

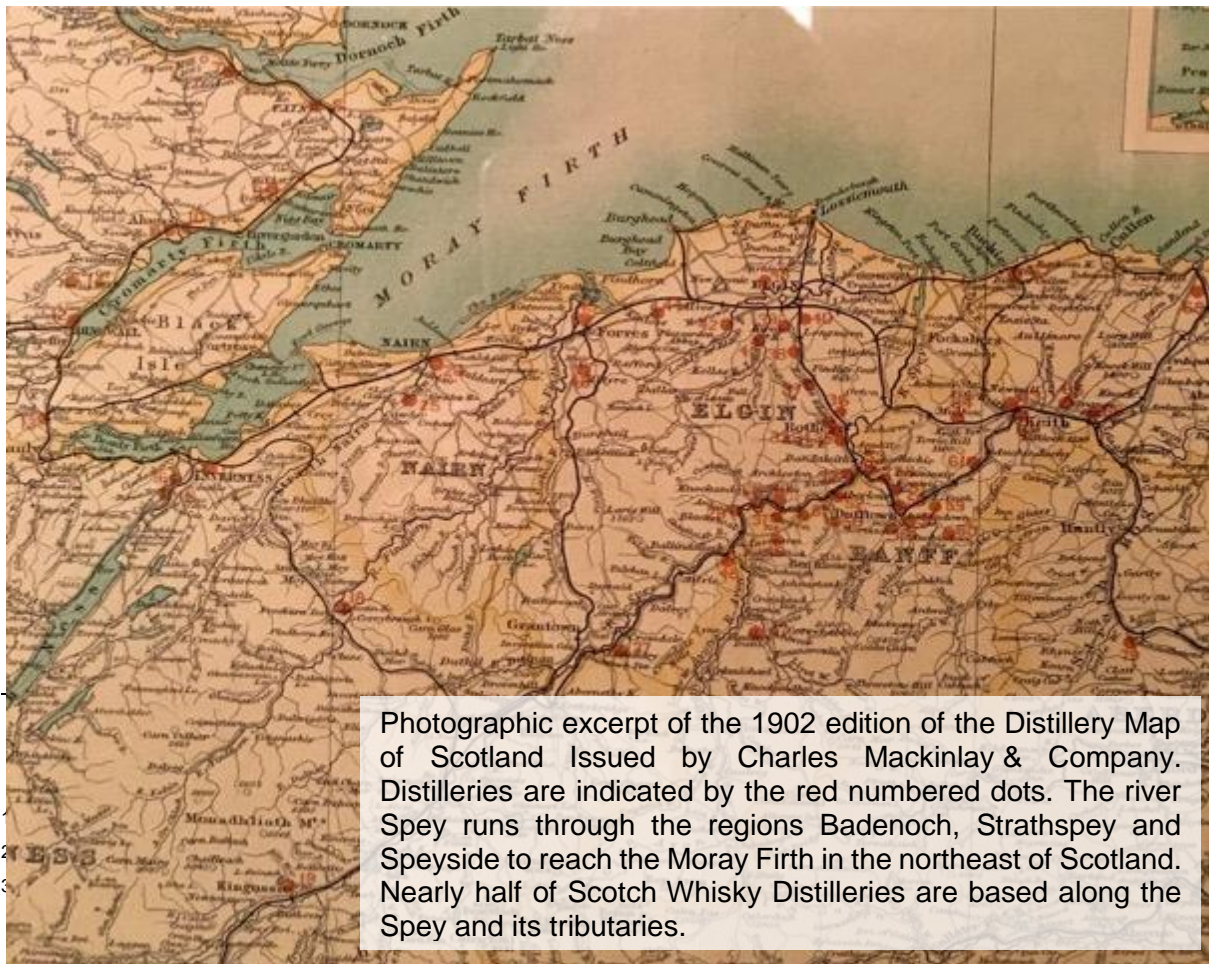
Understanding the potential for co-ordinated private sector investment in natural capital – lessons from the Spey Catchment

Final report of the Valuing Nature placement

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Executive summary

There is a growing recognition amongst policy-makers, conservation NGOs and the private sector that funding for land management needs to be increased and diversified to protect and restore biodiversity and natural capital in Scotland. However, effective mechanisms for enabling private investment by companies who do not manage land themselves are poorly understood. A better understanding of business motivations and challenges is required to effectively increase and diversify private investment in natural capital. This study reviewed existing case-studies and interviewed business in the Spey catchment to understand how private sector investments could be increased or diversified.

Main findings were:

1. Businesses recognise the importance of natural capital to their business success, but this does not currently translate into significant investment
2. Businesses are interested in diversifying and increasing their investments in the environment, but find it difficult to identify tangible returns on investment
3. There is broad support for increasing coordination of investment through an independent business-led intermediary
4. Two potential business models for coordinated business investment were identified: a levy model and a project-based model
5. Government and public sector support are essential to increase investment

Background

Natural capital can be defined as the stocks of natural assets which include geology, soil, air, water and all living things. It is from this natural capital that humans derive a wide range of benefits, often called ecosystem services, which make human life possible³. The value of Scotland's natural capital to sectors like tourism and food & drink is huge. The Scottish Government is committed to protecting and enhancing Scotland's natural capital, which was identified as an investment priority in Scotland's Economic Strategy⁴. Furthermore, natural capital assets form a National Indicator in the government's performance framework⁵.

Many Scottish businesses are dependent on natural capital but investment in sustainable land management that protects or enhances natural capital remains rare due to several challenges. For example, businesses are reluctant to invest in land management on their own, because competitors may also benefit from the investment. Also, businesses may compete for a positive environmental profile, which can deter investing in initiatives that their direct competitors are already financing.

³ <http://naturalcapitalscotland.com>

⁴ <http://www.gov.scot/Publications/2015/03/5984>

⁵ <http://www.gov.scot/About/Performance/scotPerforms/indicator/naturalcapital>

There are nevertheless several successful examples where novel business models were able to stimulate investment in natural capital, often involving intermediaries who broker the investment (Table 1).

Table 1. Examples of business investment in natural capital

Case study	Intermediary	What?
Upstream thinking, England⁶	West Country Rivers SW Trust	A spatially targeted Payment for Ecosystem Services scheme with South West Water (buyer) to incentivise farmers to improve 'raw water quality' and other ecosystem services using 10 or 25-year covenants and contracts for land management measures
Pumlumon Project, Wales⁷	Montgomeryshire Wildlife Trust	Scheme to improve upland economy in the Cambrian mountains, including Payment for Ecosystem Services. Contracts consist of direct intervention and on-going management over the funding period. The intermediary demonstrates impact to funders.
Tweed Catchment, Scotland⁸	Tweed Forum	The Forum acts as a trusted and neutral land management broker for its 25 member organisations. Buyers pay separately for different benefits including woodland creation, landscape restoration and carbon sequestration.
Eden Catchment in Cumbria⁹	River Nestle	Nestle is working with 99 farmers in their dairy supply chain to enhance landscape assets in Cumbria and Ayrshire. Farmers are paid above-average rates based on production and environmental measures.

The Spey catchment – one of Scottish Highlands' iconic cultural landscapes that also has an important natural heritage – was identified as a region where many businesses rely on natural capital, but where there is also a need for further investment in sustainable land management. The catchment is home to over 50 whisky distilleries, as well as food producers, woollen mills, sawmills, hydro-schemes, salmon fishing, and tourism businesses all of whom rely on the catchment's natural capital (landscape, water, wood, fish etc.). The Spey Catchment Initiative helps public and third sector organisations coordinate and deliver environmental land management goals in the catchment but so far only a

⁶ <https://www.gov.uk/government/publications/payments-for-ecosystem-services-pes-best-practice-guide>

⁷ http://randd.defra.gov.uk/Document.aspx?Document=12298_DefraPESpilotEvaluationReportFINAL.PDF

⁸ <http://www.tweedforum.org>

⁹ <http://www.3keel.com/wp-content/uploads/2018/01/healthy-ecosystems-cumbria-lens.pdf>

limited number of private sectors are engaged in its activities. As such it provides an interesting setting for exploring the potential to increase private sector investment in natural capital.

Aims

The aim of this research was to understand how private sector natural capital investments could be increased and diversified in the Spey catchment. The focus of the study was on businesses that do not primarily manage land, but nevertheless rely on the Spey landscape, e.g. for their supply chain or to attract customers. Specifically, the study tried to answer four questions:

1. How do businesses currently invest in natural capital?
2. What motivates and hinders businesses to invest in natural capital?
3. Is there potential for coordinated business investment in natural capital?
4. Can intermediaries help to mainstream private sector investment in natural capital?

Research methods

Semi-structured interviews with seventeen business stakeholders and seven members of the Spey Catchment Initiative were conducted between December 2017 and March 2018. Interviews lasted between 45 and 90 minutes. The term landscape assets was used instead of natural capital to explore the concept with businesses in the interviews, based on experience in Landscape Enterprise Networks projects in England. Detailed notes from the interview audio-recordings were analysed to identify common themes in the answers to the question listed above.

The private sector interviewees represented seven sectors: whisky distilling, beer brewing, food manufacturing, hydropower generation, tourism (including recreational fishing), hospitality and textile manufacturing. A mixture of small and medium sized enterprises and large businesses were interviewed. Two organisations with a role in coordinating business action in the area were also interviewed to further explore the potential for coordinated natural capital investments.

The Spey Catchment Initiative interviews represented the main government agencies with a regulatory remit for the Spey, the development, economic and conservation interests of the National Park Authority, local authority flood management officers, conservation organisation land managers and farming interests.

A four-hour stakeholder workshop was organised in end of March 2018 to explore local interest in trialling a landscape enterprise network in the Spey, based on the findings of the interviews. Altogether twelve business stakeholders, eight representatives of the Spey Catchment Initiative, one

business advice organisation and six representatives of the Scottish Forum on Natural Capital took part in the workshop.

Main findings

1. Businesses recognise the importance of natural capital to their business success, but this does not currently translate into significant investment

Businesses recognise they are dependent on local landscape assets and most of them have place-based brands. Nevertheless, few businesses invest in natural capital because it remains difficult to determine tangible returns from investment. Furthermore, most businesses do not see how investment would lead to risk reduction, impact mitigation, or meeting global sustainability targets. Some businesses do make small-scale investments to promote sustainability-oriented brands or to demonstrate corporate social responsibility, e.g. to be part of the local community.

In contrast, businesses have made substantial broader environmental investments in bioenergy, water management, recycling of by-products and chemical management. Individual investments were in the order of hundreds of thousands to millions of pounds. These investments were often driven by a combination of regulatory requirements, cost reduction opportunities and sustainability goals.

2. Businesses are interested in diversifying and increasing their investments in the environment, but find it difficult to identify tangible returns on investment

There is general interest and willingness to invest in natural capital to support internal business considerations and the Spey community, especially through direct sponsorship arrangements with land managers. Public sector actions to encourage investment are deemed important to see a wider range of businesses contributing and quantify tangible returns on investment.

There is consensus that investments in sustainable land management need to:

- Benefit the businesses making the investment
- Achieve quantifiable targets and clearly defined impact
- Provide investors control over where funding goes
- Sit within an effective national framework with defined objectives, whilst also delivering to global targets

3. There is broad support for increasing coordination of investment through an independent business-led intermediary

Coordination through a business-led intermediary is seen as particularly promising mechanism to support long term investment. Coordination could increase the effectiveness of investment and

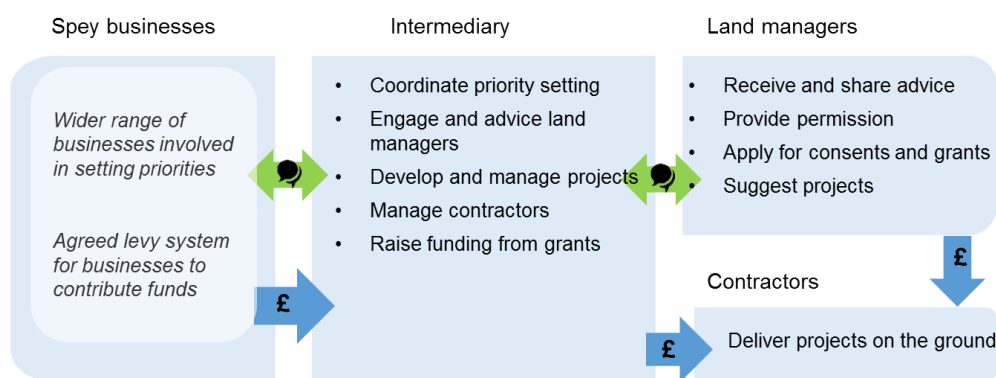
provide a trusted and knowledgeable local partner for both land managers and non-land based businesses to help build the business case for investment. This form of collaboration was seen as a promising mechanism to address long terms issues such as water resource management and the effects of climate change. Existing business or landscape partnerships could take on the intermediary role, but the intermediary would need be perceived as neutral and trusted to treat sensitive business information about risks and dependencies in confidence.

4. Two potential business models for coordinated business investment were identified: a levy model and a project project-based model

Two promising approaches to coordination of business action and investments in natural capital were identified that contain aspects preferred by businesses and the agencies responsible for managing natural resources in the catchment. These build on the existing approach in the Spey and the strong relationship between the Spey Catchment Initiative and land managers, working together to deliver projects on the ground through contractors.

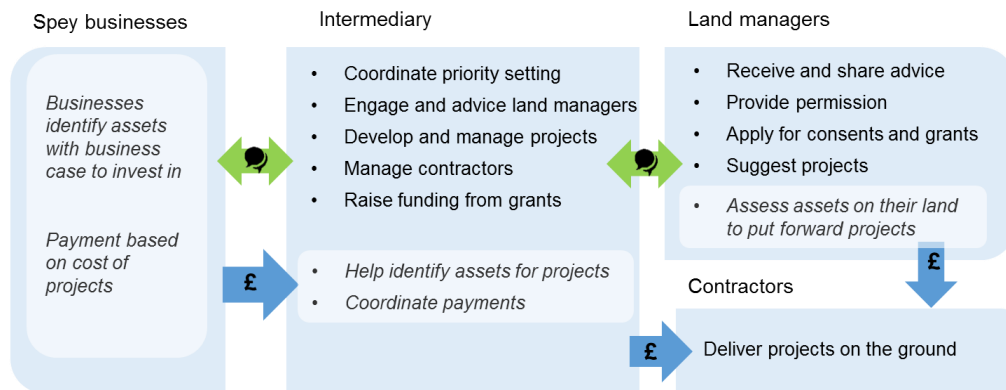
The **levy model** involves non-land managing businesses contributing to the whole catchment with projects delivering multiple benefits. Businesses help set the objectives of the programme and contribute to its costs through levies. Levies were seen as a fair system by allocating responsibility to all businesses benefiting from management of the landscape, although businesses that accrue more benefits from the investment could be asked for greater contributions.

Levies could be assigned through existing licensing systems such as Controlled Activity Regulations or Forestry Licensing, where a small proportion is assigned to the local area towards delivering environmental projects beyond compliance. Another option could be through visitor payback or a tourism business contribution.



The levy model: Businesses contributing a levy towards projects in the catchment

In the **project based** model, businesses are helped to identify specific assets in the landscape to invest in, businesses receive advice to help them do this and payments for specific projects are coordinated through the intermediary. This model had strong business support because it is clear who benefits and leads to tangible outcomes from investment.



The project model: Businesses investing in specific landscape assets through specific projects

5. Government and public sector support are essential to increase investment

Businesses expressed the view that Government should set a national framework, and businesses should lead the coordination of investments locally. The framework needs to consider a fair system for ensuring investment from all businesses that benefit within a particular landscape or catchment. The framework needs to consider that land-based businesses already invest directly in natural capital to provide long term security but may also run other businesses such as tourism activities. The public sector has a crucial role locally in facilitating business action and investments.

Specifically, the public sector has a role to:

- Provide a holistic and impartial approach to decide how funding should be allocated, and what the land management needs are in a local area, catchment or landscape
- Contribute funding towards maintaining natural capital where there are public benefits
- Facilitate and enable development of local solutions fit for local needs and aspirations
- Coordinate the work of agencies and work with groups coordinating the businesses
- Ensure the economic value of the river and other natural assets is built into public investment decisions in e.g. economic strategies

Recommendations for policy and further work

This research has helped improve understanding of business views and motivations to invest in natural capital. Businesses have expressed that in many cases they prefer to directly choose their partners for investment. However for long term investments in action to address long term issues in a catchment or landscape coordination of business investment would be helpful. Whilst businesses would wish to lead the coordination locally with the help of a neutral and safe intermediary, they seek help from Government to develop the framework to facilitate the coordination and manage the transfer of funds. If the Scottish Government wishes to develop this work further we make the following recommendations:

1. Further work is needed by Scottish Government to develop a clear national framework for businesses to invest in natural capital. The Scottish Government's Land Use Strategy could provide a policy vehicle for this framework.
2. The framework could consider the two business models developed through this research in terms of the role of the intermediary, and the flows of information and finance. The business models need further testing with businesses and landscape partnerships elsewhere in Scotland to check if there are similar views.
3. The framework could develop options for levies on businesses to fund investments in landscapes that take account of multiple benefits. The levies model would need to consider how it could work alongside existing payment systems to land managers, such as grant in aid.
4. The Scottish Government and Scottish Forum on Natural Capital Working Group may wish to consider trialling the new business models to invest in natural capital so that any unintended consequences of application are understood.

If businesses wish to develop this work further we make the following recommendation:

5. Businesses with a shared interest in investment in the landscape of the area hold a round table discussion on how to take collaboration forward, perhaps coordinated through the Chambers of Commerce, as suggested in the workshop, to enable a business led approach locally.

1. Introduction

There is a growing recognition amongst policy-makers, conservation NGOs and the private sector that funding for land management needs to be increased and diversified to protect and restore biodiversity and natural capital in Scotland¹⁰. Apart from a few emerging examples¹¹ of the private sector applying the concept of natural capital in practice, investments in natural capital are yet to be mainstreamed in Scotland, suggesting that effective mechanisms for enabling private investment are poorly understood. Investment is defined here in the broader sense in terms of financial as well as time contributions, with the aim of financial or environmental benefits, in the short-term or long-term.

A better understanding of individual business motivations, and associated challenges is required to effectively increase and diversify private investment in natural capital. The importance of this challenge is exemplified by two examples. Firstly, businesses often do not wish to invest in land management on their own, as their competitors may also benefit from the investment. Secondly, businesses within a catchment compete for a positive environmental profile, which may deter businesses from investing in initiatives that their direct competitors are already financing.

