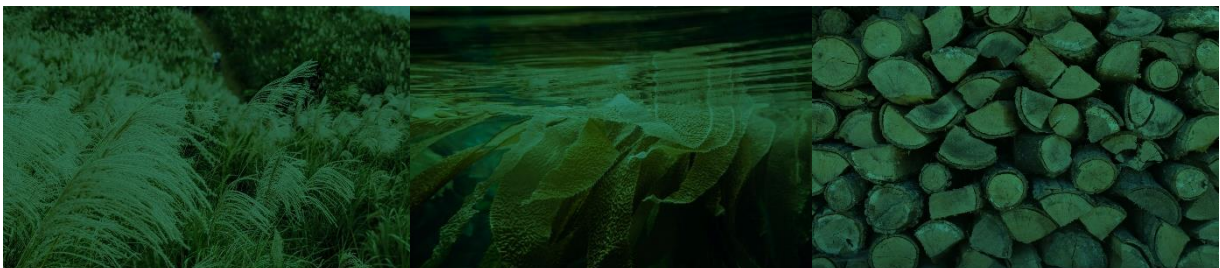




PromoBio

Phase 1 Report
February 2022
re:heat



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1 Vision

Our vision for PromoBio has been to create a vibrant and inclusive support ecosystem in which all Lot 1 projects can grow, collaborate and thrive, and contribute to a step-change in UK biomass production which goes well beyond individual project goals. Our vision is captured in Diagram 1 on the following page.

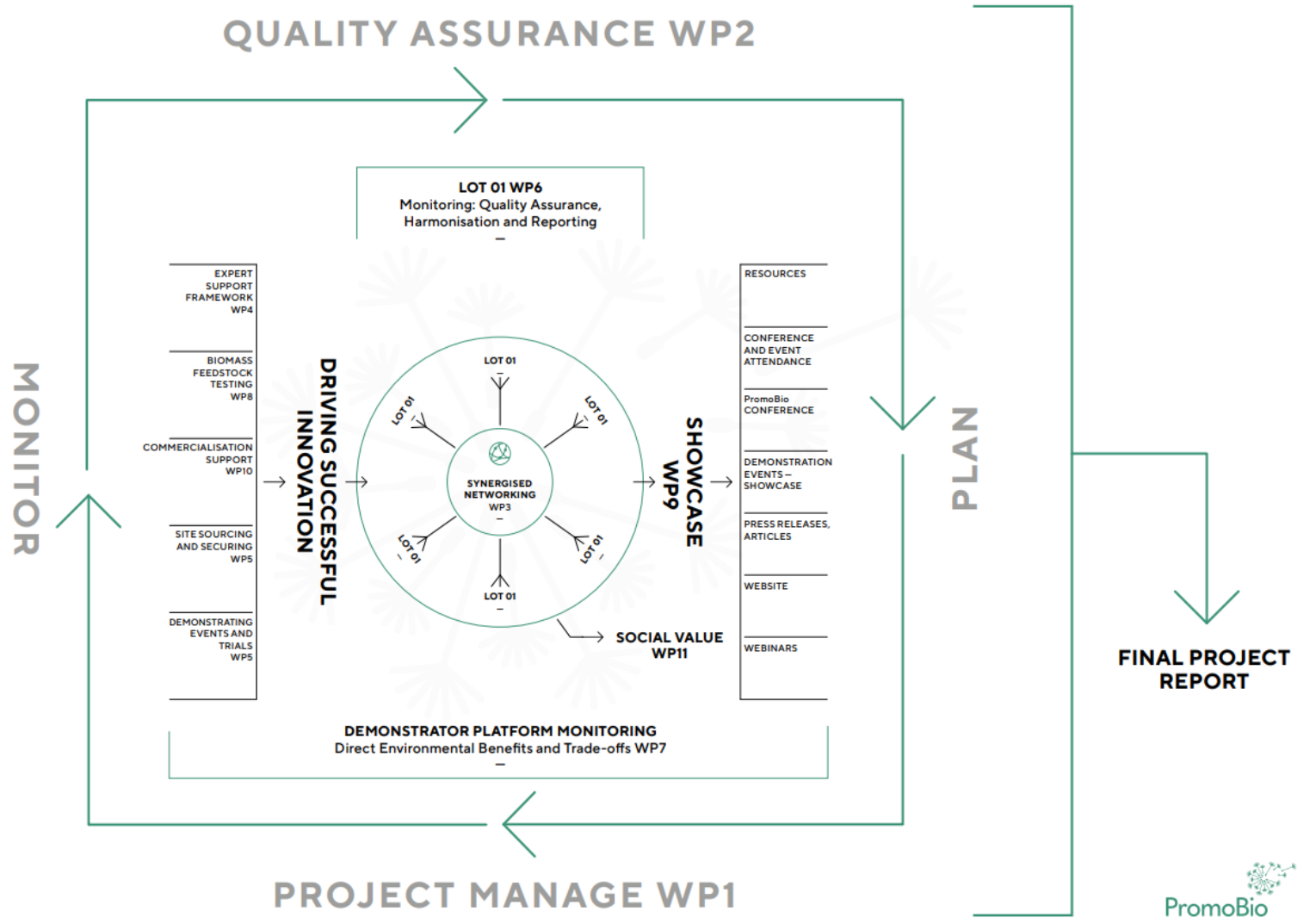
Aim:

