PERFORMANCE-BASED RESEARCH FUND

GUIDELINES 2006

July 2005

Contents

CHAPTER 1
BACKGROUND & INTRODUCTION TO THE PERFORMANCE-BASED RESEARCH FUND (PBRF)

Overview of this Chapter

Chapter 1 of the Guidelines provides a general description of the background, concepts and processes involved in the Performance-Based Research Fund (PBRF).

It is intended for participants in the PBRF during 2006, and for anyone else who is unfamiliar with the PBRF and needs to know why it was set up and what its key elements are.

It contains the following sections …… on these pages:

Section A: Using these Guidelines

Introduction

These Guidelines have been prepared to assist participants in the 2006 processes for the PBRF.

Structure and audience

The Guidelines are divided into chapters. Chapters are subdivided into sections, and sections are further subdivided into topics. Chapters, sections and topics are listed in the table of contents.

Each chapter has a primary audience for which it is intended. The chapters and their primary audience are listed in the following table.

Chapter	Title	Primary Audience
1	Background & Introduction to the Performance-Based Research Fund (PBRF)	All users of these Guidelines
2	Quality Evaluation: Completion and Submission of Evidence Portfolios	Tertiary Education Organisations (TEOs)
3	Quality Evaluation: Assessing, Scoring and Assigning a Quality Category to Evidence Portfolios	▪ TEOs ▪ Panel chairs ▪ Panel members ▪ Specialist advisers
4	Postgraduate Research-Based Degree Completions	TEOs
5	External Research Income	TEOs
6	Reporting the PBRF Results	TEOs
7	Complaints about Quality Categories Assigned to Evidence Portfolios	TEOs
8	Data Checking and Verification	All users of these Guidelines
	Glossary	All users of these Guidelines
	Index	All users of these Guidelines

Which chapters are relevant?

If you are a user of the Guidelines you will be most concerned with the chapter(s) specifically designed for you. However, you should note that other chapters may also be useful. For example, if you are putting together an evidence portfolio (EP), you will benefit from considering the material in Chapter 3, which deals with how EPs are assessed and how they have a Quality Category assigned to them.

Using these Guidelines

Follow these steps in using the Guidelines.

- Read Chapter 1 to gain a general overview and understanding
- Read the chapter of the Guidelines most relevant to you
- Read any other chapters of the Guidelines that may be relevant to your role in the PBRF process.

Navigating the paper version

These Guidelines contain many cross-references, which are intended to help you find essential information (see also "Navigating the online version" immediately below). Most of these cross-references contain a page number as well as the heading that you are being referred to; cross-references to 'above' or 'below' are to headings on the same page or close to it.

There is also an index at the end of the Guidelines.

Navigating the online version

The online version of these Guidelines contains internal links to help you navigate the document. The links within the text are coloured blue; the links in the table of contents and the index are the default colour (black). Links can also be recognised by the fact that the cursor changes to a pointing finger when it passes over them.

In general, you can find links in the following places:

- The table of contents and the index
- The table of topics at the beginning of each chapter or section
- Within the text, where references are signalled by 'see …'

Section B:
Background and Aims of the Performance-Based Research Fund (PBRF)

Introduction

This section of the Guidelines provides a brief overview of the PBRF and its guiding principles.

It contains the following topics …… on these pages:

Background to the PBRF

Establishment of PBRF Working Group

The Tertiary Education Advisory Commission in its November 2001 report, *Shaping the Funding Framework*, recommended the introduction of a performance-based research fund for tertiary education providers. This led to the establishment, in July 2002, of the PBRF Working Group to advise the then Transition Tertiary Education Commission and the Ministry of Education on the detailed design and implementation of a performance-based system for funding research in New Zealand's degree-granting institutions.

PBRF Working Group Report

The report of the Working Group, *Investing in Excellence*, was delivered in late 2002, and Cabinet endorsed the report's recommendations in December 2002. These recommendations have subsequently formed the basis for the implementation of the PBRF as described in these Guidelines.

2003 Quality Evaluation

The 2003 Quality Evaluation was the first Quality Evaluation carried out as part of the PBRF. It was conducted during 2003 and the final report, *PBRF-Evaluating Research Excellence: the 2003 assessment*, was released early in 2004.

Evaluation strategy

The evaluation strategy has three phases. Phase 1 focused upon the design and implementation of the 2003 Quality Evaluation, in particular:

- An evaluation of the implementation process (especially in relation to the 2003 Quality Evaluation)
- The short-term impacts of the PBRF on the tertiary education sector, including modelling the likely financial implications of the PBRF for TEOs during 2004-2007
- The results of the Quality Evaluation and what these reveal about the overall quality of research being conducted in the tertiary education sector, the main areas of research strength and weakness, and the relative research performance of the TEOs that have participated in the PBRF.

Phase 2, the medium-term phase, is scheduled to report back initially to Cabinet in September 2005. This phase focuses on a more detailed review and evaluation of the wider impacts of the PBRF on the tertiary education sector.

Phase 3, the longer-term phase, will focus on whether the PBRF has fulfilled its stated objectives and whether the overall benefits have exceeded the costs. (Phase 3 will be undertaken after the second Quality Evaluation but prior to the third Quality Evaluation due in 2012.)

Lessons from 2003 and preparations for 2006

The experience gained in the 2003 Quality Evaluation was used to provide input into the redesign of the PBRF in preparation for the 2006 Quality Evaluation. Following consultation with the sector, a Sector Reference Group (SRG) was formed to consider the issues highlighted by the implementation of the 2003 Quality Evaluation, the Phase 1 Evaluation of the PBRF, and the reports of the peer review panels.

The SRG's report, *Recommendations of the PBRF Sector Reference Group for the 2006 Quality Evaluation* detailed the outcome of the SRG's deliberations and the extensive consultation with the sector. The recommendations of the SRG have been incorporated into this document, as has the sector feedback on the draft version released for consultation.

Aims of the PBRF

The main aims of the PBRF, as agreed by Government, are to:

- Increase the average quality of research
- Ensure that research continues to support degree and postgraduate teaching
- Ensure that funding is available for postgraduate students and new researchers
- Improve the quality of public information on research output
- Prevent undue concentration of funding that would undermine research support for all degrees or prevent access to the system by new researchers
- Underpin the existing research strength in the tertiary education sector.

Emphasis on excellence

In order to meet these aims, the prime focus of the PBRF is on rewarding and encouraging excellence. Excellence in this respect is not just about the production of high-quality research articles, books and other forms of research output. It also includes all of the following:

- The production and creation of leading-edge knowledge
- The application of that knowledge
- The dissemination of that knowledge to students and the wider community
- Supporting current and potential researchers (eg postgraduate students) in the creation, application and dissemination of knowledge.

Guiding Principles of the PBRF

Guiding principles

The PBRF is guided 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
- *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
- *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.

Māori Research

Māori research

An important aim of the PBRF is to give due emphasis to research by Māori researchers and to research into Māori matters. Such research may also acknowledge different approaches to the research process.

Mechanisms for including Māori research

The PBRF Working Group proposed the following mechanisms to acknowledge the special role and status of the Treaty of Waitangi and the principle of cultural inclusiveness in respect of Māori:

- The formation of a Māori Knowledge and Development Panel, which would evaluate research into distinctly Māori matters, such as: research into aspects of Māori development; te reo Māori; and tikanga Māori
- The Māori Knowledge and Development Panel would also provide advice on research that had a significant Māori component but was being assessed by other panels
- The inclusion of Māori researchers on other panels, and, where this was not possible, the use of specialist advisers
- Encouraging growth in Māori research capability through an equity weighting of 2 for research degree completions by Māori students included in the Postgraduate Research Degree Completions (RDC) measure during the first two Quality Evaluation rounds of the PBRF.

Pacific Research

Pacific research

Another important aim of the PBRF is to give due emphasis to both research by Pacific researchers and research into Pacific matters. Such research may also acknowledge different approaches to the research process.

Mechanisms for including Pacific research

The PBRF Working Group proposed the following mechanisms to address the issue of cultural inclusiveness in respect of Pacific researchers and to link the tertiary sector to Pacific aspirations:

- The formation of an esteemed group of Pacific researchers to help define excellence in Pacific research and develop guidance for the peer review panels and specialist advisers on Pacific research
- Encouraging growth in Pacific research capability through an equity weighting of 2 for research degree completions by Pacific students included in the Postgraduate Research Degree Completions (RDC) measure during the first two Quality Evaluation rounds of the PBRF
- The provision for researchers to indicate whether their EPs include Pacific research.

Section C:
Key Elements and Participants

Introduction

This section of the Guidelines provides a brief overview of the major components of the PBRF and the key participants in the PBRF processes.

It contains the following topics …… on these pages:

Key Elements in the PBRF

Three elements

The PBRF funding formula is based on three elements or 'measures':

- Quality Evaluation: the assessment of the research quality of TEO staff members, based on peer review
- A Postgraduate Research Degree Completions (RDC) measure: the number of postgraduate research-based degrees completed in the TEO
- An External Research Income (ERI) measure: the amount of income for research purposes received by the TEO from external sources.

Weightings

The weightings in the funding formula for the three measures are:

- Quality Evaluation (60%)
- RDC (25%)
- ERI (15%).

Evidence portfolio

The quality of an individual's research contribution is assessed through the external peer review of their research as presented in an evidence portfolio (EP).

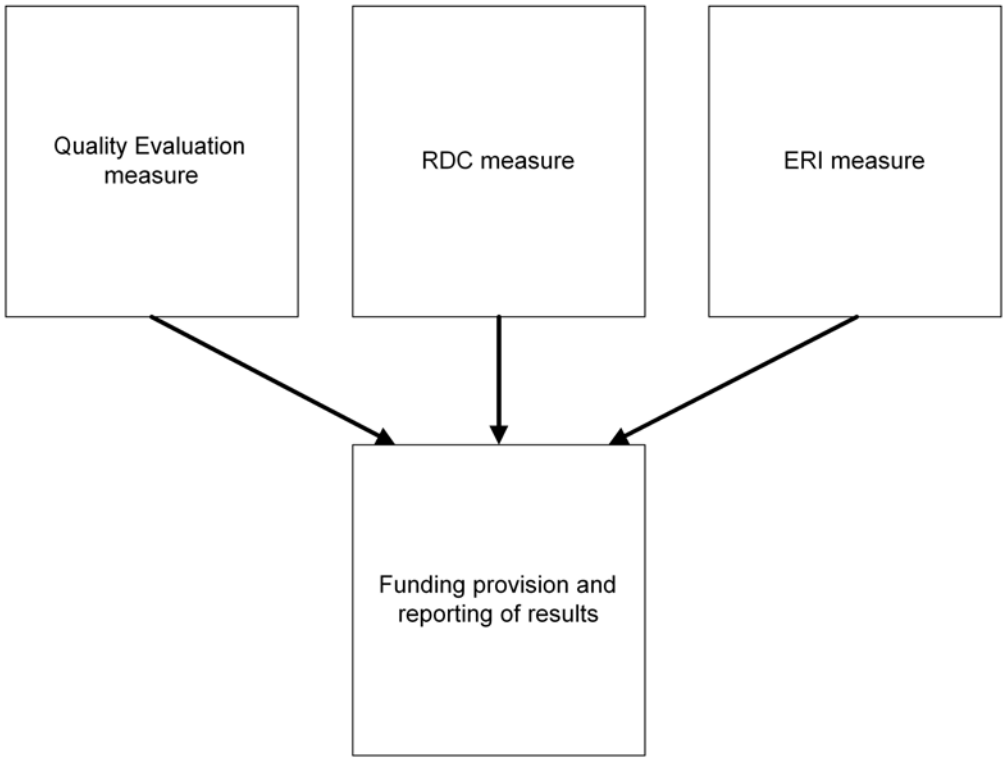
Further information

For further information on compiling an EP, see Chapter 2 Quality Evaluation: Completion and Submission of Evidence Portfolios.

For further information on the assessment processes for an EP, see Chapter 3 Quality Evaluation: Assessing, Scoring and Assigning a Quality Category to Evidence Portfolios.

PBRF Process Overview

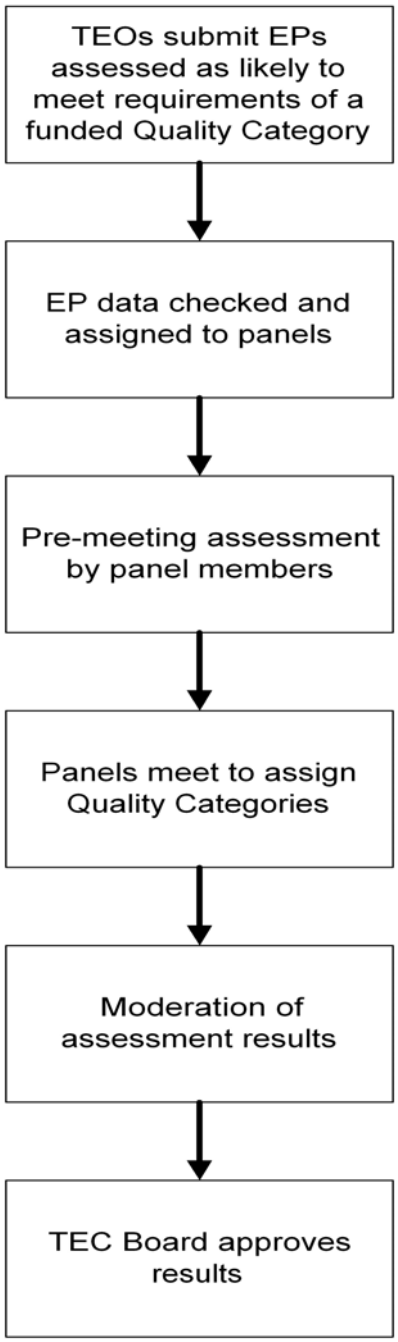
Diagram This diagram shows the various components in the overall PBRF process.



Further detail For a more detailed diagram of the Quality Evaluation process see the next topic.

Quality Evaluation Process

Phases This diagram shows the key phases in the Quality Evaluation process.



Key Participants in the PBRF

Key participants

The operation of the PBRF involves six major participants:

- TEOs
- Peer review panels
- The Tertiary Education Commission (TEC) Secretariat
- A Moderation Panel
- The TEC Board
- The Ministry of Education.

The roles of these participants are briefly described below.

TEO functions

Under the PBRF, a participating TEO's function is to provide complete and accurate data on:

- Individual staff members' research activities and contributions during the assessment period in the form of EPs, including an internal assessment of each EP (as part of the Quality Evaluation)
- Numbers of postgraduate research degree completions (as part of the RDC measure)
- external research income (as part of the ERI measure).

Peer review panels

The role of the peer review panels established by the TEC is to evaluate the quality of the EPs submitted by the participating TEOs and to assign each of them to a Quality Category.

The TEC Secretariat

The role of the TEC Secretariat is to provide technical, policy and administrative support to the PBRF process and peer review panels, and, in particular, the chairs of those panels.

Moderation Panel

The role of the Moderation Panel is to:

- Generate consistency across the peer review panels, while, at the same time, not reducing the panel judgements to a mechanistic application of the assessment criteria
- Provide an opportunity for independent review of the standards and processes being applied by the panels
- Establish mechanisms and processes by which material differences or apparent inconsistencies in standards and processes can be addressed by the panels
- Advise the TEC Board on any issues regarding consistency of standards across panels.

The TEC Board

The TEC Board considers and approves the findings of the Quality Evaluation for funding and reporting purposes.

Ministry of Education

The Ministry of Education has a number of roles in the PBRF processes. These include:

- Collection of PBRF Census data from all participating TEOs to determine which staff members will be eligible for participation in the PBRF
- Collection of data for the RDC measure
- Collection of data for the ERI measure.

Section D:
What Counts as Research?

Introduction

This section of the Guidelines provides the Definition of Research that underpins the operation of the PBRF.

Definition

For the purposes of the PBRF, research is original investigation undertaken in order to contribute to knowledge and understanding and, in the case of some disciplines, cultural innovation or aesthetic refinement.

It typically involves enquiry of an experimental or critical nature driven by hypotheses or intellectual positions capable of rigorous assessment by experts in a given discipline.

It is an independent*, creative, cumulative and often long-term activity conducted by people with specialist knowledge about the theories, methods and information concerning their field of enquiry. Its findings must be open to scrutiny and formal evaluation by others in the field, and this may be achieved through publication or public presentation.

In some disciplines, the investigation and its results may be embodied in the form of artistic works, designs or performances.

Research includes contribution to the intellectual infrastructure of subjects and disciplines (eg dictionaries and scholarly editions). It also includes the experimental development of design or construction solutions, as well as investigation that leads to new or substantially improved materials, devices, products or processes.

Note:* The term 'independent' here should not be construed to exclude collaborative work.

Excluded activities

The following activities are excluded from the Definition of Research except where they are used primarily for the support, or as part, of research and experimental development activities:

- Preparation for teaching
- The provision of advice or opinion, except where it is consistent with the PBRF's Definition of Research
- Scientific and technical information services
- General purpose or routine data-collection
- Standardisation and routine testing (but not including standards development)
- Feasibility studies (except into research and experimental development projects)
- Specialised routine medical care
- The commercial, legal and administrative aspects of patenting, copyrighting or licensing activities

- Routine computer programming, systems work or software maintenance (but **note** that research into and experimental development of, for example, applications software, new programming languages and new operating systems is included)
- Any other routine professional practice (eg in arts, law, architecture or business) that does not comply with the Definition.**

Note:** Clinical trials, evaluations and similar activities will be included, where they are consistent with the Definition of Research.

Further information

For further information on what counts as research see Chapter 2 Section H: Panel-Specific Guidelines for Completing an EP, which begins on page 72.

Section E: TEO Participation

Introduction

This section of the Guidelines provides information on the eligibility of TEOs to participate in the three measures of the PBRF (ie the Quality Evaluation, the RDC, and the ERI).

It contains the following topics …… on these pages:

How to Determine a TEO's Eligibility to Participate in the PBRF

Key principles underpinning TEO participation

The three key principles underpinning the participation of a TEO are:

- The TEO has the authority to grant degrees

  AND

- Participation in the PBRF is voluntary

  AND

- Those TEOs that choose to participate must do so in all three measures.

Note: Degree-granting authority is authority to award degrees or related qualifications including Bachelors, Graduate Certificates, Graduate Diplomas, Postgraduate Certificates, Postgraduate Diplomas, Bachelors with Honours, Masters and Doctoral degrees, and Diplomas of Teaching that lead to registration as a teacher.

Other principles

Other principles underpinning the TEO participation criteria include:

- TEOs choosing to participate in the PBRF will be required to participate in all three measures of the PBRF, even if their funding entitlement in one or more measure is zero or likely to be zero
- A PBRF-eligible TEO that chooses not to participate in the 2006 Quality Evaluation will be ineligible to make claims for funding through the ERI and RDC measures until the next Quality Evaluation
- TEOs cannot claim funding through the RDC and ERI measures unless they have participated in a Quality Evaluation.

TEO Participation Criteria

TEO participation criteria: Quality Evaluation

To be able to participate in the 2006 Quality Evaluation, TEOs must have degree-granting authority on the PBRF Census date, 14 June 2006.

TEOs participating in the 2006 Quality Evaluation must also participate in the RDC and ERI measures from 2006, even if their funding entitlement in one or more measures is zero or likely to be zero.

TEO participation criteria: RDC and ERI measures

To be able to participate in the PBRF's RDC and ERI measures for the years from 2007 to 2012, TEOs must have participated in the last Quality Evaluation (ie the 2006 Quality Evaluation).

For example, a TEO that did not participate in the 2006 Quality Evaluation may not make a claim for funding through the RDC and ERI measures for the 2007 funding year (or subsequent years). However, the same TEO may participate in the 2012 Quality Evaluation and then begin making a claim for funding through the RDC and ERI measures.

CHAPTER 2
QUALITY EVALUATION: COMPLETION AND SUBMISSION OF EVIDENCE PORTFOLIOS

Overview of this Chapter

Chapter 2 of the Guidelines provides policy and guidelines by which TEOs should complete evidence portfolios (EPs) and submit them to the TEC.

It is intended to be used by TEO staff members who are responsible for completing and submitting EPs, or by any other stakeholders or participants in the PBRF process who need to know about issues such as completion and submission, eligibility, and EP contents.

It contains the following topics …… on these pages:

Section A:
An Introduction to Evidence Portfolios (EPs)

Introduction

This section of the Guidelines provides an overview of the process of completing and submitting EPs in a TEO.

It is intended to be read by staff members in TEOs but may also be useful to panel members, TEC staff, and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

What is an Evidence Portfolio (EP)?

Key element in PBRF process

An evidence portfolio (EP) is a key component of the PBRF. It forms the basis of the Quality Evaluation measure.

Three components

The EP has three key components:

- Research Outputs (RO): the outputs of a staff member's research
- Peer Esteem (PE): an indication of the quality of the research of the staff member, as recognised by their peers
- Contribution to the Research Environment (CRE): the staff member's contribution to a vital high-quality research environment, both within the TEO and beyond it.

One EP per PBRF-eligible staff member

Each eligible staff member has one EP for each PBRF Quality Evaluation round.

Significance of 'partial' round

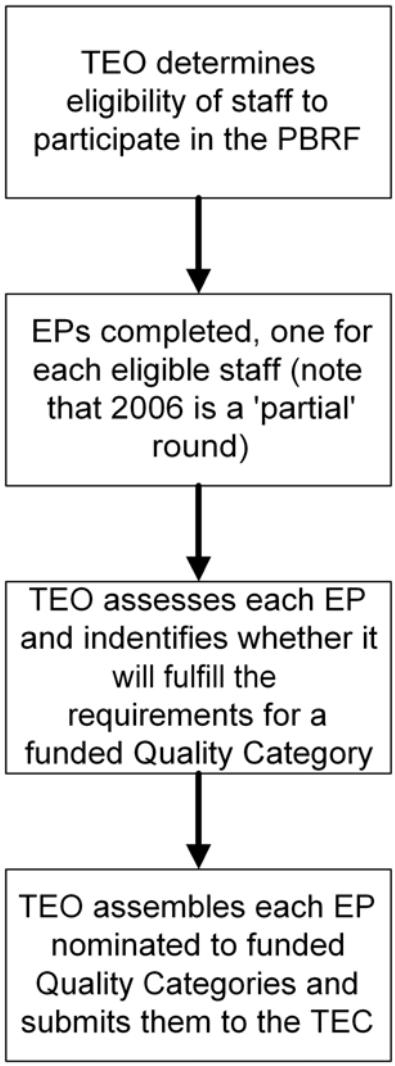
The 2006 Quality Evaluation will be a 'partial' round, and so completion of an EP will not be required for most staff members. For more information, see Who Should Prepare and Submit an Evidence Portfolio? on page 38.

EP data

TEOs have been provided with the XML specifications required for the submission of EP data.

