

REF 01.2012
January 2012

This document is for information

This document sets out the assessment criteria and working methods of the main and sub-panels for the 2014 Research Excellence Framework. The deadline for submissions is 29 November 2013.

Panel criteria and working methods

Contents

	Page	
Executive summary	1	
Introduction	3	
Part 1: Generic statement of assessment criteria and working methods	4	
<hr/>		
The Research Excellence Framework	4	
Submissions and units of assessment	4	
Expert panels	4	
Generic assessment criteria	6	
Staff and individual staff circumstances	9	
Interdisciplinary research and work on the boundaries between UOAs	13	
Panel procedures	14	
Main panel working methods	14	
Sub-panel working methods	16	
Part 2A: Main Panel A criteria	19	
<hr/>		
Section A1: Submissions and units of assessment	20	
Section A2: Assessment criteria: outputs	23	
Section A3: Assessment criteria: impact	27	
Section A4: Assessment criteria: environment	35	
Part 2B: Main Panel B criteria	38	
<hr/>		
Section B1: Submissions and units of assessment	39	
Section B2: Assessment criteria: outputs	43	
Section B3: Assessment criteria: impact	48	
Section B4: Assessment criteria: environment	55	
Part 2C: Main Panel C criteria	58	
<hr/>		
Section C1: Submissions and units of assessment	59	
Section C2: Assessment criteria: outputs	64	
Section C3: Assessment criteria: impact	68	
Section C4: Assessment criteria: environment	75	
Part 2D: Main Panel D criteria	78	
<hr/>		
Section D1: Submissions and units of assessment	79	
Section D2: Assessment criteria: outputs	85	
Section D3: Assessment criteria: impact	89	
Section D4: Assessment criteria: environment	94	
Annexes		
<hr/>		
Annex A	Summary of requirements for additional information on outputs	97
Annex B	Impact template (REF3a)	100
Annex C	Environment template (REF5)	101
Annex D	Managing conflicts of interest	102
Annex E	Confidentiality and data security arrangements	104
Annex F	List of abbreviations	106

Panel criteria and working methods

To

Heads of publicly funded higher education institutions in the UK

Of interest to those responsible for

Research

Reference

REF 01.2012

Publication date

January 2012

Enquiries from staff at UK higher education institutions

E-mail your institutional REF contact. (These are listed at www.ref.ac.uk under Contact.)

Other enquiries

Anna Dickinson, tel 0117 931 7477, e-mail info@ref.ac.uk

Executive summary

Purpose

1. This document sets out the assessment criteria and working methods of the main and sub-panels for the 2014 Research Excellence Framework (REF).
2. The final panel criteria and working methods set out in this document have been revised, in the light of responses to 'Consultation on draft panel criteria and working methods' (REF 03.2011), from July to October 2011. This includes amendments to the guidelines that were published in 'Assessment framework and guidance on submissions' (REF 02.2011). These changes are in Part 1, paragraphs 43, 44 and 64-91 and supersede the relevant paragraphs of REF 02.2011.
3. This document should therefore be read alongside REF 02.2011. Together, the two documents give a comprehensive description of the information required in submissions to the REF, and how the REF panels will assess submissions.

Key points

4. The REF is a process of expert review. Expert sub-panels for each of 36 units of assessment will carry out the assessment, working under the leadership and guidance of four main panels.
5. UK higher education institutions (HEIs) will be invited to make submissions by 29 November 2013. The REF main and sub-panels will assess submissions during 2014, and results will be published in December 2014. The results will inform the allocation of research funding by the UK higher education funding bodies, from 2015-16.
6. Part 1 of this document sets out the generic criteria and working methods that will be applied by all panels. Part 2 provides further details of the criteria of each of the four main panels.

Action required

7. This document is for information and to guide institutions in preparing and collecting data for inclusion in REF submissions. No action is required by HEIs at this stage.

Further information

8. For further information about the REF see www.ref.ac.uk.

9. Staff at UK HEIs should direct any queries to their institutional REF contact. Contact details for each institution are listed at www.ref.ac.uk under Contact.

10. Other enquiries should be addressed to info@ref.ac.uk.

Introduction

11. This document sets out the assessment criteria and working methods of the main and sub-panels for the 2014 Research Excellence Framework (REF):

- Part 1 sets out the generic assessment criteria and common working methods to be followed by all panels
- Part 2 gives further details of the criteria to be employed by each of the four main panels and their sub-panels.

12. This document should be read alongside REF 02.2011 'Assessment framework and guidance on submissions' (hereafter 'guidance on submissions'). Together, the two documents give a comprehensive description of the information required in submissions to the REF, and how the REF panels will assess submissions. We will issue supplements to the guidance at later dates to clarify points of detail regarding submissions, but such supplements will not request any new items of data.

13. This document includes amendments to the guidelines that were published in 'guidance on submissions', in the light of responses to 'Consultation on draft panel criteria and working methods' (REF 03.2011). These changes are in Part 1, paragraphs 43, 44 and 64-91 and supersede the relevant paragraphs of 'guidance on submissions'.

Background

14. In early 2011, the REF team invited the four main panels to develop their criteria and working methods, with input from their sub-panels. The 'Guidance to panels' on developing their criteria is available at www.ref.ac.uk under Publications. Each main panel was instructed to develop a common set of criteria and working methods for its group of sub-panels, with distinct criteria or approaches for particular sub-panels only where justified by differences in the nature of research in those disciplines. This approach reflects feedback from the Research Assessment Exercise that greater consistency across the exercise is desirable.

15. From July to October 2011, the REF team and the four main panels consulted on draft panel criteria and working methods (REF 03.2011). Around 400 responses were received and a number of events were held to discuss the draft criteria, including four workshops with a range of 'users' of research. A summary of the responses will be available on www.ref.ac.uk under Publications. A number of revisions to the criteria and working methods have

been made in response to the consultation feedback, and the criteria and working methods are set out in their final form in this document.

16. Panels will not be permitted to depart from the criteria and working methods as published in this document, other than in exceptional circumstances that cannot be accommodated within the published framework. In such cases, we will publish the reason and details of the change as an amendment.

Part 1

Generic statement of assessment criteria and working methods

The Research Excellence Framework

17. The Research Excellence Framework is the new system for assessing the quality of research in higher education institutions in the UK. It replaces the Research Assessment Exercise (RAE), which was last conducted in 2008.

18. The purpose of the REF, the general principles governing its conduct, and an overview of the REF framework are set out in Part 1 of 'guidance on submissions'.