This report identifies motivations, opportunities and associated challenges for increasing and diversifying business investment in land management to restore and enhance natural capital. It summarises a short research project focusing on non-land management businesses in the Spey Catchment, Scotland. The purpose of this report is to inform future work of the Scottish Forum on Natural Capital and the Scottish Environment Protection Agency in supporting private sector investment in Scotland's landscapes and seascapes.

We have looked at the particular case of intermediaries as vehicles for increasing private investments. Whether and how intermediaries can help to mainstream private investment is explored with businesses in the Spey area, but also through eight interviews with public and third sector representatives who are already investing in land management through an intermediary, the Spey Catchment Initiative.

Private sector potential for investment in natural capital is explored amongst businesses based in the Spey catchment, one of Scottish Highlands' iconic cultural landscapes that has an important natural heritage and plays a considerable role in Scotland's economy. The Spey catchment is home to over 50 whisky distilleries, as well as food producers, woollen mills, sawmills, hydro-schemes, salmon fishing, and tourism businesses. The public and third sector stakeholders in the Spey area deliver their environmental catchment goals through the coordinated activities of the Spey Catchment Initiative. Apart from one bilateral private sector sponsorship, and statutory fishing license fee payments, the partnership is not widely funded by businesses in the Spey area. The presence of a range of businesses who are dependent on the landscape, as well as an already successful intermediary for investments in land management, provide an interesting setting for exploring the potential for private sector investment in natural capital. The Spey is one of three catchments in Scotland where public and third sector bodies deliver their goals in partnership (the other are the in addition to e.g. Dee and Tweed).

¹⁰ Vision and strategy for the Scottish Forum on Natural Capital.

<http://naturalcapitalscotland.com/about/vision/#.Wp0gipO5sWo> (Accessed 5th March 2018)

¹¹ Modelling better business: Nestle trials Natural Capital premium with UK dairy farmers

<https://www.cisl.cam.ac.uk/publications/publication-pdfs/modelling-better-business-case-study-feb-2018.pdf> (Accessed 5th March 2018)

The focus of the report is on businesses that do not primarily manage land¹². The supply chains of these businesses, such as food and drinks manufacturers and tourism-based companies, are dependent on the landscape in different ways. For example, many businesses in the Spey catchment depend on the high quality and plentiful supply of water from the Spey and its tributaries for manufacturing products including whisky¹³, and as this report highlights, the river forms an important part of the place-based brand for local businesses. Unlike land-based businesses for whom investing in land management is at the heart of their business operations, businesses not managing land have a less direct relationship with land management

This report has four main aims is to understand whether and how private sector investments in the Spey landscape could be increased and diversified. Specifically we aim to answer four questions:

1. How do businesses currently invest in natural capital?
2. What motivates and hinders businesses to invest in natural capital?
3. Is there potential for coordinated business investment in natural capital?
4. Can intermediaries help to mainstream private sector investment in natural capital?

The first three aims are addressed through the business interviews, whereas the fourth aim is examined through the interviews with both business and Spey Catchment Initiative members.

¹² Many businesses, especially in the upland estates in Scotland, fall within a spectrum in terms of their involvement in land management: many businesses have some degree of involvement in managing land, and there are often synergies between the land-based activities (e.g. forestry and fishing) and other business operations (e.g. manufacturing, tourism and sporting pursuits).

¹³ River Spey Catchment Management Plan 2016. <https://www.speyfisheryboard.com/wp-content/uploads/2016/12/SCI-2016-Catchment-Management-Plan.pdf> (Accessed 5th March 2018)

2. Methods

2.1 Scoping phase

Prior to engaging with business stakeholders in the Spey, a review of case studies where businesses invest in natural capital in the landscapes they depend on was carried out, to identify different types of natural capital investment. A more detailed review of two Scottish case studies was completed based on meetings with representatives of the Tweed Forum (in person) and Nestle (over the phone). Practical examples of different investment types were developed as prompts in the interviews to better understand businesses' motivations for natural capital investments in the Spey.

To identify the business stakeholders to be interviewed, relevant sectors and major players in each sector were listed through three activities: a literature review of economic and business strategies in the Spey catchment; engagement with the local officers for Scottish Environment Protection Agency, the Cairngorms National Park Authority, business and economic partnerships; and a review of businesses holding a Controlled Activities Regulations license in the catchment.

2.2 Business stakeholder interviews

Seventeen semi-structured interviews of 45-90 min were carried out with business stakeholders who primarily do not manage land themselves, in December 2017-March 2018. Businesses from seven sectors were interviewed: whisky distilling, beer brewing, food manufacturing, hydropower generation, tourism (including recreational fishing), hospitality, textile manufacturing. Four major private sectors were not covered: water industry, heavy industry, transport, renewable energy (CHP, biomass and wind farms). Forestry businesses were only engaged over email. A mixture of small and medium sized enterprises and large businesses were interviewed. Two organisations with a role in coordinating business action in the area were also interviewed to further explore the potential for coordinated natural capital investments.

In the business stakeholder interviews, the business representatives were asked to identify how their business is dependent on the Spey area (i.e. their landscape assets); whether they saw there to be any risks to the landscape assets their business depends on; and whether and how the business currently invests in the landscape assets. Businesses were then asked to share their views on the four types of business investment that were identified from the literature review of business investment in natural capital (Figure B1 in Appendix B). Finally, businesses were asked to share their views on what they think is the right mix of public and private financing for land management.

2.3 Spey Catchment Initiative interviews

The goal of these interviews was to understand how business actions and investment in enhancing natural capital are currently coordinated through the Spey Catchment Initiative Partnership; and to learn from the experience of the partners how this could be effectively coordinated in the future. The partnership was selected as it was known that it was working with businesses, for example Diageo one of the whisky distilleries, was a member of the steering group for the partnership and it worked with land based businesses. Seven semi-structured interviews of approximately 90 minutes were carried out with members of Spey Catchment Initiative. These interviews represented the main government agencies with a regulatory remit for the Spey, the development, economic and conservation interests of the National Park Authority, local authority flood management officers, conservation organisation land managers and farming interests. All members of Spey Catchment Initiative Partnership participated through these interviews and the business stakeholder interviews combined.

The Spey Catchment Initiative interviews followed a similar format to the business interviews. In place of understanding the business dependences and risks, it explored how the Spey Catchment Initiative currently operates; and how the organisations currently work with businesses in the area. The interviews explored the benefits and challenges associated with involving businesses in restoring and enhancing the landscape.

2.4 Analysing interview findings

To analyse the content of both sets of interviews, detailed notes were produced based on audio-recordings of each interview. Content analysis was carried out to address the three aims outlined in the introduction (current investments, investment potential and coordination potential). For the first two aims, content analysis focused solely on the business interviews. For the third aim, we also analysed the content from the Spey Catchment Initiative interviews.

From the business interview, we identified mentions of **current private sector investments** (aim 1) in the Spey area, and categorised these according to three areas of investment (protecting landscapes and biodiversity; connecting people with the landscape; and circular economy) and three mechanisms of investment (getting involved; financing conservation; business operations). As the focus of this report is on businesses who primarily do not manage land themselves, investments on land within the immediate site are not included. To better understand businesses' general willingness to finance land management in the Spey, all opinions expressed regarding 'who should pay for what' in land management were identified and categorised according to different stakeholders.

For assessing the **business investment potential** in the Spey (aim 2), all considerations that business stakeholders saw to impact their willingness to invest were identified and categorised into eight types of potential motivations. For each motivation, quotes that indicate the relative importance in driving investment in the Spey Catchment, are included. We also include quotes that illustrate the challenges associated with each motivation in terms of driving investment in the Spey catchment.

For assessing **the potential for coordinated investment** (aim 3), all comments made by the business interviewees regarding the idea of working together were identified and categorised into factors that would either support or diminish the case for coordinated business action. Quotes from the interviews are included to illustrate the motivations and challenges and opportunities associated with investment and coordinated business action. The date of the interview and sector represented are indicated for each quote, except for the views regarding 'who should do what' as this was seen by many interviewees as a more personal question not solely relating to their role as a business stakeholder.

For assessing **the potential of intermediaries for increasing private investment**, relevant content from the interviews with both businesses and the Spey Catchment Initiative members was identified. For businesses, we identified experiences or attitudes that impact their willingness to invest through intermediaries. These examples were then further categorised according to whether they add value to investing through intermediaries, whether they present a challenge for investing through intermediaries, or ideas on how intermediaries can support coordinated investments amongst businesses.

The information from the Spey Catchment Initiative interviewees notes were drawn into categories based on what made it successful in coordinating action; what the challenges were. This information was drawn into a case study and checked for factual errors with two leading members of the Initiative. These views were also used to create a business model for how the Initiative currently operates. The views on strengths and weaknesses of the business models were collated and summarised under principles for coordination. The views on the four business models, alongside the current business

models were brought together to create two revised business models which were tested for views at the workshop.

2.5 Sharing research findings

A four-hour stakeholder workshop was organised in end of March 2018 to explore local interest in trialling a landscape enterprise network in the Spey, based on the findings of the interviews. The workshop was promoted through the local chambers of commerce and amongst the businesses who were interviewed. In addition to business stakeholders, members of the Spey Catchment Initiative and the Scottish Forum on Natural Capital were invited to participate. Altogether twelve business stakeholders, eight representatives of the Spey Catchment Initiative, one business advice organisation and six representatives of the Scottish Forum on Natural Capital took part in the workshop.

2.6 Ethical considerations

We obtained informed consent from all interview participants, and adequately handled their confidentiality, in line with the School of Geosciences (University of Edinburgh) Research Ethics Procedure. The research plan was reviewed and approved by the School of Geosciences Ethics Committee prior to data collection. The interview participants were informed about how the data would be used and the purpose of the study, and asked to sign a letter of consent. Interviewers were given the opportunity to review and amend the interview notes produced based on their interview, and review any quotes included in this report. The quotations are not attributed to specific companies to avoid revealing the identities of the interviewees.

3. Review of case studies on business investment in natural capital

The review identified eleven case studies (Table A1 in Appendix A). In the majority of case studies reviewed businesses have bilateral relationships with intermediaries or land managers, instead of coordinating investments with other businesses in the catchment. The scope of investment varied from targeting a specific asset in the landscape to more holistic investments that aimed to improve a number of interconnected assets in the landscape. The scope of investment was often initially based on a single landscape asset, such as water quality, which was then broadened out to cover a bundle of ecosystem services. We also found examples of coordinated investments where stakeholders invest separately in different ecosystem services, such as in the Tweed Forum (Box A1 in Appendix A). In the majority of the examples, businesses invested directly by, for example, paying a premium in return for environmental measures (e.g. Nestle in Cumbria and Ayrshire). In some of the cases, however, businesses invested indirectly in knowledge sharing and collaboration (e.g. CamEO project in East Anglia), or by brokering donations from their customers towards environmental projects.

Based on the different scopes and types of investment, four types of business investment in natural capital were identified (Figure 1):

- **Landscape-asset based investment model** - Marks and Spencer’s offset some of their carbon emissions in the Tweed Catchment by paying local land managers to plant trees (Box A1 in Appendix A)
- **Catchment-based investment model** - South West Water pays farmers to improve a number of landscape benefits (water quantity, water quality, wildlife habitat) instead of just one benefit (Table A1 in Appendix A)
- **Capacity-building model** – In East Anglia, businesses have formed a partnership to organise conferences and workshops for local land managers and other businesses to improve water management in the catchment (Table A1 in Appendix A)
- **Donation model** – In the Lake District, local businesses collect visitor donations for a charity that distributes funds to conservation projects, for example to improve the Osprey habitats (Table A1 in Appendix A)

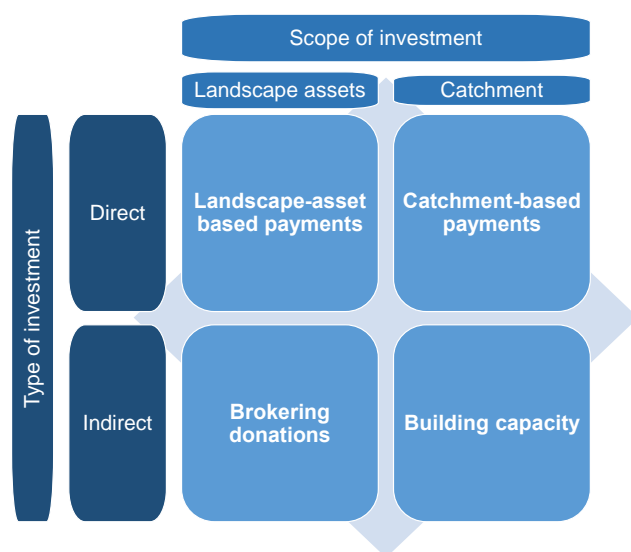


Figure 1. Four types of business investment in natural capital. Businesses invested in natural capital both directly (e.g. payments for ecosystem services) and indirectly (e.g. training or collecting donations from customers). These investments targeted specific assets in the landscape (e.g. water quality), or a bundle of ecosystem services in the catchment.

4. How do businesses currently invest in natural capital?

Businesses described a number of ways in which they are indirectly or directly investing in the landscape assets in the Spey, as well as global stocks of natural capital, such as achieving carbon neutral goals. Investment is currently mainly taken on individual basis rather than acting as a collective. As the examples of investment presented here are based only on the seventeen interviews, they do not represent an exhaustive overview of private investment in the Spey. The investments mentioned fall into three main areas:

- Businesses across all sectors interviewed, apart from hospitality, were involved in **protecting the Spey landscape and biodiversity**, beyond their own estates, by supporting land and river management. Businesses invested both their time (staff volunteering, knowledge sharing meetings, engaging in environmental organisations) as well as finances towards land and river management in the Spey (Table 2). Historically, many businesses (e.g. food manufacturing and whisky distilling) have secured landscape assets (e.g. water supply) they depend on by buying land adjacent to their site surroundings. Many businesses in the Spey are investing in land management and river management out with the catchment where they source their raw gradients.
- Businesses invested in the landscape indirectly by supporting projects that aim to **connect people with the landscape**. Enabling and encouraging responsible access and raising visitors' awareness of wildlife, were essential parts of the business operations particularly for the tourism and recreation -based businesses (Table 3).
- Businesses invested in enhancing the **local circular economy** and resource efficiency through investments in bioenergy, water management, recycling of by-products and chemical management (Table 4). These investments were more common in the lower Spey amongst the manufacturing businesses.

Businesses in the Spey invest in the landscape and natural capital through three main types of mechanisms:

- **Getting involved** – Businesses invested in landscape assets and natural capital indirectly by spending their time in volunteering, sharing their knowledge with other stakeholders or visitors in the area, and engaging in dialogue with other users, the Fisheries Board and environmental regulators.
- **Financing conservation** - All financial contributions are currently voluntary, apart from fishermen's license fees (over £400 000 annually) to fund the Spey Fisheries Board and the Spey Catchment Initiative.

For the voluntary sponsorship contributions provided by the rest of the sectors, financial amounts were relatively modest (either one-off or annual contributions of a maximum of £10 000) relative to businesses' annual turnovers. The exceptions to this were a beer brewing business, who donated over 10% of its annual turnover to dolphin conservation in Moray Bay (interviewed 01.02.2018), and the hydropower industry who pay several tens of thousands of pounds towards Fisheries Board's river management activities (06.02.2018). Many businesses finance conservation through several intermediaries, such as the Spey Catchment Initiative, Cairngorms National Park Authority officers and the Cairngorm Connect Project.

- **Business operations** – Investments that were directly linked with the business operations, such as capital investments, were the main investment mechanism for the food and drinks manufacturing businesses. They had invested considerably in circular economy in recent years.

Some of the whisky distilleries invest in land and water management through their direct operations to secure their supply chain. For example they require environmental measures from their growers as part of assurance schemes (representative interviewed 15.12.2017). Most businesses, however, do not make operational investments to secure their supply chain.

4.1 Examples of investment in the landscape and biodiversity in the Spey




















What	Land management	River management
How		
Getting involved		
Volunteering and knowledge sharing	 60 staff days per year to support local conservation	 Attend Fisheries Board meetings  Sharing knowledge about impact mitigation solutions
Dialogue with other users		 With major water abstractors to minimise impact on environment  ⚡ With Fisheries Board to identify potential issues and actions
Financing conservation		
License fees		 To Fisheries Board
Sponsoring	 Landscape and catchment partnerships, and invasive species initiatives  Donation per sold bottle to support local dolphin conservation	 ⚡ Fisheries Board campaigns  Voluntary compensation
Research		⚡ Financing fish mgmt. research
Business operations		
Contracts	 Assurance schemes with growers in return for long commitments	
Capital investments		⚡  Installing screens and fish passes to allow salmon migration
	 Tourism	 Fishing
	 Whisky distilling	 Food manufacturing
		 Hospitality
		 Beer brewing
		⚡ Hydropower
		 Textile manufacturing

Table 2. Interviews with seventeen business stakeholders revealed examples where locally based whisky, fishing, beer brewing and tourism businesses have invested in in both land management (left) and river management (right) to protect the landscape and biodiversity in the area. Land and river management actions were viewed to have synergistic effects for improving biodiversity.

4.2 Examples of how business help people to connect with the landscape

Many of the activities to improve access and raise appreciation of the landscape were an integral part of the business operations for tourism and fishing businesses.





























<i>What</i>	Access	Appreciation	
<i>How</i>			
Getting involved and business operations			
Volunteering and knowledge sharing	 Businesses encourage responsible access amongst visitors  Picking litter; angling association maintain seats	 Guides are trained to enable knowledge sharing with visitors	
Dialogue with other users	  Bilateral engagement to enable shared use of river		
Financing conservation			
Sponsoring	 Donation per canoeist to maintain access (to an access maintenance fund)  Landscape initiative	 Sponsor Fisheries Board education programmes	
	 Tourism  Whisky distilling	 Fishing  Food manufacturing  Hydropower	 Hospitality  Beer brewing  Textile manufacturing

Table 3. Interviews with seventeen business stakeholders revealed examples where locally based tourism, fishing and whisky businesses are helping to maintain and improve public access opportunities, as well as encourage responsible behaviour amongst visitors and river users. Tourism businesses also invested in raising environmental awareness amongst their staff and customers through staff training.

4.3 Examples of recent private investments in circular economy in the Spey

Circular economy was the most considerable area of investment for businesses interviewed in food manufacturing, whisky distilling, textiles and hospitality (Table 3). Businesses invested in four areas relating to circular economy: production and use of bioenergy; managing their water use and effluent treatment; recycling of by-products and waste; and the use and monitoring of chemicals.

