



Performance-Based Research Fund

Sector Reference Group – Consultation Paper #10

Review of the technical specifications for the 2018 Quality Evaluation information technology system

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Every effort is made to provide accurate and factual content. The TEC, however, cannot accept responsibility for any inadvertent errors or omissions that may occur.

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Name	Status	Distribution
Review of the technical specifications for the 2018 Quality Evaluation information technology system	CONSULTATION PAPER	Tertiary education sector and other stakeholders Online feedback to: https://www.surveymonkey.com/r/M2FNX9B Other feedback and questions to: PBRFSRG@tec.govt.nz Closing date: 5pm Friday 21 August 2015

Purpose

1. This paper has been prepared as part of the consultation for the design of the 2018 Performance-Based Research Fund (PBRF) Quality Evaluation. Specifically it:
 - summarises the changes made to the Evidence Portfolio (EP) schema and the Staff Data file specification as a result of decisions already made;
 - identifies the changes that reflect current proposals and which may require further change as a result of decisions from consultation underway; and
 - invites feedback on some of the changes and improvements identified by the PBRF Sector Reference Group's (SRG) technical sub-group and the Tertiary Education Commission's (TEC's) technical advisors.
2. To support this paper, the following technical documents have been developed and are available on the TEC website:
 - Evidence Portfolio Schema Definition;
 - Evidence Portfolio Template;
 - the XSD file;
 - an XML sample file; and
 - the Staff data file specification.

Design principles for the 2018 Quality Evaluation

3. The work of the SRG in the design of the 2018 Quality Evaluation is based on the following principles and considerations:
 - upholding the objectives and aims of the PBRF set out in Appendix 1;
 - drawing on the lessons learned as part of the previous Quality Evaluations;
 - accessing relevant experience and expertise across the SRG and the wider tertiary education sector;
 - ensuring that any proposed changes are exposed to rigorous sector and expert scrutiny;
 - achieving a level of consensus regarding how the 2018 Quality Evaluation should be conducted; and
 - avoiding changes that result in unreasonable compliance or high costs unless there is a robust rationale that indicates changes will result in significant improvements.

Background

4. The 2012 Quality Evaluation process was supported by an end-to-end information technology (IT) solution developed by the TEC. This system allowed participating tertiary education organisations (TEOs) to submit EP data, upload evidence of nominated research outputs (NROs), and submit staff data. It also facilitated the assessment of EPs by the peer review panels and allowed the TEC to monitor all aspects of the process.
5. The 2012 Quality Evaluation was the first time that the process had been administered electronically, and through a web-based system, and the TEC received very positive feedback from users.

6. The TEC supported the submission process for TEOs by providing technical documentation in conjunction with the [*PBRF 2012 Quality Evaluation Guidelines*](#) ("2012 Guidelines"). This included the Evidence Portfolio Schema Definition and the Census Data Definition documents among others.
7. The sector has requested an updated Evidence Portfolio Schema Definition and the new Staff Data file specification be provided as early as possible to enable changes to their own IT systems and the collection of data required for the 2018 Quality Evaluation.

PBRF SRG technical subgroup

8. As part of the PBRF SRG process, a subgroup has been formed to focus on the technical aspects of change for the 2018 Quality Evaluation process. The members of the subgroup are detailed below.

Name	Affiliated organisation
Mr Jonathan Hughes	Universities New Zealand
Katy Miller	Victoria University of Wellington
Professor Tony Parker	Massey University
Dr Tracey Swift	University of Auckland
Ms Mariana van der Walt	Waikato Institute of Technology
Dr Lisa Wong	Wellington Institute of Technology

9. The technical subgroup has reviewed the changes required by Cabinet and recommendations from panels, TEC and the SRG, and has also considered the potential changes that may occur as a result of the current consultation process being undertaken by the wider SRG. The technical documents have now been prepared and reflect the decisions made as at 20 June 2015 plus the proposals currently out for consultation.
10. It must be noted that the content of the Evidence Portfolio Schema Definition and the Staff Data file specification may change as a result of further decisions arising from the consultation process. Final versions will be made available in June 2016 when the PBRF Quality Evaluation 2018 Guidelines are published.
11. As neither the TEC nor the technical subgroup have identified any issues in regard to the method for submitting EP and Staff data, no change has been recommended. However, there are changes to the structure of the EP and the Staff Data file specification which have been documented.

