Moray Council

Natural Capital Investment and Carbon Offsetting Study

Final Report

Final Report
Prepared by LUC
August 2023

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Project Number
12348b

Version	Status	Prepared	Checked	Approved	Date
1.	Draft Final	J Baker M Andrew H Ennis E Hynes R Myerscough	S Underwood	S Underwood	21.06.2023
2.	Final	J Baker	S Underwood	S Underwood	31.07.2023

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Contents

Chapter 1
Introduction and Methodology

1.1 As part of the production of a Just Transition Masterplan for Moray Council, LUC has been appointed to produce a report on carbon offsetting and natural capital enhancement opportunities and delivery mechanisms.

1.2 Natural Capital is the environmental resources, habitats and ecosystems from which a flow of social, environmental and economic benefits to people can be generated. Natural capital includes; air, water, minerals, soil, coast, woodland, grassland, heathland and farmland[1].

1.3 Investing in the quality and expansion of natural capital assets can therefore realise significant benefits for humans and help to tackle the twin crises for climate and nature.

1.4 The scale of change required to meet these challenges is significant and will require a skilled workforce to deliver investments and substantial funding. This is a developing area and delivery mechanisms for natural capital investments are still emerging, although the evidence base is growing.

1.5 The scope for this work was split into four stages covering the following:

1. A strategic natural capital assessment which identifies opportunities for investment, including a high-level benefit assessment.
2. An assessment of the skills requirements for undertaking the opportunities identified.
3. Stakeholder engagement on natural capital delivery mechanisms, including developer obligations, developer contributions, payments for ecosystem services (including carbon markets) and grant funding.
4. Provide an overview of the carbon sequestration role of green walls and green roofs. This has been provided as a separate report.

[1] NatureScot website – Natural Capital

1.6 This report presents the findings from this work and includes a series of recommendations for the next steps Moray Council should take in identifying the most appropriate delivery mechanism for investment in their natural capital assets and realising the range of benefits this would bring. The remainder of the report is structured as follows:

- Identification of high-level natural capital investment opportunity areas in Moray and an overview of their potential benefits, covering the following:
  - Peatland restoration;
  - River flood risk and water quality management;
  - Coastal flood risk management;
  - Woodland enhancement; and
  - Agricultural land enhancement.
- Identification of potential supporting investment opportunities which could maximise the benefits from investing in natural capital and their potential benefits. These include access and tourism opportunities.
- Summary of skills and jobs typically required for the delivery of each of the investments identified.
- An overview of the key funding and delivery mechanisms for natural capital and carbon-offsetting projects.
- A series of case studies which demonstrate how these mechanisms have been used in practice to delivery carbon-offsetting and natural capital investment projects, including a summary of challenges to their implementation.
- A detailed list of the grant funds available to support the delivery of all the investments identified.
- Recommendations and next steps which Moray Council should take based on an assessment of delivery mechanisms and case studies, their appropriateness to Moray's context and the investment opportunities identified.

1.7 This Report also seeks to provide an evidence base to inform Moray Council's approach to the implementation of policy obligations on climate mitigation and biodiversity enhancement established through National Planning Framework (NPF) 4. In particular the Council is seeking to respond to the aspirations of NPF 4 Policy 2, 'Climate Mitigation and Adaption' which seeks to *"encourage, promote and facilitate development that minimises emissions and adapts to the current and future impacts of climate change"* and Policy 3, 'Biodiversity' which aims to *"protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks"*. Under these policies, it is expected that LDP spatial strategies should be *"designed to reduce, minimise or avoid greenhouse gas emissions"* and that LDP's in general should *"protect, conserve, restore and enhance biodiversity in line with the mitigation hierarchy. They should also promote nature recovery and nature restoration across the development plan area, including by: facilitating the creation of nature networks and strengthening connections between them to support improved ecological connectivity; restoring degraded habitats or creating new habitats; and incorporating measures to increase biodiversity, including populations of priority species"*.

Chapter 2
Natural Capital Investment Opportunities

2.1 This chapter provides a high-level natural capital assessment of Moray and identifies strategic opportunities for future investment. It covers the following strategic natural capital opportunities:

- Peatland restoration;
- River flood risk and water quality management;
- Coastal flood risk management;
- Woodland enhancement; and
- Agricultural land enhancement.

2.2 Each section provides:

- Background on the natural capital investment opportunity;
- The approach taken to selecting priority areas;
- A series of priority areas for investment; and
- An overview of the potential benefits which could be realised from investment.

Methodology and Limitations

2.3 The priority areas identified in this section are strategic and show possible investments which could be made. They are based on a rapid review of high-level GIS data and aerial photography. Should Moray Council take these projects forward each would require a site-specific survey and other technical studies such as environmental impact assessments (EIA) and habitat regulations assessment (HRA) as necessary.

2.4 The opportunity areas have not considered land ownership. Landowner engagement and community engagement will be required as per the recommendations provided at the end of the report in **Chapter 10**.

2.5 The identification of opportunity areas has also not included a full assessment of other initiatives currently taking place in Moray. Although some overlaps have been identified, and where so, opportunities to streamline actions have been suggested, it is possible that some of the opportunities have already been identified and are being progressed by others. When selected priority areas to take forward, Moray Council should carry out detailed research on other initiatives happening in that area.

Peatland Restoration

Context

2.6 Peatlands store significant amounts of carbon and have an important net cooling effect on climate. Healthy peatlands also support a range of threatened priority species and habitats and help to reduce flood risk by slowing down water flow. Degraded peatlands are a net source of carbon emissions, and much of Scotland's peatland is degraded. Therefore, the restoration and protection of peatland is a vital part of tackling climate change. There are extensive areas of peatland in Moray, particularly in the centre and south of the Council area (**Figure 2.1**).

Investment Opportunities

2.7 Scotland's Soils 2016 Carbon and Peatland map shows the distribution of carbon and peatland classes across Scotland. Peatland and carbon rich soils in Scotland are classified by the likely presence of peat soils in land. Class 1 and 2 peatlands are considered to be nationally important areas that should be protected and restored (see **Figure 2.1**).

- Class 1 areas are considered to be of high conservation value.
- Class 2 areas are considered to have higher restoration value.

2.8 Methods of peatland restoration include:

- Forest to bog restoration: Requires removal of the commercial plantation and blocking of drainage ditches to 're-wet' the bog.
- Ditch blocking in open ground: Aims to rewet peatland by raising the water table, helping to restore peatland function.
- Hag reprofiling: A peat hag is an eroding face or cliff of bare peat which dries out and releases carbon. During hag reprofiling the turf is removed and the hag reprofiled to a shallow slope. The turf is replaced and any gaps are filled in.
- Conservation grazing: A reduction in grazing pressure can lead to increased vegetation cover (both heather and sphagnum), which is compatible with blanket bog function, in terms of carbon sequestration/peat formation.

2.9 Different methods of restoration will be appropriate to different locations, depending on the character of the area and previous land management impacts.

Priority Areas

2.10 An initial selection of strategic potential areas for peatland restoration in Moray was based on the identification of areas of class 1 and t peatland from GIS data and further analysis through the study of aerial photography where areas of class one peatland appear to be visibly hagged. The dates of the aerial photography ranged from 2019-2022. The following strategic areas have been identified as priorities for restoration (illustrated on **Figure 2.2**).

Priority Area 1

2.11 Priority Area 1 is focused on a large area of primarily Class 1 peatland. The area is located across the undulating uplands which lie between the Moray Council boundary/Water of Caiplich in the north, and River Avon in the south.

2.12 An additional, smaller area of peatland to the north-east near Carn na Ruabraich is also comprised of Class 1 peatland.

2.13 In both cases, aerial photography indicates that the peat is hagged in this area and would benefit from ditch blocking and reprofiling.

Priority Areas 2-5

2.14 The aerial photography for Priority Areas 2-5 indicates that the peat is hagged and would benefit from ditch blocking and reprofiling.

2.15 Priority Area 2 is focused on an area of primarily Class 1 peatland. The area is located to the east of Dalestie, along the boundary of the Moray Council boundary. It extends across the slopes of Tolm Buirich (693m AOD) and Craig Veann (711m AOD).

2.16 Priority Area 3 is focused on an area of Class 1 peatland. The area is located to the east of Tomintoul, and immediately west of the summit of Tom Trumper (582m AOD).

2.17 Priority Area 4 is focused on a large area of primarily Class 1 peatland. The area is located across the undulating uplands which lie between the Local Authority boundary in the south, and Blackwater Forest Wind Farm in the north.

2.18 Priority Area 5 is focused on a large area of primarily Class 1 peatland around Ben Rinnes (840m AOD).

Priority Area 6

2.19 Priority Area 6 is an area of Class 1 and Class 2 peatland which has forestry planted on it in some areas. This area would benefit from forest to bog restoration and blocking of drainage ditches to 're-wet' the bog.

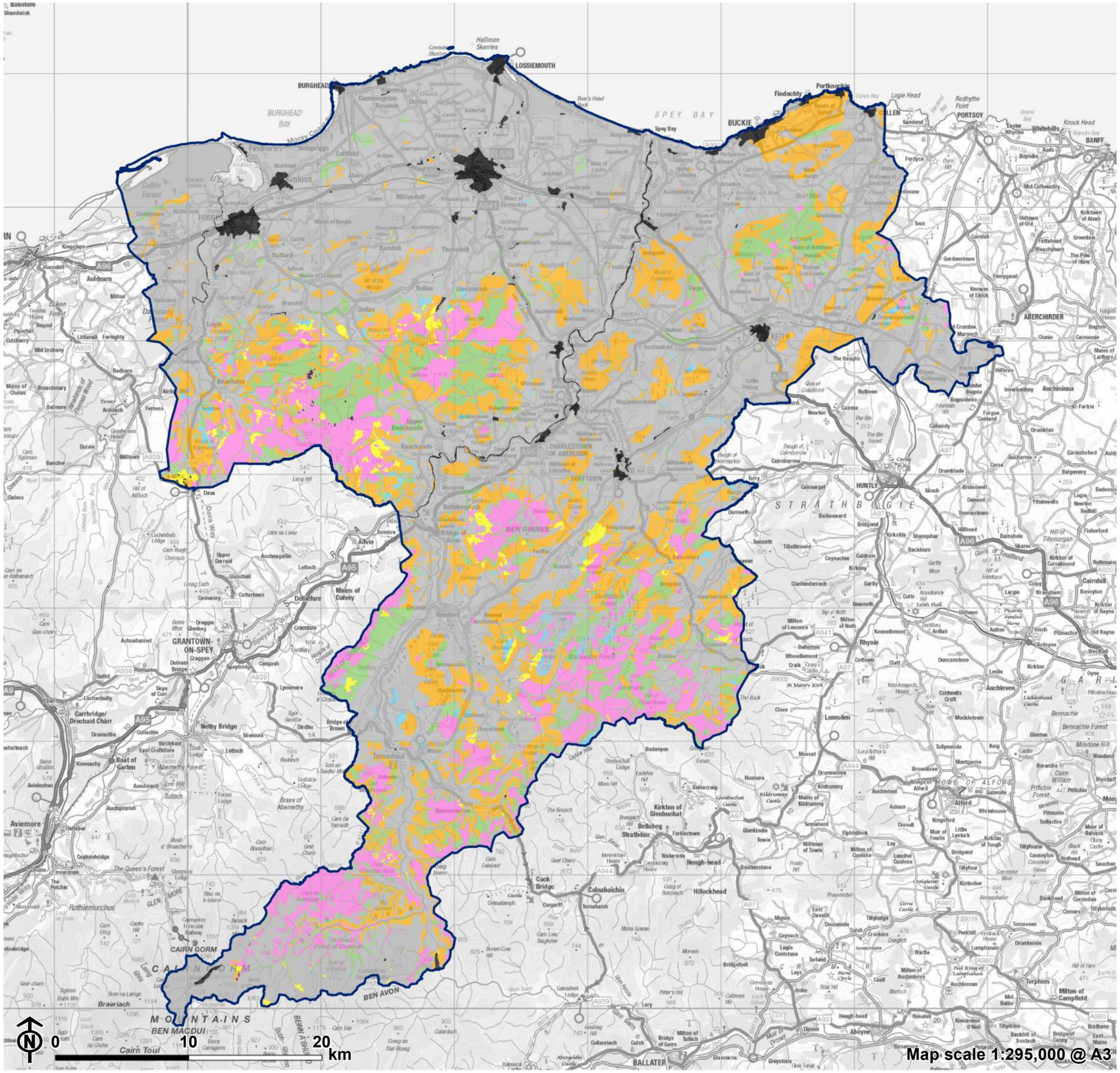
Benefits

2.20 The restoration of peatland areas will provide many benefits, including reducing greenhouse gas emissions, increasing carbon storage, improving biodiversity, water quality, acting as natural flood management, enhancing landscape character, cultural heritage, and people's health and wellbeing.

2.21 Of particular note are the ecological benefits peatland restoration would have with the sites selected spanning several designated sites. This includes the Cairngorms Massif Special Protection Area (SPA) where species of protected breeding birds such as the dotterel would benefit[2], the Cairngorms Special Area of Conservation (SAC) where the large blanket bog habitat was a primary reason for selection and is in an unfavourable condition[3], Eastern Cairngorms Site of Special Scientific Interest (SSSI) which overlaps with the SAC, River Spey SAC which is comprised of 11% bog and marsh habitat[4]. In the Ladder Hills SSSI and SAC blanket bog restoration is a conservation priority and would support priority bird species such as hen harrier, merlin and golden plover, golden eagle, peregrine and short-eared owl[5].

[2] NatureScot website – Cairngorms SPA
[3] JNCC website – Cairngorms – Designated Special Area of Conservation (SAC)
[4] JNCC website – River Spey – Designated Special Area of Conservation (SAC)
[5] JNCC website – Ladder Hills – Designated Special Area of Conservation (SAC)

Figure 2.1: Carbon and Peatland Soil Classification



CB:JB EB:bournazel_j LUC 12348B_r1_Carbon_Peatland_Soil_Classif_A3L 25/04/2023
Source: OS, Moray Council, NatureScot

Moray Just Transition Masterplan - Carbon Offset Study
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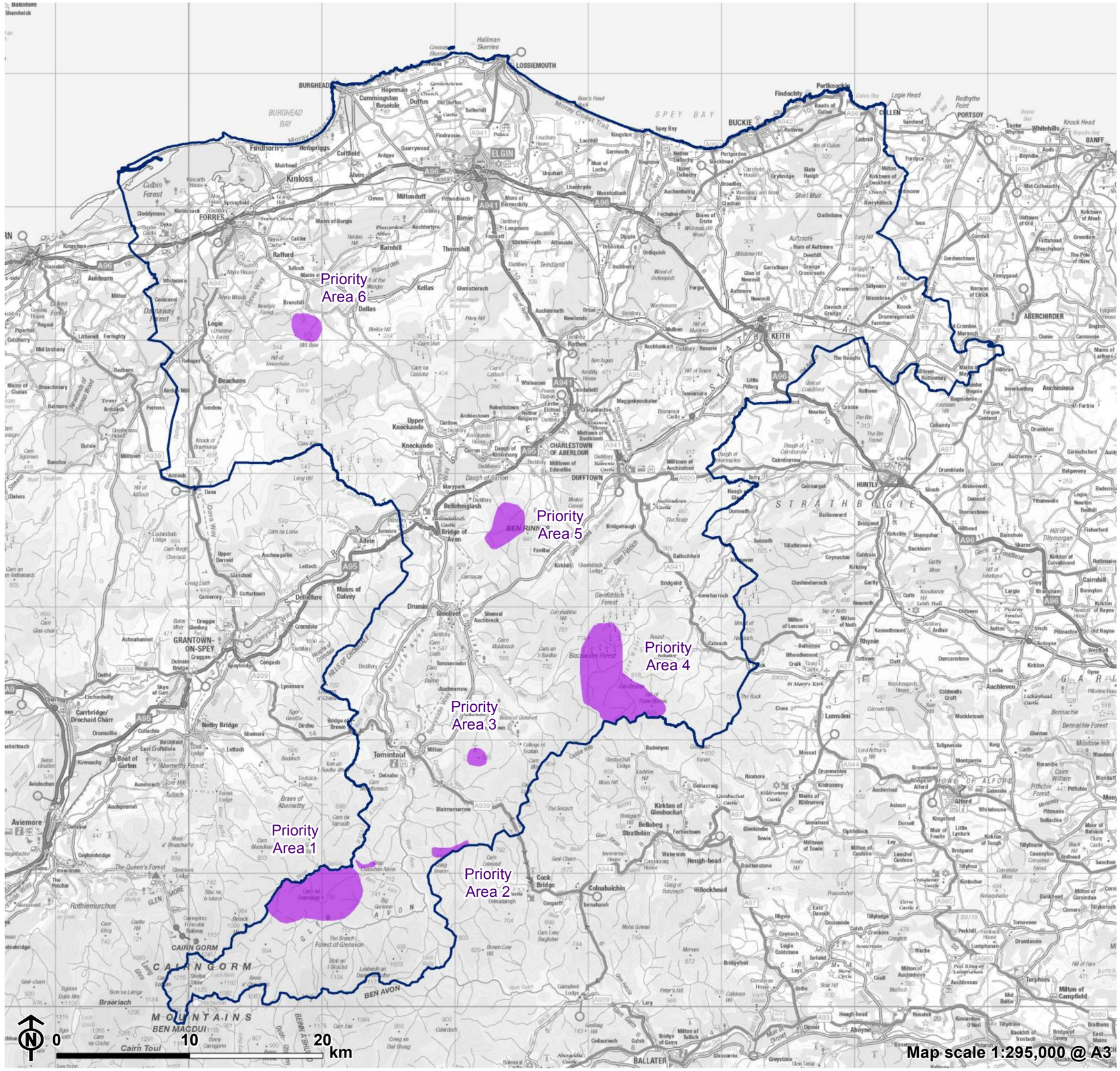
Figure 2.2: Opportunity Areas: Peatland Restoration



CB:JB EB:bournazel_j LUC 12348B_r1_Opp_Areas_Peatland_A3L 26/04/2023
Source: OS, Moray Council, LUC

River Flood Risk and Water Quality

Context

2.22 There are several watercourses within Moray, the most significant are the River Spey, River Lossie, and River Findhorn. The River Spey has the largest catchment, covering an area nearly 3000km^2 with 36,500km of streams. The catchments of the River Lossie and River Findhorn are 270km^2 and 114km^2, respectively.

2.23 Flood risk across Scotland is increasing as a result of climate change impacts such as extreme weather and sea level rise. It is therefore important to try and minimise the frequency and severity of flood events in the future.

2.24 Water quality is influenced by many factors including land use, regulated and unregulated discharges, and water abstraction for agriculture and industry which can reduce dilution of pollutants. These activities have impacts on other water users and biodiversity.

Investment Opportunities

2.25 The SEPA Flood Extent data (**Figure 2.3**) shows that many rivers within Moray have a 'high likelihood' of flooding, including the River Spey, River Lossie and River Findhorn. As such, more flood management techniques are necessary to mitigate and manage flood risk, including forms of natural flood management. Some flood alleviation schemes have already been undertaken by Moray Council including at Dallas, Forres, Lhanbryde, Rothes and Newmill and another at Elgin is currently underway.

2.26 The SEPA River Classifications data identifies the quality of watercourses within Moray. Generally, the quality of watercourses across Moray is satisfactory, with the majority of watercourses having 'moderate', 'good' or 'high' status (**Figure 2.4**). However, sections of the River Lossie near Elgin have 'bad' status. In addition, several watercourses have 'poor' status (parts of the River Lossie, Burn of Linkwood, Longmorn Burn, Burn of Rothes, Burn of Mosset and Altyre Burn).

2.27 Many of the natural flood management methods for minimising flood risk and improving water quality of watercourses are interlinked. Such methods include:

- Runoff reduction e.g. woodland and riparian woodland planting and upland drainage blocking.
- Floodplain storage e.g. floodplain restoration and floodplain and riparian woodlands.
- Sediment management e.g. sediment traps and bank restoration.
- River re-profiling and channel morphology e.g. meander restoration.
- Restoring natural features e.g. wetlands and woodlands.
- Improving agricultural practices to reduce run-off of chemicals and fertilizers and minimise soil erosion (primarily for improvements to water quality).

Priority Areas

2.28 There is high flood risk along several of the rivers in Moray, and it is recommended that detailed analysis and research is carried out to identify specific areas to be prioritised for the implementation of natural flood management measures. As a starting point, the following strategic areas at risk of river flooding have been identified as potential priority areas (Priority Areas 1-3).

2.29 With the exception of the River Lossie which has sections of 'bad' and 'poor' status, generally the water quality status of rivers is classed as moderate or higher. SEPA data on water quality along watercourses is used to identify areas where improvements could be made. It is recommended that all rivers with poor or bad status are improved. However, for this study the key strategic priority is focused on the river sections with 'bad' status (see Priority Area 4).

2.30 All priority areas are mapped in **Figure 2.5**.

Priority Areas 1-3

2.31 River flood data indicates that the following Priority Areas 1-3 are in areas identified as being at high risk of river flooding. In these areas there is an opportunity for additional riparian planting, along sections of these rivers where this is lacking.

2.32 Priority Area 1 is focused on an area of land to the north-west of Forres. This Priority Area comprises the lower reaches of the River Findhorn and Muckle Burn. The River Findhorn watershed initiative, led by the Findhorn Nairn and Lossie Rivers Trust, is currently seeking to

carry out natural flood management measures, carbon sequestration and habitat restoration and is looking to create a partnership to facilitate this. Moray Council should ensure its involvement within this partnership as a mechanism to deliver this priority.

2.33 Priority Area 2 is focused on an area of land to the north-east of Elgin. This Priority Area comprises the lower reaches of the River Lossie as it flows from Elgin to the Moray Firth. This area is within the Elgin Flood Alleviation Scheme (FAS) area, which is one of the largest FAS in Scotland. The scheme affords protection to 860 residential and 270 commercial properties in Elgin, providing a current-day standard of defence of 1 in 200 years[6]. The scheme includes a series of set-back flood embankments and flood walls, a new flood relief channel opposite the Cathedral, a new diversion channel to move Tyock confluence, approximately 1.5 km downstream, and two localised defences in area downstream of Elgin constructed. Beyond the works already planned there is potential to consider other natural flood management techniques such as riparian woodland planting and to re-profile straighter sections of the river, by restoring meanders.