<i>What</i>	Bioenergy	Water management	By-products and waste	Chemicals
<i>How</i>				
Getting involved				
Dialogue with other users				
Business operations				
Capital investments				
Contracts				
Reducing inputs				
Research and monitoring				

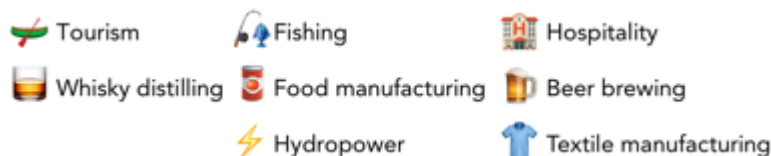


Table 4. Interviews with seventeen business stakeholders revealed examples where sectors including whisky, food, hospitality and textiles were investing in circular economy through their dialogue with other businesses, as well as their business operations.

Examples of private investment in bioenergy in the Spey area

- Whisky distilleries across the Spey area have made considerable **capital investments** in bioenergy production to recycle distillation by-products, as well as investments in research to optimise bioenergy production process using distillation products
- In addition to these internal investments, whisky distilleries have **contracts** with other local biomass plants to purchase energy. One of the major food manufacturers is in the early stages of setting up a contract with a local biomass plant.
- **Capital investments** in biomass production have also been made in the hospitality sector, for example by replacing oil fired boilers with biomass boilers that use locally sourced wood pellets

Examples of private investment in water management in the Spey area

- Food manufacturing, hospitality and whisky distilleries have made considerable **capital investments** in effluent treatment
- A major textile manufacturer is in dialogue with a water company to develop plans to invest in effluent treatment
- One of the major whisky distillery businesses has recently started improving **water use efficiency** across their sites in the Spey
- Whisky distilleries are investing in **research** to understand long-term climate risks relating to water availability and temperature in the Spey

Examples of private investment in by-products and waste in the Spey area

- Businesses across sectors have recently established **a forum** with the aim of streamlining waste recycling in the Spey
- One of the major whisky distilleries has recently achieved **zero waste to landfill**
- Whisky distilleries have longstanding **contracts** with local farmers to recycle bio-solids as fertiliser, and more recently as fuel for the biomass plants

Examples of private investment in chemical management in the Spey

- One of the largest whisky distilleries has recently considerably increased investments in on-site environmental monitoring to enable early detection of potential chemical outputs
- A major textile manufacturer has recently reduced chemical inputs by **switching to textile treatment products** with lower variability in chemical composition, as well as by **testing** of incoming products to ensure minimal low chemical outputs from their site

4.4 What is private sector's role in financing land management?

Public sector to set the framework, industry to step in for specific projects

Many of the businesses interviewed, covering many sectors and sizes of business, felt that public sector should set the framework for funding land management. This view was illustrated by one of the business representatives (interviewed 02.02.2018) as he describes his expectations on the public sector's role in influencing land management:

Working in partnership, you would expect [the public sector] to come up with projects, for looking after the health of our common asset we hold as a community. Within that, there is scope for private businesses to see specific opportunities for them that they are willing to invest in . . . I think the public sector has a big part to play in terms of setting the framework and encouraging participation from private sector.

One of the workshop participants noted that on national level paying taxes was a key mechanism through which businesses contribute to land management. On local level, however, businesses were seen to play a role in **filling funding gaps** to ensure that landscape assets are protected (business partnership representative interviewed 31.01.2018):

[Businesses'] role is to make money, to pay taxes, and then the public sector's role is to ensure that those assets [are protected]. Now, if there is a funding gap between what the private sector are generating in taxes. Then we may need to look at models to fill that gap.

Businesses thought that the public sector was in a **better position to decide** how funding should be allocated “We don’t know how much funding they [land managers] need”, (interviewed 21.12.2017), and what the land management needs are:

You need that holistic approach, and the impartiality . . . [and] the expertise. For a specific project, private money can then come in to play a bit more . . . For example, if you come up with a great project and you cannot fund it publicly, there are not grants available. Then that is when I think the industry should see the opportunity to step in (interviewed 30.01.2018)

One of the businesses interviewed (on 21.12.2017) saw **that SEPA could have key role in establishing an effective mechanism** for increasing private sector funding for land management:

[Funding for land management] should come from the public purse, but in such a way that it is a [business] levee put in somewhere, and it clearly goes into an environment fund, and it is then managed . . . Why can’t SEPA just take off a certain percentage of the SEPA fees, for partnerships, over the whole of Scotland? . . . If we have got a 5% increase for environmental projects, I don’t think there would be many [business] folk who would say no to that. SEPA gets £30 million for fees, so 1% of that would be a lot of money.

This approach would also help in diversifying the investor base in land management: “Rather than one company paying £10 000, everybody would be able to pay £100 for these projects”. Such a public-sector mechanism could also act as an incentive for compliance:

If you are fully compliant [with environmental regulations], then maybe there is an agreement that part of your charge goes to one of these projects. So, if you are doing a good job, I’m still putting the same amount of money into fees, but I have got a bit of moral high ground that part of my money is funding that, because I am compliant (interviewed 21.12.2017).

Broader range of business stakeholders to fund river management

On local level, some of the businesses, particularly those involved in fishing activities, felt that a broader range of river users, including canoeists and whisky distilleries, should contribute to river management in the Spey area. Funding for river and land management from the fishing sector in the Spey could potentially decline in the future due to declining trends in salmon catch, as noted by a fishing community representatives in the workshop.

Canoeists One of the businesses stakeholders involved in fishing activities felt that funding for river management could be diversified by introducing payments for river users beyond the fishermen in the area:

“If they [other recreational users of the river] were licensed, and each individual had to pay a share of it for the privilege of being in the river. If everybody paid their share, it would not be so bad (interviewed 16.01.2018)”

Distilleries One of the business stakeholders thought that whisky distilleries were responsible river users but wished that they would engage more in river management:

“I believe the distilleries are fairly responsible in their use of water... It does slightly concern me that they take the water slightly for granted and they seem to act as if they have a right to it. They have a responsibility for its use as well. I sometimes think they don’t take their responsibility seriously enough when it

comes payback to the river and its community for the water they take, and I wish they would get more involved in river management, after all water is the basis of their product and its purity is paramount . . . some distilleries have done little bits. Generally they [the whisky distilleries] really ought to be full on, in protecting the water asset and they are not. That concerns me (interviewed 20.12.2017)”

5. What motivates and hinders businesses to invest in natural capital?

The seventeen interviews with business representatives in the Spey revealed a range of potential motivations, and associated challenges, for why businesses in the Spey could invest in the Spey landscape. These motivations have been categorised into eight main types that are outlined in the first part of this section (4.2.1). The interviewees also identified several opportunities for enabling business investment, which are discussed in the second part of this section (4.2.2)

5.1 Motivations and associated challenges for business investment in landscape assets in the Spey catchment

The potential motivations for business investment in landscape assets in the Spey arise at three levels. The motivations can relate to the internal business considerations, such as achieving returns on investment and delivering global targets to reduce carbon footprint (motivations A-E). The motivations can relate to the surrounding Spey area, such as mitigating a local environmental impact, or the desire of being a good neighbour (Motivations F and G). The motivations can also be created



by the public sector in terms of regulation and incentives (Motivation H).

Motivation A: The investor is dependent and connected with the land

“The Speyside is a brand, not just a place. One of the hooks that you can hang your marketing pitch on, is Speyside, the romantic picture of leaping salmon (tourism business interviewed 19.01.2018”. The quote above illustrates how businesses see “the natural beauty and heritage of the area” to be “core to the value in our brand (whisky distillery representative interviewed 18.01.2018)”. Branding was the most common way in which businesses described to be dependent on the Spey area. An example of recent actions taken by business stakeholders to preserve the landscape aesthetics, in both food manufacturing and whisky sector, was the opposition of wind turbine developments:

[Some of the major family-owned companies based in the Spey] have been opposed to windfarms in the area for negative impact on the landscape, perception of the area, and visitors to the area. They associate quality of the landscape with their product (economic partnership coordinator interviewed 17.01.2018)

The Spey Catchment is an important part of private sector brands based in the area for reasons that go beyond aesthetics. Other values associated with the Spey catchment include: family heritage; sense of place; the breadth of experiences in the landscape including outdoor activities; whisky distilleries; and local produce. As the examples below illustrate, the Spey catchment is core to the brands of locally based businesses across sectors, including food and drinks, textiles, hospitality and tourism.

Family heritage A **food manufacturing** representative reasons the importance of The Spey catchment for the identity of their business:

They [company owners] are very proud of the fact that they started here. There have been times in the past where it has been recommended that they shut down this site and open up in the central belt where there is better transport links and abandon the highlands. And that has been very forcefully refused. Because this is the heritage, this is where the family business has grown up (interviewed 21.12.2017)

Sense of place A **textile manufacturing** representative explains how sense of place distinguishes their brand from their competitors:

Our sense of place is in our name . . . And we are proud of the fact that we are in our local communities. . . A lot of [textile] brands will manufacture in other parts of the world. And [for them], the most important part of their identity is the fashions that they do, and the aesthetic of their brand. But for us, it is more than that. It is actually about the place where we are in, and the people that work for us, and the craft that goes into the product. And that adds the value [to the brand] as well (interviewed 02.02.2018)

Aesthetics of the landscape A local business partnership representing the **tourism sector** (interviewed on 31.01.2018) notes that they “absolutely recognise that our number one asset is our natural beauty, that is why people come. . .The natural and cultural heritage of the area is really important to us, and we recognise that”

A **whisky industry** representative describes the clues used in the marketing of their single malt brands: “Historically, [brand] would have been tartan and bag pipers, but today it is landscapes and water (interviewed 15.12.2017)”

Aesthetics of the landscape is part of the heritage for a major **textile manufacturing** company that is known for its estate tweeds that the estate workers would historically wear: “those tweeds tended to be coloured in relation to their natural environment”. Even today, “the colour palette that we use to reflect the natural place around us” can be seen in the company’s other products, which “adds to the overall sense of how important our area is to us as a brand (interviewed 02.02.2018)”

Experiences in the landscape A **tourism** representative explains the uniqueness of the Spey catchment for experiencing wildlife:

[The Cairngorm National Park] one of the best places to see iconic wildlife like red squirrels, Capercaillie, red grouse. If we people want to come and see osprey, this is one of the places they immediately associate with that (interviewed 30.01.2018)

A **hospitality** representative summarises what attract visitors to the area:

People come here because of the landscape. That is what they want to see. Whether that is to participate in outdoor activities of energetic nature, whether it is skiing, biking, snow sports, summer sports, or water sports (interviewed 19.12.2017)

A **whisky industry** representative notes how “some of the malt distilleries are actually tourist attractions in their own right” that are “quite reliant on the landscape and the setting, which is what people are coming for, as part of their whisky experience, playing “an important part of selling the brand to people who are really interested in it” (interviewed on 15.12.2017)

Local produce Locally sourced ingredients, such as beetroot, played a major role in the marketing of products for a major **food manufacturer** (“we do market on the basis that we source locally, and that we support the Spey area as much as possible”) even for businesses who mostly relied on suppliers outside the area (“we don’t rely that heavily on the local suppliers”), and potential reductions in local supply were seen as an issue: “If some of our local suppliers were not there, that would not be so good for us (interviewed on 21.12.2017)”

Visitors at a globally branded **hospitality** chain expect “to see local Scottish produce on the menu”, such as “salmon, venison, beef”, which the hotel largely source through Rothiemurchus Estate and its surroundings (interviewed 19.12.2017).

In addition to being dependent on the Speyside brand, businesses described biophysical dependencies on the Spey landscape relating to quality of water, the supply of water, fish stocks and timber:

Quality of water *[The water in Spey catchment is] super clean, not hard, you can make really clean beer with it. [Does that softness of water affect the kind of beer you make?] Definitely. You have to treat the water in different ways for different beers. In a city you can brew a good stout, and here you can brew a good lager (independent brewery interviewed on 01.02.2018)*

Quantity of water For the hydro industry, quantity of water is their main dependence on the Spey landscape. Water abstracted from the Spey is used five or six times at different power stations to generate energy. In energy terms the Spey is “dozens of times” more valuable when compared with other catchments, as the height difference between the source and the outflow is 600 metres, whereas in other locations it might be only three meters (interviewed 06.02.2018)

For whisky distilleries, the way in which process water is supplied, varies depending on their location in the catchment:

Most of the [company's] lowland distilleries are all using boreholes, whereas the middle-catchment sites are all using a combination of springs and water courses. Most of the upland sites rely on springs . . . Supply of cooling water "tends to be a more important factor in terms the location of the [whisky] distillery, because the volumes are just so much greater than for process water (ratio of 1:4, interviewed on 15.12.2017)

Fish stocks *Over 80% of the juvenile fish stock come from the main stem, and the remainder comes from the tributaries. The tributary fish were the important ones, because they are the spring fish or tend to be the ones that spend longer in the river, and longer at sea, and come back as the bigger spring run stock, which is people want to pay more for (business stakeholder interviewed on 19.01.2018)*

Timber A representative of a local sawmill notes how important it is to their business to "have a sustainable and suitable forest resource, as such the need to have adequate long-term supplies of woodland in the catchment area is very important to us (email correspondence on 19.01.2018)"

The largest holiday accommodation provider in the catchment, who has recently switched to biomass for its electricity (?) supply, received a commitment from the wood pellet supplier to source within 30-mile radius from the biomass plant (hospitality representative interviewed on 19.02.2017)

In addition to being dependent on the Spey landscape for the supply of different provisioning ecosystem services (as listed above), the businesses interviewed relied on other businesses for recycling their by-products, supplying sustainable energy, as well as providing timber for biomass production. To illustrate these dependencies, two examples are included below:

Use of by-products A local biomass plant produces ash as a by-product, which is mixed with cattle dung to provide a phosphate-rich fertiliser on farmland locally (business stakeholder interviewed on 20.12.2017)

Bioenergy A biomass and CHP plant source local low-quality timber, which would not otherwise be economically viable for extraction, at times when timber supplies are not readily available from elsewhere. This enhances the efficiency of local timber use, as one of the business stakeholders interviewed describes: "the businesses in the Spey are totally interrelated. We wouldn't be felling this [low-value] timber, if the industries in Speyside were not there to take it" (interviewed 20.12.2017)

Dependencies on landscape assets not translated into willingness to invest

Despite businesses being dependent on the integrity of the Spey catchment place brand, it was not explicitly mentioned to motivate business investments in protecting and enhancing land in the Spey catchment beyond the immediate surrounding of the businesses' site, such as whisky distillery grounds. Lack of interest in investing is potentially driven by the fact that the values attached to the

brand are predominantly intangible, for example family heritage, and not spatially explicit, making it challenging to identify priority areas for landscape protection and conservation.

Having **clear spatial areas of interest** was indeed part of the reason why a tourism business (interviewed 30.01.2018) had decided to sponsor land management activities for a charity-based land owner of over 24 000 hectares across Scotland, as “the proportion of lands [they own] where we run our tours on is very high”. In addition to the spatially explicit linkage with land management, the tourism business felt motivated to sponsor the land owner because they felt that the land owner engaged the business in making land management decisions:

We are working directly with the land manager, but we are also able to influence and say, you know, these are the projects that you are doing, and these are the projects that we would like to support. We have that control over where the funding goes. They still make the decisions about what asset management needs to happen. But we are able to choose. So, it is a nice balance.

Businesses interviewed also identified reasons relating to their connection with the land that would lessen their interests to invest:

- Losing the freedom to access land, as outlined in The Scottish Outdoor Access Code, was seen as a potential barrier for investments in land management. Pressure for the land owners to charge visitors for access in order to fund land management, was recognised by a representative of the tourism sector (“there is a moral argument for contributing to a [landscape] asset that needs management”), however, introducing charges for access was seen to be a less “meaningful engagement” rather than a “two-way conversation” that helps the investors to build their staff awareness of the properties, as well as contribute to their customers’ experiences (interviewed on 30.01.2018)
- A representative of a local business partnership anticipated that most businesses would see land management to be the land managers’ responsibility, implying a weak interest in land management. This was seen to be a barrier particularly if the land manager is an independent estate, which “is the case for much of the banks of the Spey”, and that asking businesses to contribute towards land management “would struggle to get traction” (interviewed 31.01.2018)

Motivation B: There is a return on investments

Tangible returns on investment

The closer you can get to [a situation] where ‘I own the land, I am the only one in the catchment, there is a direct link between the issue and my risk or cost, then I can make a business case to pay for some measure that will solve that problem and it is really simple (Whisky industry representative interviewed on 15.12.2017)

Demonstrating return on investments, as the quote above illustrates, was identified to be a key motivator for investments in circular economy, and a major barrier for investments in land and river management in the Spey, particularly amongst the larger business stakeholders interviewed. The difficulty of “being able to demonstrate . . . that there is real value (textile industry representative interviewed 02.02.2018)” in investing in landscape assets to for example, improve soil quality that “leverages a reduction in risk, or likelihood” or cost (whisky industry representative interviewed on 15.12.2017”). Similarly, a representative of a local business partnership emphasised the importance of “establishing real compelling reasons to invest”, as he viewed it to be difficult to “get businesses to identify a strong enough correlation between the investments and the return, to incentivise them to make that investment (interviewed 31.01.2018)”.

Examples of recent capital investments where businesses saw tangible returns from investments in circular economy included improvements in effluent treatment to reduce “ever-increasing cost” water management (textiles industry representative interviewed 02.02.2018) and catchment-wide investments in “more sustainable sources of power for production, which is driven by cost of electricity and gas, carbon reduction, and fuel efficiency (economic partnership representative interviewed 17.01.2018)”.

Cost

Relatively low cost was identified as an opportunity for investments in land management. The relatively low cost of investing in local-level land management projects has enabled some of the recent investments made by locally based businesses to protect and enhance the landscape. One of the tourism sector representative, who felt their sponsorship relationship with a charity-based land manager was delivering considerable and varied benefits for the business, notes that “the sums of money that we are engaged with are really quite small (30.01.2018)”. Another whisky industry representative recalls the cost of sponsoring a Heritage Lottery funded landscape partnership in the area to be “quite a modest amount of the resource”, which played “an important part of [their] decision (15.12.2017)” to sponsor.

Indeed, a better understanding of the scale of financial investments required towards land and river management, in whether “Is it tens of thousands of pounds, or hundreds of thousands of pounds”, could help the businesses to weigh up the value of financing projects, and potentially identify low cost investment opportunities that work towards their goals in the area, as envisioned by a whisky sector representative: “If you do some work and find out that small projects can make a big difference, the companies might say, wait a minute, you only want £3000-4000? I’ll do that (interviewed 21.12.2017)”.

