

SID 1 ROAME Statement

General notes

1. The first stage of the ROAME (Rationale, Objectives, Appraisal, Monitoring, Evaluation) process requires a clear and succinct statement of the commissioning organisation's rationale for funding research. The SID 1 provides the customer's reasons for requiring research in a particular policy area and the policy and scientific objectives of that research. It forms the basis for all research proposals and is vital to ensure overall direction and ultimate evaluation of the research programme.
2. The level at which the SID 1 statement is set is for the policy customer to decide. Each Programme should focus on one or more related policy objectives and the related scientific objective(s). However, policy customers may wish to set SID 1 statements at a higher level, e.g. where a large research programme addresses similar policy and scientific objectives.
3. **The SID 1 is an important working document, which stems from and supports Defra's Evidence and Innovation Strategy. All SID 1s will be published and used to inform contractors and other funders of research of the rationale and key policy drivers underpinning Defra's research programmes.**
4. A SID 1 **must** be produced for each research programme. It should be **approved at Director level, or at a lower level only through formal delegation of authority**. Science Units within Defra are responsible for ensuring that all research is commissioned and contracted under a SID 1 which complies with this guidance. A SID 1 should typically be no more than 5-6 pages long, although this can vary depending on the complexity and size of the programmes covered.
5. SID 1s should be reviewed every 3-5 years. If new or revised forms are produced (for example, following a review), these should annex the original form to provide a historical record of programme change. Please refer to the Science Handbook for further guidance.
6. This form is in Word format and the boxes may be expanded, or reduced, as appropriate.

1. Area of Policy/Research

Please state the title of the proposed research programme – including FPS Programme Code Assessment Unit or Sub-Programme Code.

PLANT HEALTH (AF:090)*

* AF090 covers both Plant Health and Bee Health, both of which are now the responsibility of Plant Health Division. AF090 is run as a joint Programme and funds are not ring fenced for either Plant Health or Bee Health, but allocated according to priorities.

This Plant Health ROAME incorporates but updates the Policy Rationale, Policy Objectives and Science Objectives outlined in 2004 for the period until April 2007. It additionally outlines the planned processes for Appraisal, Monitoring and Evaluation.

A separate, new Bee Health ROAME is being developed as part of the Bee Health Strategy which will involve stakeholder consultation when finalised (2007/8). It will replace the 2003 Bee Health ROAME inherited by PHD in 2006.

Plant Health ROAME (v1. 05/2004; v2. 07/2007; v3. 07/2008)

2. RATIONALE for Defra Funding

(a) Describe the policy problems to be addressed by this research.

The primary aim of the Defra Plant Health Service is to prevent the introduction and spread of serious plant pests that threaten agricultural and horticultural industries and the rural environment in England and Wales. Imports of plants for planting, seeds, grain, fruit, cut flowers, vegetables and soil all pose significant risk pathways for the introduction of harmful pests and diseases. Individually, many of these organisms may not present a serious concern. However, at any given time, there will be a range of harmful organisms, including invasive plants, which will require statutory control because of their quarantine status. The negative impact of these organisms on crop production or the environment provide the justification for action to prevent or minimise the risk of introduction and spread in and around the country. A constraint on planning an R&D programme is the difficulty of predicting new pest challenges; for example *Phytophthora kernoviae* is a species new to science that would not have been mentioned in an R&D Review in 2003 but is now an organism of major UK concern.

Increasing globalisation of trade (volume and diversity) is increasing the risks from exotic plant pests. The risks of new pests becoming established are minimised through the implementation of controls on plant material by the Plant Health Service. Controls are based on proportionate risk assessments drawing on good quality scientific data to ensure evidence-based policy. Increasingly, the production of risk assessments follow agreed international protocols. At the simplest level they assess the potential risk from a particular pest. More complex assessments address the overall risks of importing a particular plant or plant product, i.e. commodity-based risk assessments. Subsequent controls are aimed at managing any identified risks with the minimum disruption to the normal flow of free trade. Consequently, effective Plant Health policy and its delivery tends to be more involved with detailed technical issues rather than strategic development. This is reflected in the research programme with 70-90% of the R&D programme funding dedicated to investigating highly applied topics which are problem solving in nature and normally targeted at a particular quarantine plant pest. Generally, research to support the development of pest risk analyses, to prevent introduction (e.g. diagnostics) and to eradicate or contain introduced pests are of a higher priority than work supporting trade facilitation, certification and export activities. Where funding allows, strategic research aimed at developing new techniques and methodologies is commissioned, usually through competitive tender. Defra Plant Health aims to allocate 10-30% of the available funding in this programme to more strategic research, the exact level depending upon pressures of short term requirements and the overall funding available.

