APPENDIX 1

Borderlands Natural Capital Programme – Scotland

Business Justification Case

Project Title: **Natural Capital Pilot Agri-Environment Project: Farmers, Landowners, Northern Brown Argus (NBA) and Species-rich Grassland (SRG)**

Applicant: **Butterfly Conservation**

Total project value: **£727,160**

Borderlands grant value: **£727,160**

	Name	Version	Date
Prepared by:	Tom Prescott	16	23/02/24
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Approved by:			

Farmers, Landowners, Northern Brown Argus (NBA) and Species-rich Grassland (SRG)

CONTENTS

INTRODUCTION/Executive Summary

1. The Natural Capital Scotland Programme, part of the Borderlands Inclusive Growth Deal and made up of several natural capital pilot projects, is about delivering innovation across a blend of revenue and capital-based activities to support a new way of working that reflects the role of Natural Capital in underpinning regional economic development, community development, land-use planning and management at a landscape scale.

2. Natural Capital is one of the Borderlands Inclusive Growth Deal programmes, within the Green Growth strategic theme. The Deal aims to deliver sustainable economic growth across the Borderlands region. The green growth theme capitalises on the region's green credentials, decarbonisation and high value job creation to support low carbon energy generation and decarbonisation. The Natural Capital Programme aims to be an exemplar for the UK in the development of new and innovative clean growth rural land management practices.

3. A summary of the sector in the Borderlands area is tabulated below.

Our Natural Capital Sector

- Sector comprises Agricultural, Forestry, Fishing, Mining, Water and Waste Management Services.
- In 2019, the sector employed over **14,000 people** – most jobs in Agriculture, Forestry and Fishing.
- From 2015-19, employment in the sector grew by **4%**.
- In 2020, the sector was propelled by around **3,200 businesses** – steady since 2016.
- In terms of specialisation, has **over two times** the concentration of jobs relative to Scotland.
- Employment is distributed across the region, with **greater density in the northeast of SB**.
- Forecasts suggest the sector may see a **small reduction** in employment by 2029.

4. The Natural Capital of the Borderlands region underpins much of its economic prosperity with its reliance on land-based industries such as agriculture, forestry, energy, food and drink, tourism, and outdoor recreation. As a result, the future land management of the region is recognised as a critical element of its future economic growth and resilience. The purpose of the proposal is to develop a more ecologically sustainable approach to hill livestock farming by supporting and promoting the rural economy and sustainable land management, focussing on Species-rich Grassland (SRG) and the conservation of the Northern Brown Argus (NBA) butterfly in the Scottish Borders (and across the local authority boundary in Dumfries and Galloway), and their reliance on HNV (High Nature Value) farming. The proposal prioritises nature-based solutions whilst providing improved food quality, enhanced pollination, increased biodiversity and improved soil management and carbon storage. This will help enhance productivity, potentially adding value to the end-product, grass reared, sustainable, environmentally friendly meat, ensuring land management businesses are more economically viable, sustainable, and resilient.

5. The project will be led by Butterfly Conservation, who will employ a Project Officer to deliver the project, in partnership with Scottish Borders Council (SBC). It will work very closely with the

Scottish Borders' woodland pilot and Dumfries and Galloway Council's agri-environment pilot, within the Natural Capital Scotland Programme. This pilot will provide many opportunities for local involvement, through volunteering, student placements, training, deploying local contractors and small businesses. Local people will be engaged in the delivery, developing stronger links between communities and land managers, whilst providing employment and skills opportunities. These new collaborative partnerships will deliver long-term strategic approaches to improving the region's economy. It will thereby deliver public goods for biodiversity and climate change resilience, whilst enhancing local place. It therefore helps to address the twin crises of climate change and biodiversity loss. The pilot will capitalise on the region's Natural Capital to be an exemplar for the UK in the development of new and innovative clean growth rural land management practices and make farm businesses more financially viable.

6. The **Strategic and Economic Case** sets out how our proposal fits with national and regional economic and land use policies, which recognise that Natural Capital is central to achieving net zero, arresting biodiversity decline and achieving a just transition.

7. The **Case for Change** outlines how and why change is required and highlights several options for increasing farm wealth by enhancing their Natural Capital via associated clean, green investment opportunities and the prospect of scaling up activity and investment. The urgent need for an effective agri-environment scheme is imperative. Risks have been fully assessed and are considered to be low, whilst constraints and dependencies are largely around the development of national policy, available funding and timescales.

8. The **Economic Case - Options Analysis** considered were 'Business as Usual', 'Do minimum' or the full project proposal. These were tested in a workshop with regional and national stakeholders attended by 17 individuals, with overwhelming support for the full project proposal.

9. The **Commercial Case** outlines our procurement procedures that comply with Butterfly Conservation, Scottish Borders Council, Dumfries and Galloway Council, and Scottish Government procurement policies.

10. The **Financial Case** sets out the full cost of the project of £727,160, with a full breakdown of the project costs, split between revenue and capital funding. The project is entirely funded through Borderlands Inclusive Growth Deal investment. Additional funding will be sort through the life of the project to add value.

11. The **Management Case** outlines that Scottish Borders Council will be the grant recipient with the project being delivered by Butterfly Conservation. The project will be overseen by an appointed Core Project Steering Group (CPSG) comprising key stakeholders.

DESCRIPTION OF THE PROJECT

12. The overall objective of the pilot is to develop a more ecologically sustainable approach to hill livestock farming by supporting and promoting the rural economy and sustainable land management, focussing on Species-rich Grassland (SRG) and the conservation of the Northern Brown Argus (NBA) butterfly in the Scottish Borders, and Dumfries and Galloway, using the butterfly as a flagship for Species-rich, (flower-rich), Grassland.

13. The project aims to be an exemplar in the UK in the development of new and innovative clean growth rural land management practices and make farm businesses more financially viable by capitalising on the region's Natural Capital.

14. The current system is not delivering for Species-rich Grassland, the conservation of the Northern Brown Argus or for farmers; change is therefore required. This is due to the current lack of an effective agri-environment (AE) scheme that incentivises and pays farmers to manage these vital flower-rich areas. This is set against an increased threat to these important habitats from financially rewarding afforestation grants with the offer of additional payments from selling Woodland Carbon Credits.

15. The pilot therefore aims to develop an effective AE scheme that maintains, restores and creates flower-rich habitats using an outcome-based approach. These habitats are best maintained by light seasonal grazing. However, techniques to restore Species-rich Grassland are less well established or costed, so this will require trials to determine how best to convert rank grassland or gorse dominated hillsides into flower-rich areas. This will include traditional methods of management e.g. increasing grazing, but also more innovative solutions using modern technology including the use of No Fence GPS livestock collars to target grazing without the need for fencing, deploying automated Robo-cutters to remove gorse from steep hillsides, the use of cut and collect techniques, direct drilling of wild flower seeds, drones and satellite imagery to survey and monitor habitat change and the use of Apps so that farmers and volunteers can monitor changes on the ground. These activities are key to the successful delivery of the pilot and are therefore deemed eligible.

16. Additional funding opportunities will also be explored including investigating establishing a Grassland Carbon Credits scheme, using biodiversity offsetting to restore flower-rich habitats, investing in local Natural Capital for Nature Recovery and the potential to develop a local premium meat marketing scheme "*Butterfly Beef*" and/or "*Lepidoptera Lamb*".

17. The project aims to heighten the importance of the region's Species-rich Grasslands and Northern Brown Argus populations and their reliance on High Nature Value (HNV) farming, and will provide opportunities for local involvement, through volunteering, student placements, training and working closely with landowners, farmers and their agents, local contractors and small businesses.

1 STRATEGIC CASE

1.1 Context

1.1.1 Butterfly Conservation is the UK charity dedicated to saving butterflies, moths and our environment, and its vision is a world where butterflies and moths thrive and can be enjoyed by everyone, forever.

1.1.2 Butterflies and moths are a vital part of our wildlife heritage and are valuable as sensitive indicators of the health of our environment. The stark fact is that butterflies and moths continue to decline at an alarming rate, despite Butterfly Conservation's best efforts over the last 40 years. Our data shows they are both declining faster than most other well-documented groups of plants and animals, so our task is both daunting and complex. The recent State of Nature Report Scotland (2023) shows that 13 of the 'top 15' most depleted species in Scotland are moths with declines of over 93% between 1994 and 2021. Lepidoptera are an important element of many ecosystems, being crucial in many food-chains as many other organisms depend on them for food or for their pollination. For example, Blue Tit chicks alone are estimated to eat 150,000,000,000,000 caterpillars in Britain each year and moths make up a substantial part of the diet of many bat species in Scotland.

1.1.3 For many species, we know what needs to be done to halt the decline and support recoveries. In order to tackle these losses and achieve the aims of the charity, we have to dramatically increase our capacity and influence over the next few years. Our work will benefit other wildlife and the ecosystems upon which all life depends. Falling numbers of butterflies and moths are an early warning to all wildlife that cannot be ignored.

1.1.4 Butterfly Conservation has more than 40,000 members in the UK and 32 volunteer-run branches throughout the British Isles. We employ almost 100 people, including many highly qualified scientists, making us the world's largest research institute for butterflies and moths.

1.1.5 Our current corporate strategy sets out three key goals to drive forward our work, making a pledge for the impact we will make on threatened species, doubling our impact on landscape restoration and involving people in transforming spaces for butterflies and moths. This will be achieved through implementing our three strategic goals.

1. Halve the number of the UK's threatened species of butterflies and moths.
2. Improve the condition of 100 of the most important landscapes for butterflies and moths.
3. Transform 100,000 wild spaces in the UK for people, butterflies and moths.

1.1.6 The project contributes to each of the Borderlands Inclusive Growth Deal's three priorities:

1. Narrowing the productivity gap

The project aims to increase GVA (Gross Value Added) by:

a) Investigating the establishment of a local "*Butterfly Beef*" and/or "*Lepidoptera Lamb*" scheme in partnership with Quality Meat Scotland (QMS), project farmers and local butchers whereby local meat is sold at a premium marketed on its green, natural capital

and enhanced biodiversity credentials. Options include selling directly to local butchers, or to the public by establishing their own farm shops, or directly online e.g. Peelham Farm, or the Buffalo Farm, or directly to high-end restaurants, or through an existing accreditation schemes e.g. Scotch Beef, Soil Association or Pastures for Life, or establishing a specific local scheme. Initial discussions have already been held with Bruce McConachie, Head of Industry, QMS, as to how such a scheme may operate in principle.

b) Developing an effective and bespoke agri-environmental scheme whereby farmers are paid for their management of SRG in line with the current POBAS (Piloting an Outcome Based Approach in Scotland) scheme that is currently being trialled and led by NatureScot, commissioned and funded by Scottish Government.

c) Encourage responsible private investment in Natural Capital. A recent Scottish Government Report (2023) *Mobilising Private Investment in Natural Capital* looks at how to encourage responsible private investment into peatland restoration, including how to overcome barriers to scaling voluntary carbon markets to restore peatland in Scotland. It states "*Globally there are a variety of carbon and nature-related funds which are structured to facilitate the flow of private finance into Natural Capital. These funds set a potential precedent for Scottish Government's proposed Scotland Carbon Fund*." The conclusions of this report will provide useful guidance on how to implement responsible private investment through this Natural Capital pilot.

d) Stimulate business growth to create a more diverse regional economy, recognising that innovation and skills are central to achieving this. The pilot aims to implement innovative solutions using modern technology including the use of No Fence GPS livestock collars, deploying automated Robo-cutters, using drones and satellite imagery as well as newly commissioned Apps. The pilot will also provide many opportunities for local involvement, through volunteering, student placements, training, and projects, deploying local contractors and small businesses. These activities are key to the successful delivery of the pilot and in part stimulate business growth by creating a more diverse regional economy.

2. Increasing Working Age Population

This will be supported by making farm businesses more economically viable, thereby retaining current jobs. In addition, the innovative approaches already outlined to make use of new technologies will provide additional work opportunities for local people and hopefully encourage young people who have left the Borderlands to study, to return. Work placements will be developed with Borders College through their Rural Skills programme and SRUC (Scotland's Rural College) under their proposed elective work placement module.

3. Delivering inclusive growth

The project will work closely with rural learners, and thus contribute to one of this priority's three key inclusive growth challenges, which includes **Access to education**. It is proposed to proactively work with students studying at the regionally focussed Borders College in Galashiels and SRUC's Barony Campus, near Dumfries.

Butterfly Conservation already has a good track record of working with students and trainees. It is a fulfilling and successful partnership with BC providing the opportunity, expertise and

support and the student gaining valuable experience whilst collecting useful information usually targeted on priority species and their habitats that allows BC to progress its conservation work. For example, we annually host and support 2-4 students undertaking their final year BSc or MSc dissertation projects, we have regularly hosted 4-6 week placement students from Stirling University and have employed two, year-long, TCV Natural Talent apprenticeships. We are currently supervising a PTES Internship who is studying some of Scotland's rarest micro moths, including *Lampronia capitella*, that only occurs at a single site in Scotland, near Peebles. We have also directly supervised PhD students. During the Covid pandemic, Butterfly Conservation moved our volunteer training online with regular Zoom species, habitat, and management workshops, which greatly increased our outreach.

Butterfly Conservation already has a strong working relationship with SRUC, delivering online talks and hosting students undertaking final year projects. Dr Lorna Cole, Agricultural Ecologist at SRUC, has suggested a guest lecture slot to their third-year module Ecological Applications students along with a farm visit. SRUC are also developing an elective work placement module which the pilot will be able to provide suitable opportunities. At Borders College there are potential opportunities to work with a number of courses/students including those studying agriculture, carbon courses, land-based forestry or other practical courses e.g., Rural Skills students learning about practical conservation measures to save threatened species.

There is therefore huge potential for student involvement with a commitment to provide opportunities for a minimum of:

- 1 student project/year.
- group site visits/year to demonstration sites.
- online talks/lectures a year.
- 2 work parties each year.
- Help support Ph.D students e.g. at present Sam Suter's (Glasgow University) Ph.D. project, "*Combining citizen science and remote sensing approaches for habitat monitoring*".

1.1.7 The pilot also meets the five objectives of the Borderlands Natural Capital Programme in Scotland as laid out in pages 13-14 of the Borderlands Natural Capital Programme Business Case:

1) *By 2030, deliver the six Scottish-led innovation pilot projects, delivering economic outputs, demonstrating best practice nationally and disseminating lessons to support scaling and influence future policy.*

The pilot is one of these six and is clearly delivering economic outputs by:

- Delivering economic benefits by devising a more inclusive agri-environmental scheme which includes SRG and is readily accessible to small farmers and landowners, as well as investigating opportunities for responsible investment in Natural Capital.
- Aiming to be an exemplar for Natural Capital in Scotland and across the UK.