The overall aim of the PromoBio multi-site demonstrator is to support innovation in the field of biomass feedstock production, and encourage collaboration as a means of assisting the scaling up of UK biomass production and supply to help meet Net Zero targets.

Objectives:

- Enable effective networking and collaboration between Lot 1 projects to share knowledge, identify synergies and opportunities for cross fertilisation, and deliver the maximum potential benefit of being part of an integrated innovation programme.
- Provide physical sites and resources for Lot 1 projects to effectively trial their innovations and improve understanding of their performance across the UK.
- Provide a platform for Lot 1 projects to trial and exhibit their innovation in different environments and working in conjunction with others through a comprehensive PromoBio Demonstration Events Programme.
- Disseminate key learnings, engage the UK biomass sector and wider value chain, demonstrate the value of Lot 1 Innovations, and promote the increased production of biomass feedstocks in the UK.
- Provide an overarching mechanism to quality assure, collate, and analyse the overall environmental impact of the Lot 1 trials and the multi-site demonstrator.
- Provide a broad range of scientific and industrial expertise to remove barriers, accelerate progress and maximise the contribution that innovations can make to delivering a step change in the UK biomass production.
- Provide a range of tailored commercialisation support which will assist technologies to reach TRL 8, ready for commercialisation (complementing provision through the Acceleration Support Service).
- Understand the composition of the biomass feedstocks produced and the resulting market opportunities and impacts on boosting the UK's biomass feedstock supply.
- Maximise opportunities PromoBio can offer to deliver social value and address the skills and labour gaps limiting the scaling up of production of biomass feedstocks.

Diagram 1: What is PromoBio



1.1 How PromoBio will help support the Biomass Feedstock Innovation Programme aims

PromoBio will enable the Programme to achieve its objectives by ensuring that all participating Lot 1 projects have access to the diversity of sites and facilities that they need to succeed; that a comprehensive promotion, networking and communication platform will be available to support them; and that assistance from an unrivalled team of biomass experts - drawn from academia and industry - will provide them with a wealth of technical, scientific and commercial advice.

Lot 1 projects are constrained to activities in the forest, field or open sea, whereas the utilisation of the resulting biomass feedstocks will invariably take place beyond these boundaries, and a primary objective of PromoBio is to act as the bridge between production and economic use.

Ultimately, PromoBio will ensure that the successful innovators will be comprehensively supported towards reaching TRL8, and will be encouraged to work together to deliver enhanced value and performance across the BFI Programme.

Through the BFI programme, Promobio will help to contribute towards the Net Zero Innovation portfolio targets and feed into reducing the costs of decarbonisation and ending the UK's contribution to climate change.

1.2 Principles of the Project Design

Inclusion of all successful Lot 1s:

Phase 1 (P1) attracted an impressively wide range of innovations and feedstocks. We believe that all these feedstocks have a role to play in meeting the UK's Net Zero ambitions. They all have the potential to create new economic opportunities in the low carbon economy, particularly in rural areas, and will assist with delivering the 'Levelling Up' agenda. This overarching principle has driven the design of PromoBio as a wholly inclusive environment where **all** Lot 1 projects are welcome and can be supported equally. Every work package has been designed to cope with this.

Lot 1 needs driven:

Our plans for how PromoBio will meet BEIS's objectives have changed and grown throughout P1. The design of Phase 2 (P2) is based on our in-depth, multi-stage research process which engaged with almost all the Lot 1 innovators. The interviews were a two-way process, and we followed up with a detailed transcript/report that outlined what we would provide in P2 to meet their needs. Without exception, we found they wanted external support with their project and welcomed the range of support we intended to offer. We have learned a great deal from our discussions, and gained insights into their innovations, organisational capabilities, and their aims and ambitions. This highlighted a wide range of support requirements, which have informed our project design.

Dealing with Uncertainty:

Due to the design of the procurement process, the nature, number and needs of the successful Lot 1 projects are not fully known. Coping with this uncertainty is fundamental to our design; every work package has been designed to accommodate a wide variety of types of project and the fine detail of each will be tailored to the needs of the successful projects during the Onboarding Phase. Further uncertainties are detailed within the relevant work packages.

Commercial concerns: It will be essential to identify any commercial concerns (actual and perceived conflicts of interest, IP protection and confidential information). All concerns will be entered into the RAID log and managed in accordance with our risk strategy. The RAID log is updated regularly and is a standing item at all team meetings to ensure all members are briefed and no inadvertent disclosures are made.