Submissions and units of assessment

19. Institutions will be invited to make submissions by 29 November 2013, in each unit of assessment (UOA) they elect to submit in. There are 36 UOAs, listed in Annex D of 'guidance on submissions'. Part 2 of this document provides descriptors of each UOA (see Section 1 of each of the main panels' statements of criteria). Each submission must contain, in summary:

- a. **REF1a/b/c:** Information on staff in post on the census date, 31 October 2013, selected by the institution to be included in the submission.
- b. **REF2:** Details of publications and other forms of assessable output which they have produced during the publication period (1 January 2008 to 31 December 2013). Up to four outputs must be listed against each member of staff included in the submission.
- c. **REF3a/b:** A completed template describing the submitted unit's approach during the assessment period (1 January 2008 to 31 July 2013) to enabling impact from its research, and case studies describing specific examples of impacts achieved during the assessment period, underpinned by excellent research in the period 1 January 1993 to 31 December 2013.
- d. **REF4a/b/c:** Data about research doctoral degrees awarded and research income related to the period 1 August 2008 to 31 July 2013.
- e. **REF5:** A completed template describing the research environment, related to the period 1 January 2008 to 31 July 2013.

20. The generic eligibility definitions and data requirements set out in 'guidance on submissions' apply to all submissions.

Multiple submissions

21. Institutions will normally make one submission in each UOA they submit in. They may exceptionally, and only with prior permission from the REF manager, make multiple submissions in the same UOA. All requests for multiple submissions will be considered against the generic criteria set out in 'guidance on submissions' (paragraphs 50-51). The panel criteria in Part 2 indicate which sub-panels consider there is a case for multiple submissions in their UOAs, given the nature of the disciplines they cover. Part 2 also states any additional criteria that will need to be satisfied when requesting multiple submissions in the respective UOAs.

Expert panels

22. The REF will be a process of expert review, with discipline-based expert panels assessing submissions made by higher education institutions (HEIs) in the 36 UOAs. An expert sub-panel for each of the 36 UOAs will conduct a detailed assessment of submissions in its UOA. The sub-panels will work under the leadership and guidance of four main panels: Main Panels A, B, C and D.

23. In brief, the sub-panels are responsible for:

- assessing each submission made in its UOA and recommending the outcomes for each submission to the main panel
 - contributing to the criteria and working methods of their main panels.
24. The four main panels are responsible for:
- developing the panel criteria and working methods
 - ensuring adherence to the published procedures and consistent application of the overall assessment standards by the sub-panels
 - signing off the outcomes of the assessment.

25. The roles and responsibilities of the main and sub-panels are described fully in 'Units of assessment and recruitment of expert panels' (REF 01.2010).

26. The main and sub-panels were appointed by the four UK funding bodies through an open process of nominations, as described in REF 01.2010. The membership of each panel is at www.ref.ac.uk under Expert panels. As we indicated in REF 01.2010, we have sought to ensure that the membership of the

main and sub-panels comprises individuals who have experience in conducting, managing and assessing high-quality research, as well as experts who are well-equipped to participate in the assessment of research impact from a private, public and third sector perspective. In appointing the panels, due regard was given to the desirability of ensuring that the overall body of members reflects the diversity of the research community.

27. The main and sub-panels will undertake their roles within the common framework for assessment set out in 'guidance on submissions' (Part 1) and the generic statement of criteria and working methods (Part 1 of this document). Part 2 of this document sets out in more detail the criteria that each of the main panels and its sub-panels will employ when assessing submissions.

Role and appointment of additional assessors

28. Additional assessors will be appointed to extend the breadth and depth of expertise on the sub-panels as required to carry out the assessment. Assessors will undertake either one of the following roles:

- a. To assess the impact element of submissions and develop the impact sub-profiles, alongside existing panel members. These will be people with professional experience of making use of, applying or benefiting from academic research.
- b. To assess research outputs and develop the output sub-profiles, alongside existing panel members. These will be practising researchers with relevant expertise.

29. Assessors will play a full and equal role to sub-panel members in developing the sub-profiles for either the impact or outputs element of the assessment. They will be fully briefed, take part in calibration exercises and attend panel meetings at which the relevant aspects of submissions (outputs or impact) are discussed.

30. Assessors will be appointed by the chief executives (or equivalent) of the four UK funding bodies, following recommendations from sub- and main panel chairs, made from among nominated individuals. These will either be individuals with appropriate expertise who have already been nominated (see REF 01.2010), or additional nominations that the REF team will invite from appropriate bodies. Where further nominations are invited, the REF team will ask the nominating bodies to explain the relevant expertise of nominees, as well as to state how the nominees would help enhance the diversity of the panels concerned. In recommending assessors, sub-panel chairs will give due consideration to enhancing the extent to which the

overall body of members reflects the diversity of the research community. This consideration responds to the issues raised in the 'Analysis of panel membership' (July 2011).

31. Sub- and main panel chairs' recommendations will be guided by the principle of ensuring that sub-panels have access to appropriate expertise to reach robust and fair judgements with regard to submitted material. Appointments will be made as follows:

- a. Where a clear gap in the expertise of a sub-panel required to assess either outputs or impact has been identified during the criteria development and consultation phase, assessors will be appointed during 2012.
- b. Further assessors will be appointed during 2013, after the REF team has surveyed institutions about the volume and nature of work that they intend to submit to the REF. In early 2013 the sub- and main panels will consider the breadth and depth of expertise of each sub-panel's membership, in the light of institutions' submission intentions. Each sub-panel will seek to identify:
 - i. Disciplinary or interdisciplinary areas where there may be gaps in the sub-panel's expertise required to assess outputs, or where the volume of outputs may lead to potential workload issues for existing members.
 - ii. Areas where additional user expertise would be required to assess the range of impacts indicated in the survey responses.

32. Before recommending the appointment of assessors, sub-panel chairs will discuss the recommendations with their main panels. The following issues will be considered across each main panel:

- Whether a demonstrable lack of expertise has been identified which cannot be covered from within the sub-panel.
- Whether there is a sufficient body of activity requiring an additional assessor.
- Whether serious workload issues or conflicts of interest for existing panel members have been identified, requiring an additional assessor for a particular subject area.
- The overall size of the sub-panel.
- The need to ensure that impact case studies are given fair consideration, with the intention of ensuring that there is sufficient user expertise to review the range of likely impact case studies that will be submitted.

- The potential for individual assessors to be appointed to two sub-panels, where there is a significant overlapping body of work expected (and, if appropriate, the potential to appoint existing user members to also act as assessors for other sub-panels).

33. Once appointed at each stage, the names of assessors will be published on www.ref.ac.uk alongside the panel membership. Assessors will be paid fees and expenses on the same basis as panel members.

34. As stated in REF 01.2010 (paragraph 58), as the REF progresses, main or sub-panels may recommend to the funding bodies the appointment of a small number of members or assessors in addition to the members already appointed and/or the assessors to be appointed through the processes outlined above, to provide further expertise where this is necessary and in accordance with the criteria in REF 01.2010.

Generic assessment criteria

35. As with previous RAEs, the assessment process is based on expert review. Each sub-panel will examine the submissions made in its UOA, taking into account all the evidence presented. Each sub-panel will use its professional collective judgement to form an overall view about each submission and recommend to the main panel an overall quality profile to be awarded to each submission made in its UOA.

36. The primary outcome of the panels' work will be an overall quality profile awarded to each submission, to be published in December 2014. An example overall quality profile is at Annex B of 'guidance on submissions', and further details about the published outcomes and feedback that panels will produce are at paragraphs 33-38.

