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Audit Guidance

REF 2021 Research
Excellence
Framework

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Aim of this guidance

1. In January 2019, the funding bodies published the 'Guidance on submissions' (REF 2019/01) and 'Panel criteria and working methods' (REF 2019/02) for the Research Excellence Framework (REF) 2021 exercise. Those two documents set out all the requirements for the submission of data by higher education institutions (HEIs) for REF 2021.

2. This document describes the approaches and methods that will be used to provide assurance that the data submitted are accurate, verifiable and robust. The audit guidance set out here includes descriptions of the following:

- Methods of matching data to other sources to verify their accuracy.
- Methods of risk scoring data based on characteristics of the submissions and/or matched datasets.
- Types of audit evidence that can be used to support substantive audit queries.
- The process that REF panels will use to can raise audit queries.

Introduction

3. The aim of the REF audit and data verification process is to give assurance that the data submitted by HEIs as part of the REF exercise are accurate and reliable. By enabling panels to make assessments based on accurate data, this will provide confidence in the outcomes of the REF exercise. The process also supports the principle of fairness by ensuring that all HEI submissions are made on an equal basis in accordance with the published criteria.

4. The approach to verifying submissions and the level of scrutiny applied will be proportionate to the scale of the REF exercise and the need to assure the accuracy of submitted data. Initially, we will verify proportionate samples of the data that each HEI submits¹. Further requests to verify data will then be targeted according to the risk of inaccuracy. Where available, we will use existing independent sources of data to provide assurance about the accuracy of submitted data.

5. In authorising individuals to make submissions on its behalf, the head of each HEI remains accountable for the accuracy of submitted information. While we provide examples of the kinds of evidence that institutions may supply for verification purposes, these examples are neither exhaustive nor prescriptive. Institutions should ensure they satisfy themselves on the accuracy of the information they submit, and should also maintain accurate records enabling them to verify this information.

6. This audit guidance covers the full scope of audit for REF 2021, including the approach to auditing compliance with the REF open access (OA) policy. It therefore supersedes the document that the Higher Education Funding Council for England (HEFCE) published in October 2014: 'Open access in the post-2014 Research Excellence Framework: information and audit requirements'².

Definitions

7. Controls audit: This is the process of verifying the processes that an HEI follows when managing the open access compliance, and exceptions, of its research outputs. A controls audit will include an assessment both of the risks that the HEI has identified in its processes, and of the adequacy of the mitigations or controls that have been put in place.

8. Substantive audit: Also known as sampling, this process involves selecting samples of data based on random selection, risk or other factors. Demonstrable evidence (an 'audit trail') should be produced confirming that the data selected in the sample are accurate.

1. Open access will follow a different process, as set out in paragraphs 46–56.

2. URL: <https://webarchive.nationalarchives.gov.uk/20180405125333/http://www.hefce.ac.uk/media/hefce/content/What,we,do/Research/OA/Open%20access%20in%20the%20next%20REF%20information%20and%20audit%20requirements.pdf>

Audit approach

9. The audit process will take a phased approach, broadly divided into four phases of audit activity:

- Post-submission sampling of data, where substantive audit evidence will be requested for selected samples
- Post-submission analysis of data where discrepancies will require substantive audit evidence
- Post-submission analysis of data where higher-risk data will require evidence of management controls
- Assessment-phase audit queries that will be raised by sub-panel members

10. The sampling phase will be undertaken shortly after the submission deadline and will focus primarily on the staff data submitted in sections REF1a and REF1b of HEIs' REF submissions. Sample sizes will reflect practice in previous REF and Research Assessment Exercise (RAE) audits. Specific information on sample sizes is provided in paragraph 25 below.

11. Analysis of discrepancies will be undertaken shortly after sampling. It will involve matching REF1a data with the Higher Education Statistics Agency (HESA) staff return for census date 31 July 2020 (C19025). Queries will be run to establish discrepancies between the two datasets, and substantive evidence will be sought if this is warranted by the significance of the discrepancies.

12. Analysis of risk will be undertaken on the outputs data to determine compliance with the REF open access requirements. The detail of the approach is described in paragraph 46. Where HEIs are identified as higher-risk, we will request documentation of their process for managing open access as well as evidence that they are managing the process effectively.

13. Sub-panel members will be able to raise audit queries throughout the assessment phase. A consistent approach to audit principles and process will be undertaken for both panel-led audit queries, and those that the REF audit team initiates.

Audit methods

14. A number of different audit methods will be used, including:
 - risk assessment of data based on comparisons across matched data sets
 - risk scoring of submissions and HEIs to establish levels of confidence in controls and processes
 - substantive testing of data through review of supporting evidence.