- Undertaking trials to determine the most efficient, successful, and cost-effective mechanisms to maintain and restore SRG, which can then be rolled out across the country.
- Providing deliverable management prescriptions that can become part of Scotland's future post-Brexit agri-environment scheme, thus strongly influencing agricultural policy and scaling up to the whole nation.

2) *Deliver holistic economic benefits for the regional economy through the maintenance, restoration, and enhancement of natural capital, with additional benefits for the environment and communities, supported by a strategic cross-border partnership.*

This is the whole basis of the pilot; maintenance, restoration and enhancement of Species-rich Grassland and the corresponding uplift in Natural Capital. The challenge is then to use this uplift as a source of additional funding for farmers with downstream benefits to the wider local community. The project will also engage with local volunteers and students. Although focussing on NBA and SRG there will be other numerous beneficiaries including pollinators and a knock-on effect in the food-chain e.g., birds and bats. NBA also occurs just over the border in Northern England providing the opportunity for cross-border partnership working.

3) *Align with existing initiatives, such as the South of Scotland RLUP pilot and activity south of the border, to improve understanding of current land and marine uses, the benefits delivered, their interdependencies and drivers for change, and how to ensure future uses deliver economic benefits, both direct and additional, as well as wider environmental and social outcomes.*

Northern England is the only other part of the UK, outwith Scotland, where NBA occurs, so lessons learnt here will be equally valid there as their colonies are experiencing similar issues, albeit under a different agri-environment scheme. Survey and monitoring data gathered through the project on species, habitat and management will be valuable base-line data and input into the South of Scotland RLUP. The pilot also plans to integrate and align with the Regional Land Use Partnership Pilot Project.

The project focuses on developing an outcome-based AE scheme to enhance and restore SRG to benefit NBA by trialling different management techniques, thereby ensuring future landuse delivers both environmental and economic benefits. Further economic benefits will be sought through encouraging responsible private investment in Natural Capital.

Providing local volunteering opportunities outside in nature, be that survey and monitoring, or undertaking physical work parties, will be extremely uplifting by working and mixing with like-minded people whilst improving both their physical and mental wellbeing.

4) *Deliver strategic capacity building within regional businesses, organisations and supply chains and better equip regional workers for skilled jobs in the natural capital-based economy of the future.*

The basis of the project is to make farm business more financially viable as SRG and NBA are reliant on HNV farming systems, which are currently financially very marginal. The main aim is to develop an effective AE scheme that maintains, restores, and creates flower-rich habitats using an

outcome-based approach that rewards farmers on results. The pilot will also investigate opportunities for responsible investment in Natural Capital, contribute to establishing a Grassland Carbon Code and aims to be a transformational pilot that generates Inclusive Growth. It will also look into the viability of increasing farm income through investigating a premium meat scheme, e.g. Butterfly Beef, using SRG as an exemplar for NC and all the wider cross-benefits it provides.

Butterfly Conservation already has good contacts with farmers and landowners in the regions mainly via the Northern Brown Argus surveys that have been running since 2016. In addition, another source of farmer engagement will come through the current excellent working relationships with local agricultural agents, for example, SAC Consulting, Tweed Ecology, The Farm Environment and Countryside Management Solutions, and their support for the project and willingness to work together. Furthermore, Lindsay Brown (Lothians and the Borders Regional Manager, National Farmers Union Scotland) and Reuben Singleton (Director, Tweed Ecology), have both agreed to sit on the pilot's Core Project Steering Group (CPSG).

Links will be developed with Scottish Borders College and SRUC to develop learning opportunities, student placements, student projects as well as innumerable volunteering opportunities for students and the local community. The project will also improve participants' health and well-being.

5) *By 2030 develop a long-term investment plan for the region that capitalises on private and blended finance opportunities through both responsible private sector and public sector sources.*

This pilot clearly aligns with this objective. Data gathered through this pilot will be valuable in inputting into the regional long-term investment plan, especially the outcomes from investigating opportunities into responsible investment in Natural Capital and therefore leading the way in economic transformation. In short it aims to capitalise on the region's Natural Capital.

1.1.8 The project aligns with the Scottish Centre for Regional Inclusive Growth's (SCRIG) five Inclusive Growth Outcomes: Productivity, Population, Participation, People and Place. The Inclusive Growth Dashboard is an interactive data tool which captures a balanced range of indicators for the five Inclusive Growth Outcomes, as outlined above, across Scotland's 32 local authorities, using data which is reliable and consistently updated. This section illustrates how the project contributes to those outcomes.

1. **Productivity** - Businesses are competitive and economic growth is resilient and sustainable.

The development of a more inclusive agri-environmental scheme, as well investigating opportunities for responsible investment in Natural Capital, will deliver economic benefits to the farmer. However, the maintenance and enhancement of SRG requires seasonal light grazing and can often only be delivered through traditional agriculture via High Nature Value farming, which by definition is sustainable. The establishment of a premium meat scheme e.g., Butterfly Beef will also further increase economic growth and business competitiveness.

2. **Participation** - Scotland has a sustainable working age population.

The project is being designed to encourage open inclusive participation from a wide audience, from aging farmers to students. The stakeholder meeting was evident of that with attendees ranging from PhD students, Butterfly Conservation volunteers, farmers, farm agents, academics, staff from the NGO section as well as government agencies. Learning opportunities will be provided by making direct connections with SRUC and Borders College and via demonstration days, virtual and in-person talks and training on survey and monitoring techniques, onsite work parties and the establishment of local Natural Capital groups where ideas and concepts can be discussed.

3. **Population** - Inequality of opportunity to access work is addressed and jobs are fulfilling, secure and well-paid.

Butterfly Conservation is an equal opportunities employee. Training opportunities and the resulting acquired skills provided through the project, particularly to students and volunteers, will be transferrable and increase their employability. Working for a conservation charity and trying to change the environment for the better is extremely fulfilling, though poorly paid!

4. **People** - Scotland's population is healthy and skilled and economic benefits are spread more widely, with lower levels of inequality.

There are proven health and well-being benefits from spending time with nature as illustrated during the pandemic. Spending time in flower-rich areas is uplifting, and even more so if one has contributed to that benefit or there to monitor change. As previously stated, the provision of training and volunteering opportunities will upskill individuals.

Butterfly Conservation is totally reliant on their wonderful army of dedicated, knowledgeable, and experienced volunteers. In the year 2022/23 10,747 people regularly volunteered for the organisation, contributing an estimated 205,984 hours, equivalent to 123 full time members of staff. Butterfly Conservation is currently rolling out Assemble, a new online portal, which will help recruit new volunteers, manage their training, and share information. BC already has a great track record of working with volunteers in the Borders with 44 different volunteers taking part in Northern Brown Argus surveys between 2016 and 2022. As well as using Assemble to recruit volunteers specific tasks will be advertised on the BC website, through the 1/4ly Scottish Enewletter distributed to over 2,100 contacts, via BC's East of Scotland branch and at the biannual Scottish hybrid gatherings attended by around 150 people in person and probably double that online.

5. **Place** - Communities across Scotland have the natural and physical resources to ensure they are strong and sustainable.

The project seeks to maintain traditional agriculture that has sculpted the area's landscape and provided a sense of place. NBA is very much part of this landscape with 40% of the UK and 50% of the Scottish population being found in the south of Scotland, the majority of that in the Borders. It can therefore rightly be regarded as the Borders' Butterfly and more so than any other species of wildlife. Directly involving local communities will help empower them and provide them with a strong sense of place and why their landscapes are so special and important.

1.1.9 An Integrated Impact Assessment has been undertaken for the project and is presented in **Appendix M.**

1.1.10 A Carbon Categorisation Assessment has been undertaken for the project. This assessed the Expected Carbon Impact CONTROL as Category 2: - Whole life carbon net zero, the project has no measurable effect on atmospheric carbon. Whilst the Expected Emissions Impact INFLUENCE was assessed as Category A: - Carbon emissions reduction, the project leads to wider carbon savings through reduced use of fossil fuels. The assessment concluded that emissions from the project are predicted to be very low hence it being assessed as Category 2A. However, improvements can be made to reduce the project's impact though it is highly unlikely that this will change the Category status. The Project Carbon Categorisation Form is presented in **Appendix N**.

1.1.11 In December 2022, the Scottish Government published its draft Scottish Biodiversity Strategy for consultation, *Biodiversity Strategy to 2045: Tackling the Nature Emergency.* The strategy sets out a clear ambition: for Scotland to be Nature Positive by 2030, with the following three visions:

- By 2045 Scotland will have restored and regenerated biodiversity across our land, freshwater and seas.
- Our natural environment, habitats, ecosystems and species, will be diverse, thriving, resilient and adapting to climate change.
- Regenerated biodiversity will drive a sustainable economy and support thriving communities, and people will play their part in the stewardship of nature for future generations.

1.1.12 Alongside this, the three Priority Actions for 2030 are:

1. Accelerate restoration and regeneration.
2. Expand and connect protected areas and improve their condition.
3. Nature-friendly farming, fishing and forestry.

The detailed delivery plans are still to be published, however, it is clear that this pilot clearly aligns with all three of the Strategy's visions and all three of its Priority Actions.

1.1.13 This pilot contributes to several strategies as outlined below along with details of their relevance.

1.1.14 The forthcoming post-Brexit changes to agricultural subsidies and the Climate Change Plan objectives of net zero by 2045, will require a step-change in how we manage our land. This proposal seeks to pilot ecologically sustainable land management to demonstrate and provide a delivery mechanism to help inform the development of the next round of rural development support post-2024.

1.1.15 National Strategies

- The Northern Brown Argus butterfly is listed as a species of principal importance for biodiversity conservation in the Scottish Biodiversity List. Lowland calcareous grassland habitat is also listed due to 'significant decline/unfavourable condition'.

- The Pollinator Strategy for Scotland 2017–2027 aims to address declines in populations, diversity and range of our pollinator species. The Strategy highlights the need to protect calcareous and neutral grasslands for the benefit of pollinators.
- Scotland's Third Land Use Strategy 2021-2026 sets out a vision, objectives and policies to achieve sustainable land use. This proposal will also help inform the priorities of Regional Land Use Partnerships as they emerged over the next few years.
- Towards a robust, resilient wellbeing economy for Scotland is a Report of the Advisory Group on Economic Recovery (AGER) which includes recommendations for investment in Natural Capital.
- Scotland's Natural Capital Asset Index (NCAI) tracks changes in the capacity of Scotland's terrestrial ecosystems to provide benefits to people. The index considers the habitat condition of Scotland's grasslands to have dropped markedly between the 1950's and 1990's although has been more stable in recent years.
- The next step in delivering our vision for Scotland as a leader in sustainable and regenerative farming outlines a vision for future agricultural policy in Scotland and the need to transform how we support farming and food production. It aims to develop a support framework that delivers high quality food production, climate mitigation and adaptation, and nature restoration.
- Community Wealth Building (CWB) is designed to harness the economic leverage of local 'anchor' organisations (such as local councils, health, universities, colleges, housing associations, or large local private sector employers) to tackle long standing systematic challenges and structural inequalities within our communities. It seeks to transform our local and regional economic systems to enable more local communities and people to own, have a stake in, access and benefit from the wealth our economy generates. Community Wealth Building can deliver more and better jobs, business growth, community-owned assets and shorter supply chains creating greater resilience and supporting net zero ambitions. CWB aims to ensure the economic system builds wealth and prosperity for everyone and acts as a framework for activity across five interlinked pillars. The Scottish Land Commission have also produced a CWB good practice guide.

1.1.16 Regional Plans and Strategies

- The Dumfries & Galloway Council Local Biodiversity Action Plan includes Northern Brown Argus as a priority species and targets action for several grassland habitat types that support populations of the butterfly.
- The Scottish Borders Council Local Biodiversity Action Plan includes actions to protect and enhance grassland habitat for Northern Brown Argus and pollinators.
- A South of Scotland Regional Land Use Partnership Pilot is in development and will aim to support the region's Net Zero journey and address the loss of biodiversity. At a recent stakeholder engagement meeting biodiversity decline was identified by participants as their top concern and biodiversity enhancement as their priority opportunity.

1.1.17 Agri-environment

- Piloting an Outcomes Based Approach (POBAS) is an established NatureScot-led project, commissioned and funded by Scottish Government, working with farmers and crofters to develop and test innovative approaches to delivering environmental outcomes on farms and crofts.
- Scotland's current 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. This includes direct payments to manage and restore SRG.

1.1.18 Third-sector initiatives

- Northern Brown Argus is listed in Butterfly Conservation's (BC) Conservation Strategy as a High Priority species indicating that 'action is necessary in parts of its UK range' as well as being classed as Vulnerable on the Butterfly Red list for Great Britain. It is also given the same status in Butterfly Conservation's Conservation Strategy and is listed as one of the priority species for action under Goal One "Halve the number of threatened species of butterflies and moths" in BC's recently launched 2021-2026 Organisational Strategy.
- Buglife's B-lines Scotland has identified a number of significant grassland networks for pollinators in southern Scotland and aims to increase their extent and improve connectivity.
- The £1 Billion Challenge is a new route map published by the Scottish Wildlife Trust and the Scottish Environment Protection Agency (SEPA) aimed towards unlocking £1 billion of new investment for nature conservation in Scotland. The route map includes models for stimulating investment in Scotland's Natural Capital.
- Save Our Magnificent Meadows partnership project led by Plantlife is a clarion call to protect, love and restore our meadows and Species-rich Grassland against the creeping normality that they no longer matter.

1.1.19 An online Stakeholders' meeting, attended by 17 participants, was held in May 2023. One of the main focussed discussion points was undertaking an Options Appraisal considering the following three scenarios.

1. Do Nothing - Business as Usual (BAU).
2. Do Minimum.
3. Post-Natural Capital Pilot.

The results from this exercise and the rest of the workshop are reported later in this document in Table 1 – Summary of Options Appraisals in Section 2.2. There was unanimous agreement from the workshop that the Do Nothing or the Do More options were not fit for purpose. Details from the workshop are also presented in **Appendix C** – Agenda, Presentation and Discussion Points, and **Appendix D** – Attendees and Feedback.