Quality Evaluation – TEO Process

Diagram This diagram shows the stages in which the TEO completes and submits the EPs during the Quality Evaluation process.



Section B:
Eligibility to Participate in the Quality Evaluation Process

Introduction

This section of the Guidelines sets outs the principles and criteria for determining which staff members from a TEO are eligible to participate in the 2006 Quality Evaluation.

It contains the following topics …… on these pages:

Who is Eligible to Participate in the Quality Evaluation Process?

Key principles underpinning eligibility to participate

There are two key principles underpinning the eligibility of an TEO's staff member to participate in the 2006 Quality Evaluation:

- The individual is expected to contribute to the learning environment at the degree level

  AND/OR

- The individual is expected to make a sufficiently substantive contribution to research activity.

Other elements

Other elements underpinning the staff-participation criteria include:

- The staff member has an explicit requirement to teach and/or undertake research as one of their employment functions, as at the date of the PBRF Census (Staffing Return) – hereafter referred as the PBRF Census
- A sufficiently substantive contribution is determined by applying the substantiveness test

"Other elements" continues …

- The Full Time Equivalent (FTE) counted in the Quality Evaluation for each PBRF-eligible staff member is generally that contained in their employment agreement
- Employment history in the 12-month period prior to the PBRF Census date is to be apportioned on a FTE basis to ensure fair representation of staff time, and to minimise 'poaching'
- Staff employed in wholly owned subsidiaries and fully controlled trusts of the TEO are PBRF-eligible, since these bodies operate under the control of the participating TEO
- Provision has been made to allow staff members based overseas, and staff members sub-contracted to TEOs by non-TEOs, to be PBRF-eligible under certain conditions
- Although the 2006 Quality Evaluation is being conducted on a 'partial' basis, the staff-participation criteria used to identify PBRF-eligible staff members will apply to all staff.

Staff-participation criteria

The staff-participation criteria are used to identify which staff members employed by a TEO are PBRF-eligible.

Please **note** that PBRF-eligible staff members are required to be included in the PBRF Census.

To be PBRF-eligible, staff members must fulfil **all** of the staff-participation criteria set out below:

- They were employed at any time between 15 June 2005 and 14 June 2006

  AND
- **EITHER** They were employed under an agreement of salaried employment with a duration of at least one year **OR** They were employed under one or more agreement(s) of salaried employment for at least one year on a continuous basis

  AND
- They were employed for a minimum of one day a week on average, or 0.2 FTE, over the period of the entire year

  AND
- Their employment functions include research and/or degree-level teaching

  AND
- Their contribution to research and/or degree-level teaching meets the requirements of the substantiveness test

  AND
- If their principal place of research or degree-level teaching is overseas, they must fulfil the staff-participation criteria for overseas-based staff members set out on page 33

  AND
- If they are sub-contracted to a TEO by a non-TEO, they must fulfil the staff-participation criteria for non-TEO staff members set out on page 34.

Note: To be PBRF-eligible, a staff member must be employed by a participating TEO **on** 14 June 2006. The PBRF Census will be used to identify staff members who are employed concurrently by more than one TEO, and those who have transferred between participating TEOs during the period from 15 June 2005 to 14 June 2006.

For further information on the PBRF Census, see Eligibility and the PBRF Census on page 35.

Degree-level teaching

Degree-level teaching contributes to courses that lead to degrees or related qualifications. Degrees or related qualifications include Bachelors, Graduate Certificates, Graduate Diplomas, Postgraduate Certificates, Postgraduate Diplomas, Bachelors with Honours, Masters and Doctoral degrees, and Diplomas of Teaching that lead to registration as a teacher. Degree-level courses include those at Level 4 or above on the NZQA framework that predominantly contribute to degrees or related qualifications.

Employment agreement requirements

There are requirements relating to the employment agreements of PBRF-eligible staff members:

- The staff member must have an employment agreement with a participating TEO
- The duration of one year or more specified in the employment agreement does not need to have been served at the PBRF Census date.

Note: Different requirements apply to staff members sub-contracted to a TEO by a non-TEO.

Employment on a continuous basis

Employment on a continuous basis implies that the staff member had no gaps in their service except for:

- Days the organisation is closed
- Days when the staff member is on leave taken within the terms of their employment agreement (s)
- A gap of up to, but not exceeding, one month between employment agreements.

Employment functions

Employment functions are the tasks, goals and accountabilities that a staff member is required to undertake at the PBRF Census date. These may be contained in a job description, role profile, performance agreement, sub-contract, or agreement of annual goals and accountabilities.

FTE status

The full-time-equivalent (FTE) status for part-time staff is the percentage (to two decimal places) of full-time employment, ie actual salary paid divided by the salary that would be paid if the position were full-time.

This is the same definition as the one that will be used in the Ministry of Education's 2006 PBRF Census requirements.

Substantiveness Test

Substantiveness test

In applying the criteria for staff eligibility in the 2006 Quality Evaluation, there is a need to be clear about whether or not certain staff members are making a sufficiently substantive contribution to degree-level teaching and/or research to warrant their inclusion.

This is particularly the case with respect to administrative staff, teaching-support staff and research-support staff. The substantiveness test, as set out below, is designed to clarify which staff members are PBRF-eligible.

To meet the requirements of the substantiveness test, staff members must:

EITHER fulfil a 'major role' in the teaching and assessment of at least one degree-level course or equivalent

OR undertake the design or conduct of research activity and/or the preparation of research outputs (eg as a co-author/co-producer), and thus be likely to be named as an author (or co-author) of research outputs.

Note: Any research considered under this test must conform to the PBRF Definition of Research. Also **note** the exclusion that applies if the staff member is supervised (see "Supervised exclusions" below).

Meaning of 'major role'

A 'major role' means a contribution of at least 25% of one degree-level course and/or 10 hours of class contact with degree-level students and/or supervision (or co-supervision) of one or more research students.

Supervised exclusions

Staff members are not PBRF-eligible if they are working under the strict supervision of another staff member while teaching (eg working only with small groups of students in tutorial sessions or marking papers to strict criteria), **unless** they meet the substantiveness test for research. Examples of ineligible staff members may include tutors, teaching fellows, assistant lecturers, technicians, laboratory demonstrators, research assistants, and assistant research fellows.

'Strengthened' Substantiveness Test

Strengthened substantiveness test

The 'strengthened' substantiveness test applies to the following groups of staff members:

- Those whose principal place of research or degree-level teaching is overseas
- Those who are sub-contracted to a TEO by a non-TEO.

To meet the requirements of the 'strengthened' substantiveness test, staff members must:

BOTH fulfil a major role in the teaching and assessment of at least one degree-level course or equivalent

AND undertake the design or conduct of research activity and/or the preparation of research outputs (eg as a co-author/co-producer), and thus be likely to be named as an author (or co-author) of research outputs.

Note: Any research considered under this test must conform to the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20 of these Guidelines). Also **note** the exclusion that applies if the staff member is supervised (see "Supervised exclusions" above).

Staff-Participation Criteria – Overseas-Based Staff

Staff-participation criteria: overseas-based staff members

This subset of the staff-participation criteria is used to determine whether staff members whose 'principal' place of research or degree-level teaching is overseas are PBRF-eligible. Please **note** that these staff members are required to be included in the PBRF Census.

To be PBRF-eligible, staff members who are overseas-based must fulfil **all** of the criteria set out below. Staff are PBRF-eligible if:

- They were employed by a TEO at any time between 15 June 2005 and 14 June 2006

  AND
- **EITHER** They were employed under an agreement of salaried employment with a duration of at least one year **OR** They were employed under one or more agreement(s) of salaried employment for at least one year on a continuous basis

  AND
- They were employed in New Zealand for a minimum of one day a week on average, or 0.2 FTE over the period of the entire year

  AND
- They were continuously employed for a minimum of one day a week on average, or 0.2 FTE on average, over the period of 5 years preceding the PBRF Census date (ie between 15 June 2001 and 14 June 2006)

  AND
- Their employment functions include both research and teaching

  AND
- They meet the requirements of the 'strengthened' substantiveness test.

Note: To be PBRF-eligible, a staff member must be employed by a participating TEO **on** 14 June 2006. The PBRF Census will be used to identify staff members who are employed concurrently by more than one TEO, and those who have transferred between participating TEOs during the period from 15 June 2005 to 14 June 2006.

Meaning of 'principal' place

The meaning of 'principal' in this context means over a reasonable period of time (ie more than a year), and 0.5 FTE or more employment overseas.

Staff-Participation Criteria – Non-TEO Staff

Staff-participation criteria: non-TEO staff members

This subset of the staff-participation criteria is used to determine whether staff members who are sub-contracted to a TEO by a non-TEO are PBRF-eligible. Please **note** that these staff members are required to be included in the PBRF Census.

To be PBRF-eligible, staff members who are sub-contracted to a TEO by a non-TEO must fulfil **all** of the criteria set out below. Staff are PBRF-eligible if:

- They were sub-contracted to a TEO by a non-TEO at any time between 15 June 2005 and 14 June 2006

  AND

- **EITHER** They were employed under a sub-contract with a duration of at least one year **OR** They were employed under one or more sub-contracts for at least one year on a continuous basis

  AND

- They were employed for a minimum of one day a week on average, or 0.2 FTE over the period of the entire year

  AND

- They were continuously employed for a minimum of one day a week on average, or 0.2 FTE on average, over the period of 5 years preceding the PBRF Census date (ie between 15 June 2001 and 14 June 2006)

  AND

- Their employment functions include both research and teaching

  AND

- They meet the requirements of the 'strengthened' substantiveness test.

Note: To be PBRF-eligible, a staff member must be employed or sub-contracted to a participating TEO **on** 14 June 2006. The PBRF Census will be used to identify staff members who are employed or sub-contracted concurrently by more than one TEO, and those who have transferred between participating TEOs during the period from 15 June 2005 to 14 June 2006.

New and Emerging Researchers

New and emerging researchers: how PBRF-eligible staff members are identified

Once TEOs have established who is PBRF-eligible, they must then assess who within that group is eligible to be considered for the 'new and emerging' researcher Quality Categories ("C(NE)" or "R(NE)"). The criteria to be applied are as follows:

- The staff member meets the requirements of the staff-participation criteria

  AND

- **EITHER** They were first appointed to a PBRF-eligible or equivalent position (whether in New Zealand or overseas, and whether in a TEO or non-TEO) on or after 1 January 2000 **OR** Their conditions of employment changed on or after 1 January 2000 to include a requirement to undertake research or degree-level teaching (ie for the first time in their career).

PBRF-eligible or equivalent position

A PBRF-eligible position would include a first appointment as, for example, assistant lecturer or lecturer or a postdoctoral fellow, but would not include a short-term position or positions (ie of less than 12 months) as, for instance, a research assistant or tutor.

An equivalent position might also include appointment to a role at a non-TEO with employment functions that include research, eg a Crown Research Institute.

Further information

The assessment criteria for new and emerging researchers, and the Quality Categories available to them, are set out in Chapter 3 Section B: Assessing New and Emerging Researchers on page 151.

Eligibility and the PBRF Census

PBRF Census: how PBRF-eligible staff members are identified

TEOs participating in the PBRF will be required to undertake a detailed Census of their staff members. The criteria used to determine which staff members should be included in this PBRF Census are as follows:

- The staff member meets the staff-participation criteria

  AND

- They were employed by the TEO at any time between 15 June 2005 and 14 June 2006.

The PBRF Census will be used to identify staff members who are employed concurrently by more than one TEO, and those who have transferred between participating TEOs. The PBRF Census will also be used to collect information relevant to the assessment of 'new' and 'emerging' researchers.

The PBRF Census is run by the Ministry of Education, which has issued (jointly with the TEC) the *PBRF SDR Guide Staff Return Manual*.

PBRF Census date

The PBRF Census date for the 2006 Quality Evaluation round is 14 June 2006.

Treatment of merged entities

TEOs will be required to report, as part of the PBRF Census, the staff members employed by the constituent entities at the date of merger.

Importance of PBRF Census data

Census data on all staff members who meet the participation criteria, regardless of individual Final Quality Categories, are used to calculate quality scores – for TEOs, panels, subject areas, and nominated academic units.

Eligibility of Staff on Leave

Staff on short-term leave

A staff member will be eligible for inclusion in the PBRF if, on the PBRF Census date, they are on any of the following types of leave:

- Annual leave
- Sick leave
- Bereavement or tangihanga leave
- Paid parental leave
- Other forms of paid short-term leave.

Staff on long-term leave

Staff who are on long-term leave on the PBRF Census date will be considered PBRF-eligible if:

- Their employment agreement requires them to return to their normal duties within one year from the start of their period of absence

  AND
- The staff recruited specifically to cover their duties in the organisation are not evaluated through the PBRF.

Long-term leave in the context of the PBRF means:

- Unpaid leave of absence
- Secondment
- Unpaid parental leave
- Study, research or sabbatical leave.

Eligibility of Transferring Staff

Basis of eligibility

Staff members who transfer between participating TEOs during the 12 months prior to the PBRF Census date will be counted by both their former and current organisations.

Basis of calculation

Transferring staff members are counted according to the relevant proportion of their contribution on a FTE basis for each TEO.

Note: Only one EP is submitted for that staff member.

Details of calculation

The following table indicates the FTE proportion applying to staff members leaving or arriving at a TEO in the 12 months before the PBRF Census date.

Month	Staff leaving in this month count for:	Staff arriving in this month count for:
July 2005	0.08 FTE	0.92 FTE
August 2005	0.17 FTE	0.83 FTE
September 2005	0.25 FTE	0.75 FTE
October 2005	0.33 FTE	0.67 FTE
November 2005	0.42 FTE	0.58 FTE
December 2005	0.50 FTE	0.50 FTE
January 2006	0.58 FTE	0.42 FTE
February 2006	0.67 FTE	0.33 FTE
March 2006	0.75 FTE	0.25 FTE
April 2006	0.83 FTE	0.17 FTE
May 2006	0.92 FTE	0.08 FTE
June 2006	1.00 FTE	0.00 FTE

Working example

For example, if a full-time staff member left Organisation A on 27 May 2006 to go to Organisation B, the staff member would count for 0.92 FTE (11/12 FTE rounded to two decimal places) in Organisation A and 0.08 FTE (1/12 FTE rounded to two decimal places) in Organisation B.

Transfer from non-participating TEO

Staff members who transfer to a TEO from an organisation that is not a participating TEO do not need to have their time apportioned.

Transfer to a non-participating TEO

Staff members who were employed by a participating TEO in the 12 months preceding the PBRF Census date but on that date are employed by a non-participating TEO are ineligible to participate in the PBRF.

Transfer between TEOs with a break in service

Staff members who have a break in service between positions will have their time apportioned according to the month in which they leave one organisation and commence in the other (ie they will count for less than 1.0 FTE).

Eligibility of Staff Concurrently Employed by Two or More TEOs

Submission by all employing TEOs

If a staff member is employed by two or more participating TEOs, then they may be included in the PBRF Census return for each of those TEOs – provided that all other eligibility criteria are met.

For example, a staff member who is employed by two participating TEOs and who is PBRF-eligible in each may be counted by both.

However, a staff member employed by two TEOs who is PBRF-eligible in only one of them may only be counted by the one for which they are PBRF-eligible.

Basis of calculation	Where two or more participating TEOs employ a staff member, then the proportion counted by each is to be calculated on a FTE basis – provided that proportion is higher than the 0.2 FTE threshold.
Which TEO submits the EP?	Staff members should submit their EP through the organisation where they spend the highest proportion of their time. If they spend the same time in two or more organisations, the staff member should choose the organisation through which they submit their EP.
Working example	For example, if on the PBRF Census date a staff member is employed by Organisation A for 0.4 FTE and by Organisation B for 0.2 FTE and for Organisation C for 0.1 FTE, then the staff member would count for 0.4 FTE in Organisation A and 0.2 FTE for Organisation B. The staff member would not count for Organisation C since they do not meet the 0.2 FTE threshold.

Eligibility of Staff who Change their Employment Status During the Year

Basis of calculation	Staff who change their employment status from full- to part-time or vice versa during the year should be treated in a similar manner to those who transfer between TEOs. An average FTE for the 12 months prior to 14 June 2006 should be calculated.
Working example	For example, if a staff member changes from full-time employment on 31 November 2005 to take on a 0.5 FTE role, then they would count as follows: 1.0 FTE x 5/12 + 0.5 FTE x 7/12 = 0.71 FTE
If employment ceases prior to Census date	Staff who are not employed in a TEO on the PBRF Census date (even if they have been employed in the 12 months prior to that date) will not count unless they are employed by another participating TEO.

Who Should Prepare and Submit an Evidence Portfolio?

The 2006 Quality Evaluation will be a 'partial' round

The preparation and submission of EPs will not be required for most PBRF-eligible staff members. Some groups of staff members will, however, still be required to submit an evidence portfolio (EP).

Preparation of an EP will be compulsory for the following:

- PBRF-eligible staff members who were not assessed in the 2003 Quality Evaluation
- PBRF-eligible staff members who wish to be reported under a different subject area that carries a higher cost-weighting than the one under which they were assessed for the 2003 Quality Evaluation

Preparation of an updated EP will not be required by the TEC for other staff members.

It is likely, however, that those staff members who believe that they might achieve a better Quality Category than they did in 2003 will prepare new EPs – as will those who meet the criteria for new and emerging researchers (see Chapter 3 Section B: Assessing New and Emerging Researchers on page 151).

Who should submit an EP to the TEC?

The TEO should nominate to Category "R" or "R(NE)" any staff members who are PBRF-eligible but who do not meet the requirements for a funded Quality Category. TEOs will be required to submit a full list of these people to the TEC.

The TEO will need to submit to the TEC only those EPs of staff members that are assessed by the TEO as likely to meet the standards required for the assignment of a funded Quality Category. EPs do not need to be submitted for staff members in Category "R" or "R(NE)".

Examples of the 'partial' round in operation

Example 1: Staff member G completed an EP in 2003, and this was nominated an "R" Quality Category by G's TEO. In 2006, a revised EP is not *required* for G. If a revised EP is not prepared, the "R" Quality Category assigned in 2003 will be confirmed and included in the results of the 2006 Quality Evaluation.

If a revised EP is prepared, however, and if G's TEO assesses it as meeting the requirements for a funded Quality Category, then the TEO will submit it to the TEC for panel assessment. But if G's TEO assesses the EP as not meeting the requirements for a funded Quality Category (ie it is assessed as an "R" or "R(NE)"), G's TEO will inform the TEC of this and will not forward the EP for panel assessment.

Example 2: Staff member H completed an EP in 2003, and this was nominated a "B" Quality Category by H's TEO. The EP was submitted to the TEC and received a Final Quality Category of "C". In 2006, a revised EP is not *required* for H. If a revised EP is not prepared, the "C" Quality Category assigned in 2003 will be confirmed and included in the results of the 2006 Quality Evaluation. If H has good grounds for expecting a better Quality Category in 2006, however, a revised EP may be prepared for submission to the TEC.

Example 3: Staff member K was not assessed in 2003 but is PBRF-eligible in 2006. K will be required to prepare an EP for assessment purposes in 2006. This EP will be submitted to the TEC if it appears to meet the requirements for a funded Quality Category.

Example 4: Staff member O's EP was assessed by the Business and Economics Panel in 2003 in the Economics subject area and was assigned a Final Quality Category of "B". In 2006 O wants to be reported under the subject area of Public Health (which is funded at 2.5 times the rate of Economics). O will be required to revise/update their EP and have it submitted by their TEO for assessment by a peer review panel. Please **note** that the TEC will have the right in 2006 (as in 2003) to decide which panel assesses each EP, so O may end up having their revised/updated EP assessed by the Business and Economics Panel.

Section C: Guidelines for Completing the Research Output (RO) Component

Introduction

This section of the Guidelines provides procedures and guidance for completing the research output (RO) component of an EP.

It is intended to help those who are responsible for completing an EP (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

Note: This section should be read in conjunction with this chapter Section H: Panel-Specific Guidelines for Completing an EP on page 72.

This section contains the following topics …… on these pages:

Further information

Anyone completing an EP should also read Chapter 3 Quality Evaluation: Assessing, Scoring and Assigning a Quality Category to EPs, which begins on page 139 – and especially Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which begins on page 159.

General Guidelines for the RO Component

Importance

The RO is the most important of the three assessment components of an EP (see "Three components" on page 27). This component measures the quality of research through focusing on an assessment of research outputs.

Definition of research output

For a research output to be eligible for inclusion in an EP, it must be:

- An output of research as defined for the purposes of the PBRF – see Chapter 1 Section D: What Counts as Research? on page 20 of these Guidelines

  AND

- Produced (ie published, publicly disseminated, presented, performed or exhibited) within the assessment period (1 January 2000 – 31 December 2005) – see The Meaning of the Assessment Period on page 44 of these Guidelines

  AND

- Able to be made available to, and assessable by, a peer review panel.

The only exception to the public dissemination of research outputs during the assessment period is for confidential research outputs (see Confidential Research Outputs on page 44 of these Guidelines).

Nominated research putputs (NROs)

Each EP contains **up to** four nominated research outputs (NROs). An NRO is an output nominated by the PBRF-eligible staff member as one of their best research outputs.

Judgement on merit

Research outputs will be assessed primarily on their quality:

- All research activity, whether basic, fundamental, strategic, artistic or applied, will be assessed against the same broad indicators of quality.
- All types of research outputs will be considered on their merits. No particular research output will be considered to be of higher quality than any other simply because of their type.
- Although formal processes of academic peer review or other forms of quality assurance may provide the peer review panel with some assurance about quality, the absence of such review or other formal mechanisms of quality assurance will not in itself be taken to imply lower quality.

Number of research outputs to be included

Staff members should select their best research outputs produced during the assessment period for inclusion as their **up to** four NROs. (See also Where NROs are Fewer than Four on page 51.)

Up to 30 'other' research outputs that meet the criteria for inclusion can also be included in the EP.

The **up to** four NROs and **up to** 30 'other' research outputs give a maximum of 34 research outputs for each EP. Where a staff member has produced more than 34 research outputs during the assessment period, they should select their better outputs for inclusion in the EP.

Quality-assured and non-quality-assured outputs

Both quality-assured and non-quality-assured research outputs may be included as NROs or as 'other' research outputs. See Quality-Assured and Non-Quality-Assured Research Outputs on page 47 for further discussion on the meaning of 'quality-assured'.

Outputs with similar content

Some research outputs contain much material of a broadly similar, if not identical, nature to others. For example:

- A journal article may be a slightly revised version of an earlier refereed (or non-refereed) conference paper
- A book may draw heavily on material previously published by the author(s) in articles, chapters of other books or a thesis
- Exactly the same output may be published separately in two or more languages.

When selecting their NROs, staff members should **not** include outputs that are identical, or virtually identical, in nature and content. However, they **may** include such outputs in their list of 'other' research outputs, although the general criterion of selecting their best work still applies.

