

# Investing in Nature: Evidence

## SBIF Review Investment Programme Proposal

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Version: 14:00 16/12/2019

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## 1. Executive summary

### 1.1 Programme approach and costs

This programme brief outlines the investment necessary to implement the recommendations of the Review as an enabler of Projects 4 and 5 within the Scottish Biodiversity Programme (see Section 3.1 for details). It makes the case for sufficient sustainable public funding to transform the Infrastructure and catalyse long-term funding from other sectors.

The programme will entail two tranches - each with three projects - undertaken over five years with a subsequent five year period for benefits realisation. The first project in Tranche 1 will undertake all necessary feasibility studies and project development prior to two further projects that will establish the regional, national and UK level capabilities and capacity needed to provide Infrastructure support and services (and community funding to grow participation and open provision of data) across Scotland. In Tranche 2, the newly established National and Regional Hubs will undertake three projects to facilitate high levels of sector awareness and improved data flows, development of value-added services in each sector, and capacity building with recording groups and community groups to maximise participation.

A small Programme Team (outlined in Section 5.3) will include five programme staff working alongside five National Hub staff (recruited early in the Programme) so that the Programme Team has sufficient capacity and capability to plan and implement the first tranche of work. Once the first tranche has been undertaken, the National and Regional Hub Teams will resource the planning and implementation of the second tranche.

The total investment required to undertake the programme is £15.2 million over five years (£3.05 million per year from 2020/21 to 2024/25), with an ongoing cost of £2.88 million per annum thereafter.

### 1.2 Next steps

- Scottish Government should decide whether to fund this five year investment programme and appoint a Senior Responsible Owner and Programme Board to oversee programme delivery.
- If Scottish Government decide to provide funding, then funding for Year 1 should be committed by the 1<sup>st</sup> April 2020 for release in two phases (phase 1: £1,049,118 to undertake Project 1.1 and initiate Project 1.2; phase 2: £1,325,000 to initiate Project 1.3 - subject to satisfactory completion of Project 1.1).
- Subject to satisfactory completion of Project 1.1 and other relevant considerations, Scottish Government should confirm its commitment to funding for Years 2-5 by the 31<sup>st</sup> December 2020 for release in annual phases (Year 2 - £3,233,468, Year 3 - £3,277,808, Year 4 - £3,177,808 and Year 5 - £3,177,808 (N.B: these are indicative costings to be confirmed during Project 1.1).
- Scottish Government should identify and implement a longer term mechanism to provide public funding for the ongoing operating costs of the Infrastructure after Year 5 of the programme - i.e. from April 2025.

## 2. Programme vision and scope

### 2.1 Vision

The original vision of the Scottish Biodiversity Information Forum is that:

*"High quality species and habitat data will be collected and managed through a sustainable, co-ordinated and integrated local and national framework of organisations, partnerships and initiatives. These data will be available to ensure that Scotland's biodiversity, ecosystems and people benefit."*

### 2.2 Scope

The following aspects of the biological recording infrastructure in Scotland are in scope:

1. The resourcing, governance and use of National and Regional Hubs to provide services for all sectors and geographic areas in Scotland.
2. The resourcing, development and use of the NBN Atlas as a central biodiversity database and portal for National and Regional Hubs to manage, verify, aggregate and disseminate biodiversity data in Scotland.
3. The affiliation and facilitation of data flow pathways for submission of biological records from every sector (Public, Private, Third and Academic) and environment (marine, freshwater and terrestrial).
4. The accessibility and use of biodiversity data collected in Scotland (and development of added-value data products and services) to empower local communities, Data Users and Service Users.
5. Capacity and capability building for Super Partners at the national or UK level who provide essential services and public good in Scotland (including major national recording schemes, the Biological Records Centre and iRecord, the NBN Trust, the National Museum of Scotland, the Royal Botanic Gardens in Scotland, the UK Species Inventory, Recorder 6 and Marine Recorder, the Non-Native Species Secretariat and the State of Nature Partnership).
6. Capacity and capability building for Collection Curators, Verifiers, Recorders, National Recording Schemes and Recording or Community Groups who collect, verify or manage biological records in Scotland.

All aspects of the biological recording infrastructure outside Scotland are out of scope.

## 3. Links, assumptions and dependencies

### 3.1 Links to other strategies

This programme is in direct support of the Scottish Biodiversity Strategy and the wider **Biodiversity Strategy Programme** being developed by Scottish Natural Heritage and the Scottish Government to mainstream biodiversity across Scottish Government and beyond. It facilitates the outputs and outcomes of two of the seven key projects envisaged within this wider programme (see Figure 1 opposite) - **Project 4: Biodiversity Evidence Base** and **Project 5: Communications & Public Engagement**.

It is also an enabler for many other strategies, frameworks, reports, principles and policies, including those that champion open or FAIR (Findable, Accessible, Interoperable and Re-usable) data, e.g. the Scottish Government's Open Data Strategy, and those that depend upon effective environmental monitoring, e.g. Scotland's National Performance Framework, the State of Nature (Scotland) Report, the Great Britain Invasive Non-native Species Strategy, biodiversity net gain principles, environmental net gain and carbon accounting, multi-lateral environmental agreement implementation - such as the OSPAR Convention, the Common Agricultural Policy, the Natural Capital Protocol, Site Condition Monitoring, Environmental Impact Assessment and Strategic Development Planning.

### 3.2 Assumptions

- This programme will require feasibility studies to inform our approach and costings. These feasibility studies will need to be appropriately resourced and undertaken at the outset of the first tranche of work.
- The consents, capacity and capabilities necessary for the programme will be available when needed.
- The Senior Responsible Owner and Programme Board will be appointed by the Scottish Government.

- SBIF is not itself a legal entity and so cannot employ Programme Team staff; therefore, Scottish Natural Heritage (or an organisation proposed by them) will recruit, host and manage the Programme Team.
- Funding for the role of the SBIF Development Officer will continue to be provided by Scottish Natural Heritage until it is superseded by funding for a Communications Officer within the Programme Team.
- The SBIF Advisory Group will continue to exist at least for the duration of the first programme tranche to act as a stakeholder group and maintain the integrity of the SBIF Review recommendations.
- On establishment of the National Hub, its Board of Trustees will supersede the SBIF Advisory Group and the National Hub will then act as the Lead Governance Body for the Infrastructure in Scotland.
- Even with the scale of investment proposed through this programme, the Infrastructure will continue to be dependent on, characterised by, and celebratory of, the widespread involvement of volunteers.
- Once established, the National Hub will seek to work with innovative digital organisations e.g. the Edinburgh Parallel Computing Centre.
- The biological recording infrastructure in Scotland will continue to rely on and champion the role of Super Partner organisations who operate across the UK (including the NBN Trust, the Biological Records Centre, major National Recording Schemes, the UK Species Inventory, the Non-Native Species Secretariat, the State of Nature Partnership, the Recorder 6 Consortium and others).

### 3.2 Dependencies

This programme depends on:

- One of the key projects in the Scottish Biodiversity Programme - **Project 7: Future Funding** - to develop a mechanism for sufficient sustainable funding of the core operating costs of the Infrastructure and its transformation by 2025 (until or unless income from added-value services or grant funding can reduce this requirement).
- The continued goodwill, energy and collaboration of the SBIF community in Scotland and the UK (which is in turn dependent on effective stakeholder engagement).
- The capacity and capabilities of key stakeholders named in Section 7.1 to participate in the programme and provide key services or technical platforms that are (or will be in future) integral to the Infrastructure.
- Consent from affected parties to develop new partnerships and governance arrangements and to simplify or expedite data flows and service provision where necessary.