Occasionally, a quarantine organism evades regulatory controls and becomes established in some environments. Plant Health retains an interest in some such 'quality' organisms, which remain subject to statutory control under EU marketing legislation. For organisms with no quarantine status, and even for some which are classed as quarantine but are subject to a degree of management, other divisions of Defra will have an interest and may consider funding relevant research work. This transfer is not always clearly defined and some organisms may fall between two research programmes. The science activities required to underpin current policies of all programmes are documented in the Defra Evidence and Innovation Strategies (E&IS); a specific Plant Health E&IS is outlined within the 2005 [Sustainable Farming and Food E&IS](#).

(b) Explain how the research will support Defra Strategic Priorities, PSA targets and Evidence and Innovation Strategy.

Defra's Strategic Objectives

The work on Plant Health and the underpinning research programme contribute to two of Defra's eight Departmental Strategic Objectives for 2008-2011, building on the strategic priorities set out in [Defra's 5-year strategy 2004](#):

- A thriving farming and food sector with an improving net environmental impact.

- A healthy, resilient, productive and diverse natural environment.

Defra's Public Service Agreement (PSA) Targets

This work will also contribute towards the delivery of the Government's cross-departmental Public Services Agreement for the natural environment:

“to secure a diverse, healthy and resilient natural environment, which provides the basis for everyone's well-being, health and prosperity now and in the future; and where the value of the services provided by the natural environment are reflected in decision-making”.

Defra's Evidence and Innovation Strategy (E&IS)

Plant Health's E&IS needs are incorporated into the wider [Sustainable Farming and Food E&IS](#) consultation document. Some parts of the broader [Defra E&IS Consultation document \(2005\)](#) are also relevant, especially those areas concerned with Protecting the Countryside and Natural Resource Protection. The Plant Health E&IS includes the research that is needed to support policy and operations; this ROAME therefore directly underpins the E&IS needs of Plant Health.

Plant Health Research Supporting Defra's Strategic Priorities, PSA Targets and E&IS

Defra's aim is Sustainable Development which means a better quality of life for everyone, now and for future generations to come. Two key Defra Objectives that underpin this aim are: to ensure a thriving farming and food sector, with farming making a net positive environmental contribution; and to create a healthy, resilient, productive and diverse natural environment.

The work of the Plant Health research programme is closely meshed into the Sustainable Development principle as it plays a key role in: (a) protecting the environment from the introduction and spread of plant pests, thus supporting social, rural and economic progress and development; and (b) promoting economic prosperity through sustainable farming through its regulatory Plant Health activities. Defra's Plant Health Division (PHD) has policy responsibility for quarantine plant pests and for plant certification in England and co-ordination of UK policy on Plant Health and its negotiation in international fora. The Plant Health and Seeds Inspectorate (PHSI) executes this policy in England, and through a Concordat in Wales, (except in relation to pests of forest trees and wood): it carries out import and export monitoring and survey inspections, issues phytosanitary certificates, and oversees import controls, plant passporting arrangements and eradication campaigns.

PHD is responsible for the commissioning and management of a scientific research and development (R&D) programme. The research is closely aligned to the work of the Division and Inspectorate and supports the scientific services provided by Defra's Central Science Laboratory (CSL).

The Research directly supports Plant Health policy, operations and Defra's wider objectives by: (a) developing diagnostic and monitoring tools which support the effort to exclude exotic plant pests* which are a threat to UK agriculture, horticulture and the environment; (b) developing management approaches to support eradication and containment actions for these economically and/or environmentally important regulated/quarantine pests*; and (c) providing data to support the development of optimal and evidence-based policy, e.g. supporting pest risk analysis (both risk assessment and risk management) that provide a sound basis for negotiating EC regulatory controls that safeguard UK interests and do not unnecessarily interfere with trade.