1.2 Case for Change

The project's key strategic delivery objectives are;

- Undertake at least four management trials to better understand restoration techniques and costs over 10ha by the end of the project and disseminate the results to influence future agri-environment policy.
- Provide advice to farmers/landowners to retore/enhance 400 ha of SRG over the course of the project.
- Recruit a minimum of 50 volunteers to enhance 10ha of SRG by running a minimum of two work parties annually, this will be helps by establishing two local community liaison or volunteer groups.
- Increase survey and monitoring of NBA by recruiting/training/co-ordinating 50 volunteers to enable robust distribution and abundance trends to be calculated throughout delivery of the project in 2030 after the collation of five year's of data.

Spending objectives

1.2.1 The pilot's overall objective is to develop a more ecologically sustainable approach to hill livestock farming by supporting and promoting the rural economy and sustainable land management, focussing on Species-rich Grassland (SRG) and the conservation of the Northern Brown Argus (NBA) in the Scottish Borders, and Dumfries and Galloway.

1.2.2 The pilot will capitalise on the region's Natural Capital to be an exemplar in the UK in the development of new and innovative clean growth rural land management practices. It will also make farm businesses more financially viable.

1.2.3 The current threats to the region's nationally important NBA colonies, through afforestation and inappropriate grazing management, will have been averted.

1.2.4 Different techniques, including using new technologies are tried, tested, and costed to establish the most cost-effective and efficient methods for maintenance and restoration of SRG.

1.2.5 The establishment of a new agri-environment scheme that rewards farmers on results incorporating these findings.

1.2.6 The project will heighten the importance of the region's SRG and NBA populations and their reliance on HNV (High Nature Value) farming.

1.2.7 The pilot's spending objectives are to:

- Heighten the importance and understanding of the area's Natural Capital.
- Avert the current threats to the region's nationally important NBA colonies which are at risk from afforestation and inappropriate grazing management.
- Heighten the importance of the region's nationally significant NBA populations as a flagship for SRG and their reliance on HNV (High Nature Value) farming.

- Deploy different techniques, including the use of new technologies to establish the most successful, cost-effective, and efficient methods for the management and restoration of SRG.
- Enhance the resilience of the region's SRG to climate change by increasing its size, quality, and connectedness.
- Develop an effective AE scheme that maintains, restores, and creates flower-rich habitats using an outcome-based approach that rewards farmers on results.
- Maintain and improve farm business profitability and thus viability.
- Provide opportunities for local volunteer involvement through survey/monitoring and habitat work parties.
- Provide students with opportunities to undertake placements, projects, and training.
- Establish two Natural Capital farmer-led working groups.
- Contribute to establishing a Grassland Carbon Code.
- Investigate opportunities for responsible investment in Natural Capital.
- Deliver a transformational pilot that generates Inclusive Growth.
- Use the region's Natural Capital assets to drive green growth.
- Work closely and effectively with the other Borderlands Natural Capital pilots i.e., the *Integrated Land Use and Woodland Creation* pilot, the *Integrated Whole Farm Plans* pilot and the *Natural Capital Audit and Mapping* pilot.
- Integrate and align the pilot with the Regional Land Use Partnership Pilot Project.
- Co-ordinate an NBA survey across both the Scottish Borders and Dumfries and Galloway and establish robust monitoring of the NBA population and develop an NBA landscape metric to determine the impact of the project.
- Support educational outreach/promotion through the establishment of two demonstration sites, online talks to local colleges, host undergraduate projects, and assist potential PhD student projects.
- The pilot will provide many opportunities for local involvement, through volunteering, student placements, training, and projects, deploying local contractors and small businesses.

1.2.8 It is estimated that the project will produce the following targeted outcomes:

- Appoint Project Officer within the first quarter of the project.
- Raise awareness and increase understanding of NC, SRG, and NBA through establishing two Natural Capital farmer groups and two demonstration sites organising annual meetings/events engaging with at least 50 farmers.
- Undertake at least 4 management trials to better understand restoration techniques and costs over 10ha by the end of the project and disseminate the results to influence future agri-environment policy.
- Provide advice to farmers/landowners to retore/enhance 400 ha of SRG over the course of the project.
- Recruit a minimum of 50 volunteers to enhance 10ha of SRG by running a minimum of two work parties annually, this will be helps by establishing two local community liaison or volunteer groups.
- Increase survey and monitoring of NBA by recruiting/training/co-ordinating 50 volunteers to enable robust distribution and abundance trends to be calculated.

- Provide opportunities for students at SRUC Barony Campus, Scottish Borders College at Galashiels and elsewhere to engage with the project through provision of 10 work placements/projects over the course of the pilot.
- 90 volunteers engaged of the course of the project, contributing around 1,000 days, worth £140,000.
- Bring in a minimum of £10k funding directly to the project from green initiatives e.g. Grassland Carbon, Biodiversity Net Gain, Nature Recovery etc annually from year 3.
- Disseminate results and conclusions of the pilot via publication of two case studies in the last 3 years of the project.

1.2.9 The project is totally reliant on preserving and safeguarding the region's Natural Capital as this is key to many investment opportunities including:

Carbon Credits

There are many different Carbon Offset Providers who use the proceeds to fund carbon-negative programmes. Many of these focus on investing in afforestation schemes (forest-carbon). The Woodland Carbon Code (WCC) is a government certified standard for generating carbon offset units through woodland creation in the UK. Similarly, the Peatland Code (PC), a more recently launched counterpart, is the UK's standard for generating carbon offset units by restoring degraded peatlands. Both schemes were established to help the UK reach net zero by 2050.

There is currently not a Grassland Code. The importance of grasslands for carbon storage is highlighted in a recent paper by Penny Anderson, *Carbon and ecosystems: restoration and creation to capture carbon*. Although complex, some grassland types have been found to sequester as much carbon as many other habitats, but there is considerable variation. Low/intermediate grazing levels and no artificial fertilisation are essential, the ideal grazing regime to maintain SRG to benefit NBA and other pollinators. There is therefore great scope to investigate Grassland Carbon as a future source of funding in the challenge to help Scotland reach net zero and for individuals and companies to invest in funding of Natural Capital projects, i.e., green private investment. This pilot will investigate the potential for this funding mechanism.

Biodiversity Offsetting

The *Facilitating Local Natural Capital Investment* Report identifies compensation payments provided by property and infrastructure developers to offset biodiversity losses arising out of new developments as an important market opportunity in the Borders. Biodiversity compensation schemes have the potential to accelerate investment in habitat creation and restoration through the formation of "Habitat Banks", ecological restoration projects that generate biodiversity gains before developments impact on biodiversity. The pilot can investigate provision of "off-the-shelf" options for developers looking to offset the environmental impacts of their projects. As for Carbon Credits, this pilot will investigate the potential to seek funding through this funding mechanism.

Biodiversity Metric

This is closely linked to the above two sub-headings: Carbon Credits and Biodiversity Offsetting. It is essentially a tool/metric used to measure the units traded in biodiversity offset markets. In England, Natural England have developed Biodiversity Metric 3.1. However, the exact market potential will depend on metrics/rules adopted in Scotland under the provision of Positive effects for Biodiversity as it is introduced into legislation and guidance. This pilot will look at the potential to adopt and adapt, if required, such a metric.

1.2.10 NatureScot's NCAPP (Natural Capital Pilot Programme) project has developed a non-monetary biodiversity indicator to understand the condition of the habitats on NatureScot land and their fundamental role for underpinning the habitats and ecosystems that provide benefits to us, however, it is impossible to attribute a monetary value to this function. The NCAPP project aims to help to inform what future rural support outside of the Common Agricultural Policy might look like to contribute to transformative land use change in Scotland, by restoring nature and reducing our country's contribution to climate change i.e., by valuing Scotland's greatest asset, its Natural Capital.

1.2.11 Agrecalc is a carbon footprint tool developed by SAC Consulting together with SRUC researchers. It enables farm enterprises to identify and measure emissions, benchmark key performance indicators, identify mitigation strategies and monitor improvements. It may be possible to use the tool to help determine the carbon value of SRG. The tool has been developed to help deliver net-zero emissions from food production while increasing the level of both efficiency and farm productivity.

1.2.12 AECS – Agri-environment Climate Scheme

AECS is Scotland's current agri-environment scheme under which there are annual hectarage payments for managing/restoring SRG. Estimates of the worth of AECS applications to individual farm businesses is considerable. Information gained through the trial should help inform future AECS, or its successor.

1.2.13 NatureScot Research Report 1285 - Agri-Environment Climate Scheme heat maps report 2015-18 aims to evaluate and provide an assessment of uptake and potential impact of the AECS scheme. With relevance to the management of Species-rich Grassland the review states that:

- More than 26,140 hectares of Species-rich Grassland and habitat mosaic were managed under the scheme with a committed funding of more than £20 million.
- These are some of the most diverse habitats which, without this support, are more likely to decline or disappear.
- Uptake of Species-rich Grasslands management and creation has been high across the country including parts of North and West Scotland, the North East, Islands and the Borders.

1.2.14 The combined management and creation Species Rich Grasslands map on page 34 of the report shows the widespread uptake. Whilst the management of SRG option was mapped separately on page 35. These maps show how many sites in the north, Northern Isles and the Hebrides have been supported through the scheme, with some concentrations in Orkney, Hebrides and the Borders.

1.2.15 Between 2015 and 2018, 11,087ha of Species-rich Grassland was under the SRG management or creation option in AECS across Scotland committing £11,284,903. Extracting data from these low-resolution maps, assuming a mid-point in each of the classifications, gives an estimate of 3,275ha of SRG being managed under AECS in the Scottish Borders and 1,075ha in Dumfries and Galloway. Similarly, the committed spend is estimated at £1.16 million in the Scottish Borders and £512k in D&G. However, using mid-values may lead to an overestimate of the total area and committed spend, but at present, this is the most readily available and relevant AECS data.

Current payment rates for management of SRG under AECS are tabulated below.

Agri-Environment Climate Scheme	Annual Payment per ha
Species-rich grassland Management Option	£109.56
Supporting guidance for Species-rich Grassland Management	£284.80

The current equivalent payment rates for the Countryside Stewardship Scheme (CSC) which operates south of the border is more generous.

Countryside Stewardship Scheme	Payment per ha
GS6: Management of species-rich grassland	£182.00
GS13: Management of grassland for target features	£131.00

CSC is due to be replaced by ELM (Environmental Land Management) scheme under which there are three new schemes:

- Sustainable Farming Incentive;
- Local Nature Recovery; and
- Landscape Recovery.

These schemes are still at the pilot stage and therefore payment rates are not currently available.

In addition, numerous capital items are eligible under AECS. The most relevant for SRG are:

Additional Capital Options	Payment per ha
Restoration of Species-rich Grassland	£514.15
Creation of Species-rich Grassland	£754.42
Primary Treatment of Bracken – Manual	£150.00
Primary Treatment of Bracken – Mechanised or Chemical	£225.00
Follow-up Treatment of Bracken – Mechanised or Chemical	£90.00
Control of Scrub or Woody Vegetation – Primary Treatment – Light Vegetation	£900.00
Control of Scrub or Woody Vegetation – Primary treatment – Intermediate Vegetation	£1300.00
Control of Scrub or Woody Vegetation – Primary treatment –Heavy Vegetation	£2000.00
Control of Scrub – Follow-up Treatment	£200.00

Control of Scrub or Woody Vegetation – Removal from Site of Cut Vegetation	£1050.00

1.2.16 Payments for management of SRG under AECS is often only a small percentage of the overall AECS claim, as payments are available for sympathetic management of other priority habitats and species. Each application is bespoke, and it is therefore not possible to determine an average income per farm business through AECS. Speaking with agricultural agents reveals that income from most applications ranges from £3k to £300k over their five-year span. However, most plans sit between £15,000 to £30,000 over five years.

The pilot is not reliant on AECS funding, or its replacement, as the potential income from this source is not coming directly to the project. These are estimates of what farmers can potentially claim through AECS. It is our intention that the PO will promote AECS and its successor and work with local agricultural agents to submit applications using a similar successful blueprint that worked so well in SNH's award winning Species Action Framework project that delivered advice on Marsh Fritillary and was implemented by Butterfly Conservation. The current timescales are such that it is unlikely we will be able to assist with any submissions in the 2024 AECS round, this will depend on when the pilot is given the green light and how long it takes to have a PO in post. The timescales for this are very tight given the AECS June deadline.

1.2.17 Community Windfarm Fund

The increase in onshore windfarms in the Borders and Dumfries and Galloway has provided the opportunity to seek funding from local community windfarm initiatives derived from the income the windfarms receive from selling generated electricity back to the national grid. Grant funding totals vary between the different windfarms but are usually of the order of £1,000 to £20,000 with nature restoration often being a key funding aim. There is also potential to make use of funding through biodiversity enhancement requirements that arise from windfarm developments, as well as from the income they generate.

1.2.18 Scottish Government's Nature Restoration Fund (NRF)

NRF includes two strands:
A Competitive Strand, administered by NatureScot launched in July 2021, which supports multi-year, multi-partner projects that restore wildlife and habitats and address the twin crises of biodiversity loss and climate change. Grants between £25,000 and £250,000 are awarded at several points during the year with a rolling Expression of Interest process. There is huge potential to make annual applications to this fund for large-scale projects up to the maximum permissible award. Competition for funding is high and projects which demonstrate partnership funding may therefore have a better chance of success going forward, and

1.2.19 The Edinburgh Process Strand

This provides direct allocation of funding for nature restoration projects to local authorities and the National Park Authorities. There is potential, therefore, for Scottish Borders or Dumfries and Galloway Councils to benefit SRG and NBA across a landscape. This Strand's objectives are similar to those of the NRF Competitive Strand (see above) and therefore an application focussing on SRG and NBA, should be looked upon favourably.

1.2.20 Scaling-up Activity

There is great potential to scale up this project given the importance of the two regions for NBA and SRG and the fact that this pilot is only working on a subset of sites. However, it is very difficult to estimate the total area of SRG as very surprisingly, given its importance, insufficient data is available.

1.2.20 The Habitat Map of Scotland (HabMoS), that has been developed by NatureScot, with help from partners, aims to map Scotland's main habitats is still under development. Unfortunately, SRG is one of the habitats for which the map is very data deficient. NatureScot are also developing a PollMap that maps 'Pollinator potential'. It should be available in 2024.

1.2.21 Data is available on the uptake of SRG management options under the current agri-environment scheme (AECS) although regional figures and detailed maps are not available. As outlined above, data has been extracted from the low-resolution maps presented in NatureScot Research Report 1285 - Agri-Environment Climate Scheme heat maps report 2015-18 taking an average figure for each of the classifications. This gives an estimate of 3,275ha of SRG being managed under AECS in the Scottish Borders and 1,075ha in Dumfries and Galloway. More accurate and detailed information has been requested from Scottish Government's Rural Payments and Inspections Division (RPID) who oversee AECS. They have been asked if they can provide the number of applicants and the total area being managed under each of the following AECS options in each of the last 5 years (ie 2017 to 2021), with a separate breakdown for the Borders, and Dumfries and Galloway:

- Species-rich Grassland Management.
- Restoration of Species-rich Grassland.
- Creation of Species-rich Grassland.