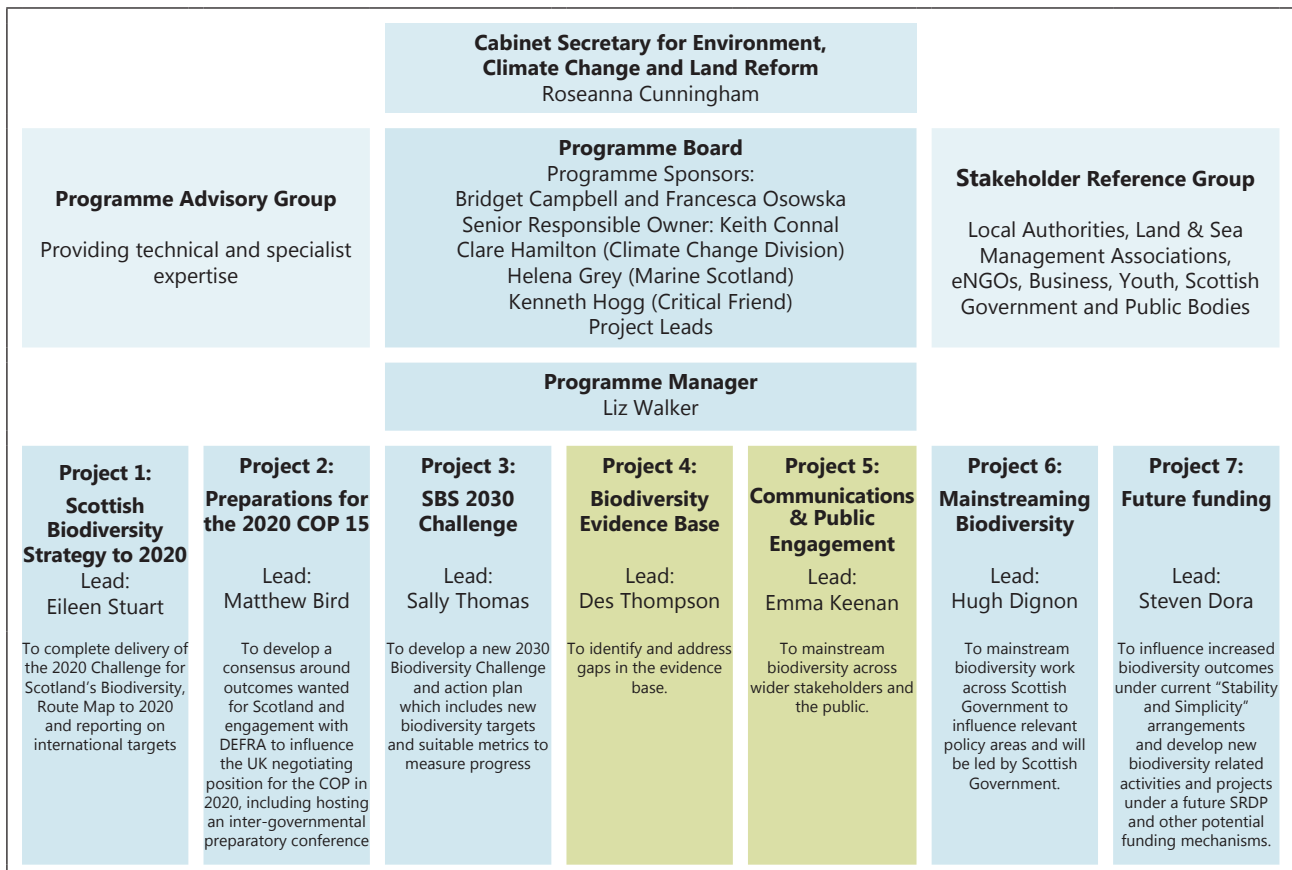


Figure 1: Scottish Biodiversity Programme Governance

## 4. Business Case

### 4.1 Why invest in the biological recording infrastructure in Scotland?

Our biological recording infrastructure provides the mechanisms that facilitate the collection, verification, curation, aggregation, dissemination and use of biological records for everyone on a 'once for Scotland' basis. It needs to operate effectively for Scotland to have the capabilities (particularly the taxonomic expertise), capacity and continuity necessary to provide a biodiversity evidence base, to mainstream biodiversity and to tackle the separate but linked biodiversity and climate crises.

Six business needs drive the demand for greater investment in the Infrastructure and demonstrate why the SBIF Review Investment Programme is required:

► **Driver 1 - the need for an open/FAIR evidence base for biodiversity**

This is a requirement to inform long term environmental strategy and effective environmental monitoring, protection and decision-making. Such an evidence base needs open/FAIR Data that everyone can access, with appropriate restrictions for sensitive data, for all taxonomic groups, from all sectors (Public/Private/Third/Academic), from all environments (terrestrial/freshwater/marine) and for the whole of Scotland, year on year.

► **Driver 2 - the need to provide services and outreach to all areas and sectors of Scotland**

This is a requirement to support public bodies to fulfil their statutory biodiversity duties and strategic goals and to empower every local community in support of the Community Empowerment (Scotland) Act 2015. In addition, the Recording Schemes, Recording Groups, Recorders, Verifiers and Collection Curators operating in each Local Authority area need to be able to access the support and services that the Infrastructure provides. Academia and Private Sector companies also rely on being able to easily access biodiversity data and expertise to facilitate new insights and opportunities.

► **Driver 3 - the need to resource the operating costs of the Infrastructure as a public good**

This is a requirement to facilitate open Data and to allow the provision of data and services that are free at the point of use to remove barriers to the mainstreaming and protection of biodiversity. The drive for open Data means that the Infrastructure cannot operate on a commercial basis, while future added-value services may not bring in enough income to sustain the entire Infrastructure. It is essential that the annual operating costs of the organisations involved are covered (until commercial services can be sustained).

► **Driver 4 - the need to remove the inefficiencies and frustrations of the current Infrastructure**

This is a requirement to enable the Infrastructure to enhance its capabilities and value while also coping with the growing volume of biological records available (driven by advances in technology) and enabling data to be available from a single central place for ease and efficiency of discovery and use. The motivation and efforts of everyone involved in collecting, providing and using biological records are compromised by the inefficiencies and frustrations encountered. These problems have been documented since 1975 and precipitated the Public Petition PE1229 in 2009 but are yet to be resolved.

► **Driver 5 - the need to mainstream biodiversity and tackle the biodiversity and climate crises**

This is a requirement to overcome the disconnect between people and nature that underlies our declining biodiversity and changing climate. Although attitudes and behaviours towards biodiversity are an indirect driver of biodiversity loss, they perpetuate the direct drivers (changes in land and sea use, over-exploitation of species, climate change, pollution and invasive non-native species). We must raise the profile and priority of biodiversity so that we can achieve the Aichi Biodiversity Targets and tackle the biodiversity and climate crises.

► **Driver 6 - the association between nature and physical and mental health and well-being**

This is a requirement to connect people to nature for the health benefits associated and the gains (and avoided costs) for public health in Scotland. Although this is an indirect driver, it is included because of the high level of opportunity that the Infrastructure provides for this purpose. Lack of access to green or blue space and lack of opportunity to connect with nature, exercise or socialise, are causes of physical and mental ill-health. However many people lack the confidence, knowledge or inspiration to venture far outdoors. Deprived or isolated communities in particular may not be able to access the resources or support - available through the biological recording infrastructure - that could overcome this.

This Investment Programme allows us to respond to these drivers and enables Scotland to become a global leader for biodiversity (which is an aspiration of the SBIF Review and the Scottish Government's Scottish Biodiversity Strategy for 2030) and the greenest country in the world (which is an aspiration of Scotland's National Performance Framework). It enables us to address the concerns of Public Petition PE1229 (which

urged "the Scottish Government to establish integrated local and national structures for collecting, analysing and sharing biological data to inform decision making processes to benefit biodiversity"). If this Investment Programme is not undertaken (or is only partially undertaken) greater costs will be incurred within each sector as a result of duplication of effort, a lack of integration and a failure to mainstream biodiversity.

It is essential that we invest in the Infrastructure so that we can address the six drivers above to achieve our desired future state and realise the many benefits that will come from doing so (outlined in Section 4.4).