2 Coordination Plan

Our coordination plan will deliver the work programme in a coherent, functioning manner that is based on a partnership approach, not only between the PromoBio team and each Lot 1 organisation, but also between the Lot 1 projects.

The aim is to enable effective networking and collaboration between Lot 1 projects to share knowledge, identify synergies and opportunities for cross fertilisation, and deliver the maximum potential benefit of being part of a wider innovation programme. It will deliver on the BFI Programme aims of driving successful innovation and identifying opportunities for additional biomass feedstock innovation in the future.

We will strive to create an open and sharing network by drawing on our extensive experience of delivering multi-partner projects and the inclusion of multiple opportunities for formal and informal networking, particularly during the early phase of the project. Our experience has shown time and again that getting everyone in a room 'early doors' is of huge long-term benefit.

We will continue to deepen our understanding of participating Lot 1 project needs in order to tailor PromoBio activities to meet the needs of the Lot 1 organisations and their innovations and fit with their delivery timescales. This process began during the interviews in P1 and will continue through our coordination plan, so PromoBio can be responsive to needs as they arise.

This process will also enable us to identify synergies between Lot 1's and opportunities for cross fertilisation between projects. We will also ensure that we are fully aware of any commercial sensitivities.

2.1.1 Onboarding Phase

- 1) Commencement Calls: PromoBio core team with every successful project. Set out the support we can offer, gather information on their project and needs.
- 2) Confirm whether Lot 1 projects wish to work with us.
- 3) Kick-off Meeting, May 2022:

- What PromoBio can offer to Lot 1
 - Monitoring harmonisation workshop
 - Lot 1 project presentations
 - BEIS input
 - Informal networking opportunities
- 4) Complete needs analysis for each project to inform the finalisation of all PromoBio work packages, delivery timescales and budget.
 - 5) 'How we will work together' document for each project summarising PromoBio support and what the projects have committed to (e.g. number of demonstration events).

Should a project that has chosen not to engage with PromoBio change their mind and request support, we will offer an open-door policy wherever budget and resources allow.

2.1.2 Delivery Phase

- Dedicated single contact for all projects (PM) ensures projects know who to contact and a single person has an overview of all Lot 1 activity.
- Catch-up calls: PromoBio team catch-up with each Lot 1 project (two monthly). Discuss support needs and share useful advice / updates.
- Project Email Catchups: brief updates from all stakeholders who wish to share information related to their projects or the BFI programme.
- In-person networking and coordination meetings, all Lot 1 and PromoBio team (annual).
- Online Forum: Enable Lot 1 projects to ask questions or start discussions on an ad-hoc basis. provide advice to each other, share market information etc.
- Shared Drive: Provide access to any shared documents such as monitoring templates, PromoBio branded items etc.

Activities within other work packages will also offer opportunities for networking and identifying synergies.

3 Demonstrator Sites Network

3.1.1 Design Rationale

Our design will avoid duplication with Lot 1 trial activity and deliver added value. It is based on:

- Interview feedback that Lot 1 projects viewed trialling their innovation as a core element of their project but required support with sourcing sites.
- Clarification from BEIS that a "Lot 1 bid should be standalone" (i.e. include trialling their own innovation).
- Coping with uncertainty and flexibly supporting demonstration needs of all successful Lot 1 innovations.
- Interview feedback that field-based trials are not relevant for many innovations, but support is required to source other resources required for demonstration, e.g. food waste.

This information has confirmed the suitability of the approach set out in our P1 application and our P2 project will therefore show a clear linear continuation, as required by the Programme scope.

This design is flexible and responsive, *not* a static set of sites; during P2 we will recruit any additional sites as required for:

- Lot 1 projects that have not engaged during P1 (i.e. their needs were not known when when we sourced the existing site list but require support).
- Additional trial needs identified during the course of P2.
- Demonstration Events to meet needs of all successful Lot 1 projects.

3.2 Sourcing Sites

3.2.1 Aim

Flexibly source sites and resources: Improve understanding of Lot 1 innovations by enabling them to effectively trial their innovations, including in different environments across the UK.

