FELLOWSHIPS INTERVIEW PANEL: GUIDANCE NOTES FOR THE CONSIDERATION OF DISCOVERY SCIENCE INDEPENDENT RESEARCH FELLOWSHIP (IRF) PROPOSALS

1. Introduction

The NERC Independent Research Fellowship scheme is designed to develop scientific leadership among the most promising early-career environmental scientists, by giving all Fellows five years' support, which will allow them sufficient time to develop their research programmes, and to establish international recognition. The primary criterion is the suitability of the applicant and their potential to become a future world class research leader. Track record should be assessed as appropriate to career stage and equal opportunities.

2. Fellowship Interview Panel

The primary role of the Fellowship Interview panel is to consider those fellowship proposals that passed the initial review and sift process and to assess each applicant. The Interview panel will comprise the members of the sift panel. The full proposals, any additional background information and all reviewers' comments will be made available to the interview panel via an extranet site. These are not moderating panels and members can use their own analysis and judgement of the project and individual. Applicants have not had the opportunity to respond to referees comments – that is part of the interview process. Using the information provided and that gained by interviewing each applicant, all interview panels are responsible for:

- providing an overall score for each applicant they interview;
- producing a final ranked list of these applicants; and
- satisfying themselves that the financial resources requested for proposals in the funding frame are reasonable to meet the fellowship objectives and recommending any areas of budget adjustment where necessary.

At the Panel

The panel Chair will welcome each applicant and outline the structure of the interview.

For each proposal, two panel members are nominated in advance as introducers and their role is to lead the questioning of that applicant. As well as the proposals that have been allocated to an introducer, panel members should read as many of the other proposals as possible and be willing to participate in the questioning of each applicant, making sure that all aspects of the fellowship, the research plan, the applicant's proposed place of work, publication record, career etc. are covered.

Each applicant is given 10 minutes to give a presentation, followed by 20 to 30 minutes of questions. Panels do not need to interview all applicants for the same time, and weaker applicants could be interviewed for a shorter time, leaving more time for the stronger/competitive applicants.

Proposal scoring

The primary criterion for the NERC Independent Research Fellowship is the suitability of the applicant and research excellence is now a secondary criterion. This is a change from the previous fellowship schemes where the applicant and the research proposal were both primary criteria. Fellows should display considerable initiative and demonstrate why they offer more potential than other postdocs in terms of future research careers. The panel must also be convinced that the applicant devised their own research plan. However, the panel should not necessarily expect pilot studies and preliminary results in support of the proposal.

Key areas for consideration are:

- Have they demonstrated their research vision and philosophy and outlined ways in which their research could be developed over the 5 year fellowship and beyond?
- Have they demonstrated how they will contribute to the international research area and interact with the leading international groups in their field?
- Have they shown a thorough grasp of their discipline and do they offer considerable promise as an independent researcher?
- Have they demonstrated that if awarded a fellowship, they will be genuinely working independently of senior colleagues with whom they might have previously collaborated or for whom they might be working in a supporting role?
- Was the quality of their presentation and their response to questions of a suitably high standard?
- Have they produced an appropriate number and quality of published papers for their career stage and research area?
- Is the proposed place of work and support from the host department appropriate?
- Have they demonstrated an appropriate level of awareness of the broader context surrounding the proposed research?
- Was the proposal exciting, challenging and feasible?
- How great are the potential rewards of the research: the significance and quality of the work, and the scientific impact it will have in terms of enhancing or developing insights, developing the field and adding to knowledge or understanding in the area to be studied in a national or international context?
- To what extent are the research questions, issues or problems that will be addressed through the work stated and their importance and appropriateness specified?
- Are the proposed research methods and/or approach appropriate and feasibility?
- Is there a high level of referee support (take into account that referee scores do not always reflect their comments)?

Please have regard to the Equality Act and be careful to avoid any unconscious bias in your assessment on the grounds of a protected characteristic such as age, disability, gender reassignment, marriage/civil partnership, pregnancy/maternity, race, religion/belief, sex or sexual orientation.

Based on the referee's scores and the assessment of the applicant at interview, the panel must assign each applicant a Research Leadership Potential score of between 0 and 10 (highest), taking into consideration both the applicant (primary criterion) and the research proposal (secondary criterion). The panel should stick closely to the definitions of the scores to ensure consistency across the panels.

