



Research Ethics Policy

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Section I – Policy

1. About this policy

- 1.1. The Board of Trustees of the Royal Botanic Gardens, Kew (“RBG Kew”) is a non-departmental public body with exempt charitable status, governed by the National Heritage Act 1983 which sets out the Board’s general functions and remit.
- 1.2. The Royal Botanic Gardens, Kew (“RBG Kew”) is both a globally renowned visitor attraction and scientific organisation specialising in botanical and mycological research, with science facilities operating across its three sites: the Royal Botanic Gardens, Kew in West London, the Millennium Seed Bank (“MSB”) at Wakehurst in West Sussex, and the Kew Madagascar Conservation Centre (“KMCC”) in Madagascar. Over 495 science staff work for RBG Kew across these three sites.
- 1.3. This Research Ethics Policy has been developed to ensure that our scientists are aware of and are operating within the remit of ethical practices as they conduct their scientific research, which includes behavioural conduct. Although RBG Kew is primarily concerned with the research and application of plant and fungal materials, this policy also covers occasions of conducting medical/other studies involving human subjects and wildlife habitats.
- 1.4. This policy has been developed in order to align with the Science Strategy and RBG Kew’s other policies (please refer to links in Section IV). This policy should be read alongside RBG Kew’s Research Integrity Policy, Defra’s Governing Framework, and the HEI Action Plan available on kew.org

2. Policy statement

- 2.1. At RBG Kew, we must ensure our science is being approached and fulfilled ethically and with integrity. Research ethics are the parameters within which scientific research (experimental and exploratory, with outcomes yet to be determined) should be conducted and disseminated in a manner that corresponds with current scientific rigor and integrity, as well as ensuring that all staff, any participants, and society at large are respected and safely engaged.
- 2.2. A separate policy outlining research ethics is required alongside RBG Kew’s policies covering Kew-wide conduct and expectations. This is due to its specificity to the science community, and the issues and considerations that can arise from carrying out research. Ethics and integrity are a part of research governance and interweave with governing principles. Governance provides a framework within which to direct, manage and organise workplace activities, including research, and ensure adherence to appropriate policies and legislation. Governance oversees and maintains the standards in which all staff operate. Everyone working for RBG Kew must have a clear understanding of their professional requirements and the organisational structure.
- 2.3. Ethical practices within the governing framework mean that staff must work and behave appropriately and morally to ensure the wellbeing of all colleagues, visitors, project partners and any communities involved in research. This includes publishing articles and the results of

research ethically. Conducting activities with ethical practices in mind also helps avoid reputational risk to scientists as individuals and to RBG Kew as an organisation.

- 2.4. RBG Kew will periodically review and amend this policy in accordance with current ethical standards and norms and any necessary updates to the governing frameworks in which RBG Kew operates.

3. Scope and definitions

- 3.1. This policy applies to all staff, students, honorary researchers, volunteers and long-term science visitors within the RBG Kew Science directorate, including staff at director level and those in operational and administrative roles, and applies to all research undertaken within the auspices of RBG Kew.
- 3.2. **Ethics** as referred to in this policy are the set of ethical guidelines and moral principles that all staff within the Science Directorate must apply when conducting and disseminating scientific research, and includes an individual's behavior and treatment towards others.
- 3.3. **Research** as referred to in this policy is in accordance with the definition used by the 2021 Research Excellence Framework (REF). Research also refers to research carried out as part of citizen science and social science projects.

“For the purposes of the REF, research is defined as a process of investigation leading to new insights, effectively shared. It includes work of direct relevance to the needs of commerce, industry, culture, society, and to the public and voluntary sectors; scholarship*; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research. It includes research that is published, disseminated or made publicly available in the form of assessable research outputs, and confidential reports. Scholarship for the REF is defined as the creation, development and maintenance of the intellectual infrastructure of subjects and disciplines, in forms such as dictionaries, scholarly editions, catalogues and contributions to major research databases.”

- 3.4. **Researchers** refers to any person who conducts or supports research, including but not limited to: an employee; an independent contractor or consultant; a research student; a visiting or emeritus member of staff; or a member of staff on a joint clinical or honorary contract.
- 3.5. **Managers of Researchers** refers to any person who is the direct manager of a person carrying out research.
- 3.6. **Research Organisations** refers to any bodies which: conduct, host, sponsor or fund research; employ, support or host researchers; teach research students; or allow research to be carried

out under their auspices. This includes RBG Kew and project lead/partner organisations.

