



FELLOWSHIPS SIFT 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. Role of the Fellowship Sift Panel

The primary role of the Fellowship Sift Panel is to consider each proposal and the reviews they have received and to draw up a shortlist of applicants to be invited to interview. The Sift Panel will be made up of 5 or 6 college members. The Panel should aim to shortlist a maximum of 14 applicants, who can be interviewed over two days, but potentially strong applicants should not be rejected just to keep within this maximum.

The proposals that are short-listed at this stage will not be sent out for further peer review, except for any exceptional cases, where the Panel considers there is a strong need for further reviews.

Proposals that have received consistently high scores can be short-listed without much discussion, as long as the scores match the written comments provided. Those proposals with consistently low scores are unlikely to be fundable and so should also not require much discussion. Time will need to be spent on those proposals that have a range of scores. For the scoring system, see below.

Sift Panel Members are asked to come to the panel meeting with their notes and recommendations for whether each proposal should be:

- Definitely short-listed
- Potentially Short-listed (some members split this into two – borderline shortlist or borderline reject).
- Definitely rejected

At the Sift Panel, it will be relatively easy to decide on the top proposals to be short-listed and the bottom proposals to be rejected. Time can then be spent where there is disagreement or the proposal is considered to be on the borderline.

No introducers are used at the Sift Panel, so all Members should consider all proposals unless they have a conflict of interest, in which case they will not receive the reviews and should leave the room during the discussion of that proposal.

At the meeting, the panel should first consider each proposal in turn. Where all panel members consider the proposal should be shortlisted, it can go straight to the interview "pile". If there is not full agreement some further discussion may be required at this point, or the proposal goes in the "pile" to discuss further. Again, if all

members agree that a proposal should be rejected, then no further discussion is required. Where there is disagreement between the panel members or where the members have placed a proposal in the middle category – potentially shortlist, then a more detailed discussion will be required. After the first run through, the panel then go through the proposals in the “discuss pile”. Further iterations may be required until all proposals have been added to the shortlist or reject pile.

For the fellowship competition, it is very important that BOTH the applicant and the Research Excellence are highly scored, but the Suitability of the Applicant is now the primary assessment criterion and Research Excellence is a secondary criterion. The Leadership Potential Assessment Criteria for the Interview Panel is at **Annex A** for information. The Sift Panel do not need to score proposals.

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 Discovery Science Fellowships, so applicants working across disciplines should not be disadvantaged. There may be co-funding agreed for fellowships funded via Research Programmes (see below).

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. This may be an area that can be addressed at interview.

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. Career Stage

NERC wishes to support the best early-career environmental scientists and therefore, reviewers have been asked to take due account of the applicants career stage when assessing the applicant's track record.

8. Panel Scoring Systems

Each proposal should have three or four reviews. Under exceptional circumstances, a proposal may come to the Sift Panel with two reviews, but two good reviews may be as helpful as three brief reviews. In exceptional cases, if the Panel consider that any proposal has not had an adequate or appropriate review, it should be shortlisted to enable further reviews to be sought on an aspect not covered by the current reviews and where the panel members do not have relevant expertise.

It is important to stress that Suitability of Applicant is the primary assessment criteria and Research Excellence a secondary criterion. You should take this distinction between primary and secondary criteria into account when considering whether an applicant should be short-listed or not.

Each reviewer will score the following criteria:

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.
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9. Applicant Feedback

Applicants, who are rejected at the sift stage, receive the referees comments as feedback, with no further feedback from the Panel. There will generally be plenty of points raised by the referees to explain the rejection decision. In exceptional cases, the Panel may decide that some further panel feedback would be helpful, in which case one member of the Panel should be tasked with drafting this feedback and returning it to the Panel Secretary within one week of the meeting.

Annex A

Interview Panel Assessment Grading System

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).