Access by panel to research outputs

All of the NROs cited in an EP must be available to a panel on request. Where the panel requests a copy of the NRO and the actual presentation of the NRO is unduly difficult or impossible – eg where the research output is a large piece of art held in private ownership – alternative evidence of the output (eg a photograph) should be presented instead.

Further guidance is provided to TEOs in Chapter 8 on the forms in which NROs should be supplied to the TEC (see The Form of Evidence Required for Requested Research Outputs on page 230).

Types of Research Output

Research outputs to be classified under their type

Research outputs include:

- Published academic work (such as books, journal articles, conference proceedings, and masters or doctoral theses)
- Work presented in non-print media (such as films, videos and recordings)
- Other types of outputs (such as intellectual property, materials, products, performances and exhibitions).

Research outputs are classified according to a number of defined types, as listed immediately below. Each research output included in an EP must be classified under one of these types.

List of research output types

Research outputs may be one of the following types:

- Artefact/Object/Craftwork
- Authored Book
- Awarded Doctoral Thesis
- Awarded Research Masters Thesis
- Chapter in Book
- Commissioned Report for External Body
- Composition
- Conference Contribution
  - abstract
  - full conference paper
  - conference paper in published proceedings
  - poster presentation
  - oral presentation
  - other
- Confidential Report for External Body
- Discussion Paper
- Design Output
- Edited Book
- Exhibition
- Film/Video
- Intellectual Property (eg patent, trademark)
- Journal Article
- Monograph
- Oral Presentation
- Performance
- Scholarly Edition
- Software
- Technical Report
- Working Paper
- Other Form of Assessable Output (including but not limited to new materials, structures, devices, images, products, buildings, food products and processes, internet publication, published geological and/or geomorphological maps, and explanatory texts).

Selecting the research output type

The staff member should select the research output type that best matches each one of their (up to) 34 outputs. Where the research output has been reproduced in another medium (eg performance that has been recorded, an exhibit has been filmed), the staff member should classify the research output in terms of its original form.

For example, a performance may be recorded on a video but the research output type would be Performance (and not Video). Similarly, where a journal article listed as a research output is published on the internet, the appropriate research output type would be Journal Article, rather than Other Form of Assessable Output (ie internet publication).

Confidential Research Outputs

Introduction

Some research outputs may be confidential for a variety of reasons. This topic provides guidance on how such research is to be handled.

Inclusion of confidential research outputs

Confidential research outputs (ie outputs not in the public domain) may be listed in an EP if the employing TEO can arrange all necessary permissions and make any other arrangements for members of peer review panels to access those research outputs if required.

If confidential outputs are included in the list of 'other' research outputs, they will not be called for examination by the panel – but sufficient information has to be provided in the EP to enable the TEC to independently verify the existence of each output (which may include sighting the report).

It will not be adequate, for example, to include a confidential research output with a title of 'confidential report' and/or with no location details. The onus is on the staff member to provide an EP that can be assessed and verified, including any confidential NROs in the EP.

Examples of confidential research outputs

Confidential research outputs may include, but are not limited to:

- Commercially sensitive research reports
- Research and evaluations for government agencies that have not been released to the public
- Research for iwi, hapu or whanau that includes material relating to confidential and culturally significant knowledge.

Research output type

Confidential outputs must be listed in the EP under the research output type Confidential Report for External Body.

The Meaning of the Assessment Period

Policy

A research output **cannot** be included in the Research Output field of an EP (either as an NRO or as an 'other' research output) unless it was produced (ie published, publicly disseminated, presented, performed or exhibited) during the assessment period (ie 1 January 2000 – 31 December 2005).

This means that research outputs produced prior to 1 January 2000 or after 31 December 2005 cannot be included for the 2006 Quality Evaluation round.

Eligibility for inclusion

The basic principle governing the inclusion or exclusion of a research output concerns the date when it was produced, and thus became readily available in the public domain.

To be eligible for inclusion, a confidential research output must have been completed and made available to those who commissioned the research within the assessment period.

Date of imprint outside the assessment period

For written publications (such as books, journal articles and conference proceedings), the date of production will generally be that indicated by its date of imprint.

However, where the date of imprint differs from the date of actual publication and the imprint date falls outside the assessment period but the actual publication date was inside the period (eg in the case of journal volumes relating to a particular year in a sequence but actually published in a different year), staff members should explain this variance for the relevant output in the Other Relevant Location Details field of the EP. Please **note** that such an explanation is required only for NROs. It is not required for any of the 'other' research outputs.

Where the actual publication date differs from the date of imprint, TEOs may be asked to provide evidence of the actual date of publication for audit purposes.

Quality-assurance process not sufficient for eligibility

Where a research output has successfully completed the relevant quality-assurance processes but has not been produced (published, publicly disseminated, presented, performed, or exhibited) within the assessment period, it is **not** eligible for inclusion in the EP. (For the definition of quality assurance, see Quality-Assured and Non-Quality-Assured Research Outputs on page 47.)

For example, where the manuscript of a book successfully completed a quality-assurance process by 31 December 2005 but the book itself was not published before that date, it is not eligible as either a quality-assured research output or a non-quality-assured research output.

By contrast, a paper that has successfully completed the relevant quality-assurance processes and was published prior to 31 December 2005 (or appeared in a publication with an imprint date within the assessment period) may be included as a quality-assured research output.

Employer during assessment period

Staff members may include any research output produced during the assessment period regardless of where they were employed during the period in question.

Reprints

A book originally published prior to 1 January 2000 but reprinted during the assessment period is not eligible for inclusion. However, a second (or subsequent) edition of a book originally published prior to 1 January 2000 will be eligible if the new edition includes significant new research material. Please **note** that repeated reprints and new editions of a book may be evidence of research-related peer esteem, and thus a matter worth mentioning under the Peer Esteem (PE) component.

The Meaning of the Assessment Period continues …

Example 1

A staff member prepared a paper (which meets the PBRF Definition of Research) in December 2005 for a conference held early in 2006.

Such a paper is **not** eligible for inclusion as a research output unless the staff member can provide reliable evidence that it was in fact produced within the assessment period (ie completed in its final form and publicly disseminated and thus was readily available within the public domain).

A draft of such a paper or a related discussion paper that was distributed to just one or two colleagues for comment prior to 31 December 2005 is **not** eligible for inclusion as a research output.

Example 2

A research output was completed but not published, publicly disseminated, presented, performed, or exhibited during the assessment period.

Such an output is **not** eligible for inclusion as a research output.

Example 3

A research output has an imprint date of 2006 but was publicly disseminated (ie produced) and available in 2005.

Such an output **is** eligible for inclusion as a research output.

For example, an article is published on the website of a journal during the assessment period and then published in hard copy in that journal after the assessment period. Such an article **is** eligible as a research output.

Note: For NROs, staff members should explain this variance for the relevant NRO in the Other Relevant Location Details field of the EP.

Example 4

A research output is completed and produced in 2000 but has an imprint date of 1999.

Such an output **is** eligible for inclusion as a research output.

Example 5

An exhibition has a finishing date of 1 January 2000, or a starting date of 31 December 2005.

Such an exhibition **is** eligible for inclusion as a research output.

Quality-Assured and Non-Quality-Assured Research Outputs

Quality-assured research outputs defined

A **quality-assured research output** is defined as any research output that, prior to its publication (public dissemination, presentation, performance, or exhibition), has successfully completed a formal quality-assurance process.

Successful completion of a formal quality-assurance process means the output must have been subject to formal, independent scrutiny by those with the necessary expertise and/or skills to assess its quality (including, where relevant, its rigour, logic, clarity, originality, intellectual significance, impact, applications, artistic merit, etc).

Each research output that is included in an EP must be classified as quality-assured or non-quality-assured. Staff members should use the definition above to guide them in classifying each of their research outputs included in the EP.

Formal quality-assurance processes

Formal quality-assurance processes vary between different disciplinary areas. They include, but are not limited to:

- Blind peer-review or refereeing processes undertaken by journals and book publishers
- Other review processes employed by editors, editorial committees or publishers
- The refereeing of conference papers
- Review processes undertaken by major galleries, museums and broadcasters
- Review processes employed by users of commissioned or funded research.

Quality-assured v. reviewed

Quality-assurance processes are different from review processes as used in the PE component. A research output may have been reviewed in the public arena **after** its publication or public dissemination. Such reviews do **not** meet the definition of a quality-assured research output. These reviews, however, may be included in the EP under the PE component.

Non-quality-assured research outputs

A non-quality-assured research output is one that:

- Has not been subject to a quality-assurance process

  OR
- Is currently in the process of being quality-assured

  OR
- Has been unsuccessful in completing a formal quality-assurance process (ie it has been peer-reviewed and rejected, possibly two or more times).

A non-quality-assured output that has been included as an NRO is more likely to be requested for scrutiny by the panel than a quality-assured NRO is.

Absence of quality assurance

Where a research output has been produced (ie published, publicly disseminated, presented, performed, or exhibited) in the assessment period but has not been subject to a quality-assurance process in that period, then it is eligible for inclusion as a non-quality-assured research output. It must not be included as a quality-assured research output.

For example, a working paper or non-refereed conference paper produced in 2004 may be included as a non-quality-assured research output.

Production in the assessment period necessary

As long as the non-quality-assured research output has been produced (ie published, publicly disseminated, presented, performed, or exhibited) within the assessment period, it will be eligible for inclusion in the EP.

Research Output Information Required for the EP

Information required

The tables below show the information required about research outputs included in an EP. All outputs included in an EP must meet the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20 of these Guidelines).

Nominated Research Outputs (NROs)

Requirements for NROs are as follows:

- NROs must be the (up to) four best research outputs produced during the assessment period
- NROs may relate to one or a number of different research activities/projects – staff members may nominate research outputs that relate to different aspects and/or development of the research activity
- NROs must be available to the panel **on request.**

Note: Staff members will not be penalised for including fewer than four NROs, but if there are fewer than four NROs in an EP there should not be any 'other' research outputs included. Also **note** that if the reason for having fewer than four NROs falls within the criteria for Special Circumstances, the staff member will need to provide an explanation for this in the Special Circumstances field of the EP (see "Criteria for claiming special circumstances" on page 62 of these Guidelines).

NROs: information required in EP fields

There is additional information required in the EP for each of the NROs.

This is set out in the following table:

Field	Information Required
Research Output Type	Selected from approved list of types.
Quality-assured	Ticked only if the research output has been through a process that meets the definition of 'quality-assured' for the PBRF (see Quality-Assured and Non-Quality-Assured Research Outputs on page 47 of these Guidelines).
Title	The title of the research output as it appears on the output.

Authors	Listed in the order and as they appear on the output, up to a maximum of four. Where there are more than four authors, the number of other authors should be recorded.
Year Available	The year that the output was produced (2000 – 2005 inclusive).
Location 1 (who/what)	To identify who or which entity produced the output.
Location 2 (where)	To identify where or how the output can be found.
Location 3 (when)	To identify when the output was produced (eg volume and issue numbers, for a journal).
Pagination (size)	Size of the output (eg number of pages, page numbers, number of exhibits, duration of a performance).
My Contribution	Where the research output has more than one author, provide details on the staff member's overall contribution to the output including the nature of that contribution.
Other Relevant Location Details	To briefly describe the output where 'other form of assessable output' type has been selected To provide additional location details if required To explain the variance between the date of actual publication and the date appearing on the publication To indicate the author's name if this is different to that on the output (eg married name).
Comments Relevant to this Output	Why the output has been selected as one of the best four produced during the assessment period A comprehensive description of the nature and significance of the output How the output embodies research, as defined in the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20 of these Guidelines) For quality-assured outputs, the nature of the quality-assurance process (where this may not be standard within the discipline for this type of output) A description of the research content, where this is not evident from the output itself (eg where a textbook has been included) Any other information specific to the research output type.

'Other' research outputs

Requirements for the 'other' research outputs are as follows:

- There may be up to 30 'other' research outputs, all produced during the assessment period
- Where a staff member has more than 30 'other' research outputs that are eligible for inclusion, the best 30 should be selected
- Where a staff member has fewer than 30 other outputs that are eligible for inclusion, they should include them all – this will provide the panel with a complete picture of the staff member's research output during the assessment period
- Where a staff member has fewer than four NROs, there should be no 'other' research outputs included
- 'Other' research outputs will not need to be supplied to peer review panels, but they will be subject to the TEC's data checking and verification processes.

'Other' research outputs: information required in EP fields

There is additional information required in the EP for each of the (up to) 30 'other' research outputs.

This is set out in the following table.

Field	Information Required
Research output type	Selected from a drop-down list in the EP.
Quality-assured	Ticked only if the research output has been through a process that meets the definition of 'quality-assured' for the PBRF (see Quality-Assured and Non-Quality-Assured Research Outputs on page 47 of these Guidelines).
Description	Entered in a recognised bibliographic format. This must include the title or name of the output, author, and sufficient location details to enable the TEC to independently verify its production (eg publication, publisher, publication year, and place of publication or equivalent details.)
Other Comments	Any relevant information on the nature, quantity, and quality of research outputs that demonstrates research quality during the assessment period.

Where NROs are Fewer than Four

Fewer than four nominated outputs

Staff members may include fewer than four NROs provided that:

- The EP contains at least one NRO (this is a minimum requirement before an EP can be submitted to the TEC)
- The reason for there being fewer than four is given in the Other Comments or Special Circumstances field of the EP. Comments should only be included in the Special Circumstances field where the staff member meets the criteria for special circumstances (see this chapter Section F: Dealing with Special Circumstances on page 61).

Where a panel concludes there is insufficient reason for fewer than four NROs, this may be reflected in the Final Quality Category assigned to the EP.

Factors influencing quantity

The number of research outputs that a full-time staff member can produce may be influenced by a variety of factors such as:

- Special circumstances
- The subject area or sub-area
- The type of research outputs produced
- The extent to which outputs are sole or multi-authored
- The career stage of the staff member
- Whether the staff member has been research active over the entire assessment period.

Outputs involving Joint Research

Can be included in EP

A research output arising from research to which two or more researchers have contributed can be included as a research output in an EP.

What is joint research?

Joint research is research resulting from the joint efforts of two or more researchers.

Two types

Within the context of the PBRF, there are two types of joint research depending on the nature of the research output involved. These are:

- Co-authorship
- Co-production.

Each of these is defined below.

Co-authorship

Co-authorship describes a situation in which a research output has more than one author.

The term ‘co-authorship’ applies to written outputs such as journal articles, books and conference papers.

Co-production

Co-production describes a situation where more than one person produces a research output.

The term 'co-production' applies generally to outputs that reflect creative and artistic works (such as a performance, composition, design, exhibition, film, buildings, etc).

General principles applying to joint research

The principles guiding the PBRF approach to joint research are:

- The PBRF Quality Evaluation process assesses the work of individual academics, regardless of whether or not they are the sole authors/producers.
- Only those joint research outputs for which there is assigned authorship (or equivalent) will be considered in the Quality Evaluation process.
- Joint research outputs will not be counted pro-rata (ie five authors will not be taken to imply that each person has contributed 20%).
- Similarly, the contribution to a joint research output will **not** be assessed on the basis of the order in which co-authors or co-producers are listed. Order may be an indication of the importance of a contribution, but this is not necessarily the case.
- Panels will assess joint research on a qualitative basis. To enable this, the staff member should include information on their contribution (relative to other co-authors or equivalent) in the My Contribution field for any of their NROs that have been co-authored.
- The PBRF is not concerned with where the other co-authors/producers are based. It is solely concerned with the quality of the output and the relative contribution of the staff member.

Inclusion in more than one EP

Two or more co-authors or co-producers of a research output can submit the same research output in their own EP. The quality of the research output is evaluated in each case on the basis of each co-author's or co-producer's stated contribution.

Co-authors or co-producers do not need to be aware of one another's submissions of the same research output.

Basis of judging contribution to joint research

The Quality Evaluation process will judge a staff member's contribution to a research output based on information about co-authorship or co-production entered in the My Contribution field in the EP.

Relevance to NROs

In nominating their NROs, staff members must be aware that only their relative contribution to co-authored or co-produced outputs will be considered. Staff members must decide the value of a co-authored or co-produced work relative to a sole-authored/produced work, when deciding on their NROs.

Panels will recognise that in some disciplines co-authorship (or its equivalent) is the norm.

Details of co-authorship/ co-production

The details of co-authorship/co-production required are:

- The names of the first four authors or producers as listed in the research output

  AND

- A record of the number of other authors, where there are more than four co-authors or co-producers.

Information required in the My Contribution field for NROs

The following information relating to the staff member's contribution to an NRO should be entered in the My Contribution field of the EP:

- Brief comments on the significance of the staff member's contribution to the output: for example, whether they took a leadership role or contributed in a major or less significant way. Comments may include a statement about the status of co-authors (eg where a co-author is a postgraduate student).
- The nature of the contribution, where this may help support the extent of the contribution made: for example, it might be helpful to include information about whether the contribution was by way of the conceptualisation and design of the research, the field work undertaken, the production of the article/output, or the supervision of other authors.

Joint research contribution statements: examples

Here are some examples of contribution statements relating to a joint research output:

- 'Lead researcher in a multi-country study. Key input into the design of the study and application for funding assistance'
- 'Played a major, but not lead, role in the research-design and field work of the project'
- 'Had a minor role; contributed to the conceptualisation of the research, and assisted with analysis of results'.

Section D:
Guidelines for Completing the Peer Esteem (PE) Component

Introduction

This section provides guidelines for completing the Peer Esteem (PE) component of the EP.

It is intended to help those who are responsible for completing EPs (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

Note: This section should be read in conjunction with this chapter Section H: Panel-Specific Guidelines for Completing an EP on page 72.

This section contains the following topics …… on these pages:

What is Peer Esteem?

Peer esteem as indicator of quality

In the PBRF, peer esteem is used as an indicator of the quality of the staff member's research. It is concerned with the recognition of the staff member's research by their peers (rather than esteem for the staff member's other activities within the TEO, their subject area, or the academic community).

Peer-esteem indicators

Indicators of peer esteem include:

- Research-related fellowships, prizes, awards, invitations to share research knowledge at academic and end-user conferences and events.
- The staff member's ability to attract graduate students or to sponsor students into higher-level research qualifications, positions or opportunities because of their research reputation.
- Research-related citations and favourable review. In considering the former, please **note** that the number of citations is not necessarily an indication of high esteem. Some research work may be cited frequently because it is considered to be an example of poor research. Emphasis should be given to evidence of positive review and citation.
- Participation in editorial boards.

Peer Esteem Types

Nine types

Evidence of peer esteem can be included in the EP under the following peer esteem types:

- Research-related fellowships, prizes and awards
- Fellows and/or restricted or elected membership of learned societies or academies
- Participation in editorial boards and/or refereeing (eg for journals)
- Invitations to provide conference addresses or similar
- Favourable reviews and/or commendations
- Appointments to key discipline-based, research, industry, professional, community, or government bodies
- Esteem factors associated with students
- Research-related favourable citations
- Other evidence of peer esteem.

These types are discussed in more detail below

Prizes and awards

Prizes and awards include any prize or award attached to a specific research output, activity or finding. It may also include a prize or award that reflects on the overall quality and productivity of a staff member rather than one attached to a specific research output, activity or finding.

The research fellowships under this type are those associated with research institutions. The research institution may be within New Zealand or elsewhere.

Fellows/ memberships

Fellowships/memberships may be of professional or learned societies or academies, in New Zealand or elsewhere, with restricted or elected admission. The expectation is that the esteem with which the staff member's research activities is held would be a key component of the appointment to a fellowship or restricted/elected membership of the cited societies, academies or professional organisations.

Editorial/ refereeing

Editorial/refereeing includes editorship or membership of editorial panels of journals within New Zealand or elsewhere, and reviewing and/or refereeing journal submissions and book proposals.

Conference addresses

Conference addresses include invitations as a speaker to conferences/events in New Zealand or internationally. Conferences and events may be discipline-based or academic, or they may focus on a substantive area of applied knowledge.

Favourable reviews

Favourable reviews may include review articles or professional comments, letters of commendation, etc.

Appointments

Appointments may include appointment, either in New Zealand or internationally, to advisory bodies to industry or to professional, community or government bodies. They may also include appointment to research-selection and funding bodies or committees, selection to iwi boards, associations, and preparation of claims to the Waitangi Tribunal. Appointment to statutory or non-statutory boards may also be relevant.

Student factors

Student factors may include examples of the staff member's ability to attract graduate and/or overseas students or to mentor students into higher-level research qualifications, positions or opportunities.

Indicators may include students whom the staff member has been able to sponsor into doctoral scholarships or postdoctoral fellowships because of the staff member's research reputation. This may not be relevant for all subject areas.

Favourable citations

Favourable citations include descriptions and bibliographic references for citations of particular research outputs or bodies of research work that demonstrate the esteem within which the staff member's work is held by other researchers. Such citations do not need to show agreement with the research findings, but should show that the research is regarded as credible and significant.

Staff members should provide an interpretation of any citation data.

Other evidence of peer esteem

Other evidence of peer esteem may include other examples which are not included in the above types but which demonstrate esteem, recognition or acknowledgement of the staff member's research by peers and end users in the staff member's own TEO (within New Zealand and/or internationally).

Such evidence might include: an ability to attract esteemed researchers or decision makers to the staff member's TEO or New Zealand and/or host their visit; invitations to mentor; invitations to peer review; gaining competitive access to major national or international facilities and/or invitations to work in overseas institutions; acting in a quality-assurance role in relation to other research activities, processes or policies.

Where a staff member meets the criteria for a new and emerging researcher, the offer of a staff position can be included as an example of peer esteem.

Information on Peer Esteem Required in the EP

Up to 30 examples

Staff members are limited to providing 30 examples of peer esteem during the assessment period for their EP (but also see "Major prizes outside assessment period" below), classified under the types listed above. The examples do not need to fall across all the different types of peer esteem but could be concentrated in one or a few of the types.

Where a staff member has more than 30 examples of peer esteem, they should concentrate on providing the most significant examples and also those that best reflect the research-related esteem of their peers.

Extended description of example

In some instances, the information about an example of peer esteem that a staff member wishes to include in the EP may exceed the character limit of the Description field for that example. The staff member can choose to continue the information in the Description field immediately below (choosing the same peer esteem type), but this will reduce the number of individual examples that can be included in the EP to 29 (or fewer depending on the number of Description fields used to provide the information for that example).

Description of peer esteem examples

For every example of peer esteem included in the EP, the staff member should provide a description that includes the following information:

- Details of the esteem example (eg prize, award, favourable review, appointment)
- Date(s), where relevant
- Organisation(s) involved.

Major prizes outside assessment period

Staff members may include major prizes and awards from outside the assessment period where these are research related, but the panel will give primary weight to those peer esteem examples that have been gained within the assessment period.