** 'Pests' include plant pests, plant diseases and invasive non-native species relevant to plants according to FAO International Standard Phytosanitary Measures (ISPM) definitions*

- (c) Explain how this research will be co-ordinated with other Defra science and policy activity. This should cover co-ordination with other Defra research programmes, including economic, social science and the Horizon Scanning Programme and other Defra science activity, e.g. monitoring and surveillance programmes.

The Programme will align with the following Defra research programmes and will aim to be complementary to these and, where possible, engage in co-funding activities:

- Defra Food and Farming Group: we will collaborate and coordinate our research with other programmes within the Food and Farming Group, e.g. on waste management for plant material contaminated with serious or quarantine pests.
- Defra Chief Scientific Adviser's Group: we will collaborate or coordinate with Defra CSA on more strategic projects, e.g.: epidemiological modelling; cross-departmental projects where there is a Plant Health interest of research element (e.g. 'Biochip': microarrays for infectious viruses); any Defra Horizon Scanning initiatives related to Plant Health.
- Defra Natural Environment Group: we will coordinate any PHD-funded research on invasive non-native species with Defra's Wildlife Species Conservation Division, i.e. via the GB Non-Native Species Secretariat or Programme Board.

The Programme will also align with several Non-R&D programmes, including:

- Defra Plant Health Science Programme: The research programme to a very large extent underpins the science provision (diagnostics and consultancy) provided by CSL's Plant Health Group under a Non-R&D MoU with Plant Health Division.
- Defra CSL Horizon Scanning and Future Proofing Programme: This HSFP programme is funded from the PHD-CSL Non-R&D MoU. It anticipates and supports future Plant Health and Bee Health science and policy needs, investigates the potential of new or novel scientific approaches, technologies or opportunities and enhances the provision of scientific knowledge and services by enabling new research outputs to be transferred into routine use. CSL is the programme owner, but topics are aligned closely with the research programme through dual oversight by PHD's Science Management Workstream (see Section 5).
- Defra PHSI Surveillance Programmes: Much of the research directly supports operations associated with import monitoring, surveys, plant passporting and certification.

Commissioning of social-scientific research is limited due to the applied nature of the programme. However, some strategic research could be funded which looks at non-traditional approaches to solving problems using social scientists, e.g. responsibility sharing issues in the area of plant quarantine. Additionally, some socio-economic elements are often included in work developing individual Pest Risk Analyses (PRA). More strategic work on developing PRA-related methods for socio-economic or environmental impact assessments might be considered, especially at the wider EU-level.

- (d) Explain how the proposed programme will align with the work of other Departments and funders of research. This should cover UK funders and, where possible or appropriate, funders in other countries or international bodies; whether co-ordination is needed or foreseen and, if so, how and when such co-ordination or collaboration should take place.

The Programme will align with the following non-Defra research programmes and will aim to be complementary to these and, where possible, engage in co-funding activities:

- The EU and Individual European Countries: we aim to coordinate our research programme with EU-funded Plant Health research, e.g. the 7th Framework Programme, providing matched funding for EU projects as appropriate. We will additionally be pro-active in aligning our Programme with Plant Health research that is funded in other European countries, i.e. via coordination through the EU-funded EUPHRESKO Phytosanitary ERA-Net; this will optimise resources and reduce duplication. EUPHRESKO is coordinated by the UK and will run from 2006-2010, after which a longer-term network of European Plant Health research funders will be launched. Where appropriate, we will also engage in research which supports wider Plant Health collaboration within Europe, e.g. aligned with the strategic priorities of the European and Mediterranean Plant Protection Organisation, the European Food Safety Authority's Plant Health Panel and the EU Council Working Party of Chief Officers of Plant Health Services; examples might include research underpinning better collaboration between diagnostic laboratories and the development of PRA science.
- Other Government Programmes: we will coordinate our programme with those of OGDs where appropriate, e.g.: The Forestry Commission; The Office of Science and Innovation (e.g. Foresight Programme); The Scottish Executive; The Welsh Assembly Government; and The Northern Ireland Department of Agriculture and Rural Development.