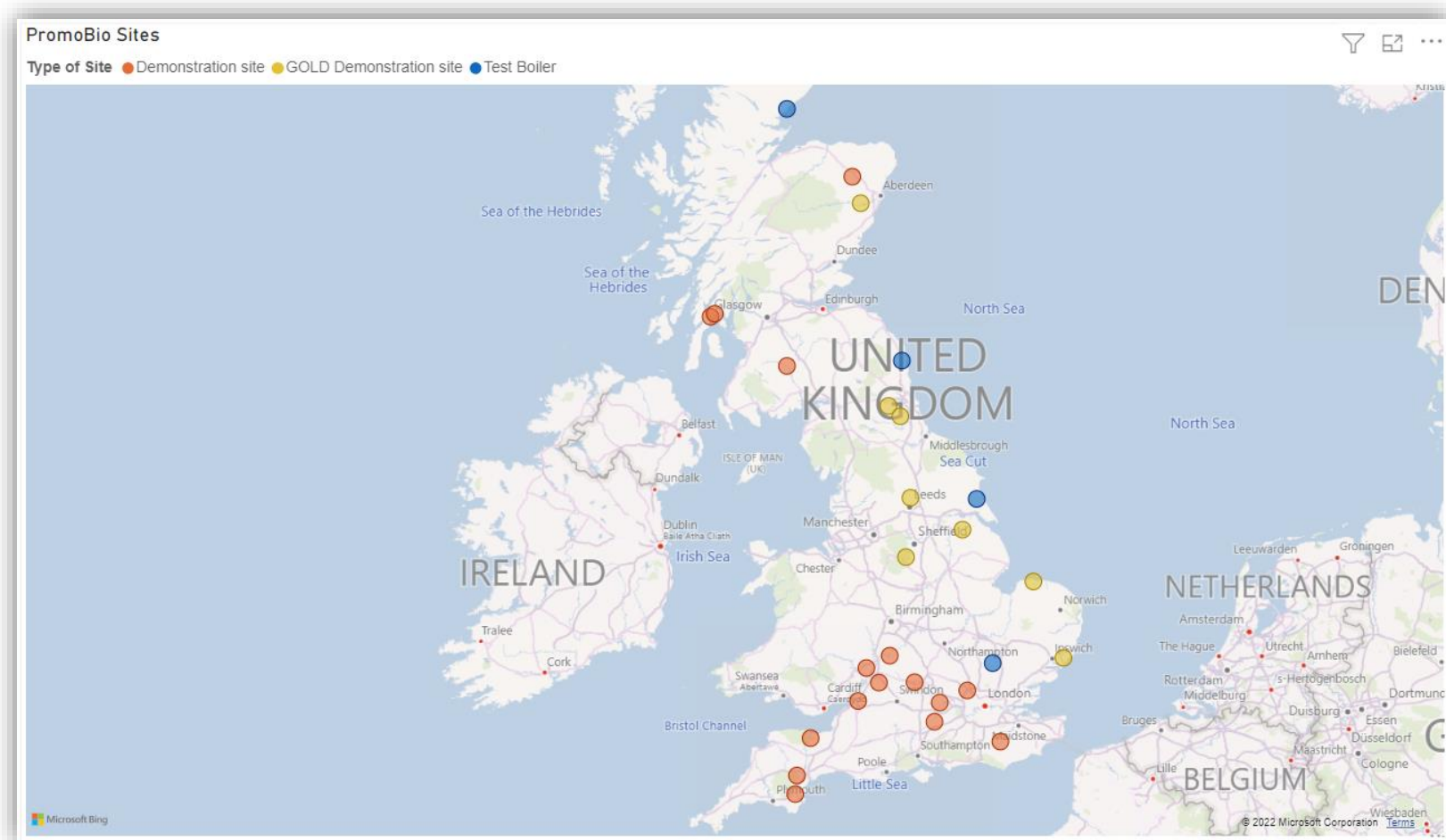
3.2.2 Phase 1 Activity

re:heat has used its excellent networks and contacts to create a network of 30+ sites across the UK with wide variety of environmental characteristics and resource types that will improve our understanding of the innovations and effectively showcase them (see Diagram 2). Our sub-contractor Ward Hadaway, have prepared a draft licence agreement for use of the sites. The rationale behind the site locations is based upon:

- Needs identified by Lot 1 projects, facilitating trialling in a range of environments across the UK.
- Delivering demonstration events across the UK and a variety of environments.
- Interest and enthusiasm by the landowners in driving forward the net zero agenda.

We have included a number of ‘gold standard’ sites with multiple land types and demonstration opportunities.

Diagram 2: PromoBio Demonstration Site Network Map



3.2.3 Plans for Phase 2

Strategy for mobilising the locations of the demonstrator platform:

- Engage with Lot 1 projects (section 2.1.1) to finalise detailed site/demonstration resource requirements:
 - Do their trial plans offer a relevant range of environments and UK coverage?
 - Timeframes for mobilisation of test site(s)?
- Can we provide suitable sites/resources from existing list to meet requirements?
 - If no, rapidly mobilise networks and source additional sites/resources to meet needs.
- During P1 Ward Hadaway prepared a draft Licence Agreement. PromoBio will act as broker between the landowner and the Lot 1 project to finalise terms of the licence with Ward Hadaway's support.
- Lot 1 project will then lead on delivery of their trial on the secured sites.