Evidence Portfolios

Structure of the Evidence Portfolio

12. A number of the changes relating to the structure of the EP for the 2018 Quality Evaluation have been agreed by Cabinet, with more detailed aspects such as the descriptions of what information should be contained being consulted on by the SRG.

13. As such the technical subgroup has proposed the following structure (Figure 1) with the detailed descriptions to be finalised once the 2018 Guidelines have been developed. An EP submitted to the 2018 Quality Evaluation will consist of the following parts:
 - EP Details
 - Researcher Details
 - Panel Details
 - Extra-ordinary Circumstances (renamed)
 - Canterbury
 - General
 - Platform of Research - Contextual Summary (new)
 - The Research Output Component:
 - Nominated Research Outputs
 - Other Research Outputs
 - The Research Contribution Component (new)
14. The SRG has proposed redefining the Special Circumstances provision. Details on this proposal are included in the SRG's consultation paper on the review of special circumstances.
15. The Platform of Research - Contextual Summary has been proposed as a new EP part in the SRG's Research Contribution component consultation paper. This was formally the Other Comments element of the EP Details.
16. The Research Contribution component replaces and expands the scope of the Peer Esteem and Contribution to the Research Environment components. Details on this component are included in the SRG's Research Contribution component consultation paper.

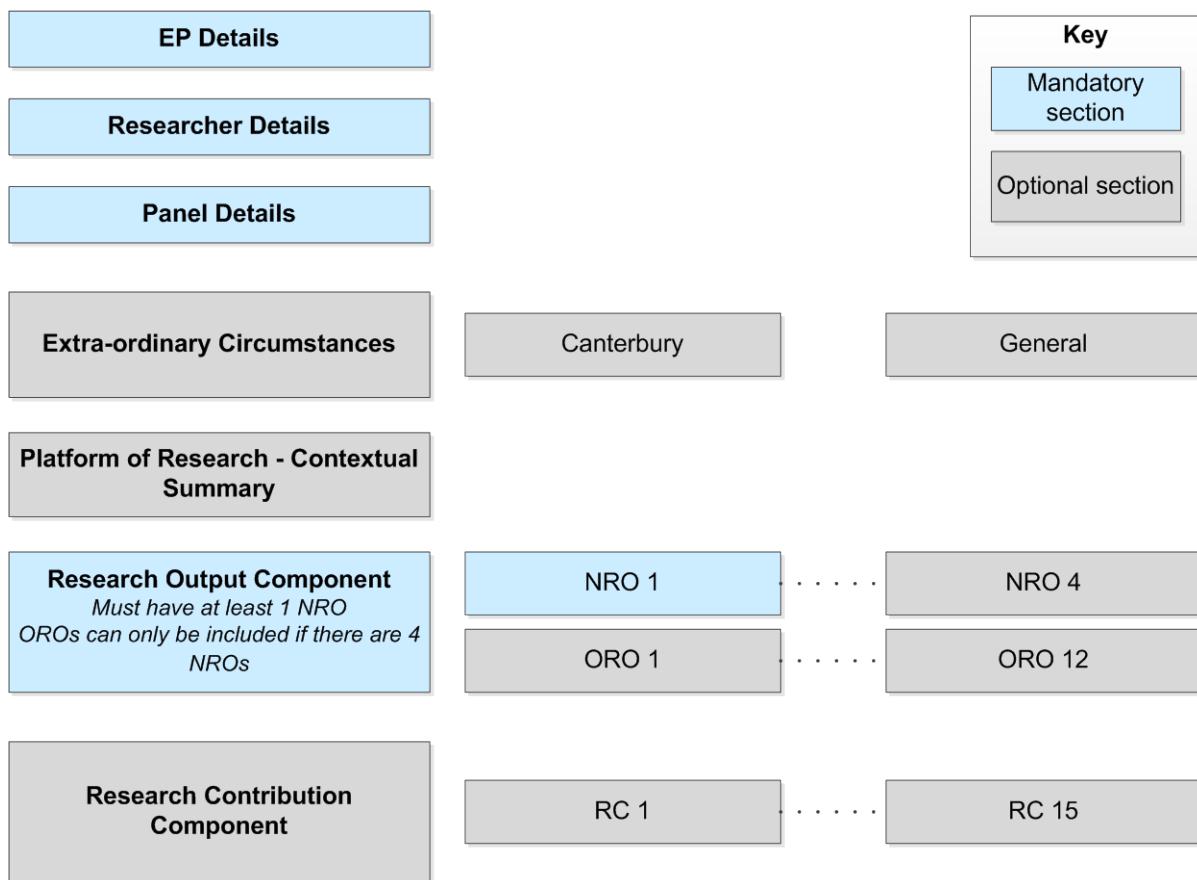


Figure 1 – EP Structure

17. Feedback is sought on the proposed structure of EPs to be submitted to the 2018 Quality Evaluation.

Changes to the EP schema

18. The Evidence Portfolio Schema Definition reflects this structure and provides draft descriptive information along with technical information including the maximum number of characters.
19. The technical subgroup proposes to round the length of many data elements (e.g. 2048 rounded to 2000, 1024 rounded to 1000, 255 rounded to 250) and seeks feedback on this proposal.