- Non-Government and Industry Programmes: where appropriate we will coordinate our activities with levy bodies, especially where the industry may have an existing or future role in pest management, e.g. during the transition from regulatory control to industry management for pests that become established. Where possible, we will also coordinate our activities with relevant Research Council programmes: e.g. The Rural Economy and Land Use Programme funded by ESRC, BBSRC, NERC and with some Defra and The Scottish Executive resource.
- Other International Bodies: where appropriate will be ensure our research is complementary and aligned to other international research, e.g. US federal and state research on *Phytophthora ramorum*.

- (e) Provide a brief summary as to why Defra should fund the proposed research. You are required to justify the use of Defra resources for the proposed project. In your justification you should clearly set out that no other existing or current research or body of information meets the policy needs; why R&D is the most suitable method to provide evidence; and the intended outcome of the programme.

Plants are important for both the UK economy and environment. Agriculture, horticulture and forestry contribute significantly to the UK economy, whilst plants in the environment are the building blocks of habitats and are an invaluable socio-economic and natural resource and heritage. Exotic (non-native/quarantine) plant pests pose serious economic and environmental risks and have associated social impacts.

It is the role of Plant Health policy makers to protect UK plants from quarantine pests. The number of quarantine plant pests, plant diseases and invasive plant species arriving and establishing in the UK is predicted to increase over the next ten years as global trade in plants and plant products continues to expand¹. This may be exacerbated by climate change, by the recognised decline in resources and expertise in the phytosanitary area and by EU expansion. Quarantine plant pests not only threaten UK agriculture, horticulture and forestry, but many are also of environmental concern. As Dutch elm disease decimated elms in the last century, other new pathogens and pests now pose risks to UK ecosystems, habitats or urban landscapes. Of current concern in this respect are: *Phytophthora ramorum* and *P. kernoviae*, which threaten UK trees; Asian longhorn beetles, which potentially threaten UK amenity trees; and various invasive non-native weeds.

Protecting UK agriculture, horticulture, forestry and the UK environment from invasive non-native plant pests in an era of increasing global trade requires: evidence-based policy and regulation; a capability to rapidly detect and diagnose quarantine plant pests; and methods to eradicate and contain such pests if they are introduced.

Government has a clear regulatory role and also international obligations in the area of quarantine Plant Health. The development of evidence-based regulatory policy requires research to provide underpinning data; similarly policy implementation (i.e. operations) requires research to provide the necessary tools to manage regulated/quarantine plant pests, including the provisions of tools for surveillance/monitoring and for managing/controlling quarantine pests when introduced.

The research outputs are intended to directly support policy and operations to protect UK Plant Health. No other research programme currently meets the identified Plant Health policy and science needs.

¹ Waage, JK, Fraser RW, Mumford JD, Cook DC & Wilby A (2005). A New Agenda for Biosecurity. Defra Horizon Scanning Project.

3. OBJECTIVES

- (a) State policy objectives which should be:
- achievable;
 - testable (i.e. in a form capable of verification, preferably in a quantitative fashion); and
 - time-bound (i.e. to be reached at a pre-determined date).

Four main areas of Plant Health's activity are supported by the research programme and policy objectives are assigned to each area:

1. Exclusion of quarantine plant pests covers those activities that are directed at reducing Plant Health risks to commercial crop production and the environment by preventing the introduction of quarantine organisms into England and Wales or into areas which are free from the pest.

1.1. To intercept pests and diseases arriving with consignments of plants, propagating material and produce from third countries and moving in intra-EU trade.

1.2 To conduct sufficient inspections to comply with Protected Zone survey requirements for Colorado beetle and *Bemisia tabaci*.

1.3 To ensure accurate and efficient confirmatory diagnosis of suspect quarantine plant pests in the laboratory and, as appropriate, on-site.

2. Eradication and Containment of Plant Pests encompasses those activities that are directed at eradicating or containing quarantine plants pests and diseases deemed to be of significance to the UK and, where appropriate, the EU.