1.2.22 The data requested above was provided by SGRPID in February 2024 and is tabulated below. This show the commitment value for support for species rich grassland management through AECS for each year the option has been available. The data is exclusive of the 2023 Round data, which has yet to be approved. The £ values include both management and capital funding. The data is for the whole of Scotland, a separate breakdown for the Borders, and Dumfries and Galloway, was not available.

AECS Scheme Option Name		Claim Year					
		2016	2017	2018	2019	2020	2021
SRG creation and management	Ha	284	778	1,480	2,066	2,588	2,530
	£	372,686	781,218	1,274,500	1,305,494	1,437,174	740,819
SRG management only	Ha	2,100	5,036	7,679	8,769	10,368	10,009
	£	389,680	740,381	1,093,566	1,112,728	1,283,913	1,134,401
Total	**Ha**	**2,384**	**5,813**	**9,159**	**10,836**	**12,956**	**12,539**
	£	**762,366**	**1,521,599**	**2,368,066**	**2,418,222**	**2,721,087**	**1,875,220**

AECS Scheme Option Name		Claim Year					
		2022	2023	2024	2025	2026	2027
SRG creation and management	Ha	1,804	1,099	529	0	0	0
	£	522,186	319,723	153,901	0	0	0
SRG management only	Ha	6,987	7,801	6,667	5,061	5,058	3,438
	£	791,516	1,090,393	753,357	562,868	561,060	384,466
Total	**Ha**	**8,791**	**8,901**	**7,195**	**5,061**	**5,058**	**3,438**
	£	**1,313,702**	**1,410,117**	**907,258**	**562,868**	**561,060**	**384,466**

This gives a maximum figure just short of 13,000ha of Species -rich Grassland being managed across Scotland in 2020, under AECS.

1.2.23 Butterfly Conservation's surveys of NBA conducted since 2016 estimates that there is around 1,500 ha of 'key habitat' for NBA in D&G and the Borders. This is almost certainly the best estimate of NBA suitable SRG habitat we have.

1.2.24 The Scottish Borders Grassland and Enclosed Farmland Action Plan estimates that the area of unimproved, Species Rich grasslands in the Borders, is less than 2,000ha.

1.2.25 An SNH commissioned report on The extent and condition of non-designated species-rich lowland grasslands in Scotland gives a figure of 30,000ha of SRG in the introduction. Surveys were conducted across Scotland. A regional breakdown shows that 43 sites were surveyed in the Borders totalling 878ha, giving an average of 20.4ha/site. The equivalent for D&G is 10 sites comprising 126ha in total and an average of 12.4ha.

1.2.26 Sam Suter (Glasgow University) is currently in the third year of her PhD entitled "*Combining citizen science and remote sensing approaches for habitat monitoring*". She has taken high resolution remote sensing data across southern Scotland and elsewhere and is co-ordinating citizen science volunteers to ground truth her SRG habitat data. This could provide a very effective and cost-effective method for mapping and assessing Scotland's SRG resource.

1.2.27 The main land use in the Borders is agriculture and forestry with an estimated 41% being classified as grazing land. There are 126,800 cattle and 1,122,700 sheep in the Borders. 16%

of Scottish Borders landcover, 74,474ha is classified as other grassland i.e., not productive grassland and thus there is vast potential for restoration to SRG.

1.3 Business Needs

1.3.1 Species-rich Grasslands are a scarce national resource and a conservation priority of the Scottish Biodiversity Strategy. Plantlife's Grassland Action Plan states that:

- Species-rich Grassland is under threat, having declined nationwide by over 97% in the last century and it covers less than 1% of UK land.
- Grassland soils contribute to carbon sequestration, with acid grasslands and dry grassy heaths outperforming habitats like woodlands.
- Flower-rich grasslands support greater numbers and diversity of pollinating species than other habitats.
- Proximity to seminatural grasslands increases predator control of agricultural pests.
- A fifth of all priority species for conservation action are associated with grassland habitats.
- Biodiverse grasslands lock up more pollutants thereby reducing impacts to air and water.
- Species-rich pasture and hay benefit grazing livestock, providing a wider range of minerals and amino acids than intensive pasture, resulting in healthier animals and healthier food.
- Surviving meadows are key landscape features like ancient woodlands.
- The colour and wildlife of meadows enrich our lives giving us a deep-rooted sense of wellbeing.

1.3.2 The Pollinator Strategy for Scotland 2017–2027 outlines the importance of pollinators under the following five headings:

- Insect pollination plays a vital role in nature. Globally, nearly 90 per cent of flowering plant species depend, at least in part, on animals like insects to transfer pollen and to maintain healthy plant populations. Pollination is therefore an important ecological process that supports healthy plant communities and, in turn, provides food, shelter and other resources for a multitude of species.
- Insect pollination supports agriculture. Worldwide, over 75% of the leading food crops (mostly fruits, vegetables, nuts, and seeds) need insect pollination to assure the amount, quality, or stability of yield. In Scotland, the most important commercial crops benefitting from this are oilseed rape, strawberries, raspberries, currants, apples, and beans, all of which contribute to a vibrant economy.

- Insect pollinators have economic importance. In 2015, the global economic value of crop pollination by pollinators was estimated at around US$ 235-577 billion per year. In Scotland, the economic value of pollinators is in the order of £43 million per year for agricultural and horticultural crops, and honey.
- Insect pollinators contribute to our well-being. The value of pollinators goes beyond their economic benefits as the ecological function they perform is crucial to the maintenance of biodiversity and the natural environment. This can have an important influence on our mental and physical well-being and is often referred to as the 'Natural Health Service'.
- Insect pollinators can be ambassadors for species conservation. The plight of pollinators has been well publicised in the media and has helped to increase public appreciation of the link between nature and societal benefits. Interest in our pollinators can also garner interest in, and raise awareness of, other essential but less charismatic species.

1.3.3 Northern Brown Argus is a rare and threated butterfly that is an excellent flagship for Scottish Species-rich Grassland particularly in southern Scotland but also elsewhere in the country. The sub-species *artaxerxes* is only found in Scotland within the UK and is potentially endemic. BC estimate that 80% of the butterfly's remaining UK colonies are found within Scotland. The south of Scotland is one of these strongholds being home to c40% of the UK population and c50% of the Scottish population.

1.3.4 Butterfly populations are more robust and resilient if they live in a metapopulation, defined as a series of linked colonies where there is an exchange of adults over time. Conservation of Lepidoptera is most effective when undertaken at a landscape scale working on a series of metapopulations rather than isolated and fragmented sites. Butterfly Conservation, as part of its second strategic goal aims to "*Improve the condition of 100 of the most important landscapes for butterflies and moths".* These *most important landscapes* have been determined by designating areas that hold significant populations of priority lepidoptera. The pilot project will work in two priority landscapes, the North Solway Coast and the Scottish Borders Species-rich Grasslands. Both these landscapes have been designated by Butterfly Conservation due to their important colonies of Northern Brown Argus.

1.3.5 The Northern Brown Argus is in trouble. Survey and monitoring by Butterfly Conservation volunteers shows the butterfly to be in decline by all metrics, i.e., abundance and distribution, and both in the long-term and shorter 10-year averages. These dramatic and disheartening figures are tabulated below.

UK Distribution	Scotland Distribution
-56% between 1990 and 2018 -23% 10-year average	-46% between 1995 and 2019 -21% 10-year average
UK Abundance	**Scotland Abundance**
-57% between 1979 and 2019 -17% 10-year average	Insufficient data to compile these trends

1.3.6 Because of its continued decline, it is included on the Scottish Biodiversity List and is one of Butterfly Conservation's high priority species and listed as one of 71 species that are included in Goal 1 of the society's corporate strategy to "*halve the number of threatened species"*. A recently revised Red List of Britain's butterflies that assesses and categorises their risk of extinction under IUCN guidelines classified Northern Brown Argus as Vulnerable.

1.3.7 Due to its threatened status and the importance of the colonies in the Borders, Butterfly Conservation volunteers commenced a project to determine its status. Between 2016 and 2022, volunteers surveyed and monitored the butterfly across the Borders. Over this period, a total of 326 surveys were undertaken by 44 different volunteers, to 167 colonies, giving coverage of around 93% of all known sites. Seventy-two (50%) of sites where data was collected were identified as being under threat. Invasion of bracken or scrub, overgrazing and afforestation were the main threats i.e., inappropriate management. The prime threat was the ever-increasing risk from afforestation being driven by generous woodland grant incentives and the lack of an effective agri-environmental scheme. Analysis of data on new woodland schemes (2015-2019), on Scottish Forestry's Open Data Hub, shows that the Scottish Borders is the most under-pressure area of Scotland in terms of new forestry plantations having experienced the highest number of new woodland creation claims (c340) than any other Scottish local authority, covering the highest percentage of overall land area. Previously unknown colonies of NBA are being found all too often after afforestation schemes have already been approved. Butterfly Conservation has highlighted our concerns with Scottish Forestry giving a presentation to their South of Scotland Conservancy staff. It subsequently provided them with its NBA data to create alert maps to help flag up the presence of NBA and SRG at an early stage. However, the onus is on the applicant or their agent to follow this up and it is not a legal requirement of the application process.

1.3.8 The pilot will work in close partnership with Tweed Forum's woodland pilot. Tweed Forum recognises the importance of SRG as a scarce and threatened priority habitat not appropriate for afforestation. Similarly, Butterfly Conservation recognises the importance and need for new woodland, both commercial and native, and woodland expansion. This therefore highlights there is no conflict between the aims of these two important projects, adhering to the mantra "*right tree in the right place*". The pilot will also work closely with the DGC Whole Farms Audit NC pilot which highlights the importance and need to work across the Natural Capital Programme and illustrates the benefits of the Programme approach.

1.3.9 The hill livestock sector is an important component of the rural economy in the south of Scotland but is vulnerable to changes in subsidy in the post-Brexit period. The management and enhancement of Species-rich Grassland is reliant on the continuation of traditional agriculture as these sensitive grasslands require light, and often seasonal, grazing to maintain a sward of an appropriate height and composition. The mixed livestock grazing found across the region is therefore crucial to the long-term management of these important habitats.

1.3.10 Suckler cows offer an irreplaceable way of turning grazing land, permanent pasture, and poor-quality rough grazing on the hills and uplands of Scotland into a much sought-after, internationally renowned and high-quality source of protein. Livestock offers the most efficient way of managing much of this land as a source of protein, and suckler beef systems have access to a ready market.

1.3.11 However, the conversion of pasture and hill-ground into woodland has accelerated largely owing to declining revenues from traditional grazing leading to reduced stocking levels or removal of stock, or in some cases increased stocking, brought about by the current lack of an effective agri-environment scheme to support farmers to sympathetically graze these important SRG habitats. SRGs are some of the most diverse habitats, which, without financial support, are likely to decline or disappear (Dadds and Averis, 2014).

1.3.12 As previously stated, farmers are therefore tempted to enter this relatively marginal agricultural land into generous and lucrative afforestation schemes. Furthermore, income can be greatly enhanced by selling off carbon under the Woodland Carbon Code. Being a priority habitat, SRG should be exempt from new afforestation schemes, but the Borders NBA survey unearthed several sites where SRG had been planted-up. There is even an entry on the Woodland Carbon Code website that extols the presence of NBA on the site to future investors, even though the habitat occupied by the butterfly has been planted with young trees. This is clearly against the Forestry Standards Code.

1.3.13 This project, therefore, seeks to pilot ecologically sustainable land management of SRG, using NBA as a flagship, to demonstrate and provide a delivery mechanism to help inform the development of the next round of rural support post-2024. This aligns with Scottish Government's Vision for Scottish Agriculture, which aims to help deliver Climate Change targets and net zero ambitions, by supporting farmers, crofters and local communities to ensure they can capitalise on the benefits and that there is a Just Transition. The vision is to:

- Ensure that Scotland's people can live and work sustainably on our land.
- Remain committed to supporting active farming and food production with direct payments.
- As part of this conditionality, expect recipients of support to deliver on targeted outcomes for biodiversity gain and low emissions production.
- Design mechanisms to support outcomes that restore nature, benefit our Natural Capital and promote the natural economy.
- Ensure those mechanisms are flexible enough to be adapted in delivery to accommodate emerging evidence, science, technology, and tools.
- Adopt an evidence-based, holistic, whole farm approach, including learning from and applying practice and experience from other nations.
- Adopt a Natural Capital and Just Transition approach to land use change.

1.3.14 This will be achieved by working alongside farmers, crofters and land managers to:

- Contribute to our Good Food Nation ambitions and Local Food Strategy, particularly to create more localised supply chains, enhance producer value and cut food miles.
- Continue delivering high farming standards, including to enhance animal health and welfare.
- Contribute to the restoration of nature through biodiversity gain on the land they farm.
- Support land use change that contributes to our climate and biodiversity goals in line with the recommendations of the Just Transition Commission.
- Encourage co-operative approaches to optimise collaboration and knowledge exchange.

1.3.15 Doing nothing is not an option, unless we wish to witness the continued loss of important semi-natural habitats to afforestation and the decline of traditional agriculture, whilst in tandem witnessing local extinctions of NBA and monitoring populations to observe their steady decline and an increase in the butterfly's threatened status.

1.3.16 Measures for Species-rich Grassland are available under the current AECS scheme, however, uptake is limited due to barriers through the competitive nature of the scheme. Currently, the scheme favours designated sites and larger farm holdings, not biodiversity-rich small farms. In addition, any capital expenditure is severely penalised under the current scoring system so measures, including fencing, or scrub control, are effectively not permitted. These habitats and their importance to pollinators have not been assigned sufficient value under past and current rural development schemes. New approaches are required that both recognise the importance of these scarce priority habitats but also enable land managers to generate income to support sustainable land management.

1.3.17 This proposal prioritises nature-based solutions, focusing on the conservation of Species-rich Grassland and Northern Brown Argus butterfly. This can provide improved food quality, enhanced pollination, increased biodiversity and improved soil management and carbon storage. This will help enhance productivity and potentially adding value to the end-product, grass reared, sustainable, environmentally friendly meat, ensuring land management businesses are more sustainable and resilient. Local people will be engaged in the delivery, developing stronger links between communities and land managers, whilst providing employment and skills opportunities. These new collaborative partnerships will deliver long-term strategic approaches to improving the region's economies. It will thereby deliver public goods for biodiversity and climate change resilience whilst enhancing local place.