Proposal Prioritisation

Once all the applicants have been interviewed, the panel is asked to place the proposals in priority order. A ranked list of the proposals should be compiled based

on the scores assigned to each for Leadership Potential. Applicants with the same leadership potential score will need to be further ranked. Applicants will receive the final score and ranking, which will also be published on the NERC website (http://www.nerc.ac.uk/funding/application/howtoapply/awards/).

3. Multidisciplinary Proposals

NERC supports fellows undertaking research in areas of environmental sciences, including freshwater, earth, atmospheric, marine and terrestrial sciences, earth observation and polar science. Proposals to work at the environmental science/socio-economic/engineering interfaces are particularly encouraged. NERC is also particularly keen to attract scientists in areas of applied mathematics, physics or strongly quantitative disciplines wishing to develop a career in environmental science. There is no co-funding agreement across Research Councils for fellowships, so applicants working across disciplines should not be disadvantaged.

4. Proposals submitted in the priority area of Bioinformatics

Some Independent Research Fellowship proposals will be linked to NERC Research Programmes. For example, fellowship proposals in the priority area of Bioinformatics submitted as part of the Mathematics and Informatics for Environmental 'Omic Data Synthesis ('Omics) Programme. The fit of these proposals to the remit of the 'Omics Programme has already been reviewed by the 'Omics Programme Management Team. Therefore reviewers and Panels are requested to assess the quality of the applicant and the research excellence of the project alone (and not score "Fit to the Programme"). In a few cases, the proposal may have been considered out of remit for the 'Omics Programme but the applicant is still being assessed for a standard Independent Research Fellowship.

The primary goal of the fellowships in the priority area of Bioinformatics is to build a sustained UK presence in environmental 'omics and bioinformatics through creation of a new generation of science leaders that are able to harness the power of these approaches to address fundamental scientific questions aligned with NERC strategic priorities.

There is also considerable potential in 'omics technologies and bioinformatics to tackle scientific problems where the environment is one part of a complex matrix of factors that affect human health, food security, agricultural productivity, ecosystem health, and other aspects of sustainability. The scale of data associated with 'omics technologies, and the application of bioinformatics to integrate across complex problems from an environmental perspective, also have potential to result in the generation of novel algorithmic and computational applications. Whilst not excluding a primary focus on NERC-led strategic priorities there is therefore an expectation that the Fellowships will address multi-disciplinary challenges that extend beyond the NERC remit and have wider application. Where appropriate, co-funding from other Research Councils may be available.

5. Moving Institutions

NERC encourages applicants to undertake their fellowships at a different institution to the one where they received postgraduate training or are currently employed. Nonetheless NERC recognises that there may be circumstances where moving institution is not appropriate, for example, due to the institution providing unique facilities or opportunities, or for domestic arrangements. In all cases the choice of

institution must be fully justified. The choice of institution should be taken into consideration when discussing a proposal, but should not be given undue weighting in deciding its outcome. However, applicants should still be able to demonstrate that if awarded a fellowship, they will be genuinely working independently of senior colleagues with whom they might have previously collaborated or for whom they might be working in a supporting role.

6. Part-time/Flexible Working/Career Breaks

All Fellowships may be held as full or part-time. NERC welcomes proposals from applicants who wish to work on a part-time/flexible basis in order to combine domestic responsibilities with a career and the panel should ensure that such applicants are not disadvantaged. When considering track record, including publication rate/volume, career breaks and part-time working should be taken fully into account.

7. Panel Scoring Systems

Research Leadership Potential (0-10)

Each proposal should be assigned a 0-10 score for Research Leadership Potential using the definitions provided below. Please note these definitions are illustrative and not exhaustive. The definitions are based around the reviewer guidance criteria (Suitability of Applicant A0-6 and Research Excellence R0-6).

Score	Usual Indicators
10	The applicant is on a clear trajectory to become a world-class research leader (A6). The proposed work is outstanding in terms of quality, significance and scientific impact (R6). Highest priority for funding.
9	The applicant is on a clear trajectory to become a world-class research leader (A6). The proposed work is excellent in terms of quality, significance and scientific impact (R5). OR The applicant is likely to become a world class research leader. (A5). The proposed work is outstanding in terms of quality, significance and scientific impact (R6). Very high priority for funding.
8	The applicant is on a clear trajectory to become a world-class research leader (A6). The proposed work is very good in terms of quality, significance and scientific impact (R4). OR The applicant is likely to become a world class research leader (A5). The proposed work is excellent in terms of quality, significance and scientific impact (R5). OR The applicant demonstrates potential to become a world class research leader. (A4). The proposed work is outstanding in terms of quality, significance and scientific impact (R6) High priority for funding.
7	The applicant is on a clear trajectory to become a world-class research leader (A6). The proposed work is good in terms of quality, significance and scientific impact (R3). OR The applicant is likely to become a world class research leader (A5). The