- 3.7. These definitions are as in accordance with the [Code of Practice of the UK Research Integrity Office](#).

4. Basic Principles of research ethics

- 4.1. [The Association of Research Managers and Administrators and UK Research Integrity Office Framework](#) defines the common agreement of the core principles of ethical research as:

- **Independence:** All institutional processes supporting best practice in research ethics, including formal and informal reviews, training and support, must operate free from conflicts of interest so that the application of ethics principles and reasoning is neither impeded nor compromised.
- **Competence:** Ethics review and other processes supporting institutional best practice and sector standards must be consistent, coherent and well-informed.
- **Facilitation:** Ethics review and other supporting processes must make the facilitation of ethically sound research a priority. This will be evidenced by researchers viewing engagement with institutional research ethics processes as positive and valuable for all phases of their research.
- **Transparency and Accountability:** Decisions and advice by Research Ethics Committees must be open to public scrutiny and responsibilities must be recognised and discharged consistently.

- 4.2. [The ESRC Framework for Research Ethics](#) should be consulted by any researchers in receipt of grants from UKRI. The framework describes its core principles as follows:

- Research should aim to maximise benefit for individuals and society and minimise risk and harm.
- The rights and dignity of individuals and groups should be respected.
- Wherever possible, participation should be voluntary and appropriately informed.
- Research should be conducted with integrity and transparency.
- Lines of responsibility and accountability should be clearly defined.
- Independence of research should be maintained and where conflicts of interest cannot be avoided they should be made explicit.

Section II – Ethical Code of Conduct for Research

1. Code of conduct overview

- 1.1. All staff at RBG Kew must conduct themselves in accordance with the Ethical Policy for RBG Kew staff as linked in Section IV.
- 1.2. Researchers must develop and carry out their research and related operational and/or managerial work with ethical conduct and questions in mind. This must also translate to partners engaged in science projects. Staff misconduct, discriminatory behaviour and bullying and harassment will not be tolerated and may lead to disciplinary action being taken, following the disciplinary policy and procedure linked in Section IV of this document.

This includes if staff are found to be engaging in unacceptable behaviours toward partners or members of the public who are engaged in experiments and/or if appropriate consent has not been sought.

- 1.3. All staff, project partners and members of the public must be treated with dignity, respect and inclusivity. and must not be discriminated against.
- 1.4. It is important to understand the impact of bad research practice and a lack of integrity upheld by organisations and researchers. Research funding, which includes public funding received by RBG Kew, could be misused or wasted, resulting in funders withdrawing further support due to reputational risk. This also affects the career progression of individual researchers. Therefore, it is important that research is thoroughly planned and the most appropriate methods will be used in experiments and for data collection and wider exploratory investigations. The research questions that are decided upon must be carefully considered for their impact and relevance to the community. The research team must be structured in order to carry out the research effectively, for example to avoid overloading any one team member with tasks.
- 1.5. All research carried out by RBG Kew must be conducted with the best interests of the public in mind and must align with RBG Kew's charitable objectives. [RBG Kew's Science Strategy document](#) should be consulted to ensure that the proposed research will operate within this framework. RBG Kew's Safeguarding policy must be consulted before undertaking any fieldwork. The policy outlines principles that must be adhered to at all times when working in the UK or overseas. All research carried out by RBG Kew must also be conducted in a manner that is respectful to the natural environment and must not damage habitats and ecosystems.

2. Research ethics guidelines for RBG Kew Science Directorate

- 2.1. All scientists at RBG Kew need to undertake an ethical assessment of their proposed research during the planning stage, and must continue to consider the ethics of their research once the project begins. Ethical questions to ask include:
 - Are these experiments safe? What can be done to ensure they will be safe before beginning?
 - Will the research involve other RBG Kew staff members, students, honorary researchers or volunteers?
 - Will the research/experiments involve human participants?
 - Will the research be conducted overseas, and will it involve indigenous people and local communities?
 - Have project partners been fully involved in the development of the project and have responsibilities of all partners been appropriately allocated and agreed? Are there concerns about engaging with particular partners? RBG Kew has a [Know Your Partner](#) assessment form that should be completed as a standard procedure for any newly engaged partners.
 - Has anybody voiced concerns about the research project itself?