15. The subsections below set out in detail the audit techniques that will be applied to each element of the REF data return, and the types of evidence that will be sought when requests are made for corroborating information.

16. Data checking and verification will normally be conducted through correspondence with the REF team. However, members of the REF team and other officers from the funding bodies reserve the right to visit HEIs to verify submission information. See paragraph 97 of the 'Guidance on submissions'.

17. If HEIs wish to make it available, our verification team may also seek to rely on any relevant internal audit work that an HEI has undertaken in preparing or submitting REF data. See paragraph 97 of the 'Guidance on submissions'.

18. The subsections below, from paragraph 22 onwards, describe the typical audit evidence that we expect HEIs will normally hold in order to enable verification of the data being sampled or assessed. Nevertheless, we recognise that, in certain circumstances, HEIs will hold other evidence that is different from that described. We will consider such alternative evidence on a fair and reasonable basis, the aim being to obtain sufficient evidence to verify the data that are being audited.

19. Typically, we would expect audit evidence to comprise normal record-keeping that HEIs would retain as part of their usual operations, including the operation of the REF. As such, we would expect HEIs to manage their audit evidence in keeping with their usual data management processes, and not to retain records for longer than necessary. However, HEIs should expect to retain audit evidence specifically related to REF 2021 until the end of 2021, and we recommend that they review and update their data and records retention schedule in light of this guidance.

20. The REF will not retain audit evidence for longer than necessary, and in any case no longer than the end of December 2021. after this date it will be deleted in conformance with our retention and deletion schedule.

21. We may be required to amend submissions in circumstances where substantive evidence has been sought and an HEI has been unable to provide evidence to verify the accuracy of the submitted information. HEIs will have the opportunity to present all relevant evidence, and discuss it where necessary, within the timescales defined in this document, before decisions are made about amending or correcting submissions. Amendments can include grading one or more elements of a submission as unclassified, as described in the 'Guidance on submissions'. Amendment of submissions, where required, will normally take place during the assessment period. HEIs should note that there is the potential for funding bodies to take actions other than through amendment of submissions, such as amending funding outcomes, where such actions are deemed appropriate and necessary.

Small unit requests

22. Where the combined full-time equivalent (FTE) of staff employed with significant responsibility for research in a unit is lower than five FTE, and other conditions are satisfied, HEIs may choose to submit a request for an exception from submission for small units. This is described in paragraphs 68-72 of the 'Guidance on submissions'. Where an HEI's request is approved, and it does not return the small unit, we may seek to verify through audit that the submission exception complies with the criteria.

23. The audit will compare submission data with HESA data for the dates 31 July 2019 and 31 July 2020 (the census date). Normally we would expect the number of staff employed in the unit with significant responsibility for research on those dates to be less than 5 FTE. We may seek to verify where the staff profile has significantly changed, and/or where the unit was submitted in a previous REF. Further information may be requested if either HESA return indicates that the number of staff employed in the unit with significant responsibility for research is greater than 5 FTE. Where the explanation is

- a. unsatisfactory; or
- b. contradicts the rationale for exception provided in the initial request

we reserve the right to require the HEI to submit all staff in the unit with significant responsibility for research, and unclassified scores will be given to each element of the submission.

Staff details (REF1a/b)

24. In general, and notwithstanding the various points set out in the following paragraphs, HEIs will need to be able to verify through audit that they have submitted all eligible staff and that all submitted staff are eligible. This will include providing evidence that all eligible staff who have significant responsibility for research have been submitted, and that those on a research-only contract were independent researchers on the census date.

25. A selection of staff from each HEI in at least one and initially up to four Units of Assessment (UOAs) will be audited, depending on the scale of the HEI's submissions. For this sample we will seek to verify staff eligibility and submitted FTE. Up to 40 staff will be selected from each HEI, by random selection. The selection will include both submitted staff, and staff not submitted who are identified through the 2019/20 HESA staff record as Category A eligible. Where significant issues are identified, we may request further staff records from more UOAs.

26. For Category A submitted staff included in the selection, we will ask each HEI to verify eligibility and FTE by providing relevant extracts of contracts, payroll or personnel records, or associated job descriptions, indicating the status of staff on the census date³. Suitable evidence will include:

3. It is the expectation of the REF that HEIs' HR and payroll systems are able to provide, on request, information about the status of staff and contracts as at the census date. It is the responsibility of HEIs to ensure they are able to meet this expectation.