	proposed work is very good in terms of quality, significance and scientific impact (R4). OR The applicant demonstrates potential to become a world class research leader (A4). The proposed work is excellent in terms of quality, significance and scientific impact (R5). Should be funded if possible.
6	The applicant is likely to become a world class research leader (A5). The proposed work is good in terms of quality, significance and scientific impact (R3). OR The applicant demonstrates potential to become a world class research leader (A4). The proposed work is very good in terms of quality, significance and scientific impact (R4). Suitable for funding in principal, but in a competitive context is not a priority.
5	The applicant is likely to become a world class research leader. (A5/6), but the proposed work is not competitive in terms of quality, significance and scientific impact. (R2/1) OR The applicant demonstrates potential to become a world class research leader. (A4). The proposed work is not competitive in terms of quality, significance and scientific impact. (R3/2/1) Not recommended for funding
4	The applicant is a solid research scientist but has demonstrated insufficient evidence of leadership potential. (A3) The proposed work is competitive in terms of quality, significance and scientific impact (R4/5/6). Not recommended for funding.
3	The applicant is a solid research scientist but has demonstrated insufficient evidence of leadership potential. (A3) The proposed work is not competitive in terms of quality, significance and scientific impact. (R3/2/1) Not recommended for funding.
2	The applicant has demonstrated some scientific weaknesses and/or no evidence of leadership potential. (A2) Not recommended for funding.
1	The applicant has demonstrated substantial scientific weaknesses. (A1) Not recommended for funding.
0	Not enough information available to judge quality of applicant (A0). For special cases, e.g. flawed in scientific approach, subject to serious technical difficulties, does not address operational risks, insufficiently clearly written that it cannot be properly assessed, is duplicative of other research (R0).

The scoring guide used by the reviewers and on which the research leadership potential scoring is based are:

A. Suitability of Applicant

Score	Suitability of Applicant (Primary Criterion)
6	**Outstanding** The applicant is on a clear trajectory to become a world-class research

	leader.
5	**Excellent** The applicant is likely to become a world class research leader.
4	**Very Good** The applicant demonstrates potential to become a world class research leader.
3	**Adequate** The applicant is a solid research scientist but has demonstrated insufficient evidence of leadership potential.
2	**Poor** The applicant has demonstrated some scientific weaknesses and/or no evidence of leadership potential.
1	**Very Poor** The applicant has demonstrated substantial scientific weaknesses.

B. Research Excellence Criterion

Score	Research Excellence (Secondary Criterion)
6	**Outstanding** The proposed work meets outstanding standards in terms of originality, quality and significance and addresses extremely important scientific questions or will enable them to be addressed through technological development.
5	**Excellent** The proposed work meets excellent standards in terms of originality, quality and significance and addresses highly important scientific questions or will enable them to be addressed through technological development.
4	**Very Good** The proposed work meets high standards of originality, quality and significance and addresses important scientific questions or will enable them to be addressed through technological development.
3	**Good** The proposed work is of merit, meets satisfactory standards of originality, quality and significance and addresses reasonably important scientific questions or will enable them to be addressed through technological development.
2	**Not Competitive/ Modest** The proposed work is potentially of some merit but overall is of inconsistent quality, significance and originality but could result in some useful knowledge.
1	**Unfundable/ Poor** The proposed work is unsatisfactory in terms of originality, quality and significance and is unlikely to advance the field.
0	**Non-Scoring** For special cases e.g. flawed in scientific approach, subject to serious technical difficulties, insufficiently clearly written that it cannot be properly assessed, or is duplicative of other research.

8. Consideration of Resources Requested

The paragraphs below describe the approach the panel should take to the resources requested on fellowship proposals. The Interview panel should consider the costs requested and advise the panel secretary of any changes to the requested costs. Panel members may wish to explore certain requested costs with the applicant.

The fellowship proposal should provide more detail on the research proposed for the first three years of the fellowship. The research proposed for the final two years can be more speculative and reflect the applicant's research vision. However, sufficient information should have been provided to inform reviewers and panels of the direction and feasibility of the research and enable appropriate costs to be requested on the proposal.