- Is the research based on data owned by RBG Kew or other organisations?
 - What contingencies and mitigations are in place if something unforeseen happens?
 - Are staff/partners/engaged communities aware of how to report concerns or complaints?
- 2.2. It is acceptable for researchers to rethink plans if any of the above questions generate cause for concern. Researchers should consult with their line manager and Section Head (e.g. Priority Leader) for advice or to report problems. Researchers should also familiarise themselves with RBG Kew's Safeguarding policy, which is integral to research conduct overseas in particular, and outlines how to handle and report Safeguarding issues.
- 2.3. All staff involved in research and the management of researchers should also consult the health and safety policy and be fully aware of health and safety protections in any location where work is carried out.
- 2.4. Any human trials must be [pre-registered](#) and results made public (refer to section 3 below).
- 2.5. All projects involving citizen science and other social science will require ethical approval and cannot commence without receiving ethical approval from the lead organisation.

3. Human participation

- 3.1. Research undertaken by RBG Kew can involve surveys involving human participants. Any experiments or surveys involving human participants, including children and vulnerable people both in the UK and overseas, must be carried out through informed participation and consent, wherein the participants are made fully aware of and understand the reason for the experiment or survey, what will be expected from them, what methods will be used, the aims of the research, any risks, and how the information gathered will be used and stored.
- 3.2. Informed consent means that consent has been given by the participant after the participant has been informed of the research and every way that they would be involved.
- 3.3. Participants of all ages and levels of education must be approached in a way that makes them aware that they do not have to agree to being involved and can withdraw their participation at any time. Participants must supply explicit agreement voluntarily and must not be coerced. Agreement to participate must be formally recorded, eg. with signed consent forms.
- 3.4. In-country ethical approvals must be sought when involving local human participants.
- 3.5. When working with local and indigenous communities, researchers will also refer to the International Society of Ethnobiology [Code of Ethics](#).
- 3.6. Researchers must complete the Safeguarding training offered at RBG Kew before they undertake projects involving human participants.
- 3.7. If minors (persons under the age of 18 years) or vulnerable people are involved in experiments/surveys in the UK or overseas, their legal parent or guardian must be consulted. Information that will be provided to these participants about the

experiment/surveys must undergo ethical review before being given to the participants.

- 3.8. When working with children and designing research at the proposal stage that will involve children, researchers will also refer to UKRI's research ethics guidance on [research with children and young people](#).
- 3.9. The information participants receive about their involvement must be clear and truthful.
- 3.10. All participants must be given the means to opt out of any research at any time. The option to refuse to participate or cease participation must be made clear from the outset.
- 3.11. All participants must be reassured prior to consenting to their involvement that RBG Kew will store any personal data in accordance with the General Data Protection Regulation 2018. If it will be necessary to share any of this personal data with a third party, consent will also be gained. Researchers must consult [RBG Kew's privacy policy](#) available on kew.org.
- 3.12. The anonymity of any participants requesting anonymity will be honoured.
- 3.13. RBG Kew will not agree to submit project proposals that aim to utilise human participants unnecessarily or in way that could lead to abuse or safeguarding issues.

4. Clinical trials and laboratory experiments involving human cells

- 4.1. Research carried out at RBG Kew using human cells must be compliant with the Human Tissue Act and be restricted to established cell lines or cells that have divided in culture. This excludes the use of primary cell cultures where whole explant/biopsy is present. Cell lines used at RBG Kew are to be purchased from approved reputable suppliers or received as donations from approved research institutions. In each case, ethical review to establish a cell line will have been carried out by the supplier. See further guidance by the [Human Tissue Authority](#). Researchers are responsible for familiarising themselves with [The Human Tissue Act \(2004\)](#) and must not operate in breach of this at any time.
- 4.2. Any experiments involving human cell lines must be carried out in a containment level 2 environment.
- 4.3. For clinical trials, RBG Kew should seek to ensure that external ethical approval has been carried out and that the organisation and researchers leading the trial have a suitable track record as part of standard due diligence.
- 4.4. All clinical trials must be pre-registered with a public registry such as [ClinicalTrials.gov](#), the [WHO list of primary registries](#) or the [ICMJE list of registries](#). It is the responsibility of the organisation leading the clinical trial to pre-register. If RBG Kew is a partner or outsourcing the human trial to a partner organisation, RBG Kew must receive proof of registration.