Changes to Researcher Details

20. The technical subgroup has identified an issue with the use of default dates of birth being used in the submission process. Default dates of birth, such as those used in the National Student Index (NSI) were used rather than the staff member's actual date of birth. Following the 2012 Quality Evaluation, staff members requesting their results from the TEC experienced delays in accessing this data as the TEC was not able to immediately validate their information. For the 2018 Quality Evaluation, default dates cannot be used in the Birth Date element.
21. The technical subgroup also identified an inconsistency in the 2012 EP schema relating to the middle name element, which has now been reduced from two elements to one. TEOs can submit multiple middle names as long as this remains within the maximum character limit.

22. Feedback is sought on these proposals.

Changes to Panel details

23. The technical subgroup identified an issue with the inconsistent use of the Field of Research Description element in the the 2012 Quality Evaluation. The intention of this element is to assist Chairs with assigning the EP to appropriate assessors. As the Subject Area of Research codes are broad, this field was intended to allow staff members to expand on the specific areas of research within the broader field. The field had a character limit of 1,024, and some EPs contained significant amounts of information that was outside the scope of the element.
24. The technical subgroup proposes reducing the character limit to 500. The wider SRG has also identified that specific advice on the purpose of the element will need to be provided.
25. Only cross-referrals to the Māori Knowledge and Development (MKD) panel and the new Pacific Research panel can be requested by TEOs. The wider SRG has considered including explicit information to support the Chairs of these two panels to determine if the cross-referral request is approved. This is addressed in the consultation paper on the assessment framework.
26. Within this context the technical subgroup proposes the addition of two new elements subject to consultation as noted above:
 - A new element *MāoriResearch* which would comprise of a 500 character comment and up to five referenced component IDs relevant to Māori research (i.e. research based on Māori world-views and Māori methods of research). The referenced component ID must exist in the EP to ensure the EP is validated for assessment.
 - A new element *PacificResearch* which would comprise of a 500 character comment and up to five referenced component IDs relevant to Pacific research. The referenced component ID must exist in the EP to ensure the EP is validated for assessment.
27. Feedback is sought on these proposals.

Changes to the Nominated Research Output element

28. In the 2012 Quality Evaluation, panels identified a number of issues relating specifically to the evidence of NROs submitted by TEOs. These included:
 - Web links that took the user to internal TEO repositories or documents that asked the user to request the physical output directly from the TEO, potentially allowing the TEO to identify the panel member assessing the EP.
 - The submission of web links and electronic documents that were supporting documentation with no evidence of the actual research output.
 - Web links that took the user to closed repositories or sites that required subscriptions.
29. The technical subgroup has considered these issues and proposes the following changes:
 - Within the NRO element, explicit information is required to identify whether the main research object evidence:
 - is uploaded to the TEC file store; or
 - is available from a non-secure publicly available web location; or

- will need to be requested from the TEO at a location specified.
 - Four additional URIs can be specified for supporting evidence.
30. This structure has been proposed to ensure the main research object is clearly identified for access by panellists.
31. Issues were identified by panels in the 2012 Quality Evaluation relating to inconsistency in describing the contribution that the staff member made to the NRO where it had more than one author. This was particularly noticeable where percentages were used. The technical subgroup recommends renaming *MyContribution* element to *IndividualContribution* to assist with this but also seeks feedback on guidelines for describing individual contribution.
32. Feedback is sought on these proposals.

Changes to file content

33. The technical subgroup has considered changes to technology in relation to file content. It is proposed that Prezi files will be accepted via a URI link to a public access website (but not export of a Prezi file to a .EXE file).
34. Online access to large video/movie files will be supported and it is recommended that these files are uploaded to Youtube, Vimeo or Ustream (as well as being available on DVD when requested). It will be the TEO's responsibility to provide the URI and to also provide the location of a physical DVD that can be requested if the panellist is unable to access the URI.
35. A requirement that panellists expecting to access large video files (e.g. the CPA panel) ensure they have high quality internet access and the latest version of Quicktime, VLC, and/or Windows Media Player will also be put in place.
36. Feedback is sought on these proposals.