2.34 Priority Area 3 is focused along a long stretch of the River Spey between Craigellachie and Kingston. Opportunities include enhancing riparian planting, removal of obstacles in the water, and river bank restoration. The Spey Catchment Initiative[7], led by a steering group of representatives from partner organisations, is already undertaking some of the measures in this area including floodplain restoration and riparian woodland creation. Moray Council is already a member of the partnership and should continue to work with the partnership to expand the range of work in the area and maximise the benefits.

Priority Area 4

2.35 Priority Area 4 is focused along a stretch of the River Lossie between Cloddach and Elgin. This Priority Area incorporates a section of the river which is identified as having 'bad' status in terms of water quality. This is the only watercourse in Moray which has 'bad' status. Opportunities should therefore be sought to improve the status and quality of this section of the river. Opportunities include restoring river meanders along the sections which have straightened, planting riparian woodland to slow surface water run-off from nearby land, and engagement with the agricultural and mineral extraction industry to minimise water pollution.

Benefits

2.36 The use of natural flood management measures along these stretches of rivers will provide a multitude of benefits, including in relation to biodiversity, water quality, climate change, and people's health and wellbeing.

2.37 Restoring and enhancing habitats along the rivers, such as wetlands and riparian planting, will help to support a greater range of species and increase connectivity across the ecological network. Restoration works to the profile of the river such as meander and bank restoration, may also provide additional benefits and diversity by altering the water flow such as slowing it down at meanders. This may allow certain species such as salmon to thrive.

2.38 Furthermore, restoration of the riverbanks may improve water quality by reducing sedimentation within the river. Likewise, wetlands and riparian woodland may help to filter surface water run-off, reducing the amount of pollutants entering the watercourse. These improvements would be further enhanced through improved operational practices including a reduction in the use of fertilisers and exploration of agro-ecological measures across the agricultural industry.

2.39 Implementing the natural flood management techniques will provide benefits in relation to climate change, by increasing the resilience of ecosystems, making them more resistant to the changing climate. Additionally, restoration and enhancements of features such as wetlands and riparian woodland will help to increase the amount of carbon sequestered and stored, thereby removing carbon from the atmosphere.

2.40 Improving the overall condition of river corridors, such as through planting riparian woodland and restoring wetland habitats, may encourage more people to use the area recreationally, and footpaths can be integrated into the planting. This will have potential benefits for health and wellbeing. Carrying out the investments and the ongoing maintenance of them will provide opportunities for local business and employment, particularly in the land management and woodland sectors.

[6] Moray Council website – Our Flood Alleviation Schemes – Elgin

[7] Spey Catchment Initiative website

Coastal Flood Risk

Context

2.41 The coastline of Moray extends along part of the Moray Firth and the North Sea.

2.42 Flood risk across Scotland is increasing because of climate change impacts such as extreme weather and sea level rise. It is therefore important to try and minimise the frequency and severity of flood events in the future. The vulnerability of the coast to these threats varies according to the physical characteristics of rocky or sandy shorelines. Between Cullen and Portgordon and Lossiemouth and Burghead, the Moray coastline is 'hard', comprising low cliffs and narrow, fringing rock platforms. Elsewhere, the coastline is considered to be 'soft' comprising depositional landforms such as sandy beaches, backed by low, raised shorelines and sand dune systems[8]. The low lying sandy coastal areas are more vulnerable.

Investment Opportunities

2.43 SEPA Flood Extent data shows that the entire coastline of Moray, and localised inland locations, have a 'high likelihood' of coastal flooding (**Figure 2.3**). As such, more coastal flood management techniques are necessary to mitigate and manage coastal flood risk, including forms of natural flood management. Natural flood management for coastal areas involves a number of methods including:

- Estuarine surge attenuation such as restoration of intertidal habitats including wetlands, mudflats and saltmarshes; and
- Wave energy dissipation such as sand dune and saltmarsh restoration.

Priority Areas

2.44 Due to the extent of high coastal flood risk across Moray, detailed analysis and research should be carried out to identify specific areas to be prioritised for the implementation of natural flood management measures. However, as a starting point, the following strategic areas at risk of coastal flooding have been identified as potential priority areas (Priority Areas 1-3). These are illustrated in **Figure 2.5**.

Priority Area 1

2.45 Priority Area 1 is focused on an area of land to the south-east of Lossiemouth. This Priority Area comprises the lower reaches of the River Lossie and its floodplains, and is in an area identified as being at high risk of coastal flooding. Opportunities to create new tidal habitats should be sought in this area, as should sand dune restoration along the coastline.

Priority Area 2

2.46 Priority Area 2 is focused on the area comprising Findhorn Bay. This enclosed estuary is identified as being at high risk of coastal flooding. Opportunities should be sought to create new and improve existing areas comprising mudflats and salt marshes.

Priority Area 3

2.47 Priority Area 3 is focused on the intertidal area to the north-west of Culbin Forest. This area is identified as being at high risk of coastal flooding, and opportunities should be sought to create new tidal habitats and to enhance and restore sand dunes.

Priority Area 4

2.48 Priority Area 4 is focused on the Spey estuary. This Priority Area comprises the lower reaches of the River Spey, near the coast of the Moray Firth and is in an area identified as being at high risk of river flooding. Opportunities should be sought to enhance intertidal habitats within the Spey estuary, and to increase riparian planting along the river.

Benefits

2.49 In addition to flood-related benefits, the use of natural flood management measures in these tidal areas along sections of the River Lossie may provide additional benefits including in relation to biodiversity, water quality, climate change. Integrating new footpaths into NFM works and improving access to the natural environment can lead to improvements to health and

[8] NatureScot website – Landscape Character Assessment: Moray and Nairn – Landscape Evolution and Influences

wellbeing. The delivery and maintenance of the investments can provide local business and employment opportunities, particularly in coastal and land management.

2.50 Restoring and enhancing tidal and estuarine habitats (e.g., wetland, mudflats, saltmarshes) will help support a greater range of species and increase connectivity across the ecological network. Bird species which frequent estuarine areas include redshank, dunlin, peregrine falcon, ringed plover, oystercatcher, sandpiper and curlew. Other mammals include otters and common and grey seals. Likewise, enhancement of sand dunes in Moray will also help enhance these dune habitats for species dependent on them.

2.51 The coastline of Moray features several internationally, nationally, and locally protected nature sites which are on soft coastal areas and therefore vulnerable to flooding. Investment to reduce coastal flooding may also lead to additional benefits for biodiversity at these important designated sites. These include the Moray Firth Special Protection Area (SPA) and Special Area of Conservation (SAC), which were designated for the presence of the great northern diver, red-throated diver and slavonian grebe populations[9]. The Moray and Nairn Coast Ramsar Site, SAC and SSSI were designated for the presence of coastal and riverine habitats including intertidal flats, saltmarsh, dunes and associated floodplain alder woodland and the aquatics plants, invertebrates and mammals they support[10]. Other designated sites include Culbin Sands RSPB Reserve, Findhorn Bay Local Nature Reserve (LNR) and several Sites of Special Scientific Interest (Spey Bay, Cullen to Stake Ness Coast, Masonshaugh, and Culbin Sands, Culbin Forest and Findhorn Bay).

2.52 Tidal and wetland habitats are particularly good at sequestering carbon from the atmosphere, providing benefits in relation to climate change mitigation. The increased occurrence of tidal and wetland habitats, and their improved quality, will help make them more resilient to the future effects of climate change.

2.53 Furthermore, restoration of these areas may help to improve water quality, as wetlands help to filter pollutants from the water. Improving the overall condition of these tidal areas may provide support recreational activities such as bird watching, thereby encouraging more people to use the area. This is likely to have benefits for mental and physical health and wellbeing.

[9] Scottish Government (2020) Moray Firth Special Protection Area: business and regulatory impact assessment

[10] Ramsar Sites Information Service website – Moray and Nair Coast

Figure 2.3: River and Coastal Flood Risk

Moray boundary

SEPA Flood Extent

- River extent - high likelihood
- River extent - 2080 high emission scenario
- Coastal extent - high likelihood
- Coastal extent - 2080 high emission scenario

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_River_Coastal_Flood_Risk_A3L 26/04/2023
Source: OS, Moray Council, SEPA

Figure 2.4: River Status

Moray boundary

SEPA River Classifications

- High status / potential
- Good status / potential
- Moderate status / potential
- Poor status / potential
- Bad status / potential

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_River_Status_A3L 26/04/2023
Source: OS, Moray Council, SEPA

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Figure 2.5: Opportunity Areas: Coastal and River Flooding, River Status Improvements

Moray boundary
River flooding opportunity
Coastal flooding opportunity

Priority Area 1
Priority Area 2
Priority Area 3
Priority Area 4
Priority Area 1
Priority Area 2
Priority Area 3
Priority Area 4

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Opp_Areas_Flooding_A3L 25/04/2023
Source: OS, Moray Council, LUC

Woodland Enhancement

Context

2.54 Native woodlands are comprised of trees which arrived naturally in Scotland without direct human assistance. There are extensive areas of native woodland in Moray, particularly in the north and centre of the area, however there is clear fragmentation in these areas and much of the native woodland has been felled or re-planted with commercial forestry (**Figure 2.6**).

Investment Opportunities

2.55 To identify opportunities for native woodland planting several factors are considered including:

- Preferred areas for woodland creation as identified in the Moray Woodland and Forestry Strategy.
- Opportunities to improve connectivity between existing areas of native woodland.
- The presence of existing riparian woodland along rivers. River banks that lack native woodland should be considered, both upstream within narrower stretches of the river, and downstream within the floodplain.
- Areas of higher flood risk should be considered to stabilise river banks and slow down the flow of run-off from surrounding slopes to reduce flood risk.
- Areas of forestry on peatland. Removal of forestry will help ensure the quality and condition of the peatland is maximised (see Priority Area 6 for Peatland Restoration).
- Planting native woodland in areas where commercial forestry is being restocked following harvesting.
- Opportunities to diversity the species of trees within woodland areas.

Priority Areas

2.56 The initial selection of potential areas for woodland creation/enhancement, and diversification is based on the Moray Woodland and Forestry Strategy (2018) data and the National Forest Inventory (**Figure 2.7**). It is noted that the Moray Woodland and Forestry Strategy is currently under review, and these recommendations should be reviewed alongside the revised document.

2.57 Areas for woodland creation were identified based on 'preferred areas' for woodland. Removal of forestry and woodland was identified where existing vegetation is found on Class 1 and Class 2 peatland soils.

2.58 Using aerial photography, areas that are being restocked following harvesting should be considered for a more diverse species choice.

2.59 The following strategic areas have been identified as areas which could be prioritised for woodland creation, marked on **Figure 2.8**.

Riparian Woodland Planting

2.60 Riparian woodland has been identified where it would provide a benefit for natural flood management but also where there are notable gaps in the network and riparian woodland would help to improve nature networks and habitat connectivity as well as carbon sequestration.

Priority Area 1
2.61 Priority Area 1 is focused on an area of land to the north-west of Forres. This Priority Area comprises the lower reaches of the River Findhorn and is identified as having limited riparian planting along the river corridor. This area is also identified as being at high risk of river flooding.

Priority Area 2
2.62 Priority Area 2 is focused on an area of land to the north-east of Elgin. This Priority Area comprises the lower reaches of the River Lossie as it flows from Elgin to the Moray Firth. This section of the River Lossie is identified as having limited riparian planting along the river corridor, and is also noted as being at high risk of river flooding.

Priority Area 3
2.63 Priority Area 3 is focused along stretches of the lower reaches of the River Spey. Aerial photography reveals there is a lack of riparian planting in these areas, which are at high risk of river flooding.

Priority Area 4
2.64 Priority Area 4 is focused along stretches of the River Spey between Boat o' Brig and Craigellachie, and near Charlestown of Aberlour. Aerial photography reveals there is a lack of riparian planting along this stretch of the river corridor, which is also at high risk of river flooding.

New Woodland

Priority Area 5
2.65 Priority Area 5 is a large area in the east of Moray, near Keith. This strategic area features predominantly agricultural land and much of the area has been identified as a 'preferred' location for woodland.

Priority Area 6
2.66 Priority Area 6 comprises two areas within the north-east of Moray. This strategic area features predominantly agricultural land, interspersed with small areas of woodland and forestry, including larger blocks within the wider area. Much of this area has been identified as a 'preferred' location for woodland.

Priority Area 7
2.67 Priority Area 7 is a large area to the south of Elgin. This strategic area features predominantly agricultural land, with small blocks of native woodland and forestry, and areas of native woodland. Much of this area has been identified as a 'preferred' location for woodland creation.

Priority Area 8
2.68 Priority Area 8 is a large area within the centre of Moray. It extends from Drummuir in the east to Blacksboat and Marypark in the west. Native woodland is found in pockets throughout this area, and further woodland creation in this area could provide a strategic link to extensive areas of native woodland near Aviemore and Abernethy Forest. Much of this area has been identified as a 'preferred' location for woodland creation.

Commercial Forestry Diversification

Priority Area 9
2.69 Priority Area 9 is an area of commercial forestry between Keith and Cullen in the north-east of Moray. This forestry is currently in various stages of growth and includes extensive areas of recently felled land. Such areas provide opportunities to replant native woodland which holds greater biodiversity benefits, supporting protected native species in Moray such as song thrush, crossbill, capercaillie, fritillary butterflies, pine martens and red squirrels and connecting up fragmented habitats, creating new nature networks.

Priority Area 10
2.70 Priority Area 10 comprises two areas of commercial forestry to the south-west of Elgin. This commercial forestry is currently in various stages of growth and includes areas of recently felled land. Such areas provide opportunities to replant native woodland which hold greater biodiversity benefits. In addition, pockets of native woodland between the two provide opportunities to link and enhance the ecological network here.

Priority Area 11
2.71 Priority Area 11 comprises an extensive area of commercial forestry located to the west of Rothes and Craigellachie. This forestry is currently in various stages of growth and includes areas of recently felled land. Such areas provide opportunities to replant native woodland which hold greater biodiversity benefits.

Benefits

2.72 Native woodlands provide key habitats throughout the landscape, helping to provide 'stepping stones' within the ecological network. Linear features, such as riparian woodland along river systems, help to improve connectivity across the ecological network, and contribute to green corridors. Woodlands, and in particular riparian woodlands, also play a major role in reducing flood risk by intercepting rainfall and slowing surface water run-off.

2.73 Planting more native woodland will have benefits for climate change mitigation due to its potential to sequester and store carbon from the atmosphere. In addition, woodland creation and enhancement will provide benefits for biodiversity by increasing woodland habitats across

Moray and improving connectivity between existing areas of woodland. This will have further benefits, by making biodiversity more resilient to the future changes in climate.

2.74 Planting more woodland will have further benefits for water quality by intercepting precipitation and increasing water infiltration in soils. This reduces the amount of surface water run-off, and sediment, entering watercourses, improving water quality and reducing flood risk. Trees can also help prevent soil erosion.

2.75 Introducing more native woodland will also have benefits for landscape character and may improve health and well-being, by encouraging people to be out in nature more often and lead more active lifestyles. Woodland creation and restoration would also create opportunities for local employment and opportunities for local business in the land management or forestry sectors to start-up or grow.

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Figure 2.6: Woodland and Forestry Cover

Moray boundary
National Forest Inventory (2020)
Native woodland - Integrated Habitat Network
Core Native Woodland

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Woodland_Forestry_Cover_A3L 26/04/2023
Source: OS, Moray Council, FC

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Figure 2.7: Preferred Areas for New Woodland Creation

Moray boundary

Moray Woodland and Forestry Strategy (2018)

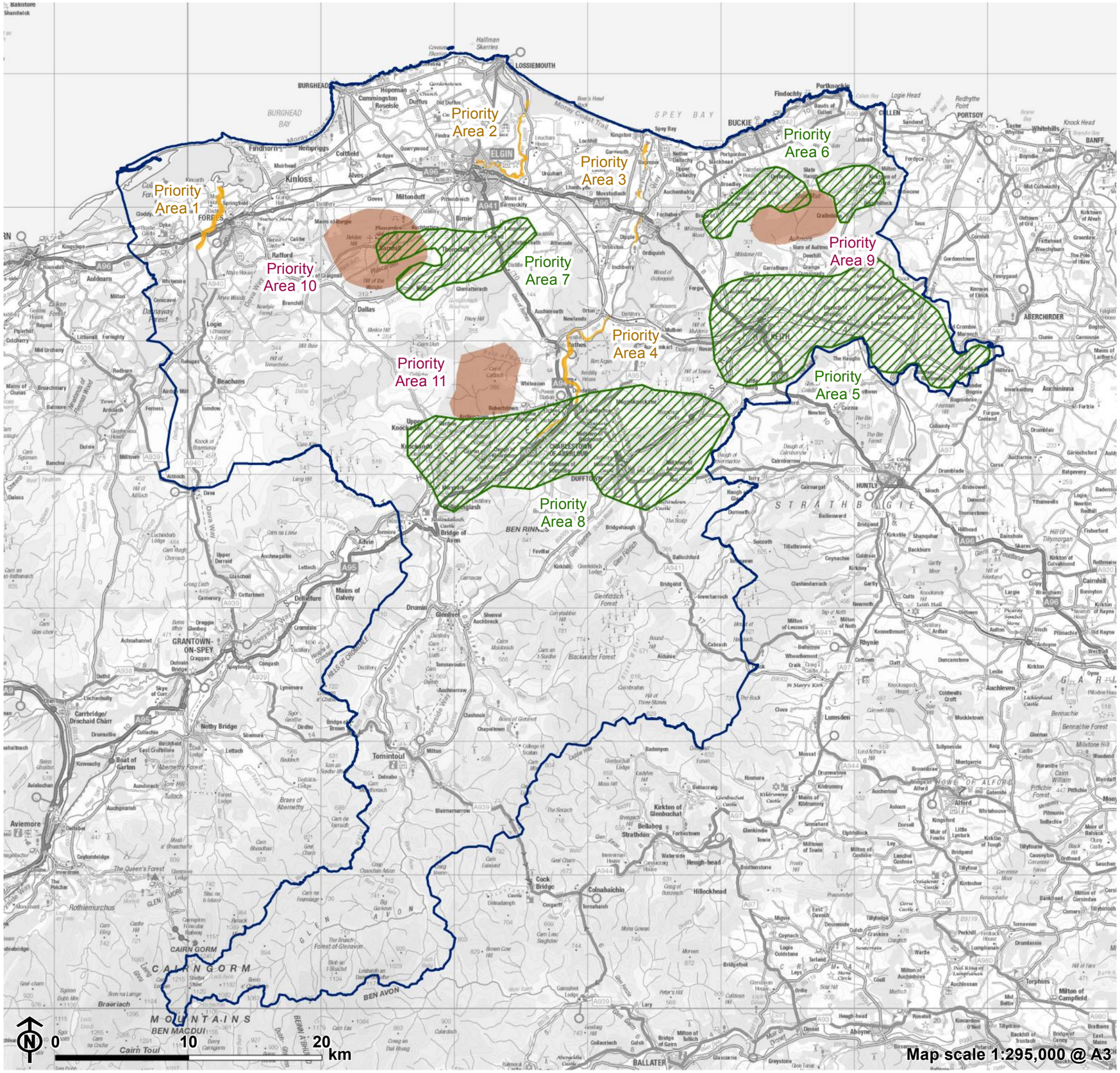
- Existing Woodland
- Likely to be unsuitable
- Potential
- Preferred
- Sensitive

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Preferred_Areas_New_Woodland_Creation_A3L 26/04/2023
Source: OS, Moray Council

Figure 2.8: Opportunity Areas: New Woodland, Riparian Planting and Forestry Diversification



CB:JB EB:bournazel_j LUC 12348B_r1_Opp_Areas_Woodland_Forestry_Diversification_A3L 26/04/2023
Source: OS, Moray Council, LUC

Agricultural Land Enhancements

Context

2.76 Scotland's soils data on land capability for agriculture was used to identify potential investment opportunity areas for agricultural land. Large areas of Moray near the coast are identified as having Grade 2 and 3.1 [11]agricultural land which is capable of supporting a very wide range of crops (**Figure 2.9**). Such areas are often more intensively farmed, with associated adverse effects on the environment. Many of these areas are associated with floodplains which are nutrient rich, with adverse effects on water quality because of agricultural activities.

Investment Opportunities

2.77 Such agricultural areas offer opportunities for alternative practices which are more sustainable and reduce the carbon footprint of farming operations. A 'payment for ecosystem services' approach provides financial incentives or payment to land-managers for providing ecosystem services by maintaining and improving ecosystems above and beyond the regulatory requirements. This approach aims to support good environmental management and can provide ecosystem benefits across the four categories of ecosystem services: provisioning, regulating, supporting and cultural. The actions to achieve enhanced ecosystem services are wide ranging. The payments can help contribute towards the costs of actions or be paid upon achieving objective.

2.78 The payment for ecosystem services approach can include a wide variety of options for enhancing agricultural land including, but not limited to:

- Maintaining and enhancing existing areas of native woodland and planting new woodland on farms;
- Introducing new habitats (e.g. wildflowers, ponds etc.); and
- Replacing single species conifer blocks with native woodland.

2.79 In addition, the following options were considered in relation to agricultural land enhancements:

- Knowledge sharing to promote less intensive agricultural practices (e.g. crop rotation, integrating grass leys in to crop rotations, non-invasive tillage, prevision fertiliser application); and
- Creating community run farms or Community Supported Agriculture (CSA).

Priority Areas

2.80 The initial selection of potential areas for agricultural land enhancement is based on land capability for agriculture classifications and arable land use data, and primarily focused on the areas of class 2 (land capable of producing a wide range of crops) and 3.1 (land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range).

2.81 The following strategic areas have been identified as having potential for enhancement (also see **Figure 2.10**).

Priority Areas 1-4

2.82 Agricultural land classifications and land use data indicates that the following Priority Areas 1-4 are in areas identified as being situated on primarily Grade 2 or 3 agricultural land and in areas where arable land is the main land use. Any of the investment opportunities could be sought in each of these areas.

2.83 Priority Area 1 is located along the River Spey between Kirkhill and Fochabers. This land is identified as arable land and is situated primarily on Grade 2 agricultural land.

2.84 Priority Area 2 is located along the River Lossie near Lossiemouth. This land is identified as arable land and is situated primarily on Grade 3.1 agricultural land.

2.85 Priority Area 3 is located to the north-west of Elgin. This land is identified as arable land and is situated primarily on Grade 2 and 3.1 agricultural land.