- a. PDFs exported directly from, or screenshots of, payroll systems. Evidence formats must demonstrate that the data provided are in the state in which they are held on the payroll system and have not been subject to alteration (for example, an Excel spreadsheet will not be accepted).
- b. Copies of relevant extracts from staff contracts or full contracts with relevant information highlighted (with sensitive data such as salary information removed). Normally we would expect contracts to show that the primary employment function is either research or teaching and research.
- c. Evidence of research independence (for staff employed on 'research only' contracts), in accordance with the HEI's processes for determining independence as set out in its code of practice. This could include, for example, evidence that the researcher was leading an externally-funded research project, or was leading a research group. Refer to paragraph 132 of the 'Guidance on submissions', and paragraph 188 of the 'Panel criteria and working methods', for further details. In addition, for staff being submitted in UOAs in Main Panels C or D, see paragraph 189 of the 'Panel criteria and working methods'. Where audit of research independence shows evidence of persistent or serious discrepancies in the application of an HEI's code of practice process, we may refer the matter to the relevant funding body for a code of practice investigation (see paragraph 37 below).
- d. For staff on the minimum fractional contracts (0.20 to 0.29), evidence that verifies the statement regarding substantive connection, or the cited circumstances in lieu of providing a statement. See below, paragraph 29, and 'Guidance on submissions', paragraphs 123 to 127.

27. For REF1a, evidence will be sought with reference to the census date. For REF1b, evidence will be sought with reference to the declared contract start and end dates.

28. Where academic staff are employed by the submitting HEI and based in a discrete department or unit outside the UK, we may seek to establish that the primary focus of their research activity on the census date is clearly and directly connected to the submitting unit based in the UK. See paragraphs 121-125 of the 'Guidance on submissions' for more information about eligibility and substantive connection of academic staff employed by the submitting HEI outside the UK.

29. Where staff FTE is between 0.20 and 0.29, and a statement evidencing a substantive connection has not been provided due to a declaration of personal and discipline related circumstances, evidence of the circumstances may be sought. Such evidence can include, but is not limited to:

- a. Evidence of caring responsibilities – a self-declaration by the staff member to the submitting HEI will be sufficient evidence.
- b. Evidence of other personal circumstances (such as ill health or disability) – a self-declaration by the staff member to the submitting HEI will be sufficient evidence.

- c. Evidence that the staff member has reduced their working hours on the approach to retirement. This could include a contract variation or other correspondence from the HEI to the staff member indicating the change of working hours.
- d. Evidence that the fractional appointment reflects normal discipline practice (for example, where joint appointments with industry or practice are typical in the submitted unit). It is assumed that HEIs are best placed to determine what evidence would be most appropriate in this circumstance.

30. For Category A eligible staff that are included in the selected sample, but were not included in the submission, we will ask each HEI to provide relevant extracts of contracts, payroll or personnel records, or associated job descriptions, indicating the status of staff on the census date. The evidence provided should demonstrate that these staff do not have significant responsibility for research, in line with the processes set out in the HEI's code of practice. Where there is evidence of persistent or serious discrepancies in the application of an HEI's code of practice process, we may refer the matter to the relevant funding body for a code of practice investigation (see paragraph 37 below).

31. A request for evidence relating to the staff sample will be sent to all HEIs in early December 2020. The deadline for responses will be in late January 2021. The evidence that HEIs provide may subsequently be followed up if required. Such requests for further evidence will require a response within 10 working days.

32. After undertaking the audit of the random staff sample, we will match REF1a data with the HESA staff return for census date 31 July 2020 (C19025). Where we identify discrepancies between the two datasets, and we consider the differences to be materially significant, we reserve the right to request an explanation of the differences from the submitting HEI. Substantive evidence will be required to support the explanation. Such requests for explanation and further evidence will require a response within 10 working days.

33. Where comparison with the HESA data shows that the HEI has not submitted 100 per cent of Category A eligible staff, they should be able to demonstrate evidence that staff not submitted to REF 2021 do not have significant responsibility for research. The evidence for this should relate to the institution's documented processes, as set out in its code of practice. Where there is evidence of persistent or serious discrepancies in the application of an HEI's code of practice process, we may refer the matter to the relevant funding body for a code of practice investigation (see paragraph 37 below).

34. We will compare submitted staff with other submissions within and between HEIs. Evidence may be requested from HEIs to verify staff eligibility or FTE where an individual has been returned by more than one HEI. Suitable evidence will include that described in paragraph 26.

35. We will compare submitted staff across the submitting HEI with the staff returned in the HESA C18025 (2018/19) and C19025 (2019/20) returns, looking at the UOA in which they have been submitted and the cost centre in the HESA data. Targeted audits will be carried out where these data comparisons identify significant anomalies.