Ensure usability in the timeframe of P2

Our process of sourcing sites is rapid and targeted. At the outset of P2, we will identify projects that urgently require sites and prioritise allocating sites that are available immediately, beginning within days of P2 commencing.

Gaps in understanding

The Onboarding process will fill gaps in our understanding:

Some projects chose not to engage with PromoBio during P1; consequently, their demonstration site/resource requirements are not known. Our process is designed to be flexible and can rapidly respond to any needs identified during the onboarding.

Opportunities to trial in conjunction: During the P1 interviews all projects were asked if there were any other projects they would like to work with. Some projects had clear ideas, but others felt they did not have enough understanding of other projects based on information currently available. During the needs assessment we will undertake a mapping exercise to identify opportunities to trial in conjunction. Where feasible, this will be built into design of our Demonstration Events programme.

3.3 Demonstration Events Programme

3.3.1 Aim

Deliver a Comprehensive Demonstration Events Programme to showcase Lot 1 innovations and to trial in different environments and in conjunction with each other.

A full Demonstration Events Plan was produced during P1.

In-depth Single Innovation Demonstration Days

- Location: Lot 1 demonstration sites.
- Half-day field events (two events per day).
- Format and content specific to each Lot 1 project; an example event could include:
 - Physical demonstration of innovation/guided tour of the test site.

- Presentations about the innovation, disseminating key learnings.
- Presentations from other speakers to assist with the uptake of that innovation or feedstock and breakdown barriers.
- Opportunities for questions, networking and feedback.
- Attendees per event: 100 (50 morning, 50 afternoon).
- Proposed number of events (assuming 6 Lot 1 projects proceed to P2):
 - Year 1: 6 (1 per project 6).
 - Year 2: 12 (2 per project).
 - Year 3: 24 (4 per project).

Multi-Innovation Field Days

- Each event will bring together several innovations around a theme e.g. Energy crops: Species selection and planting.
- Where relevant, they will include trialling innovations in conjunction and/or in other environments.
- Full day event.
- Primarily physical demonstrations with talks from those projects that don't have machinery to demonstrate and from experts on topics to support the uptake of the innovations and break down barriers.
- Number of attendees per event: 100.
- Number of events (assuming 6 Lot 1 projects proceed to P2):
 - Year 2: 3 (One event per theme, estimate three themes)
 - Year 3: 18 (three themes, two each in England, Scotland, Wales)
- Locations will be based on:
 - Achieving UK wide coverage
 - Physical demonstration requirements, e.g. land type
- Where opportunities are identified to trial an innovation in a different environment or in conjunction, the trial design and evaluation will be carried out by the Lot 1 Innovations based on their existing methodologies.

4 Showcase

4.1.1 Aim

Disseminate key learnings, engage the UK biomass sector and wider value chain, demonstrate the value of Lot 1 Innovations, and promote the increased production of biomass feedstocks in the UK.

4.1.2 Objectives

- Present Lot 1 projects as a coherent, integrated programme.
- Support the successful commercialisation of innovations.
- Disseminate key learnings.
- Promote PromoBio events.
- Promote biomass feedstock production/address perceived barriers.
- Promotion of biomass feedstock to end users/address perceived barriers.
- Promotion of BFI Programme and overall net zero agenda.
- Bolster the UK's reputation as a pioneer in Green Technologies.

4.1.3 Design Rationale

The Showcase will present all the Lot 1 projects under a single, branded umbrella, providing a unified and coordinated front to the BFI programme. The impact of the PromoBio showcase and communication activities will be significantly greater than of all the Lot 1 projects acting individually; the showcase will amplify the outputs and outcomes of the BFI programme.

Our team members have been working in biomass and the wider bioenergy, land-based and rural sectors for their entire careers, and have an extensive existing network of contacts and industry knowledge which can be leveraged for the success of the BFI programme. This process started during P1 and we have contacted many of the most relevant major organisations and publications to introduce PromoBio and had very positive responses and willingness to support our communication activities in P2.

4.1.4 Phase 1 Activity Summary

During Phase 1 the PromoBio team have:

- PromoBio Branding prepared.
- Researched the communication needs of the Lot 1 Projects.
- Used Social media activity to recruit the expert panel, source sites and promote the Communications Manager role.
- P1 website developed and live: www.PromoBio.org.uk.
- Detailed specification and plans for P2 website prepared.
- We have identified over 30 conferences and events that we believe are the most relevant in reaching the target audiences identified and delivering our communication objectives. We have contacted a significant proportion to understand speaking and media partnership opportunities.
- Preparation of a draft Showcase Strategy.
- Communications Manager: candidate interviewed and selected.