[11] Scotland's Soils website – Land capability for agriculture (partial cover)

2.86 Priority Area 4 is located to the north of Forres. This land is associated with the floodplains of the River Findhorn. It is identified as arable land and is situated primarily on Grade 2 agricultural land.

Benefits

2.87 Altering intensive agricultural practices will have a variety of benefits for the environment. Practising less intensive farming (e.g., reducing tillage) will help to reduce soil erosion, having benefits for both soil structure and water quality. Practicing crop rotation and reduced use of fertiliser will also improve soil and water quality.

2.88 Incorporating additional habitats onto agricultural land such as woodlands, wildflower meadows and ponds, will have benefits for biodiversity and help expand and better connect the ecological network. Furthermore, planting more native woodland will have benefits for climate mitigation due to their potential to sequester carbon from the atmosphere and store it.

2.89 Implementing community supported agriculture models can have benefits for local economic development, education and health and wellbeing through the promotion of healthy eating.

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Figure 2.9: Agricultural Land Classification

Moray boundary

Land Capability for Agriculture

Prime Agricultural Land

- 2 - Land capable of producing a wide range of crops
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range

Land Capable of Supporting Mixed Agriculture

- 3.2 - Land capable of average production though high yields of bareley, oats and grass can be obtained
- 4.1 - Land capable of producing narrow range of crops: grassland with short arable breaks of forage crops and cereal
- 4.2 - Land capable of producing narrow range of crops: grassland with short arable breaks of forage crops

Land Capable of Supporting Improved Grassland

- 5.2 - Land capable of use as improved grassland. Few problem with pasture establishment but may be difficult to maintain
- 5.3 - Land capable of use as improved grassland. Pasture deteriorates quickly

Land Capable of Supporting only Rough Grazing

- 6.1 - Land capable of use as rough grazings with a high proportion of palatable plants
- 6.2 - Land capable of use as rough grazings with moderate quality plants
- 6.3 - Land capable of use as rough grazings with low quality plants

Limited Agricultural Value

- 7 - Land of very limited agricultural value

N 0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Agricultural_Land_Classif_A3L
25/04/2023 Source: OS, Moray Council, JHI

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Figure 2.10: Opportunity Areas: Agricultural Land Enhancement

Moray boundary
Agricultural land enhancement opportunity

Priority Area 3
Priority Area 2
Priority Area 4
Priority Area 1

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Opp_Areas_Agricultural_Land_Enhancement_A3L 25/04/2023
Source: OS, Moray Council, LUC

Figure 2.11: Natural Capital Investment Opportunity Areas

Moray boundary

Opportunity Areas

- Peatland restoration
- River flooding
- Coastal flooding
- Riparian woodland planting
- New woodland
- Commercial forestry diversification
- Agricultural land enhancement

0 10 20 km

Map scale 1:295,000 @ A3

CB:JB EB:bournazel_j LUC 12348B_r1_Natural_Capital_Investment_Opp_Areas_A3L 25/04/2023
Source: OS, Moray Council, LUC

Chapter 3
Natural Capital Associated Investments

3.1 This chapter explores the opportunities to enhance the benefits associated with investment in natural capital assets. This includes recommended supporting investments which would increase recreational access and use of these areas by local communities and visitors, and associated tourism development. Several high-level opportunities for enhancement have been identified and this chapter outlines these opportunities, potential locations and the benefits they could achieve.

3.2 This chapter should be read in conjunction with the Moray Woodland and Forestry Strategy (currently under review)[12] which identifies key access, recreation and tourism aspirations associated with woodland and forestry and which Moray Council are supportive of in principle. Some of the Strategy recommendations overlap with opportunities outlined in this report due to the known support of Moray Council. However, the opportunities in this report reflect the whole range of natural capital investment opportunities identified, not just those associated with woodland enhancement.

Transport and Access

3.3 Ensuring sustainable easy access to the landscape will be critical to realising the associated benefits of access without leading to potential negative effects such as increased car use. This improved access should benefit both visitors to Moray and provide better connections for local communities.

Road Network

3.4 There are number of key roads that provide access to and throughout Moray including the A95, A96, A939, A940 and A941.

[12] Moray Council (2018) Moray Woodland & Forestry Strategy – Supplementary Guidance (page 13-14)

3.5 The A95 provides a link to the A9 which is the key route to the Central Belt. The A96 connects Aberdeen to Inverness along the Moray coast through Elgin. Finally, the A941 provides a link between the A95 and A96. All three main roads provide a connection point to Elgin. The A939 and A940 provide a north-south connection between Forres and Bridge of Gairn. Although the private car is the main way to travel through Moray, there are limited options to make use of more sustainable vehicle options such as electric vehicles. There are currently 90 charging points across the Council area. Moray Council has plans to install an additional 61 charging points and it is now a requirement that these should be provided within all new developments[13]. Locations for these new charging points should be considered in the context of the main visitor and community access points once final locations for the natural capital investments are known.

Public Transport

3.6 Stagecoach runs the main buses within Moray which include the number 10, 31, 35, 38 and 36. The main bus routes connect the main towns in Moray to Aberdeen and Inverness. Most smaller settlements are connected to Elgin via bus routes. There are buses roughly every 30 minutes from Elgin to Aberdeen. Bus services to Inverness are not as frequent and vary throughout the area. Bus services connect the Aberlour area to several natural capital investment opportunity areas, in particular priority area 8 which could accommodate new woodland. Bus services also provide connections to Fochabers allowing connection to three natural capital investment opportunity areas (woodland, priority area 2, river flooding priority area 2 and coastal flooding priority area 4).

3.7 There are further opportunities to make bus travel more attractive, accessible and useful to the travelling public, including through the Council's new 'm-connect' service which launched in May 2022, an on-demand bus service for journeys throughout Moray[14].

3.8 There are three train stations in Moray; Forres, Elgin and Keith. The train stations are on the Inverness to Aberdeen line which runs on average every 2 hours with some additional trains at peak times. The train station within Forres provides public transport connections to some of the natural capital opportunity areas, in particular four priority areas for river flooding, coastal flooding, agricultural land enhancement and riparian woodland planting opportunity areas.

Within and around Keith, new woodland priority area 5 will be able to be accessed via Keith Train station and several bus routes that connect to Elgin.

3.9 Elgin is the main town within Moray with rail and bus links out with Moray and to smaller settlements. Elgin is a key centre providing public transport links to several different priority areas near Elgin and within smaller settlements.

3.10 There is an opportunity to support and ensure the future of the Keith and Dufftown Railway, which presently runs services between Keith Town and Dufftown. Re-connecting this line to the mainline at Keith may increase sustainable travel along this corridor.

3.11 Beyond thing, there is limited capacity to improve rail connections within Moray within the scope of a programme of Natural Capital investment, however there may be opportunities to improve onward bus links from key stations to areas where investments in natural capital assets have been made.

Cycle Infrastructure

3.12 The National Cycle Route 1 runs through Moray connecting Aberdeen to Inverness. The cycle routes in Moray are discussed in more detail later within this chapter under access through the landscape. Bike hire is available in several locations across Moray but is mainly limited to Elgin, Lossiemouth, Forres, Findhorn and Cullen. There is limited bike hire in the more inland parts of Moray, where most of the natural capital investments area proposed.

Investment Opportunities

3.13 The following investment opportunities have been identified to improve access to the landscape:

- Increase e-charging points across Moray, in particular along the A95, A96 and A939 and other main access routes to the locations of natural capital investment areas once known.

[13] Moray Council (2023) Moray adopts Electric Vehicle Charging plan

[14] Moray Council website – m.connect

- Increase the number of passengers using the rail service and arriving by rail in Moray. This could include a Moray railcard, similar to the 'Highland Railcard[15]' which provides discounts to residents of Moray on local trainlines.
- Support the re-connection of the Keith and Dufftown Railway to the mainline at Keith and the facilitation of active travel along this sustainable transport corridor.
- Bus service improvements, including increasing the frequency of services between the main investment locations, rail stations and larger settlements. This would require engagement with Stagecoach and promotion of the routes to ensure financial viability.
- Increase bike hire opportunities, especially near public transport interchange, making use of support to businesses such as the Scottish Growth Scheme.
- Improve cycling routes between the main towns and village and investment areas, making use of funding streams such as the Cycling Friendly programme and Sustrans Places for Everyone.

Benefits

3.14 Investment in transport infrastructure means that more of Moray's natural capital assets will be accessible providing cultural ecosystem service benefits such as enhanced health and wellbeing to residents and tourists.

3.15 Increasing e-charging points, improving public transport options and improving cycling infrastructure across Moray will allow more people, including both residents and tourists, to travel in a more sustainable way, reducing emissions and improving air quality.

3.16 Improving transport connectivity to and within Moray will help make the area more accessible and could increase the number of visitors. This will encourage increased spend in the local economy supporting local businesses, particularly those in the tourism industry.

Recreational Routes and Connectivity

Footpath and Cycle Network

3.17 Moray has a large network of core paths. Some of these core paths include links between the natural capital investment opportunity areas identified, however, there will be opportunities to integrate additional path networks within the opportunity areas and address existing gaps within the network close to or within the opportunity areas. To enhance the path network the incorporation of heritage/ecological interpretation and play opportunities can add to the recreational offer and improve the attractiveness of visits. This can be through both physical interpretation panels or via QR codes or an app which link to additional digital information. This could incorporate additional features such as an audio heritage trail or mindfulness activities.

3.18 The National Cycle Route 1 is a fully sign posted cycle route that runs along the east coast of Britain from Dover to John O' Groats. Within Moray, the route connects Aberdeen to Inverness. The National Cycle Route 1 is part of the National Cycle Network. Some other fully sign posted cycle routes in Moray include:

- Elgin Experience cycle route (20.8km) – A circular loop through Elgin and the surrounding countryside.
- Glenlivet Estate Cycle Trails (27.4km) – A network of eight trails of varying length within the estate.
- Lossiemouth Loop (22.4km) – Which passes around the perimeter of the airfield via Duffus Castle and back.
- Moray Coastal Cycle Route (46.4km) – Which extends from Burghead to Cullen, linking the coastal communities.
- Moray Monster Trails, near Fochabers – Series of mountain bike trails between 4.1km and 8.8km of varying grades.

[15] Scotrail website – Highland Railcard

Opportunities

3.19 Improving and extending footpath and cycle networks is an opportunity to increase access to the landscape. New footpaths and cycle routes can be incorporated into the design of these areas.

3.20 The following actions have been identified to maximise benefit from natural capital investment and improvements to access:

- Provide new access routes within any natural capital investment areas, utilising appropriate surfacing to manage balance between access and nature restoration (e.g. boardwalks within areas of peatland restoration areas), routing paths to minimise disturbance to sensitive areas, and to maximise all abilities path provision;
- Provide new cycle routes within natural capital investment opportunity areas to provide an additional recreational offer;
- Provide interpretation and play alongside the path network to enhance recreational offer and incentivise visits; and
- Explore opportunities for providing additional digital interpretation and/or activities through an app or QR code links to a dedicated website.

Benefits

3.21 Improving access to landscape will enhance the tourism offer by offering more things to see and do.

3.22 Health and wellbeing benefits through access to nature, physical activity and recreation. The integration of interpretation and play will enhance the recreational offer and realise benefits for education and child development.

3.23 The use of path networks will manage indiscriminate access to the landscape can reduce soil erosion and allow space for nature restoration.

Long Distance Routes

3.24 Long distance routes provide an opportunity to experience the local landscape and habitats while offering a tourist attraction. Moray contains several long-distance routes with sections accessible for cycling and horse-riding. These include:

- Moray Coastal Trail – A 76.8km route along a waymarked coastal trail from Findhorn to Cullen.
- Isla Way – A 20km route providing a link between Keith and Dufftown.
- Tomintoul Spur – A 24km branch of the Speyside Way heading up over moorland from Cragganmore to Tomintoul.
- Speyside Way – Oone of four official long-distance Routes in Scotland. The route links the Moray coast with the edge of the Grampian Mountains, generally following the valley of the River Spey. The route totals 68.9km.
- Dava Way – Follows the old Highland Railway line for 38km between Forres and Granton-on-Spey.

3.25 The Moray Way is Moray's longest distance route. It is a circular route, which follows the Moray Firth coast, crosses over moorland and tracks the River Spey. The Moray Way combines the whole of The Dava Way, two-thirds of The Moray Coast Trail and approximately half of The Speyside Way creating a loop of a 160 km, which can be walked in five to nine days. The route can be walked in either direction, starting and finishing at any point with many entry/exit points with car parking nearby. The route is waymarked throughout, markers and fingerposts carry the logos of the Dava Way, Speyside Way and the Moray Coast Trail.

3.26 The National Cycle Route 1 runs parallel to the A96 running along the Moray coast connecting Aberdeen to Inverness. The other main cycle routes in Moray are the Moray Coastal Cycle Route (46.4km), Lossiemouth Loop (22.4km), Glenlivet Estate Cycle Trails and the Elgin Experience Cycle Route (20.8km).

3.27 Moray Council has developed a Strategic Infrastructure Plan for its main routes and has identified 8 key projects to help meet objectives to maximise investment, support communities and businesses to capitalise on increased use of routes, support an enhanced visitor experience and overall outdoor offer in Moray, especially in places where there is currently

weak route infrastructure and provide a focus on infrastructure that can help reduce the impacts of climate change[16].

Opportunities

3.28 Enhancing Moray's natural capital assets will offer opportunities to integrate Moray's existing plans to enhance long distance routes into a wider programme of work. The following opportunities could be integrated into any plans:

- Ensure sufficient waymarking and signage to help people navigate long distance routes;
- Improve surfacing and remove unnecessary obstacles such as gates to create a wider all-ability walking, cycling and horse-riding network; and
- Explore further opportunities to provide new branches to long-distance routes which would connect communities to the proposed natural capital asset investments.

Benefits

3.29 Investment in long distance routes within Moray and ensuring that the routes are accessible to all will allow increased access to these routes and bring positive benefits to health and wellbeing.

3.30 Enhancing long-distance routes will allow tourists to visit natural capital investment areas and their landscape features and habitats enhancing the overall tourism offer and supporting an increase in visitor numbers.

Tourism and Eco-tourism

3.31 Tourism is a major part of Moray's economy, accounting for 10% of Moray's total employment[17]. The diversity of Moray's landscape offers a variety of tourism opportunities. Moray contains a mixture of rugged coastline, farmland, forests and mountains offering land and wildlife diversity. The wide range of habitats play host to many bird and animal species, including osprey, golden eagle, capercaillie and red squirrel. The Moray Firth is also home to bottlenose dolphins, which can often be seen from the shore. The southern tip of Moray falls within the Cairngorms National Park. There are many opportunities for a range of summer and winter outdoor activities which include walking, cycling, wildlife watching and extreme sports.

3.32 Investing in natural capital enhancement is therefore likely to increase the appeal of the local area. Investing in tourism infrastructure such as overnight accommodation, hospitality and visitor centres will support a growth in tourism numbers and provide new business opportunities.

3.33 In particular, natural capital investment will provide the opportunity to create and expand the eco-tourism offer in Moray. Eco-tourism provides a more sustainable travel offer and often includes opportunities to learn about local environments and wildlife.

3.34 Moray already has a reasonably well-developed eco-tourism offer[18], with wildlife watching offers particularly around the coast and in the Cairngorms National Park and the eco-village at Findhorn but there is an opportunity to increase this through investment in the restoration of peatland, woodland, riparian and coastal habitats which will support protected species and provide opportunities for people to engage with and learn about the natural environment.

Opportunities

3.35 The following opportunities have been identified for investment:

- Expand wildlife watching and educational opportunities in natural capital investment opportunity areas;
- Explore potential to integrate wildlife centres with areas of investment; and
- Support the development of sustainable accommodation offers.

Benefits

3.36 The following benefits could be achieved through investments:

- Reduce any negative impacts of unmanaged and unsustainable tourism;

[16] Moray Routes Strategic Infrastructure Plan (October 2022)
[17] Highlands and Islands Enterprise, Tourism in Moray – The Strategy for Tourism Development in Moray
[18] Moray Speyside website

- Volunteering and educational opportunities associated with engaging in the natural environment and learning about sustainable lifestyles; and
- Support growth of existing and new businesses and creation of new jobs.

Chapter 4
Skills Requirements

4.1 Nature restoration and carbon off-setting at the scale required by UK and Scottish Government targets to meet the twin crises of climate and nature will require a significantly increased and suitably skilled workforce in these areas. Nature-based jobs grew at more than five times the rate of all jobs in Scotland between 2015 and 2019 and accounted for a third of all job growth during this period[19].

4.2 NatureScot research[20] has identified a significant skills shortage to meet this job growth, and investment in skills training will be essential to ensure there is a suitably qualified workforce. Scotland's nature-based sector skills and labour shortage is relevant to the natural capital investment opportunities identified in Moray. As part of this study, we have carried out an assessment of both the job roles needed to undertake the proposed investments and the specialist skills these jobs require using the NatureScot research and matching with the specific investment opportunities identified.

4.3 Engagement with the University of the Highlands and Islands (UHI) demonstrated that uptake of their environmental land management degrees is increasing and there are also positive signs that schools are integrating more of this type of learning into the curriculum at an earlier stage to develop the interest of young people for careers in this sector. UHI also offer qualifications in the following, with some delivered at their Moray campus and others based at other campuses or accessible online:

- HNC/HND: Aboriculture and urban forestry (Inverness)
- HNC/HND/PDA: Forestry (Inverness)
- HNC: Wildlife and conservation management (North or West Highland)
- BA (Hons): Adventure tourism management (West Highland)
- BA (Hons): Culture and heritage (Moray)

[19] NatureScot website – Nature-based jobs and skills Action Plan 2023-2024

[20] NatureScot (2020) Supporting a Green Recovery: an initial assessment of nature-based jobs and skills

- BSc (Hons): Forest management (Inverness)
- BSc (Hons) Geography (Inverness)
- BA(Hons)/HND: Hospitality management (Perth)
- BA (Hons): Marine and coastal tourism (West Highland)
- BA (Hons): Sustainable development (Argyll/West Highland)
- MSc: Sustainable mountain development (Perth)
- MSc: Tourism (Perth)
- CPD: Award Water resources in a changing climate (Online)
- CPD: Award Sustainable deer management (Online)
- CPD: Award Rural community development (Online)
- CPD: Award Sustainable resource management (Online)

4.4 It is important to note that a wide range of professions and skills are required and the skills acquired through the range of courses currently offered at UHI will not be sufficient to undertake the full range of jobs in the sector.

Jobs and Skills

4.5 Tables 4.1 to 4.5 set out the jobs and skills requirements associated with the opportunity areas identified in **Chapter 2**. The tables provide an overview of jobs and skills requirements for each natural capital investment opportunity identified. The focus is on specialist skills in each area, though it should be noted that many general skills will also be required such as communication, project management, community engagement and general ICT skills.

Peatland Restoration

Table 4.1: Peatland restoration skills and jobs

Skills	Jobs
■ Peatland hydrology ■ Groundwater investigation (GI) and modelling ■ Ecological and ornithological surveying and field skills ■ Biodiversity and wildlife management ■ Remote sensing, GIS and data analysis ■ Carbon sequestration monitoring/carbon management ■ Land management (peatland) planning	■ Peatland restoration practitioner (design of restoration scheme) ■ Peatland restoration contractor (specialist machinery operator) ■ Land manager ■ Hydrologist ■ Ecologist/ornithologist ■ GIS/remote sensing technicians ■ Planners

Woodland Restoration and Creation

Table 4.2: Woodland restoration and creation skills and jobs

Skills	Jobs
■ Forestry and woodland management (planting, pruning, thinning, felling, fencing, maintenance and protection) ■ Biodiversity and wildlife management ■ Arboriculture ■ Silviculture ■ Agroforestry ■ Ecological surveying and field skills ■ Land use appraisal and landscape design	■ Forest and woodland managers ■ Forest craftsperson/contractor (planting, pruning, thinning and felling, fencing, protection, maintenance, felling and harvesting) ■ Woodland restoration specialist ■ Arboriculturist/tree specialist ■ GIS/remote sensing technicians ■ Forest and woodland ecologist ■ Planner

Skills	Jobs
■ Remote sensing, GIS and data analysis ■ Carbon sequestration monitoring/carbon management ■ Land management (forestry) planning	■ Forest and woodland ranger ■ Recreation and community specialist

Flood Risk Management

Table 4.3: Coastal and river flood risk management skills and jobs

Skills	Jobs
■ Civil engineering ■ Flood risk modelling and management ■ SuDS design ■ Natural flood management and nature based solutions (NBS) skills e.g.: – Riparian woodland design – River and flood plain restoration – Wetland restoration ■ Remote sensing, GIS and data analysis ■ Ecological surveying and field skills	■ Hydrologist/flood risk modeller ■ Flood risk and drainage engineer ■ Geomorphologist (coastal/fluvial) ■ Flood liaison officer ■ Ecological engineer (natural flood management, coastal protection, SuDS design) ■ GIS/remote sensing technicians ■ Aquatic ecologist and ornithologist ■ Planner

Agriculture and Agro-ecology

Table 4.4: Agriculture land enhancement and agro-ecology skills and jobs

Skills	Jobs
■ Sustainable farming practices ■ Ecosystem service skills ■ Carbon management ■ Soil health ■ Horticulture ■ Biodiversity and wildlife management ■ Economic diversification of farming practices ■ Land management and conservation	■ Farmer/farm manager ■ Agro-ecological advisor ■ Regenerative agricultural practitioners ■ Advisors in integrated land management ■ Soil and plant scientist ■ Conservation planner ■ Fencers

Tourism and Recreation

Table 4.5: Tourism and recreation skills and jobs

Skills	Jobs
■ Marketing and events ■ Hospitality and customer service ■ Local knowledge: – Landscape, nature and biodiversity – Cultural heritage – Food, drink, retail and leisure – Whisky ■ Teaching	■ Marketing ■ Event planning ■ Outdoor activities operators, tour providers and instructors (e.g. walking, cycling, boat tours and kayaking) ■ Outdoor education officer ■ Wildlife guiding ■ Accommodation and hospitality jobs ■ Distiller

Chapter 5
Delivery and Funding Mechanisms

5.1 There are several existing delivery and funding mechanisms for the delivery of natural capital investment and carbon off-setting projects. Similar projects have previously largely relied on public sector grant funds. However, it is now widely recognised that private sector funding will be required to meet the scale of change required to meet net-zero and nature recovery targets. The Green Finance Institute has identified a finance gap in Scotland of between £15bn and £27bn to meet nature related outcomes as determined by national policy[21]. This chapter summarises the most used and immediately available delivery and funding mechanisms. It is important to note that this is a developing area and the UK and Scottish Governments both have programmes in place to explore additional delivery and funding opportunities.