37. In forming their overall quality judgements, the sub-panels will assess three distinct elements of each submission – outputs, impact and environment – against the following generic criteria:

- Outputs:** The sub-panels will assess the quality of submitted research outputs in terms of their 'originality, significance and rigour', with reference to international research quality standards. This element will carry a weighting of **65 per cent** in the overall outcome awarded to each submission.
- Impact:** The sub-panels will assess the 'reach and significance' of impacts on the economy, society and/or culture that were underpinned by excellent research conducted in the submitted unit, as well as the submitted unit's approach to

enabling impact from its research. This element will carry a weighting of **20 per cent**.

- Environment:** The sub-panels will assess the research environment in terms of its 'vitality and sustainability', including its contribution to the vitality and sustainability of the wider discipline or research base. This element will carry a weighting of **15 per cent**.

38. The generic definitions of the starred quality levels in the overall quality profile in each of the three sub-profiles – outputs, impact and environment – are at Annex A of 'guidance on submissions'. All sub-panels will apply these generic assessment criteria, level definitions and weightings for each element, in forming the overall quality profiles to recommend to their main panel.

39. In Part 2 of this document, the main panel statements of criteria provide a descriptive account of these generic assessment criteria, and of the starred level definitions for outputs, as they apply in each main panel. These are provided to inform their subject communities on how the panels will apply the criteria and definitions in making their judgements. These descriptive accounts should be read alongside, but do not replace, the generic definitions.

Outputs

40. An underpinning principle of the REF is that all types of research and all forms of research output across all disciplines shall be assessed on a fair and equal basis. Panels have been instructed to define criteria and adopt assessment processes that enable them to recognise, and treat on an equal footing, excellence in research across the spectrum of applied, practice-based, basic and strategic research, wherever that research is conducted; and for identifying excellence in different forms of research endeavour including interdisciplinary and collaborative research, while attaching no greater weight to one form over another.

41. 'Guidance on submissions' (Annex C) sets out the generic definition of research. Any assessable form of output that embodies research is eligible for assessment, as set out in paragraphs 105-117 of the same document and in paragraphs 43-44 below. The main panels' statements of criteria in Part 2 of this document provide further descriptive accounts of the diversity of research outputs that may be applicable in their UOAs. These are provided to inform their subject communities and should be read alongside, but do not replace, the generic definitions in 'guidance on submissions'.

Outputs 'pre-published' before 1 January 2008

Amendment to 'guidance on submissions':

Following consultation on the draft panel criteria, the definitions at paragraphs 112-113 of 'guidance on submissions' have been amended, and are now superseded by paragraphs 43-44 as indicated below.

These changes have been made in response to concerns raised that the evolving nature of publication practices, such as online 'pre-publication', would have meant that some research outputs published near the boundary between the 2008 RAE and the 2014 REF publication periods may not in practice have been eligible for submission to either exercise.

42. The principle for determining the relevant date for whether or not an output was produced within the REF publication period, and hence is eligible for submission, remains the date at which it first became publicly available (or, for confidential reports, was lodged with the relevant body), **except** as described in paragraph 43 below.

43. [This paragraph replaces paragraph 112 of 'guidance on submissions'] An output first published in its final form during the REF publication period that was 'pre-published' during calendar year 2007 – whether in full in a different form (for example, an 'online first' article or preprint), or as a preliminary version or working paper – is eligible for submission to the REF, **provided that** the 'pre-published' output was not submitted to the 2008 RAE.

44. [This paragraph replaces paragraph 113 of 'guidance on submissions'] Other than the exception described in paragraph 43 above, an output published during the REF publication period that includes significant material in common with an output published prior to 1 January 2008 is eligible only if it incorporates significant new material. In these cases:

- a. The panel may take the view that not all of the work reported in the listed output should be considered as having been issued within the publication period; and if the previously published output was submitted to the 2008 RAE, the panel will assess **only** the distinct content of the output submitted to the REF.
- b. Submissions should explain where necessary how far any work published earlier was revised to incorporate new material (see paragraph 127 of 'guidance on submissions').

Co-authored/co-produced outputs

45. Institutions may list co-authored or co-produced outputs only against individuals that made a substantial research contribution to the output. The main panel statements of criteria in Part 2 provide details of any information that panels may require in submissions, to establish that an individual made a substantial contribution to any co-authored outputs listed against them. Once this has been established, the panels will assess the quality of the output rather than the specific contribution of the individual.

46. Where two or more co-authors of an output are returned in **different** submissions (whether from the same HEI or different HEIs), any or all co-author(s) that made a substantial research contribution to the output may list the same output. In Part 2, the panels' criteria statements provide further guidance about the extent to which a co-authored output may be listed against more than one member of staff returned within the **same** submission.

47. A co-authored output will count as a single output in the assessment in respect of each author against whom it is listed.

Double-weighted outputs

48. Institutions may request that outputs of extended scale and scope be double-weighted (count as two outputs) in the assessment, according to the procedures set out in 'guidance on submissions' (paragraphs 123-126). In all UOAs, institutions may include a 'reserve' output with each output requested for double-weighting.

49. In Part 2, each main panel provides further guidance on how outputs of extended scale and scope are characterised in their disciplines, and on the process for requesting an output to be double-weighted.

Use of additional information and citation data

50. In all UOAs panels will assess outputs through a process of expert review. In doing so, panels may make use of additional information – whether provided by HEIs in their submissions, and/or citation data – to inform their judgements. In all cases expert review will be the primary means of assessment. In Part 2, the panels set out the following:

- a. Whether they will make any use of citation data in the assessment.
- b. Whether they require any of the types of additional information listed in 'guidance on submissions' (paragraph 127). Annex A provides a summary of the four main panels' requirements for such additional information.

c. How they will use any such information to inform their assessments.

51. Those panels using citation data will do so within the framework set out in 'guidance on submissions' (paragraphs 131-136). In particular, they will consider the number of times an output has been cited as additional information about the academic significance of submitted outputs. Panels will continue to rely on expert review as the primary means of assessing outputs, in order to reach rounded judgements about the full range of assessment criteria ('originality, significance and rigour'). They will also recognise the significance of outputs beyond academia wherever appropriate, and will assess all outputs on an equal basis, regardless of whether or not citation data is available for them. They will recognise the limited value of citation data for recently published outputs, the variable citation patterns for different fields of research, the possibility of 'negative citations', and the limitations of such data for outputs in languages other than English. Panels will have due regard to the potential equality implications of using citation data as additional information.

52. Given the limited role of citation data in the assessment, the funding bodies do not sanction or recommend that HEIs rely on citation information to inform the selection of staff or outputs for inclusion in their submissions (see 'guidance on submissions', paragraph 136).

53. No sub-panel will make use of journal impact factors, rankings or lists, or the perceived standing of the publisher, in assessing the quality of research outputs.

Impact

54. The generic definition of impact for the REF given in 'guidance on submissions' (Annex C) is broad, and any impact that meets this definition is eligible for assessment, in any UOA. The panels' statements of criteria and working methods in Part 2 provide some further descriptions of the diversity of impacts that may apply in their UOAs. These are provided to inform their subject communities: they should be read alongside, but do not replace, the generic definition in 'guidance on submissions'.