36. When comparing submissions with HESA data we will use the HESA ID, and also the ORCID (where available), to match staff across data sets. Where comparisons (as described in paragraphs 32-35) identify discrepancies, we would normally expect audit evidence to be provided as per the list of evidence set out in paragraph 26 above.

37. Where deemed necessary, the funding bodies may seek to verify through audit that HEIs have adhered to the approaches and processes set out in their code of practice. Where audit identifies concerns, these will be managed through the complaints process for codes of practice, which will be published in autumn 2019.

38. When auditing an institution's compliance with its code of practice, the staff circumstances report (as described in paragraph 73 of the 'Guidance on codes of practice') may be taken into account.

39. If a member of staff's eligibility cannot be verified, the individual and their associated outputs will be removed from the submission, and/or the FTE or category of a member of submitted staff may be adjusted. Where the audit process identifies staff with significant responsibility for research that have not been submitted, their FTE will be added to the unit's submission and the total output requirement will be recalculated accordingly. An unclassified score will be added to the outputs sub-profile for each missing output in the recalculated total. See paragraph 143 of the 'Guidance on submissions'.

Research outputs (REF2)

40. We will undertake verification of the dates that outputs became publicly available, particularly where they were published early in the REF period or are marked as 'pending' publication (for example, by obtaining a letter from the publisher). This will include checking the publication year against the Crossref⁴ database and against Jisc CORE⁵.

41. We will audit a sample of research outputs that are returned for former staff, to verify that the former member of staff was employed by the submitting unit as Category A eligible on the date that the output was first made publicly available.

42. We will compare the digital object identifiers (DOIs) of outputs submitted to REF 2021 with those of outputs that were submitted to REF 2014. Where this comparison identifies outputs that have been submitted in both exercises, further investigation will be undertaken.

43. As set out in the 'Guidance on submissions', outputs determined to be ineligible through audit will be removed from the submission and an unclassified score added to the profile to account for the 'missing' output. Where this involves removing the only output associated with a Category A submitted staff member, the REF team may audit the eligibility of the staff member, and review the submitted FTE accordingly.

4. www.crossref.org

5. core.ac.uk

Open access (REF2)

44. HEIs may wish to use online tools such as Jisc's Securing a Hybrid Environment for Research Preservation and Access (SHERPA) services to assist them with checking whether journals are generally compliant with the REF open access requirements. As described in paragraph 111 of the 'Guidance on submissions', where the information provided in SHERPA indicates that an output was published in a journal whose policies are compatible with REF requirements, this information will be sufficient to satisfy audit requirements. Where this is the case, HEIs should not undertake additional work to verify this information. Note that the HEIs should still have processes for checking the compliance of individual research outputs that are in-scope of the policy where such outputs do not appear in a journal that is listed in SHERPA.

45. We will aim to assess compliance with the REF 2021 open access policy, as described in the following paragraph, in the first quarter of 2021. However, HEIs should be aware that open access compliance can be audited at any time during the assessment period (for example, as a result of a panel-instigated audit). Where outputs are individually queried, outside the risk-based process described in the following paragraph, they will be treated as sampled outputs according to the processes described in paragraph 50 and following.

46. We will assess each HEIs' overall compliance with the REF 2021 open access policy by:

- a. Identifying where more than one, and more than 5%, of in-scope outputs are not compliant with the REF open access policy and are not using an exception. This will be based on the data in the *Open* access field in the REF2 submission data.
- b. Taking a risk-based approach to open access compliance. The risk identification does not itself form part of the audit, but will be used to inform the selection of HEIs and submissions for possible audit review. We will rank⁶ HEIs by:
 - i. The number of 'other' exceptions used (a higher proportion of 'other' exceptions will lead to a higher risk score). Note that use of 'deposit', 'access' or 'technical' exceptions, or the use of the exception for deposit within three months of publication, will not affect the risk score irrespective of how many times these exceptions are used.
 - ii. Using unpaywall.org to establish whether there is an OA copy of the output (based on the **is_oa** field).
 - iii. Using unpaywall.org to establish whether the output is a file with searchable text (based on the **url_for_pdf** field).
 - iv. Using Jisc CORE, comparing the **datePublished** and **depositedDate** and identifying where the number of days between the two dates is greater than 92.

6. The ranking method will seek to take into account any discipline variations that may affect each of the elements under paragraph 46.b.

47. Where HEIs receive a high risk score, we will request documentation of their process for managing open access and evidence that they are managing compliance with the REF 2021 open access policy effectively. The audit will focus specifically on those parts of the process that determine compliance with the REF 2021 open access policy, rather than management of open access more broadly. We recognise that there is a range of practice in the sector, and it will be up to HEIs to determine what evidence to provide.