4.1.5 Plans for Phase 2

The communications activities during P2 will be led by a dedicated Communications Manager who has been identified and contract can be signed as soon as the outcome of the funding is known. A full showcase strategy was prepared during Phase 1, in summary activities, will include:

- PromoBio branding: presentation of the projects as a single, unified programme
- Website: will form the hub of the Showcase, providing all the functionality required to deliver the objectives and activities identified.
- PromoBio Launch.
- PromoBio eNewsletter.
- Press releases.
- Attending conferences and events, as well as delivering presentations and PromoBio branded stands. This includes PromoBio funding Lot 1 projects to attend, present and have a presence and machinery on stands.
- PromoBio Annual Conference.
- Comprehensive programme of Site Open Days and Innovation Field Days.

- Ongoing programme of social media posts using LinkedIn & Twitter.
- PromoBio videos: A series of short videos will be prepared to showcase both the overarching PromoBio project and the successful Lot 1 projects.
- PromoBio Resources Library: key reports, case studies etc. that provide information to support the uptake of biomass.

Key audiences include national and international end users of the innovations and biomass feedstock, existing UK biomass sector and wider value chain, related projects & experts, other key influencers e.g. industry bodies, policy & regulatory bodies.

5 Environmental Monitoring

Aim

Provide an overarching mechanism to quality assure, collate, and analyse the overall environmental impact of the Lot 1 trials and the multi-site demonstrator.

During P1 we have focused on designing our plans for monitoring. This involved significant work with Newcastle University to understand the likely impacts and how to monitor them. A full monitoring strategy was prepared during P1.

5.1 Demonstrator Platform Monitoring: Direct Environmental Benefits and Trade-offs

Objectives

- Quantify the GHG emissions (CO_{2e}) of running demonstrator platform.
- Identify and mitigate significant environmental hazards and impacts.
- Commit no long-term impacts on land used for demonstration activities.

5.1.1 Design Rationale & Phase 1 Activity

Given our approach to demonstration (Section 3) and based on expertise from Newcastle University and advice from the PromoBio Advisory Board, we will focus on monitoring the GHG emissions of PromoBio activities. We have been advised that the direct environmental benefits and trade-offs on soil, water, air, and land-use change of our planned activities will be negligible due to the slow rate of change that occurs in these cycles; Quantitative monitoring would not be meaningful.

Risks and Mitigation Actions

Given the uncertainty surrounding which Lot 1 Projects will progress, there are a range of potential impacts across the demonstration of Lot 1 Projects. We have identified a range of risks and mitigation actions to minimise direct environmental impacts and trade-offs. Demonstration events will observe the following principals plus any others that arise to minimise negative environmental impacts:

- **Seasonal restrictions** - demonstration days will observe protocols with regards to seasonal restrictions on land management activities to reduce the impacts as far as possible.

- **Sensitive (designated) Sites** - based on feedback from Lot 1s, no innovation needs to demonstrate on sensitive sites. Should this be specifically requested the Lot 1 Project must adequately demonstrate the environmental benefits and trade-offs and set out the clear advantages of demonstrating on sensitive sites. The Project Manager will make a decision following conversations with the Lot 1 Project, the Site Owner and relevant bodies e.g. Natural England.
- **Hazards** - we assume demonstration activity will follow an expected course of action where no hazards occur which could impact the surrounding environment. Each Lot 1 Project will be required to submit Risk Assessment and Method Statement to PromoBio when organising the event. Where significant environmental risks are identified with high impact or high probability, the PM will discuss mitigation actions with the Lot 1 Project to ensure there is no environmental risk in demonstration. If significant impacts are identified and the mitigating actions are not deemed comprehensive enough, these will be raised with the MO.
- **Bio-security** – PromoBio will observe best practise with regards to bio-security to prevent the introduction and/or spread of harmful organisms or disease to animals and plants at demonstration sites.
- **Travel** – where possible, transport emissions will be reduced following re:heat's Travel Policy, which encourages minimising need for transport, transport sharing, and the use of public transport to reduce transport emissions.
- **Other** – additional mitigation activities will be identified following the confirmation of the nature of the P2 Lot 1 Innovations.

5.1.2 Plans for Phase 2

Superficial/short term impacts of demonstration days will be managed and monitored in a qualitative manner. Demonstration events will minimise negative environmental impacts by complying with seasonal restrictions, avoiding sensitive sites, managing hazards and bio-security (see 5.1.1).

Using the Government's *Greenhouse gas reporting: conversion factors 2021* the GHG emissions of running the platform will be monitored (CO_{2e}) due to its universal applicability across all aspects of the demonstration platform: Data compiled from event attendees, transport of the innovations, events, conference and exhibition attendance, and comprehensive online presence.

5.2 Lot 1 Monitoring: Quality Assurance, Harmonisation and Reporting

Objectives

- Quality assure the environmental monitoring plans of Lot 1 projects.
- Ensure environmental monitoring harmonisation across Lot 1 projects to allow comparison, analysis, and discussion of impacts across a range of sites and innovations.
- Report on the overall impact of the BFI programme.