5.2 This chapter covers the following delivery and funding mechanisms:

- Developer obligations;
- Biodiversity net gain;
- Developer carbon-offset payments;
- Community benefit funding;
- Payment for ecosystem services;
- Carbon markets;
- Landscape Enterprise Networks; and
- Grant funding.

5.3 Chapters 6, 7 and 8 then explore some of these delivery and funding mechanisms in more detail through case studies.

[21] Green Finance Institute (2021) The Finance Gap for UK Nature

Methodology and Limitations

5.4 Stakeholder engagement was carried out with the Planning team at Scottish Government, responsible for the natural environment policies in NPF4 and other key agencies including the Innovation Policy team at SEPA and NatureScot's Green Finance team to establish their current positions on the various delivery mechanisms and their feedback has been fed into this chapter.

5.5 Further information was identified from a range of government and agency sources to present the full details of each mechanism.

5.6 Other stakeholders contacted included the Speyside Catchment Initiative, but no response was received.

5.7 It should be noted that some of the mechanisms outlined are in the very early stages of development and therefore may need updating once more detailed policy positions are released and as the various delivery mechanisms are adapted through practice.

Developer Contributions

5.8 In Scotland there are well-established mechanisms for seeking financial and in-kind contributions from developers as part of the planning process. These mechanisms may be relevant in certain limited circumstances subject to the applicable policy and legal tests.

5.9 All planning applications must be determined based on the local development plan (unless material considerations indicate otherwise). For something to be taken into account as a material consideration it must be relevant to planning and relate to the development proposed by the particular application under consideration.

5.10 As well as relating to material planning matters, any contributions sought as part of the planning application process must be proportionate – being fairly and reasonably related to the impact of the proposed development in question.

5.11 National Planning Framework 4 (NPF4) rebalances the planning system in favour of conserving, restoring and enhancing biodiversity, and promotes investment in nature-based solutions, benefiting people. The emphasis of NPF4 biodiversity policies is on securing on-site enhancement, including by designing-in enhancement measures from the outset secured through the planning permission.

5.12 Where on-site measures alone are not sufficient, biodiversity/environmental improvements can potentially be secured through planning obligations – these are legal agreements entered into under section 75 of the Town and Country Planning (Scotland) Act 1997. Planning obligations may only be entered into where the relevant policy and legal tests are met. The tests provide that planning obligations may only be used where they are: necessary to make the proposed development acceptable in planning terms (i.e. without which planning permission would be refused); relevant to planning (address a material planning consideration); and proportionate to the scale and specific impacts of the particular development in question.

Utilising Building Control Regulations

5.13 From 1st February 2023, the Building (Scotland) Regulations were updated to more clearly define and control the energy and environmental performance of buildings. This includes, for example, new requirements for a delivered energy target for new buildings, improved fabric standards for new buildings and a new approach to on-site energy generation and heat network connections. While the Building Control Regulations offer a minimum standard requirement for the environmental performance of buildings, it is highlighted that the provisions of NPF 4 and in particular the requirements in relation to biodiversity enhancement present a more aspirational and strategic approach to natural carbon investment which goes beyond those standards established through Building Control.

Biodiversity Net Gain

5.14 The UK Government is working towards the roll out of Biodiversity Net Gain (BNG) in November 2023[22]. BNG is a way to contribute to the recovery of nature while developing land and will require developers to ensure habitats are in a better condition than they were before the development. Developers must try to avoid loss of habitat and if not, they must create habitat either on or off-site. If neither can be provided, as a last resort, statutory credits can be bought from the Government who will use this to invest in habitat creation elsewhere in

[22] Department for Environment, Food and Rural Affairs (2023) Understanding biodiversity net gain

England. A biodiversity metric has been produced to enable the calculation of how a development or change in land management will change the biodiversity value of a site and will be used to calculate the amount of credits a developer must purchase[23].

5.15 The Scottish Government has commissioned research to explore options for developing a similar biodiversity metric or other tool, specifically for use in developing approaches to measuring biodiversity at the 'site' scale in Scotland.

Community Benefit Funding

5.16 Initial work is being undertaken by some organisations to establish whether community benefit contributions, particularly from renewable energy developments could be invested in Natural Capital assets to maximise the ecosystem service benefits for communities. While it is anticipated that the use of funds in this way could achieve transformational benefits for communities beyond what this funding is currently spent on, this approach is very new and further feasibility work needs to take place to ensure that investment of these funds would realise equitable benefits for communities and involve sufficient opportunities for communities to determine what the funds are invested in.

Payment for Ecosystem Services

5.17 Payment for ecosystem services or schemes (PES) involve financial incentives to land-managers to voluntarily maintain or improve ecosystems above and beyond what is required by regulatory compliance[24]. These services attempt to address the 'market failure' within the current UK economic system, where ecosystem and climate degradation are considered separate to economic activity. This means that addressing these issues will not be remedied by the economic market itself, and that direct intervention is needed from outside this system. The payment for ecosystem services outlined are an attempt to set up a separate economic market for the provision of ecosystem services. Ecosystem services are the benefits that society derives from nature. These can be broken down into four categories:

- Provisioning: Production of food and other material goods, such as timber.
- Regulating: Climate control, such as carbon sequestration or hazard prevention.
- Supporting: Water and nutrient cycles, soil formation.
- Cultural: Recreation and public amenity, cultural value.

5.18 Currently, payment for ecosystem services in the UK generally focuses on regulating services, with a particular focus on climate control and carbon sequestration/reduction.

Carbon Markets

5.19 Carbon markets exist for organisations with unavoidable emissions to buy carbon offsets in form of carbon units from projects that take carbon out of the atmosphere including carbon sequestration projects. There are two types of carbon markets – the compulsory carbon market, run under the UK Emissions Trading Scheme (UK ETS)[25], and the voluntary carbon market which includes has two accredited schemes including the Woodland Carbon Code and the Peatland Carbon Code.

Woodland Carbon Code (WCC)

5.20 The WCC is the government-backed quality assurance standard for woodland creation projects, launched in 2011[26]. It provides a framework for businesses and organisations to invest in carbon offsets in the form of high-quality carbon units from woodland projects. It is endorsed by the International Carbon Reduction and Offset Alliance[27] (ICROA) as such carbon sequestration from carbon code certified projects will contribute to the UK's targets for reducing emissions. The WCC is based on scientific forest research and uses a carbon model to estimate the amount of carbon sequestered by a woodland up to 100 years. Participants include the secretariat of the woodland carbon code, landowners, project developers, accreditors, and carbon buyers. To meet the requirements of the code, projects must:

- Register their project, stating the exact location and long-term objectives of their project;

[23] Department for Environment, Food and Rural Affairs and Natural England (2021, updated 2023) Biodiversity metric: calculate the biodiversity net gain of a project or development
[24] ClimateXChange (2018) The 'Payment for Ecosystem Services' approach – relevance to climate change
[25] Scottish Government (2020) Climate change – UK emissions trading scheme
[26] UK Woodland Carbon Code website
[27] ICROA website

- Meet national forestry standards to ensure they are sustainably and responsibly managed;
- Have a long-term management plan;
- Use standard methods for estimating the carbon that will be sequestered;
- Demonstrate that the project delivers additional carbon benefits than would otherwise have been the case; and
- Maintain verification for the duration of the project.

5.21 Carbon credits come in two main forms in the code:

- A **Woodland Carbon Unit (WCU)** is a tonne of CO2e that has physically been sequestered in a WCC-verified woodland. WCU's can only be traded once the woodland project has reached certain time periods (every 10 years for example) and are retired once purchased and used by a company.
- A **Pending Issuance Unit (PIU)** is a *"promise to deliver"* a WCU in the future, based on the predicted sequestration of a project. It allows organisations to plan their emission reduction strategies.

Peatland Carbon Code (PCC)

5.22 The PCC is a government-backed voluntary certification standard for UK peatland restoration and management projects[28]. It exists to assure carbon market buyers that the benefits sold are high quality, real, and permanent. The concept behind the code is that restoring peatland will reduce GHG emission loss to the atmosphere from peat carbon stores. To meet the requirements of the code, a project must:

- Be an eligible peatland type;
- The project must be additional;
- Restoration activities must not conflict with other land management agreements; and
- Restoration must not be legally or contractually required.

5.23 Carbon credits for the PCC come in two main forms:

- A **Peatland Carbon Unit (PCU)** is a tonne of CO2e from a verified Peatland Code certified peatland.
- A **Pending Issuance Unit (PIU)** is a 'promise to deliver' a PCU in the future.

5.24 The benefits of the codes are that the minimum standards ensure that creation and restoration projects achieve the carbon savings stated and consumers can have confidence in the quality of offset they are purchasing. However, considerations need to be made when planning new projects including replanting woodlands in cases of catastrophes (such as fire or disease) and the possibility of buying back sold units.

Developing Markets

5.25 There is on-going research funded from DEFRA's Natural Environment Investment Readiness Fund[29] into developing carbon codes which will enable the development and restoration of other natural assets to be marketed and traded as carbon offsets. These include the UK Soil & Farm Carbon Code, Saltmarsh Carbon Code, and Hedgerow Carbon Code[30], with some projects such as the Hedgerow Carbon Code already in pilot[31].

5.26 Additionally, ongoing consideration into implementing a voluntary biodiversity market is being explored by the Scottish Government and partners which could open up further opportunities.

[28] IUCN website – Peatland Code
[29] Department for Environment, Food and Rural Affairs, Environment Agency and Natural England (2021) New £10 million fund to drive private sector investment in nature
[30] Environment Agency, Department for Environment, Food and Rural Affairs and Natural England (2021) Innovative nature projects awarded funding to drive private investment
[31] Game & Wildlife Conservation Trust (2022) Hedgerow Carbon Code: "good news for UK agriculture, climate change and British wildlife"

Landscape Enterprise Networks (LENS)

5.27 Landscape Enterprise Networks (LENS) are a system for organising the buying and selling of nature-based solutions[32]. LENS brings a wide range of private and public-sector organisations together to fund nature-based solutions within a given area. LENS then brokers negotiations, and eventually transactions, between these buyers and groups of landowners who are in a position to deliver them on the ground. LENS works by establishing and managing a regional trading system of collaborative value chains, each driving specific landscape outcomes for different groupings of businesses. LENS are established through three steps:

- Step 1: Network Opportunity Analysis – This involves a systematic process for understanding which sectors in a region have most at stake as a result of landscape performance, which landscape assets underpin that performance, and where there are cross-overs in interest for different businesses or sectors in the same landscape assets.
- Step 2: The Basic Operating Unit – A collaborative value chain – This step focuses on building a first 'anchor' value chain. In essence, the process involves working with 'demand side' interests to define a common specification for services; with the 'supply side' to define a service proposition; and then working with both to broker a deal.
- Step 3: Growing and Formalising the Regional Network – Building a functioning first anchor value chain creates momentum and interest and leads naturally to both extending the first value chain by attracting more customers and suppliers and building the next. It is at this point that some form of organisational infrastructure, and governance, is required to manage and broker trades in an equitable, transparent, and locally accountable manner.

Grant Funding

5.28 Several public bodies and third sector organisations provide grant funding for natural capital investment works such as those suggested in **Chapters 2 and 3**. Grant funds vary significantly by value and criteria and often they are only available to public or third sector organisations. They are usually competitively allocated and often several grant funds can be stacked to fund larger scale projects. A full breakdown of all funds available in Scotland (at April 2023), their eligibility and criteria, is provided in **Chapter 9**.

[32] Landscape Enterprise Networks (LENs) website

Chapter 6
Delivery Mechanisms Case Studies

6.1 The subsequent **Chapters 7 to 9** present case studies identified for their characteristics, with the aim of presenting a breadth of funding mechanisms and types of projects funded, including a range of natural capital and carbon offsetting investments. The case studies are intended to provide Moray Council examples of a full range of mechanisms they could take forward and the relative strengths and weaknesses of each in practice. The assessment of case studies has informed the recommendations provided in **Chapter 10**. The case studies presented were identified through a range of ways; client selection, previous knowledge of schemes, through the stakeholder engagement and via web search. Resources used to research and present these case studies included organisation and project websites, project case studies, monitoring reports, videos and webinars and research reports that explored carbon offsetting schemes and natural capital solutions, such as research carried out by the Centre for Sustainable Energy. These resources were used to identify a range of funding mechanisms, the outcomes delivered by each initiative's spending and any challenges and limitations that were faced.

Chapter 7
Delivery Mechanism Case Studies – Carbon Offsetting via Developer Contributions

Introduction

7.1 This chapter sets out five case studies, selected for their use of carbon offsetting via developer contributions, which are secured through planning obligations. It covers the mechanisms used, outcomes from their implementation and the challenges they faced. The case studies include the following locations:

- Milton Keynes;
- West of England;
- Southampton;
- Reading; and
- Greater London Authority.

Case Study 1: Milton Keynes

Overview

7.2 The Milton Keynes Carbon Offset Fund (COF), administered by the National Energy Foundation (NEF), was launched by Milton Keynes Council in 2008. The Milton Keynes Local Plan Policy SC1 states: Sustainable Constructions applies to all residential developments of 11 or more dwellings and non-residential developments with a floor space of 1000 sqm or more, requiring them to achieve:

- A 19% carbon reduction improvement upon the requirements within Building Regulations Part L 2013;
- A further 20% reduction in residual carbon emissions from onsite renewable energy generation or connection to a low carbon/renewable community energy scheme; and

- A financial contribution to the COF for anything after this point.

7.3 Requirements are fully set out in a Sustainable Construction Supplementary Planning Document (SPD) and the funds are managed by an in-house Council team by means of s106 agreements, unilateral undertaking or via the Milton Keynes Partnership tariff. However, the management, delivery and verification of projects are outsourced to the NEF. A new homes energy statement is used to specify the anticipated level of carbon which will be emitted by each home within its first year of use. For each tonne indicated, the developer is to pay £200 per tonne into the COF.

Outcomes

7.4 The scheme has helped over 8,000 households in Milton Keynes to receive measures such as free energy efficient light bulbs, and subsidised loft and cavity wall insulation. It has also provided contributions towards the costs of new boilers. The COF is open to community groups/organisations, public organisations including schools, Milton Keynes Council, Parish and Town Councils, Milton Keynes charities and non-profits, and bulk domestic schemes within the borough. The COF tends to provide a maximum of 50% capital finance support for eligible organisations aiming to reduce their carbon footprint, although more funding may be offered at the discretion of the board. The COF is generally intended to be spent on projects that satisfy social need, with high visibility or education value, in particular, projects that encourage community engagement and create knowledge sharing networks.

Challenges

7.5 Challenges for the Milton Keynes COF included initial limitations on the use of the fund, creating a barrier to more innovative use of the money. Some costs, such as solid wall installation and hard-to-treat cavity walls are more expensive than the required cost per tonne gained under the COF. However, in more recent years the scheme's partners have found ways around these barriers. For instance, a fund for solid wall insulation is available with £500 provided towards the costs of these measures[33].

Case Study 2: West of England

Overview

7.6 The West of England (WoE) Authorities; Bristol, Bath and North-east Somerset, South Gloucestershire and North Somerset Councils; are in the process of developing net zero policies. Specifically, the WoE Authorities are considering developing net zero policies based around a framework proposed by the London Energy Transformation Initiative (LETI)[34]. The Centre for Sustainable Energy (CSE) has been helping to develop a consistent approach for the WoE authorities by considering the possible implications of developing an energy offsetting regime, rather than the traditional carbon offsetting approach. For clarity:

- **Carbon offsetting**: A fixed price in £/tonne of CO_2 is set based on the avoided costs of generating those equivalent savings locally. This is a recognised metric that can be linked to universal carbon pricing (i.e., easily compared and traded between non-energy sectors e.g. peat restoration). It is also compatible with embodied energy offsetting. CSE are of the view that these traditional offset funds are flawed and difficult to administer due to challenges with ensuring genuinely 'new' and 'additional' carbon savings at the rate necessary to offset emissions. They therefore advise that an 'energy offsetting' approach is more suitable for the WoE authorities.
- **Energy offsetting/LETI approach**: Energy demand not met from on-site renewable energy must be met through investment in off-site renewables, i.e., a kWh shortfall can be matched with the equivalent kWh of generation 'credits' offsite. There is no fixed cost with this approach and the emphasis is on the developer to evidence additional investment in offsite generation at the time of construction. With tight building fabric efficiency and heat demand standards for new development, a much higher proportion of development will be able to meet its operational energy needs from on-site renewables. Therefore, investment in off-site energy offsetting to make up for any shortfall would be a very last resort.

7.7 As such this LETI approach aims to use an energy metric that has a quantifiable means of ensuring that new development is net zero in terms of operational emissions, rather than using a carbon policy framing and the UK Net Zero Buildings Standard. The basic rationale behind

[33] Energy Magazine

[34] Centre for Sustainable Energy (2022) Carbon offsetting report – Carbon offsetting within an energy intensity policy framing

using this approach, over carbon offsetting, is that *"if new development can be powered entirely from renewable sources (either on or off-site), it will be zero carbon, at least in terms of its operational energy use"*[35].

Outcomes

7.8 The CSE Carbon Offsetting report to the WoE Authorities was published in June 2022. Therefore, the implementation of energy offsetting within any of four the local planning authorities is not particularly advanced. However, CSE have advised on some outcomes and potential benefits of adopting this approach across the region.

7.9 CSE provided calculations to estimate the pot size and carbon price across the local authorities. Using the price of solar PV installations, a £0.091/kWh was advised (subject to review every 6 months). Therefore, the calculation for a development to fund off-site renewables to achieve net zero targets would be: Annual residual electrical demand (kwh) X 0.091 (offset rate) X 30 (lifetime of development). The size of the energy offset fund could range significantly dependent on the rate of compliance with on-site net zero standards for new development and the rate of growth across the region.

7.10 The energy offsetting approach offers an offsetting system that is easy to check and monitor at the planning stage, as energy offsets can be directly matched against onsite kWh reporting. There are currently no examples, other than Cornwall Council, where LETI-style planning policies have been advanced far enough to set out how authorities intend to secure additional renewable energy capacity. The approach being considered by WoE Authorities is similar to that of Policy SEC1 of the Cornwall Climate Emergency Development Plan which recommends that the fund is used to fund solar photovoltaic panels on new buildings and large-scale renewable energy generation. It recommends **against** using the fund for retrofit of existing buildings, reduction of energy demand, solar photovoltaic panels on existing buildings or reforestation/afforestation/peatland restoration.

Challenges

7.11 The energy offsetting approach does not benefit from being a recognised metric like the traditional carbon offsetting approach, which is recognised by investors and can be linked to universal carbon pricing[36]. Additionally, the energy offsetting approach does not necessarily deliver some of the co-benefits offered by nature-based solutions for carbon offsetting, such as woodland creation (e.g. biodiversity net-gain (BNG)), and renewable energy development may have to mitigate some of their own adverse environmental effects, the approach could implement some of these benefits if the landholding on which renewable energy development takes place is managed to deliver them, e.g. delivering BNG.

Case Study 3: Southampton

Overview

7.12 Southampton City Council has implemented carbon offsetting since 2012 via their Adopted Core Strategy Policy CS20. On site developments must meet BREEAM 'Excellent' standards for non-domestic development or 19% improvements on 2013 Target Emission Rates for domestic development. The remaining emissions can then be offset through the Southampton Carbon Offset Fund, designed to provide flexibility and to reduce development costs compared to strict zero carbon standards for new developments. In 2015, the approach was amended to apply only to new developments of over 10 dwellings or 1000 sqm in accordance with national guidance.

7.13 The Southampton Carbon Offset Fund offsets one year of emissions rather than the lifetime of the development, at a cost of £210/tCO2 in the first year of development, made through the Section 106 mechanism (includes a management fee of £31.50 per tonne). A hierarchy was suggested requiring a high standard of energy efficiency first, on-site carbon reductions second, and payments to the local fund as a last resort.

[35] Centre for Sustainable Energy (2022) Carbon offsetting report – Carbon offsetting within an energy intensity policy framing (page 13)

[36] South West Energy Hub (2021) Net Zero New Buildings

Outcomes

7.14 The fund is administered externally by The Environment Centre, enabling Southampton City Council to work with a partner already working closely with the Council on fuel poverty projects. This has enabled the fund to be combined to assist vulnerable households who would otherwise not be able to afford retrofitting measures.

7.15 Initiatives that benefit from the scheme largely include retrofitting energy efficiency measures such as insulation, replacement boilers and renewable technologies. Additionally, the fund has been used to support vulnerable, fuel poor, residents to improve the comfort of their homes, reduce energy bills and alleviate issues associated with fuel poverty. This complements several other Southampton City Council initiatives and improves the health and wellbeing of local residents.

Challenges

7.16 When compared against other local authorities that have implemented carbon offsetting schemes, Southampton had one of the lowest carbon offset prices (£210 one off payment - equivalent to £7 per tonne CO2 x 30 years) as the fund offsets one year of emissions rather than the lifetime of the development. However, research conducted by CSE suggests that when individual council officers were interviewed about their carbon offset fund, Southampton officers were happy with their unit price.

Case Study 4: Reading

Overview

7.17 Reading Borough Council has implemented their own planning requirements that require all new residential homes (developments of ten or more homes) to be built to zero carbon standards if possible. This is set out in the Reading Borough Local Plan 2019. The Local Plan is supported by a revised Sustainable Design and Construction SPD which contains more detail on achieving these zero carbon standards. Where the developer designs homes that are not carbon neutral then the development must deliver, as a minimum, a 35% improvement in the dwelling emission rate over the 2013 Building Regulations, plus a contribution of £1,800 per tonne towards carbon offsetting within Reading (calculated as £60 per tonne over a 30 year period) via S106 payment where necessary.

Outcomes

7.18 These contributions are ringfenced for projects in Reading which deliver energy-efficiency improvements or renewable energy such as retrofitting existing housing, provision of energy saving advice, heat pump installation, renewable and low-carbon energy generation, energy projects for community buildings (e.g., installation of solar panels), installation of electric vehicle charging infrastructure, and tree planting and greening measures.