48. Note that we will not audit processes and data relating to outputs published by an individual while not employed by the submitting HEI. This includes outputs published while at a different UK HEI. Such outputs will either be compliant with the open access policy or covered by the exception in paragraph 254a of the 'Guidance on submissions'.

49. Where there is insufficient evidence to demonstrate a robust and well-managed process for open access, we will identify a set of outputs from each submission made by the HEI, and request further information to verify whether they are compliant with the policy, or whether an exception applies. Outputs may be selected randomly, or based on information in unpaywall.org or Jisc CORE, or a combination of the two. We will select outputs that have been returned as compliant with the policy, and/or outputs that have been returned with exceptions.

50. Where substantive sampling (see paragraph 49) identifies outputs that have been returned in the submission as compliant with the policy, but which are potentially non-compliant, these will initially be raised as queries with the submitting HEI. The HEI will be asked to respond with an explanation or supporting evidence. Similarly, where substantive sampling of outputs that have been returned with exceptions indicate that the exceptions may not be applicable, these will initially be raised as queries with the submitting HEI, who will be asked to respond with an explanation or supporting evidence. In both cases, evidence may be requested at the level of individual outputs.

51. The 'Guidance on submissions' (paragraph 255a) sets out the grounds for using the 'other' exception. HEIs should reference this guidance, and use this exception only in circumstances that they deem appropriate. Where the 'other' exception is used, HEIs should expect to be able to justify their decision to use the exception, in the context of both of the 'Guidance on submissions' and their own process for managing open access.

52. For identified individual outputs where the HEI cannot demonstrate policy compliance or an exception in terms of their process for managing open access, such outputs will be changed to non-compliant in the submission. Within each UOA, where this takes the total number of non-compliant outputs above one and above 5% for that submission, we will require the submitting HEI to select outputs equal to the number that exceed the tolerance for non-compliance. The selected outputs will be removed from the submission, and an unclassified score will be added for the 'missing' outputs. See paragraph 231 of the 'Guidance on submissions'.

53. Where this involves removing the only output associated with a Category A submitted staff member, and this calls into question the eligibility of the associated staff member, the REF team may audit the eligibility of the staff member, and review the submitted FTE accordingly⁷.

7. 'Guidance on submissions', paragraph 210.

54. Outputs produced by staff that were accepted for publication when they were at a former employer should not be returned as non-compliant. Instead, they should be returned:

- a. as out-of-scope, if they are known to have been accepted for publication before the 1 April 2016; or
- b. as 'compliant' if this is known to be the case; or
- c. with the technical exception for outputs attributed to staff members employed at a different UK HEI at the point of acceptance, as described in paragraph 254(a) of the 'Guidance on submissions'.

55. We would expect HEIs' own process for managing open access to address 'Gold' open access, in agreement with funders' requirements and definitions and with paragraph 239 of the 'Guidance on submissions', and to describe the decision-making process by which an output is determined to be, or not to be, open access via the 'Gold' route.

56. If the output in question has been made available immediately as 'Gold' open access in accordance with Wellcome, Research Council or other funders' requirements then we deem this to have met the policy need. In other instances we encourage the institution to assure themselves that they deem the output to be 'Gold' via the definition in their own process for managing open access.

Impact case studies (REF3)

57. The REF team will audit a sample of impact case studies, including some case studies submitted by each HEI (in one or more UOAs). In the first instance, selection of the sample will be based on advice from the sub-panels in relation to case studies they have concerns about. This will be supplemented, where necessary, by random audit by the REF team, to ensure a reasonable spread across UOAs and HEIs. We will seek to verify the eligibility of impact case studies and corroborate key claims made about the impacts.

58. Each submitted impact case study should include all elements as described in the REF3 data requirements in paragraphs 327-330 of the 'Guidance on submissions'.

59. Impact case studies must meet the eligibility criteria set out in the 'Guidance on submissions' at paragraph 311.

60. Within the sample of impact case studies to be audited, we will verify the dates when the underpinning research was published (with reference to the outputs listed in section B3 of the impact template), to establish that:

- a. The research was undertaken by staff working in the unit in the period 1 January 2000 to 31 December 2020.
- b. The research outputs were first made publicly available in the period 1 January 2000 to 31 December 2020.

61. Sources to corroborate the impact (section B5 of the impact template) should not be a substitute for providing clear evidence of impact in Section B4; the information in section B5 will be used for audit purposes only.