Cost of investments was also identified to be a challenge for mainstreaming private sector investments in natural capital. Cost was also described to pose a potential barrier for investments for reasons relating to market response, the size of the businesses in the Spey, as well as the scale of finances required for long-term investments:

- Uncertainties in market response were described to be a potential challenge by one of the whisky distillery representatives (15.12.2017) in introducing additional land practice measures to, for example, reduce wind-blown soil loss, as part of assurance schemes for barley growers, such as Red Tractor [whisky distillery representative interviewed 15.12.2017]. The distilleries could potentially face increased costs of sourcing barley, if “the growers would look at that scheme and say, that is expensive, we are going to charge a premium”
- “The cost of investments” was seen to be “the main challenge (18.01.2018)” in enhancing the landscape assets their business depends not only amongst the largest whisky distillers in the Area, but across the “rural environment, where the businesses are often very small, and not many of them are making significant profits (business partnership representative interviewed 31.01.2018)”
- Long term investments in landscape assets to manage risks were associated by one of the whisky distillery representatives (15.12.2017) as actions to be taken on catchment-scale, rather than specific locations, which was perceived to be a potential barrier in terms of cost: “If you’ve got longer term risks, you can start to do things, but the downside is [that] . . . you may be in a catchment where you have to take a lot of measures, and that makes the cost quite high”

Challenges in justifying long-term investments

Justifying investments in land management to mitigate long-term risks, such as climate-induced changes in water temperature patterns in the Spey river systems, were seen as a challenge from a private sector perspective for several reasons: it is difficult to predict benefits achieved; it is uncertain to what extent they can adapt their operations to avoid risk; and competing needs for investment to mitigate short-term risks.

- Justifying investments to tackle long term risks was seen as a challenge by a representative of the textiles industry, who describes how it is “difficult to see a direct and tangible benefit from [investing in capacity-building to improve land practices amongst herders] very quickly because it is a long-term investment”, making it “the biggest challenge” in justifying the investment (interviewed 02.02.2018). Similarly, a representative of the whisky describes the difficulty in investing in land-based mitigation measures to manage long-term risk:

If you are taking some of the [land-based] mitigation measures, because it is a risk today, and you want to prevent it becoming a problem, then how do you make the case, when sometimes the science isn't fantastic (interviewed 15.12.2017).

- The textile industry representative notes, however, that the company “does not really expect [a quick turnaround]”, as they view their investment in the knowledge sharing project amongst herders in Mongolia as “a long haul” investment.
- Justifying investments in long-term risks can also be hindered by businesses’ partial ability to adjust their operations to avoid the impacts of long-term risks, by e.g. concentrating production to days of null impact. It is uncertain, however, to what extent operational adjustments can avoid the risks, as well as the severity of the risks. This makes it difficult to justify long-term investments to manage risk, as illustrated by one of the whisky industry representatives:

Our challenge is that we are talking about events where once in 50 years, you might have period of 7 days where the temperature is above your ideal limit. So, if I then ask my business, what is that day of production worth to you, I can get everything from quite a nicely quantified answer of how much we can make in that day, how much whisky will that eventually make, and what it could sell for, to zero. The reason the answer can be zero, is because we are making whisky today for sale in 18 years’ time, and inventory planners can do quite a lot with a day’s production in terms of adjusting in the future how much we make, so that actually has no consequence whatsoever (interviewed 15.12.2017)

- Capital investments to manage short term environmental risks and issues make it increasingly difficult to justify investments to manage long-term risks. This issue was highlighted by one of the whisky industry representatives, who have transitioned from using springs to boreholes for process water due to water quality issues, making it harder to justify a business case for long-term investments:

Once you have the borehole, how you get yourself back to deciding to spend [on long-term investments to improve water quality], when you now have to make that capital pay for itself, in 10 or 20 years. That means you will never win a business case to do something else. So that is a real challenge (interviewed 15.12.2017)

Motivation C: The investments help to mitigate environmental business risks

The businesses interviewed generally felt that there were no short-term or long-term risks, which were well enough understood to justify investments in landscape assets to mitigate risks. Businesses felt that environmental issues in the area were relative small and did not affect their operations: “I know there is a lot of work that can be done to get it into a more ideal state but the current state of

the Spey environment doesn't present immediate business risks and therefore risk mitigation isn't out primary driver currently (whisky distillery representative interviewed 30.01.2018". Many of the businesses shared the view that the broader business community, as well as their own industry, had "good practice" with regards to dealing with environmental risks, and that the Spey environment was well understood and well maintained. Some of the larger businesses interviewed, however, were undertaking research to better understand climate change induced risks.

Short-term risks

- Climate change -induced changes in **weather patterns** are already causing water storage issues in hydropower generation. In the past, snow was stored on the hillsides on a seasonal basis, whereas in recent years there is an emerging pattern of more frequent snowmelt events that coincide with high precipitation. In early spring months, the low-temperature rainfall events are also causing fish management issues, as the swimming speed of fish slows down in lower temperatures, leading to fish getting trapped in screens (interviewed 06.02.2018)
- Although **flooding** was recognised to impact the Spey area and it was mentioned to have caused challenges in for example harvesting in the past, none of the interviewees explicitly mentioned their key infrastructure assets to be at risk in the short-term. None of the interviewees saw there to be a need for considerable investment to mitigate flood risk, apart from localised works on their immediate site
- For **water quality**, none of the businesses mentioned concerns regarding water quality, although one of the whisky distillery representative did share examples where whisky distilleries had avoided water quality risks by abandoning "water courses or springs. . . for boreholes due to water quality issues (interviewed 15.12.2017)"
- For risks relating to **quantity of water**, businesses' views were varied, ranging from the position that "the catchment is not stressed, and that there is a lot of available capacity (whisky distillery representative interviewed 15.12.2017)", to concerns that fluvial movement is indirectly increasing flood risk:

Something like 25% of water at Grantown-on-Spey has been abstracted into other water catchments. And that is a problem. That means there are blockages in the river, probably impacting salmon passage. There is not the amount of water down the river that nature intended to clean out, so the river isn't as forceful and powerful as it was, you get less fluvial movement, and probably deposits more on a day-to-day basis than it should. This will impact the whole river and the estuary. Although we don't understand exactly the consequences, this has been going on for more than 50 years now, and we are starting to see some of those consequences with gravel build ups shallowing of the river. Probably some of the flood alleviation schemes are having to be put in place Fochabers and Rothies because, believe it or not, we have got less water, as a result of the extraction from the head waters. If that water was coming through, I think it would keep the channel cleaner (business stakeholder interviewed 20.12.2017)

- For **soils**, windblown soil loss was mentioned to be a concern for barley growing in the area (whisky distillery representative interviewed 15.12.2017)

Long term risks

Overall, businesses who were investing in long-term research on long-term risk on the basis of precaution (“we are very protective over things like water sources”) and good business practice (“As a good business, you need to think ahead, and not take things for granted”), and emphasised that there were no major environmental concerns in the Spey area: “We’re not concerned in the shorter term that we’re going to run out of water or anything similar, but we want to make sure we apply good stewardship so water resources are protected in the longer term (interviewed 30.01.2018)”.

Despite general lack of concern regarding long term risks amongst the businesses interviewed, several types of long term risks affecting landscape assets were mentioned by stakeholders interviewed, predominantly by the whisky industry representatives:

Business type	Risk	Example
Whisky industry and barley growers	Rainfall patterns	Two of the major whisky distillery businesses mentioned recent investments in research to understand the uncertainties and severity of climate change risks. The representative outlined their interest to be focused on the “broader global environmental themes such as global warming (interviewed 30.01.2018)”. The representative noted that “there are now modelled scenarios which suggest there may be less runoff from snowmelt and potentially less water availability. These represent a longer term concern of which we need to be aware”.
	Water temperature changes	One of the whisky distillery interviewees recognised climate-induced changes in water temperature to be an unknown risk that “has not been properly assessed” to understand whether whisky distilleries will be able to remove enough heat from the outgoing water to comply with their permits (interviewed 15.12.2017).
	Soil health	Impact of climate change on soil health were also mentioned to be a concern for barley growers in the area (interviewed 15.12.2017). Climate also applies to our growers, is there anything they are not doing, they are more vulnerable to climate change, and what that might mean for their soil health, or their ability to grow barley.
	Land use change	A whisky distillery representative (interviewed 15.12.2017) mentioned land-use changes to be a potential concern for surface water availability, in terms of “not having enough water at certain times of the year, because of enhanced transpiration”
Tourism and hospitality	Snow cover	If there is less snow, snow sports would be scaled back: <i>Weather is a key, particularly in the winter, everybody knows Scotland isn’t fantastically sunny, so nobody comes expecting tropical temperatures, but in the winter, there is a very strong expectation that there will be snow. If, it tends to happen, where the snow sports were scaled back, it would have</i>

a very detrimental effect on the immediate area and the hotel, because that is how it is seen (hospitality representative interviewed 19.12.2017)”

Fishing	Rainfall patterns	<p>There was concern about already occurring changes in rainfall patterns, resulting in more frequent flood events:</p> <p>“The rainfall is way more intense over a far shorter period . . . In the 80’s there was one [flood], in the 90s there were four, in the 2000s there were six, and I think we had three between 2010 and 2015”</p> <p>The flood events were noted to have detrimental impacts on the juvenile fish in the Spey and its tributaries:</p> <p>“When the river breaks its banks, the juvenile fish are spread across the landscape. When the water level goes down, you are left with a huge number of juvenile fish lying on the banks dead (business stakeholder interviewed 20.12.2017)”</p>
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Motivation D: The action helps to deliver global targets

Investments in natural capital can be motivated by global targets if it is feasible to *set site-specific goals*, the businesses know *how* the targets can be reached, and impacts of investments can be *measured*:

- For **site-specific goals**, a representative of one of the multinational businesses operating in the Spey catchment points out that “most of our investments are made with consideration of global business perspective, including investments to reduce greenhouse gas emissions and reduce water consumption. At the local level though all sites on the Spey have local water savings targets and initiatives which form part of our global initiative (interviewed 30.01.2018)”.
- Even with clear targets, however, there are challenges in making investments to reduce water use, as “water efficiency and saving in a locality that isn’t water stressed is a relatively new field and more work needs to be done to better understand where savings and improvements might lie” in the drinks manufacturing sector (interviewed 30.01.2018), suggesting lack of **knowledge on effective measures** to potentially limit investments.
- For **measuring the impacts of investments**, one of the interviewees notes how investing in local-scale biodiversity projects is a “hard sell, because it is hard to put numbers behind that. The company would like me to say, right, we are taking it from this position to this position”, using “some kind of metric or ranking”. Defining the company’s responsibility and impact on biodiversity “in black and white” poses a further challenge for setting and delivering global biodiversity goals on local level, as illustrated by the representative of one of the whisky distilleries:

If we’re not having a direct impact on species or sensitive areas then it becomes less clear what role we should adopt. As a business we’re familiar with working with well-defined metrics e.g. to save x amount of water and create a project to deliver against this target. With biodiversity it seems much harder to set down a clear benchmark and understand in clear terms what we want to achieve (interviewed 30.01.2018)

Motivation E: Additional motivations for products with environmental responsibility as a core value for the brand

Environmental responsibility was identified to be a core value that many businesses in the Spey area promote through actions and investments in landscape assets. Businesses that attach environmental sustainability as a value in the brand for the products were motivated to invest due to consumer demand and potential for good news stories. These brand-driven investments in sustainability, however, were seen to have limited positive environmental impact, because they were often short-term and small financial contributions. These three considerations in investments attached to sustainability-driven brands are outlined in further detail below.

Although environmental responsibility is a core value that many businesses in the Spey area, it was seen to be **less important driver** for actions for three types of businesses:

- Businesses with supply chains that were more dependent on other landscapes, such as the wool used by textiles industry (interviewed 02.02.2018)
- Businesses that have separate philanthropic organisations or charitable foundations that determine funding targets to promote corporate responsible values, which was the case for two large businesses in both food manufacturing (interviewed 21.12.2017) and hospitality (interviewed 19.12.2017)
- Blended whisky brands that have more than one location associated with the product, as mentioned by a whisky industry representative (interviewed 15.12.2017)

Consumer demand

For certain product types in the Spey catchment, such as single malt whisky, customer demand was also identified to have the potential to drive business investments in natural capital through, for example, enhancing environmental standards in quality assurance schemes for barley:

There is more interest in where things come from, how they are made, who makes them, so some of the single malt distillers are being much more specific about where the barley will be grown, and who is growing it, and promoting that more (whisky industry representative, 15.12.2017)

Consumer demand was seen as a “hook to hang other things on” that indirectly enables the delivery of other environmental goals, such as environmental “risks we might want to manage in the future (whisky industry representative, 15.12.2017)”

“It is a good news story”

Many of the recent investments in natural capital, for example to reduce carbon emissions or purify water, were seen to make compelling news stories that had the potential to be part of the brand story, which demonstrate how the businesses are “being an industry leader”, and are “going way beyond from what is being asked, to try and reduce our impact on the environment (whisky industry representative interviewed 18.01.2018)”.

Despite the potential marketing benefits, investments in natural capital are “not yet used in company’s branding (whisky industry representative interviewed 18.01.2018)” for a considerable proportion of the whisky distilleries, because the company executives “do not like to publicise it (whisky industry representative interviewed 21.12.2017)”. One of the businesses saw sustainability-driven branding to create risks if there were future issues in meeting environmental standards: “If you put yourself up there on a medal stall, there is only one way you can come. And that is down (whisky industry representative interviewed 21.12.2017)”.

The future marketing for The Spey catchment brands, however, may reflect some of the major investments in low carbon emissions and effluent treatment solutions. One of the representatives of a major whisky distillery believes “the company is heading to the direction where marketing reflects (interviewed 18.01.2018)” the recent investments made in renewable energy. Another whisky industry representative saw it as the company’s next step to raise awareness of how the wetland created on their site to purify outgoing water cooling water brings wildlife to the site:

[The wetland] captures all of our effluent, which is treated to the standard required by the regulator, and just before it goes back into the river . . . It brings in lots of ducks to the area. . . The heron comes as well, you do see deer as well wandering down there. Because it is the bottom third of the site, it is fenced off, so there is nobody really in there. So that it is a haven for wildlife. I have not carried out a study yet or said to people what is down here. That would be the next stage, look and say, without realising it, we have created a habitat here (interviewed 21.12.2017).

Limited environmental impact

Businesses interviewed perceived the corporate responsibility -driven investments to have limited environmental impact for two reasons: businesses were willing to invest limited amounts on targets that were not primarily driven by financial returns; and they were less likely to guarantee long term investments that are required for delivering long term goals.

- Investments driven by responsibility, instead of returns, were seen to “limit the amount of financial input you get” (whisky industry representative interviewed 15.12.2017), as “there is more than one pool for the businesses’ spare cash” (whisky industry representative interviewed 21.12.2017).
- The potential longevity of corporate responsibility -driven investments was seen to be limited, as shifts in marketing strategies could affect the relevance of the investments for enhancing the company’s brand. A representative for the whisky industry notes that businesses are “more likely to change [funding targets]:

. . . Because of adjustments to the way in which the product is marketed, and the cues they are going to use to do that. So, there is less guarantee to be a long-term investment, I would say, because people like to have new things they can talk about. The fact that it’s been the 20th year you’ve been supporting a project doesn’t always have the same ring, unless you can do some new things through that route, that it not to say that we don’t have things that we haven’t supported for a long time, there are (interviewed 15.12.2017).

Motivation F: It makes us a better neighbour

Being a good neighbour was a widely shared motivation for businesses in hydropower, whisky distilling, beer brewing and food manufacturing businesses. Businesses finance a number of natural and cultural heritage projects, but also investments in resource efficiency (“[saving water] is the right thing to do . . . that gives more water for others to use in the rest of the catchment (whisky industry representative interviewed 30.01.2018)”, on the basis of “being a good neighbour and part of the community (whisky industry representative interviewed 15.12.2017)”; and because “[funding a dolphin conservation charity] is a good wholesome thing to do (independent craft beer representative interviewed 01.02.2018)”. A hydropower sector representative felt funding local projects helped the company to be seen as part of the community, rather than only having environmental impacts (interviewed 06.02.2018).

The businesses recognised their collective responsibility in contributing towards environmental sustainability in the local area, implying they had a role in financing local heritage projects: “We are

all based in the Spey, shouldn't we be giving something back to the Spey, the answer might be yes (whisky industry representative interviewed 15.12.2017)". Their role in the Spey area was also recognised in terms of employing local workforce:

Businesses [should] take more of an interest in the areas they are sitting in, even if they are not necessarily impacting that landscape . . . If their workforce is local, the business has an impact on the communities as a whole (food manufacturing representative interviewed 21.12.2017)

Protecting the company's reputation was raised as an important part of being a good neighbour, which had motivated a major textile manufacturer to invest in reductions of chemical inputs (" . . . because we are a family company, the place is so important to us, the last thing we want to be doing is introducing anything harmful to it, interviewed 02.02.2018"). Similarly, the food manufacturer who recognised their reputation "locally as a big employer", saw that any actions to "harm the environment" to have a "very bad" impact on their reputation locally (interviewed 21.12.2017).

Lack of pressure from local stakeholders was mentioned by one of whisky distillery representatives as a potential disincentive to investment. Although the business has sponsored an environmental catchment initiative for several years, the representative felt that there was no "massive pressure to do that at the moment". The representative gave another example where the company was taking actions to reduce water usage, even though "no-one is asking us to use less water, and he found it "quite difficult to do [invest in water saving] as a business as we have tonnes of water".

Motivation G: The business is having an impact on the landscape

Identifying to what extent individual businesses are having a tangible impact on the Spey was generally seen to be hard to prove. Although businesses felt that "everybody agrees, you should get everything back to being pristine, back to its natural condition", and recognised the Spey to be "crucial to what we do", none of the businesses interviewed, apart from one tourism sector representative (interviewed on 30.01.2018), thought their business operations had a considerable enough impact to justify further investments in the Spey landscape. Businesses felt that "we don't have any impact on the environment round about here", which is why "there is no need for us to invest any more in the catchment" (whisky distillery representative interviewed 21.12.2017).

Whereas whisky distilleries are "making considerable investment" on water management and greenhouse gas reduction "because there is a recognised global impact from burning fossil fuels or using water in certain areas", investing in land and river management was described to "quite a hard sell" because they "are not having a defined impact" on the Spey environment:

"Our water usage appears to be sustainable but that does mean making a business case for additional investment difficult. If we were having an impact then that would provide a potentially quantifiable target for improvement (interviewed 30.01.2018)"

There is one exception to the difficulty of determining environmental impacts of individual businesses. This was the longstanding case of the Spey Dam, which was recognised to present a barrier for salmon migration amongst many of the interviewees across a range of sector (hydropower, fishing and tourism).