1.3.18 This proposal will build upon NatureScot's project Piloting an Outcomes Based Approach in Scotland (POBAS), commissioned and funded by Scottish Government, focussing on local priority habitats and species across selected parts of the country rewarding farmers for positive environmental results. It is envisaged that this will provide a blueprint for the delivery of a Result-based Agri-environment Payment Schemes (RBAPS) to benefit Species-rich Grassland and Northern Brown Argus in the south of Scotland, which could readily be adopted across the rest of the country. A very positive meeting was held on 5th May 2023 with staff from NatureScot responsible for overseeing and managing the current POBAS pilots. There was agreement that the proposals were a close fit with their scheme and potential for our

findings to be adopted in Scotland's new agri-environment scheme, however, there is still uncertainty from Scottish Government on the timescales and preferred design.

1.3.19 It is vital therefore that we work closely with the key individuals within Scottish Government and NatureScot who are leading in this area. This includes Ross Lilley (Head of Natural Resource Management), Sue Agnew (Farming with Nature Project Manager) and Kirsty Hutchison (Agricultural Officer), all within NatureScot and Steph Davies (Senior Policy Advisor) in the Agricultural Policy Division of Scottish Government and her colleagues. Kirsty has already agreed to site on the Core Steering Group, whilst the others will potentially be ideal candidates to sit on any relevant Specialist Advisory Groups. All are supportive of the pilot. The future of agricultural environment support in Scotland post 2016 when the current AECS scheme ends is still being developed, the results from the POBAS pilot are being analysed and assessed. The current Farming with Nature Programme which is being led by NatureScot, supported by Scottish Government, is proposing a whole farm plan within which two of the four items are relevant to the pilot, carbon and biodiversity audit, particularly the development of a scorecard for the latter. The ethos of the new scheme is for it to be evidence based, the pilot can provide that evidence, for example by developing and trailing biodiversity scorecards and calculating the real costs of effective management and restoration of Species-rich Grassland using different techniques. We are currently inputting through farmers into the development of NatureScot's Landscape Scale Natural Capital Tool. It is therefore imperative that we all work together and share our outputs, everyone is supportive of this approach.

1.3.20 One of the consequences of an ineffective agri-environment scheme is that many areas of former SRG have already been lost, either to a ranker sward or scrub, particularly gorse, due to a lack of grazing, or in some cases excessive grazing that has impoverished the structural and floral diversity of the sward, therefore greatly diminishing its biodiversity value. It is therefore important that different restoration techniques are trialled and costed. This will ensure that the most effective and efficient techniques can be rolled out across the region and that appropriate costs are included in future agri-environment schemes. Trials will not just include the initial management e.g. scrub control, but also the all-important, yet often neglected, follow up management e.g. targeted grazing, topping, herbicide treatment. It is also recognised that gorse and scrub has its own value, particularly providing shelter and a habitat in its own right. At the majority of sites some scrub will be retained to create a mosaic with more open habitats.

1.3.21 Mechanical cutting of scrub will be trialled using different techniques including tractor mounted flails using different cutting heads, remote controlled McConnell Robocut technology, clearing saws and volunteer work parties using handtools. Cut and collect will also be trialled to determine if the additional time and expense is justified by the results. Follow up treatments will include targeted grazing using No Fence technology, herbicide treatment and regular cutting. In addition, restoration of the species-rich sward will be trialled by seed sowing, plug planting and direct drilling in combination with targeted No Fence grazing. The latter will also be conducted on areas of rank vegetation that have lost their species-rich sward. A portfolio of trials will develop and test innovative approaches to delivering environmental outcomes. This will include providing farmers with access to these

new technologies e.g. No Fence collars and determining how best they can be incorporated into the new agri-environment scheme. In particular, the project is testing the implementation of a less prescriptive, results-based approach, where the level of payment received is dependent on the quality of the outcome delivered.

1.3.22 The sites will be monitored using drones to help determine the extent of habitat management and monitor habitat change. In addition, the project will investigate developing a biodiversity metric, or modifying those under development, e.g., the DEFRA metric, to measure success. This will include habitat scorecards that will align with those being developed under the POBAS scheme to test whether offering a payment that is dependent on the results achieved, as opposed to a payment based on following management prescriptions, could improve the environmental performance of agri-environment schemes. The data will potentially be collected by the farmer by self-assessment making use of the Iceni Earth and Flora Icognita Apps, or similar. A weighted scoring system will score both positive and negative attributes with the final score helping to determine the grant payment rate. Overall, the pilot will test whether the POBAS approach will deliver better results than existing schemes, if farmers can assess their own results accurately and if it is more cost–effective. The project will also investigate additional payments through local Natural Capital investment for nature recovery.

1.3.23 The project will therefore deliver an integrated package of activity and adheres to the Borderlands Partnership's shared ambition by delivering green growth seeking to attract and unlock new investment e.g. Carbon Credits, Agri-environment, Landfill, Nature Recovery Fund, deliver skills and innovation and enhance the beautiful natural environment. It will aim to capitalise on the green credentials of the Borderlands region and to facilitate the creation of new high value jobs supporting carbon reduction schemes. By capitalising on the region's Natural Capital, it has the potential to be an exemplar in the UK in the development of new and innovative clean growth rural land management practices and regenerative agriculture.

1.4 Main Benefits and evaluation of impact

1.4.1 There are multiple beneficiaries accruing from this project. Refocusing future rural support with a stronger emphasis on investing in Natural Capital can help to make land-based businesses more resilient, support jobs, and strengthen Scotland's green brand. There is increasing scope for Natural Capital to support our economic recovery post-Covid, and to contribute to Scotland's ambitions for a wellbeing economy that promotes the wellbeing of people and planet. Evidence suggests that a Natural Capital approach can result in greater public benefits, a stronger return on investment for public funds, and help land managers address the twin challenges of a warming climate and biodiversity loss through HNV (High Nature Value) farming.

1.4.2 Farming Community

This project is focussing on how farmers can be rewarded for managing and enhancing Natural Capital assets. The pilot aims to develop a costed, tiered, bespoke support package designed with and for farmers to reward them for the benefits in terms of Natural Capital they are providing to the public. In turn, their business will be more economically robust and resilient. This also has a knock-on downstream effect to their local communities. The development of a local premium meat scheme should also help increase their profit margins.

1.4.3 Local Employment and Services

The project will employ a local part-time Project Officer and much of the work will be contracted out to local small businesses.

1.4.4 Biodiversity Benefits

The obvious species that will be a worthy benefactor from this targeted action is Northern Brown Argus, a Scottish Biodiversity List species, and designated a high priority in Butterfly Conservation's Scottish Conservation Strategy. The status of UK's butterflies has recently been updated by Fox and Dennis (2021) using International Union for Conservation of Nature (IUCN) criteria, producing a new Red List of Great Britain's butterflies, that assesses and categorises their risk of extinction. Northern Brown Argus was classified as Vulnerable. The south of Scotland is a stronghold for the butterfly in the UK and therefore efforts to enhance its population here will greatly enhance its UK status. In addition, sympathetic habitat management practices developed through this project can be rolled out across the UK. The butterfly, being a flagship species for Species-rich Grassland, will also enable this rare and threatened habitat to recover. However, NBA is not the sole species of scarce and threatened Lepidoptera restricted to SRG, other beneficiaries within the region include Small Pearl-bordered Fritillary, and Forester moth, Dingy Skipper and Grayling in Dumfries and Galloway.

1.4.5 SRG, by definition, supports a wide range of flowering plants, which in turn improve the fortunes of large numbers of pollinators and other invertebrates. This in turn has a positive knock-on benefit to birds and bats and other insectivorous species higher up the food chain.

SRG itself is a rare and very threatened habitat and therefore classified as a high priority habitat.

The following species of rare and threatened Lepidoptera, in addition to Northern Brown Argus, will also benefit from this project.

1.4.6 **Small Pearl-bordered Fritillary**

Small Pearl-bordered Fritillary remains widely distributed in Scotland and Wales but is much more local now in England. It previously qualified under IUCN guidelines as Near Threatened in 2010 based on distribution decrease but was uplifted in 2021 to Vulnerable due to a 37% distribution decline over the last 10 years. The species has low to moderate dispersal ability,

but long-distance dispersal is uncommon and there are no source populations in continental Europe that are sufficiently close to Britain, therefore no rescue effect is likely.

1.4.7 It is a UKBAP Priority Species, on the Scottish Biodiversity List and a medium priority in Butterfly Conservation's Scottish Conservation Strategy. However, it is upgraded to a high priority in the Borders. It occurs throughout the project area, favouring damp localities where its preferred larval foodplant, Marsh Violet, grows.

1.4.8 **Dingy Skipper**

Dingy Skipper previously qualified as Vulnerable in 2010 based on Area of Occupation (AOO) decrease. More recent trend estimates for both abundance and distribution do not meet the threatened status thresholds: 2005-2014 abundance change 65%, distribution change -5% and 2010-2019 abundance change -6%, distribution change -3%. Having no longer met the criteria for threatened status for five years, the species was downlisted in 2021 to Least Concern. It is widely but locally distributed in England, Scotland and Wales.

1.4.9 It is a UKBAP Priority Species, on the Scottish Biodiversity List and a medium priority in Butterfly Conservation's Scottish Conservation Strategy. It has a far more restricted range in Scotland than south of the border, being confined to the Moray Coast, and South-west coast north to Ayrshire. There are a handful of inland colonies mainly in the Cairngorms. It occurs along the Dumfries and Galloway coast favouring areas of short turf and bare ground with Bird's-foot Trefoil.

1.4.10 **Grayling**

Grayling remains widespread but previously qualified as Vulnerable in 2010 based on abundance and distribution trends. It was uplifted in 2021 to Endangered due to a 42% abundance decline and 52% distribution decline over the last 10 years. The species has moderate dispersal ability and has been assessed as Least Concern in Europe, but long-distance dispersal is uncommon, and the English Channel appears to present an effective barrier so there is no likely rescue effect.

1.4.11 It is a UKBAP Priority Species, on the Scottish Biodiversity List and a medium priority in Butterfly Conservation's Scottish Conservation Strategy. It has a far more restricted range in Scotland than south of the border, with a predominantly coastal distribution. It occurs along the Dumfries and Galloway coast favouring areas of short turf and bare ground with fine-leaved grasses. Owing to the recent upgrading of its status to Endangered, Grayling will no doubt also be upgraded in the next review of Butterfly Conservation's Conservation Strategies.

1.4.12 **Forester Moth**

This day-flying metallic green moth favours Species-rich Grassland where there is abundant nectar and its sole larval foodplant, Common Sorrel. In Scotland, it only occurs along parts of the Dumfries and Galloway coast, and Argyll and some of the neighbouring islands. It is a UKBAP Priority Species, on the Scottish Biodiversity List and a high priority in Butterfly Conservation's Scottish Conservation Strategy.

1.4.13 The project will also benefit a wide range of other more common and widespread lepidoptera as well as many species of plant. In addition, it will also benefit other pollinators and several species of birds and bats for which lepidoptera, particularly caterpillars and night flying adults respectively, form the mainstay of their diet.

1.4.14 Local Communities, Young People and Volunteers

The provision of student projects, online training, work placements as well as opportunities to get involved in volunteer work parties, surveys and monitoring provides an ideal ground for learning and education. The provision of opportunities for students as well as local people to get involved should not be under-estimated. In return they are providing a free in-kind contribution to the project whilst gaining experience and meeting like-minded people. This involvement with the natural world can have an important positive influence on our mental and physical well-being and is often referred to as the 'Natural Health Service'.

1.4.15 Raising Awareness

The project will do much to increase the awareness and importance of farming and biodiversity. Demonstration days and annual project reports/updates alongside the monitoring will provide useful information for statutory agencies and NGOs alike. The project will also provide opportunities for farmers and conservation volunteers to come together and share views and find common ground. This will include through the establishment of two Natural Capital farmer led groups. Participants will be selected via recommendation from SRUC, NFUS and engaged agricultural advisors operating in the area.

1.4.16 Public/societal Benefits

Enhancing Natural Capital through restoring SRG and thus NBA by deploying regenerative farming techniques provides many benefits. SRG if managed sustainably acts as a carbon sink. The production of local meat, a premium product, sold close to its market also reduces greenhouse emissions.

1.4.17 One intangible benefit to the public is an increase in physical and mental health wellbeing. A recent survey suggested that 73% of people find that connecting with nature provides a boost to their mental health. This is no doubt due to the benefit derived from direct and indirect enjoyment of biodiversity.

1.4.18 The programme outputs include:

- Publicise the importance of Natural Capital and its benefits to society and individuals.
- Development of a POBAS agri-environment scheme whereby farmers are paid for environmental results rather than following off-the-shelve standard prescriptions.
- Self-assessed scoring sheet developed to work alongside a tiered payment system.
- Influencing the post-2024 Rural Development Programmes and future Scottish Government Economic Strategy.
- Trialling innovative technology including use of drones, Apps, No Fence technology, remote-controlled Robocutters to restore SRG.

- Increase the understanding of the importance of SRG and other permanent pasture as a carbon sink.
- Trial different techniques to restore SRG including restoration of both gorse-dominated hillsides and rank under-grazed and short impoverished over-grazed pastures.
- Identify and publicise the most effective, efficient and costed SRG restoration techniques.
- 400ha of SRG under restoration management.
- Full survey of NBA in the south of Scotland.
- Robust monitoring established across the region to enable a population and distribution trend to be calculated for NBA.
- Appointment of a Project Officer.
- Up to 50 jobs safeguarded.
- 2 local community liaison or volunteer groups established.
- 2 farmer-led Natural Capital groups established.
- 2 demonstration sites set up per region.
- At least 36 volunteer work parties undertaken to restore SRG.
- 100 volunteers engaged with the project, contributing around 1000 days, worth £140,000.
- Project engages with 50 farmers.
- Novel Natural Capital finance packages investigated, including feasibility study into developing a Biodiversity Metric.
- Potential for up to £4M in additional income generated through bringing in public/private investment in Natural Capital.
- Potential development of a local premium meat marketing scheme.
- Collaborative links formed with Borders College in Galashiels and SRUC's Barony Campus, near Dumfries.
- 10 work placements providing short-term work experience.

1.4.19 Progress will be evaluated and reviewed throughout the project via quarterly reports and six monthly CPSG (Core Project Steering Group) meetings. This will allow any issues to be discussed and resolved to the satisfaction of the CPSG. It is likely that the CPSG will need to meet more regularly to provide the necessary steer and support to the project and to the Project Officer in the initial stages of the project. A monitoring and evaluation programme will also be set up in the first year of the project.