Challenges

7.19 The implementation of this policy within the Reading Borough Local Plan has resulted in the majority of new homes in the borough meeting the criteria to apply the zero-carbon policy. However, between April 2020 and March 2021 a relatively low number of homes (165 units in five developments) were granted planning permission. While all development conformed to the zero carbon standards the scale of housing development required in Reading over the coming decade (16,000 units between 2020 and 2036) will increase the impact of the policy and further evaluation will be required to establish if the requirements remain effective.

Case Study 5: Greater London Authority

7.20 The most well-established carbon offsetting approach through the planning system in the UK is that used by the Greater London Authority (GLA). This has secured over £145 million for carbon offsetting since October 2016[37]. Approximately £55.2 million of this was collected or secured for collection between 2020 and 2021, equating to a 61% increase in the fund over the course of the year.

7.21 The GLA carbon offsetting scheme is a recognised means of how the planning system can leverage carbon reductions.

[37] Greater London Authority (2023) Carbon Offset Funds Report 2021

Overview

7.22 The London Plan requires all major developments[38] to achieve net zero carbon. There is a minimum requirement for a 35% on-site carbon improvement on national Building Regulations. Once on-site carbon reductions have been maximised, the shortfall to zero carbon is offset by making a cash-in-lieu contribution to the relevant Local Planning Authority's (LPA) carbon offset fund. Developments are however expected to maximise on-site savings before paying to offset residual emissions. As of 2021, the net zero carbon target also started applying to all major non-residential developments and so developers have been making payments accordingly.

7.23 The London Plan requires LPAs to[39]:

- Set up a carbon offset fund to collect carbon offset payments from developers to meet any carbon shortfall from new development and ring fence these funds to secure delivery of carbon savings within the relevant LPA; and
- Set a price for carbon, i.e. price per annual tonne of carbon, that developers pay to make up any shortfall in on-site carbon savings, securing contributions through Section 106 agreements.

7.24 The Mayor's guidance price for offsetting carbon is £95 per tonne (previous to the new London Plan it was £60 per tonne). However, LPAs can also apply their own locally set costs of carbon. For instance, Lewisham charges £104 per tonne and Islington takes a different approach that factors in unregulated emissions[40] as well as regulated emissions[41]. The GLA indicates that the overall funding contribution should be calculated over 30 years (the assumed lifetime of the development's services). For example, using the GLA's recommended price equates to £95 x 30 years = £2,850 per tonne of carbon to be offset.

7.25 It advises further *"LPAs should either establish a dedicated carbon offset fund or administer the funds through their Section 106 processes. In either case the funds should be ring-fenced for the sole purpose of delivering carbon reduction projects… LPAs are encouraged to pool offset payments, rather than specifying in a Section 106 agreement the project which will offset the development's shortfall in emissions"*.

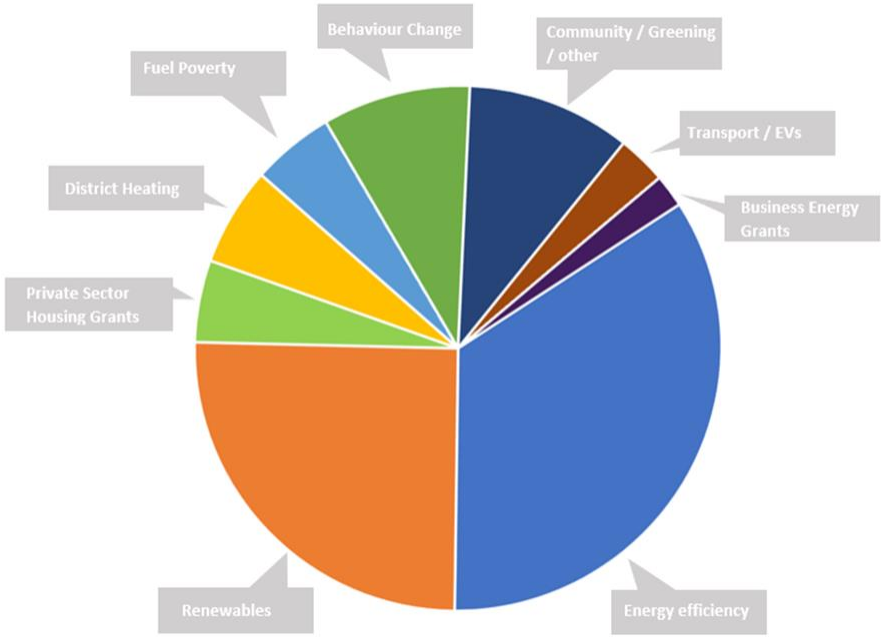
7.26 The local authority should also identify a suitable range of projects that can be funded through the carbon offsetting fund and put in place suitable monitoring procedures to enable reporting to the GLA.

Projects Funded

7.27 The total GLA carbon offset fund expenditure was £19.3 million from the schemes inception until 2021. This meant an approximate £5.5 million of this was spent between 2020 and 2021, demonstrating that there has been an increase in spending. **Figure 6.1** below illustrates the most common direction of funding across the GLA.

[38] Those with ten or more units or those with >1000sqm. of floorspace.
[39] Greater London Authority (2018) Carbon Offset Funds – Greater London Authority guidance for London's Local Planning Authorities on establishing carbon offset funds
[40] Unregulated emissions are the emissions from fixtures or appliances within a building i.e. non-building-related systems. The contribute towards a building's carbon footprint however cannot be controlled through design of the building as occupants lifestyle choices are not pre-determined by energy efficiency measures associated with construction.
[41] Regulated emissions are building-related emissions including heating, domestic hot water supply, air conditioning, ventilation, lighting and auxiliary systems.

Figure 7.1: Types of projects funded by the GLA carbon offset fund[42]



7.28 The most popular use of funding was for projects on schools and LPA corporate estates, mainly involving energy efficiency improvements. The GLA recommends that funds are targets towards energy efficiency, renewable energy and district heating projects to help reduce the cost of living and to support schools and other public institutions, and *"Projects with less tangible carbon savings (e.g., behaviour change), or improving resilience (e.g. tree planting, greening) can be funded but should not benefit from the majority of an LPA's fund"* (p.17).

7.29 Going forward, the GLA aims to encourage LPAs to consider strategic pooling funds with other LPAs to deliver strategic, sub-regional or London-wide green recovery objectives. Only three LPAs in the 2021/22 monitoring report reported that they were considering this approach.

7.30 LPAs are also encouraged by the GLA to co-fund projects using other funding sources as a priority. In the 2022 Monitoring Report, 28 LPAs confirmed they were supportive of co-funding, with several reporting it is already happening. Other sources of funding to combing with have included Energy Company Obligation (ECO), GLA Warmer Homes Fund, Go Ultra Low City Scheme (GULCS), Green Homes Grant, Heat Networks Delivery Unit (HNDU) and many more.

7.31 Examples of projects funded through carbon-offset funding in the London Borough's of Camden and Merton are outlined below.

Camden Council

7.32 Camden's Climate Fund is financed by Camden's carbon offset payments. The Camden Climate Fund provides up to a 50% discount of costs to reduce the carbon inside homes, businesses and community spaces in Camden. It can contribute to measures including improved insulation, the installation of heat pumps, solar photovoltaic panels and solar thermal systems. Funds can be applied for via. a Household Energy Efficiency Grant, a Business Grant, a Community Energy Grant, or a Community Climate Action Grant.

7.33 In late 2021/early 2022, Camden had collected £2,331,686 and had secured by legal agreement (but not yet collected) £2,825,296. However, Camden's total committed expenditure was only £153,000, meaning the percentage funding spent is low compared to what has been collected. Between 2016 and 2019, Camden had collected £511,373, with a total of £2,208,307 secured by legal agreement but not collected at this time. This demonstrates that a large proportion of funds have been collected in recent years, with some time lag expected between collecting the funds and spending them appropriately. Spending levels are expected to increase in coming years as spending channels become more established.

[42] Figure adapted from Greater London Authority (2022) Carbon Offset Funds: Monitoring Report 2021.

7.34 Additionally, the total expenditure figure for Camden had decreased from £313,222 in 2020 to £153,800 in 2021 as some large legal agreements signed had been collected, thereby reducing the amount of outstanding payment.

Merton Council

7.35 The Merton Climate Strategy and Action Plan[43] was adopted by the Council in November 2020, setting out how the Council will work towards a reduction in GHG and adapt to the effects of climate change. In late 2021/early 2022 Merton had collected £377,871 and had secured by legal agreement (but not yet collected) an additional £299,715. At the time Merton had only spent, or had committed to a specific project, £82,000[44].

7.36 In 2022, a recommendation was made to allocate £150,000 of Merton's carbon offset funds as top-up funding for the Green Homes Grant Local Authority Delivery (LAD) to retrofit fuel-poor homes in Merton. These funds were considered to be funding of last resort where funding for works exceeded the maximum allowances through national funding streams (e.g., LAD, ECO, Warmer Homes)[45].

Outcomes and Monitoring

7.37 All projects financed by the offset fund must be able to demonstrate that they will save carbon once they are funded. 22 LPAs confirmed that carbon savings will be verified post-installation and seven confirmed this monitoring is already taking place. However, as of late 2021/early 2022, 13 LPAs did not have any auditing process in place. Five LPAs have ensured that monitoring and evaluation is specifically detailed in their funding agreements.

7.38 GLA guidance advises that offset payments must be spent on projects that *"would not have occurred without the offset funding, would not have occurred under a business as usual scenario, and are not required in order to meet national legislation"*[46]. Therefore, determining whether a project offers this additionality is a key component of the effective governance of the project. These tests may be time-consuming and expensive, however are necessary to ensure that funded projects achieve qualifying carbon reductions.

Challenges

7.39 LPAs reported some initial challenges with spending their funding however good progress is expected as LPAs increasingly align their funding priorities with their responses to the climate emergency. As of late 2021/early 2022, 21 of the 35 LPAs in London had begun spending their offset funds[47]. This figure was only 15 in 2020. There have been challenges reported by several of the LPAs in spending the funds due to lack of staff resources, COVID-19, an absence of governance structure within the LPA, or waiting for a sufficient level of funding to be accumulated to deliver a project of significant scale. Two LPAs reported that they had not yet collected any funds. 13 LPAs had reported combining offset funds with other funding sources to maximise their impact. Some developers have taken an alternative approach where the LPA has agreed they may undertake a project off-site to meet their shortfall in emissions, instead of paying to the fund. This must be agreed by the LPA first and should deliver carbon savings.

7.40 There have also been challenges related to the set price of carbon. Several LPAs reported that the initial adopted carbon price, prior to the new London Plan (£60 per tonne per year rather than £95) was too low to fund like-for-like carbon savings.

7.41 Additionally, as discussed in relation to the West of England case study, CSE have identified some flaws with the carbon offsetting approach as a whole. CSE suggest that traditional carbon offset funds are flawed and complex to administer, particularly in relation to ensuring that carbon savings are generally **new** and **additional** at the rate necessary to offset emissions from new development and to monitor the pace of emissions savings achieved. Citing London, where this traditional carbon offsetting approach has been operating the longest in connection for the planning system, CSE confirms that these flaws do not appear to have been overcome[48].

[43] Merton Council (undated) Merton Climate Strategy & Action Plan
[44] Greater London Authority (2022) Carbon Offset Funds: Monitoring Report 2021
[45] Merton Council (2022) Climate Delivery Plan – Year 2
[46] Greater London Authority (2018) Carbon Offset Funds – Greater London Authority guidance for London's Local Planning Authorities on establishing carbon offset funds
[47] Greater London Authority (2023) Carbon Offset Funds Report 2021
[48] Centre for Sustainable Energy (2022) Carbon offsetting report – Carbon offsetting within an energy intensity policy framing

Chapter 8
Other Delivery Mechanisms – Summary Case Studies

Introduction

8.1 This chapter sets out five case studies which illustrate delivery mechanisms, their benefits and challenges based on a range of different models at varying scales and include two case studies within Moray. The case studies include:

- Ashill Habitat Bank;
- Findhorn Watershed Initiative;
- Trees as Infrastructure;
- Highland Carbon; and
- Spey Catchment Initiative.

Case Study 6: Ashill Habitat Bank

8.2 This case study was selected due to its unique use of section 106 funding for a specific purpose; small scale habitat compensation for Cirl Buting from housing development.

Overview

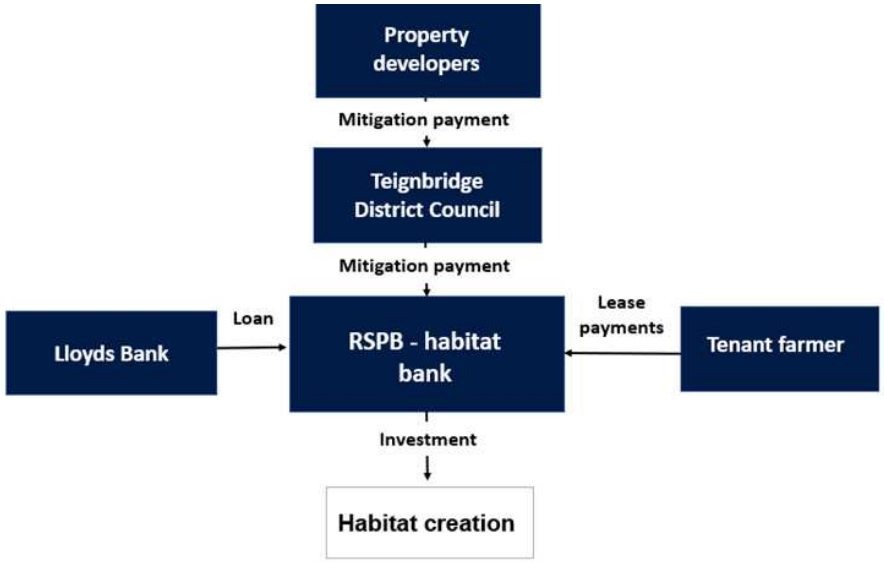
8.3 The RSPB, Finance Earth and Teignbridge Council have worked closely together to bring forward one of the first examples of up-front private investment being supported by S106 payments towards a nature-based outcome.

8.4 RSPB purchased Ashill, a 37-hectare site in Devon, through its cash balance in 2017. This was refinanced by Lloyds Bank in 2020 and this loan is being repaid over five years via Section 106 funding from Teignbridge District Council. Ashill was acquired to help offset the impact of housing expansion in the local area on the loss of cirl bunting (a protected farmland bird species under threat from development activity). Therefore, the main revenue stream for the

project built on 'mitigation payments' from property developers that will cause harm to the cirl bunting.

8.5 Additional revenue was also received in the form of rental payments from farms managing the land under a Farm Business Tenancy. Cirl bunting can thrive alongside agriculture practices although the lease set out suitable farming practices. This second stream of funding makes the model more appealing to all stakeholders.

Figure 8.1: Project financing structure[49]



Outcomes

8.6 The income stream agreement between the RPSB and Teignbridge District Council set out certain performance metrics relating to the bird population. It was agreed that the RPSB (habitat bank operator) would safeguard the 52 pairs of cirl bunting living within 2km of the site and would increase the number of breeding pairs within a defined period.

8.7 This model has been beneficial to Teignbridge District Council, responsible for the deployment of S106 funds for compensation measures. Traditionally, councils have often struggled to spend S106 funds with significant amounts often remaining unallocated within the planning system. The habitat bank system has removed the time gap between the damage caused by the developer to the local environment and the establishment of a compensatory habitat. Thus, reducing risks of failing to ensure no net loss of cirl bunting habitat.

Challenges

8.8 As a leader in the project, Finance Earth, together with the RSPB, developed this new 'habitat bank' financing mechanism. Project risks were associated with the scheme being an innovative financing model and associated risks with taking on a loan.

8.9 There was a high degree of uncertainty about the timing of mitigation payments from the Council, which is highly dependent on the timing of demand from developers. Finance Earth provided an analysis of forecasted planning applications and impacts of proposed developments was assessed, taking into consideration that S106 payments are not required until the housing unit(s) is sold. Therefore, whilst there was confidence in the level of mitigation payments expected, there was less confidence in the timing of these payments. Nevertheless, it was estimated that enough mitigation payments would be made within the five-year time period, enabling the RSPB to meet it obligation to Lloyds Bank.

Case Study 7: Findhorn Watershed Initiative

8.10 This case study, the Findhorn Watershed Initiative, covers an emerging local initiative taking place within the Moray area. The initiative focuses on carbon sequestration and habitat restoration on the River Findhorn corridor.

[49] Figure adapted from Green Finance Institute website – Milestone 05 – Ashill Habitat Bank – Develop Business Case and Financial Model

Overview

8.11 The Findhorn Nairn and Lossie Rivers Trust published their Management Plan 2021-26 which set out the Trust's focus on improving the health of the wider river catchment area and ecosystems it contains. The Trust has recently launched their most recent project, the Findhorn Watershed Initiative.

8.12 £970,000 of funding was secured from the Scottish Government's Just Transition Fund (JTF) - a policy programme set out in the Bute House Agreement to provide a 10-year £500 million JTF for the North East and Moray – which enabled the Trust to pursue the project. The JTF was set up due to the recognition of the need to diversify the economy of the region away from carbon-intensive industries. The JTF prioritises partnership working, supporting capacity building, and supporting projects that are informed by a just transition vision for the North East and Moray.

8.13 The Trust is looking to work in collaboration with communities, landowners, businesses, farmers, land managers, local authorities and education institutions to deliver ecosystem upgrades to tackle the climate crisis and threats to biodiversity, particularly Wild Atlantic Salmon populations.

Outcomes

8.14 The project aims to pursue an ambitious large-scale scheme of carbon sequestration and habitat restoration, from river source to the sea. It aims to deliver a *"long-term, integrated, landscape-scale vision for ecological restoration across 1,300 sq.km. of the Scottish Highlands"*[50]. This will start with the creation of 'riverwoods' riparian woodlands in the upper catchment of the River Findhorn.

8.15 As funding has been received from the JTF, the Scottish Government has ensured monitoring of year one projects will take place and learning from year one projects will be applied to future development of the JTF.

Challenges

8.16 This project is still at an early stage of inception, with one of the first major challenges being securing funding from the Scottish Government. The project aims to bring together a wide variety of stakeholders which will require coordination and collaboration to deliver the best outcomes across the catchment, reflecting landowner and local interests.

Case Study 8: Trees as Infrastructure (TreesAI)

8.17 Trees as Infrastructure (Trees AI) is an open source model that aims to support municipalities with urban tree-planting and maintenance. It is an innovative model for urban greening utilising technology and data and the pilot project is taking place in Scotland, in partnership with Glasgow City Council.

Overview

8.18 Urban forests regulate several ecosystem processes (e.g., water and air quality) and provide tangible and intangible benefits vital for living environments. Trees as Infrastructure (TreesAI) establishes nature as a critical part of urban infrastructure, alongside bridges, roads and rail, enabling investment, profitability and sustainability. TreesAI is a cloud-based platform, built to address declining tree numbers, and support the expansion of urban forests. The goal is to establish trees as assets with a variety of values. TreesAI connects nature Stewards who develop urban forest projects with investors and nature beneficiaries interested in the delivery of environmental services.

8.19 TreesAI Steward will allow council officers, landowners, project developers, community groups and NGOs to map the forecast impact of their urban forest projects and source funding. The TreesAI beneficiary will allow a variety of organisations to green their investments and operations, via trusted secure and local portfolio of projects.

Outcomes

8.20 TreesAI is partnering with Glasgow City Council to help the city meet its climate targets through its pilot study. The project is due to start in 2023 with a 5 year investment period. The

[50] Findhorn Watershed Initiative website

total investment target is expected to be £5 million from public and private sources with the key impact being natural flood management. The portfolio aims to deliver social, healthcare, and economic benefits to local communities creating green jobs, access to green spaces, improving mental well-being and increasing local biodiversity. The portfolio contains street trees, woodland, sustainable urban drainage systems (SUDs) and the preservation of trees in vacant and derelict land. TreesAI wants to diversify the efforts to create urban forests by maintaining existing trees while planting new trees. TreesAI ensures that any trees planted are monitored and their development is logged, to enable better and more successful creation of urban forests. Financing urban forests and not maintaining them will not result in positive benefits for climate change.

Challenges

8.21 There are a number of reasons why urban areas are struggling to increase urban forest growth. These include:

- Urban trees are seen as a cost rather than an asset. This can result in the planting of small tree species that are easier to maintain and therefore not enhancing street canopy cover or biodiversity.
- The focus is on the number of trees planted rather than maintaining the trees planted.
- Bulking the benefits from the planting of urban trees can create issues when gathering funding for the development of green infrastructure. This is because beneficiaries tend to want to provide funding towards one benefit such as reducing flooding levels by planting street trees.

8.22 The adoption of the TreesAI platform services will be gradual as they require the emergence of new practices in the public, private and civic sectors. The creation of urban forests will require the involvement, investment and care of the many organisations that are present within the urban environment, from communities to landowners, and from multiple public sector bodies through to the private sector.

Case Study 9: Highland Carbon

8.23 Highland Carbon is a company which has been operating in the voluntary carbon offsetting markets since 2017. This case study illustrates a well-established carbon offsetting company which has been involved in a range of carbon offsetting projects within Scotland, the UK and internationally.

Overview

8.24 Highland Carbon uses expertise to shape and examine carbon offsetting projects throughout the UK. Highland Carbon is a private limited company. Highland Carbon is engaged in a range of projects in the UK and across the world, working on projects of varying size, e.g. from 68 hectares to over 300 hectares. Highland Carbon projects aim to bring significant community economic development benefits to the UK's remotest communities through forestry and peatland restoration. Representing more than 50% of Scotland's land area, the Scottish Highlands has only 9% of its population while year-round employment opportunities are not as readily available. Highland Carbon aims to bring employment to local people to undertake work that supports environmental activity, such as: deer fence installation, tree planting, earth moving, and ecological assessments.

8.25 Nature based carbon offsetting projects are important to reverse the depletion of the UK's natural environment. Highland Carbon helps clients to achieve engaging content for Environmental Social Governance (ESG) and Sustainable Development Goal (SDG) reporting. They also support clients' communications by producing content that can be made available for public relations, investor relations, employee engagement, customer engagement, and digital campaigns. Highland Carbon's projects are within the frameworks of the Woodland Carbon Code and Peatland Code. Highland Carbon sets out to achieve educational, health and wellbeing outcomes via partnerships with Highland Outdoor & Wilderness Learning (HOWL) and EarthSelf.