2.1. Undertake activities to minimise or remove the risks to commercial crops and the environment by eradicating or containing quarantine plant pests, including the development and maintenance of eradication and containment contingency plans.

2.2 Organisms currently of primary concern include, for example, *Phytophthora ramorum*, *P. kernoviae*, potato brown rot, potato ring rot, *Thrips palmi* and *Anoplophora* species.

3. Development of Optimum Policy encompasses those activities in the Plant Health programme that involve our relations with international fora (e.g. EU, EPPO, IPPC), consultation with stakeholders, and the production and use of scientific risk assessments to provide an evidence base for our decisions and the development of new legislation.

3.1 To produce and utilise evidence-based pest risk analyses.

3.2 To influence EU and international policy developments to achieve UK negotiating objectives

3.3 To comply with EU and international obligations in Plant Health.

4. Trade Facilitation comprises those activities that assist in the sustainable development of businesses by ensuring that the quality of marketed plants and planting material meets statutory and international requirements.

4.1 To facilitate the export of plants and plant products, including grain, in compliance with international standards by efficient and effective inspection and certification.

4.2 To implement and promote an effective Seed Potato Classification Scheme (SPCS) for England and Wales in line with statutory provisions.

4.3 To implement the Plant Health Propagation Scheme (PHPS) in a way that maintains the integrity of the scheme and meets the needs of the industry.

3. OBJECTIVES continued

- (b) State scientific objectives which must be achievable, verifiable and timebound. Science staff must decide where research can contribute to the achievement of policy objectives and agree with Policy DGs scientific objectives appropriate to meet the policy need. **They should also cover the key deliverables against which the success of the programme will be judged at review:**
- anticipated contribution to Defra policy development (i.e. to inform change of policy);
 - other outputs, such as new or refined industry practices/standards;
 - planned processes for Knowledge Transfer and Innovation and communication to the public.

1. Exclusion of Quarantine Plant Pests

1.1 To develop sensitive and robust methods for the detection of quarantine organisms, including the innovative development of appropriate technology for 'on-site' use.

1.2 To develop efficient, sensitive and specific methods of diagnosis of organisms of concern. Continually maintain and improve diagnostic capability including the development of diagnostic tools for 'on-site' use.

1.3 Maintain and develop the taxonomic expertise/capability that underpins pest diagnostics.

2 Eradication and Containment of Plant Pests

2.1 Improve the understanding of specific quarantine pests as a basis for the development of optimal eradication & containment strategies and related biosecurity strategies. These strategies should contribute to the overall reduction in chemical inputs, include sustainable waste management practices and take account of production methods including organic systems. They should also take account of wider biodiversity issues.

2.2 Target organisms include those which affect commercial crops as well as environmental pests, including invasive plants, which threaten the native flora.

2.3 To investigate modelling approaches that can inform surveillance and eradication and containment actions.

3. Development of Optimum Policy

3.1 To proactively assess the risks posed by the occurrence, movement and establishment potential of pests to estimate the impact of these organisms (including impacts under climate change scenarios) and their controls through the utilisation of pest and disease management science (including modelling) and a detailed information on crop production systems and environmental ecosystems.

3.2 Continual development of the science of pest risk assessment to increasingly include economic, environmental and socio-economic analysis, and pest risk management to include modelling approaches.

3.3 To develop research policy at the European level (e.g. through a Phytosanitary ERA-Net) to facilitate European joint activities and trans-national research.

4. Trade Facilitation

4.1 To assess key aspects of pest biology and distribution to support the development and operation of Plant Health passporting, certification and marketing schemes of agronomic importance.

4. APPRAISAL

Explain your plans to ensure that you obtain fit for purpose research under this programme and value for money for the taxpayer. In particular, how will you ensure expert external input and challenge (e.g. through advice from expert groups/committees; peer review of project proposals; and level of competitively let contracts) are taken into account.

Fit for Purpose

Since the Programme is very applied and primarily underpins the Plant Health science programme at CSL, most of the programme is let to CSL non-competitively. However, we aim to have 10-30% of the Programme let competitively for more strategic work, though the exact level is dependant on the overall availability of funds and on operational needs.