## 4.2 Which options have been considered?

The options for our preferred models to transform service provision, in-country governance, funding sources and community funding were fully considered through the SBIF Review process. However, ongoing discussion has moved the thinking on for governance and funding. The current preferred option for each dimension is as follows:

- **Service provision:** Our preferred option is to provide services at three levels: centrally in the UK via our Super Partners for services best provided on a 'once for the UK' basis; nationally in Scotland via a National Hub for services best provided on a 'once for Scotland' basis; and regionally within Scotland for services best provided via Regional Hubs for local relevance and engagement.
- **In-country governance:** Our preferred option was to establish a National Hub for Scotland as a new Scottish Division of the NBN Trust. However, since the SBIF Review was published, there has been an emerging preference for an alternative option, that of an independent National Hub that has its own governance structure in Scotland and that is affiliated to the NBN Trust.
- **Funding source:** Our preferred option was to seek public funding. However since the SBIF Review was published, there has been an emerging preference for an alternative option, that of a combination of public and user funding. It is essential to note that user funding will only be possible once core funding has transformed the Infrastructure to allow the provision of paid for added-value services. In the interim, public funding will also be needed to catalyse funding from other sectors.
- **Community funding:** Our preferred option is to provide a tiered fund that is open to applications from Verifiers (tier 1), Recorders and Recording Groups (tier 2), and local community groups and all educational settings (tier 3). This fund would be balanced across all Local Authority areas in Scotland with priority given to applications from deprived or remote areas or for under-recorded sites or species.

Our rationale for choosing these options was that nothing less would be sufficient to transform the Infrastructure. The entire SBIF community is highly motivated and united behind this ambition and aiming for anything less would be counter-productive and unlikely to realise the benefits sought.

## 4.3 How will we achieve our preferred option?

This investment programme will build the capability and capacity of existing organisations and people who have been involved in operating the Infrastructure in Scotland to date. The National Hub will be established at the earliest opportunity to provide the leadership and governance necessary to then extend and enhance the network of Regional Hubs so that services can be provided at both the national and regional level.

The programme will be undertaken in two tranches. The first tranche will determine the feasibility, requirements and cost of establishing the National and Regional Hubs in detail to facilitate the consent of affected parties and other key stakeholders during the first project. Based on the results of this project, a second project will establish the National and Regional Hubs, while a third will develop the capability and capacity of the organisations involved in providing services at the UK level.

The second tranche will establish affiliated data flows for records collected in Scotland while developing added-value services bespoke to each sector and building the capacity and capability of Recording Groups and Community Groups operating in Scotland. Once established, the National and Regional Hubs will each provide the resources to undertake Tranche 2 of the programme, supported by an enhanced NBN Trust and other key Super Partners.

Throughout the programme, effective stakeholder engagement will be essential to engender great cooperation and energy from everyone involved so that the desired transformation happens with ease. The culture of the Infrastructure will facilitate equality, diversity and inclusion so that the Infrastructure is relevant to, and welcoming for, all communities and people in Scotland. We will also seek to work with the digital technology sector to encourage innovation in the design of our digital services to realise maximum value for Service and Data Users. We will aim to create cross-sectoral partnerships to facilitate greater insights and learning from new partners who bring fresh perspectives.

## 4.4 What will happen as a result?

As a result of this programme, the following will be delivered:

### ► ***Deliverable 1 - Extension and enhancement of Regional Hub services for all of Scotland***

The current network of Local Environmental Records Centres (LERCs) will be extended to provide a core set of services to all sectors and Local Authorities. A number of Regional Hubs will be established with larger Hubs in more densely-populated areas (e.g. Aberdeen, Edinburgh, Inverness and Glasgow) and smaller Hubs - or 'outposts' - in less densely-populated areas (e.g. the Western Isles and Northern Isles and the far north and far south of Scotland).

### ► ***Deliverable 2 - Establishment of National Hub services and governance for Scotland***

A new National Hub for Scotland will be established to provide core services on a 'once for Scotland' basis. These services will include the provision of national governance and support for affiliated Regional Hub partners; development of added-value data products and services; liaison with, and affiliation of, Data Providers from all sectors and environments; and, administration and disbursement of the Community Fund.

### ► ***Deliverable 3 - Enhancement of UK Hub capacity and capabilities***

The capacity and capabilities of the NBN Trust will be enhanced to facilitate an improved NBN Atlas database and portal for use in Scotland (with common standards and full integration with GBIF). An improved set of tools with which to curate, aggregate, analyse and use biological records will enable Data and Service Providers to contribute and gain new insights for environmental decision-making in Scotland and beyond.

### ► ***Deliverable 4 - Enhancement of Super Partner capacity and capabilities***

The capacity and capabilities of Super Partners providing essential services in Scotland (e.g. the National Museum of Scotland, the Royal Botanic Garden Edinburgh, the UK Species Inventory, major national recording schemes, the Biological Records Centre, iRecord and Recorder 6) will be enhanced to ensure their sustainability and to maximise their value, reach and use in Scotland.

### ► ***Deliverable 5 - Establishment of a Community Fund for Verifiers, Recorders and Community Groups***

A Community Fund will be established to sponsor the Verifiers (including Collection Curators), Recorders and Groups involved in biological recording in Scotland. This fund will enable Verifiers, Recorders and Group Leaders to access transport, training, equipment and expertise to help develop and share confidence and skills in biological recording, particularly for deprived or remote communities and under-recorded sites or species.

### ► ***Deliverable 6 - Improved data flows to provide an open biodiversity evidence base for Scotland***

Data flows in Scotland will be improved through the affiliation and promotion of data flow pathways for the submission of biological records from every sector (Public, Private, Third and Academic) and environment (marine, freshwater and terrestrial). Liaison with Data Providers and other outreach (and community funding stipulations) will facilitate the open provision of biological records wherever possible.

### ► ***Deliverable 7 - Added-value services and products for each sector and environment***

Once 1-6 are sufficiently in place, the programme will facilitate each component of the Infrastructure to focus on the development and use of added-value services for all sectors and environments. Collaboration and innovation will be fostered to stimulate new and improved products and services with sustainable commercial value that in future could offset operating costs while engendering new insights and efficiencies.

Transformation of the Infrastructure depends on all of these deliverables being in place. The main risk to their delivery relates to our ability to secure sufficient funding to undertake the programme in full. The SBIF community will work together to mitigate this and other risks and to overcome any issues that could be encountered during implementation. Progress against these deliverables will be monitored with appropriate actions undertaken to ensure that the programme remains on track.

Achieving all of the above deliverables will enable the realisation of a suite of benefits for Scotland outlined below. In summary, these benefits include: an open biodiversity evidence base for Scotland, growing public engagement and participation (leading to greater community empowerment, improved public health and the mainstreaming of biodiversity), greater insight and improved environmental decision-making (leading to an enhanced ecosystem resilience and a sustainable economy).

Together, these benefits make it possible for Scotland to tackle the biodiversity and climate crises with appropriate evidence, optimism and confidence.

Six direct benefits are expected from successful delivery of this investment programme:

	DIRECT BENEFITS *	KEY MEASURES **
1.	<b>OPENING UP BIODIVERSITY DATA FOR EVERYONE</b> All Data Users have open access to a comprehensive biodiversity evidence base; Recorders and Data Providers are confident in how and where to submit their records.	<ul style="list-style-type: none"> <li>Number of datasets and records that are openly available by sector and environment</li> <li>Number of affiliated data flows and Data Providers per sector and environment</li> </ul>
2.	<b>OPTIMISING INFRASTRUCTURE EFFICIENCY &amp; SUSTAINABILITY</b> Data Users can access data with greater efficiency; key players in the Infrastructure have sufficient resources to operate and improve the provision and relevance of services across Scotland.	<ul style="list-style-type: none"> <li>Proportion of UK, National and Regional Hubs and Super Partners with sufficient sustainable funding</li> <li>Proportion of Infrastructure income generated from added-value services</li> </ul>
3.	<b>GROWING PARTICIPATION, SKILLS &amp; CONFIDENCE</b> Public outreach engages more people and provides accessible training and support. With more people participating, pressure on key volunteers reduces, recording groups are easier to run and data gaps reduce.	<ul style="list-style-type: none"> <li>Number of Recorders, Verifiers, Collection Curators, Recording Group Operators, Recording Scheme Operators in Scotland per sector/environment</li> <li>Number of training courses and trainees, events and event attendees per Hub/per year/per taxon group</li> </ul>
4.	<b>DEVELOPING CAPABILITIES &amp; INNOVATING</b> The taxonomic and technical capabilities of the Infrastructure increase and collaboration with experts from across the Digital sector facilitates greater innovation.	<ul style="list-style-type: none"> <li>Number of projects in which Infrastructure staff and volunteers collaborate to develop new capabilities</li> <li>Number of new added-value data products and services available through the Infrastructure</li> </ul>
5.	<b>GREATER INSIGHTS &amp; IMPROVED DECISION-MAKING</b> Bespoke services and products tailored for each purpose provide new insights that mainstream biodiversity and engender proper regard for biodiversity duty.	<ul style="list-style-type: none"> <li>Proportion of Public Bodies using the biodiversity evidence base effectively for their biodiversity duty</li> <li>Number of environmental subsidies using biodiversity data to inform their design and monitor their impact</li> </ul>
6.	<b>ENHANCING ECOSYSTEM RESILIENCE &amp; AVOIDING NUGATORY SPEND</b> Early detection of, and insight into, environmental issues allows land and sea managers to respond and to avoid the costs of poor/late interventions.	<ul style="list-style-type: none"> <li>Proportion of designated sites that are in favourable condition</li> <li>Proportion of species that are 'Critically Endangered, Endangered or Vulnerable' (as per the IUCN Red List)</li> </ul>