55. 'Guidance on submissions' sets out the generic submission requirements in relation to impact, including the number of case studies required in each submission (paragraph 156), the eligibility criteria for impact case studies (paragraphs 158-162), the requirement for a completed impact template (paragraphs 149-155), and a template and guidance on completing impact case studies (Annex G).

56. The main panel statements of criteria in Part 2 provide guidance on the forms of evidence that would be appropriate for submissions to include in the impact template (REF3a) and in case studies (REF3b). They also state how the panels will assure that the quality of research that underpins impact case studies is equivalent to at least two star quality.

57. Annex B of this document provides a template for REF3a.

Impact case studies that include confidential information

58. The following arrangements have been developed to enable institutions to submit case studies that include confidential information, with the agreement of the relevant organisation(s):

- a. All panel members, assessors, observers and the panel secretariat are bound by confidentiality arrangements. The current confidentiality and data security arrangements are at Annex E. Panel members' obligations during the assessment phase will be expanded on, to include specific arrangements for their treatment of confidential or sensitive information in submissions. These expanded arrangements will be published in advance of the submissions deadline.
- b. Where there are main or sub-panel members or assessors who HEIs believe would have a conflict of interest in assessing specific case studies, HEIs can identify these when making submissions, and the case studies will not be made available to such individuals.
- c. When making submissions, HEIs can identify specific case studies that either should not be published at all due to their confidential nature, or that should be redacted prior to publication. HEIs will be able to provide redacted versions suitable for publication after the close of submissions. Submitted case studies identified as 'not for publication' or for 'redaction' will be destroyed by the REF team once no longer required for assessment purposes.
- d. To protect panel members from potentially inappropriate exposure to intellectual property, sub-panel chairs may identify specific panel members who should not have access to, or should have access only to the redacted versions of, specific case studies that include commercially sensitive information.

59. In addition to the general arrangements set out in paragraph 58 above, there may be specific instances where research has had impacts of a sensitive nature where the material to be included in a case study could only be made available for assessment to

individuals with national security vetting clearance. The following arrangements apply, to enable the submission of such specific cases:

- a. The submitting HEI must request advance permission from the REF manager to submit such case studies, by providing outline information about the broad nature of the impact, the level of sensitivity of the intended material, and the level of clearance required of individuals to whom the full case study could be made available. These requests must be made by December 2012.
- b. Permission will be granted to submit such case studies where the REF manager considers, having consulted the relevant panel chairs, that:
 - i. The confidentiality arrangements outlined at paragraph 58 above are insufficient to enable the institution to submit the case study in the normal way for assessment by the panel; **and**
 - ii. It is practicable to identify existing panellists or appoint additional assessors who have the appropriate clearance and expertise, and do not have direct conflicts of interest, to assess the material. Additional assessors would only be appointed for this purpose, on the basis that they would also play a full role as assessors, taking part in the sub-panel's calibration exercise and assessing a range of material relevant to their expertise.
- c. Where permission is granted, arrangements will be made for the HEI to make the case study available securely to the appropriate panel members/assessors. Only the outline information will be made available to the panel and no details about these case studies will be published.
- d. HEIs should allow sufficient time for such case studies to go through the relevant organisation's internal release processes.

Environment

60. 'Guidance on submissions' sets out the generic requirements for the environment element of submissions, which comprise:

- a. Standard data on research doctoral degrees awarded, research income and research income-in-kind (REF4a/b/c).
- b. A completed environment template (REF5).

61. In Part 2, the panel criteria provide guidance on the forms of evidence that would be appropriate for submissions to include in the environment template (REF5), including any quantitative indicators that

should be provided within REF5. The template for REF5 is at Annex C.

62. REF panels will form an environment sub-profile by assessing the information submitted in REF5, informed by the data submitted in REF4a/b/c. When the REF team provides submissions to sub-panels, we will supply a standard analysis of the quantitative data submitted in REF4a/b/c, in respect of each submission in that UOA, and aggregated for all submissions in that UOA (see 'guidance on submissions', Annex H). Panels will consider these data within the context of the information provided in REF5, and within the context of the disciplines concerned. In Part 2, panels' criteria statements indicate how the data analyses will be used in informing the assessment of the research environment.

Staff and individual staff circumstances

Amendment to 'guidance on submissions':

Following consultation on the draft panel criteria, the arrangements concerning maternity, paternity and adoption leave in 'guidance on submissions' have been amended, and are now superseded by the guidance as stated below.

For completeness, the full set of arrangements concerning individual staff circumstances are set out in paragraphs 64-91 of this document, which replace paragraphs 88-95 of 'guidance on submissions'.

63. The criteria for determining which staff are eligible to be included in institutions' submissions are common for all UOAs, and are set out in 'guidance on submissions' (paragraphs 78-83).

64. Up to four research outputs must be listed against each member of staff included in the submission. A maximum of four outputs per researcher will provide panels with a sufficient selection of research outputs from each submitted unit upon which to base judgements about the quality of that unit's outputs. Consultations on the development of the REF confirmed that this is an appropriate maximum volume of research outputs for the purposes of assessment.

65. As a key measure to support equality and diversity in research careers, in all UOAs individuals may be returned with fewer than four outputs without penalty in the assessment, where their individual circumstances have significantly constrained their ability to produce four outputs or to work productively throughout the assessment period.

This measure is intended to encourage institutions to submit all their eligible staff who have produced excellent research.

66. HEIs are allowed to list the maximum of four outputs against any researcher, irrespective of their circumstances or the length of time they have had to conduct research. A minimum of one output must be listed against each individual submitted to the REF.

67. In order to provide clarity and consistency on the number of outputs that may be reduced without penalty, there will be a **clearly defined** reduction in outputs for those types of circumstances listed at paragraph 69a. Circumstances that are more **complex** will require a judgement about the appropriate reduction in outputs; these are listed at paragraph 69b. Arrangements have been put in place for complex circumstances to be considered on a consistent basis, as described at paragraphs 88-91.

68. Where an individual is submitted with fewer than four outputs and they do not satisfy the criteria described at paragraphs 69-91 below, any 'missing' outputs will be graded as 'unclassified'.

69. Category A and C staff may be returned with fewer than four outputs without penalty in the assessment, if one or more of the following circumstances significantly constrained their ability to produce four outputs or to work productively throughout the assessment period:

- a. Circumstances with a **clearly defined** reduction in outputs, which are:
 - i. Qualifying as an early career researcher (on the basis set out in paragraph 72 and Table 1 below).
 - ii. Absence from work due to working part-time, secondments or career breaks (on the basis set out in paragraphs 73-74 and Table 2 below).
 - iii. Qualifying periods of maternity, paternity or adoption leave (on the basis set out in paragraphs 75-81).
 - iv. Other circumstances that apply in UOAs 1-6, as defined at paragraph 86.

b. **Complex circumstances** that require a judgement about the appropriate reduction in outputs, which are:

- i. Disability. This is defined in 'guidance on submissions' Part 4, Table 2 under 'Disability'.
- ii. Ill health or injury.
- iii. Mental health conditions.