1.4.20 There are many metrics that will help to determine the success of the project and thus whether it is on track, on budget and meeting its milestones. These metrics include:

- No. of participating volunteers and their volunteer contribution (in hours).
- No. of NBA sites surveyed.
- No. of NBA sites monitored.
- Production of annual NBA population index and trend with 5 years of robust data.
- Improved conservation status of NBA assessed through the Species Recovery Curve.
- 2 local community liaison or volunteer groups established.
- Improved landscape connectivity measured through BC metric.
- No. of talks/lectures and participants.
- No. of participating and engaged farmers.
- Establishment of 2 NC farmer groups.

- No of habitat restoration trials set up.
- No of sites where SRG restored.
- Area (in ha) of SRG habitat maintained and restored.
- Determination of the most effective, efficient and costed SRG restoration technique.
- Production of a robust and tested self-assessed POBAS SRG Scoresheet.
- Adoption of a Natural Capital Biodiversity Metric.
- No. of student projects.
- No. of college training places.
- Successful evaluation into the feasibility of establishing a premium meat marketing scheme.
- Measure of match funding brought in.
- Production of final evaluation report.
- Assessment of the added value to the local economy derived from the project.

1.4.21 Other benefits include:

- Better integration between farming and nature conservation, and local communities informing payments for ecosystem services to support sustainable land management.
- Additional diversification opportunities for farmers.
- Employment, skills and training opportunities for local communities.
- Long term conservation of priority species and habitats.
- Improved understanding of the role of Species-rich Grassland as carbon sinks.
- Increasing investment in Natural Capital with south Scotland as the premier investment area in Scotland.
- Adoption of the pilot approaches under Regional Land Use Partnerships targeting action and directing public and private finance.

A Benefits Realisation Plan is provided in **Appendix A.**

1.5 Main Risks

1.5.1 The risks associated with project delivery have been clearly set out and assessed in the Risk Register presented in **Appendix B**. This table outlines sixteen risks and provides an approach to risk management for each along with clear control measures. Each risk is also scored using a risk matrix which combines two scores, Likelihood of risk and Impact of risk to provide an overall Risk Score.

1.5.2 All risks fall out under the approaches to risk management as either Treat, with a requirement to *Take action to mitigate the impact or the likelihood of the risk occurring through the implementation of a number of control measures*, or Tolerate with a requirement to *Acknowledge that the risk might happen and choose to tolerate the fact that it might do so,* in other words, don't treat it with controls.

1.5.3 Only two activities are assessed as high risk, the remainder come out as medium. The two high risk activities are:

1. **Recruitment** where the risk is an absence of suitable candidates resulting in a lack of specialist and/or dedicated resource to deliver the project. The control being to advertise positions as widely as possible. If this fails to produce candidates, consider extending the startup to accommodate a second-round of recruitment or consider secondment options or job sharing.
2. **Loss of staff** where the risk is that the PO leaves the project hindering delivery of project objectives, and the control being to support staff day-to-day and encourage team development especially with outposted staff who may require stronger support. Hold regular one-to-one and team meetings and encourage two-way communication and feedback.

1.5.4 It is interesting that both risks relate to ensuring a suitably qualified PO is recruited and retained. Identifying this risk at this pre-project stage will help ensure that the recruitment is far-reaching and rigorous, whilst when in post high-quality and supportive line-management is required.

1.6 Constraints

The following constraints include external conditions as well as agreed parameters within which the project must be delivered:

- The available Borderlands Inclusive Growth Deal funding provides for £5 million in funding for the Natural Capital theme on either side of the Border, with the £5m in Scotland comprised of half capital and half revenue.
- The available Borderlands Inclusive Growth Deal funding is for a spending period until 2030/31.
- The timescales, including the speed at which the project can start to be delivered.
- Dependent on the success of pilot development, the scope may expand in time if additional external funding is secured.

1.7 Dependencies

The following dependencies are outside the scope of the investment proposal and are upon which successful delivery of the pilot project is dependent:

- The project aims to fit with and influence emerging policy changes from Scottish Government to replace European Common Agricultural Policy subsidies.
- Activities need to align with developing land use initiatives in the Scottish region of the Borderlands, including the proposed Regional Land Use Partnerships (RLUPs).
- The progress of national and regional activities may overtake/overlap with the work of the project if the start date is delayed.

- Nature-based solutions is a key theme within the Scottish Borders Climate Change Route Map (CCRM) and there may be opportunity to support the concept across the Borderlands region through the programme.
- Full funding is required to complete the pilot.
- To succeed, there needs to be willing stakeholders, especially farmers and land managers, to engage with the pilot project. Indications from the Stakeholder Workshop were extremely positive especially over the requirement and urgency for the pilot, as well as engagement with the pilot.
- Having staff who work on this project from inception to delivery is most efficient and effective. Butterfly Conservation will recruit a Project Officer for a fixed term and will set expectations for fulfilling the term.
- Having staff with the relevant skill set will help jump start the project and keep it on track. Butterfly Conservation will recruit a Project Officer with the relevant skill set and if the leading applicant needs additional training will address those gaps in knowledge.

2. ECONOMIC CASE

The economic case is structured as follows:

- The Options Assessment section uses Critical Success Factors (CSFs) to demonstrate how the configuration of the pilot project was developed, including a shortlist of potential alternatives.
- In the Main Options section, and as agreed with Scottish Government, the shortlist is then taken through a detailed, qualitative assessment based on multiple criteria to demonstrate that the proposed activities, planned procurement mechanisms, and delivery approach are the most appropriate configuration for the pilot project. Based upon this qualitative assessment, a preferred option is taken forward.

2.1 Critical Success Factors

The following critical success factors have been identified for each attribute.

2.1.1 Strategic fit

The pilot contributes to several strategies and plans/reports including:

- Scottish Biodiversity Strategy.
- Pollinator Plan for Scotland 2017-2027.
- Scotland's Third Land Use Strategy 2021-2026.
- Climate Change Plan.
- The next step in delivering our vision for Scotland as a leader in sustainable and regenerative farming.

2.1.2 Business need

- Current system not delivering for farmers, SRG or NBA, so change is required.
- Aims to make farm businesses, especially the hill livestock sector and small farms, more financially viable.
- Acknowledgement of the importance of livestock farming to the local economy.
- Development of a more targeted and inclusive agri-environment scheme.
- Addresses need of farm businesses to be involved in new ways of assessing Natural Capital due to future policy changes and dual impacts of climate change and nature crisis.
- Stakeholders workshop highlighted the need for the project.
- Pilot supported by local NFUS (National Farmers Union Scotland) Lothians and the Borders Regional Manager.
- Will identify additional sources of funding e.g., Grassland Carbon Credits scheme, biodiversity offsetting, public/private investment in Natural Capital.
- Potential to develop a local premium meat marketing scheme.

2.1.3 Optimisation of costs and benefits

- Preservation and enhancing the region's Natural Capital as this is key to many private as well as public sector investment opportunities.
- Develop and test specialised products that are already in existence/development, e.g., POBAS, Agrecalc, DEFRA biodiversity metric etc rather than reinvent the wheel developing similar products from scratch.
- Deployment of Butterfly Conservation's skilled and dedicated volunteers who will bring their enthusiasm and local knowledge to benefit the project free of charge, whilst improving their physical and mental health wellbeing.
- Enhancement of NBA populations as a flagship for SRG.

2.1.4 Capacity and capability

- Appointment of suitable Project Officer whilst recognising that that the market for recruiting suitably skilled personnel with direct or transferrable skills is very competitive.
- Specialised support and training from Butterfly Conservation staff.
- Project overseen by carefully selected CPSG with diverse range of relevant knowledge and skills.
- Suitable capacity in the area for deploying contractors to undertake traditional land-based operations.
- Acknowledgement that utilisation of more specialised equipment e.g., Robo-cutters will necessitate bringing dedicated contractors into the area.
- Retention of current dedicated band of committed and well-trained volunteers in the Borders and establishment of similar group in Dumfries and Galloway.

2.1.5 Affordability

- Establishing the mindset that views the region's important and unique Natural Capital as an asset for the future, to be maintained and enhanced.
- Investigation of novel local Natural Capital investment for Nature Recovery.
- Fully costed and monitored management trials to ensure the most affordable, effective, and efficient techniques are adopted.
- Development of a more effective agri-environment scheme that delivers for SRG and pays farmers on results.
- Management of SRG through traditional seasonal light grazing, especially by cattle, which converts *rough grazing* into internationally renowned and high-quality source of protein in an affordable and efficient manner.
- Use of skilled volunteers to undertake survey, monitoring and habitat assessments greatly reduces costs as well as adding legacy to the pilot.
- As Government funding moves from direct payment towards conditionality and greening, pilot will help the proposition to be more attractive beyond the investment in this pilot.

2.1.6 Achievability

- Butterfly Conservation has a solid history in delivering similar projects engaging with land managers and volunteers to enhance the population of threatened species ensuring targets and costs are realistic and achievable.
- The Core Project Steering Group (CPSG) will ensure the project keeps on track and within budget.
- The Stakeholders Workshop highlighted that the pilot was an ambitious project but there were no concerns over achievability and the Do Nothing or Do Minimum scenarios were not an option.

2.2 Main Options

2.2.1 An online Stakeholder's Workshop, with 17 participants present, was held on 18th May 2023. One of the main foci of the event was to undertake an Options Appraisal considering the following three scenarios:

1. Do Nothing = Business as Usual (BAU).
2. Do Minimum = Do a Little (DAL).
3. Do More = Implement Natural Capital Pilot (INCP).

2.2.2 For each scenario, an assessment of positive and negative impacts was presented and subsequently discussed, resulting in a summary conclusion. The results of this appraisal are presented in the table below, but in conclusion, there was a unanimous agreement that the Do Nothing or the Do Minimum options were not fit for purpose.

2.2.3 A pdf of the workshop which includes the agenda, the presentation explaining the background to the project, as well as the discussion topics is provided in **Appendix C**. Feedback from the workshop, including a list of attendees, is provided in **Appendix D**.

Table 1: Summary of Options Appraisals

OPTION 1	**DO NOTHING = BUSINESS AS USUAL (BAU)**
Description	Farmers continue to rely on financial support through AECS to undertake appropriate management of SRG, whilst financial incentives to enter their land into woodland afforestation schemes become ever more enticing, further incentivised by selling off carbon credits through the Woodland Carbon Code.
Net Costs	There are no costs to the Borderlands Deal associated with this scenario as it is *Business as Usual* reliant on the continuation of the existing agricultural and woodland support systems that the project currently has no influence over. This is therefore a nil return.
Advantages	Easy. No change required, system continues as before without the need for farmers or their agents to learn or adapt to a new agricultural payment system. There is often an initial resistance to change which would obviously be avoided.
Disadvantages	It is becoming increasingly difficult to enter land into the existing Agri-environment scheme (AECS). Currently the scheme, which is competitive, favours designated sites and larger farm holdings over biodiversity rich small farms. In addition, any capital expenditure is severely penalised under the current scoring system so measures, including fencing, or scrub control, are effectively not permitted. Farms therefore become less financially viable. This is set against the incentivised financial rewards from afforestation schemes with the additional bonus of selling off carbon credits and thus the continued threat to SRG and other semi-natural habitats from afforestation. BAU is therefore not an option unless we wish to witness the continued loss of important semi-natural habitats to afforestation and the decline of traditional agriculture, whilst in tandem witnessing local loss of SRG and extinctions of NBA, whilst monitoring NBA populations to document their steady decline and an increase in their threatened status.
Conclusion	The current system is not delivering for SRG, NBA or farmers. Data gathered by Butterfly Conservation volunteers established that 50% of assessed NBA colonies in the Borders were under threat. This pilot project was developed because of these alarming findings. Change is therefore required.
OPTION 2	**DO MINIMUM = DO A LITTLE (DAL)**
Description	It is not going to be possible to easily change either the current agri-environment scheme (AECS), or the enticing afforestation grants. However, it is possible to try and ensure that NBA colonies and SRG is better protected from afforestation by sharing our relevant butterfly and habitat data with Scottish Forestry.
Net Costs	The data is provided to Scottish Forestry under a data agreement free of charge. It is mostly collected, collated and verified by Butterfly Conservation volunteers. However, Butterfly Conservation staff input is required to train and co-ordinate the volunteers, undertake mapping, planning, reporting and data analysis. All these tasks are conducted at no cost to the Borderlands Deal. The cost of collecting and providing this data is estimated to cost Butterfly Conservation around £2k/year for staff time
Advantages	The use of alert maps indicating the presence of NBA and/or SRG at an early stage of the forestry grant application process will help protect current areas from afforestation schemes, by alerting applicants to their presence, although there is no legal requirement for applicants to amend their schemes should NBA be known to be present.
Disadvantages	There is no legal requirement for applicants, be they forest agents or landowners, to use the data. Although some sites will be saved directly from afforestation, SRG sites will deteriorate and lose their biodiversity interest in the absence of suitable grazing management, becoming either too rank or the floral interest grazed-out. Other SRG sites will also deteriorate due to

	the lack of an effective agri-environment scheme and farm businesses become less financially viable. Both scenarios, over time, will result in a species poor sward and loss of NBA and other biodiversity.
Conclusion	The management and importance of NBA and SRG needs to be prioritised and financially incentivised under AECS, or its equivalent, and both need to be better protected from afforestation.
OPTION 3	**DO MORE = IMPLEMENT NATURAL CAPITAL PILOT (INCP)**
Description	Design and implementation of a new Scottish Agri-environment Scheme that values the importance of NBA and SRG, as well as carbon capture capability of permanent grasslands i.e. farmers being paid for delivering public benefits. SRG restoration techniques have been fully trialled and costed. The importance of the regions' NBA populations and SRG is recognised. Additional funding brought in through private and public investment in Natural Capital.
Net Costs	The net cost of the project to the Borderlands Deal is £727,160. An annual breakdown of this spend by capital and revenue is given below in section 4.1. A more thorough breakdown is provided in Appendix O - Annual Financial Breakdown Revenue and Capital Spend. This appendix also outlines and estimates potential income streams.
Advantages	New agri-environment scheme delivers for SRG, NBA and farmers. Current areas of SRG are maintained and enhanced, whilst former areas of SRG are restored. More flexible land management system that is bespoke and delivered by the farmer rather than adhering to off-the-shelf prescribed options. The value and importance of NBA, SRG and Natural Capital is valued and recognised. Pilot acts as a blueprint to be rolled out across Scotland and potentially Northern England where NBA also occurs. Farm income enhanced through additional sources of funding including Grassland Carbon Credits scheme, Biodiversity Offsetting, introduction of a premium meat marketing scheme.
Disadvantages	A brand-new approach is required with buy-in from farmers who will require good knowledge of what they are trying to achieve and how they will achieve it. The scheme maybe trying to do too-much and could be overly complex, expensive to administer and potentially not deliver for SRG or NBA. The financial incentives will have to be equal to or greater than competing woodland schemes for it to work. It won't be easy, but similar schemes have been set up in other countries including Ireland, Belgium, Spain and Sweden. More information available on the Results Based Payments Network website https://www.rbpnetwork.eu/about/