5. Experiments on invertebrates/projects within wildlife habitats

- 5.1. Research at RBG Kew does not involve clinical experiments on wildlife. In the event that a research project at RBG Kew will involve invertebrates, the requirement for this must be clearly outlined at the project design stage and assessed by the Research Ethics Committee.
- 5.2. RBG Kew will work on invertebrates only when ethically justifiable and critical to scientific research to help understand natural processes that inform biodiversity conservation or the sustainable management of pests.
- 5.3. If a third party partnering with RBG Kew is conducting trials involving wildlife, RBG Kew must undertake appropriate due diligence on the partner and be provided with confirmation that the third party has registered the trial and sought their own ethical approvals. RBG Kew researchers should refer to [UKRIO's Primer on Research Involving Animals](#). Researchers must also ensure that the [key principles](#) (known as the 3Rs) of the National Centre for the Replacement, Refinement & Reduction of Animals in Research are upheld, which is [a requirement of UKRI](#). These are:
 - **Replacement:** Avoiding or replacing animal use e.g. using cell cultures, computer modelling, or human tissue or volunteers.
 - **Reduction:** Where animal use is necessary, keeping numbers to the minimum e.g. using statistical methods to determine the smallest number of animals that can be used in an experiment.
 - **Refinement:** Where animal use is necessary, minimising pain and suffering and improving welfare e.g. using pain relief and providing housing that allows animals to perform their natural behaviours.
- 5.4. If animals are to be purchased as part of a research project (example: agricultural livestock purchased to monitor grazing and feed) researchers and RBG Kew as an organisation must adhere to the most robust animal welfare regulations available, ie. If the UK's standards for animal welfare are higher than those in the country within the project is operating, these standards must be met.
- 5.5. At the end of a project that involves the use and/or purchase of animals, steps must be taken to ensure the safeguarding of the future of those animals.
- 5.6. Researchers entering the natural habitats of wildlife must cause minimal disruption or destruction of these habitats and must not disturb or remove nests, dens or other dwellings. Researchers must take wildlife breeding seasons into consideration.
- 5.7. RBG Kew will not agree to submit project proposals that wish to utilise animals unnecessarily or in way that could lead to animal cruelty.

6. Research involving plant and/or fungal materials and/or overseas fieldwork

- 6.1. Most scientific research projects at RBG Kew involve plant and/or fungal material. Any researchers utilising plant and/or fungal matter and materials from overseas for research and development purposes must adhere to [RBG Kew's policy on Access Benefit Sharing](#).

- 6.2. Researchers must also refer to Kewnet's [A staff guide to collecting, use and supply of plant material and data - tasks and guides \(kew.org\)](#) which includes specific guidance on working with [and Traditional knowledge](#)
- 6.3. The Research Ethics Committee in collaboration with the Overseas Fieldwork Committee, the Grant Review Panel and Sapwood at RBG Kew will maintain oversight of projects involving collection and use of plant and/or fungal materials.
- 6.4. If any researchers are found to be in breach of national legislation on access to genetic resources and benefit sharing or have not managed to acquire the appropriate permits for the research being undertaken, RBG Kew must halt or end the project until the appropriate corrective measures have been taken (example: further training of staff or the obtaining of necessary documents).
- 6.5. RBG Kew undertakes to not submit project proposals that aim to utilise overseas plant and/or fungal materials without assurance that the Principal Investigator will adhere to all relevant national and international legislation and has informed the Overseas Fieldwork Committee of their project's activities and the materials that will be utilised.

7. Publishing research

- 7.1. Researchers should refer to the RBG Kew Research Integrity Policy for full guidance on publishing research.
- 7.2. Researchers are advised to refer to guidance provided by the Committee on Publication Ethics (COPE): [publicationethics.org](#).
- 7.3. Reproducibility and research integrity are crucial to scientific studies and subsequent publications. Data and full methodology should be made available upon enquiry unless covered by a confidentiality agreement. All underpinning data should be retained as intellectual property by RBG Kew staff under current employment obligations. All datasets should be made available on [kew.org](#) or through the most appropriate resource or portal with discrete digital object identifier (D.O.I.) citable designation. Datasets should be open access by default, with RBG Kew recognition, with other legal obligations noted for funders and partners.
- 7.4. Researchers at RBG Kew should always aim to publish in open access journals and platforms (known as 'gold open access'). Where gold open access is not possible, a pre-print version of publications should be submitted for archiving on [RBG Kew's Research Repository](#), which is freely accessible (known as 'green open access'). Researchers should not use artificial intelligence software to author publications or fabricate results.
- 7.5. Any academic research published by researchers at RBG Kew should be peer reviewed prior to publication.
- 7.6. Papers must be written by staff involved in the research and 'paper mills' (companies that sell manuscripts) should never be engaged. All contributors should be acknowledged. Contributors meriting co-authorship should be duly named as co-authors on the publication.