Where the award or fellowship is ongoing (eg fellowship of learned society), these can be included in the EP even though the appointment was outside the assessment period. For example, appointment as a Fellow of the Royal Society in 1994 can be included as a peer esteem example for the 2006 Quality Evaluation if the fellowship was held during the assessment period.

New and emerging researchers

Evidence of peer esteem is **not** required for a new and emerging researcher's EP to be assigned a "C(NE)" Quality Category. However, new and emerging researchers who have completed a PhD and two quality-assured research outputs (ie are eligible for the award of the "C(NE)" Quality Category) will not be disadvantaged if they include evidence of peer esteem in their EPs. In fact, they are encouraged to complete the PE component of their EP, as this may allow the EP to be assigned a higher Quality Category. (For the criteria for new and emerging researchers see New and Emerging Researchers on page 35.)

Section E: Guidelines for Completing the Contribution to the Research Environment (CRE) Component

Introduction

This section provides guidelines for completing the Contribution to Research Environment (CRE) component of the EP.

It is intended to help those who are responsible for completing EPs (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

Note: This section should be read in conjunction with this chapter Section H: Panel-Specific Guidelines for Completing an EP on page 72.

This section contains the following topics …… on these pages:

What is Contribution to the Research Environment?

The CRE component

The CRE component is concerned with the staff member's contribution to a vital, high-quality research environment. Active research environments are a key outcome sought from the PBRF, and EPs provide an opportunity for staff members to indicate their role and contributions in this respect.

Includes but not limited to

The CRE component has a number of aspects including, but not limited to:

- Research and disciplinary leadership
- Contribution through students and emerging researchers
- Contribution to institutional vitality.

Types of Contribution to the Research Environment

Nine types

Evidence of contribution to the research environment can be included in the EP under the following types:

- Membership of research collaborations and consortia
- Contributions to the research discipline
- Facilitating discipline-based and research networks
- Contributions to the research environment within and outside the TEO
- Generation of externally funded research
- Contribution to researcher development
- Supervision of student research
- Assisting student publishing, exhibiting or performance
- Other evidence of contribution to the research environment.

	There is a particular emphasis on the contribution to and development of Māori and/or Pacific research capability. These types are discussed in more detail below.
Consortia membership	Consortia membership may include leadership or membership of research collaborations/consortia within the staff member's TEO (within New Zealand or internationally).
Research discipline	Contribution to research discipline may be within the staff member's TEO (within New Zealand or internationally).
Facilitating networks	Examples of facilitating networks include: organising and/or hosting or chairing conferences, panels, seminars, workshops, journal clubs, or similar events; developing working relationships amongst researchers within and across institutions and subject areas; developing and maintaining strong links with end users of research, including active engagement with relevant communities and stakeholders, and dissemination of research outputs.
Research environment	The research environment type includes the development of research infrastructure (facilities and otherwise) within the TEO and elsewhere in New Zealand.
External research funding	The external research funding type includes the staff member's ability to contribute to a vital research environment and demonstrate a record of quality research through the attraction of funding external to the TEO. In exceptional cases, the research may not be funded but generated from external sources. The amount of funding received is not required as this is assessed for each participating TEO under the External Research Income (ERI) measure.
Researcher development	Researcher development includes activities that contribute to the development of new researchers (such as those who have completed their degrees and are starting a research career) and to research capability.
Student supervision	Student supervision includes the supervision of masters or doctoral-level students, including assistance to Māori students and Pacific students. Indicators may include students whom the staff member has supervised.
Student assistance	Examples of contribution to student assistance include where the staff member has assisted a student under their supervision to publish, exhibit, participate in competitions (within New Zealand and overseas) or produce a research output, possibly in conjunction with academic staff.
Other evidence of contribution to the research environment	Other evidence of contribution to the research environment may include examples which are not included in the above types but which demonstrate the staff member's contribution to research vitality in their own TEO (within New Zealand and/or internationally).

Information on Contribution to the Research Environment Required in the EP

Up to 30 examples

Staff members are limited to providing 30 examples of contribution to the research environment during the assessment period for their EP (see also "Relation to assessment period" below), classified under the types listed above. The examples do not need to fall across all the different types but could be concentrated in one or a few of the types.

Where a staff member has more than 30 examples of contribution to the research environment, they should concentrate on providing the most significant examples.

Extended description of example

In some instances, the information that a staff member wishes to include in the EP about an example may exceed the character limit of the Description field for that example. The staff member can choose to continue the information in the Description field immediately below (choosing the same contribution to the research environment type), but this will reduce the number of individual examples that can be included in the EP to 29 (or fewer, depending on the number of Description fields used to provide the information for that example).

Descriptions required for examples of contribution to the research environment

For every example of contribution to the research environment included in the EP, the staff member should provide a description that includes the following information:

- Details of the activity
- Date(s), where relevant
- Organisation(s) involved
- Student numbers and the degree level (eg masters, doctoral), where relevant.

Relation to assessment period

Evidence of contribution to the research environment should relate to the assessment period.

However, a staff member may include examples of contribution to the research environment from outside the assessment period if such contributions are outstanding or of particular significance.

New and emerging researchers

Evidence of contribution to the research environment is **not** required for a new and emerging researcher's EP to be assigned a "C(NE)" Quality Category. However, new and emerging researchers who have completed a PhD and two quality-assured research outputs (ie are eligible for the award of the "C(NE)" Quality Category) will not be disadvantaged if they include evidence of contribution to the research environment in their EPs. In fact, new and emerging researchers are encouraged to complete the CRE component of their EP, as this may allow the EP to be assigned a higher Quality Category. (For the criteria for new and emerging researchers see New and Emerging Researchers on page 35.)

Section F: Dealing with Special Circumstances

Introduction

Special circumstances relate to some impairment or impediment that has affected the development of research outputs AND the staff member's PE or CRE components.

Special circumstances

Special circumstances can be claimed by a staff member and considered by the peer review panel only in relation to the **quantity** of research outputs and other aspects of research activity produced during the assessment period.

Note: Special circumstances are **NOT** relevant to the assessment of the quality of research outputs and activities.

Types of special circumstances

The types of special circumstances that are available for staff members to select are as follows:

- Limited numbers of research outputs
- Having become research active for the first time during the assessment period
- Extended leave
- Part time employment
- Significant and sustained other responsibilities
- Significant and sustained community responsibilities
- Other circumstances.

Note: Staff members may select **up to** three of these types of special circumstances.

Information required in EP fields

There is additional information required in the EP for each of the (up to) three special circumstances being claimed.

This is set out in the following table.

Field	Information Required
Special circumstances type	Selected from a drop-down list of special circumstances types.
Start date of special circumstances	The date that special circumstances began.
End date of special circumstances	The date that special circumstances ended.
Description of the magnitude or seriousness of impact	Selected from a drop-down list of magnitude types.
Description of nature of impairment	Any relevant information on the nature, extent and seriousness of the impairment and the impact of these on the research activities of the staff member.

Criteria for claiming special circumstances

A staff member can claim special circumstances only where they meet one or more of the following criteria:

- Their limited numbers of research outputs are due to:
  - a long period of preparation in advance of publication of a major work (such as a book, composition, design, product or performance)
  - confidentiality requirements that restrict the publication of further outputs based on the confidential research output
  - work of a collaborative nature that is dependent on the completion of further work by other researchers, where evidence of intensive research activity during the assessment period exists and this suggests that the research is significant in scope and impact, including producing intermediate outputs.
- They have become research active for the first time during the assessment period.
- They have been on extended leave that prevents research activity from occurring (such as sick leave, parental leave etc). Sabbatical leave that allows for a continuation of research activity should not result in lowered expectations of the quantity of research output.
- They have been employed part time for some or all of the assessment period.
- They have had significant and sustained other responsibilities during the assessment period, which has limited the quantity of research they have produced (eg staff teaching at both degree and sub-degree level).
- They have had significant and sustained community responsibilities during the assessment period (eg to iwi and Pacific communities).
- Other circumstances that are seen to be relevant, at the discretion of the panel chair.

Magnitude or seriousness of impact

Staff are invited to indicate for each particular special circumstance that they have identified the extent to which their research performance may have been impaired. There are 3 categories of impairment; 'low', 'medium' and 'high'. When determining which of the three categories best applies to any special circumstance, the staff member should consider its impact in the context of the 6-year assessment period. For example, the impact on research performance where a staff member became research active a year after the commencement of the assessment period is likely to be low. Conversely, the impact on research performance where a staff member became research active a year before the end of the assessment period is likely to be high.

This information will not supplant the detailed commentary that staff may provide with each special circumstance, but will be used to inform the moderation of the special circumstances provision.

Section G: General Guidelines for Completing an EP and Selecting a Panel and Subject Area

Introduction

This section of the Guidelines provides general guidance on completing an EP – and, in particular, on selecting a subject area and panel.

It is intended to help those who are responsible for completing EPs (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Further information

Anyone completing an EP should also read Chapter 3 Quality Evaluation: Assessing, Scoring and Assigning a Quality Category to Evidence Portfolios, which begins on page 139 – and especially Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which begins on page 159.

General Guidelines for Completing an EP

Quality not quantity

The PBRF is primarily concerned with quality. The EP should provide an overview of a staff member's outputs and contributions during the assessment period. Where a staff member has more material than can be included in the EP, they should select their best research outputs and their most significant examples of peer esteem and contribution to research environment from the assessment period. Further guidance on this is contained in the following sections.

Which field to use?

Information on some activities (eg appointment to a key body within a discipline) may indicate both peer esteem and contribution to the research environment. Please **note** that there is no 'right' field for such information. Peer review panels are instructed to take a holistic approach to assessment and to consider this kind of information in whichever field it appears.

Don't duplicate

Avoid duplication of information in the Peer Esteem and Contribution to the Research Environment fields. The panel will only consider such information once.

Use of te reo Māori

Te reo Māori may be used for any or all of the material entered in the staff member's EP.

Using online help

The EP software includes online help that explains the kind of information to be entered into each field. It also includes any rules that you may need to follow in entering that information.

Guidelines for Selecting a Peer Review Panel

TEOs will nominate a peer review panel

TEOs must nominate a subject area and a peer review panel for each EP. This nomination will either be confirmed or amended by the TEC where necessary, in consultation with panel chairs, prior to distributing EPs to panel members.

TEOs are also responsible for making sure that the EP states a 'primary field of research' for each EP. (See "Primary field of research" below.)

Note: For more information on the process used by the TEC for assigning EPs to panels, the safeguards in place in the event of panel transfers, and the process for notifying TEOs, see Chapter 3 Section C: Allocating EPs to Panel Members and Obtaining Additional Input on page 153.

Which panel to nominate?

The nominated peer review panel should be the panel that covers the discipline or subject area best representing the staff member's overall EP.

Forty-two subject areas have been identified across the panels, and staff members will be required to select the subject area for their EP that best matches their primary subject area of research. This may not always be the same as the subject area represented by the staff member's academic department.

The subject area selected for the EP will be the subject area that the quality score will be reported under on a nationally standardised basis.

Research outputs as guide

Typically, the nominated peer review panel should be the one that best matches the research outputs of an EP and, in particular, that EP's NROs.

Primary field of research

Staff members will be required to enter a 'primary field of research' in a free-text field in their EP. This is likely to be described at the level of a discipline or sub-discipline (eg educational psychology, molecular biology).

This primary field of research should reflect **both** the research field of the EP's NROs **and** the balance of the staff member's research activity during the assessment period.

This information will be used to help guide the allocation of an EP for assessment. It will not be used for reporting.

Interdisciplinary research

Interdisciplinary research is any research undertaken by a staff member, or a group of staff members, that spans two or more disciplines or subject areas. It includes any part of the EP, although typically it will be represented in the RO component.

Where the research outputs in an EP involve interdisciplinary research that is covered by more than one panel, the TEO should nominate the panel with the subject area that best matches the majority of the research outputs – in particular, the subject area that best matches the NROs selected.

Note: Only **one panel** may be nominated. However, a staff member may ask for their EP to be cross-referred to another panel that covers a subject area relevant to their research.

Further information

The following topic Peer Review Panels and Subject Areas contains information on the subject areas covered by each of the twelve panels. This should be helpful in selecting the right panel for an EP.

Peer Review Panels and Subject Areas

Panels and subject areas

The twelve panels and their subject areas are set out in the following table.

Panel	Subject Areas
Biological Sciences	Agriculture and other applied biological sciences Ecology, evolution and behaviour Molecular, cellular and whole organism biology
Business and Economics	Accounting and finance Economics Management, human resources, industrial relations, international business and other business Marketing and tourism
Creative and Performing Arts	Design Music, literary arts and other arts Theatre and dance, film and television and multimedia Visual arts and crafts
Education	Education
Engineering, Technology and Architecture	Architecture, design, planning, surveying Engineering and technology
Health	Dentistry Nursing Other health studies (including rehabilitation therapies) Pharmacy Sport and exercise science Veterinary studies and large animal science

Humanities and Law	English language and literature Foreign languages and linguistics History, history of art, classics and curatorial studies Law Philosophy Religious studies and theology
Māori Knowledge and Development	Māori knowledge and development
Mathematical and Information Sciences and Technology	Computer science, information technology, information sciences Pure and applied mathematics Statistics
Medicine and Public Health	Biomedical Clinical medicine Public health
Physical Sciences	Chemistry Earth sciences Physics
Social Sciences and Other Cultural/Social Studies	Anthropology and archaeology Communications, journalism and media studies Human geography Political science, international relations and public policy Psychology Sociology, social policy, social work, criminology and gender studies

Further information

For more detail on the panels and their subject areas, see this chapter Section H:Panel-Specific Guidelines for Completing an EP on page 72 – and especially the sub-topics "Description of panel coverage", which begin each panel topic.

Subjects that Cross Subject-Area Boundaries

Purpose of this topic

A number of research areas cannot readily be allocated to subject areas and panels – and so the purpose of this topic is to provide guidance on choosing a subject area that best fits the focus of an EP. The research activities covered in this topic are:

- Area Studies (eg Pacific studies, Asian studies, European studies)
- Audiology
- Biomedical research (including pharmacology)
- Creative writing
- Curatorial studies
- Interior design
- Industrial design and product design
- Design history
- Environmental studies
- Food science and technology
- Librarianship and information management
- Māori education
- Māori health
- Multimedia and other media studies areas
- Tourism studies.

Note: The list above is not intended to be exhaustive.

Area studies (eg Pacific studies, Asian studies, European studies)

Potential subject areas

- Depends on the underpinning research methodologies utilised in preparing research outputs.

Comment

For example, many staff members who research in area studies will be deploying social science or humanities paradigms, in which case the EP should be submitted to the Social Sciences and Other Cultural/Social Studies Panel or the Humanities and Law Panel respectively.

Audiology

Potential subject areas

- Clinical Medicine
- Other Health Studies.

Comment

Audiology generally falls within the Clinical Medicine subject area of the Medicine and Public Health Panel. In cases where the research is primarily about rehabilitation, audiology could fall within Other Health Studies and so the EP could be submitted to the Health Panel.

Biomedical research (including pharmacology)	***Potential subject areas*** ▪ Biomedical ▪ Molecular, Cellular and Whole Organism Biology. ***Comment*** The disciplines of physiology, pathology, immunology, pharmacology, biochemistry, molecular biology, genetics, genomics, cell biology, microbiology, neuroscience, developmental biology, and bioinformatics could fall within both the Biomedical subject area (Medicine and Public Health Panel) and the Molecular, Cellular and Whole Organism Biology subject area (Biological Sciences Panel). Research outputs that are being used primarily in medical science, clinical practice, public health and health interventions should be submitted to the Medicine and Public Health Panel. 'Other' research outputs in those disciplines or subject areas should be submitted to the Biological Sciences Panel.
Creative writing	***Potential subject areas*** ▪ Music, Literary Arts and Other Arts ▪ English Language and Literature. ***Comment*** Creative writing is mostly associated with English and Literature departments. However, research that primarily represents creative writing outputs would fall within the Music, Literary Arts and Other Arts subject area and so should be submitted to the Creative and Performing Arts Panel: this is because the nature of assessment is likely to be closer to other creative and performing arts. Where the research is more closely aligned with humanities research it would fall within the English Language and Literature subject area and so the EP should be submitted to the Humanities and Law Panel.
Curatorial studies	***Potential subject areas*** ▪ History, History of Art, Classics and Curatorial Studies ▪ Music, Literary Arts and Other Arts. ***Comment*** Curatorial studies would primarily fall within the History, History of Art, Classics and Curatorial Studies subject area and so would be submitted to the the Humanities and Law Panel. However, in some cases, the nature of the research may be associated more with creative and performing arts research activity: therefore it would fall within the Music, Literary Arts and Other Arts subject area and the EP would be submitted to the Creative and Performing Arts Panel.

Interior design

Potential subject areas

- Design
- Architecture, Design, Planning, Surveying.

Comment

Research that is focused on interior design may fall within the Design subject area (Creative and Performing Arts Panel) or the Architecture, Design, Planning, Surveying subject area (Engineering, Technology and Architecture Panel). This depends on the research focus, and on whether it is closer in approach to architecture or creative design.

Industrial design and product design

Potential subject areas

- Design
- Architecture, Design, Planning, Surveying

Comment

Research that is focused on industrial design and product design may fall within the Design subject area (Creative and Performing Arts Panel) or the Architecture, Design, Planning, Surveying subject area (Engineering, Technology and Architecture Panel). This depends on the research focus, and whether it is closer in approach to architecture/engineering or creative design.

Design history

Potential subject areas

- Design
- Architecture, Design, Planning, Surveying
- History, History of Art, Classics and Curatorial Studies.

Comment

Research into design history could feasibly be seen by three panels (Creative and Performing Arts Panel; Engineering, Technology and Architecture Panel; and Humanities and Law Panel). For example if the primary focus of the research involves historical analysis, it would fall within the History, History of Art, Classics and Curatorial Studies subject area and so the EP would be submitted to the Humanities and Law Panel. If the research outputs extend to other aspects of design, then see "Interior design" and "Industrial design and product design" immediately above.

Environmental studies

Potential subject areas

- Ecology, Evolution and Behaviour
- Chemistry
- Physics
- Public Health.

Comment

Research focused on environmental studies falls within a number of subject areas. The most appropriate subject area will reflect the underpinning disciplinary base of the research.

Food science and technology

Potential subject areas

- Engineering and Technology
- Chemistry
- Agriculture and Other Applied Biological Sciences.

Comment

Food science and technology research falls within a number of subject areas. Food science would fall within the subject area that best reflects the underlying science – that is, either the Chemistry subject area (Physical Sciences Panel) or the Agriculture and Other Applied Biological Sciences subject area (Biological Sciences Panel). Food technology would generally fall within the Engineering and Technology subject area, and so would be submitted to the Engineering, Technology and Architecture Panel.

Librarianship and information management

Potential subject areas

- Computer Science, Information Technology, Information Sciences
- History, History of Art, Classics and Curatorial Studies.

Comment

Librarianship and information management primarily falls within the Computer Science, Information Technology and Information Sciences subject area and so an EP with this research focus should be submitted to the Mathematical and Information Sciences and Technology Panel. A staff member may, however, feel that the focus of their research is primarily from a humanities perspective and in this case the EP would be more appropriately submitted to the Humanities and Law Panel (within the History, History of Art, Classics and Curatorial Studies subject area).

Māori education

Potential subject areas

- Education
- Māori Knowledge and Development.

Comment

Research focused on Māori education (including kaupapa Māori education and mātauranga Māori education) would generally fall within the Education subject area and so the EP would be submitted to the Education Panel. If the research outputs fundamentally influence Māori culture or development, however, they would fall within the Māori Knowledge and Development subject area and so the EP would be submitted to the Māori Knowledge and Development Panel.

Māori health

Potential subject areas

- Public Health
- Māori Knowledge and Development.

Comment

Research focused on Māori health (including hauora) would generally fall within the Public Health subject area and so the EP would be submitted to the Medicine and Public Health Panel. If the research outputs fundamentally influence Māori culture or development, however, they would fall within the Māori Knowledge and Development subject area and so the EP would be submitted to the Māori Knowledge and Development Panel.

Multimedia and other media studies

Potential subject areas

- Theatre and Dance, Film and Television and Multimedia
- English Language and Literature.

Comment

Research expressed by way of media products (eg multimedia production) would generally fall within the Theatre and Dance, Film and Television and Multimedia subject area (Creative and Performing Arts Panel). Research that represents commentary on or analysis of media products would be likely to fall within the English Language and Literature subject area (Humanities and Law Panel).

Tourism studies

Potential subject areas

- Marketing and Tourism
- Other subject areas as applicable.

Comment

Research into tourism will generally fall within the Marketing and Tourism subject area (Business and Economics Panel); but where the research focus is primarily in another discipline (eg history of tourism, or ecological tourism), the research could fall within another subject area and so the EP would be submitted to the panel responsible for that subject area.

Section H:
Panel-Specific Guidelines for Completing an EP

Introduction

This section of the Guidelines provides additional panel-specific guidelines.

It is intended to help those who are responsible for completing EPs (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

What each topic contains

Each topic (one for each of the twelve peer review panels) contains the following standard sub-topics:

- Description of panel coverage
- General expectations for standard of evidence to be supplied
- Elaboration of the Definition of Research
- Indications of the minimum quantity of research output expected to be produced during the assessment period
- Special circumstances
- Definitions of Quality Categories
- Measuring the impact of applicable and practice-based research
- Characteristics of excellence for applicable and practice-based research
- Treatment of non-standard, non-quality-assured and jointly produced research outputs
- Proportions of NROs to be sampled
- Use of specialist advisers
- Types of research output

- Elaboration of the descriptor and tie-points for the RO component
- Elaboration of the descriptor and tie-points for the PE component
- Elaboration of the descriptor and tie-points for the CRE component
- Other relevant information required for panel assessors to accurately assign Quality Categories to EPs.

Note: Not every panel has information under every sub-topic.

Biological Sciences

Description of panel coverage

The Biological Sciences Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Agriculture and other applied biological sciences

Includes food science, biotechnology, bioactives, agricultural science, crop production, agronomy, farm management, animal husbandry, wool and fibre science, aquaculture, horticulture, viticulture, forestry studies, and fisheries science.

Ecology, evolution and behaviour

Includes animal, plant and microbial ecology, biogeography, marine science, land, parks and wildlife, biodiversity, biophysical sustainability, pest and weed control, phylogenetics, systematics, evolution, population biology and genetics, animal behaviour, physiological plant ecology, and biostatistics and modelling.

Molecular, cellular and whole organism biology

Includes animal and plant physiology, cell biology, animal and plant biochemistry, molecular biology, genetics, genomics, bioinformatics, microbiology, animal and plant pathology, pathology, immunology, molecular biology, pharmacology, neuroscience, developmental biology, and structural biology.