- iv. Constraints relating to pregnancy, maternity, paternity, adoption or childcare that fall outside of – or justify the reduction of further outputs in addition to – the allowances made in paragraph 75 below.
- v. Other caring responsibilities (such as caring for an elderly or disabled family member).
- vi. Gender reassignment.
- vii. Other circumstances relating to the protected characteristics listed at paragraph 190 of 'guidance of submissions' or relating to activities protected by employment legislation.

Clearly defined circumstances

70. Where an individual has one or more circumstances with a clearly defined reduction in outputs, the number of outputs that may be reduced should be determined according to the tables and guidance in paragraphs 72-86 below. All sub-panels will accept a reduction in outputs according to this guidance and will assess the remaining number of submitted outputs without any penalty.

71. In REF1b, submissions must include sufficient details of the individual's circumstances to show that these criteria have been applied correctly. The panel secretariat will examine the information in the first instance and advise the sub-panels on whether sufficient information has been provided and the guidance applied correctly. The panel secretariat will be trained to provide such advice, on a consistent basis across all UOAs. Where the sub-panel judges that the criteria have not been met, the 'missing' output(s) will be recorded as unclassified. (For example, an individual became an early career researcher in January 2011 but only one output is submitted rather than two. In this case the submitted output will be assessed, and the 'missing' output recorded as unclassified.)

Early career researchers

72. Early career researchers are defined in paragraphs 85-86 of 'guidance on submissions'. Table 1 sets out the permitted reduction in outputs without penalty in the assessment for early career researchers who meet this definition.

Table 1 Early career researchers: permitted reduction in outputs

Date at which the individual first met the REF definition of an early career researcher:	Number of outputs may be reduced by up to:
On or before 31 July 2009	0
Between 1 August 2009 and 31 July 2010 inclusive	1
Between 1 August 2010 and 31 July 2011 inclusive	2
On or after 1 August 2011	3

Absence from work due to part-time working, secondments or career breaks

73. Table 2 sets out the permitted reduction in outputs without penalty in the assessment for absence from work due to:

- a. part-time working
- b. secondments or career breaks outside of the higher education sector, and in which the individual did not undertake academic research.

Table 2 Part-time working, secondments or career breaks: permitted reduction in outputs

Total months absent between 1 January 2008 and 31 October 2013 due to working part-time, secondment or career break:	Number of outputs may be reduced by up to:
0-11.99	0
12-27.99	1
28-45.99	2
46 or more	3

74. The allowances in Table 2 are based on the length of the individual's absence or time away from working in higher education. They are defined in terms of total months absent from work. For part-time working, the equivalent 'total months absent' should be calculated by multiplying the number of months worked part-time by the full-time equivalent (FTE) **not** worked during those months. For example, an individual worked part-time for 30 months at 0.6 FTE. The number of equivalent months absent = $30 \times 0.4 = 12$.

Qualifying periods of maternity, paternity or adoption leave

75. Individuals may reduce the number of outputs by one, for each discrete period of:

- a. Statutory maternity leave or statutory adoption leave taken substantially during the period 1 January 2008 to 31 October 2013, regardless of the length of the leave.
- b. Additional paternity¹ or adoption leave lasting for four months or more, taken substantially during the period 1 January 2008 to 31 October 2013.

76. The approach to these circumstances is based on the funding bodies' considered judgement that the impact of such a period of leave and the arrival of a new child into a family is generally sufficiently disruptive of an individual's research work to justify the reduction of an output. This judgement was informed by the consultation on draft panel criteria, in which an overwhelming majority of respondents supported such an approach.

77. The funding bodies' decision not to have a minimum qualifying period for maternity leave was informed by the sector's clear support for this approach in the consultation; recognition of the potential physical implications of pregnancy and childbirth; and the intention to remove any artificial barriers to the inclusion of women in submissions, given that women were significantly less likely to be selected in former RAE exercises.

78. The funding bodies consider it appropriate to make the same provision for those regarded as the 'primary adopter' of a child (that is, a person who takes statutory adoption leave) as the adoption of a child and taking of statutory adoption leave is generally likely to have a comparable impact on a researcher's work to that of taking maternity leave.

79. As regards additional paternity or adoption leave, researchers who take such leave will also have been away from work and acting as the primary carer of a new child within a family. The funding bodies consider that where researchers take such leave over a significant period (four months or more), this is likely to have an impact on their ability to work productively on research that is comparable to the impact on those taking maternity or statutory adoption leave.

¹ 'Additional paternity or adoption leave' refers to leave of up to 26 weeks which is taken to care for a child where the person's spouse, partner or civil partner was entitled to statutory maternity leave or statutory adoption leave, and has since returned to work. The term 'additional paternity leave' is often used to describe this type of leave although it may be taken by parents of either gender. For the purposes of the REF we refer to this leave as 'additional paternity or adoption leave'.

80. While the clearly defined reduction of outputs due to additional paternity or adoption leave is subject to a minimum period of four months, shorter periods of such leave can be taken into account as follows:

- a. By seeking a reduction in outputs under the provision for complex circumstances, for example where the period of leave had an impact in combination with other factors such as ongoing childcare responsibilities.
- b. By combining the number of months for shorter periods of such leave in combination with other clearly defined circumstances, according to Table 2.

81. Any period of maternity, adoption or paternity leave that qualifies for the reduction of an output under the provisions in paragraph 75 above may in individual cases be associated with prolonged constraints on work that justify the reduction of more than one output. In such cases, the circumstances should be explained using the arrangements for complex circumstances.

Combining clearly defined circumstances

82. Where individuals have had a combination of circumstances with clearly defined reductions in outputs, these may be accumulated up to a maximum reduction of three outputs. For each circumstance, the relevant reduction should be applied and added together to calculate the total maximum reduction.

83. Where Table 1 is combined with Table 2, the period of time since 1 January 2008 up until the individual met the definition of an early career researcher should be calculated in months, and Table 2 should be applied.

84. When combining circumstances, only one circumstance should be taken into account for any period of time during which they took place simultaneously. (For example, an individual worked part-time throughout the assessment period and first met the definition of an early career researcher on 1 September 2009. In this case the number of months 'absent' due to part-time working should be calculated from 1 September 2009 onwards, and combined with the reduction due to qualifying as an early career researcher, as indicated in paragraph 83 above.)

85. Where an individual has a combination of circumstances with a clearly defined reduction in outputs **and** complex circumstances, the institution should submit these collectively as 'complex' so that a single judgement can be made about the appropriate reduction in outputs, taking into account all the

circumstances. Those circumstances with a clearly defined reduction in outputs should be calculated according to the guidance above (paragraphs 72-84).