8. See 'Guidance on submissions' paragraph 331.

62. Panel members may request the corroborating evidence in instances where they wish to raise an audit query. Where requested, information will be shared via a secure system with panel chairs, members, assessors, panel secretariat and observers, who are all bound by confidentiality arrangements. The information will be used to corroborate the claims made in the impact case studies and will not be anonymised⁸.

63. As part of the sample-based and panel-instigated audits of case studies (as described in paragraph 57 above), we will examine the external sources of information that could corroborate claims made.

64. Where corroborating evidence is reviewed as a consequence of audit, it will be used solely to verify the claims made about the impact. Additional information included in such evidence will not be used to supplement or strengthen the narrative of the impact case study.

65. The onus is on submitting units to provide appropriate evidence within each case study of the particular impact claimed. The REF panels provide guidance in the 'Panel criteria' about the kinds of evidence and indicators of impact they would consider appropriate to research in their respective UOAs, although this guidance is not exhaustive. Evidence may include relevant extracts of staff contracts, records of research grants, or other appropriate evidence. Information in the additional contextual data section within the submissions system may be compared with the UKRI Gateway to Research⁹ and used as evidence of the period during which the research was produced.

66. To corroborate claims about the impact, we will use one or more sources of corroboration that have been listed in section B5 of the case study template. For example:

- a. We may examine the corroborating evidence submitted by the HEI.
- b. We may contact one or more users/beneficiaries whose contact details have been provided, to seek corroboration directly from them.
- c. Sub-panels may refer to any publicly available material listed.

67. Underpinning research listed in section B3 of the impact case study template may be subject to audit. HEIs may cite a minimum of one and a maximum of six outputs in this section. All outputs cited in this section must be capable of being made available to panels. If they are not available in the public domain or listed in REF2, the HEI must be able to provide them if requested by the REF team.

68. Where case studies requiring security clearance for assessment require audit, the audit will be undertaken by the security-cleared assessors, including the verification of corroborating claims. Underpinning research that requires security clearance will be verified by the security-cleared assessors.

69. Impact case studies can be audited at any time during the assessment period, with the bulk of requests occurring between March and June 2021.

9. UKRI Gateway to Research - gtr.ukri.org

70. Where a specific claim made within an impact case study is not corroborated through audit, the sub-panel will disregard this claim when making its assessment. If the eligibility of the impact case study cannot be verified, it will be graded as 'unclassified'.

Environment data (REF4a/b/c)

71. The REF submission system will validate REF4 data against data held by HESA and other agencies, at HEI level. Targeted audits of environment data will be carried out, where either:

- a. The HEI submits REF4 data close to the submission system limits, indicating that potentially ineligible data may have been returned to the REF.
- b. A comparison of REF and HESA data at subject level indicates a potential discrepancy in the way the HEI has allocated data to REF UOAs.

72. We will align the data on research doctoral degrees awarded (REF4a) with the HESA data and this will inform our selection of submissions to be audited. We will investigate instances where there appear to be significant differences between submitted data and other returns. If audited, an institution will need to explain any significant variances with the totals submitted to HESA, and to describe how they have allocated data to the appropriate UOAs in their REF submissions. Research doctoral degrees are identified in the HESA data as those that meet all of the following criteria with reference to the HESA data fields:

- a. XQOBTN01 = 'D00' or 'D01' (note that D01 has been removed from 2017 onwards)
- b. XQOBTN01 is the highest ranking value of QUAL
- c. RSNEND = 1 or 5 (completion or death)
- d. LOCSDY not 'S' (exclude students studying abroad)
- e. EXCHANGE not '4' or 'G' (instance is not an incoming exchange student)

73. We will align the data on research income (REF4b) with the HESA data and this will inform our selection of submissions to be audited. We will investigate instances where there appear to be significant differences between submitted data and other returns. If audited, an institution will need to explain any significant variances with the totals submitted to HESA, and to show how they have allocated data to the appropriate REF UOAs.

74. We will compare the data on research income-in-kind (REF4c) with data provided by the Research Councils and the health research funding bodies, and this will inform our selection of submissions for audit. If audited, an institution will need to explain any significant variances and to show how they have allocated data to the appropriate REF UOAs.

75. We will compare Income-in-kind data with equivalent data that the Research Councils and health research funding bodies hold. The data will be compared against defined percentage tolerances and other tolerances, to identify variances that indicate risk. This will be done at HEI level.

76. If audited, the institution will need to provide an explanation of the discrepancies identified by the data comparison. Acceptable evidence will include details of any environment data that has been returned to the REF but not to HESA (or other relevant agency), and/or a description of how the HEI has allocated data to REF UOAs.