5.2.1 Design Rationale & Phase 1 Activity

Lot 1 Projects are required to be 'standalone' and assess the direct environmental benefits and trade-offs of their innovation during the programme and in the short term

(within 5 years of programme end). Interview feedback established that the Lot 1 projects require a large range of support with regards to field trial monitoring and reporting. Our approach complements and adds value to Lot 1 projects' responsibilities without duplication.

Lot 1 Quality Assurance: Newcastle University will provide quality assurance and peer review Lot 1 monitoring plans. This will ensure individual monitoring plans are comprehensive, detailed and high quality, ensuring the Lot 1 contribution to the UK bioeconomy is high quality and credible.

Harmonisation and reporting: To allow for meaningful comparison, analysis, and discussion of the environmental impacts, benefits, and trade-offs of the Lot 1 innovations and their impact across a range of UK sites, standardised metrics will be used where possible. This will enable PromoBio to report on the overall impact of the BFI Programme.

Reporting on the environmental impacts of each Lot 1 project as well as the common metrics across all Lot 1 innovations allows for meaningful comparison, analysis, and discussion of the environmental impacts, benefits, and trade-offs of the Lot 1 innovations and their impact across a range of UK sites.

5.2.2 Plans for Phase 2

Each Lot 1 Project will be assigned a Newcastle University monitoring mentor to provide individual support, advice, and guidance to ensure quality monitoring. Relevant parameters will be identified.

Harmonisation: The most appropriate common metrics will be identified early in P2. Where Lot 1 innovations are trialling in conjunction, an additional review of the metrics will be undertaken to ensure the cumulative impact is measured.

Data on metrics will be collected by the Lot 1 projects. Newcastle University will request the data on a regular basis via the Innovation Hub (Website Forum) and via monitoring mentors and undertake a review to ensure quality and comprehension and compile a database.

Annual summary statements will be generated, and the results of the monitoring will form the basis of environmental impact across the duration of the project that will be included for discussion in the final report.

6 Added Value

6.1 Expert Support Framework

6.1.1 Aim

Provide a broad range of scientific and industrial expertise to remove barriers, accelerate progress and maximise the contribution that innovations can make to delivering a step change in the UK biomass production.

6.1.2 Design Rationale

This work package directly supports the BFI programme overarching aim of “driving innovation” and contributes to delivering a step change in the UK biomass production.

Lot 1s will have access to an unrivalled breadth and depth of expertise from across the biomass sector, including market expertise, technical and practical knowledge of biomass production, end uses, scientific and engineering expertise. The support will be delivered by experts from PromoBio staff and a pool of external experts from across the biomass industry and academia, from the UK and overseas. In-depth interviews with Lot 1 projects found that without exception, the projects thought this support would be a valuable asset to their project, even where specific expertise was not identified in P1.

6.1.3 Phase 1 Activity Summary

During P1 a substantial amount of work was completed: Recruited ten experts to the Framework covering subjects reflecting the diversity of the Lot 1 projects. Draft contracts and Code of Conduct have been prepared, ready to be signed as soon as a decision is announced on P2 and we understand which experts are relevant to the successful projects.

6.1.4 Phase Two Activity

Sourcing Additional Expertise & Dealing with Uncertainty

Processes have been established and tested enabling a rapid response if additional expertise need is identified, e.g. to overcome a barrier. Algae UK advised that due to the diversity of the Lot 1 algae projects, one single expert would not be suitable and will support recruitment of relevant expert(s) in P2.

To deal with the uncertainty of which projects will be successful, we have a fixed daily rate for experts and have not offered any guarantee of work or number of days. This means that if a project requires additional expertise and has not used their allocation, a new expert can be sourced without affecting the budget.

How will expertise be delivered

- Bespoke support: Every successful Lot 1 project will be offered 30 days of expert support that they can draw on over the course of P2.
- Solutions Sessions: If a Lot 1 project encounters a problem, relevant experts will be brought together in a Teams event. Other Lot 1 projects may be invited if they have either expertise or a similar knowledge gap.
- Innovation Support Webinars: If any common areas of need are identified we will prepare and deliver a bespoke webinar.
- Experts may be invited to attend relevant PromoBio events to provide advice and give talks.

Experts will be required to submit reports on nature of expertise delivered and Lot 1 project be required to submit an evaluation of value added by the expert advice.

6.2 Commercialisation

6.2.1 Aim

Provide a range of tailored commercialisation support which will assist technologies to reach TRL 8, ready for commercialisation (complementing provision through the Acceleration Support Service).

6.2.2 Design Rationale & Phase 1 Activity

The overarching purpose of the support will be to guide Lot 1 projects through the process of developing and refining their innovation to being market-ready.

Almost all the projects interviewed highlighted a need for support with commercialisation. We provided details of industry contacts, possible demonstrator sites and general business-focused advice on markets and opportunities. Some Lot 1 projects indicated their innovation had strong export potential, and we have started to identify how best to support them in their aspirations for accessing overseas markets.