Other circumstances that apply in UOAs 1-6

86. In UOAs 1-6, the number of outputs may be reduced by up to two, without penalty in the assessment, for the following:

- a. Category A staff who are junior clinical academics. These are defined as clinically qualified academics who are still completing their clinical training in medicine or dentistry and have not gained a Certificate of Completion of Training (CCT) or its equivalent prior to 31 October 2013.
- b. Category C staff who are employed primarily as clinical, health or veterinary professionals (for example by the NHS), and whose research is primarily focused in the submitting unit.

87. These allowances are made on the basis that the staff concerned are normally significantly constrained in the time they have available to undertake research during the assessment period. The reduction of two outputs takes account of significant constraints on research work, and is normally sufficient to also take account of additional circumstances that may have affected the individual's research work. Where the individual meets the criteria at paragraph 86, and has had significant additional circumstances – for any of the reasons at paragraph 69 – the institution may return the circumstances as 'complex' with a reduction of three outputs, and provide a justification for this.

Complex circumstances

88. Where staff have had one or more complex circumstances – including in combination with any circumstances with a clearly defined reduction in outputs – the institution will need to make a judgement on the appropriate reduction in the number of outputs submitted, and provide a rationale for this judgement.

89. As far as is practicable, the information in REF1b should provide an estimate – in terms of the equivalent number of months absent from work – of the impact of the complex circumstances on the individual's ability to work productively throughout the assessment period, and state any further constraints on the individual's research work in addition to the equivalent months absent. A reduction should be made according to Table 2 in relation to estimated months absent from work, with further constraints taken into account as appropriate. To aid

institutions the Equality Challenge Unit (ECU) will publish worked examples of complex circumstances, which will indicate how these calculations can be made and the appropriate reduction in outputs for a range of complex circumstances. These will be available at www.ecu.ac.uk/our-projects/REF from February 2012.

90. All submitted complex circumstances will be considered by the REF Equality and Diversity Advisory Panel (EDAP), on a consistent basis across all UOAs. The membership and terms of reference of the EDAP are available at www.ref.ac.uk under Equality and diversity. The EDAP will make recommendations about the appropriate number of outputs that may be reduced without penalty to the relevant main panel chairs, who will make the decisions. The relevant sub-panels will then be informed of the decisions and will assess the remaining outputs without any penalty.

91. To enable individuals to disclose the information in a confidential manner, information submitted about individuals' complex circumstances will be kept confidential to the REF team, the EDAP and main panel chairs, and will be destroyed on completion of the REF (as described in 'guidance on submissions', paragraphs 98-99).

Interdisciplinary research and work on the boundaries between UOAs

92. All main and sub-panels recognise the diverse nature of the disciplines that they cover and the UOAs described in Part 2 thus have no firm or rigidly definable boundaries. The panels recognise that aspects of research are naturally interdisciplinary or multidisciplinary or span the boundaries between individual UOAs, whether within a main panel or across main panels. The main panels and sub-panels welcome the submission of such research, in any relevant UOA.

93. Panels will assess on an equal basis submissions that reflect the work of administrative units such as departments, and submissions that do not map neatly onto departmental or other administrative structures within HEIs. In either case institutions will not be penalised if submissions contain some work that overlaps UOA boundaries. The main and sub-panels will apply the standards of excellence defined by the starred quality levels equally to research in interdisciplinary areas, to research that spans UOA boundaries and to research within distinct disciplines. The main and sub-panels consider that all such research is capable of displaying the highest standards of quality.

94. The procedures that all panels will apply in assessing interdisciplinary research and work that spans UOA boundaries are set out below. In Part 2, the UOA descriptors indicate where the panels might expect work submitted in their UOA to cross boundaries with other UOAs, but recognise that there may be other overlaps.

95. Across all UOAs, the members of sub-panels have experience of multidisciplinary and interdisciplinary work and of work which spans UOA boundaries, and where appropriate this expertise will be augmented with the appointment of assessors. Sub-panels are confident that they can assess such work, and their members have been deliberately selected to embrace broad-ranging experience in order to enable this. In addition, specific arrangements to support the assessment of interdisciplinary and multidisciplinary work and work at UOA boundaries will be employed as follows:

- a. Additional assessors will be appointed to extend the breadth and depth of expertise on sub-panels, following the survey of institutions' submission intentions. Assessors may be appointed to work with an individual sub-panel or with more than one sub-panel, where there is a significant overlap between UOAs.
- b. Main panel international and user members have a range of multidisciplinary and interdisciplinary expertise and, where their expertise is relevant and additional to that on a sub-panel, they will provide assessment advice, across a number of sub-panels if appropriate.
- c. The sub-panels' preferred approach is to assess work within the sub-panel to which it was submitted, and to appoint assessors where required to enable this. Exceptionally, in cases where in the sub-panel's opinion the sub-panel and its appointed assessors do not have the required expertise to assess specific parts of submissions, those parts of submissions may be cross-referred to other sub-panels for advice. The broad procedures for cross-referral are set out in 'guidance on submissions' (paragraph 75d), supplemented by information about how panels will operationalise the procedures, in paragraphs 96-100 below.

Cross-referral of parts of submissions

96. The submitting HEI may identify research outputs as interdisciplinary and/or request that specific parts of submissions should be cross-referred to another sub-panel for advice. The sub-panels will

consider such requests and the most appropriate means of assessing the material in question:

- a. Where the sub-panel considers there is sufficient expertise within the sub-panel to reach a robust judgement, the work will be assessed within the sub-panel. The sub-panels expect that this will normally be the case, except where the UOA descriptors in Part 2 indicate specific arrangements for cross-referral.
- b. In those instances where the sub-panel does not consider it contains the appropriate expertise, it may request that the work should be cross-referred to an appropriate sub-panel for advice (whether within or outside the same main panel). Sub-panels will make these requests to the REF manager, who will decide on the requests and cross-refer parts of submissions to other sub-panels as necessary.

97. In addition to considering requests made by institutions, sub-panels may identify specific parts of submissions that it considers should be cross-referred to another sub-panel, and request that such work should be cross-referred.

98. The sub-panels' approach to cross-referral will be discussed within the main panels, to ensure an appropriate consistency of approach.

99. Specific outputs or impact case studies may be cross-referred. Entire submissions may not. The original sub-panel will specify the scope of advice that it is seeking. This will be limited to advice relating to the quality of outputs or the 'reach and significance' of impact case studies. It may not include advice on other matters such as individual staff circumstances, the contribution of a co-author or double-weighting of outputs.

100. Where parts of submissions are cross-referred, advice will be sought and given on the basis of the assessment criteria and procedures for the UOA in which the work was originally submitted; cross-referred parts of submissions will be assessed on the same basis as work which is not cross-referred. The original sub-panel will retain responsibility for recommending the quality profile for all work that was submitted in its UOA.

Panel procedures

Panel competence to do business

101. Each main and sub-panel will consider, confirm and document its competence to do business at the start of each assessment meeting, taking into consideration the range of expertise as well as the numbers of panel members present.

102. Where there is a foreseen absence of a sub-panel chair at a main panel meeting, the main panel chair will consider whether it requires the attendance of the deputy sub-panel chair in order to be competent to do business. Attendance of the deputy sub-panel chair at main panel meetings will only be allowed in this case, and at the discretion of the main panel chair.