Details of all changes to the EP Schema

37. All changes to the Evidence Portfolio Schema Definition used in the 2012 Quality Evaluation have been detailed in Appendix 3. This table uses the technical element names.
38. Feedback regarding any other aspect of the Evidence Portfolio Schema Definition document and/or the XSD can be provided.

Staff Data file specification

39. In February 2014, Cabinet decided that the primary measure for reporting future Quality Evaluation results will be the average research quality based on the number of full-time equivalent teaching and research staff (AQS(S)) in tertiary education organisations, subject areas and nominated academic units.
40. This decision means that the Ministry of Education will collect the data that forms the denominator for the calculation. In turn, the TEC is now only required to collect staff data to support the assessment process and the audit of data.
41. The technical subgroup has developed a Staff Data file specification that will replace the previous PBRF Census Data definition. This means that the data submitted by tertiary education organisations (TEOs) will include information on only those staff members:

- for whom an Evidence Portfolio has been submitted for the 2018 Quality Evaluation; or
 - who meet the criteria for transferring staff (i.e. meet the staff eligibility criteria, but transferred to another participating TEO during the census year and that TEO is submitting the EP); or
 - who meet the criteria for concurrently employed staff (i.e. meet the staff eligibility criteria, and concurrently employed at two or more participating TEOs).
42. The technical subgroup has not identified any issues relating to the submission of this data via a CSV file so no change is proposed.

Changes to the Staff Data file specification

Date of Birth field

43. The technical subgroup proposes to introduce validation rules to ensure that default dates of birth are not allowed for the DOB (Date of Birth) field of the staff data file. The issues relating to default dates of birth are discussed in paragraph 20.

Information on new and emerging researchers

44. The TEC has made in-principle decisions relating to new and emerging researchers, specifically that in order for a staff member to be considered for the ‘new and emerging’ researcher Quality Categories (“C(NE)” or “R(NE)”), the key principle is that the staff member is undertaking substantive and independent research for the first time in their career. Staff who have produced outputs that meet the PBRF definition of research before the assessment period, except when in a supervised or support role, cannot be considered as ‘new and emerging’.
45. To support this decision, the field formerly known as the Date of First Academic Appointment (*AcademicAppointDate*) has been renamed as the Date of First Research Appointment (*ResearchAppointDate*). This will represent the day, month, and year of the first independent research appointment, worldwide on or after 1 January 2012.
46. Feedback is sought on whether the field Date of Employment Contract Change is still required based on the change to new and emerging researchers.

Transferring and concurrently employed staff

47. The removal of the PBRF-Eligible field from the PBRF Census file in the 2012 Quality Evaluation meant that the TEC needed manual processes to identify all transferring and concurrently employed staff members.
48. The technical subgroup proposes the inclusion of new fields to indicate if a researcher has transferred from another TEO during the 12 month period prior to the PBRF Census date, and if so, the TEO they have transferred from.
49. PBRF-eligible staff members who transfer between participating TEOs during the 12 months prior to the PBRF Census date should be recorded in the staff data file submitted by both their former and current organisations.
50. Similarly, to resolve issues of identifying concurrently employed staff members, TEOs are asked to explicitly indicate if a researcher is concurrently employed at more than one TEO and should be recorded in the staff data file submitted by all employing organisations.

51. Feedback is sought on these proposals.

Details of all changes to the Staff Data file specification

52. All changes to the Census Data Definition used in the 2012 Quality Evaluation have been detailed in Appendix 4. This table uses the technical field names.

53. Feedback regarding any other aspect of the Staff Data file specification can be provided.

Providing Feedback

54. Feedback is sought from the sector and other key stakeholders on the information outlined in this paper.

55. Feedback can be completed:

- online: <https://www.surveymonkey.com/r/M2FNX9B>
- or via email using the template provided on the TEC website, with completed templates being emailed to PBRFSRG@tec.govt.nz.