Motivation H: Public sector as a carrot or a stick

Some of the recent business investments in the Spey have been driven by incentives set by the public sector. The incentive mechanisms include access to tree planting grants, and the availability of competitive public sector -funding for land management, cultural heritage projects and research and development. In addition to the funding opportunities listed above, regulation was seen to have

driven recent and future investments, particularly in circular economy in the Spey area, and to a lesser degree, towards invasive species management. Some of the interviewees, however, felt that the current regulatory framework for emissions reductions, as well as the implementation of the water framework directive, were not sufficiently effective.

Availability of public funding

Availability of funding was a motivator for small-to-medium scale investments in all three key areas of investment: protecting landscapes and biodiversity, connecting people with the landscape and circular economy:

- **Tree planting grants** – For one of the major whisky distillery companies, who had made some small-scale investments in tree planting, the “business case is based on grant schemes, as part of a land management approach that delivers biodiversity benefits”, which they “would have not done it by themselves if that [financial] support had not been there (interviewed 15.12.2017)”.
- **Availability of competitive funding for land management and cultural heritage projects** – One of the major whisky distillery companies (interviewed 15.12.2017) had sponsored funding bids to Heritage Lottery Fund with the aim of leveraging funding from the public sector.
- **Availability of competitive funding for research and development** – The whisky distillery company (interviewed 15.12.2017) had also sponsored a bid for a government-funded research project, to understand the potential benefits of nature-based solutions for managing temperature and increasing base flows in The River Spey and its tributaries. Another large company in textile manufacturing had invested in research and development to determine the feasibility of a project for improving their effluent treatment processes, because of the financial support received from a government agency (interviewed 02.02.2018).

5.2 Environmental regulation

Requirements to enhance circular economy, and particularly to reduce carbon emissions, were the most important regulatory driver for investment in the Spey. Regulations to reduce carbon emissions were seen to be partly driving the whisky distilleries in the area to invest hundreds of millions of pounds in infrastructure and measures (economic partnership representative interviewed 17.01.2018)”. In addition to reducing their carbon footprint, regulation had also driven investments in other aspects of circular economy, including water management to purify discharged water. One of the major whisky distilleries (interviewed 21.12.2017) had invested in the creation of a wetland on their site to minimise the amount of dissolved copper discharged from the site, although since then the regulations have changed to address availability of bioavailable copper in the water discharged.

Regulation was also driving investment in protecting landscapes and biodiversity in the Spey, although on a considerably smaller scale compared to the circular economy investments. Businesses were, for example, participating in a catchment-wide initiative to eradicate invasive non-native plants to meet their “legal obligation not to let invasive plant species spread” (interviewed 18.01.2018).

Overall, the prospects of tightening environmental regulation were seen to motivate businesses to plan their investments in environmental performance proactively to manage the costs involved:

As regulation gets tighter, [the risk is that] we will be playing catch up instead of being ahead of it, and you might end up doing something quickly rather than doing it properly, and you end up spending

more money on it sometimes because you didn't get it right the first time (food manufacturing representative interviewed 21.12.2017)

Regulation was also seen to be insufficient in driving investments in the environment. Some of the interviewees representing a range of sectors (food manufacturing, tourism and fishing) felt that current regulations for emissions reductions, which require businesses to audit the energy used to identify cost-efficient energy saving measures, were “toothless”, because there was no obligation for investing in carbon reduction (representative interviewed 21.12.2017):

Although you have to identify areas you can improve on, there is no obligation to actually do that. . . so it is kind of toothless. Maybe that won't carry on for much longer, which I think is a good thing, because it does give us some extra teeth.

Some of the businesses also felt the regulators were not implementing the water framework directive sufficiently effectively, which reduced the economic productivity of fishing businesses in the Spey:

The water framework directive is supposed to make sure that the Spey dam is passable for fish, which it is not. SEPA has now said that it is an unpassable barrier [implying they did not admit that in the past], but they don't do anything about it. [Does that impact your business?] Definitely. It takes about 30% of the water at the top of the Spey. . . There is no doubt that there is very much fewer salmon now than before those dams were put in” . . . [the evidence] has been presented to SEPA a thousand times (business stakeholder interviewed 19.01.2018)

There was also concern amongst some of the interviewees that the insufficiencies in implementing the water framework directive were driven by political and economic pressures for development:

If a business wants to get something done for business purposes, they will allow it to happen”. They [the environmental regulators] don't have any teeth, especially if a minister [of Scotland's leading political party] gives them [the regulator] a call and says, actually I want this factory to happen (business stakeholder interviewed 19.01.2018).

5.3 Opportunities for mainstreaming private investment in natural capital

Businesses interviewed felt that there is potential to diversify the investor base and the investment mechanisms to manage natural capital in the Spey through assurance schemes, visitor giving, and volunteering.

Assurance schemes

A whisky industry representative (interviewed on 15.12.2017) highlights soil erosion to be one of the risks the whisky industry is deliberating to manage, and considers assurance schemes as a potential mechanism for incentivising sustainable land practices: “If we want to source materials responsibly, then are there things we could require as part of assurance schemes in the future that would protect or manage those risks, by requiring certain measures to be taken if you're growing barley”.

The senior executives in a locally based fabrics industry (interviewed on 02.02.2018), who are making long term investments in knowledge sharing amongst the herders that supply the wool for the business to secure sustainable management of land in Mongolia, envisaged their investment in capacity-building to be create the foundations for establishing a certification scheme:

What we would like to get out of it eventually is a certification that you can get from this group [Sustainable Fibre Alliance] that show that they are working to this high standard, and then that becomes something that our brands can buy into.

New mechanisms for visitor giving

Businesses recognised the potential for voluntary visitor giving as a feasible financing mechanism, given the high volumes of visitors to e.g. Speyside distilleries (“six visitor centres with 100 000 [annual] visitors, whisky industry representative interviewed on 21.12.2017”), as well as the need for funding to maintain the path network in the Cairngorm National Park:

We do recognise that there is need to maintain the path network, businesses and visitors benefit from it. We have talked about this a lot at board level within our [tourism sector] organisation. We have talked about a lot with members . . . We believe that the concept of visitor giving is good. And we would support that (tourism sector representative interviewed on 31.01.2018).

Two potential pathways for visitor giving were mentioned by the businesses interviewed. Visitor levies were identified as a way of collecting donations from tourists in whisky distilleries, and crowdfunding mobile applications were mentioned for collecting direct donations:

- **“Could you charge a levy onto every visitor?** A pound for habitat initiatives? I don’t think there are many people who wouldn’t pay a pound. And it is a simple fix. It is like a tourist tax. Want to come to Speyside? You pay an environment tax. That would work. That would not hit the businesses. That would hit the tourists. Because they are a customer and a visitor to the area. So, we could ask for donations. We could put a levy on all the visitor centres (whisky industry representative interviewed on 21.12.2017)”
- Use of **mobile phone applications**, which enable donations to reach the receiver directly without intermediaries, was seen to be the best way forward for increasing visitor giving towards land management in the national park. Funding models to increase visitor giving had been discussed in depth amongst stakeholders involved in the management of the Cairngorm National Park at the top of the Spey catchment, and private sector representatives were most interested in promoting technology-based crowdsourcing models, as envisioned by a representative of a local business partnership:

If somebody can come up . . .with a product [in] which, if I’m walking off a path, and my phone pings, and says, hope you have enjoyed this path. If you want to donate £5, press this button. To help maintain the path for you and others, and your kids in the future. That direct appeal, I believe, can work (interviewed 31.01.2018).

It was recognised, however, that mobile phone -based funding was not a panacea to issues with visitor giving, as recent trial by the Cairngorm National Park Authority to raise funds for landscape conservation, by asking visitors to use a text message to donate £5 during promotional weekend event: “[The text message donation campaign] was promoted reasonably heavily throughout the weekend. And they did not get one penny. Not one person texted (tourism sector representative interviewed on 31.01.2018)”. Avoiding administrative costs were seen to be important in achieving success in future crowdfunding initiatives, particularly amongst young adults:

I think people are very . . . savvy now about where their money goes. They want to know that if they have walked down this path, then their money is going to maintain this path. Not go into a pot that is being administered by some expensive bureaucracy. Ninety-five percent of it is going to go maintaining that path (tourism sector representative interviewed on 31.01.2018).

Volunteering

Organising staff volunteering days was identified as a potential way for businesses to help control the spread of invasive species, such as hogweed, in the Spey catchment. A representative for a whisky

distillery company that employs about 250 people in the Spey area, was considering organise “a charity weekend, to get all the staff to come in, and take the weeds out (Interviewed 21.12.2017”), which would also help the company to raise staff awareness of their environmental surroundings to support behavioural changes:

We have got a big river here, there is a nice bit of environment we could be enhancing . . ., we could be getting people on site [of the whisky distillery] more interested in [the river]. And then they might take more of an interest on what they are doing on site.

6. Is there potential for coordinated business investment in natural capital?

Working together across companies to address shared goals was seen to be common amongst sectors both locally and nationally. Representatives in the whisky sector, in particular, felt that different companies in their sector had an open dialogue that benefited the industry as a whole:

You will find that the whisky industry is very close knit, and the ideas are shared quite freely and openly. It is very normal for us to go and visit our competitors, and they will visit us. I think that is a huge benefit for the industry, that we share and try to advance the industry, not just ourselves (whisky distillery representative interviewed 18.01.2018).

Coordinated action in the whisky industry was identified to help to streamline regulation. For example, the whisky distilleries have been supplying their organic residue by-products to farmers to fertilise land banks (under the SEPA waste management exemptions), “for 50-60 years with no impact (whisky sector representative interviewed 21.12.2017)”. On the basis of the successful sector-wide compliance with the requirements of the exemption, the industry now feels that they “don’t need all the bureaucracy around it”, and they are currently working to streamline the regulation, by creating an industry code that has sufficient rules in it, to ensure the continuation of high standard practice across the whisky sector.

Overall businesses across sectors felt that **there was potential for coordinated action** to protect the Spey landscape. The Spey area was seen to be a fertile ground for innovating and trialling new models for business engagement, because the business stakeholders were already engaging closely with public and third sector in the area on land management issues. A representative of a local business partnership notes, however, that businesses are less inclined to engage in initiatives that require direct financial contributions:

This is a great place to try things like that because we are a national park, because we already have a lot of structures in place. We [the business community] work with really closely with the national park authority, the access and planning authorities and with other agencies. . . We are always up for trying new things. And our members are always up for trying new things. Largely if that involves them not having to put their hands in their pockets (interviewed 31.01.2018).

6.1 Is there a case for coordinated investments?

From the seventeen interviews with business stakeholders, four main types of motivations for coordinating private sector investments were identified. Coordinated investments would help to achieve **more impact**, either because businesses can pool funds to deliver high-cost projects, or because coordinated business investment can leverage more public funds. Coordination was also seen to be relevant given the **shared interests** amongst businesses around timber production, biomass, by-product recycling and visitor awareness raising. Existing coordinated action, through a local economic partnership and a recently established local waste forum, were seen to be motivated by opportunities to deliver **long-term strategy** and achieve **shared learning** amongst businesses.

Majority of the businesses felt that there was potential for coordinated action to **enable shared learning amongst businesses and land managers** to support investments in all of the three key areas of investment (land and river management, engaging people with the landscape, and circular economy). There was a shared view amongst businesses interviewed that coordinated action to support learning and capacity-building was more achievable and aligned well with their existing goals and activities in the area (businesses interviewed on 15.12.2017, 19.12.2017, 21.12.2017 and 16.01.2018). Few of the businesses identified clear topics where shared learning would be required.

Some of the suggestions included sharing information about access to grants amongst farmers and biomass energy solutions.

More impact A representative for the whisky industry recognised how coordinating business investments “would allow to band together some businesses to do something bigger”, which could be relevant in reducing the carbon footprint of businesses in the Spey area:

If we have to pay a lot of money because of the carbon we release and other companies in the area have a carbon problem, we could all band together, and say, we need to capture this much carbon, and we get together to for example plant trees, or we invest in carbon capture and storage technology locally. Perhaps individually your budgets would not be big enough to do anything, but if you get a bunch of people together, and all committed to paying an agreed amount to the pot, which could then be used to offset your carbon. I can see that working (interviewed 18.01.2018)

Another representative of the whisky sector saw the public sector to have a potential role in incentivising coordinated investments through public match funding:

The other thing that is quite nice [about coordinated investments] is that you are potentially able to leverage quite a lot of additional funding, so other companies have to take part, if it is open for match funding from other public sources, then that all makes it much more attractive (whisky industry representative interviewed 15.12.2017)

Shared interests A representative of a local economic partnership saw there to be local relevance for coordinating investments “around businesses investing in timber production and tree planting, biomass, use of draff (interviewed 17.01.2018)”, whereas a representative of a local business partnership felt the main shared interest was around visitor awareness raising:

Our [the tourism sector’s] job is to attract visitors to the area. When we attract visitors, lots of visitors will come, who can cause damage to the environment. Whether it is freshwater mussels on the Spey, or whatever is, they can cause damage. Whether it is fragmentation of woodlands, and Capercaillie habitat. But it is through ignorance, and not deliberate action. There is more that the public sector and private sector could do together . . . to help our visitors become better informed. . . If it is ever pointed to them that they are having a detrimental effect on the landscape, then they would be pretty devastated by that . . . That is the gap, and there is a real opportunity for public/private sector agencies to work together to help our visitor gain more enjoyment out of our environment by understanding their own actions on the environment (interviewed 31.01.2018).

Delivering long-term strategy A food manufacturing representative explains why they had decided to join a recently established business partnership to improve waste management, even though they benefited relatively less in the short-term, compared to other business participants:

There might be other areas where we might benefit from the partnership later down the road. It might not be waste, it might be something else. Until you talk to each other, you don't know (interviewed 21.12.2017).

A representative of a local economic partnership explains why businesses are motivated in partnership working: "It is harder for the businesses to see the benefits to their day-to-day operations. [Their] motivations are more around contributing and influencing [economic] strategy and investment" (interviewed 17.01.2018)

Shared learning

A representative of a local business partnership believes that the businesses in the area "would be more than happy [to participate] if we provide them with a forum to share their knowledge, and help to educate others in sustainable use of the river", as the local businesses actively took part in locally organised business events (interviewed 31.01.2018):

We have demonstrated consistently that people are more than happy to come together and are willing to, and want to, come together to help to fill those [knowledge] gaps and learn from the experience of others. And from those who have got the experience, on the whole, are very willing to share. Because their passion is the river, their passion is not making money, their passion is the river. The river, and its environment, enable them to make a living, so then they can go on and enjoy the river, paddle on it . . . And because their passion is the river, they are happy to share their knowledge and expertise.

6.2 Challenges for coordinated business action

Spatial scale of responsible investments may not fit catchment-wide partnership working

Working on catchment-scale is one the key motivations for public and third sector stakeholders to engage in land management partnerships. Some of the businesses, including a business stakeholder interviewed on 20.12.2017, also recognised the benefits of working across estate borders:

Planning in the countryside should be on the same sort of scale as it is in towns. So, you have an area, like there, which you're allowed to [use for intensive forestry], and you have an area there that is much more restricted [in terms of land management]. And you need integrated access. When you come to a subsidy regime in the future, you say, no. It is landscape-scale. You all need to get together.

Catchment-scale actions, however, were not always seen to be the most effective or convenient scale of action amongst the business stakeholders interviewed, potentially limiting their interest in coordinating investments.

- Most of the businesses operating on national or global scales do not currently invest in catchment-scale projects, as the tourism business representative illustrates:

We are already doing this [donating to land management], but it doesn't link with anything specific in the catchment, and that is unlikely to change . . . It is easier and makes more sense for us to support a nationally operating land management business than it does to work [on catchment-scale]. That is not to say that we are not open to that (interviewed 30.01.2018)

- Some businesses felt that localised action was a more effective means of achieving impact:

- “We don’t work on much catchment-wide issues. [Is there interest in doing that?] People might say: why should we bother with something that happens upstream but does not affect us? You have to target your resources to what is really relevant for the company . . . Some things need to be done individually, some catchment-wide. Why should we be paying to a farmer to improve something that does not directly affect us? . . . We wouldn’t want to be paying for doing work on other people’s land (whisky distillery representative interviewed 18.01.2018)”

Diverse business types

Businesses interviewed indicated four types of challenges in working with businesses in different sectors, and of different sizes. These challenges relate to working at different paces, sharing interests, time limitations and power dynamics.

- Working with businesses in different sectors was seen as a challenge because different sectors work at **different paces**:

Managing all the contributors would be a challenge with [coordinating business actions]. You would have a lot of businesses . . . with all different attitudes. We move at a different pace compared to for example (a manufacturing company in a different sector, whisky industry representative interviewed 18.01.2018)

Working with businesses in the same sector was also seen to be an advantage as their **interests would be closely aligned**. For example, a tourism sector representative considered it likely that the business would “remain in the tourism sphere” in terms of coordinating investments, as they would “look to work with businesses that are using natural capital and the [landscape] asset in a similar way (interviewed 30.01.2018)”.

- Working with businesses of different sizes was mentioned to impact the **amount of time businesses could dedicate** to coordinating actions:

“With any type of collaborative initiative, businesses are usually at different stages of maturity, and have different levels of resource to try and spend on this. Some of the smaller companies in [a local waste management initiative], have one person that covers a range of business operations (food manufacturing representative interviewed 21.12.2017)”

Differences in the size of the business also impacted the **power dynamic** between the partners, as illustrated by how a business (interviewed (01.02.2018) had chosen which whisky distillery to approach for setting up a collaborative project: “I was looking for a distillery to work with, and it needed to be an independent distillery, because a chain would have just squashed us”.

There is less of a competitive advantage in coordinated investments

Businesses perceive bilateral investments in landscapes to bring more competitive advantage in terms of marketing. This perception, mentioned by several businesses, was illustrated by one of the business representatives as he justified why their company had decided not to invest in a local landscape initiative: “When [our company] is considering whether they should be contributing to the [the local landscape initiative] . . . One of their big competitors is, so they haven’t (interviewed 18.01.2018)”.

Having less influence in how the funds are spent was also seen as a caveat in investing in projects with multiple other investors (“It all depends on . . . and how much influence you can have, food manufacturing representative interviewed 21.12.2017”). This was seen to be one of the major draws for why one of the whisky distillery businesses is funding a local landscape partnership:

It currently works well for us because as the only commercial sponsor we have some stake in understanding and even influencing the direction of the project. We would of course be interested in larger initiatives but wouldn't then see these advantages (interviewed 30.01.2018).

Attitudes towards coordinated action

Willingness to work together, and share information, was seen to be an important prerequisite for successful coordination efforts (“it all depends on people wanting to work alongside each other”), which had been a challenge in recent efforts to foster coordinated action amongst businesses:

[Weaknesses of landscape-asset model] Willingness for companies to do it together and share information. “Sometimes you have to be a bit open and honest about things you are not doing, which you should be doing. For some people, they are not willing to be that honest. Some of the companies who received the invitation to the [local waste] forum said no and put the shutters up. That is a shame, we could all be learning from each other (interviewed 21.12.2017).