Dealing with absences of the chair

103. Each main and sub-panel will elect a deputy chair for planned and unforeseen absences of the chair, and in cases where there is a major conflict of interest for the chair. In the absence of the chair, the deputy will chair meetings of the panel. Where both the chair and deputy declare a conflict of interest in the same institution, the panel will nominate one of the remaining members to officiate in that instance.

Conflicts of interest

104. All REF main and sub-panel chairs, members, assessors, observers, secretaries and advisers will observe the arrangements for managing potential conflicts of interest set out at Annex D.

Confidentiality arrangements

105. All REF main and sub-panel chairs, members, assessors, secretaries, advisers and observers are bound by the terms of the REF confidentiality arrangements as detailed at Annex E. These arrangements have been put in place to enable the effective management and operation of the REF, and for the protection of panel members.

Main panel working methods

106. Each main panel has worked with its sub-panels to define common assessment criteria, as set out in Part 2. Main panels will work with their sub-panels throughout the assessment process to ensure that the published procedures are followed and that the overall assessment standards are applied consistently. Each main panel will also be responsible for deciding on the quality profile to be awarded to each submission in each of the UOAs in its remit, following recommendations made by the sub-panels.

107. Each main panel will work with its sub-panels as follows:

- a. **Main panel meetings.** The main panels will meet regularly throughout the planning and assessment phases to ensure close working and communication between sub-panels, to identify issues for early action, seek advice on handling specific cases, resolve emerging differences, share developing good practice and provide assurance on the procedures being followed. Sub-panel chairs will report to the main panel meetings on

general progress and on the implementation of working methods, particularly on issues where cross-panel consistency is significant, including:

- individual staff circumstances with a clearly defined reduction in outputs
- cross-referrals
- the range of output types
- impact case studies generally
- double-weighted outputs.

b. **Main panel member attendance at sub-panel meetings.**

The chair and members of the main panel will attend some meetings of sub-panels, to provide assurance that practices are consistent across the group of sub-panels:

- i. The international members of the main panel will in particular be engaged in sub-panel calibration processes and in the formation of quality profiles, to ensure consistency with international standards.
- ii. Main panel user members will in particular be engaged in briefing and calibration among sub-panel user members and assessors, providing leadership and focus for them, and supporting consistency of method and efficient use of expertise and knowledge in assessing impact case studies.
- iii. The main panel chair, sub-panel chairs and other main panel members will attend a sample of sub-panel meetings as agreed with the main panel, especially at an early stage in the assessment process.

c. **Advice and support to panels.** A group of panel advisers and panel secretaries will be appointed to support the work of each main panel and its sub-panels. The secretariat will be briefed and trained in providing advice and guidance to their group of panels on the assessment procedures. Each member of the panel secretariat will work with several sub-panels within a main panel, providing consistent support and advice across them and providing feedback to the main panel chairs as appropriate.

d. **Cross-panel appointments.** Individual academic assessors and user members or assessors may be appointed to work with more than one UOA, particularly where there are substantial overlaps between UOAs, to contribute to consistency in the assessment of work on the boundaries. In considering the selection and appointment of assessors, the main panel will identify where such boundaries could benefit from joint appointments.

e. **Calibration exercises.** Each main panel and its sub-panels will undertake calibration exercises at an early stage in the assessment to develop a common understanding of the assessment standards and the application of the quality levels. International and user members of the main panel will participate in these exercises to assist in benchmarking judgements. The main panel chair and members of the main panel will attend a selection of the sub-panel meetings that deal with calibration exercises and main panels will receive and discuss reports from sub-panel chairs on these exercises.

f. **Reviewing emerging assessment outcomes.** The main panels will review the emerging assessments at UOA level from their sub-panels during the course of the assessment phase, to support the consistent application of assessment standards. To facilitate this review the group of sub-panels within each main panel will adopt a common process for the formation of each of the three sub-profiles and a common sequence in which each sub-profile will be formed. In considering the emerging assessment outcomes from sub-panels, the main panels will seek advice from the international members about the application of internationally referenced standards, and from the user members about the assessment of impact.

g. **Deciding on the outcomes.** When endorsing the quality profiles recommended by its sub-panels, each main panel will confirm that the published assessment procedures and criteria have been applied by the sub-panels, and that the sub-panels have consistently applied the overall standards of assessment. The main panels recognise that there may be a range of overall profiles across their respective UOAs reflecting the relative strength of the disciplines in the UK. Each main panel will require that any substantial differences in the overall profiles for each UOA are investigated and understood before approving the quality profiles recommended by its sub-panels. Where the recommendations of a given sub-panel for the overall results for that UOA are at substantial variance from the other sub-panels, the sub-panel chair will need to justify this to the main panel with reference to external evidence where available.

108. In addition to the main panels' approaches to ensuring consistency within each group of sub-panels, to support appropriate consistency across the four main panels:

- a. Generic assessment criteria and working methods across all main and sub-panels have been developed, as set out in 'guidance on submissions'

and in Part 1 of this document. These include standard weightings for each of the elements of the assessment (outputs, impact and environment), generic criteria for assessing each element, a consistent approach to individual staff circumstances, and consistent working methods and procedures.

- b. The four main panel chairs, the REF manager and the panel advisers will meet regularly throughout the assessment phase to discuss progress, identify issues for early action and inform the work of the main panels. This will include planning and reporting on calibration exercises and reviewing emerging and final outcomes across the four main panels. Specific actions will be identified to support consistency across those sub-panels in different main panels that have a significant overlap (for example, sharing of some of the material used in calibration exercises, and identifying opportunities for appointing assessors to work across those sub-panels).

Sub-panel working methods

109. Each sub-panel will be responsible for assessing submissions in its UOA, applying the published criteria and working methods, and recommending the outcomes to the main panel. This section sets out how the sub-panels will undertake their work at each stage of the assessment process.

Reviewing the sub-panel's collective expertise

110. In early 2013, the sub-panels will examine institutions' submission intentions and identify where additional assessors are required to extend the breadth and depth of expertise on the sub-panels as required to carry out the assessment. Assessors will be appointed prior to the start of the assessment to ensure that sub-panels have access to appropriate expertise to reach robust and fair judgements with regard to the material anticipated in submissions. The procedures for appointing assessors are described at paragraphs 28-34.

111. Sub-panels will consider the breadth of work in actual submissions early in the assessment phase in 2014 in order to confirm that the sub-panel and its appointed assessors collectively have the breadth and depth of expertise to assess the work submitted. Where necessary, sub-panels may recommend the appointment of further additional assessors or, exceptionally, request that specific parts of submissions should be cross-referred to another sub-panel (as described at paragraphs 96-100 and indicated, where appropriate, in the UOA descriptors in Part 2).

112. Each sub-panel will include user members and assessors, with appropriate expertise to contribute fully to the assessment of the impact element of submissions, alongside academic members of the sub-panels. The user members and assessors will be appropriately briefed (for example, with respect to equality and diversity) alongside the sub-panel members and academic assessors, and may also receive additional training to ensure that they are fully cognisant of the REF process.