It is expected that most **cross-referrals** to this panel will come from the following panels: Engineering, Technology and Architecture; Physical Sciences; Medicine and Public Health; and Health.

General expectations for standard of evidence to be supplied

It is expected that most research outputs submitted to the Biological Sciences Panel would be quality-assured. Quality assurance for this panel normally means that the research output has been peer-reviewed.

Elaboration of the Definition of Research

The general Guidelines apply (see Chapter 1 Section D: What Counts as Research? on page 20).

Biological Sciences Panel continues …

Types of research output	It is expected that most research outputs submitted to the Biological Sciences Panel will be formally peer-reviewed journal articles in scientific journals. Where a textbook is cited as one of the (up to) four NROs, it will be important to identify the contribution to original research in the Comments Relevant to this Output field. It is not expected that textbooks aimed at the undergraduate level will be submitted.
Indications of the minimum quantity of research output expected to be produced during the assessment period	Four research outputs would be expected as a minimum, but a smaller number would be acceptable with the appropriate special circumstance, for instance when the period of research is significantly shorter than the full assessment period.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	The general Guidelines apply (see "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47; and Outputs involving Joint Research on page 51). The Biological Sciences Panel emphasises the importance of jointly authored papers and recognises that joint research is likely to be the norm. Applicants should not consider that joint publication is a negative point.
Proportions of NROs to be sampled	The Biological Sciences Panel expects to review 100% of all NROs submitted.

Biological Sciences Panel continues …

Use of specialist advisers

As necessary (see Using a Specialist Adviser on page 155).

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).

Tie-point 6

For journal articles an assessment of the scientific importance of the work will be the overriding criterion. There is a preference for primary research papers rather than for review articles. The standing of the journal within the sub-discipline area is an additional factor in demonstrating performance at this level. The Science Citation Index may be used as a criterion and will be made available to the panel assessors.

Tie-point 4

For journal articles, the standing of the journal in the sub-discipline area will be important in demonstrating performance at this level.

Tie-point 2

It would normally be expected that four quality-assured journal articles or equivalent NROs would be submitted. A PhD thesis completed within the assessment period may be included.

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Tie-point 6

Ability to attract high-quality postgraduate students and postdoctoral fellows could be important in demonstrating performance at this level.

Tie-point 4

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Tie-point 2

May include travel grants, invitations to give talks on research, and prizes (eg best paper at a conference).

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Tie-points 6 and 4

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Tie-point 2

Organisation of local scientific meetings, seminars or journal clubs, involvement in organising scientific symposia and meetings.

Biological Sciences Panel continues …

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	No panel-specific guidance.

Business and Economics

Description of panel coverage	The Business and Economics Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive. ***Accounting and finance*** Accounting includes financial accounting, management accounting (including behavioural accounting), auditing, and taxation. Finance includes banking, investment and securities, and insurance. ***Economics*** Includes economics, econometrics and economic history. ***Management, human resources, industrial relations, international business and other business*** Management, human resources and industrial relations includes management, communication in organisations, employment relations, human resource management, management science including operations and services management; knowledge management; organisation studies including organisational behaviour and organisation theory, public sector management, risk management, small business management, and strategic management. International business and other business includes business development, business ethics, business history, corporate governance, innovation and entrepreneurship, international business and cross-cultural business studies, property studies, and business and society. ***Marketing and tourism*** Includes marketing and tourism.
General expectations for standard of evidence to be supplied	NROs should normally be quality-assured.

Business and Economics Panel continues …

Elaboration of the Definition of Research	Consultancy and case studies, book reviews and textbooks, and research into the teaching of areas of business and economics studies count as research provided that they meet the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20). Other consultancy, case study, textbook and book review work may be relevant to peer esteem or contribution to the research environment. For example, textbooks may embody original theorising or original application of theory and research to a new business or geographical context. Case studies accompanied by appropriate interpretation may be seen as a means of validating or questioning existing theory and research or developing new theory.
Types of research output	For the Business and Economics Panel, monographs, working papers, discussion papers and occasional papers are seen as valuable types of research output. For the Business and Economics Panel, the research output types typically expected to be evaluated would be journal articles, chapters in books, conference contributions, working papers and reports for external bodies. In the subject areas of Economics and Finance, monographs, discussion papers and occasional papers are also seen as typical types of research output.
Indications of the minimum quantity of research output expected to be produced during the assessment period	The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160). In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.
Special circumstances	The taking of unpaid leave to undertake consultancy assignments provided this does not result in research outputs that are included in the EP is a valid grounds for special circumstances.
Definitions of Quality Categories	The Business and Economics Panel affirms that the term 'world-class' denotes a standard, not a location.
Measuring the impact of applicable and practice-based research	Impacts likely to result from good business research include: ▪ Organisational practices changed as a result of such research ▪ Educational pedagogy revised as a result of such research ▪ Government acknowledgement of the value of such research in policy formation.

Business and Economics Panel continues …

Characteristics of excellence for applicable and practice-based research

Excellence in applicable and practice-based research is likely to be characterised by, for example:

- Change in organisational practice that results in positive impacts on efficiency, growth, productivity, etc
- Change in educational pedagogy that results in improved pass-rates, high student evaluations, morale improvements, stimulation of student research, etc
- Change in government policy that results in clear positive improvements in practice.

Treatment of non-standard, non-quality-assured and jointly produced research outputs

Non-standard

See "Characteristics of excellence for applicable and practice-based research" immediately above.

Non-quality-assured

The Business and Economics Panel anticipates that EPs submitted to it will have been prepared with due regard for the definitions of quality-assured and non-quality-assured research outputs as set out in the general Guidelines (see "Quality-assured and non-quality-assured outputs" on page 41 and also Quality-Assured and Non-Quality-Assured Research Outputs on page 47).

Joint publications

While it may not always be possible to claim credit for an NRO on a percentage basis, staff members are encouraged to do this where they can.

Proportions of NROs to be sampled

The Business and Economics Panel expects to sample at least 25% of NROs, as it did in 2003. It expects to sample a higher proportion of non-quality-assured NROs.

Use of specialist advisers

The Business and Economics panel recognises that the subject areas covered by the panel embrace many diverse areas of study that cannot be totally covered by panel members alone, and anticipates making use of specialist advisors, particularly in any areas of study where panel expertise is limited. In addition, the general Guidelines apply (see Using a Specialist Adviser on page 155).

Other information

The Business and Economics Panel notes some interest among staff members in the use of quantitative evidence such as journal ranking indices. The panel would like it to be clarified to staff members that panel members have been selected for their professional expertise and judgement, that each member has preferred ways of judging, that the advantages and disadvantages of ratings are known to all, and that the use of such ratings is neither guaranteed nor ruled out. A number of sources of such information are available.

Business and Economics Panel continues …

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).

Tie-point 6

The Business and Economics Panel will have regard to the possible constraints on access to internationally focused publication channels that may be imposed when research is focused on local situations or information.

Tie-points 4 and 2

The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

The panel will also consider the ability of the staff member to sponsor their own students into positions such as lectureships.

In the case of Business and Economics, peer esteem may reflect esteem amongst peers outside the academic area. Such esteem should, however, be based on the staff member's research activity. It may include esteem amongst senior members of business and the relevant profession.

Societies include professional societies.

It is recognised that citations data are not available in some areas covered by the panel, or may be hard to find.

Media recognition of research activity might be relevant in some areas covered by the panel.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

In Business and Economics, it is expected that much of the activity will relate to areas outside the academic area – such as in the business and government communities and in iwi, hapu and other Māori organisations. Such contributions should, however, be based on the staff member's research activity. In the case of research in Māori and Pacific areas, this may involve stakeholder or end-user satisfaction.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Business and Economics Panel continues …

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

In 2003, the lack of clarity around what represented quality assurance was an issue, particularly with lesser-known conferences and journals, external reports, and working papers. For example, claims of quality assurance were sometimes made inappropriately and, for some RO types, quality-assurance claims were difficult to verify.

The Business and Economics Panel needs maximum information on the nature of any quality assurance of NROs, on the contribution of staff members to specific NROs, and on the rationale whereby NROs representing applicable and practice-based research is considered to meet PBRF criteria for research.

Creative and Performing Arts

Description of panel coverage

The Creative and Performing Arts Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Design

Includes fashion and textile design, graphic design, visual communication design, industrial design, interior design, multimedia design, design history, critical theory, and illustration.

Music, literary arts and other arts

Music includes performance (including improvisation), composition, critical editions, electro-acoustic composition, multimedia performances, sound engineering, musicology and analysis, taonga puoro, waiata, and ethnomusicology.

Literary arts include poetry, fiction, drama, biography, essay, screenwriting, edited scholarly editions, and anthologies.

Other arts also include curatorial theory and practice such as exhibition concepts, selection and programming of film festivals, exhibitions, interdisciplinary work etc.

Theatre and dance, film and television and multimedia

Theatre includes acting, theatre direction, costume design, lighting design, set design, sound design, music theatre, stage management, dramaturgy and theatre studies.

Dance includes dance performance and choreography.

Film, television and multimedia includes video, TV making, multimedia production, soundtrack design, art direction, film/TV/media studies, animation, and screenwriting.

Visual arts and crafts

Includes printmaking, sculpture, photography, moving image/media, installation, painting, drawing, ceramics, jewellery and metalwork, glass, carving, tukutuku, raranga, tattoo, and fibre arts. Also Includes illustration.

It is expected that most **cross-referrals** to this panel will come from the following panels: Education; Engineering, Technology and Architecture; Humanities and Law; Māori Knowledge & Development; and Social Sciences and other Social/Cultural Studies.

Creative and Performing Arts Panel continues …

General expectations for standard of evidence to be supplied

It is expected that most research outputs submitted to the Creative and Performing Arts Panel will be quality-assured. Where it is not self evident, the quality-assurance process should be described in the Comments Relevant to this Output field.

Examples of quality-assurance processes include:

- Exhibitions in or acquisition by national or international institutions
- Inclusion in national or international festivals, biennales, etc
- Publication in credible literary journals or by credible publishers
- Broadcast on national television or radio
- Performances with or by a major professional ensemble
- Concerts promoted within an established professional series
- CDs on recognised labels
- Patents
- Exhibition in a recognised dealer gallery
- Commission by a recognised institution.

Examples of non-quality-assured research outputs might include:

- Web design on the internet
- Presentation in alternative fora
- Documented ephemera
- Concerts in series that contain a high proportion of amateur groups
- Concerts presented by, or exhibitions within, the staff member's own institution.

It is essential that, where an NRO is submitted as quality-assured, the basis of that claim is clearly indicated.

Quality assurance relates to the character of the output. Reviews, on the whole, are evidence of peer esteem rather than quality assurance. (A glowing review of a concert in, say, Wellington's St Andrew's Lunchtime Concerts is evidence of peer esteem elicited from a non-quality-assured event. A concert in the Auckland Town Hall promoted in Chamber Music New Zealand's Celebrity Series is quality-assured even if it receives uniformly damning reviews.)

Elaboration of the Definition of Research

Original creative work is in and of itself considered to be research and it fulfils the criteria of the PBRF Definition of Research where it results in the generation of new knowledge, an enriched sense of the possibilities of the art form, or communicates in a meaningful and profound way through an artistic medium. (For the PBRF Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.)

Work in the creative and performing arts is regarded as research where it has an aesthetic or exploratory rationale and value.

Creative and Performing Arts Panel continues …

Types of research output	Any research output appropriate to and recognised by the particular discipline will be considered. Clearly, the Creative and Performing Arts Panel expects to encounter a much wider range of outputs than would be presented to many other panels. The key concept for the Creative and Performing Arts Panel is 'publication', interpreted broadly as a process that gives public access to the creative work under consideration. It is essential that basic information be included with the description of the NRO. It is not, for example, adequate simply to name an exhibition in a gallery if it is not clear what kind of exhibition this is. It is essential to identify the medium and provide other relevant information. Panel members need to know when picking up an EP whether they are being asked to consider the work of a photographer, a painter, a sculptor, or a poet. A summary of the kind of information that should be included with NROs in a variety of Creative and Performing Arts fields is included in this panel's "Appendix – essential information for inclusion with NROs", at the end of this topic.
Indications of the minimum quantity of research output expected to be produced during the assessment period	Quantity of outputs commensurate with an ongoing commitment to creative work in the disciplines concerned.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP– starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).

Creative and Performing Arts Panel continues …

Treatment of non-standard, non-quality-assured and jointly produced research outputs	The general Guidelines apply (see "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47; and Outputs involving Joint Research on page 51).
Proportions of NROs to be sampled	The general Guidelines apply (see "Number of NROs to be examined" on page 169).
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).
Elaboration of the descriptor and tie-points for the RO component	The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).
Elaboration of the descriptor and tie-points for the PE component	The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).
Elaboration of the descriptor and tie-points for the CRE component	The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).
Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	Documentation must be of a sufficient standard to allow for a proper evaluation of an NRO. (Poor-quality photocopies of works in an exhibition, for example, are not adequate.) There should be some indication as to why each NRO should be considered research in the sense described under this panel's Elaboration of the Definition of Research on page 81.

Creative and Performing Arts Panel continues …

Appendix – essential information for inclusion with NROs

A: Art/artefacts, exhibited or otherwise presented within the public domain

Title; collaborators; brief description including media; name of galleries/venues (up to three); locations; opening and closing dates; number of pieces exhibited; scale of the project and/or dimensions of the exhibits; co-exhibitors (total number and up to three names); where applicable, catalogue ISBN/ISSN/URL.

B: Design of exhibitions or events

Title; collaborators; brief description including media; name of galleries/venues (up to three); locations; opening and closing dates; commissioning bodies; source of funding/sponsorship; scale of the project; where applicable, catalogue ISBN/ISSN/URL.

C: Editorships and curation (adapted from the guidelines for the British RAE)

Title; collaborators; brief description including media; name of publication and publisher/commissioning body/ galleries/venues (up to three); locations; opening and closing dates; scale of the project; catalogue ISBN/ISSN/URL.

D: Public commissions

Title; collaborators; brief description including media; name of client/commissioning body; location; date commission completed/ available to the public; process of commission (invitation, tender, competition etc); associated publications if applicable.

E: Media presentations including performance, installations and catwalk presentations

Title; collaborators; brief description including media/ process/format; dates; names of galleries/venues (up to three); locations; associated publications if applicable; documentation details, eg ISBN, ISSN, URL, Video, CD-ROM.

F: Mass production

Title or brief description including media/format; collaborators; scale of production; name of client/commissioning body; associated publications if applicable; date to market; market and distribution.

G: Musical composition

Title; brief description including media/ performance requirements; name of commissioning body; date of premiere performance; details of performers (if applicable); publication details (if applicable).

H: Musical performance

Venue(s); dates; collaborators; brief description including media, programme, performing forces (eg string quartet), duration; professional/pro-am/amateur; name of series and/or promoter.

I: CD recording

Title; brief description including media, programme, performing forces (eg string quartet), duration; details of performers; name of recording company and catalogue number; date of release; basis of funding.

J: Patents and registered designs

Title or brief description; collaborators; date; patent/design registration number; location.

K: New processes and materials

Title or brief description of principles, materials and processes involved; collaborators; date; format/means and location of dissemination.

Creative and Performing Arts Panel continues …

L: New devices including software

Title or brief description of principles; materials/media involved; collaborators; date; format/means and location of dissemination.

M: Other non-textual research output

Title or brief description including media; collaborators; date; format/means and location of dissemination.

N: Film or TV production

Title; collaborators; brief description including media, duration, basis of funding, commissioning body, distributor/ broadcaster, release date.

O: Theatrical production

Title; collaborators; brief description including media, duration, basis of funding, commissioning body, producer, venue, dates, associated publications if applicable.

Education

Description of panel coverage

The Education Panel assesses EPs in one subject area, Education, which covers the areas set out below. These areas are based on the NZARE list of educational research interests. They should be considered a guide – they are not intended to be exhaustive.

Philosophy of education; history of education; sociology of education; educational anthropology; comparative education; educational administration; education management and leadership; educational politics and policy; educational planning; educational development; economics of education, educational psychology; teaching and learning; human development; child development; social psychology; applied behavioural analysis; behaviour management; educational counselling and guidance; special education; disability studies; atypicality and exceptionality; alternative education; assessment; educational programme evaluation; educational research methods/design/data analysis; ICT in education; educational technology; teacher education; Māori education; kaupapa Māori education; mātauranga Māori education; bilingual education; multi-cultural education; Pacific education; early childhood education; primary education; secondary education; tertiary education; adult and community education; continuing education; parent education; curriculum studies including studies in any subject areas taught in initial teacher education and New Zealand schools; gender education; sexuality education; language and literacy education; and other areas of educational research.

The Education Panel would also consider research into related areas such as health education, nurse education, speech and language education, professional education and development of human services personnel.

Māori education research (including kaupapa Māori education research and mātauranga Māori education research) will be considered by the Education Panel but may in some cases be referred to the Māori Knowledge and Development Panel.

Education Panel continues …

It is expected that most **cross-referrals** to the Education Panel will come from the following panels: Humanities and Law; Social Sciences and Other Cultural/Social Studies; Māori Knowledge and Development; Health; and Creative and Performing Arts.

General expectations for standard of evidence to be supplied

Much of the work in education is designed to inform professional practice. Such work is entirely appropriate for consideration, and the key consideration is the extent to which it meets the PBRF Definition of Research (see this panel's Elaboration of the Definition of Research immediately below).

The primary consideration is the scholarly significance of the output along with evidence of the quality-assurance process.

Elaboration of the Definition of Research

Researchers in practice-related areas (such as curriculum or teaching-related research) are encouraged to explain clearly how the activities reported in their NROs meet the requirements of the PBRF Definition of Research. (For the PBRF Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.)

A précis of the theoretical approach, research methodology and/or underpinnings should be included in the Comments Relevant to this Output field for each NRO. This will also be necessary in relation to any creative outputs.

Descriptive reports of classroom practice are not research. But an analytic account, set in the context of other research, can be the basis of research. Curriculum documents are not of themselves research. However, a paper examining the intellectual processes involved in their development and the consultation of other research literature may be research. A standard text is unlikely to meet the requirements of the Definition of Research; but a text analysing, and/or synthesising the latest information in the field covered, discussing controversies, guiding students understanding and underpinned with references is likely to count as research.

Types of research output

The quality of education research can be demonstrated in a number of ways, including its influence on other researchers working in similar areas, or on policy makers and practitioners.

The most common types of research output are likely to be journal articles, chapter contributions to books, books, conference presentations, research reports and proceedings, and theses. Other types of research output could include written, oral, electronic, or creative works.

Excluded material includes media interviews, presentations to schools, and school journal writing. These may, however, be relevant to the PE component and/or the CRE component of the EP.

Some research outputs, such as scholarly books, are more substantial and take longer to produce than others. The panel will take account of this in weighting outputs.

Education Panel continues …

Indications of the minimum quantity of research output expected to be produced during the assessment period	The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160). In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP– starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	The general Guidelines apply (see "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47; and Outputs involving Joint Research on page 51).
Proportions of NROs to be sampled	The general Guidelines apply (see "Number of NROs to be examined" on page 169).
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).

Education Panel continues …

Elaboration of the descriptor and tie-points for the RO component	***RO descriptor*** It is recognised that there can be a wide range of standards of refereeing applied to journals and other outputs. When an NRO has multiple authors, it is vital that the notes indicate the personal contribution of the staff member. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).
Elaboration of the descriptor and tie-points for the PE component	***PE descriptor*** Peer esteem may relate to selection on to iwi boards or associations, and preparation of claims to the Waitangi Tribunal. Peer esteem must be related to research, not to teaching or professional practice. For example, examining theses for another institution is an indication of scholarly standing and respect. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).
Elaboration of the descriptor and tie-points for the CRE component	***CRE descriptor*** Mentoring new researchers, including colleagues (especially Māori and Pacific staff members and students) is particularly important in education due to the emergent nature of research in many organisations. Evidence of the benefits of mentoring to other researchers would be helpful. Influencing national education research and government policies and priorities can be an important indicator of the contribution to the discipline of education. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).
Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	No panel-specific guidance.

Engineering, Technology and Architecture

Description of panel coverage

The Engineering, Technology and Architecture Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Architecture, design, planning, surveying

This subject area includes:

Architecture and urban design including design, history/theory/criticism, professional practice, construction management, construction technologies, structures and materials, manufacturing processes, sustainability, ecology, communication, and social and human factors.

Urban and regional planning including history/theory/criticism, professional practice, sustainability, ecology, and social and human factors.

Interior architecture/design including design, history/theory/criticism, professional practice, construction management, construction technologies, structures and materials, manufacturing processes, sustainability, communication, social and human factors, and facilities management.

Industrial / product design including design, history/theory/criticism, professional practice, manufacturing processes, sustainability, communication, and social and human factors.

Landscape architecture including design, history/theory/criticism, professional practice, construction technologies, structures and materials, manufacturing processes, sustainability, ecology, communication, and social and human factors.

Building economics and management including professional practice, construction management, construction technologies, structures and materials, sustainability, facilities management and social and human factors.

Building science including design, construction management, construction technologies, structures and management, manufacturing processing, sustainability, ecology, and social and human factors.

Surveying and photogrammetry.

Engineering and technology

This subject area includes:

Chemical and process/materials engineering including product and process engineering, biomedical and biochemical engineering, fuel technology and energy engineering, environmental engineering, systems engineering, pedagogic research in chemical engineering, materials engineering, extractive metallurgy, thermo physical processes, control engineering, and computational methods.

Civil, resource and environment engineering including construction management, fluid mechanics, hydraulic engineering and hydrology, geotechnical engineering, solid mechanics, computational mechanics, structural engineering and materials, transportation, environmental engineering and resource management, offshore and coastal engineering, earthquake engineering, pavement engineering, natural resources engineering, forestry engineering, fire engineering, systems engineering, and computational methods.

Engineering, Technology and Architecture Panel continues …

Electrical and electronic engineering including communications (mobile, satellite, networks, etc), electronic materials and devices and micro-electronics, electronic systems and circuits, optoelectronics and optical communications systems, multimedia, video and audio processing and coding, signal processing, modelling and estimation, radio frequency, microwave and millimetre wave techniques, control, robotics and systems engineering, electrical power, machines and drives, computer engineering, power electronics, embedded systems, instrumentation, micro-technology, nano-technology, and computational methods.

Mechanical and production engineering including acoustics, noise and vibration, aerodynamics and aeronautics, energy conversion, biomedical engineering, computational methods, control, control of fluid power and fluidics, dynamics, engineering design, engineering management, hazard engineering, heat transfer, industrial design, manufacturing including manufacturing systems and manufacturing management, materials including polymers and composites, mechatronics, wind engineering, process engineering, product design, solid mechanics, structural integrity, fatigue and failure analysis, thermodynamics and fluid mechanics.