The Programme is overseen by PHD's Science Management Workstream (SMW) which is an overarching programme and project management (PPM) group (see Section 5) involving all three elements of the Plant Health Service (PHD, PHSI, CSL); this ensures that the science needs of each element of the service are met and integrated and that the research is fit for purpose.

The SMW is responsible for keeping the ROAME under review and for initiating the commissioning of research. Research needs are identified through pro-active consultation within the wider policy division, the inspectorate and with CSL scientists. For Plant Health Taxonomic Fellowships, a wider consultation of relevant organisations is also undertaken to identify specific needs over the longer term. Plant Health Taxonomic Fellowships are funded in response to the National Audit Office report ([NAO Report HC1186, October 2003](#)) and subsequent Public Accounts Committee report ([PAC 44th Report, HC 208, 2004](#)) on 'Protecting England Wales from plant pests and diseases'. These taxonomic fellowships aim to underpin Plant Health by: (a) ensuring the availability of UK taxonomic expertise (succession planning and gap filling); and (b) providing the basic taxonomic knowledge needed to underpin the Plant Health research and science programmes. We aim to have 3 fellowships running at any one time.

The SMW also considers whether independent experts and stakeholders should also be utilised in the development of the research programme and in the identification of both operational and strategic science needs, in line with the Science Advisory Council's recommendations ([SAC Report on Science into Policy](#)). Specific external stakeholder and scientific review is facilitated during reviews of the Programme, approximately every 5 years.

Input is also obtained via Steering Groups which comprise end-users of the research, as well as industry stakeholders as appropriate. Steering Groups are established for all projects and typically comprise of one person from the policy division (PHD), one person from the inspectorate (PHSI), one CSL end-user (CSL diagnostician or CSL Plant Health consultant) and industry stakeholder representatives where appropriate. Steering Groups review proposals before commissioning to ensure they are 'fit for purpose' and also oversee progress after commissioning.

All competitive project proposals are peer reviewed prior to panel meetings. Non-competitive projects over £250k are also peer reviewed; other projects over £50k–£70k per year may also be peer reviewed in the interests of best practice. Peer reviews include an assessment of how well the proposals address Defra's wider objectives and those of Plant Health specifically.

Although research is commissioned within the framework of the ROAME statement, the PHD business plan and the evidence and innovation strategy (E&IS), PHD may also consider longer-term availability of skills and capability when commissioning research. However, projects are never commissioned solely for this purpose but must fall within the ROAME statement and deliver to identified policy or science needs, in line with Science Advisory Council recommendations.

Value for Money and Quality

For competitive research, standard evaluation criteria for proposals typically include value for money and a measure of whether the research meets the Programme objectives. For non-competitive research, Defra's Central Science Laboratory are the main preferred research provider since the majority of research commissioned by PHD is very applied and directly underpins the Plant Health science programme at CSL. Value for money and quality of CSL research is assessed to a large degree as part of their 5-yearly science audits. The high level of technology transfer and information transfer from CSL research teams to diagnostic teams and Plant Health consultants contributes to ensuring good value for money.

All research contractors have to indicate that they are compliant with the Defra Joint Code of Practice for Research ([JCOP](#)). This is assessed by visits by the Scientific Adviser and/or through contractor updates/reports on JCOP implementation. This process helps ensure the quality of research outputs.

We also plan to pro-actively engage with other research funders to better make use of limited resources. Many projects are co-funded synergistically with other funding bodies, especially: the

European Union (e.g. Framework Programmes); other EU member states (e.g. through transnational calls facilitated through the EUPHRESKO Phytosanitary ERA-Net); other Defra Research Programmes; The Forestry Commission; grower levy bodies, e.g. The Horticultural Development Council (HDC); The Scottish Executive; and The Welsh Assembly Government. Co-funding or collaboration opportunities are also explored with research councils and with non-UK/EU funders (see also Section 2(d)).

5. MONITORING

Please explain how you plan to monitor progress against programme and project objectives, in particular any key programme review points.