2.3 Recommended option

The recommended option is Option 3, delivery of this pilot Natural Capital project. The conclusions from the Options Appraisal above clearly highlight that Option 1 Business as Usual, and Option 2 Do a Little, will not solve the current issue of loss of SRG to either afforestation schemes or unsuitable management, with farm businesses becoming less financially viable. Investment now in this pilot, as previously outlined, will have multiple benefits and beneficiaries through the development of a costed, tiered, bespoke support package designed with and for farmers to reward them for the benefits in terms of Natural Capital they are providing to the public, including benefits to biodiversity. Investigating other sources of Natural Capital income will also bring further monies into the project and to farmers. These sources include applications to NatureScot's Nature Recovery Fund to finance larger scale habitat restoration. In 2022, Butterfly Conservation successfully applied to NRF for c£27K

for a project Restoring Flower-Rich Grasslands Along the Tweed, which aimed to clear scrub to benefit Northern Brown Argus and enhance Species-rich Grassland in the pilot area. Unfortunately, BC were unable to implement the project due to lack of staff capacity as it had been hoped that the Borderlands PO would have been in post by then. The pilot is not reliant on this funding, but this clearly demonstrates that funding through NRF is available and permissible and can provide very worthwhile additionality to the project. The likelihood of using this fund to enhance the project is therefore high. Similarly, the Scottish Landfill Community Fund and Community Windfarm Fund can pay for habitat maintenance and enhancement work. Farmers will also be encouraged to enter their land, where feasible, into the current, AECS, and future agri-environment schemes thus bringing further monies into the project and to farmers. There is also huge potential income from other green funding initiatives including Biodiversity Offsetting and the development of a Biodiversity Metric and Grassland Carbon Credits. Monies from these sources are outlined in **Appendix O** - Annual Financial Breakdown Revenue and Capital Spend, where they are estimated to exceed £2.5 million over the eight years of the pilot and an addition £1.5 million over the subsequent 5 years.

An assessment of each of the three Options Appraisals against Critical Success Factors is provided in **Appendix P**.

3. COMMERCIAL CASE

3.1.1 As the project will be led by Butterfly Conservation, it will be adhering to our procurement rules and policies as outlined below with several supporting documents supplied in the Appendices.

Butterfly Conservation's authorisation levels for procurement are as follows.

Authorisation Limits (inclusive of VAT)
Ordering of goods, contracts, approval of invoices

Grade	Limit
Council	> £50,000
SMT	< £50,000
Chief Executive	< £10,000
Band F – Director	< £10,000
Band E – Head of Section	< £2,500
Band D – Budget Holder	< £2,000
Band C – Budget Holder	< £1,000
Band B – petty cash only	< £30
Band A – petty cash only	< £30
Branch signatories	< £2,500

Details of Butterfly Conservation's tendering processes are given in **Appendix E** and are summarised in the table below.

Total value and procedure	Up to £1,000	£1,001 - £5,000	Branches > £2,500	£5,001 - £10,000 (or multiple contracts of this amount)	£10,001 - £50,000 (or multiple contracts of this amount)	£50,000 (or multiple contracts of this amount)
Budget Holder	1 quote	3 quotes or single tender approval	SMT approval	3 quotes or single tender approval	Competitive tender or single tender approval	Competitive tender or single tender approval

3.1.2 Other documents provided in the Appendices include:

- Butterfly Conservation's recruitment guidance and sample job description is given in **Appendix F**.
- Butterfly Conservation's Standard Terms and Conditions are given in **Appendix G.**
- Butterfly Conservation's Ethical Policy for Fundraising, Investments and Purchasing is given in **Appendix H.**

- Butterfly Conservation's Equal Opportunities Policy is given in **Appendix I.**
- Butterfly Conservation's Environmental Policy is given in **Appendix J.**
- Butterfly Conservations generic work plan for a similar role is provided in **Appendix K.**

3.1.3 The majority of invoices will be paid on delivery of services e.g., purchase/rental of No Fence technology, contractors clearing scrub etc. In similar projects BC usually claims quarterly in arrears and this therefore is the proposed model. Goods and services will be procured in adherence to Butterfly Conservation's policies as outlined above.

3.1.4 The goods, services and works that will be procured to implement the recommended option include the following:

- Butterfly Conservation to project manage, appoint and line manage Project Officer, etc.
- Provision of certified training via approved organisations e.g., in First Aid, pesticides and safe use of machinery e.g., brushcutters.
- Capital items e.g., handtools, SRG seed and plug plants etc in accordance with BC procedures.
- PO and volunteer expenses e.g., T&S in accordance with BC procedures.
- Contractors to deliver mechanical scrub removal and follow up treatments.

3.1.5 Goods and services will be paid for on delivery and claimed back quarterly. Bespoke contracts will be required to ensure delivery of the specialised aspects of the project.

3.1.6 Much of the project will be delivered directly through a Project Officer, employed by Butterfly Conservation. The recruitment and employment process will adhere to Butterfly Conservation's relevant codes and policies. The Project Officer will be line managed by the Head of Conservation (Scotland) and be a welcomed and much valued part of Butterfly Conservation's small yet dynamic team of staff working across Scotland.

3.1.7 Butterfly Conservation is a Real Living Wage employee and ensures that all contractors also meet this criteria. In March 2023 BC used the Fairwork Assessment Tool and subsequently produced a Fair Work Plan that identifies the next steps required to progress knowledge and understanding of the Five Dimensions of The Fair Work Framework.

3.1.8 Butterfly Conservation's procurement route is outlined in appendix F - Purchasing Control Guidance Notes. This includes the ability to use a single tender procedure that can be used in exceptional circumstances, this will include favouring local suppliers over national or large corporations.

3.1.9 Butterfly Conservation offers a generous package of benefits to all employees. This includes
1) Flexible working which ensures everyone can achieve their own version of a work life balance.
2) 8% employer pension contributions. According to the Office of National Statistics, around 80% of employing organisations of a similar size pay less than 8% contributions. That puts us in the top 20% of small organisations.

3) 28 days annual leave. Our generous annual leave allowance plus bank holidays means you have plenty of time to do the things you love outside of work.
4) Wellbeing. All employees and their immediate families have 24-hour access to our Employee Assistance Programme. This is a confidential portal which offers expert advice and compassionate guidance 24/7, covering a wide range of issues that could be affecting your home life or work life, health and general wellbeing.
5) Learning and Development. We have a comprehensive basic training package for all staff to cover the range of topics you need to know about whilst working for us.
6) Living wage employer. This means that we're committed to paying not just the minimum wage but the real Living Wage for all staff and sub-contractors.

4. FINANCIAL CASE

4.1 A financial spreadsheet giving the annual breakdown of revenue and capital spend across financial years 2023-24 (year 1) to 2030-31 (year 8) along with potential income sources is provided in **Appendix O**. A summary is provided here:

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	Totals
Revenue (£)	500	37,878	52,657	54,105	45,625	23,774	23,333	26,096	263,969
Capital (£)		61,684	94,799	75,759	76,767	64,825	45,936	43,240	463,190
Totals (£)	**500**	**99,743**	**147,456**	**129,864**	**122,392**	**88,599**	**69,269**	**69,337**	**727,159**

4.2 The current overall budget is split as 37% Revenue spend and 63% Capital spend. This does vary across the years with a maximum Revenue spend in any one year being 40%, the lowest 27%, apart from the shortened first year when it is 55%. Several of the lines under Capital spend may more traditionally be considered Revenue items. However, their inclusion under Capital spend is because the Natural Capital, in this case Species-rich Grassland, is viewed as a fixed asset, in the same way that a building would be viewed as a fixed asset, and the expenditure is extending the life of that fixed and useful asset. Under suitable management, SRG should be considered a longer-term asset rather than a building, fence or item of machinery/equipment. Therefore, any monies spent on enhancing or repairing it, or in the case of the pilot maintaining and restoring, will add to its value and is thus considered as Capital expenditure.

4.3 This stance has been taken with the following items.

- A proportion of the Project Officer Salary and associated costs e.g., FCR and T&S - this is allocated as Capital spend as it is an estimation of the PO's time and associated costs enhancing Natural Capital fixed assets i.e., SRG.

- Contractor costs to maintain and enhance SRG - as above, these costs are increasing the capital value of these very important natural fixed assets.

- Wildflower seeds and plug plants - although individual plants and seedlings will be relatively short-lived, probably 5-10 years, under the correct management regime their future seed will allow these plants to spread and flourish across the site where they were sown/planted. They are therefore regarded as a permanent and increasing fixed asset.

There are no contractor costs in year 1 of the project (2023-24). Annual estimated contractor costs are itemised in the financial spreadsheet in **Appendix O**.

4.4 Claiming and Balance Sheet Treatment

This project will submit its funding claims to Dumfries and Galloway Council, which is the accountable body for the Borderlands Inclusive Growth Deal finances in Scotland. Stewardship will be provided by the Natural Capital Programme Board and membership will include a Section 95 Officer to provide assurance of the project's finances and ensure that the financial requirements agreed with both the UK and Scottish Governments are met. The project will also be aligned with Dumfries and Galloway Council's financial regulations and, where appropriate, those of the regional partners. Should the project present any risks to the overall Borderlands programme, it will be held to account by Dumfries and Galloway Council.

Should this BJC be approved, formal Government approval will be sought to enable Borderlands Inclusive Growth Deal funds to flow to the project. Funding will be provided by the Scottish Government to Scottish Borders Council via Dumfries and Galloway Council in the respective roles of the local authorities as the delivery and the accountable bodies. This funding will be claimed quarterly in arrears from Dumfries and Galloway Council upon receipt of a completed Grant Claim Form and appropriate supporting evidence, which will initially be provided by Butterfly Conservation Scotland to Scottish Borders Council as the grant recipient.

The proposed model for Butterfly Conservation to claim monies quarterly in arrears, is identical to how it operates many other similar projects. There will be no balance sheet implications.

5. MANAGEMENT CASE

5.1 The Project Lead will be from South of Scotland Enterprise (SOSE) and Scottish Borders Council (SBC) and represented on the Natural Capital Scotland Working Group. Scottish Borders Council will be the grant recipient, but Butterfly Conservation will be the project lead.

5.2 The project will be managed and delivered by the lead delivery partner, Butterfly Conservation, via a Project Officer employed by Butterfly Conservation. The project will be overseen by a Core Project Steering Group (CPSG) who will meet at least twice a year though it is likely that the CPSG will need to meet more regularly during the initial stages of the project to provide the necessary steer and support to the pilot and to the Project Officer.

5.3 Butterfly Conservation has been selected as the delivery partner as they were one of the first organisations to recognise the fragility of the hill livestock sector in the Borders. This was identified following targeted surveys of Northern Brown Argus that commenced in 2016 to determine the status of the butterfly in the region. The results highlighted the lack of appropriate management at the majority of colonies, the threat of afforestation due to the lack of an effective agri-environment scheme and recognition of the importance and value of Species-rich Grassland. Butterfly Conservation is the UK charity dedicated to saving butterflies, moths and our environment, and its vision is a world where butterflies and moths thrive and can be enjoyed by everyone, forever. It has more than 40,000 members in the UK and 32 volunteer-run branches throughout the British Isles. It employs almost 100 people, including many highly qualified scientists, making it one of the world's largest research institutes for butterflies and moths. Butterfly Conservation has a history of successfully delivering very similar large landscape-scale restoration projects across the country. Through the surveys Butterfly Conservation has established excellent working relationships with several local landowners and farmers, has a trained, knowledgeable and enthusiastic group of engaged local volunteers, and has the knowledge, experience and track record to manage and deliver the project to time and budget. Butterfly Conservation has been fully involved in putting the project together from its inception to the production of this Business Justification Case. Butterfly Conservation therefore makes the ideal delivery partner, a decision supported by Scottish Borders Council and South of Scotland Enterprise.