Four wider benefits will be facilitated by those above to provide further value for Scotland:

	WIDER BENEFITS *	KEY MEASURES **
7.	<b>MAINSTREAMING BIODIVERSITY</b> Scottish Government policy and public practice takes biodiversity into account.	<ul style="list-style-type: none"> <li>Proportion of the direct benefits above whose measures meet or exceed their targets by 2030</li> </ul>
8.	<b>GLOBAL LEADERSHIP &amp; IMPACT</b> Scotland is a global leader for biodiversity through the realisation of our National Outcomes, the UN Sustainable Development Goals and the Aichi Targets.	<ul style="list-style-type: none"> <li>National Indicator Performance for 'Environment' (including relevant Sustainable Development Goals)</li> <li>Scotland's contribution to global biodiversity targets (such as the Aichi Targets and similar in future)</li> </ul>
9.	<b>COMMUNITY EMPOWERMENT &amp; PUBLIC HEALTH</b> The Infrastructure facilitates public access to biodiversity information and the outdoors, which empowers communities and connects people with nature.	<ul style="list-style-type: none"> <li>Proportion of local communities using biological records in decision-making (e.g. development planning)</li> <li>Trends in Scottish Government headline indicators of healthy life expectancy and mental wellbeing of adults</li> </ul>
10.	<b>ENCOURAGING WILDLIFE TOURISM &amp; A SUSTAINABLE ECONOMY</b> The Infrastructure facilitates the protection and knowledge of iconic sites and species necessary for wildlife tourism and effective development planning (through well-informed and well-designed projects).	<ul style="list-style-type: none"> <li>Total spend by wildlife visitors in Scotland per year</li> <li>Public sector spend on biodiversity conservation both in total and as a percentage of GDP</li> <li>Proportion of developments achieving a net gain for biodiversity and no net loss</li> </ul>

\* For more detail please see pages 36-37 in the final report of the SBIF Review      \*\* Measures to be confirmed in Tranche 1

## 5. Programme outline

### 5.1 Programme objectives and projects

To achieve the outcomes above, this investment programme has the following six objectives and key results:

	OBJECTIVE	KEY RESULTS
1.	To establish and embed the preferred models for data flow, service provision, governance and funding to achieve the SBIF Vision.	<ul style="list-style-type: none"> <li>Number of affiliated Data Providers increases</li> <li>Proportion of affiliated Regional Hubs offering all services increases</li> <li>Proportion of Facilitators/Service Providers with sufficient funding increases</li> <li>Level of income from added-value services begins to offset core costs</li> </ul>
2.	To provide consistent high quality services equally accessible to all public bodies in support of their statutory biodiversity duties and strategic goals.	<ul style="list-style-type: none"> <li>Proportion of Scottish Public Bodies able to access services increases</li> <li>Level of use of each service by each Public Body increases</li> <li>Level of satisfaction of Public Body Service Users increases</li> <li>Number of statutory processes informed by biodiversity data increases</li> </ul>
3.	To better facilitate and grow the network of volunteer Recorders and Verifiers who are actively supporting, or being supported by, the infrastructure.	<ul style="list-style-type: none"> <li>Number of Recorders and Verifiers volunteering in Scotland increases</li> <li>Level of Recorder and Verifier satisfaction increases</li> <li>Proportion of Recorders and Verifiers receiving support/training increases</li> </ul>
4.	To better facilitate the open provision of biological records from all sectors for onward dissemination via the NBN Atlas as the single central data repository.	<ul style="list-style-type: none"> <li>Level of contact with each sector in Scotland increases</li> <li>Number of case studies of open data per sector increases</li> <li>Proportion of Data Providers with sufficient funding increases</li> <li>Number of open datasets available via the NBN Atlas increases</li> </ul>
5.	To establish a feedback mechanism for Recorders and Data Providers to showcase the use of their records and value of their contribution.	<ul style="list-style-type: none"> <li>Rate of innovation to develop an appropriate mechanism increases</li> <li>Number of Recorders and Data Providers receiving feedback increases</li> </ul>
6.	To be universally recognised and valued for being the definitive provider of biological records in Scotland as a common evidence base for all purposes, sectors and generations.	<ul style="list-style-type: none"> <li>Level of awareness of the infrastructure in each sector increases</li> <li>Level of satisfaction of each Data User/Data Developer increases</li> <li>Level of use of the infrastructure by each Data User increases</li> <li>Number of Service Users and Data Users in each sector increases</li> </ul>

To achieve the above objectives, two tranches each with three projects are proposed:

TRANCHE	PROJECT	KEY OUTPUTS
1.	1.1 Establishing programme feasibility and capabilities (Project Lead: SNH-hosted Programme Team)	<ul style="list-style-type: none"> <li>Detailed programme plan with accurate costings and timings</li> <li>Detailed risks and opportunities</li> <li>Detailed communications plan and stakeholder analysis</li> <li>Consent from affected parties</li> <li>Programme and project teams ready to undertake work</li> </ul>
	1.2 Establishing a National Hub for Scotland and affiliated Regional Hubs (Project Lead: SNH-hosted Programme Team)	<ul style="list-style-type: none"> <li>Detailed project plan with accurate costings and timings</li> <li>Detailed communications plan and stakeholder analysis</li> <li>National Hub team, tools and services</li> <li>Regional Hub teams, tools and services</li> <li>Community fund processes and financial controls</li> </ul>
	1.3 Capacity building with UK Facilitators and core Service Providers (i.e. Super Partners) (Project Lead: National Hub)	<ul style="list-style-type: none"> <li>Detailed project plan with accurate costings and timings</li> <li>Detailed communications plan and stakeholder analysis</li> <li>Road map for core capabilities, platforms, products, services and portals</li> <li>Register of affiliated Service Providers and services/public goods</li> </ul>
2.	2.1 Sector awareness, data flow and capability building (Project Lead: National Hub)	<ul style="list-style-type: none"> <li>Detailed project plan with accurate costings and timings</li> <li>Detailed communications plan and stakeholder analysis</li> <li>Showcase of affiliated data flows for each sector</li> <li>National and regional data products for key Data Users</li> <li>Centrally digitised records (for records of strategic/outreach value)</li> </ul>
	2.2 Value-added service development (Project Lead: National and Regional Hubs)	<ul style="list-style-type: none"> <li>Detailed project plan with accurate costings and timings</li> <li>Detailed communications plan and stakeholder analysis</li> <li>Requirements gathered for each service</li> <li>Service and subscription specifications and feasibility studies</li> <li>Innovative data products and digital services for key Service Users</li> </ul>
	2.3 Capacity building with recording groups and community groups (Project Lead: Regional Hubs)	<ul style="list-style-type: none"> <li>Detailed project plan with accurate costings and timings</li> <li>Detailed communications plan and stakeholder analysis</li> <li>Register of participating groups</li> <li>New capabilities and competencies of groups and individuals</li> </ul>