8.26 Carbon offsetting projects are intended to develop substantial capital for estates whilst increasing their natural capital value. If the natural capital value increases, Highland Carbon will increase the retail price on clients' behalf. Highland Carbon offers a full service from project conception to design, implementation and brokerage service. They support landowners to scope out the opportunities and to complement other aspirations for their estate, such as renewable energy, farming and eco-tourism. The funds generated can help estates to develop other opportunities such as renewable energy, events businesses, ecotourism and improved farming. Local residents can also benefit from both project creation and project maintenance. Highland Carbon acts as a broker service between a private investor who will help fund the

work and the landowner. Highland Carbon aims to generate substantial revenue through buying carbon credits from the Woodland Carbon Code and Peatland Code projects that can then be invested in projects for restoring and rewilding nature. These funding opportunities are made available to the landowners to support their own team to deliver the project or Highland Carbon can arrange for the project work to be done on the estate.

8.27 Highland Carbon also offers opportunities to businesses for them to support the planting of trees. This is done within their Trees for Doncaster Initiative. This initiative offers two options:

- Support one tree to be planted in Loversall, Doncaster for every 20 tonnes of carbon offsetting that they purchase from the Woodland Carbon Code projects located in Scotland, or via our international offsetting projects; or
- 'Sponsor a tree' with a minimum purchase of five trees.

8.28 Highland Carbon also runs a subscription service for the public to offset their household carbon footprint called TreeWilder.

Outcomes

8.29 Some of Highland Carbon's projects include:

- Traquair Forest Project – A 246 ha site of planting a diverse range of broadleaf riparian woodland. The project would offset a total of 66,066 tCO2e.
- Tay Forest Project – New woodland planting comprising of 202 ha, 493,440 trees and offsets 36,348 tCO2e.
- Broad Hill Woods – The planting scheme comprises a combination of mixed conifers, to achieve rapid growth and timely carbon sequestration, alongside mixed native broadleaves covering 66 ha.
- Loch Ness Afforestation – A two-phase native woodland restoration project just to the south of Loch Ness covering a total of 92 ha offsetting 20,092 tCO2e.
- Galloway Coastal Forest – A large area of woodland planting containing mixture of conifer planting and riparian broadleaves offsetting 213,754 tCO2e.
- Gleann Eanaich Peatland, Aviemore – A peatland restoration project spanning 300 ha offsetting 90,000 tCO2e.
- Buckny Burn Peatland Restoration, Perthshire – A peatland restoration project spanning 90 ha offsetting 40,000 tCO2e.
- Achanalt Peatland Restoration – A 240 ha peatland restoration project in Wester Ross offsetting 50,963 tCO2e.
- Blue Slate Wood – The Blue Slate Wood comprises a permanent and diverse native broadleaf planting scheme in Lancashire. The project has an offsetting capacity of 1,607 tCO2e.
- Blackford Forest – The Blackford Forest Project is located West of Gleneagles village, East of the Trossachs National Park. The project entails three new woods, comprising 192 ha and all located within 2km of each other. Its offsetting capacity is 38,162 tCO2e. The project will comprise 489,744 trees.
- Pitlochry Afforestation – The project is located west of the Cairngorms National Park compromising of 135 ha. The project will see the planting of native trees offsetting 48,706 tCO2.

Challenges

8.30 There is no explicit legal framework for the ownership of carbon or rights to carbon. Therefore, control over land brings control over the ability to pursue activities to sequester carbon.

8.31 One of the challenges with Highland Carbon projects is that providing biodiversity enhancements and offsetting carbon provides initial benefits to landowners and may not benefit local communities. Rising land values and potential new revenue flows could encourage some existing landowners to hold on to land. Equally it could encourage others to sell. However, high demand, low supply and high land values are likely to make it more difficult for communities and individuals to acquire land in the market. There is a risk that the financial benefits of Scotland's natural capital could be narrowly distributed and extracted from local economies, or exported out with Scotland, rather than be reinvested.

8.32 It is important that decisions are not made on the basis of carbon alone but seek to deliver multiple benefits for carbon, nature, communities, and economies. While these objectives can and should be mutually achievable there is a risk they are seen to be in competition. There is a risk that in the rush for carbon, action is taken unilaterally, missing the landscape scale opportunities and ultimately delivering less. On the ground, mutually beneficial opportunities may be missed, meaning that local businesses and communities could not benefit and feel not included in decision making.

8.33 Recognising these challenges, The Scottish Government has developed interim principles for responsible investment in Natural Capital which will help to deliver policy goals for economic transformation, climate changes and biodiversity that provides community benefits and supports a Just Transition[51].

Case Study 10: Spey Catchment Initiative

8.34 This case study presents an established natural capital initiative taking place locally, in the Highlands and Moray, facilitated by a mix of grant funding from public and private sources.

Overview

8.35 The River Spey Catchment Initiative is about making the River Spey Catchment area better for nature and people. The River Spey is Scotland's 3rd largest river with a catchment area of over 3,000km^2. The whole river is protected under European legislation as a Special Area of Conservation (SAC) in recognition of its importance for four threatened wildlife species, Atlantic salmon, otters, freshwater pearl mussels and sea lamprey. Many parts are also Sites of Special Scientific Interest (SSSIs) because of their outstanding nature, and about two thirds of the catchment lies inside the boundary of the Cairngorms National Park. The catchment area has several important economic activities such as tourism, agriculture, forestry and food and drink. Up to 70% of the water in the River Spey is diverted from the upper catchment for generating hydro power.

Figure 8.2: Photo of Speyside catchment area

8.36 The initiative covers the River Spey catchment area from just south of Newtonmore in the Cairngorms National Park towards where the River Spey meets the Moray Firth. The Spey Catchment Initiative was established in 2010 to take forward key actions from the 2003 Spey Catchment management Plan. A new Spey Catchment Management Plan was adopted for the five year period 2017-2022. The new Plan sets out the regulatory framework, the key issues and opportunities which characterize the catchment, and importantly the agreed objectives,

[51] Scottish Government (2022) Interim Principles for Responsible Investment in Natural Capital

actions for achieving them and lead partners for their delivery. The Spey Catchment Initiative is run by a steering group of representatives from the following partners:

- Cairngorms National Park Authority;
- Diageo;
- Spey Fishery Board;
- NatureScot;
- Forestry and Land Scotland;
- Highland Council;
- Moray Council;
- NFU Scotland;
- RSPB;
- SEPA;
- Scottish Forestry; and
- Woodland Trust Scotland.

8.37 The steering group coordinates action and engages with the wider stakeholder group of landowners, managers, recreational users, communities and industry. The steering group also acts as an opportunity for cross-sectoral discussion of issues affecting the whole of the Spey catchment. The Spey Catchment Initiative plays a key role in delivering projects while also facilitating other organisations to act. The strong relationship with partners has proven invaluable in streamlining delivery of projects, not least as a positive advantage when it comes to attracting funding. Funding comes from a variety of public and private sector organisations such as the Scottish Government, NatureScot, Cairngorms National Park Authority, The Macallan, SEPA, Heritage Lottery Fund, Crown Estate Scotland, Speyburn (Speyside Single Malt Scotch Whiskey), and Spey Fishery Board. In the past, the Spey Catchment Initiative has been awarded £80,215 in funding from the Scottish Government.

Outcomes

8.38 The main aim is to deliver projects which restore the natural form and function of the River Spey while enhancing the river corridors habitats. Since its establishment the Spey Catchment Initiative has delivered or facilitated several successful on-the-ground project including riparian woodland creation, river restoration, removing man-made barriers to fish migration and improving access to the river for recreation. Some of the current projects in the Spey Catchment Initiative are:

- Delliefure Burn Floodplain Restoration – Restoration of a 330m stretch of burn and its floodplain.
- River Calder Restoration: Riparian Woodland Creation – Planting along a 4.5km stretch of the river and deer fencing creating 22ha of enclosed area.
- River Calder Restoration: Habitat Enhancement – Installing Large Wood Structures along 1.6km of the River Calder.
- Aviemore Spey Access Point Enhancement and Willow Spiling Project – Restoration of a recreational river access point and use of ‘green engineering’ design for bank stabilisation beside the access point.

8.39 Some of the previous projects within the Spey Catchment Initiative include:

- Kinchurdy Farm Riparian Woodland Creation – Livestock fencing for 4.5km of the river bank to reduce degradation and planting to link up existing woodland creating a 7km long riverside woodland habitat corridor.
- River Avon Catchment Fish Barrier Easement – Creation of a ‘staircase’ opening up 9km of additional breeding habitat for salmon.
- Delagyle Backwater Channel Re-watering – Reconnecting and restoring flow in a 200m channel.
- Allt Lorgy River Restoration Project – Restoration of a 600m stretch of artificially canalised river and its floodplain.
- Allt a’ Mharcaidh River Restoration – Restoration of a 1.2km stretch of artificially canalised river and its surrounding wet woodland and peatland.

- Aviemore Backwater Reconnection – Reconnecting a 500m side-channel to the River Spey.

8.40 The running costs of the Spey Initiative are funded by NatureScot, Cairngorms National Park Authority and Diageo.

Challenges

8.41 Overall, the current and past projects have seen successes in relation to woodland creation, river restoration, habitat enhancement and floodplain restoration. However, there are several overall challenges within the River Spey Catchment that could impact water quality, natural function of the river and wildlife habitats. There is increased pressure on the River Spey, particularly in relation to using the river to generate hydro power as the demand for renewable energy increases. This can interfere with the natural functioning of the River Spey downstream. This is partly compounded by the pressures on the River Spey. Development, and growing population means more demand for drinking water and more treated sewage going back into the river. This requires new infrastructure and careful management and monitoring to ensure the river is not harmed. Climate change will mean hotter, drier summers and warmer, wetter winters for north-east Scotland. Low flows and peaks in water temperature in drought conditions, as were experienced in summer 2018, pose a potential threat to salmon and trout. In addition, increased intensity and frequency of storms can cause flooding, excessive erosion and damage to the river's ecology.

Chapter 9
Other Delivery Mechanisms – Detailed Case Studies

Introduction

9.1 This chapter of the report sets out four case studies where different delivery mechanisms have been used in more detail. The case studies include:

- Clyde Climate Forest;
- Greater Manchester;
- Forestry and Land Scotland; and
- Cumbria Landscape Partnership.

9.2 The first two case studies have been selected as they have both been developed through partnerships which have enabled them to amalgamate several different funding sources and have involved the delivery of projects at different scales. The third case study was selected to show how private sector funding can be leveraged to deliver large scale projects. The final case study was selected to provide an example of a Landscape Enterprise Network Scheme, one of the new emerging mechanisms to deliver landscape-scale by creating a local network for the delivery of nature-based solutions for ecosystem services.

Case Study 11: Clyde Climate Forest

Overview

9.3 The Glasgow and Clyde Valley Green Network Partnership (GCVGNP) acts as the facilitator for large-scale Green Network initiatives across the Glasgow City Region, in partnership with Scottish Forestry. The Clyde Climate Forest (CCF), launched June 2021, is being delivered as part of the GCVGN across the eight local authorities in the region. It has gained support from the Woodland Trust, the Green Action Trust, TCV Scotland, local authorities, universities and housing associations.

9.4 The CCF aims to plant 18 million trees by 2030, increasing the average tree canopy cover in the Glasgow City Region from 17% to 20%, requiring a doubling of the current rate of woodland creation to achieve this target. It aims to deliver three main elements:

- **'Canopy':** Urban canopy cover.
- **'Connectivity':** Regional woodland habitat network.
- **'Carbon':** New forests on farmland and vacant and derelict land.

9.5 The scheme allows businesses to purchase local carbon credits to help offset residual emissions through their corporate climate change strategy helping to deliver their NetZero targets. They can also contribute as part of Corporate Social Responsibility commitments through sponsorship. They are encouraged to engage staff to participate in corporate tree planting activities as part of the project. Businesses are offered recognition for their support in campaign materials and PR opportunities at the time of planting, in return for their support. For example, McLaughlin & Harvey Construction Ltd. signed off on a new Carbon Strategy with a commitment to Net Zero by 2030. To achieve this, they have been investing in the CCF.

9.6 Individuals and community groups are also able to donate to the CCF.

9.7 The majority of woodland planting will be funded through Scottish Forestry grants and other funding mechanisms (e.g., £400,000 from Woodland Trust Emergency Tree Fund and £150,000 from Scottish Forestry secured). A higher payment rate of grant funding from the Forestry Grant Scheme (FGS) is also available for native woodland projects located within the target areas of the CCF[52].

9.8 It should be noted that all investments in this project are voluntary and no developer obligation mechanisms are currently put towards the delivery of this project.

Projects Funded

9.9 The target is to plant up to 1.5 million new trees with local communities in urban areas, 101 native woodlands to create migratory routes for wildlife, and up to 1,000 hectares per year of new forest across the region. A significant focus is being placed of the benefits to health and wellbeing of increased planting in this largely urban context, offering opportunities for improved access to greenspace and improved air quality.

9.10 Some projects that are underway include:

- Faifley Knowes Park, Clydebank – Planting of 600 trees creating multiple co-benefits for biodiversity and the local community. This also contributes to an important link in the strategic access network.
- Tiny Forest, Seven Lochs – Planting of dense mix of 600 native trees to form part of Scotland's largest urban nature park.
- Farming Sector, Torrance – Planting across 27ha of unproductive land with FGS support. Enabled co-benefits of diversification for the family business at Hillhead Farm.
- Utility Sector, Scottish Water – Scottish Water has identified sites to support the development of the CCF and is assessing all landholdings for the potential to improve sequestration.
- Public Sector – 40,000 trees are being planted to help Glasgow City Council towards Net Zero in association with the Green Action Trust. This includes the creation of a woodland habitat linking key woodland areas in the region, including Cart and Kittoch Wood Site of Special Scientific Interest.

9.11 The CCF has identified 16 'Target Neighbourhoods' across the City Region with very low urban tree cover and are particularly vulnerable to the impacts of climate change. They are promoting a '1000 Tree' campaign in four target neighbourhoods for 2022/23.

Outcomes and Monitoring

9.12 The CCF monitor progress towards the 18 million trees in 10 years target by collecting information via. the 'CCF Tree Counter' form on their website. As of March 2023, the CCF website reports that 1,154,665 trees have been planted across the region[53].

9.13 The Clyde Climate Ready Glasgow City Region Adaptation Strategy and Action Plan sets out the expected outcomes for the CCF. Planting at scale across the region, improving

[52] Scottish Forestry (2021) Grants to Fund Connectivity

[53] Clyde Climate Forest website – CCF Tree Counter

connectivity and the expansion of areas that are ecologically resilient will help to manage climate risk through improved natural flood management. Overheating in urban areas will also be reduced through improved shading and transpiration. Connections for biodiversity across the region will benefit and there will be much greater opportunities for recreation, active transport connectivity, and associated health and wellbeing benefits across the region.

9.14 The CCF model has the potential to unlock further funding opportunities, such as for peatland restoration. It also has the potential to inspire climate action, and provide opportunities for education, training and new green jobs.

Challenges

9.15 Woodland planting is a well-established carbon offsetting practice, therefore readily available guidance is available from examples across the UK including the Forestry Commission, the Woodland Carbon Code and Woodland Carbon Guarantee, offering established methods for calculating carbon sequestration from tree planting. The challenge with tree planting for organisations hoping to reach net zero by 2030 due to the time lag associated with establishment of trees and growth needed to reach peak carbon sequestration takes time (around 10 to 30 years)[54]. Carbon sequestration and storage is also dependent on the management of woodlands once trees are established.

9.16 As for the CCF, most tree planting schemes are likely to attract funding for their function beyond carbon sequestration, such as biodiversity and conservation objectives. Therefore, investment for carbon purposes (i.e. 'carbon credits') would need to be scrutinised from an additionality point of view. The Woodland Carbon Code required projects to source at least 15% of lifetime costs from the sale of carbon offsets to be considered 'additional'[55].

9.17 The success of CCF will not only depend on the ability to raise sufficient funding for the project, but also the willingness and cooperation of landowners to plant their land[56].

Case Study 12: Greater Manchester

Overview

9.18 Greater Manchester has set out a pathway to become a carbon neutral in the city region by 2038. Significant action and investment is also required to meet the ambitions set out in Greater Manchester's Five Year Environment Plan.

9.19 The Greater Manchester Joint Development Plan 'Places for Everyone' (2021, p.87) states that *"By following the energy hierarchy, new development will need to achieve net zero carbon through the maximisation of on-site measures first. However, in circumstances where a development has demonstrated that the hierarchy has been followed and there are no reasonable alternatives to meet the minimum carbon reductions, then payment to offset remaining emissions will also be required. Such payments should be expected to fund other carbon saving programmes within Greater Manchester to help meet the 5 Year Environment Plan targets (such as energy efficiency retrofit and renewable energy installations). The Mayor of Greater Manchester is developing an Environment Fund, which will provide a mechanism for carbon offset payments to be made. Districts may also develop alternative approaches within Local Plans"*.

9.20 A detailed evidence base report on carbon offsetting was produced by the Central for Sustainable Energy (CSE) for the Greater Manchester Combined Authority in 2020[57]. It proposed setting a carbon price of £113 or £118 per tonne but questions whether a higher price might be needed to achieve Greater Manchester's target of net zero emissions by 2038.

The Greater Manchester Environment Fund

9.21 The Greater Manchester Environment Fund (GMEF) was created in partnership between The Wildlife Trust for Lancashire, Manchester and North Merseyside and The Greater Manchester Combined Authority. It is an independent charity that aims to bring together public, private and philanthropic funding to tackle environmental challenges in the region. The idea for

[54] Environment Agency (2021) Achieving net zero – A review of the evidence behind potential carbon offsetting approaches
[55] Environment Agency (2021) Achieving net zero – A review of the evidence behind potential carbon offsetting approaches
[56] Brodies (2021) Glasgow's Greenprint – The Clyde Climate Forest
[57] Centre for Sustainable Energy (2020) Greater Manchester Combined Authority Carbon and Policy Implementation Study – Part 2 – Carbon Offsetting

its inception was about corralling a lot of the funds that sometimes disappear nationally, are not spent as effectively and to bring them all together to make a focused difference.

9.22 It is seeking to develop business models based on income generated by voluntary carbon credits, biodiversity net gain (BNG) credits and private investment in the restoration of landscapes across Greater Manchester. The GMEF is also exploring ways to divert business levies, fines and taxes (such as landfill, aggregate, plastic bags and enforcement undertakings) into the one centralised funding mechanism. For instance, Lancashire Wildlife Trust has received Enforcement Undertakings in the past and have used the funds to invest in conservation and restoration of grasslands, woodlands, peatlands and the North West coast. The GMEF has also created a relationship with Suez, who focus on tackling waste and benefiting communities across the region by funding community initiatives.

9.23 The Natural Capital Investment Fund, financed by DEFRA, has been used by the GMEF to help develop a means of realising Greater Manchester's Local Nature Recovery Strategy by developing a project that will harness private investment. Finance Earth has been commissioned to support the GMEF to establish the verification procedures, carry out further research and test models for levering private investment. The GMEF aims to implement financing models that have been developed to attract carbon and BNG[58] income from development activity. They are also working with verification bodies to find ways to quantify and verify these carbon benefits to meet reporting requirements and therefore attract further private investment.

9.24 The GMEF and Finance Earth are working with local authorities, developers and landowners in Greater Manchester to support ambitions to measurably enhance biodiversity based on BNG policy (i.e., developing a 'Habitat Baking Facility' with 'BNG credits' for sale to developers to compensate for unavoidable impacts from new development). They are also developing a carbon facility to attract private investment in carbon landscapes such as peatlands in order to supply high quality local carbon offsets and attract private investment.

9.25 Market research has found that businesses will be willing to pay a premium for *"charismatic"* ways to carbon capture (e.g., peatland restoration, woodland planting) and so GMEF is going to be offering a range of opportunities for businesses to support these projects. Local carbon markets are attractive for businesses looking to meet their Net Zero commitments and align with consumer demand. Rather than investing in overseas carbon markets, investors will have the opportunity to visit and engage in the local projects, improving a business's corporate responsibility profile and local image[59].

Projects Funded

9.26 The 2020 CSE report[60] provides a summary of recommendations for suitable carbon offset projects including domestic efficiency retrofitting (e.g. via council fuel poverty alleviation initiatives, topping up ECO funding, retrofitting council houses and private rental sector), non-domestic retrofitting (energy efficiency improvements to Council buildings and community buildings), community energy projects (e.g. adapting the Greater Manchester Low Carbon Fund or developing new routes similar to the Urban Community Energy Fund), domestic renewable energy projects (e.g. rooftop solar installation), carbon sequestration through tree planting and peat bog restoration.

9.27 Other projects such as commercial renewable energy, commercial and private-owned retrofitting, heat pump installation, district heating networks, and electrification of local authority fleets are also considered potentially suitable dependent on whether carbon savings can be accurately demonstrated.

9.28 The GMEF aims to build up the market infrastructure for greater investment in Natural Capital through developing a few investable pilot projects. With some capacity building and technical assistance, these could then be replicated across the Greater Manchester City Region. Along with these long-term ambitions for carbon offsetting and habitat banking, the GMEF has worked with eNGO partners to develop more short-term 'shovel ready' projects, with the support from the Green Recovery Challenge Fund. Funds have been allocated via the

[58] In line with the Environment Bill (2020), BNG offsets should exceed the impact it compensates for by at least 10%.
[59] Greater Manchester Environment Fund (2021) GMEF Webinar Greater Manchester Natural Capital Conference June 2021 – Youtube

[60] Centre for Sustainable Energy (2020) Greater Manchester Combined Authority Carbon and Policy Implementation Study – Part 2 – Carbon Offsetting

Green Recovery Challenge Fund, the Recycle for Greater Manchester Community Fund, and the Green Spaces Fund. Projects supported by these funds have included:

- Dovestone – Peatland restoration of a 4000 hectare site and a partnership site between RSPB and United Utilities where they have been delivering restoration works since 2005. 2500 hectares of the site is blanket bog so there is significant potential for restoration.
- Philips Park – Greenspace improvements including wetlands, woodlands, public access and recreation.
- Rochdale Canal – Working the Canal and River Trust for habitat creation including grasslands, wetland areas, flower-rich meadows and introduction of aquatic species along the canal.
- Wigan Wetlands – Wigan Council and Lancashire Wildlife Trust are improving the environment for people and nature.
- Northern Roots, Oldham – Development of the UK's largest urban farm and eco-park to create jobs, skills and education for local people while improving the biodiversity and environmental value of the site.
- Manchester Mosslands – Working with Lancashire Wildlife Trust to improve lowland raised bog and improving connectivity by re-wetting the site.