5.4 It is recommended that the CPSG will comprise:

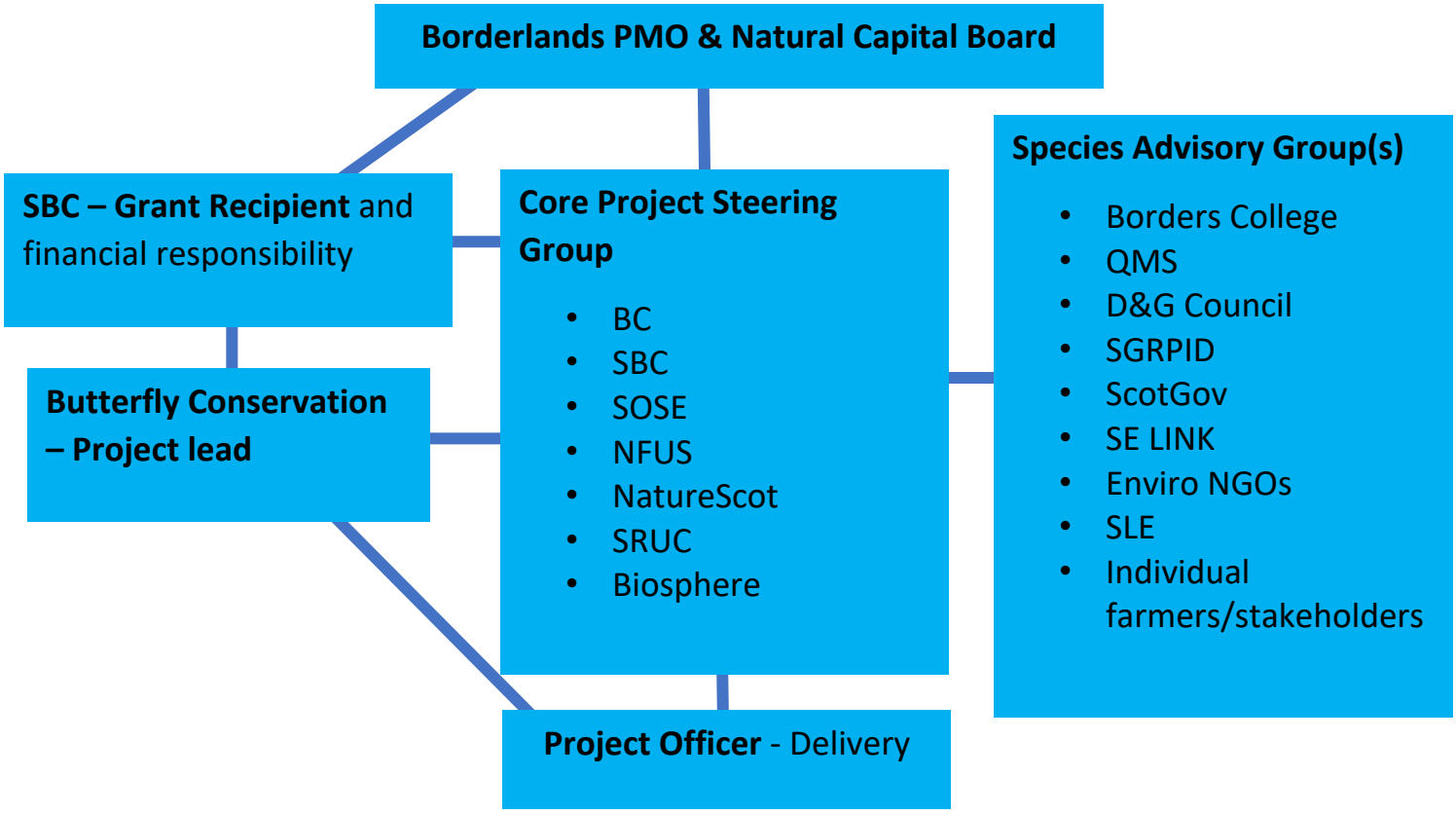
- Borderlands SRG & NBA Natural Capital Project Officer.
- Tom Prescott - Head of Conservation (Scotland), Butterfly Conservation Scotland.
- Louise Cox - Sustainability Manager, Scottish Borders Council.
- Malcolm Ginns – Ecology Officer, Scottish Borders Council.
- Andy Tharme – Natural Resources Strategy Manager, South of Scotland Enterprise.
- Lindsay Brown - Lothians and the Borders Regional Manager, National Farmers Union Scotland.
- Kirsty Hutchison – Agricultural Officer, NatureScot.
- Reuben Singleton – Director, Tweed Ecology.
- Davy McCracken - Professor of Agricultural Ecology and Head of both SRUC's Hill & Mountain Research Centre and Integrated Land Management Department.

- Representative from Galloway Biosphere Borderlands Natural Capital Integrated Whole Farm Plans Pilot Project.

5.5 In addition, specialist expertise will be brought in to join the CPSG either permanently or ad hoc as and when required, or small Specialist Advisory Groups (SAGs) will be established to focus on specific topics. This could include representatives from:

- Borders College.
- Quality Meat Scotland (QMS).
- D&G Council.
- Scottish Government Rural Payments and Inspections Directorate (SGRPID).
- Scottish Government.
- Scottish Environmental LINK.
- Individual farmers.
- Environmental NGOs.

5.6 The diagram below sets out the governance structure.



5.7 The pilot's governance structure is clearly outlined above. The role of the PO, with guidance and support from the Core Project Steering Group (CPSG), is to implement the project. This will include establishing the two farmer groups and associated demonstration sites, and identify the most appropriate sites for the trial management. The latter will be undertaken by either contractors, or volunteers, or in some cases a combination of both. This blueprint is identical to how Butterfly Conservation is running the Rocking the Blues Project in Species on the Edge, with the PO having the necessary skills to manage volunteers and contractors and work closely with landowners and farmers and their agents, whilst also have good ecological knowledge of the priority species. As with any project, but particularly one dealing with landowners and managers, as well as volunteers and contractors, it is necessary to be pragmatic and flexible to be able to quickly change as new opportunities arise and potential one's falter. The size of the CPSG and any SAGs established will be kept to a minimum to ensure effective decision making.

5.8 Dumfries and Galloway Council, being the Accountable Body for the Borderlands Deal in Scotland, will prepare a Grant Funding Agreement that will set out the terms and conditions of award and grant payment profile. Funds from the Borderlands Inclusive Growth Deal will be distributed by the Accountable Body to Scottish Borders Council on a quarterly basis in arrears as will be set out in a grant offer letter. Scottish Borders Council will then release these funds to Butterfly Conservation and will be responsible for all monitoring and reporting of spend to the Accountable

Body. A Memorandum of Understanding (MOU) will be drawn up between Butterfly Conservation and Scottish Borders Council that will outline the terms and understanding between the two parties, the roles and responsibilities of each party and clarify their contributions to the collaboration and delivery arrangements. Following an initial Project Engagement Visit by the Accountable Body and Borderlands PMO, Butterfly Conservation will be required to provide a monthly update and quarterly claim via Scottish Borders Council based on activities undertaken and identify any issues. These will be escalated as required including for change controls and be discussed at the regular Natural Capital Scotland Working Group.

5.9 A full monitoring and evaluation framework will be developed for the Natural Capital Programme to guide all monitoring and evaluation activity. The framework design will be based on the Programme Logic Model and will be consistent with the Borderlands Inclusive Growth Deal Monitoring and Evaluation Framework. In line with the overall monitoring and evaluation approach, the Natural Capital Programme specific activity will be to show that the Natural Capital Scotland Programme is making a difference in the Borderlands area, including:

- Contributing to the three challenges of the Borderlands Inclusive Growth Deal (increasing the working age population; boosting productivity; delivering inclusive economic growth).
- Achieving the Strategic Objectives of the Agri-Environment Project: Farmers, Landowners, Northern Brown Argus (NBA) and Species-rich Grassland (SRG) Pilot Project and the Natural Capital Scotland Programme.
- This will feed into the overall evaluation of the Deal evidencing both the direct outputs generated by the investment but also the longer-term strategic impact in ensuring the natural environment of the Borderlands region is recognised as an economically productive asset and is developed sustainably and protected. The initial approach will focus on regular monitoring of delivery and the resulting outputs (KPIs) directly generated as part of the quarterly and annual review approach for all projects. This will capture both delivery against spend but also the delivery of key direct outputs in relation to the project's baselines established at the start of the programme.
- The Natural Capital Scotland Programme has a focus on measuring and quantifying the benefits of the region's Natural Capital. The Agri-Environment Project: Farmers, Landowners, Northern Brown Argus (NBA) and Species-rich Grassland (SRG) Pilot Project may include specific engagement and evaluation activities such as surveys and case studies undertaken throughout the delivery of the project; this activity is covered in Section 1.2.4, Main benefits and evaluation of Impacts, above.

5.10 The change management process is set out in the Borderlands Programme Handbook and involves three levels of change or variation: minor, notable, and significant, which will affect the level of information required to secure approval. The current process is as follows, any changes to this require approval from the Borderlands Partnership Board on advice of the PMO, Accountable Bodies, and UK Government and Scottish Government:

- The project delivery partner (Butterfly Conservation) identifies the change, why it is needed, and secures agreement from their project team.
- Butterfly Conservation notifies the PMO of the proposed change by completing a 'change request form'. In discussion with the relevant Accountable Body, the PMO will determine whether the proposed change is minor, notable or significant, which will determine the relevant level of approval required.

5.11 Multiple benefits will accrue from this pilot project. These are detailed in Section 1.2.4 Main benefits and evaluation of impacts, above. A Benefits Realisation Plan is presented in **Appendix A.** This summarises the benefits under the following six categories for each of the eight years of the pilot:

- Project Management.
- Develop an effective Result-based Agri-environment Payment Scheme (RBAPS) for SRG & NBA.
- NBA.
- Outreach/Education/Research/Promotion.
- Habitat Management.
- Monitoring Habitat Restoration Trials.

5.12 Risks will be managed at two levels:

- Project-level. Managing the risks associated with the delivery of the individual project benefitting from funding.
- Programme-level. Managing the risks associated with delivery of a complex, high-value, multi-faceted Borderlands wide investment programme.

5.13 Please see **Appendix B** for a project-level risk register. Butterfly Conservation will manage their own risk register and will report on a quarterly basis to the programme team/PMO to highlight any changes to the register, either in level of risks or new risks emerging. These will be assessed and added to the Programme-level risk register as appropriate. Risks will be identified, monitored, and managed through the following process:

- Application and appraisal. Risk management will be integrated as a core element of the process of developing the individual project. As part of preparing this Business Justification Case (BJC) the project has developed a project risk register. The PMO and Programme team will undertake an assessment of risk at individual project-level as part of the overall appraisal of each BJC.
- Contracting and monitoring. Once the BJC for the project is approved by the Programme team and the Borderlands Partnership Board, the risk register will form part of the Grant Agreement between the Accountable Body and the lead Local Authority/Delivery Partner. This will place a responsibility on the lead Local Authority to manage and monitor risk at the project level. As part of the Quarterly Monitoring Returns, the lead Local Authority

and project delivery partner will be required to report to the Accountable Body on risk management. On a quarterly basis, the Accountable Body and the PMO will report these into the overall Programme-level risk register.

5.14 Risks to the Natural Capital Scotland Programme will be identified, recorded and managed by the Head of the Borderlands Programme Management Office (PMO) who will be responsible for risk management at the overall Programme level, while ultimate accountability will rest with the Borderlands Partnership Board.

5.15 The Natural Capital Scotland Programme risk register will be monitored and updated on an ongoing basis by the PMO/Programme team, who will be responsible for identifying and implementing actions to mitigate each of the risks recorded in the register.

5.16 The PMO will provide risk management updates on a quarterly basis to the Natural Capital Programme Board and will escalate key risks, or significant changes to risk, to the Borderlands Partnership Board.

5.17 The PMO will amalgamate output, outcome, and impact data for individual Projects, reporting on their performance to the Partnership Board. The Accountable Body will review, and process grant claims, making payments quarterly and in arrears to each project delivery organisation on submission of a complete and evidenced grant claim.

5.18 The Programme has developed a change management and contract management process, based on existing good practice, to ensure all changes are handled fairly, consistently, and transparently. The process will apply to changes or variations within Project Plans that have been formally agreed.

5.19 An independent evaluation will be commissioned at the commencement of the Natural Capital Scotland Programme to undertake a longitudinal evaluation covering the full 8-year life of the Programme.

5.20 The evaluation will commence with a comprehensive baseline study which will help establish the current Natural Capital of the Borderlands area; this work is already underway as part of the wider Borderlands Inclusive Growth Deal benefits realisation work. This will be followed with a comprehensive evaluation study, repeated at regular intervals throughout the programme and funded from the Borderlands programme budget.

5.21 At a Project level, the funding allocation includes 3% for contingencies split between Revenue and Capital:

- Revenue: £7,859.
- Capital: £13,308.

A project Gantt Chart can also be found in **Appendix L**.

5.20 **Project Milestones**

The Table below itemises key project milestones and reporting dates/frequency.

Project Management

Milestone	Date
Establish Core Project Steering Group	By end of 2023
CPSG meetings	Minimum twice a year
Recruit Project Officer	End of 2023
Produce 1/4ly reports	4/year
Annual report to stakeholders	1/year
Production of final evaluation report	Year 8

Develop RBAPS

Milestone	Date
Establish two farmer led Natural Capital groups, meeting annually	From year 2
Develop a SRG/NBA Score Card	Year 2
Trial and adapt SRG/NBA scorecard with farmers. Target 12	4 year 3 & each subsequent year
Develop a tiered payment scheme	Year 3
Trial a tiered payment scheme with farmers (no. of farmers). Target 12	4 year 4 & each subsequent year
Implement SRG/NBA option in new Post Brexit agri-enviro scheme	By year 6
Adoption of a Natural Capital Biodiversity Metric	Year 6

Northern Brown Argus

Milestone	Date
No. of participating trained volunteers	30 year 2, 40 year 3 50 from year 4
No. of NBA sites surveyed annually.	30 year 2 40 year 3 50 from year 4
No. of NBA sites monitored target 10/year	3 year 2, 6 year 3 10 from year 4
Production of annual NBA population index	Annual index with trend after 5 years of robust data
Develop NBA landscape connectivity metric	Year 3
Use metric to measure impact	Assess annually from year 4

Outreach/Education/Research/Promotion

Milestone	Date
Establish demonstration sites	1 year 2, 2 by year 3
Demonstration event(s)	2/year from year 3
Farmer led Natural Capital groups established	1 year 3, 2nd year 4
Online/in-person talks to students	2/year from year 2
Student undergraduate projects and/or work placements	1 year 2, 2 from year 3
Annual input into PhD projects	Minimum of 1 annually
No. of Press Releases, talks, blogs and other promotion opportunities	Up to 4/year by year 3
No. of local community liaison or volunteer groups established and/or supported	1 year 1 2 from year 2
No. of participating and engaged farmers. Target 40	Annually

Habitat Management

Milestone	Date
No. of volunteer work parties	4/year from year 2
No. of volunteers undertaking practical conservation to benefit NBA & SRG	20/year 1 40/year 2 onwards
No. of management trial sites	1 year 2, 4 from year 3
Area of scrub cleared (ha) - reported annually	2ha year 2, 3ha, year 3 4ha from year 4
Area of scrub follow-up management - reported annually	2ha year 3, 5ha, year 4 additional 4ha from year 5
Area where restoration grazing being implemented	50ha/year from year 2
Determination of the most effective, efficient and costed SRG restoration technique	Year 5
Publish management case studies	1 year 7, 1 year 8

Funding

Milestone	Date
Measure of match funding brought in	Annually
Successful evaluation of feasibility of establishing a premium meat marketing scheme	Year 5

List of Appendices (submitted separately)

A. Benefits Realisation Plan.
B. Risk Register.
C. Stakeholders Workshop – Agenda, Presentation and Discussion Points.
D. Stakeholders Workshop – Attendees and Feedback.
E. Butterfly Conservation's Purchasing Control Guidance.
F. Butterfly Conservation's Recruitment Guidance and sample Job Description.
G. Butterfly Conservation's Standard Terms and Conditions.
H. Butterfly Conservation's Ethical Policy for Fundraising, Investments and Purchasing.
I. Butterfly Conservation's Equal Opportunities Policy.
J. Butterfly Conservation's Environmental Policy.
K. Butterfly Conservations Generic Work Plan (for a similar role).
L. Gantt Chart.
M. Integrated Impact Assessment.
N. Carbon Categorisation Form.
O. Annual Financial Breakdown Revenue and Capital Spend.
P. Assessment of Options Appraisals against Critical Success Factors
Q. Monitoring and Evaluation Plan