## 5.2 Programme milestones

- ▶ 2020 - MILESTONES 1: Tranche 1 projects funded and initiated
  - a. Decision by Scottish Government to fund this investment programme confirmed in principle
  - b. Funding for Year 1 released, Programme Team appointed and Project 1.1 initiated
  - c. Project 1.2 initiated and first funding for NBN Trust, BRC, NMS and UKSI released
  - d. Marine sector stakeholder engagement underway
- ▶ 2021 - MILESTONE 2: National and Regional Hubs and Super Partner Fund established
  - a. Project 1.3 initiated and first applications to the Super Partner fund approved
  - b. All Regional Hub partnerships agreed and funded; first 'all Scotland' regional service and branding established
  - c. Most National Hub staff appointed and first national service and branding established
- ▶ 2022 - MILESTONE 3: New NBN Atlas and Recorder 6 functionality and Community Fund piloted
  - a. All National Hub staff appointed and new NBN Atlas and Recorder 6 functionality for Scotland is in development
  - b. First applications to the pilot scheme for the Community fund are approved
  - c. Projects 1.2 and 1.3 completed; Projects 2.1 and 2.2 initiated
- ▶ 2023 - MILESTONE 4: New Super Partner capabilities and first data flows affiliated
  - a. First integrated systems from Super Partners are available following investment from the Super Partner Fund
  - b. First biological records collected and verified following investment from the Community Fund
  - c. First data flows and data providers affiliated to the Infrastructure and publicly promoted
- ▶ 2024 - MILESTONE 5: First new data products/services established and SBIF superseded
  - a. New data products and services established for each sector (Public, Private, Academic and Third) and each environment (terrestrial, freshwater and marine)
  - b. The National Hub's Stakeholder Group supersedes the SBIF Advisory Group once Tranche 1 is completed
- ▶ 2025 - MILESTONE 6: First paid for value-added service goes live
  - a. Infrastructure scorecard and dashboards in use for viewing service performance and progress against outcomes
- ▶ 2026 - MILESTONE 7: Programme reviewed and closed
- ▶ 2030 - MILESTONE 8: All benefits realised from complete transformation of the Infrastructure

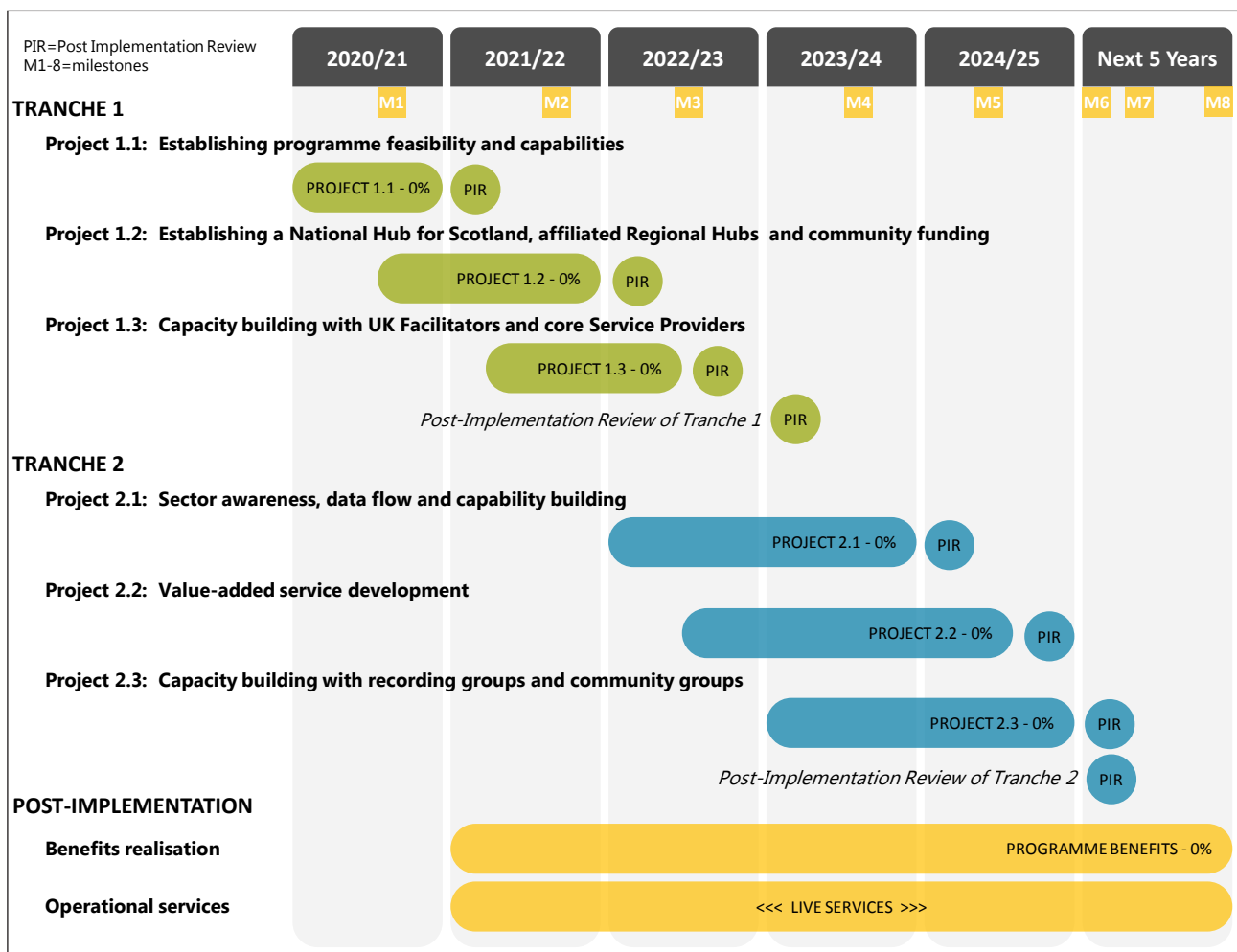


Figure 2: Phasing of Programme Milestones, Tranches and Projects over five years from 2020

## 5.3 Programme management

### *Quality*

Quality of the services and data products created will be assured through the use of effective service and product design and ownership. Service and Product Owners within the National and Regional Hubs will create a knowledge sharing community to access and share best practice within and beyond the Infrastructure. Post-implementation reviews at the end of each project and tranche will invite all stakeholders to participate so that we can appraise and celebrate our progress.

The benefits being facilitated by public funding of the National and Regional Hubs will be monitored and reported annually by the Programme Team for the duration of the programme as a condition of funding. Once it is established, the National Hub will compile an annual report describing the performance of the Infrastructure using a 'balanced scorecard' approach (or equivalent).

### *Budget control and risk management*

The Programme Manager will be responsible for day to day budget management on behalf of the Programme Team, with a summary of income and expenditure provided to the Programme Board through programme highlight reports. The organisation hosting the Programme Team will receive and manage funds to cover the staff and office costs for the Programme for the first year of the Programme. This host organisation will provide banking and financial reporting support so that all financial transactions are accounted for with appropriate controls. The Programme Team and its budget will transfer to the National Hub (or its host organisation if more appropriate - this will be explored and confirmed during Project 1.1) once the National Hub has been established and is ready to support the Programme Team.

The Senior Responsible Owner appointed by Scottish Government will approve the programme budget and any changes in scope or time scale. As the costings for the programme (outlined in Sections 6.1 and 6.2) have been compiled using estimates provided in the final report of the SBIF Review, these will be revised during Project 1.1 which will prepare more accurate costings for each project in the programme.

Programme risks will be managed by the Programme Team and escalated by exception to the Programme Board and Senior Responsible Owner as necessary. Once established, the National and Regional Hubs and their Steering Groups or Trustees will manage their own operating risks. An appropriate risk management framework will be used to ensure that risk is appropriately controlled to keep residual risk at a low level at all times. The Programme Team and National Hub will invest time in understanding the General Data Protection Regulations and other relevant legal or regulatory requirements that need to be considered when establishing or working with the National and Regional Hubs and Super Partners or any other organisations or the public.