77. HEIs will be contacted with queries from February 2021 onwards. Requests will generally require a response within 10 working days unless otherwise specified.

78. Where additional data (not held by the relevant agency) are not demonstrably eligible, the submission will be adjusted and such data will be removed. Where the allocation of data to UOAs cannot be justified, the submission will be adjusted accordingly.

Environment (REF5a/b)

79. This section refers primarily to audit of the unit level environment template (REF5b). We may seek to verify information included in the institutional level environment statement (REF5a) where sub-panels raise concerns.

80. We will audit a sample of unit-level environment templates, including some unit-level templates submitted by each HEI (in one or more UOAs). Selection of the sample will be based on advice from the sub-panels.

81. We will seek to verify key claims made within the environment template. HEIs will be invited to provide further corroborating evidence for those that are selected for audit.

82. The Equality and Diversity Advisory Panel (EDAP) may also refer to an HEI's code of practice when providing advice to the sub-panels on its assessment of the 'People' section in the unit-level environment templates (REF 5b) and may use this as a basis for audit, where necessary (see paragraph 15 in the 'Guidance on codes of practice').

83. Institutional-level environment statements and unit-level environment templates can be audited at any time during the assessment period with the bulk of requests occurring between March and June 2021. Requests will require a response within 15 working days unless otherwise specified.

84. Where a specific claim made within an institutional-level environment statement / unit-level environment template is not corroborated through audit, the sub-panel will disregard this claim when making their assessment.

Staff circumstances (REF6a/b)

85. The information returned in REF6a/b for any type of circumstance must be based on verifiable evidence (although, for the avoidance of doubt, the REF team will typically accept individuals' self-descriptions of their circumstances and institutions are expected to approach any verification of circumstances with tact and care and only in accordance with the law; however, see paragraph 87 for further verification requirements). EDAP may request further details during the process of reviewing the request, and all submitted information will be subject to audit during the assessment year (2021).

86. For staff circumstances where the information includes special category personal data, the audit will only require evidence of the staff self-declaration. The REF team will not require any other evidence for the following self-declared circumstances:

- a. Qualifying periods of family-related leave.
- b. Disability: this is defined in the 'Guidance on codes of practice', Table 1 under 'Disability'.

- c. Ill health, injury, or mental health conditions.
- d. 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 set out in Annex L of the ‘Guidance on submissions’.
- e. Other caring responsibilities (such as caring for an elderly or disabled family member).
- f. Gender reassignment.
- g. Other circumstances relating to the protected characteristics listed in the ‘Guidance on codes of practice’, Table 1, or relating to activities protected by employment legislation.

87. Different audit arrangements will apply to the following circumstances, which are not classified as special category personal data:

- a. Qualifying as an early career researcher (ECR).
- b. Absence from work due to secondments or career breaks outside the higher education sector.
- c. In UOAs 1–6, Category A submitted staff who are junior clinical academics.

88. For the three types of circumstances listed in paragraph 87, the HEI may be asked to verify staff circumstances by stating how it assured itself that the cited circumstance(s) took place, and what evidence it had consulted. Due to the sensitivity of such information we will not request original documentation. Appropriate forms of evidence that the HEI may have used could include records of contracted working hours, leave or time taken off work, contracts or secondment agreements (note: this is not an exhaustive or prescriptive list of examples). The HEI may use evidence from its own record-keeping, alongside evidence provided by the staff member at the time of self-declaration of their circumstances. Note that such circumstances should still only be returned to the REF where staff have consented to declare them voluntarily, and the HEI should retain a record of the consent – see paragraph 166 of the ‘Guidance on submissions’.

89. We may request further information about the timing/nature of individual staff circumstances or further details of the career history of an ECR, if required to make a judgement about the appropriate reduction in the number of outputs. For ECRs, we will in the first instance request further information to explain how the individual did not meet the definition of an ECR prior to the point at which ECR status is claimed. This could include details about the nature of previous contracts and/or details of how their previous work did not include independent research. If necessary, we may request copies of original documentation that relates to an ECR’s contract or career history.

90. Any request to remove the ‘minimum of one’ requirement should include a description of how the circumstances have affected the staff member’s ability to produce an eligible output in the period. Note this is not the nature of the circumstances (which is described in paragraphs 86-87 above) but the nature of the effect on the researcher’s ability to produce an eligible output. We would expect the information provided in the request to be based on verifiable evidence. HEIs should be mindful of the guidance in paragraph 194 of the ‘Guidance on submissions’ when presenting evidence of the effect of the circumstances on the researcher’s ability to produce an output. Where evidence of a potentially eligible output is identified by the REF team, the HEI will be asked to provide further information.