56. All feedback would be appreciated as soon as possible, but no later than 5pm Monday 17 August 2015.

Appendix 1: Objectives and principles of the PBRF

Objectives of the PBRF

The primary objectives of the PBRF are to:

- increase the quality of basic and applied research at New Zealand's degree granting TEOs;
- support world-leading research-led teaching and learning at degree and postgraduate levels;
- assist New Zealand's TEOs to maintain and lift their competitive rankings relative to their international peers; and
- provide robust public information to stakeholders about research performance within and across TEOs.
- In doing so the PBRF will also:
- support the development of postgraduate student researchers and new and emerging researchers;
- support research activities that provide economic, social, cultural and environmental benefits to New Zealand, including the advancement of Mātauranga Māori; and
- support technology and knowledge transfer to New Zealand businesses, iwi and communities.¹

Principles of the PBRF

The PBRF is governed by the following principles:

- Comprehensiveness: the PBRF should appropriately measure the quality of the full range of original investigative activity that occurs within the sector, regardless of its type, form, or place of output;
- Respect for academic traditions: the PBRF should operate in a manner that is consistent with academic freedom and institutional autonomy;
- Consistency: evaluations of quality made through the PBRF should be consistent across the different subject areas and in the calibration of quality ratings against international standards of excellence;
- Continuity: changes to the PBRF process should only be made where they can bring demonstrable improvements that outweigh the cost of implementing them;
- Differentiation: the PBRF should allow stakeholders and the government to differentiate between providers and their units on the basis of their relative quality;

¹ The objectives were revised as a part of the Ministry of Education's review of the PBRF and agreed by Cabinet in February 2014.

- Credibility: the methodology, format and processes employed in the PBRF must be credible to those being assessed;
- Efficiency: administrative and compliance costs should be kept to the minimum consistent with a robust and credible process;
- Transparency: decisions and decision-making processes must be explained openly, except where there is a need to preserve confidentiality and privacy;
- Complementarity: the PBRF should be integrated with new and existing policies, such as charters and profiles, and quality assurance systems for degrees and degree providers; and
- Cultural inclusiveness: the PBRF should reflect the bicultural nature of New Zealand and the special role and status of the Treaty of Waitangi, and should appropriately reflect and include the full diversity of New Zealand's population. ²

² These principles were first enunciated by the Working Group on the PBRF. See [*Investing in Excellence*](#), pp.8-9.

Appendix 2: EP Schema changes

The following table details the changes made to the EP schema. It excludes minor changes made to match the XSD regarding minimum length.

#	EP Part	Element	Change
1.	Evidence Portfolios	ProviderNumber	Data Type is <i>int</i>
2.	Evidence Portfolio Details	ContainsConfidentialResearch	Relabelled from <i>ContainsConfidentialResearchInd</i>
3.		ReleasePermissionObtained	Relabelled from <i>ConfidentialContentReleasePermissionObtainedInd</i> Removed “no” as a valid option.
4.		SendScoreToResearcher	Relabelled from <i>SendQualityCategoryScoreToResearcher</i>
5.		Other Comments	Now moved to a new element called <i>Contextual Narrative</i> . Length rounded to 2000.
6.	Researcher	Researcher	Relabelled from <i>LearnerIdentityType</i>
7.		Name	Relabelled from <i>LearnerName</i> .
8.		Title	Length rounded to 250
9.		FirstName	Length rounded to 250
10.		MiddleName	1 element of length 250 that can contain middle names. This was previously 2 elements, one for each of 2 middle names.
11.		LastName	Length rounded to 250
12.		GenderCode	Removed
13.		BirthDate	Default birth date from the NSI (11 Nov 1918) will not be accepted
14.		DeathDate	Removed
15.	Panels	Panels	Relabelled from <i>PanelsType</i>
16.		PrimarySubjectAreaOfResearchCode	Data Type is <i>int</i>
17.		FieldOfResearchDescription	Length reduced to 500.
18.		Assessment by expert advisory groups – 5 elements	Removed assessment by expert advisory groups
19.		CrossReferralPanelRequests	Removed
20.		RequestedPanelCode	Removed