Building interest in coordinated action at the **executive level** was described to be a particular challenge across sectors interviewed, including the food manufacturing businesses:

Within my role, environment sits very firmly. But getting the executive level to look at that and say that we would like to work with other businesses. That is a bit more difficult. Because, immediately, it is about, what is the benefit to us, what is the cost to us? Will we get out of it what we need? Will we be enabling others to get out what they need (interviewed 21.12.2017)?

Leadership

Establishing effective leadership was identified as an essential ingredient for a coordinated business action to succeed. The role of the leader was seen to envision what the partnership would look like in practice, and communicate the vision effectively to the businesses taking part:

“I think it [coordinated business action] can work, but it needs leadership. It needs vision. What are you asking us to imagine? We can't imagine it. You need someone who can visualise it, and say, this is what it could look like, very clearly and specifically (whisky distillery representative interviewed 18.01.2018)”.

Effective leadership was also seen necessary for driving action forward amongst partners, as described by a hospitality business representative (interviewed 19.12.2017)

“I think it [partnership working] is done because in the vast majority of cases it is the best solution, but it takes very clear, very strong direction, with an independent chair, to be able to drive a partnership forward successfully”.

Rules for pooling investments

Businesses identified different ways in which the level of contribution could be determined across the businesses in the partnership. The amount of funding provided per business could be determined based on a principle of “the bigger the businesses, the bigger the contribution”, although this was seen to be potentially problematic as the larger businesses may feel that “they are getting the same level of benefit as everyone else (business interviewed 21.12.2017)”. This view was mentioned to be the perspective that “usually tends to come across (whisky industry representative interviewed 21.12.2017). Alternatively, the investment contribution could be based in proportion to the risk exposure, such as probability of flooding, that the investment helps to mitigate (economic partnership representative interviewed 17.01.2018)

7. Can intermediaries help to mainstream private sector investment in natural capital?

In this section we outline the potential for intermediaries to help mainstream private sector investments in natural capital. Drawing from seventeen interviews with businesses and eight interviews with Spey Catchment Initiative members, we highlight the value and challenges of investing through an intermediaries based on the experiences of the interviewees. Finally, attention is also drawn to a successful direct mode of private investment, or sponsorship, which was widely recognised to be an important and successful investment model in the Spey.

7.1 Value and challenges of working with intermediaries: business perspective

Businesses who currently work with intermediaries to invest in protecting the landscape and biodiversity saw it had helped them to source the relevant expertise about the local area, work with land managers, and achieve impartiality in land management decisions they fund. One of the businesses also felt that working with intermediaries helped them to deliver biodiversity goals, which was seen to be a more difficult task for businesses operating on a global scale.

Expertise	One of the main motivations for a whisky distillery business (interviewed 30.01.2018) to sponsor a land management initiative was their local and ecological expertise that allows them to set land management priorities in the Spey catchment: “We just don’t have the expertise and time to determine what the priorities might be for the catchment”
Connecting with land managers	<p>A textile business representative works with an intermediary in East Asia to enable engagement with land managers:</p> <p><i>“We were looking for a partner on this because it is a very difficult area for us to operate in. It is geographically far away, it is very specialist because you have to have language skills, the herder community is hugely diverse, and there are thousands of them. So, we wanted somebody to work with on the ground (interviewed 02.02.2018)”</i></p> <p>A tourism business representative notes it is not always easy to identify landowners: “When it comes to land managers, who are not always visible enough. Finding out who owns what and the rest of it, is not always straightforward. I suppose, to some extent, there can be some value in that. Working out who it is that you want to talk to (interviewed 30.01.2018)”</p>
Delivering both land management projects and awareness raising	“The thing I like about [a local landscape management partnership] is that it is about taking direct actions but also about knowledge building. And that works really well. If it was either one separately, particularly if it was just knowledge building, without any action, then the partnership would be much less effective (whisky industry representative interviewed 30.01.2018)”

Impartiality	“It much easier for us to invest in a group that is independent and decides where the priorities are, rather than for us to pay an estate. We don't want to directly influence estate management practice - it's far better this comes from a multi-interest partnership. I really like that about the initiative (whisky industry representative interviewed 30.01.2018)”
Delivering biodiversity goals on local level	“Our environmental strategy says that we will try to lead also on biodiversity [in addition to other environmental goals), but that has been the harder thing for an industry to pick up on. . . So that where you need a more collaborative, smaller-scale, holistic approach. That is not a familiar place for industries. So, that is where we became part of [a local land management initiative], because it is not something that we specialise in. Looking at biodiversity and landscape, it is more difficult to do on global scale (whisky industry representative interviewed 30.01.2018)”

The two main challenges in working with intermediaries to invest in landscapes were lack of transparency of how funding is used, and the administrative costs. These limitations were seen to make intermediary-based initiatives less attractive investments for both businesses as well as visitors. One of the business stakeholders, who was sceptical about the effectiveness of intermediary-based visitor schemes, noted that there was “very little evidence anywhere where such schemes had worked (interviewed 31.01.2018)”

Lack of transparency on how the funds were spent was one of the reasons for why one of the businesses interviewed preferred direct relationships with land managers (tourism sector representative interviewed 30.01.2018):

“We are not interested in throwing money at something. It is almost greenwashing. It's like conscience easing: we contribute x amount to charity. Who? Why? How's the money being used? That is what is important to us. And it is not always easy”

A business, who preferred to directly fund land managers saw that there was potential for initiatives involving intermediaries to coordinate business investments, if the intermediary is transparent about how the funding is used:

“Very efficient, frugal thing that can show its costs and where it is going, your transparency essentially. Then I think that is when that [coordinated business investments through an intermediary] would work. Because, as a business, I would like to think that every single penny I give to that charity would get there (business stakeholder interviewed 01.02.2018)”

7.2 How intermediaries can help to coordinate private investments from a business perspective

Business stakeholders interviewed recognised three ways in which intermediaries could help to facilitate coordinated investments in the Spey. Intermediaries could provide connections between businesses and land managers, facilitate dialogue and coordinated investments between small businesses, and engagement with multinational whisky companies.

- One of the businesses who usually preferred working directly with land managers, felt that investing through an intermediary could be justified if they provide “**a meaningful**

connection” between the businesses and the land managers where it “is otherwise proving to be difficult (tourism business representative interviewed 30.01.2018)”.

- They were also seen to be potentially valuable in brokering “**dialogues between little microbusinesses**”, or in helping to “funnel very small contributions into a collective contribution that has value and meaning (tourism business representative interviewed 30.01.2018)”.
- Some representatives of the non-whisky sectors felt it was challenging to **engage with multinational whisky companies on local level** (“We only get an opportunity to get in front of them every now and then, business stakeholder interviewed 20.12.2017”), as illustrated by a representative of a local economic partnership:

Problem is that many of them are owned by multinational conglomerates who have businesses all over the world. Speyside is just one place where they manufacture, so they have less incentive to do something that would benefit the region . . .but it is difficult to get commitments from them because they are global organisations (interviewed 17.01.2018).

To improve whisky sector engagement with the other sectors in the area, one of the interviewees suggested the establishment of a Spey whisky body. A regional sector body for the whisky industry could then enhance the potential for collaboration with the other sectors in the Spey area.

7.3 Business models that do not require an intermediary

There are successful examples of business investment in natural capital that do not involve intermediaries. Both businesses and Spey Catchment Initiative members recognised the value of direct sponsorship arrangements, and there were several examples of positive experiences across sectors and with different land managers.

The majority of the businesses and Spey Catchment Initiative members interviewed had positive experiences and attitudes towards direct sponsorship arrangements where businesses fund land management or conservation directly without intermediaries (Figure 2). Both businesses and land managers want to continue to invest in the Spey area through sponsorship agreements between specific land managers and landscape partnerships. Both interests would like to benefit from the competitive market advantages of shared publicity.

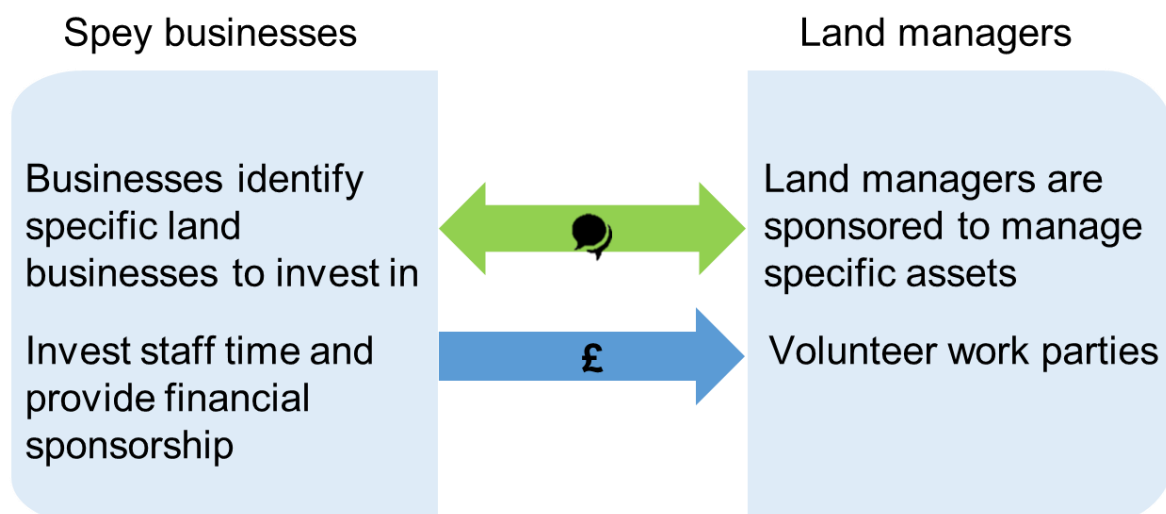


Figure 2. Sponsorship business model involves a varying level of direct dialogue, as well as direct financial contributions, between the two parties. The investment can be indirect (e.g. staff time) or a direct donation.

Examples of direct sponsorship arrangements with Spey businesses include a food producer and wildlife tour provider supporting a conservation land manager's establishment of a tree nursery as part of Woodlands for Capercaillie work, as well as surveys for montane woodland species.

Whilst this is the primary way land managers and other businesses prefer to operate. One Spey Catchment Initiative interviewee made the point that many smaller farm businesses may not have time or resources to devote to this and an intermediary would be valuable.

There is a view amongst some Spey Catchment Initiative members that sponsorship does not need coordination. Businesses and organisation want the ability to choose their own partners and agree terms for publicity. Therefore they do not want an intermediary to do this. This view was restated at the stakeholder workshop (27.3.1).

7.4 Existing coordination via the Spey catchment Initiative

Effective partnership leading to delivery on the ground

The Spey Catchment Initiative is an informal partnership between eight organisations: Spey Fishery Board (SFB), Scottish Natural Heritage, Scottish Environment Protection Agency, Cairngorms National Park Authority, Forestry Commission Scotland, Moray Council, Highland Council, RSPB Scotland, National Farmers Union Scotland and Diageo. Its quarterly steering group meetings provide a mechanism for the partners to coordinate their investments and share knowledge. They engage other businesses and communities in developing priorities for the catchment through stakeholder workshops.

It is a well-established partnership that has successfully delivered 6-7 river restoration projects e.g. Allt Lorgy and helped to develop larger landscape scale project partnerships e.g. Tomintoul and Glen Livet. The partnership is effective and motivated. This contributes to the successful delivery of projects on the ground and motivates the partners to continue to invest time and resources.

"Things happen on the ground...there have been several successful projects over the last 5 years...in other areas things often stall at the implementation stage" (Spey Catchment Initiative member interviewed 01.02.2018)

"For me the strength of the partnership is the knowledge and skills brought by all of the partners – everyone brings something different. Working together we achieve much more than we would otherwise The other key point is that we try and keep the admin and Project Officer costs as low as possible – we aim to spend mostly on delivery" (Spey Catchment Initiative Member)

Strategic approach to prioritisation of issues

The focus of investments through the Spey Catchment Initiative has changed since it was set up in 1999. Initially the purpose was to write a catchment Management Plan; develop a code of practice for engineering works; raise awareness of issues affecting the river and its economic value e.g. the farm water and waste project. However in 2008 priorities shifted to delivering projects on the ground to carry out river restoration works, restore riparian woodland in addition to the education and awareness raising work.

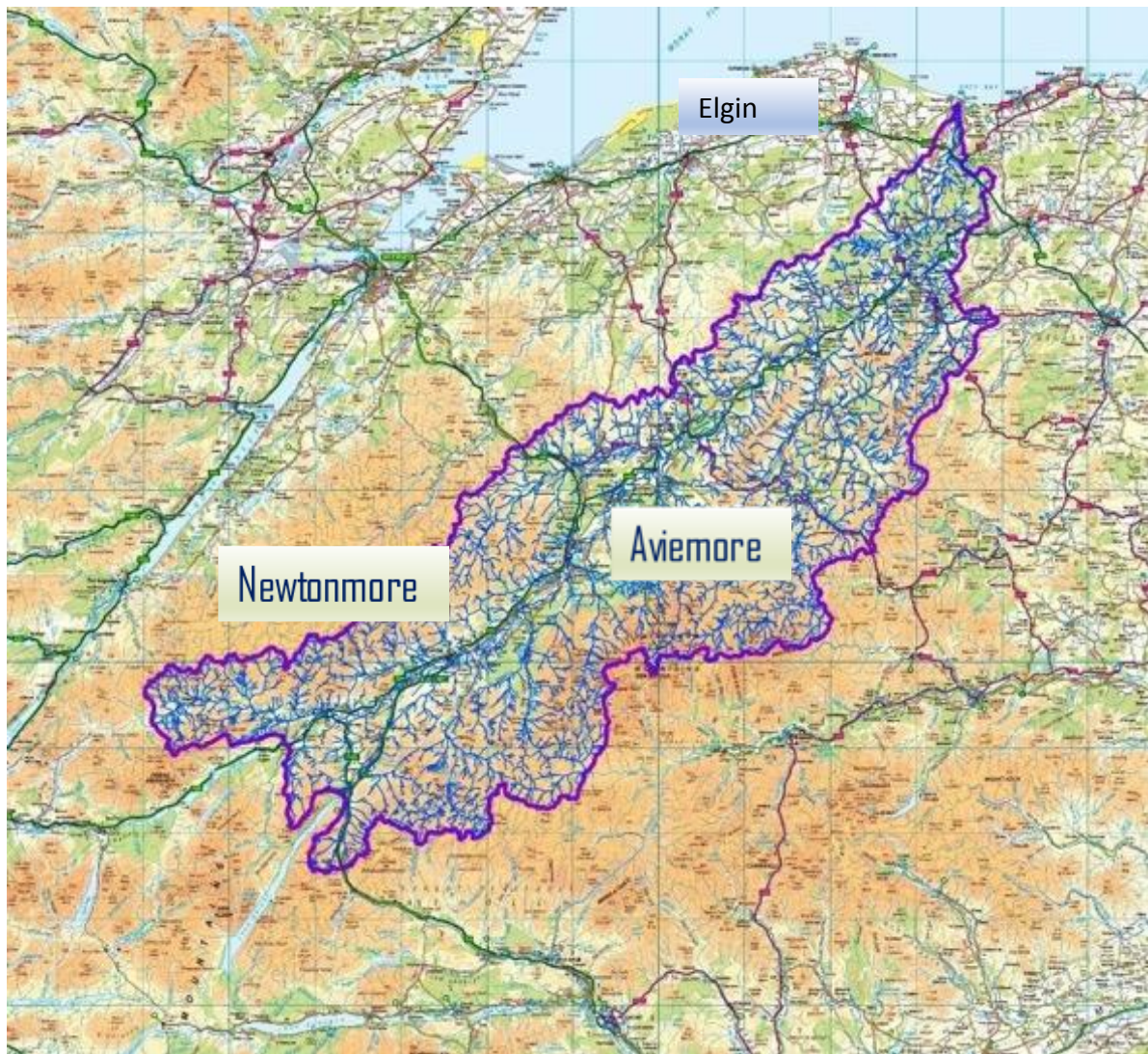


Figure 2. Area covered by Spey Catchment Initiative

Its revised catchment plan in 2016 includes activity beyond the river to farmland, woodland and wetlands. The Catchment Management Plan ¹⁴ sets out in detail the issues affecting the Spey catchment from a broad range of perspectives. The major issues to resolve in the catchment, as identified through the interviews with Spey catchment Initiative Members are:

- Use of water resources – drought and abstraction affecting protected features such as pearl mussels
- Water temperature – impact on spawning fish from industrial uses and climate change
- Water quality – the impact of sediment, peat erosion, pesticides and sheep dip
- Conflict between users working through partners e.g. access, riparian planting

¹⁴ [Spey Catchment Initiative: Publications - Spey Fishery Board](#)

- Achieving land management projects at sufficient scale to influence management of flooding.

Projects are focussed primarily on river restoration, natural flood management and riparian tree planting

Strategic and opportunistic approach to delivery

The Spey Catchment Initiative members interviewed felt that the initiative has good relationships with land managers and this has been key to its successful delivery of projects. It uses the catchment plan to identify and prioritise issues. The project officer and SFB operations manager discuss potential projects with land managers, who also suggest and put forward areas for projects. The Catchment Initiative's Steering Group considers these and is also opportunistic to delivering projects through developments such as the A9 widening project. The actions taken by the initiative are a mixture of environmentally strategic actions to for example plant trees in flood prone areas, but also actions based on opportunities created by development, such as widening the A9 road.

One Speyside Catchment Initiative member thought that the partnership has found it harder to find funding for projects outside the Cairngorms National Park, where strategically there are more issues concerning water bodies in less than good status. However as a group there is a focus in the upper catchment as the improvements at the top produce additional benefits down river.