9.29 The GMEF has a funding plan to improve the environment including wetland creation and improvement, habitat creation, tree planting and protecting priority habitats to store carbon. Other projects the GMEF aims to fund include nature-based solutions for flood risk mitigation, and diversifying parks and greenspaces.

Outcomes and Monitoring

9.30 The 2020 CSE report recommends that the schemes such as the woodland carbon code and the UK peatland code would provide a basis by which the amount of carbon sequestration can be verified. Projects must be additional to 'business as usual' and they must be monitored and re-certified, the calculations should be conservative and based on sound evidence, and emissions reductions should be permanent.

9.31 As set out above, the GMEF is investing in developing a financing mechanism by which both 'carbon credits' and 'BNG credits' can be accurately quantified and meet the reporting requirements.

Challenges

9.32 The Greater Manchester Natural Capital Investment Plan[61] proposed significant investment in tree planting. The CSE have previously raised concerns about using carbon offset funding to pay for tree planting because there may be substantial overlap between the requirements to carry out tree planting to achieve carbon sequestration, and the landscaping required as an integral part of a new development (i.e., it may be difficult to rebut arguments of double charging). Additionally, trees are only effective in sequestering carbon if they are left in place to grow. However, CSE acknowledge that with appropriate monitoring and verification (i.e., using the woodland carbon code) these problems could be addressed.

Case Study 13: Forestry and Land Scotland Carbon-offsetting Partnerships

Overview

9.33 Forestry and Land Scotland (FLS), as one of Scotland's largest land managers, can work on a large scale and deliver significant impact when it comes to delivering carbon offsetting projects. The Scottish Government's updated Climate Plan (2020) pledges that woodland cover across the country will be increased from 18 to 21%, and that 40% of Scotland's degraded peatland will be restored by 2032. Given the scale of these targets, it is acknowledged that private investment through the carbon market will be required to meet these targets.

9.34 FLS work with partners to scale-up their ability to deliver carbon capture projects such as tree-plating and degraded peatland restoration. They offer corporate partnerships to businesses and organisations that could help offset their unavoidable carbon emissions (as well as

[61] Greater Manchester Green City website – Nature Greater Manchester – Connecting People with Nature

contributing to an organisation's corporate social responsibility project portfolio). Before offering corporate partnerships, FLS expected organisations have taken measurable steps to reduce their carbon footprint, prevent any avoidable emissions and reduce any remaining emissions as far as possible.

Projects Funded

9.35 The first corporate partnership was launched in 2019 with a £5 million investment to create new woodland and restore peatland over five years. These carbon credits enable Shell to offer customers an option to offset carbon dioxide emissions from their fuel purchases in the Netherlands and more recently in the UK[62]. The partnership with oil company Shell funded a project to re-establish Caledonian pine forests across hundreds of hectares at Glengarry in the west Highlands. These traditional offsetting schemes, such as tree-planting and peatland restoration provide clear benefits with potential to maximise multiple benefits including both carbon sequestration and biodiversity net gain. Glengarry forest is one of the largest remaining areas of native Caledonian pine that still exists. FLS are working to preserve and extend this native woodland, including a scheme to plant more than 200,000 trees in the first two years of the project.

Figure 9.1: Tree planting

9.36 FLS have identified more than 80 carbon projects across over 5,000 hectares of Scotland. They are advertising opportunities for further corporate partnerships with the aim of bringing about projects that will help restore degraded landscapes and create new habitats for wildlife, create green spaces for people for enjoy, improve local water quality, improve flood and drought resilience, and provide sustainable construction materials. Partners can choose from a range of projects including[63]:

[62] Shell Global (2019) 2019 Inside Energy Articles – 4. Sowing seeds for the future

[63] Forestry and Land Scotland (2022) Carbon Partnerships – How Forestry and Land Scotland can help deliver land-based carbon projects

- Transforming derelict land – Working to restore soils at several open-cast coal mines in readiness to plant trees, create green space, create new habitats, enhance the landscape and provide a supply of sustainable building materials.
- Planting pockets of native woodland – Particularly trees planted along river banks to create connective corridors of flora and fauna, prevent landslides and reduce flood risk.
- Creating new productive woodlands – Including a variety of broadleaved and coniferous species to create diverse habitats and enhance the landscape.
- Restoring degraded peatland – Bog restoration, drain blocking and gullies to help re-wet soils, re-profiling peat hags and manually spreading donor sphagnum to help re-vegetate damaged areas. Healthy peatlands provide benefits to biodiversity, water quality, and flood, drought and wildfire resilience.
- Working to restore whole landscapes – FLS are Scotland's largest land manager so large-scale projects can include woodland creation, peatland restoration, and other land management activities that are out with current carbon markets.

Outcomes and Monitoring

9.37 Each FLS project will begin with a forecasted future carbon benefit through independent evaluation, quantified as a 'Pending Issuance Unit' (PIU). Each PIU is equivalent to one future tonne of carbon dioxide equivalent captured (by woodlands) or avoided (by peatlands). As the projects progress (the trees grow and the peatland stops eroding), independent verification is carried out to survey and quantify the achieved carbon benefits. At this point, PIUs can be converted into carbon offsets.

9.38 Woodland creation projects are validated to the UK Woodland Carbon Code and peatland projects to the Peatland Code to ensure the verification of carbon credits. These are independent quality assurance standards for the UK and ensure that there will be no double counting of carbon units at UK or international level.

9.39 FLS also advertise the wider benefits of the scheme for corporate partners, outside of carbon offsets such as those which will help organisations meet their Corporate Responsibility Aims. A report by Eftec[64] into wider project benefits undertaken through the Woodland Carbon Code valued them as:

- £64-£75 per tonne for recreation;
- £9.80 per tonne for air quality (dependent on location – higher in urban areas);
- £22-£97 per tonne for biodiversity; and
- £7.37 of Gross Value Added (GVA) per tonne in economic activity (through jobs in planting and managing the woodlands).

9.40 These offer additional benefits to the carbon offsets delivered through the project and are not independently monitored through a recognised validation scheme.

Challenges

9.41 The initial corporate partnership between FLS and Shell has raised some backlash from environmental groups that consider the carbon offsetting scheme as *"greenwashing"*. Scottish ministers have received criticism for accepting the pledged money from Shell, as one of the biggest fossil fuel companies in the UK. Tree planting projects will sometimes take decades to capture the quantity of emission that the offsetting scheme provides. Critics of this carbon offsetting approach argue that this approach offers a 'get out of jail free' card for companies with a large carbon footprint and will actually slow efforts to reduce carbon emissions in the long run. However, private investment through the carbon market is required to meet Scottish Government pledges to woodland cover and peatland restoration.

9.42 Lorna Slater (Green MSP and Minister responsible for NatureScot and National Parks), with reference to the recent partnership between NatureScot, Hampden & Co., Lombard Odier Investment Managers and Palladium set out that *"The finance gap for nature in Scotland for the next decade has been estimated to be £20 billion. Leveraging responsible private investment, through valuable partnerships like this, will be absolutely vital to meeting our climate targets and restoring our natural environment. Scotland is well placed to take a leading role by offering investors the opportunity to generate sustainable returns from the restoration and regeneration of our landscapes. This investment will generate multiple benefits: ending the loss of*

[64] Forestry Commission (2016) Assessing the wider benefits of the Woodland Carbon Code

biodiversity, improving water quality, reducing the risk of flooding, regenerating local communities and creating green jobs".

Case Study 14: Cumbria Landscape Enterprise Network (LENS)

Overview

9.43 Nestlé and 3Keel, have developed LENs – an independent mechanism through which businesses with a common interest in protecting the environment work together to protect it. LENs systematically connects groups of buyers of nature-based solutions (usually habitat restoration, or regenerative farming methods) with groups of land managers who can deliver the work on the ground.

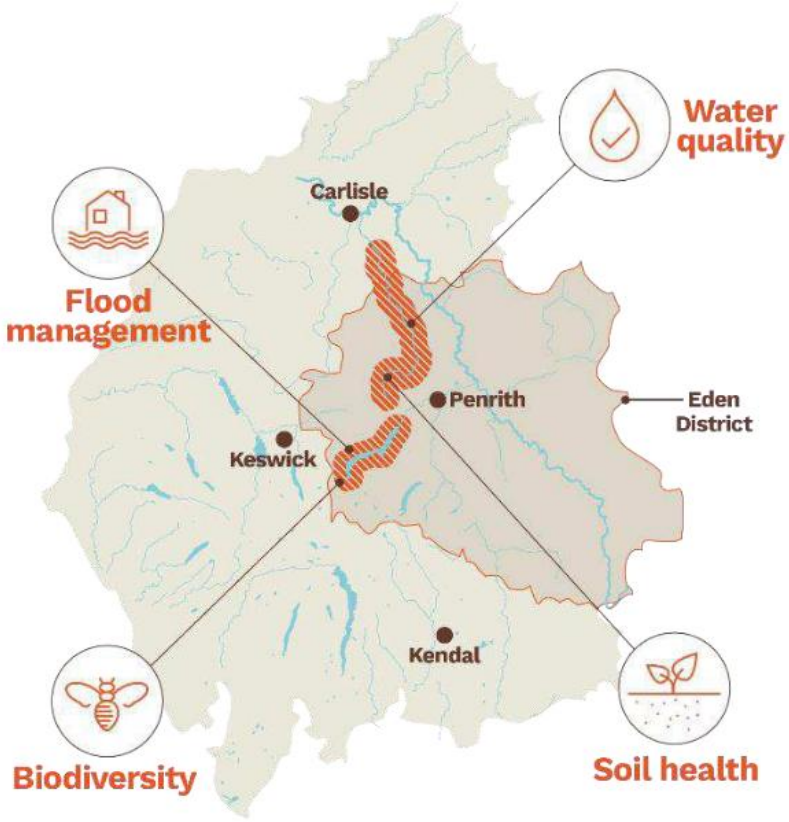
9.44 The first LENs project started in 2017 in Cumbria. Cumbria is known for mountains, lakes and rural landscapes, including the Lake District National Park. The LENs project in Cumbria focused on soil and nutrient management with the aim of reducing phosphorus in watercourses. Several organisations rely on the Cumbria's landscape, in particular for food production and tourism. Nestlé and United Utilities co-funded NbS delivered by farmers in the Peterril catchment, coordinated by First Milk. This trade is leading to multiple landscape and business benefits:

- It creates an alternative income source for farmers;
- Contributes to lower levels of phosphorus in water courses managed by United Utilities; and
- Strengthens the resilience of Nestle's dairy supply.

9.45 Cumbria LENs now has a strong network of active stakeholders including Nestlé, United Utilities, First Milk, Eden Rivers Trust, Environment Agency, Eden District Council and the National Trust. The next task is to formalise the LENs trading mechanism through a locally-run governance structure, to better integrate LENs within the Cumbria community, and to facilitate NBS trading on a larger scale.

9.46 The LENs projects have enabled positive environmental action and continue to expand. There are now projects across the UK and within mainland Europe. LENs projects support co-investment and encourage organisations to work together. This could support infrastructure for other sectors such as housing, water utilities and hospitality.

Figure 9.2: Cumbria LENs Project[65]



[65] Landscape Enterprise Networks (LENs) website – Cumbria reproduced with permission from 3keel.

Outcomes

9.47 Some of the key benefits from the Cumbria LENs are:

- Enhancements to local biodiversity and wildlife habitats;
- Improvements to the health of soils;
- Improvements to local water quality; and
- Better flood risk management.

9.48 These benefits from the Cumbria LENs will support businesses within Cumbria that provide employment and also have a positive effect on local residents and local farmers. These benefits are not mutually exclusive in that improving the health of soils and preventing soil erosion will help protect water quality. Cumbrian businesses and communities have been severely impacted by recent flood events - such as storms Eva and Desmond in December 2015. United Utilities incurred costs of £13.8 million in 2015 and £19.5 million in 2016 due to flooding, including the inundation of a key pumping station in Keswick. It is believed that much of the flooding is associated with the main river and therefore, the creation of flood defenses will have a positive effect of reducing the damage to businesses and houses as a result of flooding. In the landscapes around Ullswater, natural habitats on the fells and by the rivers underpin a range of commercially important functions, Therefore, protecting the natural environment around Ullswater and protecting its water quality will support key industries and local businesses to continue running. It could also reduce the cost to local authorities by lowering the damage risks from storms.

9.49 The work so far sets out the possibilities and has engaged a set of potential players in a LENs network. The plan now is to build on the interest created in the development phases of LENs to start to build a LENs business network in Cumbria.

Challenges

9.50 One of the key challenges with LENs is that it relies on partnership across a variety of industries and organisations. This could impact on funding for nature based solutions if partnerships can't be established or the organisations involved are not in a position to fund nature-based projects. There is also a risk of how much community engagement will occur given that the partnership includes several large organisations and national agencies.

9.51 Significant flood events have occurred in Cumbria in recent years, particularly in Carlisle and Keswick. Climate change is expected to increase the frequency and severity of flood events. Therefore, providing flood mitigation through LENs could be costly and require regular maintenance to ensure the defences remain functionable.

Chapter 10
Grant Funding Sources

10.1 A detailed assessment of all current grant sources available to Moray Council and its private, third and community sector partners for investment in natural capital assets and other associated investments is available in **Appendix A**. This is presented as a table and provides a description of each fund and details on eligibility, assessment criteria, timescales and the amount of funding available. Each fund has been matched to the potential investment opportunities identified in **Chapters 2 and 3**. Details of a total of 23 funds are provided. It should be noted that grant funds are subject to change, both in the grants available and their assessment criteria. Therefore, it is important that a regular review of funding sources is undertaken.

Chapter 11
Recommendations and Next Steps

Overview

11.1 This report has outlined potential natural capital investments which could be made in Moray to achieve carbon-offsetting and nature restoration benefits and deliver other ecosystem services. It has also provided a summary of potential supporting investments which would maximise the benefits from the investment in natural capital assets.

11.2 The delivery of such investments on a landscape scale will be essential to achieving carbon offsetting and nature recovery targets. However, their successful delivery relies on various considerations of delivery and funding mechanisms and an appropriately skilled workforce to implement them.

11.3 This report has provided a summary of several funding and delivery mechanisms for these types of investment, supplemented with a series of case studies outlining the relative benefits and challenges associated with each in practice.

11.4 This chapter draws together the recommended approach for Moray to deliver landscape scale carbon offsetting, both through the planning system and through an area wide partnership.

Recommended Approach to Implementation through the Planning System

11.5 The recommended way to deliver the enhancement opportunities identified in this Report through the planning process is in the form of financial contributions linked to a local policy requirement and/or a supplementary guidance document. Financial contributions should be sought as a last resort whereby a developer has evidenced they cannot achieve net zero on-site. The contributions should be accounted for in the purchase price of the land however, where viability is an issue then the viability process set out in the Council's Developer Obligations Supplementary Guidance is to be adhered to.

11.6 It is suggested that the most appropriate way of framing the requirement for financial contributions for carbon offsetting is through a local policy in the new MLDP 2027 and in the interim, a planning guidance document which supports the developer through the process, for example by detailing the enhancement measures identified in this Report or through other measures the Council may deem appropriate.

11.7 Some key considerations relevant to framing any future supplementary guidance include:

- Linking or phasing requirements to the scale and nature of the development through the 'hierarchy of development';
- Identifying appropriate net zero targets and biodiversity benefits which would frame the requirement, as discussed throughout the Case Studies in this Report (e.g. percentage improvement of Building Regulation Standards) or any other appropriate measure(s) identified by the Council;
- Considering the mitigation hierarchy and ensuring offsetting is only pursued where it is demonstrated that the necessary emissions reductions or biodiversity enhancements cannot be achieved on site; and
- Unless another appropriate alternative delivery mechanism can be put in place by the Council, consideration of a zoning approach, whereby a commuted sum may only be required where development is within a certain zone, or within a certain proximity to an identified enhancement opportunity.

11.8 In summary, it is considered that provided that any future guidance is robust enough in setting out the methodology for off-setting contributions, this would provide a competent approach to implementation, meeting the associated legal test while providing sufficient flexibility for the Council to work in partnership with the development industry to achieve natural capital objectives and implement key provisions of NPF4.

Recommended Approach for Landscape Scale Implementation

11.9 It is unlikely that any developer contributions would be sufficient to achieve natural capital investment at the scale identified in **Chapters 2 and 3** and a range of funding mechanisms will be required.

11.10 Highland Carbon, and Forestry and Land Scotland's carbon off-setting partnerships have used one main private finance mechanism to deliver projects. While this reduced complexity in delivery, it led to criticism of the projects, relating to a lack of consideration of benefits for local communities and accusations of 'greenwashing' from environmental groups in the case of Shell's investment in forestry at Glen Garry.

11.11 Other case studies which used only one mechanism e.g., Ashill Habitat Bank or TreesAI were focussed on specific outcomes in a localised area and are therefore would not deliver the full range of potential investments identified in Moray. Case studies with characteristics which are most relevant to achieving natural capital investment in Moray include those delivering a variety of outcomes at a larger scale such as the Clyde Climate Forest and the Greater Manchester Environment Fund.

11.12 These partnership models have enabled the amalgamation of several different funding streams, maximising the outcomes from projects they have funded. This has ensured a pragmatic and streamlined approach to meeting a common goal for natural capital investment across a wider area. While the geography of Moray is different to both the Clyde Region and Greater Manchester, being a more rural and disparate area, this approach is still appropriate. It maximises outcomes as it allows various funding mechanisms and projects to be incorporated.

Recommendation

LUC recommends that Moray Council establish a partnership to take the natural capital investment opportunities forward. A partnership model would also allow the delivery of projects at a range of scales, including projects which could be fully community led to maximise community buy in to the overall programme of investments.

11.13 The development of the partnership should involve coordination with existing initiatives already being explored in Moray such as the Findhorn Watershed Initiative and the Spey Catchment Initiative who have developed their own partnerships and are exploring a range of delivery mechanisms including LENS.

11.14 A partnership approach was previously set up for the National Lottery Heritage Funded Tomintoul and Glenlivet Landscape Partnership in the Moray Council area, many of the same partners are likely to be involved in this future project and bringing this experience. The main

challenge for the partnership is likely to be gaining the support and participation of private landowners which will be critical for the delivery of many of the identified investments.

Funding

11.15 Under the partnership model described above, funding mechanisms appropriate for implementation in Moray include:

- Grant funding;
- Developer contributions;
- Potential offsite biodiversity net gain credits (Scottish equivalent metric as this is developed); and
- Private investment through payments for ecosystem services, including carbon markets.

11.16 As individual investment opportunities are developed, specific funding mechanisms appropriate to these can be identified. At this stage it is important that the partnership explores the full range of potential funding mechanisms and retains the ability to stack these where appropriate and feasible to maximise investment.

Next Steps

11.17 The next steps that Moray Council should take to progress the natural capital investment opportunities identified can be split into 5 stages, with multiple actions within each stage.

Figure 11.1: Steps to progress the natural capital investment opportunities

Stage 1: Stakeholder and Landowner Engagement

11.18 Before the individual opportunities are developed further, it will be important to engage with key stakeholders to gain their support for the opportunities identified and to identify any potential constraints. Crucial stakeholders for which early engagement will be necessary include the Cairngorms National Park Authority, SEPA, other statutory bodies and relevant Moray Council departments including the flood team.

11.19 It will also be important to engage with landowners and tenants at an early stage, particularly farmers where agricultural land enhancements are proposed.

Stage 2: Source Development Funding

11.20 Development funding should be sourced to cover the costs of a development officer post to coordinate the initial stages of the project and professional fees for options development. Moray Council may wish to consider funding this position themselves and funds such as FIRNS and the Nature Restoration fund can be approached for additional funding for project development work.

11.21 The development officer role should manage all subsequent stages.

Stage 3: Identify Governance Model and Establish the Partnership

11.22 Further work is required to assess the governance model for the partnership and a full review of options should be carried out, which could include the creation of a separate governance body/charity as for the Greater Manchester Environment Fund. The next steps are then to: identify and engage with potential stakeholders to secure their representation in the partnership (e.g., statutory agencies and landowners).

11.23 Regional Land Use Partnership Pilots are currently underway in Scotland[66], including in the Cairngorms National Park and this may become a suitable governance structure for the delivery of many of the identified opportunities dependent on the outcomes of the pilots.

11.24 Establish the partnership and governance structures.

[66] Scottish Government (2021) Land use – getting the best from our land: strategy 2021 to 2026

Stage 4: Project Development and Prioritisation

11.25 In order to identify projects the following steps should be taken:

- Prioritise natural capital investment opportunities through stakeholder engagement including community, stakeholder engagement and landowner engagement, and an assessment of socio-economic data in order to identify areas where greatest community benefit can be achieved;
- Carry out a detailed feasibility assessment of initial priority natural capital investment projects;
- Identify and co-ordinate further detailed work and assessments required to further progress opportunities towards the delivery stage; and
- Make connections with staff responsible for Clyde Climate Forest and Greater Manchester Environment Fund to share learning.

Stage 5: Develop Potential Delivery and Funding Mechanisms

11.26 The final stage of this early development is to assess options to match potential funding mechanisms with prioritised investment opportunities to enable the Council to progress to detailed assessment and delivery of the options.