The biggest risk for the programme is the risk of not securing sufficient public funding to sustain the core infrastructure until such funding can be offset by income generated from added-value services. There is also a risk that some Data Providers may not wish to make their datasets openly available (or that they only do so in return for a proportion of the income generated when their data are used in added-value services). In this case, the level of income that can be used to cover the core operating costs of the Infrastructure may be reduced. During the Programme, the increased level of resource for Regional Hubs should mitigate needing their time in the programme - there should be sufficient capacity for both operating and developing services.

In establishing a new National Hub for Scotland, there is also a risk that the first staff appointed are inexperienced in operating 'as a business'. To mitigate this risk we will seek advice from the NBN Trust, other Super Partners and other similar 'businesses' such as the Local Environmental Record Centres already operating in Scotland and beyond. We will also seek to appoint experienced staff in key roles. In addition, there is a risk that if the National Hub is a small independent organisation, its cash flow may be problematic if funding is provided in arrears.

### *Programme governance*

The Senior Responsible Owner appointed by Scottish Government will act as the Programme Executive until the Head of the National Hub is appointed. Once in post, the Head of the National Hub could take on this role. The Programme Executive will chair the Programme Board and direct the Programme Team (outlined in Section 5.3), escalating issues by exception to the Senior Responsible Owner. The Programme Team will be responsible for assessing and managing stakeholders and for all programme communications.

The SBIF Advisory Group will meet quarterly to review progress and advise the Programme Board and Team until the end of Tranche 1. Members of this group will receive programme highlight reports and will be invited to participate in post-implementation reviews for each project within the first tranche of the programme.

Any employment issues relating to the Programme Team will be handled by the Team's host organisation. Any employment or partnership issues relating to the National or Regional Hubs will be handled by the National Hub (with the assistance of its host organisation if their hosting arrangement includes the provision of HR support).

### Programme Board

A small Programme Board comprising the roles listed below, chaired by the Programme Executive, will be required to oversee the programme comprising the roles listed below. Membership of the Programme Board will be confirmed in discussion with the SBIF Advisory Group and the Senior Responsible Owner.

PROGRAMME BOARD ROLES	ROLE HOLDER	NAME
Senior Responsible Owner	Appointed by Scottish Government	to be confirmed
Programme Executive (chair)	Head of National Hub	to be confirmed
Senior Supplier	CEO of NBN Trust	Jo Judge
Senior Supplier	Regional Hubs Representative	to be confirmed
Senior Supplier	Super Partners Representative	to be confirmed
Senior User	SBIF Representative	Ellen Wilson
Senior User	BRISC Representative	to be confirmed

### Programme Team

A dedicated Programme Team comprising the five roles highlighted in blue in the first column below will be required, hosted in an organisation that can provide back office support and office facilities. It is suggested that five National Hub roles (highlighted in blue in the first column) are appointed at the same time to provide the capacity and capabilities needed to resource programme delivery from the outset.

Subject to confirmation in Projects 1.1 and 1.2 that these roles are the most appropriate roles for the National Hub, the remaining roles listed below will be appointed by the Head of the National Hub during Project 1.2. Other Programme and Project Team members will be included from the National and Regional Hubs and other stakeholders as the programme progresses.

It is recommended that the 'SBIF Development Officer' role funded by SNH is renamed 'Communications Officer' and that the current role holder should join the Programme Team to facilitate ongoing liaison and communications with the SBIF Advisory Group and other stakeholders.

It is recognised that the SBIF Review did not fully engage with the Marine Sector and so the Programme Team will include a Marine Sector Liaison Officer (based within the Marine Team in SNH) to engender active engagement with the Marine Sector.

PROGRAMME TEAM ROLES	ROLE PURPOSE	NATIONAL HUB ROLES	ROLE PURPOSE
Programme Manager	Management and communication of the programme and projects; liaison with stakeholders and analysis of requirements	Head of National Hub	National Hub leadership
Project Manager		Finance & Performance Manager	Management of National Hub and Community Fund finances, administration and reporting
Communications Officer		Administrator	
Business Analyst		Grants Officer	
Marine Sector Liaison Officer		Partner Services Manager	Provision of support to Regional Hubs and system management of a national portal for data management
NOTE:  1. This list of National Hub roles will be fully considered and confirmed during Project 1.1.  2. These roles, and those funded through the Regional Hubs, will be defined in consultation with the Scottish LERCs also during Project 1.1.		Education & Events Officer	Sector liaison, service development, business partnering and capability building to meet sector needs
		GIS & Data System Manager	
		Digital Services Manager	Development of new data products and insights for Regional Hubs and Service Users; ownership of a national strategy for mobilising data
		Comm' & Public Sector Liaison Officer	
		3rd & Academic Sector Liaison Officer	
		Data & Product Development Manager	
	Data & Insights Analyst		
	Data Mobilisation Officer		

## 6. Financial and environmental impacts

### 6.1 Expected financial impact during the programme

Our best estimates of the financial impact of the programme are presented in Figure 3. At c. £3 million per annum, these costs are similar in scale to those estimated in the original SBIF Review. To improve our estimates, Project 1.1 will provide exact costings for the National and Regional Hubs while Project 2.2 will estimate and facilitate the income generation that can be realised after the programme has completed.

The costings include an element to facilitate Marine Sector engagement (through the Marine Sector Liaison Officer which is included as a member of the Programme Team for five years). N.B.: The costings do not yet include an amount for inflation nor do they take into account that some costs may be offset by in-kind contributions (e.g. provision of National or Regional Hub staff or office facilities for their use).

The total cost of the programme - including the costs of a Programme Team and allowing between 10% (on National and Regional Hub costs) and 25% (on Programme Team costs) for contingencies such as the need for legal advice - is expected to be **£15.2 million over five years** or c. **£3.05 million per annum**.

### 6.2 Expected financial impact after the programme

On completion of the programme, the costs of a Programme Team cease and the costs of the Super Partner Fund continue to be at a lower level. The total annual costs of the Infrastructure after the programme is therefore expected to be **£2,876,745 per annum** before inflation. It is likely that these costs will be offset by any income that can be realised through the added-value services provided by the Regional and National Hubs as these mature and develop an increasing customer base.

### 6.3 Phasing of costs

For simplicity, the timing of expenditure has been designed to spread the costs evenly over five years. Super Partner funding should be front-loaded to facilitate major investment to enhance their capability and integration at the earliest opportunity. Community funding should begin mid-way through the programme, with lower costs for an initial pilot in Year 3 then rising to the full costs from Year 4. National Hub costs should be lower in the early years of the programme with only 4 FTE staff in Year 1, 9 FTE staff in Year 2 and all 13 FTE staff from Year 3 onwards. Regional Hub costs arise sooner with 9 FTE staff in Year 1 and all 26 FTE staff from Year 2 onwards. Programme Team costs should be level throughout the programme.

There is a need to proceed quickly at scale to maintain the momentum of the SBIF community and vision - or the transformation sought will be impossible to realise. In this eventuality, new leadership will be required.