91. For unit reduction requests the HEI must include the information described in paragraph 193 of the 'Guidance on submissions'.
92. For the staff-level outline (see paragraph 193.b of the 'Guidance on submissions'), an HEI may be asked both to provide further information about how it determined an appropriate reduction, and to verify the cited circumstances. Refer to paragraphs 86-88 regarding evidence verifying that the cited circumstances took place.
93. EDAP will review the rationale statement (see paragraph 193.c of the 'Guidance on submissions') within the context of the HEI's code of practice. Audit will focus on verifying the information provided.
94. In relation to information provided in REF6a and REF6b, EDAP may request further details between April 2020 (after the deadline for submitting requests) and June 2020. Audit evidence for information provided in REF6a and REF6b may be sought between January 2021 and June 2021.
95. Evidence received from HEIs may subsequently be followed up if required. Such requests for further evidence will require a response within 15 working days.
96. Where an individual's circumstances in REF6a/b cannot be verified, any 'missing' outputs will be graded as 'unclassified'.

Panel-instigated queries

97. 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. The REF team will then investigate and seek to verify the data (in addition to the REF team auditing a proportion of submitted information from each institution, as described in paragraphs 91 to 97 of the 'Guidance on submissions').
98. Sub-panels may instigate audits to verify specific information relating to any aspect of a submission. The REF audit team will request further information or evidence from the HEI, as appropriate to the query.
99. Examples of types of panel instigated queries include (but are not limited to) the following:
- a. Research independence. Information may be requested to demonstrate that staff employed on 'research only' contracts are independent researchers.
 - b. Co-authorship. Details of an individual's contribution to a co-authored output may be requested, to verify their substantial research contribution. We expect HEIs to be able to identify the most appropriate evidence to verify the author's contribution. Where this cannot be verified the output will be graded as 'unclassified'. See paragraph 219 of the 'Panel criteria and working methods'. For outputs returned in submissions that are within Main Panels A and B, where the author contribution has been included in the output acknowledgements, this will take precedence over the statement on co-authored outputs.

c. Quality of research underpinning an impact case study. Where sub-panels consider there is a need to review underpinning research outputs to assure the quality threshold has been met, they will in the first instance seek to source the outputs themselves. Where this is not possible, we may request a copy of the output from the HEI. (Fifteen working days will be given to source the output. We will expect institutions to have ensured the outputs are potentially available, but do not expect or encourage HEIs to collect them in advance, in anticipation of a potential audit request.) Where an institution cannot provide a copy of an underpinning output on request (after the panel members have attempted to source it themselves), the sub-panel will disregard that output in the assessment.

d. We will look to the sub-panels to identify where submitted outputs in REF 2021 include significant material in common with outputs published prior to 1 January 2014. In addition, where sub-panel members identify submitted outputs in REF 2021 that were also submitted as pre-published outputs in REF2014, these will be investigated.

100. Panel instigated audits can occur at any point throughout the assessment period. The majority of these requests will occur between January and June 2021.

101. Requests will require a response within 10 working days unless otherwise specified.

Appendix: suggested process framework for open access

1. This is not intended to be a prescriptive description of the way that HEIs should manage their compliance with the REF open access policy, as we recognise that there will be a range of approaches across the sector. However, it provides some indicators of good practice which we would expect to see within a well-managed process.
2. The following are some general descriptors of characteristics that we would expect to see within a well-managed process for managing compliance with the REF open access policy:
 - a. A description of the process, which may be narrative and/or diagrammatic. The process document does not need to be dated or version-controlled, as we recognise that these should be operational documents which will be reviewed and updated regularly. We would not expect an HEI's normal process for managing open access to be solely based on REF requirements, but it may contain REF-specific elements.
 - b. A description of the sources of data that are used in the process, and of how these are verified.
 - c. How the REF-specific elements of the process handle decisions about whether outputs are:
 - i. In or out of scope.
 - ii. Compliant or not compliant with the policy.
 - iii. Using a valid exception. In particular, how the process ensures that the appropriate exception is used, and avoids overly broad interpretations of exceptions, especially the 'other' exception.
 - d. How the HEI addresses 'Gold' open access.
 - e. Measures to train staff on the process, and the monitoring of the operation of the process.
 - f. Communication strategies with authors regarding policy requirements.
 - g. An assessment of risks in the management of open access (for example poor data collection, and inconsistent application of exceptions), and appropriate mitigations that the HEI has put in place.
 - h. Processes for producing management information and/or reporting.



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