Engineering science including mathematic modelling, computational techniques, thermo fluids, probability and statistics, continuum mechanics, stochastic programming, theoretical fluid mechanics, bio engineering, and control engineering.

Technology including food technology, production technology, and construction technology.

General expectations for standard of evidence to be supplied

The RO component

The Engineering, Technology and Architecture Panel's coverage is broad, and research assessed will range from fundamental scientific research through professional practice-based or industry-linked research to creative work whose outputs may not necessarily be measured in terms of conventional publications. The panel will therefore address greater breadth in the types of research output and related evidence of quality offered by staff members than may be the case for panels whose coverage is more narrowly focused on fundamental science. Key words that the panel will use to assess the research contribution will be *new knowledge, creativity,* and *innovation.*

Quality-assured outputs are preferred as NROs. However, both quality-assured and non-quality-assured work can be submitted.

Where an NRO is not quality-assured, or its quality assurance is not through a conventional refereeing process (eg journal publications), the onus is on the staff member to provide evidence of its impact. This might include providing reasons why the output represents one of their best research outputs. Examples of such evidence are: size of user community, citations by other research groups, patents, other formal intellectual property underpinning the development, evidence of successful commercialisation, or adoption by industry as new standard practice. The information should be included in the Comments Relevant to this Output field.

Engineering, Technology and Architecture Panel continues …

The foregoing may occur where the staff member submits creative or innovative outputs in any field covered by the panel, for example:

- Design and/or design artefacts
- Analytical methods, or new standards or codes of practice based on a body of research
- Where the test of quality will be originality
- Step change or incremental innovation
- Contribution to advancing the relevant field of knowledge
- Contribution to policy and practice.

Prizes or other public recognition can be acceptable as peer review of research quality provided the independence of the reviewer(s) can be established. Where a staff member submits an exhibition as a research output, examples of quality-assurance criteria include:

- Exhibitions in or acquisition by national or international institutions
- Inclusion as finalist in national or international design competitions.

Where software is an NRO, and it is said to be quality-assured, the staff member should clearly describe the innovative research contribution embodied in the software, and the nature of the quality independent assurance process that has taken place. For example, where the research has resulted in a commercial product for a commercial enterprise or firm, the staff member should describe the quality assurance used by the firm to evaluate the research results, note any formal reporting on the outcome of the process, and include supporting statements by the firm. While quality-assured software should be considered to have 'non-standard quality assurance', where appropriate evidence is supplied it will be considered equivalent to standard quality assurance. This information should be included in the Comments Relevant to this Output field.

The PE component

In addition to the general Guidelines (see this chapter Section D: Guidelines for Completing the Peer Esteem (PE) Component on page 54), the Engineering, Technology and Architecture Panel will include as evidence of peer esteem:

- Invitation to serve on or head up government, business or industry task forces, liaison groups, commissions of enquiry, review panels, or governance boards, on the basis of the staff member's research expertise.
- Engagement to contribute key innovative design elements of a major project.
- Membership of conference programme committees or editorial panels.
- Industry adoption of an output of the staff member as standard practice, for example, a type of design (engineering or architectural), an analytical method, a textbook, a research-based engineering or architectural standard.

Engineering, Technology and Architecture Panel continues …

For each of the first two items on this list, staff members must include (in the Description field) information on the standing and scope of the conference or taskforce etc and the extent of their role. They should also be able to provide independent evidence of this, if requested.

The third item on the list also requires the staff member to include (in the Description field) information on their contribution – and to be able to provide independent evidence of this if requested. In addition, this item may need to be considered under the RO component as well as the PE component.

The CRE component

Where a staff member presents evidence of initiatives in founding significant collaborative national or international research centres or consortia, this may be quality-assured through evidence of institutional- or government-support funding achieved, growth in national or international collaborative research activity, or the attraction of a substantial number of researchers (staff members, postdoctoral fellows, students) and, where appropriate, industry sponsorship or membership.

Elaboration of the Definition of Research

Research undertaken individually or collectively leading to the definition or refinement of standards or performance criteria is an accepted research output.

Research involving the discovery, development and novel application of analytical techniques is an accepted research output.

The development of databases of routine engineering properties or practices (or in architecture and design) would **not** generally be acceptable as a research output unless there was some particular innovative feature which should be clearly outlined in the Comments Relevant to this Output field.

A research consultancy or series of consultancies that has involved research into current practice and that establishes new policy, paradigms, methods and/or standards which create a landmark and extend the body of knowledge in a given area of professional practice may be acceptable as a research output.

Client-sponsored research is recognised as an integral component of the engineering, technology and architectural disciplines. Where quality assurance through other researchers is not possible (eg through constraints imposed by the client), the fitness for purpose of the research, if independently validated, can sometimes be a valid proxy for demonstrating research quality.

Where the research or inventive activity includes new designs (either as designs or realised design artefacts) or performance works, such outputs should be able to be clearly identified as innovative contributions to an area of design or technology, departing from established concepts and practice. Routine production of designs following established concepts would not normally qualify. The aspect of creativity and innovation should be demonstrated through associated factors such as the award of patents, prizes, and/or the successful commercialisation of the design or technology.

Types of research output

The following types of research output will be considered in addition to those listed in the general Guidelines (see Types of Research Output on page 42).

- Attributable design standard or other standard, code of practice, or design guideline (where the term standard is restricted to outputs promulgated through an international or national process administered by an authoritative body; the term code of practice refers to a method accepted, promulgated and applied widely within a professional practising community; and the term design guideline is used to describe a practice identified and recommended by a group of practising professionals as being a good practice)
- Conference contributions, where refereed papers published in proceedings and invited keynote addresses would normally rank ahead of poster presentations (where not published in proceedings), abstracts (where submitted alone and not as full paper), no-refereed papers and oral presentations
- Designs and design artefacts, prototypes or products
- Editorial contributions in relation to compilations of research publications (for example, introductory chapters)
- Journal articles, where refereed articles (particularly in leading international journals in the discipline) will normally rank ahead of a professional journal article under editorial scrutiny, and ahead of non-reviewed articles
- New standard or code of practice.

For most disciplines covered by the Engineering, Technology and Architecture Panel, a wide range of journals and refereed conference proceedings is available in which to publish research outputs. Some research outputs (eg books, research monographs, dissertations, software and design artefacts) might be expected to take considerably longer than a journal article to produce.

Indications of the minimum quantity of research output expected to be produced during the assessment period

The Engineering, Technology and Architecture Panel views quality as the primary driver in ranking the performance of staff members. The minimum quantity of research would be one output.

Special circumstances

The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61.)

Definitions of Quality Categories

The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).

Engineering, Technology and Architecture Panel continues …

Measuring the impact of applicable and practice-based research	In applicable and practice-based research the onus will be on the staff member to present objective evidence of quality, and to know the appropriate measures of quality in their specialist area to bring forward as evidence. For example, when research is carried out for industrial clients, quality (in the form of fitness for purpose) can be measured by impact of the research and by how well the research addresses the issue of concern to the satisfaction of those affected. Independent verification or validation is important for establishing the authenticity of claims of fitness for purpose. Evidence could include: patents, awards, adoption of research outcomes by a particular area of the profession nationally or internationally as new standard practice, successful commercialisation, and business growth (particularly with international sales). Measures of the impact of applicable and practice-based research might include: revenues and profit growth; reduced incidences of failure or other adverse statistics such as death and injury; wider environmental impacts; re-work or maintenance costs; faster processing times; and lower construction, manufacturing or maintenance costs.
Characteristics of excellence for applicable and practice-based research	Indicators of excellence include patents, awards, adoption of research outcomes by a particular area of the profession as new standard practice, successful commercialisation with business growth (particularly in direct competition with internationally available products or services), reduced operational costs, increased profits, enhanced societal outcomes. Evidence of such indicators must be provided by the staff member.
Treatment of non-standard, non-quality-assured and jointly produced research outputs	Jointly produced research outputs need to be assessed to determine the weighting to be given to the role of the candidate in the work concerned, eg senior author or researcher or not. Researcher-nominated percentage contribution is an acceptable measure, but the panel will have to make a judgement where conflict arises between co-authors' views of their contributions. Where the research output assessed is non-standard or non-quality-assured, more reliance will be placed upon the actual or potential downstream impact of the completed work – for example, through its influence on practice and standards in the profession, or through commercial outcomes such as new design paradigms, products, businesses etc. This must, however, have been measured and evidence must be supplied by the staff member.
Proportions of NROs to be sampled	The Engineering, Technology and Architecture Panel expects to sample at least 25% of NROs. A higher proportion of non-quality-assured NROs will be reviewed. The panel expects to sample more NROs for EPs around the tie-points.
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).

Elaboration of the descriptor and tie-points for the RO component

The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

The PE component is concerned with peer recognition of the staff member's research by peers. Indicators of peer esteem include:

- Research-related fellowships, prizes, awards, and invitations to share research knowledge at academic and end-user conferences and events.
- The ability to attract graduate students or to sponsor students into higher-level research qualifications, positions or opportunities because of their research reputation.
- Research-related citations and favourable review. In considering the former, it must be noted that the quantum of citations may be a poor proxy for peer esteem. Some research work may be cited frequently because it is an example of poor research. Consequently, emphasis should be placed on evidence of positive review and citation.
- Participation in editorial boards.
- Participation on relevant degree or professional qualification-accreditation panels.
- Invitation to serve on government, business or industry task forces, commissions of enquiry, review panels, or governance boards, on the basis of the staff member's research esteem in the relevant field.
- Membership of conference programme committees or editorial panels.
- Participation in research funding agency review panels.
- Industry adoption of an output of the staff member as standard practice – for example, a type of design (engineering or architectural), an analytical method, a textbook, a research-based engineering or architectural standard.

Tie-point 6

This could be reflected by some or all of the following: the receipt of prestigious prizes, or fellowships of leading learned societies/academies or prestigious institutions, or special status with professional or academic societies, editorship or membership of editorial panels or the refereeing of top ranked journals, or awards for research and invited attendance or examinations of PhDs, or presentation at prestigious academic and industry conferences/events, or invitation to serve New Zealand and foreign government ministerial or international taskforces, review panels or commissions of enquiry; or invitation to sit as government or international appointees on governance boards, or invitation to serve on international conference programme committees or editorial review panels, or international adoption of a design, analytical method, textbook, architectural or engineering standard or code of practice deriving from the staff member's research.

Engineering, Technology and Architecture Panel continues …

Tie-point 4

The EP demonstrates peer esteem by providing evidence of some or all of the following: the receipt of prizes, membership of a professional society or similar with restricted or elected membership or honours or special status with professional or academic societies, editorship or membership of editorial panels or referees of reputable journals within New Zealand or elsewhere, research fellowships of esteemed institutions, reviewing of journal submissions and book proposals, PhD examination or invitations for keynote addresses for conferences/events that are at a middle level of excellence, or invitation to serve on mid-level national or major local industry taskforces, review panels or commissions of enquiry, or invitation to sit as an institutional member on governance boards, or invitation to serve on national conference programme committees or editorial review panels, or national adoption of a design, analytical method, textbook, architectural or engineering standard or code of practice deriving from the staff member's research.

Tie-point 2

This may be evidenced through attracting awards and invitations to present research to informed audiences, within and possibly beyond the applicant's immediate institution as well as positive reviews and citations, or being asked to referee research outputs, or being invited to serve institutional or local industry taskforces and review panels, or evidence of membership of a local conference programme committee or editorial panel, or evidence of a research contribution to a new design, analytical method, textbook, architectural or engineering standard or code of practice led by a more senior researcher.

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

This is concerned with the contribution to the development of research students, to new and emerging researchers, and to a vital, high-quality research environment. The CRE component has a number of aspects, including:

- Research and disciplinary leadership – such as membership of research teams, and contributions to disciplinary development and debate and public understanding of the discipline.
- Contributions through students and emerging researchers – that is, supporting and mentoring students in achieving postgraduate qualifications and development as researchers.
- Contribution to institutional vitality – that is, supporting the development of research both within and across institutions (eg hosting visiting researchers). Attracting research funding may be an important contribution to institutional vitality, but the amount of the income itself will not be taken into account.
- Grant income (the staff member should identify whether this is as principal investigator, how many co-investigators, dollar amounts, funding duration).

Engineering, Technology and Architecture Panel continues …

- Number of PhD and Masters students being supervised and whether this is as principal or associate supervisor.
- Number of postdoctoral fellows working under supervision of staff member.
- Directorships of research centres or research groups (stating how many researchers working in centre/group, budget, etc).
- Leading or participating in the establishment of inter-institutional research collaborations, consortia, or research centres – either nationally or internationally.
- Leading or participating in policy development activities that have a national or international impact on the way in which research-investment or research-funding decisions are made by government or private sector agencies.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

No panel-specific guidance.

Health

Description of panel coverage

The Health Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Dentistry

Includes research in all areas of basic and applied clinical dental sciences including restorative dentistry, cariology, prosthodontics, endodontology, periodontology, oral and maxillofacial surgery, oral radiology, orthodontics, paediatric dentistry, oral medicine, oral pathology, oral microbiology, dental materials science, dental public health, dental education, oral biology, and basic dental sciences relevant to clinical dentistry.

Nursing

Includes research activity relevant to the discipline of nursing and all the contexts within which it operates, including policy, practice education and management. Research activity relevant to the discipline of midwifery and all the contexts within which it operates, including policy, practice education and management.

Health Panel continues …

Other health studies (including rehabilitation therapies)

Includes other health-related research including optometry, optical technology, occupational health and safety, naturopathy and homeopathy, acupuncture, traditional Chinese medicine, other complementary therapies, nutrition and dietetics, health psychology and mental health, occupational therapy, chiropractic and osteopathy, speech and language therapies, massage therapy, art, music and drama therapies, podiatry, and other rehabilitation therapies.

Includes physiotherapy.

Pharmacy

Includes research in all areas of basic and applied clinical pharmacy.

Sport and exercise science

Includes sport and exercise sciences, physical activity and health, human movement science, and socio-cultural and management aspects of sport and recreation.

Veterinary studies and large animal science

Includes veterinary studies and large animal science.

Overlaps are likely to occur between the Health Panel's coverage and that of other panels. The Health Panel expects **cross-referrals** of EPs to occur with a number of the other panels, including Social Sciences and Other Cultural/Social Studies; and Māori Knowledge and Development.

General expectations for standard of evidence to be supplied

The RO component

The Health Panel expects that research outputs will normally be peer-reviewed journal articles describing research studies. While other output types will be considered on their merits by the panel, a staff member should explain why these have been chosen as NROs instead of peer-reviewed journal articles.

Elaboration of the Definition of Research

Publication of case reports without a research component (ie not involving anything beyond normal clinical care, description and treatment) would not normally be considered to fit the PBRF Definition of Research. For the Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.

Types of research output

The general Guidelines apply (see Types of Research Output on page 42).

Indications of the minimum quantity of research output expected to be produced during the assessment period

The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160).

In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.

Health Panel continues …

Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).
Definitions of Quality Categories	The Health Panel is aware that some staff members will be working across some combination of clinical, teaching, and significant administrative and research positions. If this impacts significantly on the quantum of research outputs or their channels of dissemination, then staff members should comment on this in the Special Circumstances field of their EP. These comments should specify what proportion of time is available for research during the assessment period. Position or career duration should be indicated under Special Circumstances.
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	In health, it is usual for original research papers to have more than one author. As different research groups have varying understandings about authorship, and as journals require that all authors who have made significant intellectual contributions be included as authors, the Health Panel expects that the majority of peer-reviewed journal papers will have multiple authors. Indeed, the panel would be concerned if senior university staff were sole authors as this could suggest they were not promoting research by students and junior staff members. There could also be concerns if junior university staff were sole authors, as this could possibly suggest an inability to receive advice or supervision or an inability to participate in a research team. In cases where a significant proportion of research outputs are sole-authored, staff members should indicate in their EP why this is the case.
Proportions of NROs to be sampled	25%.
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).

Health Panel continues …

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).

Tie-point 6

To achieve an RO component score of 6, the normal expectation would be that the staff member provides evidence of a major contribution to four NROs and a minimum of 16 ROs published in major well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent.

Tie-point 4

To achieve an RO component score of 4, the normal expectation would be that the staff member provides evidence of a significant contribution to four NROs and a minimum of 12 ROs published in well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent.

Tie-point 2

To achieve an RO component score of 2, the normal expectation would be that the staff member provides evidence of a minimum of four NROs, several of which will be published in well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent.

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

In order for high scores to be awarded in the PE component, it would normally be expected that the staff member concerned has achieved appropriate recognition as reflected in significant citations of their research. Staff are encouraged to provide relevant citation data.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor and tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

No panel-specific guidance.

Humanities and Law

Description of panel coverage

The Humanities and Law Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

English language and literature

Includes English language and literature.

Foreign languages and linguistics

Includes foreign languages, literatures and cultures, English for speakers of other languages, translating and interpreting, applied linguistics and linguistics.

History, history of art, classics and curatorial studies

Includes history, history of art, classics and curatorial studies.

Law

Includes business and commercial law, constitutional law, criminal law, family law, international law, Treaty of Waitangi law, environmental law, human rights law, legal practice and justice administration.

Philosophy

Philosophy.

Religious studies and theology

Religious studies and theology.

It should be **noted** that, relation to area studies, women's studies, cultural studies, gender studies, and other multidisciplinary studies, the Humanities and Law Panel will consider EPs in those areas that are primarily concerned with research outputs generated out of humanities or law paradigms.

Cross-referrals are likely to arise in relation to the following panels: Social Sciences and Other Cultural/Social Studies; Māori Knowledge and Development; Mathematical and Information Systems and Technology; and Creative and Performing Arts.

General expectations for standard of evidence to be supplied

It is expected that, for the majority of disciplines covered by the Humanities and Law Panel, most research outputs submitted will be quality-assured. Quality assurance will include peer-review for journals, referee reports for books and conference papers, and other equivalent quality-assurance processes. If a non-standard quality-assurance process has been used, eg in relation to practice-based research outputs (such as a commissioned report) or creative research outputs (such as a film, video or exhibition), staff members are expected to explain in the Comments Relevant to this Output field precisely how quality has been assured for the NRO.

Humanities and Law Panel continues …

The Humanities and Law Panel will use the same standard of evidence to assess all types of research output. That is, it will consider the extent to which the research:

- Is recognised as being of high quality
- Is original, representing an intellectual advance or a significant contribution to knowledge
- Exhibits intellectual and methodological rigour and coherence
- Demonstrates intellectual and/or disciplinary impact
- Demonstrates impact in the wider community, eg through influencing the direction of policy or practice.

The scope of these criteria may overlap. The list does not imply any particular rank order, although overall research quality will be the critical factor.

Elaboration of the Definition of Research

Where an NRO results from media production, professional practice or consultancy, the staff member should clearly indicate its research character and content in the Comments Relevant to this Output field.

Routine professional practice in law does not fall into the PBRF Definition of Research. However, it is recognised that analysis derived in the course of professional practice may contribute to or constitute research outputs (eg an influential and original opinion or submission).

Routine professional practice in language teaching does not fall within the PBRF Definition of Research. However, research-based commentary on language teaching and pedagogy, as well as research-based curricula and products, may fall within the Definition of Research.

(For the PBRF Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.)

Types of research output

The types of research outputs generated by staff members in Humanities and Law subject areas are diverse.

The most common types of research output are likely to be journal articles, books, and chapter contributions to books.

Research outputs may also include:

- Bibliographies
- Catalogues
- Exhibitions
- Critical commentaries
- Multimedia presentations
- Reviews, including book reviews that meet the PBRF Definition of Research (see above) and do not fall within its exclusion definitions – but **note** that book reviews are not articles and should not be presented as such
- Review articles
- Translations, where these contain significant editorial work in the nature of research

Humanities and Law Panel continues …

- Dictionary and encyclopaedia articles that meet the PBRF Definition of Research
- Textbooks or loose leaves that meet the PBRF Definition of Research.

Other types of research output such as electronic and web-based publications, film and video, and other types of non-print research outputs.

It is recognised that, in law, textbooks can be important forms of research. Where a legal textbook has offered a new paradigm to explain a body of well-known existing case law or to reconcile a new body of case law to existing case law, this should be made clear in the Comments Relevant to this Output field. A new paradigm is distinct from a new exposition of known and established law, and the commentary should specifically address this distinction. Where a new paradigm is claimed in respect of parts only of a legal textbook, those parts should be clearly identified by page or chapter references. Similar specific referencing and commentary is required when the claim is made in respect of a new edition, or the updating or adaptation of an existing text.

NROs that are non-print-based need to be made available to the panel (if requested) in an alternative form that provides adequate documentation for assessment to be made.

If a book published on the occasion of an exhibition is a major stand-alone publication in its own right with a shelf-life longer than the exhibition (distributed internationally, or reprinted several times, for example), it may be considered a separate output and be presented in the EP as an authored (or edited) book. If this is the case, the staff member should indicate at the end of the exhibition entry that: 'This exhibition was complemented by [book title].' At the end of the authored book/edited volume entry, a phrase such as: 'This book was published on the occasion of [exhibition title]' should be included.

With regard to research outputs for languages, it should be noted that, although language teaching materials would not normally be included in the Definition of Research, some such materials could conform to the research definition where they are original and generated out of research activities. Where outputs such as language curriculum design, or new or substantially improved teaching materials, devices, products or processes are presented as research outputs, staff members should demonstrate that those materials meet the requirements of the PBRF Definition of Research.

The following types of research outputs should not be presented as NROs where they appear in substantially the same form as the original:

- Foreign language versions of work originally published in English
- English language versions of work originally published in a foreign language
- Second or later editions of a work.

Humanities and Law Panel continues …

Indications of the minimum quantity of research output expected to be produced during the assessment period	The Humanities and Law Panel understands that there may be some variation in the number of research outputs across disciplines and sub-disciplines, and will look for evidence of consistent engagement and an ongoing programme of research during the assessment period.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61). Other special circumstances that the panel may deem relevant, taking into consideration the evidence presented, may include for example a journal editorship which has significantly affected the ability of the staff member to undertake or maintain research activity during all or most of the assessment period.
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	In the case of applicable and practice-based research, the EP should identify impacts in the Comments field of the RO component. The panel will expect also to see evidence of impact in the Description field of the PE component.
Characteristics of excellence for applicable and practice-based research	The same characteristics of excellence will apply to all research (see this panel's "General expectations for standard of evidence to be supplied" on page 101).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	***Non-standard research outputs*** Non-standard research outputs will be assessed using the same criteria as standard research outputs. ***Non-quality-assured research outputs*** Non-quality-assured research outputs will be treated according to the general Guidelines (see "Quality-assured and non-quality-assured outputs" on page 41 and also Quality-Assured and Non-Quality-Assured Research Outputs on page 47). ***Jointly produced research outputs*** Jointly produced research outputs must clearly state the extent and nature of the contribution made by the staff member submitting the EP.