### 6.4 Funding sources

Scottish Government will need to provide the majority of the funding for the Programme (and for the ongoing costs of the Infrastructure after the programme) because with open access to biodiversity data, the data are non-excludable, i.e. non-paying users cannot be prevented from accessing them. The Infrastructure is therefore a public good and so dependent on public funding. However, in Years 1 and 2 of the programme the National Hub Grants Officer should develop cross-sectoral applications for grant funding to transform the Infrastructure using public funding to match and lever contributions from other sectors. As the total amount of funding needed is substantial it is not likely to be available through SNH's current resources; the following suggestions for funding sources should therefore be explored and used to best effect:

- *SUGGESTION 1: Ring-fencing £3 million per annum plus inflation from within Pillar 1 or Pillar 2 of the CAP payments (or equivalent in future) received in Scotland to cover the annual operating costs of the infrastructure. Given that agriculture is the biggest driver of biodiversity loss, this option gains the industry access to the evidence needed to understand its impact on biodiversity and to increase its resilience to climate change while fulfilling a key principle of the SBIF Review (that the greatest burden of funding should be placed on those whose activities are key drivers of biodiversity loss).*
- *SUGGESTION 2: Hypothecating £3 million per annum plus inflation from environmental taxation levied in Scotland to cover the annual operating costs of the infrastructure. Given that the Office for National Statistics states that "these taxes are designed to promote environmentally positive behaviour, reduce damaging effects on the environment and generate revenue that can potentially be used to promote further environmental protection", this option fully accomplishes this purpose.*
- *SUGGESTION 3: Ranking and divestment of the 'worst performing' payments for public goods (in terms of their environmental, carbon or biodiversity footprint) so that £3 million per annum plus inflation can be swapped to investments that remedy, rather than worsen, the climate and biodiversity crises.*

	2020/21	2021/22	2022/23	2023/24	2024/25	TOTAL Programme	Ongoing Annually
<b>INCOME</b>							
Regional income <sup>1</sup>	£0	£0	£0	£0	£0	£0	£0
Cost of income generation <sup>2</sup>	£0	£0	£0	£0	£0	£0	£0
National income <sup>3</sup>	£0	£0	£0	£0	£0	£0	£0
Cost of income generation <sup>4</sup>	£0	£0	£0	£0	£0	£0	£0
<b>NET INCOME</b>	£0	£0	£0	£0	£0	£0	£0
<b>EXPENDITURE</b>							
Programme Team costs <sup>5</sup>	£301,063	£301,063	£301,063	£301,063	£301,063	£1,505,313	£0
Regional Hub costs <sup>6</sup>	£486,915	£1,339,910	£1,339,910	£1,339,910	£1,339,910	£5,846,555	£1,339,910
National Hub costs <sup>7</sup>	£261,140	£517,495	£736,835	£736,835	£736,835	£2,989,140	£736,835
Community Fund costs <sup>8</sup>	£0	£0	£75,000	£225,000	£225,000	£525,000	£225,000
Super Partner Fund costs <sup>9</sup>	£1,325,000	£1,075,000	£825,000	£575,000	£575,000	£4,375,000	£575,000
<b>TOTAL EXPENDITURE</b>	£2,325,948	£3,185,298	£3,229,638	£3,129,638	£3,129,638	£15,000,158	£2,876,745
<b>PROGRAMME VALUE</b>							
Net Income – Total Expenditure	–£2,374,118	–£3,233,468	–£3,277,808	–£3,177,808	–£3,177,808	–£15,241,008	–£2,876,745
Cost savings <sup>10</sup>	–£291,767	–£291,767	–£291,767	–£291,767	–£291,767	–£1,458,835	–£291,767
<b>NET PROGRAMME VALUE (including cost savings)</b>	–£2,082,351	–£2,941,701	–£2,986,041	–£2,886,041	–£2,886,041	–£13,782,173	–£2,584,978
<b>NOTES</b>							
<p><b>1-4 Income</b> Until Project 1.2 and 2.2 have completed, it is not possible to estimate the income (nor its costs of generation) that may be achieved during and following the programme. Worst case scenario is that income is low or zero; best case scenario is that on average, the income raised through provision of added-value services to the Private, Academic, Public and Third Sectors could be in excess of an average of £25,000 per Local Authority area per annum i.e. £800,000 across Scotland per annum (or c. 28% of the operating costs of the Infrastructure).</p> <p><b>5 Programme Team</b> costs arise from salary and office overheads plus <b>25% contingency</b> (in case of legal fees etc) for 5 roles: Programme Manager, Project Manager, Business Analyst, Communications Officer, Marine Sector Liaison Officer. Programme Team costs were not within the £2.865 million annual costs estimated by the original SBIF Review as they are not part of the annual running costs of the Infrastructure after the life of the programme.</p> <p><b>6 Regional Hub</b> costs arise from salary and office overheads plus <b>10% contingency</b> for 26 roles: 5 x Regional Hub Managers, 5 x Community Liaison Officers, 8 x GIS &amp; Data Officers, 3 x Project Officers, 5 x Ecologist/Enquiries Officers. For the purposes of estimating these costs, it was assumed that three Regional Hubs would have 5 full time equivalent (FTE) staff (Aberdeen, Edinburgh and Glasgow), two would have 4 FTE staff (Inverness and Dumfries &amp; Galloway), two would have 1 FTE staff (Western Isles and National Parks) and two would have 0.5 FTE staff (Shetland and Orkney) - however the actual arrangements needed will be determined by Project 1.1 and 1.2.</p> <p><b>7 National Hub</b> costs arise from salary and office overheads plus <b>10% contingency</b> for 13 roles: Head of National Hub, Finance &amp; Performance Manager, Administrator, Grants Officer, Partner Services Manager, Education &amp; Events Officer, GIS &amp; Data System Manager, Digital Services Manager, Private &amp; Public Sector Liaison Officer, Third &amp; Academic Sector Officer, Data &amp; Product Development Manager, Data &amp; Insights Analyst, Data Mobilisation Officer.</p> <p><b>8 Community Fund</b> costs arise from the piloting (in Year 3 of the programme) and operation (from Year 4) of funding for Verifiers &amp; Collection Curators (Tier 1), Recorders &amp; Recording Groups (Tier 2) and Education &amp; Community Groups (Tier 3) with £25,000 per Tier for piloting and £75,000 per Tier thereafter.</p> <p><b>9 Super Partner Fund</b> costs arise from creation of a grants scheme to invest in Super Partners for the purposes of transforming their system capabilities and integration during the programme, alongside a low level of regular long term funding for the NBN Trust, the Biological Records Centre, the UK Species Inventory and the National Museum Scotland's natural history collection curators.</p> <p><b>10 Cost savings</b> Until the first tranche of projects is complete, it is not possible to estimate the costs savings that may be achieved during and following the programme. However, cost savings may come from current service level agreements between Local and National Authorities and Scottish LERCs as core services will become free at the point of use (these agreements were estimated to be worth approximately £291,767 in the original SBIF Review).</p>							

**Figure 3: Financial estimates and phasing**

## **6.5 Potential income generation**

It is unlikely that income from the Infrastructure can cover the costs of the programme in any significant way. However, in future years it is estimated that 25% to 33% of the Infrastructure's operating costs could be offset by income from added-value services. Projects 1.1 and 2.2 will be instrumental in understanding what level of income may be achieved. Accurate estimates can only be developed during the programme.

## **6.6 Financial impact of not undertaking the programme**

The financial impact of not undertaking the programme in the short term is that the costs outlined in Sections 6.1 and 6.2 are avoided. However, the longer this investment is deferred, the greater the cumulative risk, inefficiency and potential cost (direct and indirect) are compounded as current capabilities fail to meet increasingly urgent needs across all sectors for informed, timely and effective action to tackle the biodiversity crisis in the decade ahead.

Excellent environmental strategy, protection and decision-making should lead to public awareness and ecosystem resilience that lower the costs of climate change and reverse the loss of biodiversity. Our biodiversity underpins the sustainability of the Scottish economy and natural capital - from wildlife tourism to the direct harvesting of wild species for human consumption and the world-famous Scottish food and drink industry. An evidence base for effective environmental protection and decision-making is essential to safeguard its sustainability. The financial impact, therefore, of not undertaking the programme is likely to be many times greater than the investment to undertake it in full.

## **6.7 Expected environmental impact during the programme**

Through the outcomes delivered by this programme many positive benefits for biodiversity will be achieved. However, during the programme the Programme Team and new National and Regional Hubs will incur some negative environmental impacts through the carbon and other pollution emitted as a result of their travel, office and equipment use and digital information storage. Although these emissions will not be large they will contribute to the accumulation of carbon in our atmosphere and adverse climate change. Other than such carbon emissions, the programme will not have any significant direct environmental impacts nor will it trigger a legal requirement such as the need for an environmental impact assessment.

To minimise any adverse environmental impact, however insignificant, the Programme Team will seek to minimise their carbon footprint and will raise awareness of the need for action to reduce adverse environmental impacts - particularly for biodiversity. Travel undertaken for the programme will be monitored to track the level of our carbon emissions with the aim of minimising the level of carbon emitted per person during the programme. Green travel and clean energy options will be chosen wherever possible so that the programme and Infrastructure meet or exceed all legal requirements and relevant voluntary codes of practice.