Intermediary role – how it operates and resources

The Spey Catchment Initiative acts as an intermediary between businesses and land managers in the Spey. The SFB Director manages the project officer who undertakes the majority of the administration for the Initiative's projects. The SFB Operations Manager works closely with the project officer on the development and practical implementation/delivery of those projects. This includes contacting land owners and providing advice on river restoration e.g. A9 dualling; and working on site with contractors during project delivery. Agency partners provide advice on and facilitate consents for specific projects. The non-government organisations contribute advice relevant to their interests. They also support the Initiative through delivering specific projects. (Figure 3)

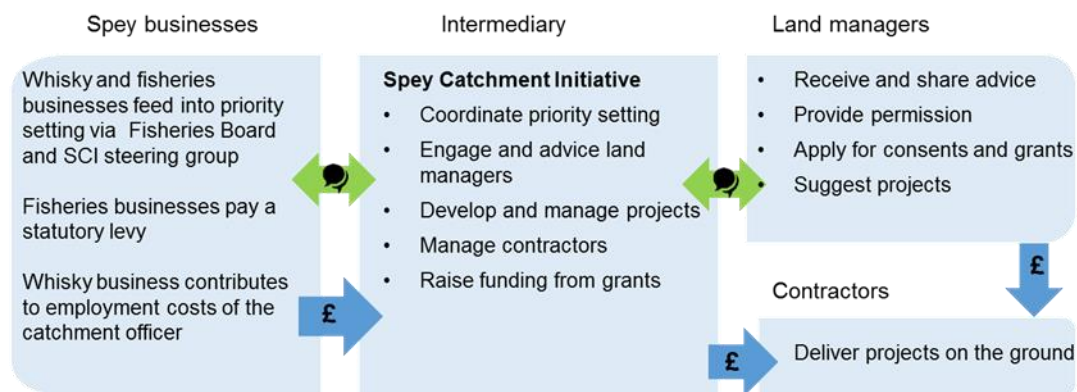


Figure 3 Current coordination of investments and knowledge exchange by SCI

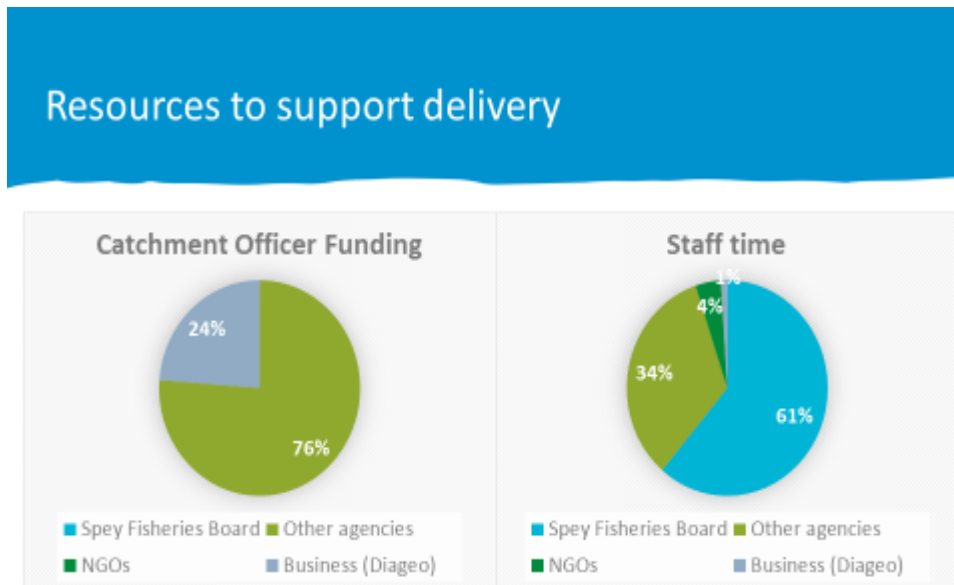


Figure 4. Resources to support delivery by partner type

The financial contributions from the Spey Catchment Initiative partners are used to employ a project officer and to cover some of the costs of specific projects. Different partners provide finances and time to help deliver projects (Figure 4). The officer has six main tasks:

1. Developing and managing projects;
2. Contributing to funding applications with partners e.g. Heritage Lottery Landscape partnership at Tomintoul and Glen Livet;
3. Liaising with land owners;
4. Education work with communities and schools;
5. Coordinating training and skills development.
6. Encouraging research into projects on the Spey.

In addition, partners contribute to costs of specific projects and SNH, in addition to providing direct financial support to the project officer's costs, also supports the post by providing a desk and administrative support.

Resource challenges

The major challenge identified by Spey Catchment Initiative interviewees was securing resources for the person providing the project officer role. The project officer found that a proportion of their time was spent securing their own funding and being concerned about their future employment when the post was funded annually. However overall the partnership has been successful in securing the funding from partners, and the same project officer was maintained for 5 years. The security for the post has been increased through a three year contract. However it was still recognised by one interviewee that.

"The greatest long term challenge is getting on-going core funding for the Project Officer role"
(Spey catchment Initiative Member)

The project officer role was seen as fundamental to the success of the partnership, especially successful delivery of projects on the ground, and building relationships between different interests. The project officer in the Spey was held with high regard for example one interviewee said:

“These things just wouldn’t be happening...” (Spey Catchment Initiative member interviewed 15.01.2018)

In another catchment partnership in Scotland greater security for staff is achieved through service level agreements with local authorities and agencies have been used to secure this role, and enable the focus on bringing in funding for projects and delivery on the ground. Potentially this approach should be extended to other catchment partnerships, including the Spey Catchment Initiative.

One Spey Catchment Initiative member expressed the view that the greater resource challenge is securing capital resources for the project and this can take a lot of the project officer’s time:

“We have been successful in securing funding for the project officer role; what has been challenging is to secure funding to make the projects actually happen. It is securing this project capital that has likely taken up the project officer’s time”. Spey Catchment Initiative Member

Other resource related challenges identified by interviewees were:

- Funding for projects especially outside of the Cairngorms National Park;
- Private funding to match funding bids;
- Funding for community engagement.

Effective engagement of people

Working effectively with people was identified as the third area of challenge for the partnership. Community engagement was seen by one Spey Catchment Initiative interviewee as being key to the success of river restoration projects. Sometimes river restoration is challenging to progress, as some people view it as undoing the *“effort of many generations”* (Speyside Catchment Initiative member Interviewed 25.1.18)

Another interviewee identified that there was opportunity to engage businesses more, especially those who rely on the high quality natural environment of the area. There are existing stakeholder workshops which include both communities and businesses

7.5 Who could provide the role of intermediaries?

Interviews with SCI members, businesses and the stakeholder workshop identified a variety of organisations who could fulfil the role of intermediaries between businesses that do not manage land and land managers.

It was seen as a role that would be helpful to small and medium sized businesses who want to contribute and do not have resources to develop individual partnerships with land managers. Their combined effect could have a large impact.

There was also a view that Government agencies should not lead on setting up intermediaries, instead it should be led by the private sector. Public sector were seen as being driven by their own agendas.

There was discussion about whether the private sector had a responsibility for generating wider community support and engaging businesses with shorter term interests.

They also identified that intermediaries need to operate at an appropriate spatial scale, whilst providing cost effective coordination in terms of resources including government agency staff time and funding.

Potential intermediaries:

- **Catchment partnerships** could provide an effective intermediary to manage business risks and dependencies in a particular catchment. It enables action on land upstream for downstream beneficiaries. This group could provide businesses with guidance on what the natural capital priorities are. It works for managing conflicting uses of natural resources; water based issues; land use change and some climate related dependencies and risks. Businesses would need to be involved in helping to set priorities.
- **Landscape partnerships** e.g. Glen Livet and Tomintoul or Cairngorms Connect could provide an effective intermediary to manage business risks and dependencies in a particular landscape. These tend to cover smaller areas than catchments and enable more community level engagement closer to business operations. The funding for these partnerships may mean that they are not secure in the long term.
- **Local business partnerships** e.g. Chambers of Commerce could provide representation of a range of smaller businesses in an area. It could also coordinate advice and training to businesses on natural capital risks and dependencies. This intermediary would need to work with other partnerships who understand the natural capital priorities for the area.
- **Sector based associations** could provide coordination for farm assurance approaches to secure supply chain risks e.g. long term soil quality of suppliers outside the catchment. However in this approach there may still need coordination of farm advice with other interests e.g. via farm advisory networks.
- **National Park Authority** could also provide the role of intermediary as it has a wide range of responsibilities covering a range of interests and is responsible for strategic planning for the environment and economy. This would not be appropriate for areas outside national parks.

There was concern about setting up a specific charity to administer the intermediary role as these were not seen as having an understanding of the priorities of the area and high administrative costs relative to funds raised. The Cairngorms National Park Authority and Loch Lomond and Trossachs National Park has successfully developed this approach for footpath and other visitor infrastructure.

7.6 How could coordinating business investments be improved?

Different business models for coordinating business investment in the Spey were explored with interviewees based on the case studies (Section 3). These were summarised into four main approaches (See Appendix B for detail):

1. **Landscape assets** – where businesses have identified risks and dependencies to their business. They have a business case for investing in managing specific assets and the investment and delivery of action is coordinated.
2. **Catchment-based multiple benefit projects** – the businesses are less concerned about investing in specific assets, they invest more for publicity & brand. The investment in projects is coordinated and deliver multiple benefits

3. **Coordinating donations** – examples visitor giving or Tesco plastic bag – local donations – coordination across different businesses
4. **Building capacity** - benefit to businesses from investing in the catchment coordination of advice and skills training

Different views were gathered from all interviewees on preferences for different approaches to coordination. Figure 5 identifies the views of the Spey Catchment Initiative members.

Most participants from a business perspective did not have a strong view about individual approaches to coordination. Spey Catchment Initiative members also could see value in different aspects of the business models for coordination between businesses and land managers in the Spey. They thought that the different models provide different benefits depending on the business audience and what they are trying to achieve out of their involvement. Therefore there needed to be some flexibility in approach to meet these different needs. Capacity building was seen as key to all approaches since it coordinated the sharing of information and expertise. There was a view that if the administration is not funded then the partnership will not function. The reputation of the intermediary organisation was also identified as critical to the success of all the models

The preferences of the Spey Catchment Initiative members are grouped in Figure 5. The research found that the **catchment based model** was most preferred across all interviews with Spey Catchment

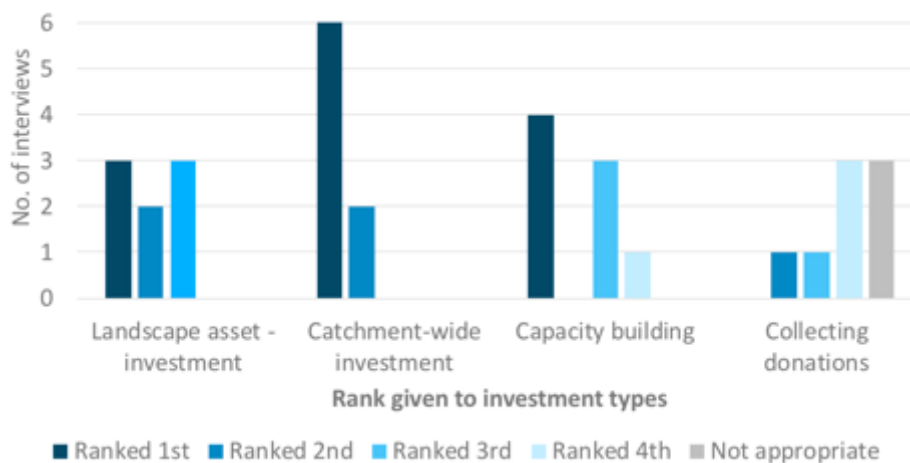


Figure 5. Preferences for alternative business models for coordination

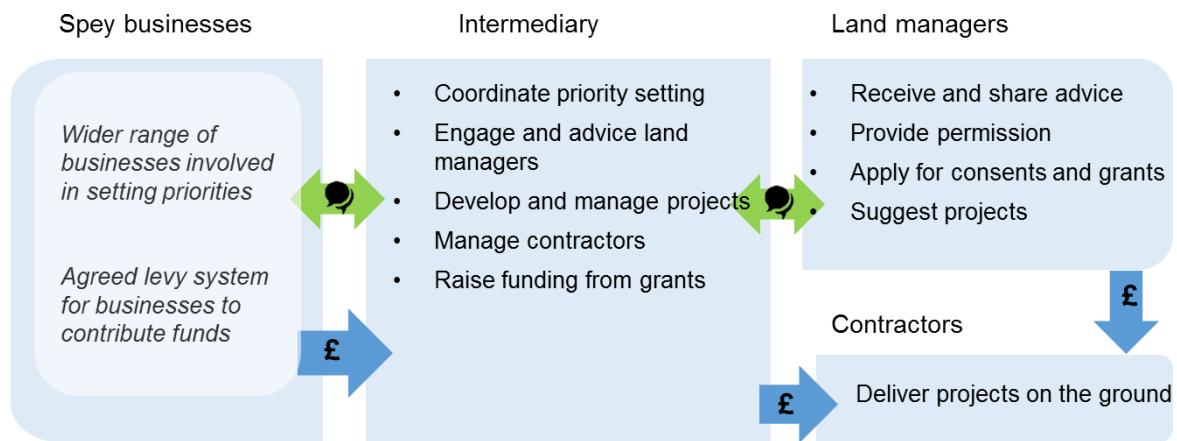
Initiative members mostly **in combination with the capacity building model**. This combination was similar to the existing approach in the Spey but with a wider range of businesses engaged and contributing

The **catchment based model** was also preferred **in combination with the landscape asset model**. Those that preferred the landscape asset model thought it was clearer to businesses why they were contributing. This was provided businesses were provided assistance in assessing and understanding which aspects of the landscape their businesses depended on or were at risk. Business can direct where the money goes into specific projects. There was more control for the land manager, with the catchment partnership helping to resolve conflicting objectives.

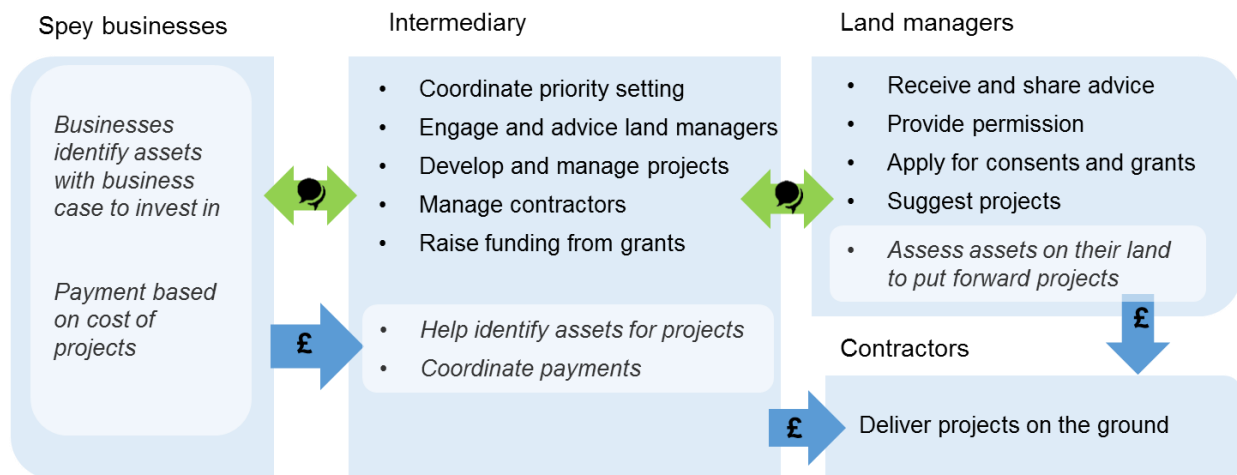
The **donation model** was generally less preferred or seen as unsuitable for the Spey. This was primarily due to the costs of raising money from businesses this way may be more expensive than the money raised. However it was also seen as a way that smaller businesses who did not have staff resources to invest in assessments of their risks and dependences could contribute either through their own funding or that raised through customers or to engage businesses already doing this.

Business models based on feedback in interviews

Based on the views from the SCI partnership 2 alternative business models (Figure 6) for coordination were explored further with a mixed audience of businesses SCI members and land managers at the workshop.



Business model 1: Businesses contributing a levy towards projects in the catchment



Business model 2: Businesses investing in specific landscape assets through specific projects

Figure 6. Two alternative business models for coordination in the Spey

Views on levies

There was discussion in the workshop about the levies suggested in Business model 1. Fisheries businesses already pay levies to restore and enhance natural capital through statute. It was considered fairer if other businesses using natural resources in the area should also pay levies. For

example contribution from other water users, and businesses that use the quality of the landscape for their product marketing and activities. The basis for levies were not discussed in detail. One participant thought that it could be based on businesses using the Speyside brand providing a proportion of their turnover. Another participant expressed a view that levies were already being considered through other routes such as land reform, and there were enough taxes and levies already affecting land based businesses.

Views on alternative business models

The consideration of alternative business models at the workshop prompted the following point from a participant:

“The investment by businesses could enable a viable shift for land managers from the traditional business model reliant on deer management and farming to a more sustainable model”

In the discussion participants identified that support would be needed to make this change as it is not currently financially viable. It would involve working across businesses for the benefit of the wider community, but it is also difficult to break with tradition.

7.7 Principles for effective coordination by intermediaries

The views of the SCI members and business interviews on the strengths and weaknesses of different approaches to coordination were compiled into principles for coordination. These principles were further tested in the workshop. They are summarized in Figure 7.

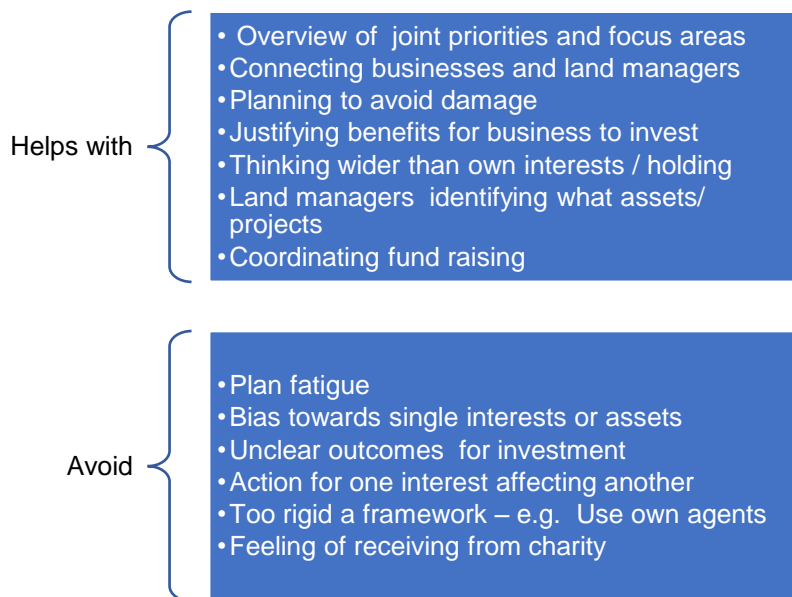


Figure 7. Principles for effective coordination of investments in landscapes

Businesses would like intermediaries to:

- Be neutral, safe and trusted to treat their information about risks and dependencies in confidence;
- Provide a safe place for them to work collectively to address issues;
- Help with building up their business case for investment.