Plant Health Division operates a Programme and Project Management (PPM) system. Within this, a Science Management Workstream (SMW) is responsible for overseeing Science issues, including the Research Programme. It is chaired by the Research Programme Manager and comprises policy representatives (Head of Plant Health and the Heads of Branches), the Plant Health and Seeds Inspectorate (Chief PHSI) and Defra's Central Science Laboratory (Head of Plant Health Group). The SMW has a remit to guide and oversee Plant Health and Bee Health science/research strategy and science quality issues, as laid down in a framework document that outlines the basis and *modus operandii* for managing its science-based issues, specifically:

- To establish and keep under review the Plant Health and Bee Health ROAME statement and a 'Plant Health and Bee Health' Evidence and Innovation Strategy.
- Under the ROAME, to determine and keep under review the content of the Plant Health and Bee Health research programme, in consultation with other policy makers, inspectorates, scientists and stakeholders as appropriate. Also, to ensure that the content meets wider policy and science objectives, e.g. that it accounts for recommendations from the National Audit Office and Public Accounts Committee that relate to science capability and taxonomic expertise.
- To ensure appropriate linkages with other R&D projects, programmes or initiatives from other funding bodies or organisations.
- To oversee and approve the annual CSL Horizon Scanning and Future Proofing (HSFP) programme (funded under the PHD-CSL Non-R&D MoU).
- To oversee research quality issues, including: evaluation processes; membership and the functioning of Steering Groups; appraisal and quality of research projects and reports; compliance by contractors with the Defra Joint Code of Practice (JCOP); review and implementation of Defra quality principles for research (e.g. Defra Science Handbook and [SAC Report on Quality Assurance](#)).
- Oversight of 'Science into Policy' issues, including the appropriate implementation of the [SAC Science into Policy](#) recommendations.

We also aim to have an external review of the research programme approximately every 5 years, amending the ROAME accordingly. In between reviews, stakeholder input is also facilitated through the normal lines of communication and this is taken into account when considering specific project commissioning. This also includes inputs from any policy consultations, reviews or challenges, including those via Government Chief Scientific Advisers (e.g. Defra/OSI).

At the Project level, all PHD-funded projects are overseen by a Steering Group, as outlined above. These monitor progress against the programme and project objectives. Steering Groups meet with the Project Leader at least once a year, review appraisals of annual reports done by the Defra Project Officer and assess proposed changes to projects.

The Plant Health Taxonomic Fellowship Programme and its on-going projects are reviewed annually during a specific review day alongside CSL's Plant Health and Bee Health Horizon Scanning and Future Proofing Programme (HSFP).

6. EVALUATION

Please specify how you intend to evaluate the outputs of the programme against its objectives, ensuring appropriate external input and challenge. This should also include an assessment of the future of the programme.

Project reports are required annually and are appraised by the Defra Project Officer. Appraisals and reports are reviewed by Steering Group members for approval/comment. The appraisals include a policy interpretation of the results, separate to the policy interpretation provided by the researchers. The quality of the science and also the impact/value to policy are assessed. Reports and appraisals are signed off by the Head of the Policy Unit (PHD) and final reports are placed on the external [Defra website science pages](#). Report appraisals are provided to the research contractors as part of best practice and to provide feedback.

Increasingly, we also consider peer reviewing the final reports for larger projects, especially: those that are more strategic in nature; those that may warrant follow-on work; and those providing data that underpin regulation and key policy decisions.

Research outputs are integrated into policy processes and consultations. In particular data on specific pests are incorporated within PRAs which are made available for stakeholder/public comment via the Plant Health Website (<http://www.defra.gov.uk/planth/pr.htm>). For specific policy consultations, research results that underpin policy making or decisions are identified either within accompanying PRAs or in Regulatory Impact Assessments (RIA).

The outputs of the programme are also specifically evaluated approximately every 5 years during the external review of the programme, which also assesses future direction.

In the case of research commissioned with Defra's Central Science Laboratory, which typically accounts for 70–80% of PHD-funded research, the outputs are evaluated during the 5-yearly Science Audits, the last being in 2006.

This research programme will be reviewed by (insert year)

Approved by Date

Name Unit