Allocating work

113. The sub-panel chair, consulting with the deputy chair and sub-panel members as appropriate, will allocate work to members and assessors with appropriate expertise, taking account of any conflicts of interest (see Annex D). This allocation may be at the level of individual or groups of outputs, individual or groups of impact case studies, whole impact templates and whole environment templates.

114. Each member and assessor on a sub-panel will be allocated a significant volume of material to assess, so that each member and assessor makes a significant contribution to the sub-panel's overall recommendations.

115. Each impact case study will be allocated to at least one academic member and one user member or assessor, wherever practicable. User assessors will be allocated impact case studies and impact templates only. User members may – in addition to impact case studies and impact templates – be allocated environment templates and/or outputs in particular areas where they are willing and have appropriate expertise to assess them.

116. Where a sub-panel cross-refers parts of a submission to another sub-panel for advice, the procedures at paragraphs 96-100 will be followed. Where a sub-panel refers outputs in a language other than English to external specialist advisers, the procedures in 'guidance on submissions' paragraphs 128-130 will be followed.

Calibration of assessment standards

117. Sub-panels will undertake early calibration exercises with respect to outputs and impact, to ensure sub-panel members and assessors develop a common understanding of the quality levels. The calibration exercises will be based on samples of a range of outputs (whether submitted to the REF or sourced from elsewhere by panel members) and on samples of submitted impacts.

118. In addition to sub-panel members, the assessors who will subsequently be involved in assessing either outputs or impact will take part in the relevant calibration exercises.

119. After these initial calibration exercises, the sub-panels will continue to discuss the application of the quality levels and will keep under review the scoring patterns of members and assessors, to ensure consistency in the sub-panel's standards of assessment.

Assessing submissions

120. Sub-panels will assess all of the components of submissions: research outputs, impact and the research environment. This reflects an underpinning principle that sub-panels will assess each submission in the round. They will not make collective judgements about the contributions of individual researchers. Sub-panels will make collective judgements about the range of submitted information in order to develop the sub-profiles and recommend the overall quality profile, for each unit being assessed.

121. All the outputs listed in submissions will (unless prevented by reasons beyond a sub-panel's control) be examined by panel members and/or assessors. They will be examined with a level of detail sufficient to contribute to the formation of a robust sub-profile for all the outputs in that submission. In doing so panels will take into account additional information where relevant (as described in Part 2, Section 2), but expert review of the outputs will remain the primary means of assessing them.

122. Sub-panels will examine all the submitted case studies and impact templates, and all the information submitted in the environment template together with the standard data analysis.

123. Sub-panels will meet during the course of the assessment phase to discuss their assessment of each element of submissions. Assessors will attend those meetings at which the relevant element of submissions is being discussed, so that they contribute fully and on an equal basis with members, to the development of the relevant sub-profile.

124. During the course of the assessment, the sub-panels will be asked to draw attention to any data they would like the REF team to verify through an audit. These data will be investigated by the REF team (in addition to the REF team auditing a proportion of submitted information from each institution, as described in 'guidance on submissions', paragraphs 67-72).

Developing and recommending quality profiles

125. Sub-panels will develop a sub-profile for each of the three elements – outputs, impact and environment – of each submission.

126. **Outputs sub-profile.** Each output listed in a submission will be assessed and assigned a quality level: 4*, 3*, 2*, 1* or 'unclassified'. The outputs sub-profile will be formed by calculating the percentage of outputs listed in a submission that are assigned at each quality level, with each output contributing an equal proportion to the sub-profile. The following exceptions and rules apply:

- a. Any submitted output that is found to be ineligible will be entered into the outputs sub-profile as 'unclassified'.
- b. Where a submitted member of staff is found to be ineligible, that member of staff and the outputs listed against them will be removed from the submission; those outputs will not contribute to the outputs sub-profile.
- c. Where fewer than four outputs are listed against an individual and the criteria for individual staff circumstances (described at paragraphs 69-91) are not satisfied, any 'missing' outputs will be entered into the outputs sub-profile as 'unclassified'.
- d. Where a request to double-weight an output has been accepted by the sub-panel, the quality level assigned to the output will be entered twice into the outputs sub-profile. Where a request to double-weight an output is not accepted by the sub-panel and no reserve output has been submitted, the output will contribute to the sub-profile as a single output and one instance of 'unclassified' will be entered into the outputs sub-profile.
- e. Where the sub-panel determines that the submitted member of staff against whom a co-authored output is listed did not make a substantial contribution to the output, the output will be entered into the outputs sub-profile as 'unclassified'.
- f. Where a co-authored output has been listed against two individuals within a submission and the panel accepts the justification for this, the quality level assigned to the output will be entered twice into the outputs sub-profile (once in respect of each member of staff against whom it is listed). Where the sub-panel does not accept the justification, one instance of the output will be assigned a quality level and the other will be entered into the sub-profile as 'unclassified'.

127. **Impact sub-profile.** Each case study included in a submission will be assessed according to the definitions of the starred levels in 'guidance on submissions' (Annex A, Table A3). Any case studies that are 'missing' from a submission (that is, where

fewer case studies have been submitted than the number required, as specified in Table 1 of 'guidance on submissions') will be graded as 'unclassified'. Sub-panels will form a graduated impact sub-profile for each submission by attributing a weighting of 20 per cent to the impact template (REF3a) and 80 per cent to the case studies (REF3b), with each case study within a submission making an equal contribution to this.

128. Environment sub-profile: Sub-panels will assess the information provided in the environment template, and consider the environment data within the context of that information. Sub-panels will build up a graduated sub-profile by assessing the range of elements in each submission, using the starred levels defined in 'guidance on submissions' (Annex A, Table A4). In Part 2 of this document, each main panel indicates the weighting that the sub-panels will attach to each component of the environment template.

129. The three sub-profiles will be combined into an overall quality profile, using the weightings and method described in Annex B of 'guidance on submissions'.

130. In recommending the overall quality profile for each submission to its main panel, each sub-panel will:

- a. Reach a collective decision, within the framework of the exercise and in accordance with the published statement of criteria and working methods. Each sub-panel will debate the reasoning behind the quality profiles in sufficient detail to reach collective conclusions, and will make recommendations to the main panel on the basis of its collective judgement. Each sub-panel will seek to achieve a consensus on all the overall quality profiles to be recommended to its main panel. If a consensus cannot be achieved, decisions will be taken by majority vote, with the chair holding a casting vote.
- b. Confirm to the main panel that each submission has been assessed against the published criteria for that UOA (including in cases where parts of submissions have been cross-referred to other sub-panels for advice) and according to the published procedures.
- c. Confirm that each submission has been examined in sufficient detail to form robust judgements, and that appropriate expertise has been deployed in assessing submissions.

Recording panel decisions

131. The panel secretariat will minute details of the procedures followed by panels, and these will be published after the conclusion of the exercise. Panels will not make or record collective judgements about individuals' contributions to submissions. The panel secretariat will record the panels' collective judgements about the sub-profiles and overall quality profiles in respect of each submission.