Humanities and Law Panel continues …

Proportions of NROs to be sampled

The panel expects to sample at least 50% of NROs.

Use of specialist advisers

Specialist advisers will be used:

- To assist in assessing NROs wholly or partly in a language that is inaccessible to panel members
- To assist in assessing NROs that are outside the range of competency of panel members.

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165).

Tie-point 6

Research outputs that deal with topics or themes of primarily local, regional or national focus or interest can be of world-class standard if they exhibit the characteristics stated in the generic guidelines. Such works will be of the highest quality in their theoretical approach and sophistication, in their evidence or material base and use of that evidence or material, in argument, originality and presentation or creativity.

Tie-point 4

The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).

Tie-point 2

It would be exceptional to reach this level without quality-assured research outputs.

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

Public acknowledgement (for example, in prefaces or footnotes) of assistance in providing collegial research support and reading manuscripts of colleagues is considered by the Humanities and Law Panel as one indicator of peer esteem that staff members may wish to present.

The panel recognises that, for many of the humanities and law disciplines, supporting students to gain scholarships or graduate positions may be an indicator of peer esteem.

When reviews and citations are used as evidence of peer esteem, sufficient indication should be provided to show the extent of the esteem.

Financial support received for exhibitions (such as grants from Creative New Zealand or other sponsorship of the exhibition), visitor numbers to exhibitions, positive citations, etc can be presented as evidence of peer esteem.

Tie-point 6

Emphasis will be placed in tie-point 6 on the extent to which the EP shows that the staff member has attracted recognition for world-class research.

Tie-points 4 and 2

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Humanities and Law Panel continues …

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

The Humanities and Law Panel recognises that a number of activities contribute to the research environment in humanities and law, including: translations; significant language teaching materials; academic writing and commentaries on existing works and research; book reviews; reading manuscripts; membership of editorial boards; refereeing and reviewing; external examining of theses; leadership in conference planning; hosting department colloquia; research-related collegial activities.

In addition to the mentoring of students referred to in the general Guidelines (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167) the panel recognises that contribution to the research environment involves the support of honours and honours-equivalent students, particularly in law.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

No panel-specific guidance.

Māori Knowledge and Development

Description of panel coverage

The Māori Knowledge and Development Panel assesses EPs in one subject area, Māori Knowledge and Development, and so will cover a wide range of research areas.

The guiding principle for coverage is that the panel will consider all EPs where there is evidence of research based on Māori world-views, both traditional and contemporary, and Māori methods of research. While other methodologies may also be used in the research, the inclusion of Māori methodologies will be the important criterion.

Consequently, there is potential for the panel to consider research across all subject areas.

In practice, however, it is likely that the broad theme areas covered by the panel will be: te reo Māori, tikanga Māori, wairuatanga, cultural development, social development, economic development, political development, environmental sustainability, and toi Māori.

It is expected that all or most of the NROs will primarily investigate issues of importance to Māori, with Māori-specific measures and processes being evident. The EP is likely to show significant involvement with Māori, and outcomes that are relevant and of value to Māori.

Māori Knowledge and Development Panel continues …

EPs which include some Māori component (eg in subject area) but which do not involve Māori methodologies will not be assessed by the Māori Knowledge and Development Panel. Instead, the panel that best covers the subject area of the EP will assess it. That panel will either have its own Māori member or will refer the EP to a Māori adviser as required.

The Māori Knowledge and Development Panel will **cross-refer** EPs to other relevant panels and/or seek input from specialist advisers where it is appropriate to supplement the range of expertise of panel members. This panel acknowledges that EPs, in addition to demonstrating a Māori methodological approach, could include research based on other approaches and across other disciplines, and it will ensure equitable treatment of multi- and/or cross-disciplinary research.

An EP that is written in Māori will be assessed according to the research method employed, rather than the language used. Māori members of other panels or Māori specialist advisers will be able to assist further.

The Māori Knowledge and Development Panel will assess EPs compiled by Māori and non-Māori, the guiding principle being that the EP consists primarily of research based on Māori world-views and methodologies.

General expectations for standard of evidence to be supplied

Outputs will be considered on their merits. Staff members are asked to ensure that they give as much information as possible in the Comments Relevant to this Output field for each NRO as to (i) why they have chosen that NRO as one of their (up to) four best research outputs, (ii) how it meets the Definition of Research in the general Guidelines and/or panel-specific guidelines (see this panel's Elaboration of the Definition of Research below), and (iii) the quality-assurance measures undertaken in its production.

The kinds of quality-assurance measures that could be considered for applied, practice-based and/or print-based research outputs include the provision of, for example:

- A script accompanied by notes and/or comments from judges, assessors and/or other knowledgeable persons (for a performance or artistic output)
- An examiner's report (for a thesis)
- An abstract (for a book or journal article).

In order to assess the quality of research outputs that are non-print-based, such as oral presentations at a hui, the panel expects that the staff member will describe the nature of quality assurance according to one or more of the following criteria:

- Publication of the oral presentation in channels with conventionally accepted peer-review processes, such as peer-reviewed journals
- Attestation by a scholar of acknowledged repute, either in New Zealand or overseas (the scholar may be an eminent kaumātua or an academically credentialled expert)
- Invitation to present at an event, such as a hui, that is acknowledged as having wide significance for Māori.

Māori Knowledge and Development Panel continues …

The Māori Knowledge and Development Panel acknowledges that other criteria may demonstrate the quality and significance of research outputs, and will consider such criteria as described by the staff member on their merits. Examples of these might include:

- Wide acclaim by Māori beyond the original presentation (eg as evidenced by media reports including Māori media)
- Conferment of tribal honours for the contribution.

The Māori Knowledge and Development Panel will use the following criteria for assessing all types of research outputs, noting that the scope of these criteria may overlap. This list does not imply a ranking order, although overall research quality will be the critical factor.

In particular, the panel will consider the extent to which the staff member's output:

- Reflects Māori world-views
- Represents an intellectual or creative advance or a significant contribution to knowledge
- Exhibits intellectual rigour, methodological coherence and originality in the approach taken
- Has significance for the wider community, eg through influencing the direction of Māori thought and development
- Is considered by peers as being of high quality; while recognising that, in many cases, the Māori community provides a more rigorous assessment of what constitutes excellence in Māori research
- Is recognised as an important contribution to Māori knowledge in the context of indigenous knowledge and research by indigenous peoples.

Elaboration of the Definition of Research

The panel will have particular regard to Māori research, and generally characterises that research as follows:

- Māori research is a broad descriptor that includes a range of Māori approaches to research, such as kaupapa Māori research, Māori-centred research, mātauranga Māori research, etc
- Research is based on Māori world-views (Māori ways of being, knowing, and doing)
- Primary data include material derived from Te Ao Māori
- Research practices and processes are consistent with Māori ethical standards and guidelines
- Methods, analyses and measurements recognise Māori philosophies and experience
- The outcomes of 'Māori research' contribute to Māori knowledge and development.

In respect of applied and/or practice-based research in a Māori context, the term 'creative' in the general Guidelines refers to the generation of images, performances and/or artefacts (including design) that leads to the development of new knowledge, understanding and expertise.

Māori Knowledge and Development Panel continues …

The term 'cultural innovation' in the general Guidelines refers to performance practice in a Māori context that can be a gradual and incremental process over time, that results in an individual style or 'statement', and that produces, contributes to or creates new knowledge.

'Applied' research is work that develops or tests existing knowledge and is primarily directed towards specific practical objectives or the evaluation of policies and/or practices.

For the general Guidelines on research and the PBRF Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.

Types of research output

Given the diverse nature of the subject areas covered, the Māori Knowledge and Development Panel expects to receive a wide range of research outputs.

Full consideration will be given to the types of research noted in the general Guidelines (see Types of Research Output on page 42) and, in addition, to other types of research that may especially contribute to Māori knowledge and development.

These could include outputs such as the following:

- Presentations at hui or wānanga
- Oral presentations such as whaikōrero and waiata
- Performance such as haka and waiata-ā-ringa
- Reports for external bodies, including submissions to the Māori Land Court, the Waitangi Tribunal, and/or research for iwi rūnanga
- Translations (Māori-English, English-Māori)
- The 're-discovery' of old knowledge in a Māori context, with its attendant safeguards
- Artefacts including material cultural creations such as whakairo, raranga, whare construction, etc
- Other types of research output, eg kai products and processes.

Research outputs may be delivered in a specific Māori context or produced in a specific Māori format (eg an art work, whakairo or whaikōrero). Where such an output is an NRO and is requested by the panel, it may be provided in an alternative form such as a photograph, audio or video recording, transcription, commentary, or kaumātua attestation. It should be noted that copies of attestations, with an appropriate accompanying commentary in the Comments Relevant to this Output field, should be sufficient for the panel to form an assessment of the research output.

The Māori Knowledge and Development Panel accepts that there may be some delay in the publication of certain types of research. There may also be circumstances where research outputs are disseminated initially through non-quality-assured media, or else directly to the research community or communities involved. These factors will be given due consideration in evaluating the evidence presented. However, the panel is primarily interested in outputs that contain or are accompanied by evidence of research quality; and it considers, where fieldwork or investigation is undertaken over an extended period, that research outputs such as conference papers and/or journal articles may be expected.

Māori Knowledge and Development Panel continues …

In addition to the exclusions given in the general Guidelines (see Chapter 1 Section D: What Counts as Research? on page 20), the following list gives an indication of outputs in a Māori context that are either **not** considered to be research, or should **not** be included amongst the NROs in an EP:

- Keeping abreast of research developments
- Multiple uses or re-workings of a single research output in different formats (**note** that these can go into the list of up to 30 'other' research outputs which demonstrate the 'platform' or quantity of research achieved during the assessment period)
- Papers taken towards a research masters degree or other postgraduate qualification
- Reprints of journal articles and new editions of books unless substantially changed
- The routine application of established techniques in an applied and/or practice-based context, except where this meets the PBRF Definition of Research.

Note: Research outputs that do not meet the Definition of Research may be relevant to the PE and/or CRE components of an EP.

Indications of the minimum quantity of research output expected to be produced during the assessment period

In the case of new and emerging researchers, it is expected that the EP will contain evidence of an adequate quantity and quality of research outputs that have been completed during the assessment period, taking into account the length of time the researcher has been PBRF-eligible. A minimum of two quality-assured research outputs would normally be expected, together with a doctoral degree or equivalent (eg in disciplines where doctoral study is not established, a terminal degree).

Special circumstances

The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).

Other special circumstances that the Māori Knowledge and Development Panel may deem relevant, taking into account the evidence presented, could include:

- A particular area of Māori knowledge and development where there are insufficient researchers to sustain a research culture
- Specific responsibilities beyond the TEO to iwi and Māori
- Sustained responsibilities and commitments to the wider whānau, eg whāngai, kuia, koroua, mokopuna
- The length of time a new and/or emerging researcher has been PBRF-eligible.

If a staff member has a significant proportion of research that is confidential in nature and this affects their quantity of research output, these circumstances should be explained in the Special Circumstances field. Nevertheless, the onus is on the staff member to provide an assessable EP. It is noted that confidential NROs will be treated with the utmost respect, taking into account such factors as iwi/ hapū/ whānau intellectual property and the nature of the research output itself.

Māori Knowledge and Development Panel continues …

Definitions of Quality Categories

The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).

In addition, the Māori Knowledge and Development Panel will have regard to the following:

Quality Category "A": The panel recognises that 'world-class' denotes a standard, not a type or location or focus of research. Research outputs based on Māori research methodologies may rank with the best research of their type conducted anywhere in the world, including New Zealand, and thus be considered to demonstrate performance at this level.

Peer esteem and contributions to the research environment may be demonstrated by research and disciplinary leadership and by extensive networks and/or collaborations, which result in research outputs that contribute in a significant and substantial way to Māori and indigenous knowledge and development in a New Zealand and/or global context.

Quality Category "B": To be assigned a "B" for an EP, the staff member would normally be expected to have produced research outputs of a sustained high quality, and to have acquired peer recognition and made a substantial contribution to the research environment at a national/iwi level or across a range of Māori communities and/or developmental interests.

Quality Category "C": To be assigned a "C" for an EP, the staff member would normally be expected to have produced a reasonable number of quality-assured research outputs, and to have acquired peer recognition and made a contribution to the research environment within her/his own institution and/or at a local community level.

Quality Category "R": The general Guidelines apply (see What do the Quality Categories Mean? on page 149).

Quality Categories "C(NE)" and "R(NE)": The general Guidelines will apply (see Assessing New and Emerging Researchers on page 151).

Measuring the impact of applicable and practice-based research

The impact of applicable and practice-based research may be measured and assessed according to the extent to which it is:

- Adopted as a practice standard
- Incorporated into institutional and/or agency manuals
- Used as a basis for policy at local, regional/iwi and/or national levels
- Cited in guidelines, strategies, and/or operational plans.

Māori Knowledge and Development Panel continues …

Characteristics of excellence for applicable and practice-based research

The characteristics of excellence for applicable and practice-based research may be measured and assessed according to the extent to which it is:

- Cited favourably in the academic literature and/or recognised by creative and performing networks
- Endorsed by Māori agencies and individuals as a useful contribution to Māori knowledge and development
- Referenced by students and practitioners in assignments, coursework and/or projects
- Incorporated into institutional and/or agency practice bibliographies.

Treatment of non-standard, non-quality-assured and jointly produced research outputs

The Māori Knowledge and Development Panel acknowledges that many of the EPs it assesses may contain research outputs that are non-standard, non-quality-assured, and/or jointly produced. In such cases the EP will be judged on its merits. The panel recognises that the lack of evidence of, for instance, quality assurance will not necessarily be taken to mean that the EP is of a lesser quality than if evidence had been provided.

Research outputs that have been jointly produced with specialists in their field should specify the extent of the staff member's contribution, but will be judged according to 'the company kept', ie the fact of being considered worthy to work with a specialist or 'master' speaks for itself in the assessment of such work.

In the case of non-standard or other types of EPs where kaumātua and/or peer attestations are used to support or substitute for the staff member's own commentary in the Comments Relevant to this Output field, the panel will take into account the reluctance of many researchers in a Māori context to self-promote. However, it should be recognised that the output is a taonga in its own right, which deserves to be suitably acknowledged by the researcher in providing the kinds of information that the panel would normally expect to receive – that is, the staff member should state in their own words (i) why it has been chosen as an NRO, (ii) how it meets the Definition of Research, and (iii) the quality-assurance measures undertaken in its production.

Note: 'Peers' in the context of supportive attestations of an applied and/or practice-based nature could include recognised leaders or experts (painters, sculptors, poets, etc) in fields such as whakairo, raranga, kōwhaiwhai, waiata, etc.

Proportions of NROs to be sampled

The Māori Knowledge and Development Panel will sample as many NROs as the time constraints and the availability of outputs allow, in order to give full consideration to the EP as a whole. The goal of 15% (or more) of NROs sampled will also apply to transfers and cross-referrals to this panel.

Use of specialist advisers

Specialist advisers will be used by the Māori Knowledge and Development Panel:

- To supplement the range of expertise of panel members
- To address conflicts of interest within the panel
- To gauge the appropriateness of panel findings
- To assist the panel to reach a consensus in borderline cases.

Māori Knowledge and Development Panel continues …

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

The Māori Knowledge and Development Panel will consider all EPs that consist primarily of research based on Māori world-views and methods. Consequently, the panel will potentially consider research across all subject areas. It is expected that all or most of the NROs will investigate issues of importance to Māori, with Māori-specific measures and processes being evident. The EP is likely to show significant involvement with Māori, and outcomes that are relevant and of value to Māori.

Given the diverse nature of the subject areas covered, the panel expects to receive a wide range of research outputs. Full consideration will be given to the examples of research outputs noted in the general Guidelines (see Scoring an EP: Allocating Points for Research Outputs on page 165) and, in addition, to other types of research outputs that make a particular contribution to Māori knowledge and development.

The panel acknowledges that there is a wide range of channels of presentation in the Māori community (eg through marae and rūnanga hui), some of which offer a higher level of scrutiny, peer review or informed critique than others. The panel will take into consideration the channel through which a research output is presented as one measure of quality.

Tie-point 6

The panel recognises that 'world-class' denotes a standard, not a type or location or focus of research. Research outputs based on Māori research methodologies may rank with the best research of their type conducted anywhere in the world, including New Zealand, and thus be considered to demonstrate performance at a global or national level. Other indigenous research will also provide an opportunity for benchmarking at this level.

Nevertheless, it is recognised that 'world-class' in a New Zealand context would include quality-assured research outputs that are at the leading edge of insight and innovation, that have the ability to create new paradigms and concepts, that are influential in the development of new and alternative directions, and that provide models of innovative excellence with a significant impact across the spectrum of Māori practice and/or Māori policy and development at a national level.

Tie-point 4

Research outputs judged to be of this standard could include those that address issues of relevance to Māori at a national/iwi level and/or across a range of Māori communities and/or developmental interests within New Zealand. It is expected that the majority of such ROs would be quality-assured and demonstrate rigour in creative work practices, research design, and/or methodological approach.

Tie-point 2

Research outputs judged to be of this standard could include those that address issues of relevance to Māori at an institutional and/or local community level. It is expected that at least some of such research outputs would be quality-assured and/or would demonstrate an emerging creative work practice with developing rigour in research design and/or methodological approach.

Māori Knowledge and Development Panel continues …

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

The Māori Knowledge and Development Panel acknowledges that a wide range of evidence of peer esteem would indicate that the research is regarded as an important contribution to Māori knowledge and development.

In addition to the examples of peer esteem provided in the general Guidelines (see Scoring an EP: Allocating Points for Peer Esteem on page 166), the panel will consider other examples related to Te Ao Māori, including:

- Invitations to address hui where there is wide Māori participation
- Mandated representation on behalf of Māori and/or iwi at a range of fora (eg marae, Waitangi Tribunal, iwi hui)
- Recognised expertise in a field of endeavour, which results in others looking to that person for inspiration and for examples of excellence in applied and practice-based research.

Tie-point 6

World-class recognition of research outputs based on Māori research methodologies could include, for instance, presentations at world indigenous research conferences and fora or a position at an indigenous research institution overseas.

Recognition at this level could also include the presentation of influential and cutting-edge research in a New Zealand context, which attracts overseas (particularly indigenous) as well as national (particularly Māori) attention and uptake. Researchers at this level of achievement could be expected to attract media recognition as spokespersons capable of responding to significant issues that impact on iwi and/or Māori development. They could also be expected to attract recognition and acknowledgement by leading New Zealand and/or overseas commentators, as established performers or exhibitors presenting new and creative insights within the Māori visual and performance culture.

Tie-point 4

Evidence of peer esteem at this level could include the staff member's influence being recognised at a national/iwi level and/or across a range of Māori communities and/or developmental interests. Researchers at this level could be expected to attract critical acclaim from nationally recognised commentators, exhibit or perform with others in a recognised national venue, or demonstrate extended end-user satisfaction with the results of the research.

Tie-point 2

Evidence of peer esteem at this level could include the staff member's influence being recognised at an institutional and/or local community level. Researchers at this level could be expected to attract favourable critique from an institution or local community authority in the field, exhibit or perform with other recognised artists, or demonstrate effective participation in institutional and/or local community matters of a research nature.

Māori Knowledge and Development Panel continues …

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

A wide range of contributions to the research and creative work environment are relevant to the subject areas covered by the Māori Knowledge and Development Panel.

In addition to the examples of contribution to the research environment provided in the general Guidelines (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167), the panel will consider other examples related to Te Ao Māori, including:

- Development and maintenance of strong and effective links with end users of research and creative work, including the transfer of knowledge to participants and stakeholders such as whānau/ hapū/ iwi/ Māori communities and/or Māori visual and performing networks. It is also noted that the wider New Zealand community would benefit from being informed about Māori-specific world-views and research (including creative work) achievements
- Contributions to the further development of research and creative work capacity in broad areas of Māori knowledge and development, through supervision, peer review and mentoring
- Promotion of a research and creative work culture within iwi/ hapū/ Māori communities and/or Māori visual and performing networks through guidance, leadership and facilitation
- Engagement at the interface between Māori approaches and other approaches to research and creative work
- The use of Māori research and creative work approaches to inform other disciplines and subject areas.

Tie-point 6

Extensive networks and collaborations could include links with overseas indigenous researchers and research institutions, while research and disciplinary leadership could include contributions to Māori knowledge and the knowledge of other indigenous peoples in New Zealand and overseas.

The aim should be to demonstrate a level of research and creative work that informs and inspires researchers in a New Zealand context (particularly those working in Māori-related areas), that motivates others to strive for higher levels of achievement, and that provides a model of excellence in disciplinary areas of relevance to Māori researchers and communities (including Māori visual and performing networks) and Māori-relevant organisations.

Tie-point 4

Evidence of contribution to the research environment at this level could include the staff member's expertise in aspects of mātauranga Māori and/or Māori visual and performance culture at a national/ iwi level and/or across a range of Māori communities and/or Māori-relevant organisations.

Tie-point 2

Evidence of contribution to the research environment at this level could include the staff member's expertise in aspects of mātauranga Māori at an institutional and/or local community level.

Māori Knowledge and Development Panel continues …

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	No panel-specific guidance.

Mathematical and Information Sciences and Technology

Description of panel coverage

The Mathematical and Information Sciences and Technology Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Computer science, information technology, information sciences

Computer and information sciences include theoretical and practical study of the following: adaptive systems, algorithms, artificial intelligence, bioinformatics tools and techniques, computer architecture, computer graphics, computer information systems, computer vision, database, dependable systems, distributed systems, encryption and security, formal methods, high performance computing, human computer interactions, information retrieval, machine learning, multimedia, networks and communications, operating systems, pattern recognition, programming languages, software engineering, speech and language technology.

Information systems includes the analysis, development, application and use of information and communication technologies (including new electronic media) in human activity systems relating to management, organisational, commercial, government, social, and other areas.

This subject area also includes pedagogical research in computer and information systems.

It also includes disciplines concerned with the management of recorded knowledge, namely librarianship and information science, record and archive studies and information systems including: information communities and the use and management of information in all forms and in all contexts, all aspects of archive administration and records management, all aspects of information policy in the information society, information systems, systems thinking, systems development, information retrieval (including interfaces and gateways), preservation and conservation of recorded information, and the information industry (including publishing).

Pure and applied mathematics

Pure mathematics includes group theory, number theory, general algebra, algebraic and Lie groups, algebraic geometry, topology, geometric analysis, linear analysis, operator theory and operator algebras, complex analysis, ordinary differential equations and dynamical systems, partial differential equations, probability theory and stochastic analysis, harmonic analysis, mathematical logic, combinatorics and graph theory.

Mathematical and Information Sciences and Technology Panel continues …

Applied mathematics includes the development of, the analysis of, and the solution or approximate solution of mathematical models including those arising in physical, geophysical, marine and life and health sciences, engineering and technology; it also includes the development and application of mathematical theories and techniques that further these objectives.