#	EP Part	Element	Change
21.		MāoriResearch	New element to assist the Chair to determine if the EP should be cross-referred to the MKD panel. Information includes a comment and up to 5 referenced research component IDs relevant to Māori research.
22.		PacificResearch	New element to assist the Chair to determine if the EP should be cross-referred to the PACIFIC panel. Information includes a comment and up to 5 referenced research component IDs relevant to Pacific research.
23.	Canterbury Extra-ordinary Circumstances	ExtraOrdinaryCircumstanceCanterburyEarthquakes	Renamed from <i>SpecialCircumstanceCanterburyEarthquakes</i>
24.		ImpactCode	New set of codes, currently 5 values Data type is <i>int</i>
25.		EligibilityPeriod	Removed
26.		PeriodsClaimed	New element. Provides for sets of time periods to be listed that must add up to a minimum of three years.
27.		Comment	Relabelled from <i>CircumstanceComment</i> Length rounded to 2000.
28.	Other Special Circumstance	SpecialCircumstanceType	Removed this element and the provision for up to 6 occurrences of Special Circumstances
29.	Extra Ordinary Circumstance	ExtraordinaryCircumstance	Added new element, consistent with the format required for the Canterbury Extra-ordinary Circumstance part.
30.		Code	New set of codes, currently 3 values Data type is <i>int</i>
31.		PeriodsClaimed	New element. Provides for sets of time periods to be listed that must add up to a minimum of three years.
32.		Comment	Length rounded to 2000. Mandatory element.
33.	NRO	NominatedResearchOutput	Relabelled from <i>NominatedResearchOutputType</i>
34.		RequestProfessionalEagAssessment	Removed
35.		RequestPacificEagAssessment	Removed
36.		ResearchOutputTypeCode	Relabelled from <i>ResearchOutputType</i> . New set of codes. Data type is <i>int</i>

#	EP Part	Element	Change
37.		PreferredOrder	Relabelled from <i>PreferredOrderofAssessment</i> . Data type described as <i>int</i>
38.		MainResearchObjectURI	New element to ensure main research object explicitly referenced. Max length is 2000 if URI is an external URL, else 255 if URI is a filename.
39.		MainResearchObjectLocation	Was previously <i>LocationDetails</i> . Length rounded to 1000.
40.		SupportingObjectURI	Up to 4 URI locations of supporting research objects. Max length is 2000 if URI is an external URL, else 255 if URI is a filename.
41.		URI	Removed and replaced by the new URI elements.
42.		QualityAssured	Relabelled from <i>QualityAssuredInd</i> .
43.		Title	Length rounded to 1000.
44.		Authors	Length rounded to 2000.
45.		YearAvailable	Valid values 2012 to 2017.
46.		OutputSource	Relabelled from Source. Length rounded to 1000.
47.		IndividualContribution	Relabelled from <i>MyContributionDescription</i> . Length rounded to 1000.
48.		Description	Length rounded to 1000.
49.			Order of elements within an NRO
50.	ORO	OtherResearchOutput	Relabelled from <i>OtherResearchOutputType</i> .
51.		ResearchOutputTypeCode	Relabelled from <i>OutputTypeCode</i> . New set of codes. Data type is <i>int</i>
52.		PreferredOrder	Relabelled from <i>PreferredOrderofAssessment</i> Data type described as <i>int</i>
53.		QualityAssured	Relabelled from <i>QualityAssuredInd</i> .
54.		Description	Length rounded to 1000.
55.	RC	ResearchContribution	New component that replaces PE and CRE

#	EP Part	Element	Change
56.		ContributionTypeCode	New element. New set of codes. Data type is <i>int</i>

Appendix 3: Staff data file changes

Data submitted by tertiary education organisations (TEOs) will include information on only those staff members:

- for whom an Evidence Portfolio has been submitted for the 2018 Quality Evaluation; or
- who meet the criteria for transferring staff (i.e. meet the staff eligibility criteria, but transferred to another participating TEO during the census year and that TEO is submitting the EP); or
- who meet the criteria for concurrently employed staff (i.e. meet the staff eligibility criteria, and concurrently employed at two or more participating TEOs).

#	Field Name	Change
1.	Gender	Field removed
2.	DOB	If the NSI default date of birth (11 November 1918) is entered the staff data file will be rejected
3.	Title	Length rounded to 250
4.	FirstName	Length rounded to 250
5.	MiddleName	Length rounded to 250
6.	LastName	Length rounded to 250
7.	Ethnicity	Field removed
8.	PositionTitle	Field removed
9.	WillSubmitEP	Field removed
10.	ResearchAppointDate	Previously known as AcademicAppointDate. Description changed to: The day, month, and year of first <i>independent</i> research appointment, worldwide on or after 1 January 2012.
11.	DofEmpContractChange	Field removed
12.	SubjectArea	Field removed
13.	TransferYN	New field to indicate if the researcher has transferred from another TEO during the 12 month period prior to the PBRF QE Staff data date.
14.	TransferFromInstitID	The ID of the TEO where the researcher has transferred from during the 12 month period prior to the PBRF QE Staff data date.
15.	ComcurrentYN	Indicates if a researcher is concurrently employed at more than one TEO.