## **6.8 Expected environmental impact after the programme**

On completion of the programme, although positive benefits for biodiversity will have begun to be achieved, the National and Regional Hubs will continue to emit carbon and other pollution as a result of travel, office and equipment use and digital information storage. Although these emissions will still not be large, they may further contribute to the accumulation of carbon in our atmosphere. Other than this, operation of the biological recording infrastructure in Scotland itself should have negligible adverse environmental impacts.

To minimise any adverse environmental impact arising from our National and Regional Hubs, Infrastructure staff will be based in host organisations whose environmental policies also meet or exceed all legal requirements and relevant voluntary codes of practice. Partnerships with organisations that are committed to protecting biodiversity and raising public awareness of the need to take action for nature will be welcomed. The purchasing policy for the programme will ensure that essential goods and services are only acquired from companies that visibly advocate switching to a low-carbon future and that actively reduce their impact on climate and biodiversity.

## **6.9 Environmental impact of not undertaking the programme**

The negative environmental impact of not undertaking the programme is significant. Without the programme, Scotland will not be able to transform its biological recording infrastructure and so the benefits outlined in Section 4.4 will not be realised. The biodiversity evidence base and added-value services that would be generated by facilitating citizen science through the Infrastructure and aggregating volunteer-collected records with those from other sectors will not materialise. As a result, long-term environmental harm will be inevitable as we will not have the evidence base necessary to inform long term environmental strategy and effective environmental monitoring, protection and decision-making. It is difficult to make good decisions for biodiversity on protected areas or in local communities if there is insufficient evidence as to

what species may be present nor how they or their ecosystems may respond to land use or climate change.

In particular, the biological recording infrastructure is essential to develop and support the taxonomic experts of the future. Without sufficient investment, it is impossible to sustain the level of taxonomic knowledge needed to detect invasive species, to understand the impacts of land management interventions or to facilitate the mainstreaming of biodiversity across society. Ultimately, it is hard to care about and conserve biodiversity if people do not know what species and ecosystems occur nor how to record them.

## 7. Stakeholder engagement

### 7.1 Key stakeholders

A full stakeholder analysis will be undertaken to inform Project 1.1 and the preparation of stakeholder engagement and communications plans for each tranche and project.

Our key stakeholders can be categorised by those individuals and organisations with an interest in, or business need for, biodiversity data available for (or through) each environment, sector or role. Any individual or corporate stakeholder may be concerned with at least one (and often many more) of the following categories:

- ▶ *ENVIRONMENT: Terrestrial, Freshwater and Marine*
- ▶ *SECTOR: Public, Private, Academic and Third*
- ▶ *ROLE: Recorder, Verifier, Collection Curator, Recording Group Operator, Recording Scheme Operator, Data Provider, Data Developer, Data User, Service Provider, Service User, Facilitator and Funder*

Tranche 1 of the programme will focus on the community of individuals and organisations who provide services or facilitation that collectively provide the Infrastructure. This tranche will also be of interest for stakeholders in each environment and sector who will benefit from an effective Infrastructure being achieved. Tranche 2 of the programme will focus on the community of individuals and organisations involved in each environment and sector that provide or use the data and services being provided through the Infrastructure. Each of the twelve roles listed above will have a stake in the programme during both tranches.

The Programme Team and National Hub will host an annual online conference and webinars to report progress to the SBIF community and to showcase new ways of working and new data products and services as they materialise. Once the programme is initiated, the following stakeholders will be invited to comment on and improve the programme and project plans as these are developed for each tranche of the programme:

ORGANISATION	CONTACT
Scottish Government	Scottish Biodiversity Programme Manager and Project Leads
Scottish Natural Heritage	Ed Mackey/Iain Sime/Tom McKenna/Katie Gilham/Des Thompson
SBIF Advisory Group	Ellen Wilson/Rachel Tierney
Biological Recording in Scotland	Chris McNerny/Jonathan Willet
NBN Trust/Global Biodiversity Information Facility	Jo Judge/Wilma Harper
Biological Records Centre	David Roy
North East Scotland Biological Record Centre	Glenn Roberts
Fife Nature Records Centre	Lindsay Bamforth
Argyll Biological Records Centre	Carl Farmer
The Wildlife Information Centre	Natalie Harmsworth
Outer Hebrides Biological Recording Group	Christine Johnson
Highland Biological Recording Group	Stephen Moran
Orkney Wildlife and Records Centre	Sydney Gauld
Glasgow Museum Biological Records Centre	Richard Sutcliffe
Shetland Biological Records Centre	Paul Harvey
SW Scotland Environmental Information Centre	Mark Pollitt
Scottish Wildlife Trust	Gill Dowse
Association of Local Environmental Records Centres	Debs Muscat
Joint Nature Conservation Committee	Chris Cheffings
Convention of Scottish Local Authorities	Robert Nichol
Chartered Institute of Ecology & Env' Management	Annie Robinson/Claire Lacey
Royal Botanic Garden Edinburgh	Elsbeth Haston
London Natural History Museum/UK Species Inv.	Chris Raper
Scottish Environment LINK	Deborah Long/Craig Macadam/Paul Walton
Major National Recording Schemes	Scheme organisers

## 7.2 Communications

A communications plan will be developed by the Programme Team to identify the audiences with an interest in each project and tranche in the programme. Project 1.1 will consider how to brand the programme (and National and Regional Hubs) and if and when to end or blend with the SBIF brand currently in use. In the interim, communications will reflect the SBIF brand and any other branding necessary to also acknowledge all funders and partners, in particular the Scottish Local Environmental Records Centres, the NBN Trust, SBIF Advisory Group members including Scottish Natural Heritage. The following communication channels will be used to share progress updates and encourage dialogue during the programme:

- **Direct dialogue** - the Programme Team will make every effort to engage all stakeholders and so will visit and include highland and island communities as much as the urban and rural communities of the north east and south of Scotland. It will also engage with national and UK Super Partners.
- **National and Regional Hub web pages** - latest news, general information and links to national and regional services will be shared online via web pages maintained by each National and Regional Hub.
- **Programme and Project Highlight reports** - Programme and Project Teams will provide quarterly and monthly reports circulated direct to the Programme and Project Boards and SBIF Advisory Group.
- **Newsletters/social media/blogs** - the Programme's Communications Officer will prepare regular newsletter and social media content to reach as wide an audience as possible.
- **Focus groups and workshops** - the Programme Team will use focus groups and workshops within each project to engage with stakeholders, particularly for gathering requirements and developing services.
- **Public meetings and conferences** - the Programme Team will attend relevant meetings and conferences to present talks and posters to report progress and showcase ways that people can get involved.
- **Online webinars** - the Programme Team will hold webinars and an annual conference online using virtual conferencing tools to allow participation from any location.
- **Social events** - the Programme Team will encourage the National and Regional Hubs and Super Partners to invite each other to shared social events to build a sense of community across the partnership.

## 8. Next steps

### 8.1 For immediate action

- ▶ Scottish Government should decide whether to fund this five year investment programme and appoint a Senior Responsible Owner and Programme Board to oversee programme delivery.
- ▶ If Scottish Government decide to provide funding, then funding for Year 1 should be committed by the 1st April 2020 for release in two phases. Firstly, an amount of £1,049,118 to undertake Project 1.1 and initiate Project 1.2. Secondly, an amount of £1,325,000 to initiate Project 1.3 (subject to satisfactory completion of Project 1.1).

### 8.2 For consideration and decision by 31<sup>st</sup> December 2020

- ▶ Subject to satisfactory completion of Project 1.1 and other relevant considerations, Scottish Government should confirm its commitment to funding for Years 2-5 by the 31st December 2020 for release in annual phases as follows: Year 2 - £3,233,468, Year 3 - £3,277,808, Year 4 - £3,177,808 and Year 5 - £3,177,808 (N.B: these are indicative costings that will be confirmed during Project 1.1).
- ▶ Scottish Government should identify and implement a longer term mechanism to provide public funding for the ongoing operating costs of the Infrastructure after Year 5 of the programme - i.e. from April 2025.