We have identified a range of individuals with vast experience of different aspects of biomass-based businesses, including starting and growing companies, innovation, and of working in board-level and business support roles. These business experts have agreed to act as business mentors to complement our re:heat in house expertise and are ready to sign contracts.

6.2.3 Plans for Phase 2

Five Lot 1 projects are not SMEs and can receive full commercialisation support from PromoBio. A diagnostic session will be held during the Commencement Calls to understand where they sit currently and where they aim to be by the end of the project. A tailored programme will be developed to cover topics such as determining production costs and economics, setting the market proposition, achieving investment readiness and securing the right team and talent.

All Lot 1 projects will be able to work with a PromoBio Business Mentor with background in a relevant technology or market. The role of the mentor will be akin to a NED; providing valuable support, guidance and an expert sounding board. This will **complement not duplicate** acceleration support.

6.3 Biomass Feedstock Testing

6.3.1 Aim

Understand the composition of the biomass feedstocks produced and the resulting market opportunities and impacts on boosting the UK's biomass feedstock supply.

6.3.2 Design Rationale & Phase 1 Activity Summary

PromoBio will provide testing and validation of the feedstocks in real world markets and applications through the provision of trial facilities and access to potential customers. Understanding the physical, mechanical, and chemical composition of the biomass feedstocks will provide the basis of market potential for that material in the various

industries now searching for green, renewable alternatives, including fuel, biochemical, and low carbon building materials.

We have all the necessary legal and contractual arrangements in place with Newcastle University (subcontractor) to enable access to the full range of university laboratories available for feedstock testing. Newcastle University have prepared a table of testing parameters and identified potential key metrics for each type of innovation.

We have also established relationships and with a number of biomass boiler owners across the country and a specialist emissions testing company to test real-world emissions and practical feasibility. This is particularly important in establishing whether the Lot 1 innovations have developed a means of producing an economically viable and sustainable feedstock that has genuine market potential.

6.3.3 Plans for Phase 2

PromoBio will provide a range of testing facilities to allow Lot 1 projects to develop a better understanding of their biomass feedstock and its application to current and future markets:

- Boiler sizes ranging from 50kW to 3MW have been identified to enable assessment of fuels at different scales - domestic to industrial including a proposed new system at our offices, which we sub-let from DEFRA.
- MCERTS accredited emissions testing, observing products of combustion including NO_x, CO and VOCs.
- Comprehensive testing facilities at Newcastle University can provide data on composition of both biomass and reaction products, including facilities specifically appropriate for the testing of algae which will enable thorough assessment of the extensive potential markets, such as biofertilizer and food.

7 Social Value

7.1.1 Aim

Maximise opportunities PromoBio can offer to deliver social value and address the skills and labour gaps limiting the scaling up of production of biomass feedstocks.

7.1.2 Phase 1 Activity Summary

We have met all our P1 commitments as contracted, including the recruitment of a Graduate position to work on the PromoBio project and interviewed and selected a Communications Manager.

7.1.3 Plans for Phase 2

Jobs Created (Direct): Creation of five new full time posts during the project, and sustaining these beyond the end of the funded period by deploying to other projects and contracts across the business as part of our long term growth strategy: Communications Manager, Events Officer and recruit one new graduate each year that PromoBio runs.

Support Regional & Rural Economies: By helping drive innovation, awareness and the uptake of biomass feedstock production and its use via a comprehensive programme of activities, PromoBio will make meaningful contributions to supporting regional and rural economies by:

- Creating opportunities for new businesses and the expansion of existing.
- Facilitating access to export markets.
- Creating direct employment opportunities.
- Helping land managers reorient and secure their enterprises in a post-CAP world.
- Increasing access to lower cost and locally produced biomass feedstocks to processors and manufacturers.
- Increasing awareness of the role that low carbon bio-materials can play in meeting Net Zero ambitions, thereby driving market demand.

Bolster the UK's Reputation as a Pioneer in Green Technologies: Our experienced team, supported by professional branding and resources, will attend the primary international conferences in the fields relevant to BFI, to present PromoBio, the BFI programme and the work of UK innovators and government on an international stage. We will measure our impact by undertaking a baseline survey to assess awareness and understanding of PromoBio and a range of issues related to biomass feedstocks in the UK and repeat with the same individuals at the end to demonstrate how their attitudes and general perceptions have moved over time.

Graduate placements: Offer six-month research projects linked to the Lot 1 projects through our partners Newcastle University and Supergen Bioenergy Hub. These students could one day be leaders in net zero innovation, biomass feedstock research and development, and will contribute to bolstering the UK's growing reputation as a leader in Green Technologies.

Other Added Value to Society: Provide work placement opportunities to young people, to open their eyes to the wide range of career opportunities in the bioeconomy - from machinery operators and other hands on roles, through to those for engineering and scientific staff.