Successful fellows are encouraged to apply for other NERC grants and studentships during their fellowship. However, the research proposed in the fellowship should be manageable by the fellow and with the resources available (including any made available by the host institution). If the project is obviously over-ambitious and looks like it would require other grant and researcher support, this should be discussed with the applicant so it is clear what is being covered by the fellowship.

Full Economic Costing

All research proposals submitted for consideration are expected to present the full economic cost (FEC) of the project. Proposals must include the funds for the investigator's effort and the overheads supporting the research activity. Proposals are composed of four summary fund headings as follows:

Directly Incurred Costs – Costs that are explicitly identifiable as arising from the conduct of a project, are charged as the cash value actually spent and are supported by an auditable record.
Directly Allocated – The costs of resources used by a project that are shared by other activities (including the cost of estates). They are charged to projects on the basis of estimates rather than actual costs and do not represent actual costs on a project-by-project basis.
Indirect costs – non-specific costs charged across all projects, based on estimates that are not otherwise included as Directly Allocated costs.
Exceptions – Directly Incurred costs that are funded as 100% of FEC, subject to actual expenditure incurred, or items that are outside FEC – There are none applicable for fellowships.

All costs that have been justified as reasonable requirements for the research proposed are allowable and should be accepted. Panel recommendations on resources requested should be constrained to items that have not been justified. Note the consideration of whether the resources are justified or not should focus **only** on:

- 'Directly Incurred' costs,
- 'Other Directly Allocated' costs (except charge-out costs for departmental technical & administrative services).

All other Estates and Indirect Cost elements, which are fixed by the research organisation, should **not** be considered.

9. Pathways to Impact

An exploration of 'Pathways to Impact' continues to be required with every proposal;

the Pathways to Impact attachment describe potential opportunities and approaches to generate economic and social impact from the proposed research over different timescales.

Whilst NERC does not expect applicants to be able to predict the economic and societal impact of their research, NERC does expect applicants to have explored the following from the outset:

1. Who could potentially benefit from the proposed research over different timescales?
2. How might the potential beneficiaries benefit?
3. What will be done during and after the project to increase the likelihood of the research reaching the identified beneficiaries and maximize the likelihood of the identified benefits being achieved?

Whilst Pathways to Impact is not a secondary assessment criterion for ranking of proposals, Panels are responsible for discussing Pathways to Impact and identifying any unacceptable Pathways to Impact or unjustified costs associated with proposals within the funding frame and providing feedback on the unacceptable Pathways to Impact.

10. Panel Feedback

The lead introducer (Introducer 1) is responsible for providing "consolidated panel feedback". This should include input from the second introducer and other panel members as required and should be emailed to the panel secretary as soon as possible and at the latest one week after the interviews. The consolidated feedback will form the feedback which will be sent (unabridged) to all applicants (successful and unsuccessful) alongside their full reviewers comments. The same feedback will also be copied to the applicant's Research Organisation Administration Office. When preparing feedback please consider the Freedom of Information act and do not include comments that could not be fed back to the applicant. A feedback form is at **Annex A**.

Panels cannot formally invite a resubmission, but may wish to include encouraging comments within the feedback. Equally, if the applicant falls a long way short of a suitable standard for a fellowship, the panel should indicate this through using the full scoring range and also provide constructive feedback.

Annex A

This form should be used to provide a description and justification of the interview panel's assessment of the applicant and the proposal. Comments included will be used as feedback to the applicant and as a record of the panel's discussion for NERC. The same feedback will also be copied to the applicant's Research Organisation Administration Office.

Please note:

- the first introducer for each proposal is responsible for completing this form and sending it to the Panel Secretary within one week of the meeting date
- Please note, your comments will be fed back verbatim to the applicant and their Research Organisation Administrative Office

Proposal details	
Introducer Name	
Grant Reference	
PI Name	
Proposal Assessment details and feedback to applicant	
Panel Score for Research Leadership Potential (0 – 10)	
Please detail the panel's justification for this score	
Panel Assessment for Pathways to Impact (Acceptable/Unacceptable)	
Please detail the panel's justification for this assessment below. *If the panel considered that the Pathways to Impact was unacceptable, please detail any actions/improvements required of the applicants to raise this to an acceptable level.*	
Please detail any comments and recommendations made by the panel (including any adjustments) regarding cost effectiveness and resources requested.	
Additional comments. Please add any other comments pertinent to the assessment of this proposal at the interview panel meeting which have not been included above	