Appendix A

Grant Funding Sources

Table A.1: Funding opportunities for natural capital investment

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
NatureScot/Scottish Government/National Lottery Heritage Fund	**FIRNS – The Facility for Investment ready Nature in Scotland** Grant scheme to support projects that shape and grow the use of private investment and market-based mechanisms to finance the restoration of Scotland's nature. Projects must be able to develop a viable business case and financial model to attract investment in projects that can restore and improve the natural environment. https://www.nature.scot/funding-and-projects/firns-facility-investment-ready-nature-scotland	Offered to range of organisations and partnerships: ■ Charities/trusts/community groups; ■ Public bodies including local authorities/central govt. agencies; ■ Private individuals/companies, academic institutions; and ■ Community interest companies.	Must be able to develop a viable business case and financial model to attract investment in projects that can restore and improve the natural environment. Supported projects will: ■ Support the restoration of nature and growth of natural capital backed by robust science-based methodologies; ■ Enable or generate revenue and /or cost savings from ecosystem services in order to attract and repay private sector investment; ■ Explore and demonstrate engagement with community interests in project design, and activities, supporting a just transition; and ■ Develop effective mechanisms to share benefits with communities, supporting a just transition.	Deadline for expression of interest: 17th April 2023. Application window closed: mid-June 2023. Announcement of winning bids: mid-August 2023.	Development phase projects (max. duration 6 months): £100,000. Market and investment readiness projects (approx. 21 months): Up to £240,000.	All.
Scottish Government/ NatureScot	**Peatland ACTION Fund** National programme to restore peatlands across Scotland. Led/funded by Scottish Government in partnership with NatureScot and supporting agents. Fund primarily supports on-the-ground peatland restoration activities. Where appropriate, multi-year offers for large-scale projects will be made. https://www.nature.scot/climate-change/nature-based-solutions/peatland-action-project	All eligible land managers who have peatlands that would benefit from restoration. There are no geographical restrictions or target areas.	■ Majority of peatland in project area must have peat depth over 50cm, but down to 30cm will be considered if they form an intrinsic component of the peat hydrological unit. ■ Generally expect projects >10ha with cost over £10,000.	Rolling programme – applications can be submitted at any time of year (recommend 12 weeks before intended start date). Also offer multi-year offers for larger projects.	Total fund £250 million up to 2030. Range not specified for individual projects.	Peatland restoration.
	Nature Restoration Fund (NRF) Specifically encourages applicants with projects that restore wildlife and habitats on land and sea and address the twin crises of biodiversity loss and climate change. The NRF is a commitment in the current Programme for Government for multi-year funding as part of overall investment in the natural economy. The £65 million fund, a key part of the Bute House Agreement and multi-year funding across this parliament was announced on Nature Day at COP26. Details for The Edinburgh Process Fund, for Local Authorities, National Park Authorities, and their partners engaged in delivering local nature networks and other biodiversity projects locally will be announced later in 2023. https://www.nature.scot/funding-and-projects/scottish-government-nature-restoration-fund-nrf	Suitable for: ■ Constituted organisations (registered charities and trusts/community groups); ■ Private individuals and companies; and ■ Partnerships and organisations working collaboratively with others. Public Bodies cannot be the principal beneficiary of a grant from NRF but can be a coordinator of, or funding contributor to, a wider partnership bid (where the match funding eligibility criteria are met). Any bids with public body partners will be scrutinised to ensure funding is delivering activities that would not be expected to be undertaken by public bodies as part of their core functions, or as would be expected in delivering their biodiversity duties.	Priority will be given to projects which: ■ Bring together strong partnerships; ■ Leverage funding in excess of the NRF minimum requirement from other financial partners; ■ Demonstrate clear additionality to existing and already committed actions; and ■ Have a sustainable vision and a clear exit strategy which does not require further NRF funding. All project proposals should reference how the project will contribute to climate change mitigation and adaptation.	Expressions of interest recently closed for projects under 'Helping Nature' funding steam (£25,000-£250,000). To be delivered over max 2 years. The Transforming Nature strand of the NRF (which offers grants of over £250,000 and development phase funding) is expected to open again later this year.	Helping Nature £25,000-£250,000. Transforming Nature £250,000+.	All.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
National Lottery Community Fund	**Climate Action Fund – Nature and Climate** Looking for projects that focus on the link between nature and climate. The Climate Action Fund will fund projects that use nature to encourage more community-led climate action. These projects should bring other important social and economic benefits. Like the creation of strong, resilient and healthy communities or the development of 'green' skills and jobs.	Accept offers from: ■ Local partnerships; and ■ UK-wide partnerships which are delivered across at least two UK countries.	Projects should do at least one of the following: ■ Show how creating a deeper connection with nature will lead to changing people's behaviours and greater care for the environment; and ■ Show how by bringing nature back into the places we live and work, we can help communities to reduce or adapt to the impacts of climate change.	Ongoing.	Up to £1.5million over 2-5 years. Most projects between £300,000 and £500,000.	All.
Transport Scotland	**Network Support Grant** The Network Support Grant is a discretionary grant that subsidises commercial and community bus routes. It aims to keep fares at affordable levels and networks more extensive than would otherwise be the case.	Commercial bus operators and community transport organisations. See the Transport Scotland website for full details on eligibility.	https://www.transport.gov.scot/public-transport/buses/network-support-grant/	Community transport organisations possessing a section 19 or section 22 permit can either claim once annually, or twice yearly in arrears for set 6-month periods (1 October – 31 March and 1 April – 30 September).	Information not available.	Supporting investment – Access.
Scottish Marine Environmental Enhancement Fund (SMEEF)	**Restoration, Recovery or Enhancement (RRE) Grants** Examples of restoration, recovery or enhancement could include: ■ Habitat improvements, for example, relating to sand dunes, seagrass, saltmarsh and native oyster beds. ■ Measures to restore, recover or enhance mobile species for example relating to marine birds or cetaceans. ■ Invasive species eradication. ■ Other activities, including citizen science, which help to improve our understanding of human pressures on the marine environment, particularly if they are part of a practical restoration project. https://smeef.scot/grants/	The applicant(s) must be based in the UK and all projects must be delivered in Scotland. The main applicant cannot be a for-profit company, however they can make up a minority interest of a consortium bid.	Projects should always: ■ Be as collaborative as possible and have a clear engagement plan for involving interested groups; ■ Demonstrate clear additionality to existing and already committed actions; and ■ Be informed by science; driven by knowledge and backed up by monitoring. All applications for marine and coastal restoration are welcome. As a broad guide we consider 'marine and coastal' to include species and habitats where salt water plays a crucial role in the natural life cycle. The project can include financial returns or cost recovery through financial mechanism, but the main aim of the project must be biodiversity/ecosystem gains, not profit.	Currently closed for RRE applications.	£10,000-£25,000. One exceptional award of up to £100,000.	Coastal flood management.
Scottish Government/ Scottish Forestry	**The Forestry Grant Scheme** Financial support for both the creation of new woodland and the sustainable management of existing woodland (planting, woodland protection, harvesting etc.). Capital payments and annual management payments available. https://forestry.gov.scot/support-regulations/forestry-grants	Must register with Rural Payments and Services and have a Business Reference Number (BRN). This funding is available for farmers, crofters, foresters, land managers and rural communities.	■ Woodland creation applications must fit well with the local authority woodland strategy (or equivalent). ■ Must meet Scottish Forestry woodland creation aims / scoring criteria. ■ Woodland Improvements grants can go towards creating long term plans (e.g. long-term forest plans), for capital work to protect habitats/species, restructuring regeneration (i.e. restocking/improving diversity), low impact silvicultural systems (LISS) or woodlands in and around towns (WIAT).	Varying timescales for delivery of varying projects following funding (1-3 years). https://www.ruralpayments.org/topics/all-schemes/forestry-grant-scheme/forestry-grant-scheme-full-guidance-menu/forestry-grant-scheme---claims-and-payments/	Woodland Management – funding varies depending on operation. Rates available here. Includes grant and annual maintenance payments. Woodland creation – funding varies depending on density/woodland types. Rates available here. Includes initial planting payment, annual maintenance payments and capital grant for fencing/tree protection.	Woodland creation/restoration.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
	Small Woodland Loan Scheme (SWLS) Allows you to carry out work required to create new, small woodland before you get financial support from the Forestry Grant Scheme (see above).	Only available for new applications to Forestry Grant Scheme (see above).	■ Must meet Scottish Forestry woodland creation aims / scoring criteria. ■ Woodland applications no greater than 50ha.	As above.	50% of the capital items in approved Forestry Grant Scheme contract to a maximum of £40,000.	Woodland creation/restoration.
	Community Fund Supports groups and organisations that encourage people to use woods more. Funding can support activities on Scotland's national forests and land.	Suitable for: ■ Voluntary; ■ Community organisations; ■ Social enterprises; ■ Community councils; and ■ Public sector organisations. Minimum requirement is that the applicant has a bank account, and for community groups, a basic constitution.	Eligible: ■ School care clubs and play schemes; ■ Schemes that promote physical activity such as walking, safe routes to school, natural play and adventure play; ■ Developing materials that promote the health and well-being benefits of using woodlands; ■ Facilitation of volunteering for skills training, health improvement and community development; ■ Establishment of volunteer groups and the induction of volunteers; ■ Providing resources to involve communities in the decision making process of managing their local woodland; ■ Costs related to developing Community Asset Transfer Scheme applications from community bodies such as valuation - funding will not normally cover legal fees; and ■ Projects that support the Queen's Green Canopy initiative. Not eligible: ■ Land based and infrastructure spending that can be supported by the Scotland Rural Development Programme; ■ Formal education including forest schools, forest kindergarten and staff continued personal development; ■ Funding staff who work for public sector organisations such as local authorities; and ■ Capital funding for the acquisition of fixed assets such as land and buildings, or mobile assets for public sector organisations.	Not know – Application forms available from local Conservancy office (Highlands and Islands Conservancy).	Up to 100% for projects with a total cost of up to £1,000. Up to 90% for projects with a total cost of between £1,001 to £5,000. Up to 75% for projects with a total cost exceeding £5,000.	Woodland creation/restoration.
Scottish Government	**Agri-Environnent Climate Scheme (AECS)** The Agri-Environment Climate Scheme (AECS) promotes land management practices which protect and enhance Scotland's magnificent natural heritage, improve water quality, manage flood risk and mitigate and adapt to climate change. It also helps to improve public access and preserve historic sites.	The scheme is open to farmers, groups of farmers and other land managers with land in Scotland, who are registered with Scottish Government and have a Business Reference Number.	https://www.ruralpayments.org/publicsite/futures/topics/all-schemes/agri-environment-climate-scheme/	Improving public access suspended for 2023. Agri-environment: Open 30th January – 7th June 2023	Annual management payments/payments for capital cost available. Varied: more information available here.	Agricultural.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
National Lottery Community Fund/ Highlands and Islands Enterprise	**Scottish Land Fund** Supporting urban and rural communities to become more resilient and sustainable through ownership and management of land and assets. https://www.tnlcommunityfund.org.uk/funding/programmes/scottish-land-fund	Suitable for: ■ Voluntary; ■ Community organisations; ■ Social enterprises; ■ Community councils; and ■ Public sector organisation.	Open to organisations in both rural/urban areas which are community-led, community-controlled and defined by a geographic area. Must be able to demonstrate project will help local community to: ■ Achieve more sustainable economic, environmental and/or social development through ownership of land and buildings; ■ Have a stronger role in and control over their own development; and ■ Own well managed, financially sustainable land and buildings.	Rolling.	Stage 1: Technical assistance funding £2,500-£30,000. Stage 2: Asset acquisition £5,000-£1million.	All.
Crown Estate Scotland	**Sustainable Communities Fund** Supports local regeneration and sustainable development. Two types of funding available: ■ Community capacity grants; and ■ Environment grants. https://www.crownestatescotland.com/our-projects/sustainable-communities-fund	Community capacity grants – open to all communities up to five miles from Scotland's coastline or within five miles of Crown Estate's rural estates. Environment grants – provide funding to Crown Estate Scotland tenants only.	Community capacity grants – projects that contribute to local regeneration and sustainable development, and, ultimately, help create great places to live, work and visit. Projects that will create self-sustaining community enterprises that will promote sustainable development through the provision of local economic, social, and/or environmental benefits. Environment grants – Can deliver climate change/ natural climate solutions e.g. native tree planting, green travel initiatives, increase local biodiversity, environmental education, circular economy.	Unclear when 2023 applications will be open. 2022/23 deadline was in October 2022 for monies awarded March 2023. Environmental grants – must be able to deliver demonstrable environmental benefits within 18 months of award of funds.	Based on 2022/23 round: ■ £20,000-£50,000 for community capacity grants; and ■ £5,000-£20,000 for environment grants.	All.
Sustrans	**National Cycle Network improvements and signage** To deliver physical improvements to the National Cycle Network.	Available for: ■ Local authorities; ■ Constituted community group; and ■ Public/third sector organisations.	Email scotland@sustrans.org.uk to find out more.	Information not available.	Information not available.	Supporting investments – Access.
	Strategic Partnerships Sustrans Officers to support active travel infrastructure development. The strategic partnerships team will share knowledge and expertise on how to develop active travel projects and guide strategies.	Available for: ■ Local authorities; ■ Constituted community group; and ■ Public/third sector organisations.	Email lee.muir@sustrans.org.uk to find out more.	Information not available.	Information not available.	Supporting investments – Access.
	ArtRoots Fund The ArtRoots fund is a community fund for artistic and aesthetic improvements to the National Cycle Network in Scotland. It aims to encourage communities to participate in shaping their local environment and increase their levels of physical activity. Previous ArtRoots-supported projects include: temporary installations, one-off performances, sculptures, heritage signs, information boards, murals, seating.	Available for constituted community groups based in Scotland.	All groups submitting an application must evidence how they plan to work with the local community to develop the project.	ArtRoots is open for new applications throughout the year. Total annual funding is limited, so prospective applicants are encouraged to apply as soon as possible.	£2,500-£5,000.	Supporting investments – Access and tourism.
Sport Scotland	**Sports Facilities Fund** The fund supports capital projects that create or improve places that people take part in sport and physical activity. Awards are available for sports	Open to any non-profit distributing, constituted organisation whose membership is open to all sections of	In clubs and communities they will support: ■ New, upgraded or extended sports facilities; Inclusive changing facilities;	Small projects have a deadline of 1 April and 1 September for a decision within three months of the deadline.	Single stage process: Up to £250,000.	Supporting investments – Recreation and tourism.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
	facility projects within club and communities, school & education or performance sport environments. https://sportscotland.org.uk/about-us/	society. This includes schools and public bodies such as local authorities.	■ Facilities that provide or improve access for outdoor sport and adventure activities; ■ Floodlights that increase capacity at appropriate sports facilities; and ■ Major items of sports equipment. They will provide enhanced support to projects within or serving the most deprived communities, according to the Scottish Index of Multiple Deprivation (SIMD). They focus participation and progression and prioritise projects where there is a commitment to equalities and inclusion, people development, collaboration and impact.	Stage 1 large projects should be submitted by the 1 of any month and Stage 2 by 1 April and 1 September for a decision within three months of the deadline.	Two stage process: £250,000+.	
National Lottery Heritage Fund	**National Lottery Heritage Fund** National Lottery Grants for Heritage allows us to fund projects that connect people and communities to the national, regional and local heritage of the UK. Funds can be used for engagement activities, repairs and conservation, digital outputs, new staff posts, paid training placements, and professional fees. https://www.heritagefund.org.uk/funding/what-we-fund	Any not-for-profit organisation (including community groups/charities/ trusts/local authorities/other public sector organisations).	Don't define heritage – fund projects from historic buildings, industrial legacy and the natural environment to collections, stories and more. Heritage projects could include: ■ Nature (work to improve habitats and conserve species as well as helping people to connect to nature in their daily lives); ■ Designed landscapes (improving and conserving historic landscapes such as public parks, historic gardens and botanical gardens); and ■ Landscapes and the countryside large-scale rural projects that help improve landscapes for people and nature by, for example, restoring habitats and celebrating the cultural traditions of the land.	Under £250,000 – open all year round (assessed within 8 weeks). £250,000-£5m – quarterly application deadlines (25 May/ 17 August/16 Nov 2023/22 Feb 2024).	Funded at three levels: ■ £3,000 to £10,000; ■ £10,000 to £250,000; and ■ £250,000 to £5million.	All, including supporting investments – Recreation and tourism.
Paths for All	**Smarter Choices, Smarter Places Open Fund** To change people's everyday travel behaviour by encouraging more people to walk, wheel or cycle for everyday short journeys, or access public transport for longer journeys. https://www.pathsforall.org.uk/community-paths/cmp-grants	Available to public, third and community sector organisations.	Community path groups can apply to the fund for: ■ Consulting with communities on path improvements; ■ Mapping local walking and cycling routes; ■ Producing local maps showing walking and cycling routes; ■ Providing signage for pedestrian and cycle friendly routes*; and ■ Making walking and cycling routes more attractive and accessible*. * These activities would have to be part of a wider package of behaviour change.	Ongoing with no deadline date.	£5,000 to £100,000.	Supporting investments – Access.
Highlands and Islands Environment Foundation	**Highlands and Islands Environment Foundation Grants** Our goal is to protect and restore the natural beauty, biodiversity & eco-systems of the Scottish highlands and islands for the benefit of all by working in partnership with local communities to implement sustainable and regenerative projects. https://hief.scot/grants/	Local non-profit organisations, associations, clubs or unions, social cooperative enterprises and/or other local bodies, including research centres. They can support projects throughout the Scottish highlands and islands.	Supports projects in the Scottish highlands and islands which fit into one of the Foundation's areas of interest: ■ Montane; ■ Fresh water; ■ Marine and coastal; and ■ Forest and woodland. Your project should create measurable and sustainable long-term results, build capacity and encourage participation by the local society.	Applications will be accepted in three periods in 2023. Upcoming deadlines are 9am on: ■ 15 May 2023; and ■ 18 September 2023.	Previous projects generally £5,000-£15,000.	All.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
ScotWays	**Small Grant Scheme** The scheme will award grants to enable a community-based and access-related project which might otherwise not proceed. Projects should fit with ScotWays aims which are the preservation, defence, restoration and acquisition, for the public benefit, of public rights of access in Scotland, including public rights of way and related amenity.	Applicant organisations should be members of ScotWays.	The project meets ScotWays' charitable objective 'The preservation, defence, restoration and acquisition, for the public benefit, of public rights of access in Scotland, including public rights of way, and related amenity'. In the past, the Society has been involved in route maintenance, mapping, signing and producing leaflets to make information about routes available to the public. ■ The application should demonstrate a public benefit to the project; ■ ScotWays will fund up to 50% of the total project cost (excluding volunteer time); ■ The project should not have started before the grant is approved; ■ ScotWays will consider giving staff time in lieu of a cash contribution where that best serves the interests of ScotWays and the project; and ■ ScotWays' contribution to or involvement with the project should be fully acknowledged in all published materials and on signs and structures erected as part of the project, where appropriate.	Application deadlines: ■ 31 May (for decisions mid to end July); ■ 31 August (for decisions mid to end October); ■ 31 December (for decisions mid to end February); and ■ 28 February (for decisions mid to end April).	£500-£1,500 (for up to 50% of the total budget for the project, excluding volunteer time).	Supporting investments – Access.
SEPA via approved bodies: ■ LandTrust ■ EB Scotland ■ The Levenseat Trust ■ SUEZ Communities Trust ■ Grantscape ■ FCC Communities Foundation ltd. ■ Valencia Communities Fund	**Scottish Landfill Communities Fund (SLCF)** This is a Government initiative which was introduced to reduce the impact of landfill sites on neighbouring communities by funding local environmental projects. The aim of the scheme is to enable landfill operators to support various types of environmental projects by donating a percentage of their landfill tax liability. The SLCF are distributed by approved bodies who receive funds from landfill operators. Other organisations involved in the fund are SEPA, Revenue Scotland, the Scottish government, landfill operators, approved bodies and recipient projects. The grant funding can be allocated to carry out a specific project that meets the criteria of the SCLF and projects will be operated on a not-for-profit basis.	Charities and not for profit organisations. Project eligibility quiz: https://scottishepa.typeform.com/to/YjmHzb?typeform-source=www.sepa.org.uk	Projects must conform to one of the following SCLF criteria, fulfilling one of the six objectives given in Regulation 29(5) of the Scottish Landfill Tax (Administration) Regulations 2015: ■ Object A: The reclamation, remediation, restoration or other operation on land to facilitate economic, social or environmental use. ■ Object B: Community based recycling, re-use and waste prevention projects. ■ Object C: To provide, maintain or improve a public park or other public amenity. ■ Object D: The conservation or promotion of biological diversity through the provision, conservation, restoration or enhancement of a natural habitat or the maintenance or recovery of a species in its natural habitat. ■ Object E: The maintenance, repair or restoration of a building, other structure or a site of archaeological interest which is a place of religious worship, or a site of historic or architectural or archaeological interest and is open to the public. ■ Object F: The provision of financial, administration and other similar services to projects. Approved bodies will receive contributions from the landfill operators and consider applications for funding. Each Approved Body has its own application process and will enrol projects that are to be awarded funding. Projects will have to comply with the specific requirements of the Approved Body funding them (see individual project funding websites) e.g. reporting on the project progress	Generally ongoing with no deadline date.	Landtrust: There is no limit to the amount of funding which a project can receive. The funding awarded depends on the quality of the project and support available for appropriate contribution (Recent examples range from £5,000 to £700,000+). EB Scotland: Previous projects typically range £1,000-£100,000+. FCC communities foundation: £2,000-£100,000. Grantscape/SUEZ Communities Trust: Small projects £3,000-£20,000. No overall cost more than £40,000 and must start within 3 months. Primary fund £3,000-£50,000. No overall cost of £250,000+ and must start within 6 months. Valencia: Up to £25,000.	All including supporting investments.

Funder	Fund Description and Eligible Projects	Eligible Applicants	Criteria	Timescales	Funding Amount/Range per Project	Moray Natural Capital Investment Opportunity (tbc)
			and money spent. However, the overarching SLCF criteria is applicable for all Approved Bodies.			
HDH Wills	**HDH Wills – Large Grants** Large grants are made by the Trust in a fixed seven-year cycle. In 2023/24 external applications will be accepted for wildlife and environmental causes. The focus of their support is the conservation and maintenance for the benefit of the public of the natural environment and its indigenous woodland flora and fauna, with particular reference to the conservation and maintenance of the character and amenity of rural areas. https://hdhwills.org/grants/	Charities/organisations supporting wildlife and the environment.	https://hdhwills.org/grants/	Accepting applications from January 2023 – December 2024.	£5,000-£50,000.	All.
Esmée Fairbairn Foundation	**Esmee Fairbairn Foundation** The aims of the organisation include improving the natural world, securing a fair future and strengthen bonds in communities in the UK. They offer grant funding for charitable work. They offer social investment including to organisations working on nature-based solutions towards: preserved species health and habitats (e.g. peat, spaces for nature, prioritising community ownership models where possible), sustainable and ethical food (nature friendly farming), and clean and healthy freshwater. https://esmeefairbairn.org.uk/our-support/social-investment/our-natural-world/	All grants provided by the Foundation must be used solely for charitable purposes. Social investment in organisations that have charitable aims and mission. Also support more commercially based activities where it is clear that the organisation's primary purpose is social impact.	■ Projects that align with the Foundation's aims (wide variety) – under broad headings of Our Natural World, A Fairer Future, and Creative, Confident Communities. ■ Provide a breakdown of outcomes and indicators.	Rolling.	Grants: Varied – depend on nature of the project/organisation. Social investment: £100,000-£2 million (average £437k).	All.