8. Conclusions

1. Businesses recognise the importance of natural capital to their business success, but this does not currently translate into significant investment

Businesses recognise they are dependent on local landscape assets and most of them have place-based brands. Nevertheless, few businesses invest in natural capital because it remains difficult to determine tangible returns from investment. Furthermore, most businesses do not see how investment would lead to risk reduction, impact mitigation, or meeting global sustainability targets. Some businesses do make small-scale investments to promote sustainability-oriented brands or to demonstrate corporate social responsibility, e.g. to be part of the local community.

In contrast, businesses have made substantial broader environmental investments in bioenergy, water management, recycling of by-products and chemical management. Individual investments were in the order of hundreds of thousands to millions of pounds. These investments were often driven by a combination of regulatory requirements, cost reduction opportunities and sustainability goals.

2. Businesses are interested in diversifying and increasing their investments in the environment, but find it difficult to identify tangible returns on investment

There is general interest and willingness to invest in natural capital to support internal business considerations and the Spey community, especially through direct sponsorship arrangements with land managers. Public sector actions to encourage investment are deemed important to see a wider range of businesses contributing and quantify tangible returns on investment.

There is consensus that investments in sustainable land management need to:

- Benefit the businesses making the investment
- Achieve quantifiable targets and clearly defined impact
- Provide investors control over where funding goes
- Sit within an effective national framework with defined objectives, whilst also delivering to global targets

3. There is broad support for increasing coordination of investment through an independent business-led intermediary

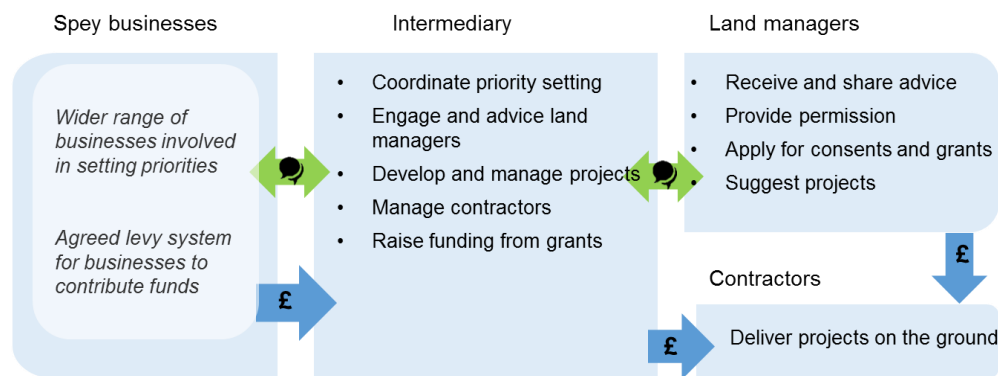
Coordination through a business-led intermediary is seen as particularly promising mechanism to support long term investment. Coordination could increase the effectiveness of investment and provide a trusted and knowledgeable local partner for both land managers and non-land based businesses to help build the business case for investment. This form of collaboration was seen as a promising mechanism to address long terms issues such as water resource management and the effects of climate change. Existing business or landscape partnerships could take on the intermediary role, but the intermediary would need be perceived as neutral and trusted to treat sensitive business information about risks and dependencies in confidence.

4. Two potential business models for coordinated business investment were identified: a levy model and a project project-based model

Two promising approaches to coordination of business action and investments in natural capital were identified that contain aspects preferred by businesses and the agencies responsible for managing natural resources in the catchment. These build on the existing approach in the Spey and the strong relationship between the Spey Catchment Initiative and land managers, working together to deliver projects on the ground through contractors

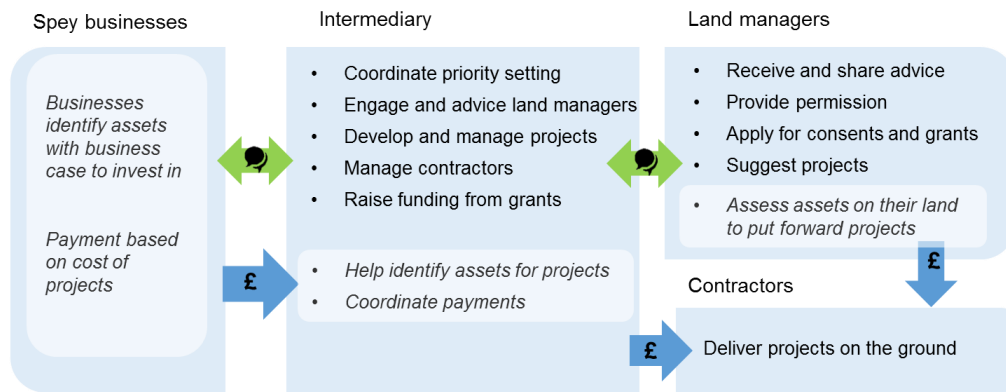
The **levy model** involves non-land managing businesses contributing to the whole catchment with projects delivering multiple benefits. Businesses help set the objectives of the programme and contribute to its costs through levies. Levies were seen as a fair system by allocating responsibility to all businesses benefiting from management of the landscape, although businesses that accrue more benefits from the investment could be asked for greater contributions.

Levies could be assigned through existing licensing systems such as Controlled Activity Regulations or Forestry Licensing, where a small proportion is assigned to the local area towards delivering environmental projects beyond compliance. Another option could be through visitor payback or a tourism business contribution.



The levy model: Businesses contributing a levy towards projects in the catchment

In the **project based** model, businesses are helped to identify specific assets in the landscape to invest in, businesses receive advice to help them do this and payments for specific projects are coordinated through the intermediary. This model had strong business support because it is clear who benefits and leads to tangible outcomes from investment.



The project model: Businesses investing in specific landscape assets through specific projects

5. Government and public sector support are essential to increase investment

Businesses expressed the view that Government should set a national framework, and businesses should lead the coordination of investments locally. The framework needs to consider a fair system for ensuring investment from all businesses that benefit within a particular landscape or catchment. The framework needs to consider that land-based businesses already invest directly in natural capital to provide long term security but may also run other businesses such as tourism activities. The public sector has a crucial role locally in facilitating business action and investments.

Specifically, the public sector has a role to:

- Provide a holistic and impartial approach to decide how funding should be allocated, and what the land management needs are in a local area, catchment or landscape
- Contribute funding towards maintaining natural capital where there are public benefits
- Facilitate and enable development of local solutions fit for local needs and aspirations
- Coordinate the work of agencies and work with groups coordinating the businesses
- Ensure the economic value of the river and other natural assets is built into public investment decisions in e.g. economic strategies

9. Recommendations for policy and further work

This research has helped improve understanding of business views and motivations to invest in natural capital. Businesses have expressed that in many cases they prefer to directly choose their partners for investment. However for long term investments in action to address long term issues in a catchment or landscape coordination of business investment would be helpful. Whilst businesses would wish to lead the coordination locally with the help of a neutral and safe intermediary, they seek help from Government to develop the framework to facilitate the coordination and manage the transfer of funds. If the Scottish Government wishes to develop this work further we make the following recommendations:

1. Further work is needed by Scottish Government to develop a clear national framework for businesses to invest in natural capital. The Scottish Government's Land use Strategy could provide a policy vehicle for this framework.
2. The framework could consider the two business models developed through the research in terms of the role of the intermediary, and the flows of information and finance. The business models need further testing with businesses and landscape partnerships elsewhere in Scotland to check if there are similar views.
3. The framework could develop options for levies on businesses to fund investments in landscapes that take account of multiple benefits. The payments through levies would need to consider how it could work alongside existing payment systems to land managers, such as grant in aid.
4. The Scottish Government and Scottish Forum on Natural capital Working Group may wish to consider trialling the new business models to invest in natural capital so that any unintended consequences of applications of are understood.

If businesses wish to develop this work further we make the following recommendation:

5. Businesses with a shared interest in investment in the landscape of the area hold a round table discussion on how to take collaboration forward, perhaps coordinated through the Chambers of Commerce, as suggested in the workshop, to enable a business led approach locally.

10. Appendices

Appendix A. Review of case studies where businesses invest in natural capital

Case study	Intermediary	What?
Portbury Wharf Nature Reserve ¹⁵	N Somerset LA; Port Marine Mgt. Ltd.	Developer paid for the set-up costs of creating a nature reserve to compensate for development impacts. All property owners in the area are charged an annual levy to pay for staff and management costs incurring to Avon Wildlife Trust
Upstream thinking, England ¹⁶	West Country Rivers SW trust	Co-developed a spatially targeted PES Scheme together with the South West Water (payer) to incentivise farmers to take actions to improve 'raw water quality' and other ecosystem services <ul style="list-style-type: none"> • built on existing 15-year relationships with farmers • 10 or 25-year covenants and contracts for management measures
Pumlumon Project, Wales ¹⁷	Montgomeryshire Wildlife Trust	A Wildlife Trust flagship scheme to improve upland economy in the Cambrian mountains, including PES <ul style="list-style-type: none"> • Buyers are mixed group of stakeholders who pay separately for different ecosystem services • Contracts consist of direct intervention and on-going management over the funding period • Intermediary demonstrates impact to funders using scientifically validated monitoring measures
Tweed Catchment, Scotland	Tweed Forum (NGO)	Over the past 25 years, the Forum has developed a reputation and role as a neutral and trusted intermediary (see Box 1 for detailed description). Buyers pay separately for different benefits.

¹⁵ The Guardian (2010). Residents fund nature reserve in new housing development ([link here](#))

¹⁶ Person. Comm. Laurence Couldrick at the Westcountry Rivers Trust [in Defra 2013 report Smith, S., Rowcroft, P., Everard, M., Couldrick, L., Reed, M., Rogers, H., Quick, T., Eves, C. and White, C. (2013). Payments for Ecosystem Services: A Best Practice Guide. Defra, London]; Defra 2013 report Annex on Case Studies ([link here](#))

¹⁷ Montgomeryshire Wildlife Trust (2010) 'Living Landscapes' ([link here](#))

Case study	Intermediary	What?
Eden Catchment Cumbria	River Nestle in	<p>Nestle is working with 99 farmers in their dairy supply chain to enhance landscape assets in Cumbria and Ayrshire.</p> <ul style="list-style-type: none"> • Meet with farmers on individual basis to discuss useful measures; interventions incentivised based on points • Farmers are paid above-average rates based on production and environmental measures • Intermediary officers know the landscape well, so criteria flexible and able to build capacity
SCaMP 1, England¹⁸	NW United Utilities and RSPB	<p>Incentivise tenant farmers to improve land practices to deliver benefits as part of the SCaMP partnership</p> <ul style="list-style-type: none"> • reduced need to invest in additional water treatment • RSPB assisted in developing individual farm plans for 56 farmers and accessing grants
PES for water quality, France¹⁹	Agrivair	<p>Brokered a PES deal between Nestle Waters and 27 farmers in the catchment to improve water quality</p> <ul style="list-style-type: none"> • 10-year bargaining period resulting in long term contracts (18-30 years) and less non-point source groundwater pollution • Land purchases at above-market prices and contracts with farmers to uptake sustainable farming techniques to improve aquifer issues due to agricultural intensification
Water Certificate scheme, USA²⁰	Bonneville Environmental Foundation	<p>Compensation to landowners for leaving water in the stream rather than abstracting, to increase supply of water. Water Restoration Certificates bought by businesses using urban water, to invest in water-scarce ecosystems.</p>

¹⁸ United Utilities Catchment Management website ([link here](#))

¹⁹ Perrot-Maître, D. (2006). The Vittel payments for ecosystem services: a “perfect” PES case? International Institute for Environment and Development, London, UK ([link here](#))

²⁰ Harmon, R. (2012). How the market can keep streams flowing ([link here](#)), Bonneville Environmental Foundation ([link here](#))

Case study	Intermediary	What?
Catchment management, SW England²¹	Wessex Water	The water service company uses its internal knowledge on problem areas to target farmers with scope for improvement in land practices, sharing best practice advice, investing expertise, aiding access to grant schemes and leveraging capital grants.
CamEO partnership in East Anglia²²	Anglian Water	Building a collaborative action plan with businesses that have a supply chain within the CamEO (The Cam and Ely Ouse). Annual conference, workshops and website to share best practices
Bassenthwaite catchment	Nurture charity	Lakeland Set up a Visitor Payment Scheme to conserve lakes, fells and Osprey habitat in the Lake District National Park by collecting donations (opt-out system in booking systems; donation envelopes; sponsored products). The grant-giving charity distributes money to other charities to implement projects. It took 1-2 years before any significant funds are raised; raised £2M in donations over 18 years

Table A1. Overview of eleven highlighted case studies of business investment in natural capital

²¹ Wessex Water website ([link here](#))

²² *Practical economics: Making the case for stewardship (2017) Report by Business In The Community for Defra.* Case study on p. 16 ([link here](#))

Box A1. Tweed Forum – a pioneering broker for land-based interventions to deliver sustainability goals on local, national and international level

The Tweed Forum, a charity based in the Scottish Borders, acts as a land management broker in the Tweed catchment. Altogether 25 organisations, including Scottish Lands and Estates and National Farmers' Union, are involved in the Forum. Over the past 25 years, the Forum has developed a reputation and role as a neutral and trusted intermediary amongst local stakeholders, including farmers and landowners. Out of its eight staff members, 3-4 people engage with farmers and land-owners in the area on a daily basis, to broker land-based interventions to deliver sustainability goals.

The funding for the Forum is currently secured primarily through service-level agreements with government agencies (SEPA and SNH) and the local authorities. The local authorities in the Tweed have been central in securing funding for the investments brokered by the Forum, through creative mechanisms, such as biodiversity offsetting schemes for local wind farm development projects. At present, private sector funding does not contribute towards the core funding of the Forum, however, it does somewhat contribute to the funding of the project delivered by the Forum.

Funding for land practice interventions brokered by the Forum include the following:

- Woodland creation schemes, previously funded by forestry grant scheme offers, now competitively applied for through the Forestry Grant/Woodland Creation Scheme (also funded by the Forestry Commission)
- Carbon payments, funded by Marks and Spencer, for carbon footprint offsetting, which are brokered to the Forum through a business called 'Forest Carbon', contracted on a 50-year basis with upfront payment
- Peatland Action Fund, funded by the Government, with a goal of meeting the government carbon targets
- River re-meandering scheme in the Eddleston, although challenges in reaching agreements with some farmers, as the Forum has not been able to offer the farmers sufficient financial compensation
- Fencing schemes to improve water quality on 12 farms, funded by SEPA, in response to a priority catchment exercise as part of the River Basin Management

There are several key factors that enable the success of the Tweed Forum as broker for land-based interventions, such as woodland creation schemes:

- Speaking the same language as the farmers
- Understanding the concerns of the farmers and the local area

Appendix B. Four examples of how businesses could coordinate investments in the Spey landscape

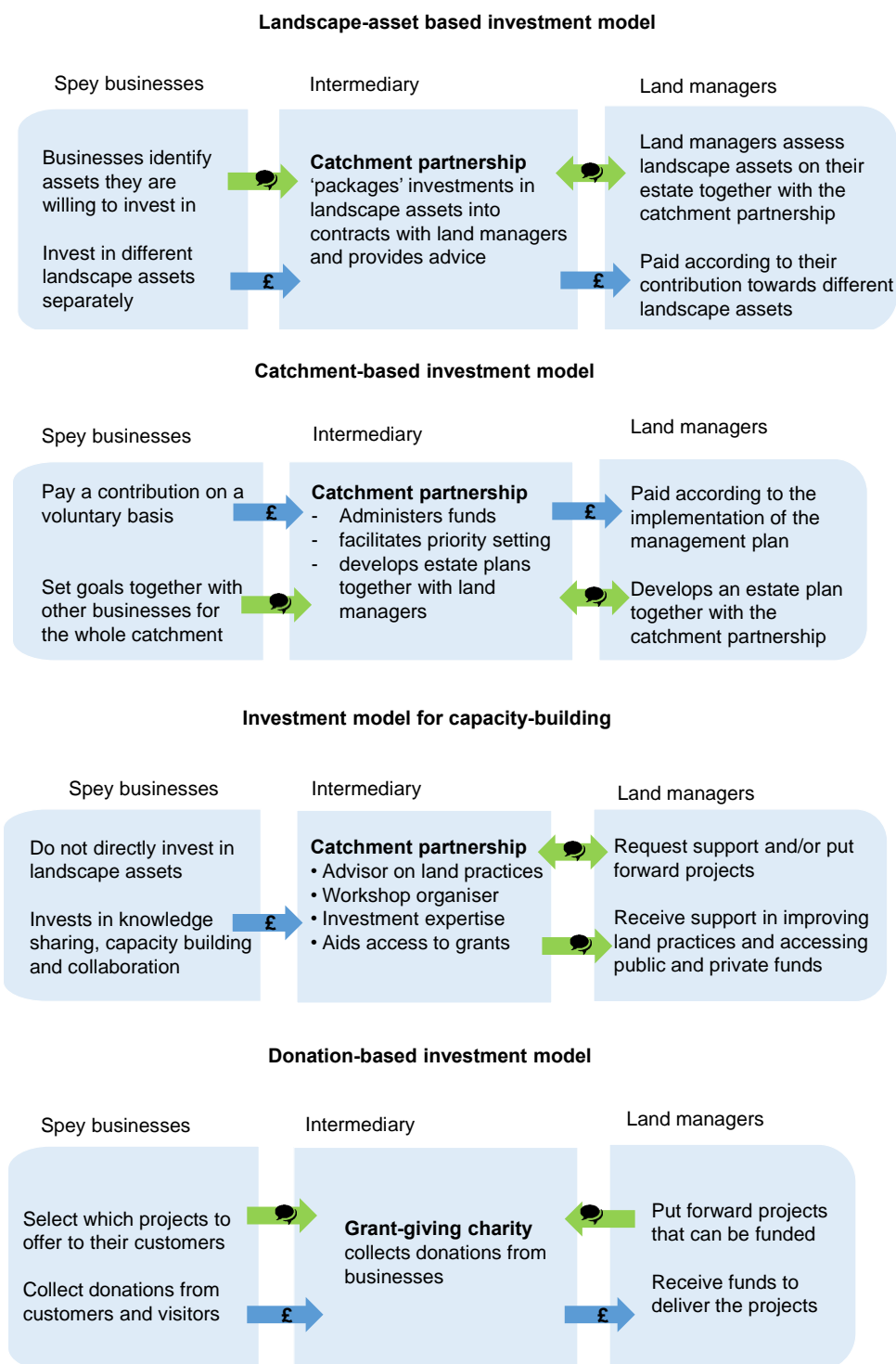


Figure B1. Four examples of how businesses could coordinate natural capital investments in the Spey area, developed from a review of investment case studies. The examples were used as prompts in the seventeen business stakeholder interviews to gauge motivations and challenges in natural capital investment.