- 7.7. Publishers must be informed if details within published papers are incorrect or fraudulent. Particular note should be made on the state of balance or unbalanced data sets to ensure any projections or models are viewed with knowledge of the limitations of the underpinning dataset. It is acceptable to publish details in a paper and then publish a correction in a later issue if an error was made in a previous publication. Authors must consider potential conflicts of interest, misconduct in experiments, image manipulation, plagiarism and issues with authorship.
- 7.8. In the event that any of the above deliberate issues are apparent, Sapwood must be informed and advise on how to proceed until responsibility for ethical review passes to the new Research Ethics Committee.

Section III – Ethical Review Practices

1. Current practice

- 1.1. RBG Kew is in the process of establishing a dedicated Research Ethics Committee to oversee and advise upon ethical matters within the research carried out at RBG Kew, throughout the lifetime of a project – from development stage, through its implementation, to the project's closure.
- 1.2. Prior to the implementation of the RBG Kew Research Ethics Committee, Ethical review is to be carried out externally by the lead or partnering university's Research Ethics Committee.
- 1.3. Current ethical review at RBG Kew is carried out at the pre-award stage by the Grants Review Panel, which has rotating members, and internal peer review is sought in addition, prior to an application valued at over £50,000 being submitted to a funder.
- 1.4. Applications with a value of less than £50,000 have the oversight and agreement of Science Section Heads.
- 1.5. Ethics and standards of integrity within research projects at RBG Kew is also examined regularly by: the 'Sapwood' Science Senior Management Group, which is the second tier of science leadership; the Executive Board that comprises of Directors across the organisation; the Science Advisory Committee that is in place to advise specifically on science at RBG Kew, and the Board of Trustees, which maintains oversight and governing authority of the entire organisation. These groups will continue to have oversight and provide expertise in addition to the Research Ethics Committee upon its implementation.
- 1.6. Applications will not be put forward to the funder in the case of poor research design and ethical questions being raised and unresolved.

2. Role of the Research Ethics Committee

- 2.1. A dedicated Research Ethics Committee will be implemented at RBG Kew and this policy shall be updated accordingly to include further information and details of committee membership, terms of reference and standard operating procedures.
- 2.2. The Research Ethics Committee will be an expert advisory board that will specifically strengthen the ethics within the research during a project's lifetime, starting from the planning stage.
- 2.3. The role of the Research Ethics Committee will be advisory and provide ethics opinions. Favourable ethics opinions are necessary prior to recruiting participants. Any ethical concerns that cannot be resolved through the redevelopment and reassessment of research, or through behavioural changes, will be raised with the: 'Sapwood Science Senior Management Group at RBG Kew. This is a live document and will be updated once the Research Ethics Committee has been established.
- 2.4. The Research Ethics Committee will follow core principles as outlined in Section I of this policy.

Section IV – Related Policies, Procedures and Guidance

This Research Ethics Policy will operate in conjunction with other RBG Kew policies and procedures including the following:

[Royal Botanic Gardens, Kew Framework Document \(Defra\)](#)

[Code of Conduct](#)

[Disciplinary policy and procedure](#)

[Whistleblowing policy](#)

[Identifying and managing conflicts of interest](#)

[Ethical policy for all RGB Kew staff, including the Universal Ethical Code for Scientists](#)

[Guidance on managing intellectual property](#)

[Policy on access to genetic resources and benefit-sharing](#)

[Planning an overseas fieldwork trip](#)

[CITES, EU Wildlife Trade Regulations and Kew](#)

[Health and safety policies and guidance](#)

[Open access publishing: advice for Kew authors](#)

[A staff guide to collecting, use and supply of plant material and data - tasks and guides \(kew.org\)](#)

[Traditional knowledge – collecting material and information](#)

[HEI Action Plan \(kew.org\)](#)

[Explanation of unacceptable behaviour](#)

[RBG Kew data protection \(privacy\) policy](#)

[The Government's ethical code for scientists](#)