This subject area includes operations research and optimisation including deterministic and stochastic models and solution methods.

It also includes mathematics education.

Statistics

Statistics includes applied statistics, statistical methodology and applications, mathematical statistics, applied probability and statistics education.

Overlaps will occur between this panel's coverage and that of other panels, particularly for research that applies mathematics and statistical techniques. The Mathematical and Information Sciences and Technology Panel expects **cross-referral** of EPs to occur with at least the following panels: Social Sciences and Other Cultural/Social Studies; Physical Sciences; Biological Sciences; Engineering, Technology and Architecture; Humanities and Law; and Business and Economics. Consultation with the Mathematical and Information Sciences and Technology Panel and the Education Panel is also likely for EPs that report pedagogical research in the mathematical, statistical and information sciences.

General expectations for standard of evidence to be supplied

The RO component

Because of the relatively large number of peer-reviewed publications available across the range of disciplines covered by the panel, it would normally be expected that research outputs would be quality-assured.

Where software or a case study is an NRO and is said to be quality-assured, staff members should clearly describe the nature of the quality-assurance process that has taken place – for example, where the research has resulted in a commercial product for a firm, the staff member should describe the quality-assurance process used by the firm to evaluate the research results, note any formal reporting on the outcome of the process, and include supporting statements by the firm. In other words, all quality-assured software or case studies should be considered to have 'non-standard quality assurance'. This information should be included in the Comments Relevant to this Output field.

Where software or a case study is an NRO and is not quality-assured, the staff member should, at least, provide some evidence of the impact of the software (eg size of user community, citations by other research groups, patents or other formal intellectual property underpinning the development) in providing reasons for why the software or case study represents one of the staff member's best research outputs. This information should be included in the Comments Relevant to this Output field.

Acceptance rates for publication in some mathematics journals, and for some computer and information science and information systems conferences, can be especially low. Where appropriate (and where this relates to an NRO), staff members should include information on acceptance rates for publications in the Comments Relevant to this Output field.

Mathematical and Information Sciences and Technology Panel continues …

The PE component

In all areas covered by the Mathematical and Information Sciences and Technology Panel, but especially in computer and information science and information systems, membership of conference programme committees and invitations to contribute to conference panels will be recognised as a factor in assessing peer esteem.

The CRE component

Contributions to published *Mathematical Reviews* and *Zentralblatt für Mathematik* will be considered a valid contribution to the research environment. In the areas of computer and information science and information systems, membership of standards committees will also be considered a legitimate and worthwhile contribution.

Elaboration of the Definition of Research

The general Guidelines apply (see Chapter 1 Section D: What Counts as Research? on page 20).

Types of research output

In the information systems area, research-informed teaching cases studies will be considered as a legitimate research output.

For most disciplines covered by the panel, a wide range of journals and refereed conference proceedings is available for publishing research outputs. Research outputs of any type will be considered on their merits, and will be assessed in relation to the quality of the output or the perceived quality of the outlet in which the research is published. Some research outputs (eg books, research monographs, dissertations, some software) might be expected to involve considerably greater effort than a journal article to produce.

Indications of the minimum quantity of research output expected to be produced during the assessment period

The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160).

In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.

Special circumstances

The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).

Definitions of Quality Categories

The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).

Mathematical and Information Sciences and Technology Panel continues …

Measuring the impact of applicable and practice-based research	Generally applies to computer and information sciences areas. See the discussion on software and case studies (which are the two most common areas of practice-based research activity) in this panel's "General expectations for standard of evidence to be supplied" on page 117.
Characteristics of excellence for applicable and practice-based research	Relevant only to computer and information sciences areas. See the discussion on software and case studies (which are the two most common areas of practice-based research activity) in this panel's "General expectations for standard of evidence to be supplied" on page 117.
Treatment of non-standard, non-quality-assured and jointly produced research outputs	***Non-standard and non-quality-assured research outputs*** Relevant only to computer and information sciences areas. See the discussion on software and case studies (which are the two most common areas of practice-based research activity) in this panel's "General expectations for standard of evidence to be supplied" on page 117. ***Jointly produced research outputs*** The general Guidelines apply (see Outputs involving Joint Research on page 47).
Proportions of NROs to be sampled	At least one NRO per EP.
Use of specialist advisers	Specialist advisers will be used to assist in assessing pedagogical research in the subject areas covered by the Mathematical and Information Sciences and Technology Panel.
Elaboration of the descriptor and tie-points for the RO component	***RO descriptor*** The Mathematical and Information Sciences and Technology Panel recognises that the standing and impact of the journals covered by the panel is quite diverse, including some with especially low acceptance rates. The same is true of conference quality, particularly in the computer and information sciences. Applied statistics has been specifically identified in the tie-point descriptors below. For all other subjects covered by this panel, the general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165). ***Tie-point 6*** In applied statistics, staff members will need to show that they have made a significant original contribution to the research. They might provide evidence that the application area is one of their primary areas of research. ***Mathematical and Information Sciences and Technology Panel continues …***

Tie-point 4

In applied statistics, staff members will need to demonstrate that their involvement in the research contributes to more than a routine analysis of the data. They might show that they have made a contribution, for instance, to the design of the study, collecting information, the analysis and report preparation.

Tie-point 2

The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

The panel recognises that non-academic indicators of peer esteem may arise for some staff members because of the professional nature of applied statistics, computer and informational sciences, and library systems.

Tie-point 6

In computer and information science and information systems, staff members might demonstrate membership of conference programme committees and invitations to contribute to conference panels of international conferences.

Tie-point 4

In computer and information science and information systems, staff members might demonstrate membership of conference programme committees and invitations to contribute to conference panels of regional/national conferences.

Tie-point 2

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

The panel recognises that non-academic indicators of contribution to the research environment may arise for some staff members because of the professional nature of applied statistics, computer and informational sciences, and library systems.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

No panel-specific guidance.

Medicine and Public Health

Description of panel coverage

The Medicine and Public Health Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Biomedical

Includes disciplines of physiology, pathology, biochemistry, molecular biology, genetics, cell biology, immunology, microbiology, neuroscience, genomics, developmental biology, pharmacology and bioinformatics when research outputs presented in EPs are being used primarily in medical science, clinical practice, public health and health interventions.

Clinical medicine

Includes all clinically oriented research including research in medical disciplines such as psychiatry, surgery, obstetrics and gynaecology, general practice medicine, paediatrics, anaesthesiology, and internal medicine.

Public health

Includes epidemiology, Hauora (Māori Health), environmental health, occupational health, community health, health education, and health promotion.

The Medicine and Public Health Panel expects to **cross-refer** with the following panels: Health; Biological Sciences; Social Sciences and Other Cultural/Social Studies; and Māori Knowledge and Development.

Note: Both this panel and the Biological Sciences Panel recognise the importance of the following disciplines: physiology, pathology, immunology, pharmacology, biochemistry, molecular biology, genetics, genomics, cell biology, microbiology, neuroscience, developmental biology, and bioinformatics. EPs with research outputs that are being used primarily in medical science, clinical practice, public health and health interventions will be assessed by the Medicine and Public Health Panel; other research outputs in these disciplines or subject areas will be directed to the Biological Sciences Panel. The panel chairs will confer on those EPs where the primary orientation of the research outputs is unclear.

General expectations for standard of evidence to be supplied

There are a number of dissemination channels that are broadly recognised as premier research outlets. Those tend to be general journals. However, it is also recognised that there are specialist outlets for research that are leading in their field. Staff members must make their own judgements as to the relative weight they give to presenting research outputs through general and specialist channels. Where information in the form of impact indices is available, that information may be usefully included in the Comments Relevant to this Output field when describing why a research output represents one of the staff member's best outputs.

Medicine and Public Health Panel continues …

	The Medicine and Public Health Panel recognises that subject areas have different impact indices, and these will not be used as proxy for quality. It is recognised that a staff member may have chosen to disseminate research findings directly in communities, to practitioners or in arenas that are not subject to traditional forms of refereeing. Under those circumstances, the EP should indicate whether any quantified measures of quality/or impact of those outputs exist and should comment on the nature of the quality-assurance process in the Comments Relevant to this Output field.
Elaboration of the Definition of Research	Clinical audit in itself is not research. However, audit-derived data may contribute to research outputs. In order for participation in clinical trials (particularly multi-centre clinical trials) to meet the PBRF Definition of Research, that participation must involve substantive intellectual input consistent with the Definition of Research. (For the Definition of Research, see Chapter 1 Section D: What Counts as Research? on page 20.) Cochrane reviews are accepted as research outputs. Critical reviews using research techniques and analysis such as meta-evaluations are accepted as research outputs.
Types of research output	Research outputs in printed form are likely to make up many of the research outputs presented in EPs. There will be other forms of research output, however, including products and equipment that a staff member wishes to present. Full consideration will be given to the range of types of research output.
Indications of the minimum quantity of research output expected to be produced during the assessment period	The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160). In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.
Special circumstances	The Medicine and Public Health Panel is aware that some staff members will be working across a combination of clinical, teaching, and significant administrative and research positions. If this impacts significantly on the quantum of research outputs or their channels of dissemination, then staff members should comment on this in the Special Circumstances field of their EP. These comments should specify what proportion of time is available for research during the period of the review. Position or career duration should be indicated under Special Circumstances.
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).

Medicine and Public Health Panel continues …

Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	***Non-standard and non-quality-assured research outputs*** The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component, which starts on page 40 – especially "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47). ***Jointly produced research outputs*** The Medicine and Public Health Panel emphasises the importance of jointly authored papers for the subject areas it assesses; and it encourages staff members to clearly and explicitly specify the extent of their contribution to any NRO.
Proportions of NROs to be sampled	The general Guidelines apply (see Number of NROs to be examined on page 169).
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).
Elaboration of the descriptor and tie-points for the RO component	***RO descriptor*** For journal articles, an assessment of the scientific importance of the work will be the overriding criterion. The standing of the journal in the sub-discipline area will be an additional factor in demonstrating performance at this level. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).
Elaboration of the descriptor and tie-points for the PE component	***PE descriptor*** The Medicine and Public Health Panel will consider evidence of peer esteem in relation to clinical work where it is explicitly linked to research. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Medicine and Public Health Panel continues …

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor and tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

Other relevant information required for panel assessors to accurately assign Quality Categories to EPs

No panel-specific guidance.

Physical Sciences

Description of panel coverage

The Physical Sciences Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Chemistry and physics

These two subject areas include theoretical, experimental and applied physics and chemistry, and inorganic, organic, physical and analytical chemistry including condensed matter and low temperature physics, astrophysics and astronomy, nuclear and high energy physics, instrumentation and engineering physics, environmental physics and chemistry, biophysics, medical physics and chemistry and biological chemistry, optics and electronics, atmospheric and oceanic physics and chemistry, materials physics and chemistry, organometallic chemistry, forensic physics and chemistry, spectroscopy, polymers, food chemistry, computational chemistry, structural chemistry, crystallography and natural products chemistry.

Earth sciences

This subject area includes meteorology and climatology, climate change, hydrology, soils, coastal processes, surface processes, geomorphology, glaciology, physical geography, petrology, geochemistry, mineralogy, stratigraphy, palaeontology, palaeobiology, geophysics, engineering geology, volcanology, sedimentology, tectonics, structural geology, all other branches of geology and surveying.

The Physical Sciences Panel affirms that multidisciplinary and interdisciplinary EPs will be given the same weight as single-discipline EPs. This panel covers a broad range of subjects within the Physical Sciences and is structured to optimise the assessment of multidisciplinary and interdisciplinary research. It expects to **cross-refer** EPs to other panels, or to call on the input of specialist advisers, as appropriate.

Physical Sciences Panel continues …

General expectations for standard of evidence to be supplied	***The RO component*** It is expected that most research outputs submitted to the Physical Sciences Panel will be quality-assured fully-refereed journal articles in international literature (including New Zealand literature of international repute), describing original research. The staff member's original research contributions to review articles, books, research monographs and other forms of research output should be carefully stated. Generally, quality-assured research outputs will be given more weight than their non-quality-assured counterparts. Outputs that are multi-authored must be supported by a full description of the contribution being claimed: intellectual input, planning, writing, …'. A description of the staff member's role and their relationship to co-authors might also be helpful – that is, whether the co-authors are students, postdoctoral fellows, New Zealand or overseas colleagues or collaborators. ***The PE component*** The Physical Sciences Panel will give particular emphasis to the gaining of competitive access to major national or international facilities, invitations to work in overseas institutions, and editorship or memberships of advisory boards of international or national journals. ***The CRE component*** The Physical Sciences Panel will give particular emphasis to evidence of postdoctoral fellows working with staff members, clear links with a visiting researcher or adjunct appointment, and successful engagement with industry.
Elaboration of the Definition of Research	The general Guidelines apply (see Chapter 1 Section D: What Counts as Research? on page 20).
Types of research output	The most common research output is expected to be publications in refereed literature. Refereed conference proceedings will normally be regarded as less significant. Patents will be considered only if they have been granted and are available to the panel.
Indications of the minimum quantity of research output expected to be produced during the assessment period	The general Guidelines apply (see this chapter Section C: Guidelines for Completing the Research Output (RO) Component on page 40 and also The 'Quantity' of Research on page 160). In relation to new and emerging researchers, see Assessing New and Emerging Researchers on page 151.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).

Physical Sciences Panel continues …

Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Treatment of non-standard, non-quality-assured and jointly produced research outputs	The general Guidelines apply (see "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47; and Outputs involving Joint Research on page 51).
Proportions of NROs to be sampled	It is intended that at least 25% of all NROs will be sighted by at least one member of the panel.
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).
Elaboration of the descriptor and tie-points for the RO component	***RO descriptor*** The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165). ***Tie-point 6*** Evidence of a major contribution to four NROs, with many ROs published in major well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent. ***Tie-point 4*** Evidence of a significant contribution to four NROs, with some ROs published in well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent. ***Tie-point 2*** Evidence of a minimum of four NROs, several of which are published in well-recognised journals. One or more NRO might be the equivalent in another form, eg a patent.

Physical Sciences Panel continues …

Elaboration of the descriptor and tie-points for the PE component	***PE descriptor and tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).
Elaboration of the descriptor and tie-points for the CRE component	***CRE descriptor and tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).
Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	No panel-specific guidance.

Social Sciences and Other Cultural/Social Sciences

Description of panel coverage

The Social Sciences and Other Cultural/Social Sciences Panel will assess EPs in the subject areas described below. The descriptions should be considered a guide – they are not intended to be exhaustive.

Anthropology and archaeology

Includes all anthropology and archaeology.

Communications, journalism and media studies

Communications, journalism, and media studies, includes audiovisual studies, film, and screen studies.

Human geography

Includes human geography.

Political science, international relations and public policy

Includes political science, international studies and policy studies (including public policy and political studies).

Psychology

Psychology (social, cognitive, and behavioural science disciplines and methodologies) including behavioural neuroscience, biological psychology, cognitive neuroscience, cognitive psychology, community psychology, clinical psychology, health psychology, and social psychology.

Social Sciences and Other Cultural/Social Sciences Panel continues …

Sociology, social policy, criminology and gender studies

Includes sociology, social policy, social work, criminology, gender studies, demography and population studies, cultural studies, women's studies, men's studies, gay studies, community studies, family studies, whānau studies, consumer studies, welfare studies, human welfare studies, and social sciences not elsewhere classified.

Note: The key criterion for the allocation of an EP to the Social Sciences and Other Cultural/Social Sciences Panel is that it primarily includes research within a social science discipline or social science methodology.

This panel expects to interact with almost all other panels, and it may consider EPs in other subject areas or disciplines where the EP is primarily based within a social science methodology. For example, the Social Sciences and Other Cultural/Social Sciences Panel may consider EPs in such areas as planning, transport, environmental studies, area studies, and labour studies if they are primarily concerned with research outputs generated out of social science paradigms.

The Social Sciences and Other Cultural/Social Sciences Panel will **cross-refer** EPs to other relevant panels or will seek input from specialist advisers where it is appropriate to supplement the range of expertise of panel members. The panel will also seek the advice of Pacific advisers where appropriate.

The panel expects that, in general, counselling research would be assessed by the Education Panel, sociolinguistic research by the Humanities and Law Panel, and creative outputs in film and screen by the Creative and Performing Arts panel. For those EPs that contain research outputs in the theory and history of film making and film or screen outputs, it is anticipated that there will be close liaison between the chair of the Social Sciences and Other Cultural/Social Studies Panel and the chair of the panel that will undertake the assessment. Areas within psychology where close liaison between panel chairs may be needed include industrial psychology (Business and Economics Panel), health psychology (Health Panel), and biological psychology including neuroscience (Biological Sciences Panel). Specific areas of social policy where research might be cross-referred to other panels include criminology (Humanities and Law Panel) and labour studies (Business and Economics Panel).

General expectations for standard of evidence to be supplied

Staff members are expected to nominate quality-assured research outputs for the majority of disciplines covered by the Social Sciences and Other Cultural/Social Studies Panel. Quality assurance will include peer review for journals (including, where appropriate, on-line and e-journals), referee reports for books and conference papers, and other equivalent quality-assurance processes. If a non-standard quality-assurance process has been used (eg in relation to practice-based research outputs or creative research outputs such as a film, video, or exhibition), staff members are expected to explain precisely how quality has been assured in the Comments Relevant to this Output field.

New and emerging researchers may indicate the names of the supervisors and examiners of their masters or doctoral theses as evidence of quality assurance.

Social Sciences and Other Cultural/Social Sciences Panel continues …

Where appropriate, staff members may choose to indicate citation counts or impact factors of the journals in which outputs are published – this can be either in relation to specific NROs or over all outputs within the assessment period. Panel members may choose to investigate these indices where details about them are not supplied. The Social Sciences and Other Cultural/Social Studies Panel will bear in mind that citation counts accumulate over time (so that counts will be less for recent articles than for earlier ones), and that impact factors differ markedly within different disciplines and sub-disciplines. For example: within psychology, neuroscience journals generally have greater impact than other psychology journals. This is not necessarily an indication of higher quality but may simply indicate that one field is currently more 'fashionable' than another.

In order to assess any NRO that is wholly or partly in a language other than English or Māori, the panel will if necessary use a specialist adviser or will ask the staff member to submit an English language version if this is available (but see Guidelines for Special Input Requirements: Pacific Research on page 158 for NROs in a Pacific language).

The Social Sciences and Other Cultural/Social Studies Panel will use the same standard of evidence to assess all types of research output. That is, it will consider the extent to which the research:

- Is recognised as being of high quality
- Is original, representing an intellectual advance or a significant contribution to knowledge
- Exhibits intellectual and methodological rigour and coherence
- Demonstrates intellectual and/or disciplinary impact
- Demonstrates impact in the wider community, eg, through influencing the direction of policy or practice.

The scope of these criteria may overlap. The list does not imply any particular rank order, although overall research quality will be the critical factor.

Elaboration of the Definition of Research

NROs resulting from media production, professional practice, or consultancy should have their research character and content clearly indicated in the Comments Relevant to this Output field. The staff member should also use this field to describe why the NRO represents one of their best research outputs.

Social Sciences and Other Cultural/Social Sciences Panel continues …

Types of research output	The most common types of research output are likely to be journal articles, books, and chapter contributions to books. Other types could include electronic and web-based publications, film and video, and other non-print research outputs. An encyclopaedia entry should **not** be included as a research output unless it is substantial and innovative – and in this case it should be accompanied by appropriate supporting comment in the Comments Relevant to this Output field. Regular encyclopaedia entries may be listed under the CRE component. NROs that are non-print-based need to be made available to the panel (if requested) in an alternative form that provides adequate documentation for an assessment to be made.
Indications of the minimum quantity of research output expected to be produced during the assessment period	As a rule of thumb, it is expected that a productive researcher will produce at least two journal publications (or the equivalent) per year. The Social Sciences and Other Cultural/Social Studies Panel nevertheless understands that there may be some variation in the number of research outputs across disciplines and sub-disciplines, and it will look for evidence of consistent engagement and an ongoing programme of research during the assessment period.
Special circumstances	The general Guidelines apply (see this chapter Section F: Dealing with Special Circumstances on page 61).
Definitions of Quality Categories	The general Guidelines apply (see What do the Quality Categories Mean? on page 149; and also see the final three topics of Chapter 3 Section D: Assessing and Scoring the Three Components of an EP – starting with Scoring an EP: Allocating Points for Research Outputs on page 165).
Measuring the impact of applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).
Characteristics of excellence for applicable and practice-based research	The general Guidelines apply (see Chapter 3 Section D: Assessing and Scoring the Three Components of an EP, which starts on page 159).

Social Sciences and Other Cultural/Social Sciences Panel continues …

Treatment of non-standard, non-quality-assured and jointly produced research outputs	The general Guidelines apply (see "Quality-assured and non-quality-assured outputs" on page 41 and Quality-Assured and Non-Quality-Assured Research Outputs on page 47; and Outputs involving Joint Research on page 51).
Proportions of NROs to be sampled	The general Guidelines apply (see Number of NROs to be examined on page 169).
Use of specialist advisers	The general Guidelines apply (see Using a Specialist Adviser on page 155).
Elaboration of the descriptor and tie-points for the RO component	***RO descriptor*** The general Guidelines apply (see Scoring the RO Component on page 164 and Scoring an EP: Allocating Points for Research Outputs on page 165). ***Tie-point 6*** Research outputs that deal with topics or themes of primarily local, regional, or national focus or interest can be of world-class standard. For example, research concerning Māori or Pacific topics or themes may rank with the best research of its type conducted anywhere in the world. ***Tie-points 4 and 2*** The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).
Elaboration of the descriptor and tie-points for the PE component	***PE descriptor*** The use of web searches (eg number of 'hits' via a search engine such as Google) to establish a quantity of peer esteem will be disregarded. The results of web searches must be clearly shown to be related to research quality. ***Tie-point 6*** The Social Sciences and Other Cultural/Social Studies Panel recognises that some disciplines are less likely to be able to attract overseas graduate students, and this will be taken into account. ***Tie-points 4 and 2*** The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Social Sciences and Other Cultural/Social Sciences Panel continues …

Elaboration of the descriptor and tie-points for the CRE component	***CRE descriptor*** For the Social Sciences and Other Cultural/Social Studies Panel, particular indicators of research and disciplinary development include: book reviews; academic commentaries; leadership in conference planning; hosting departmental colloquia; and research-related collegial activities. Mentoring of students and new and emerging researchers is also regarded as an indicator of contribution to the research environment. Encyclopaedia and dictionary entries may be included as contributions to the research environment. ***Tie-points*** The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).
Other relevant information required for panel assessors to accurately assign Quality Categories to EPs	No panel-specific guidance.

Section I: Pacific Research

Introduction

This section of the Guidelines provides guidance on completing EPs that contain Pacific research.

It is intended to help those who are responsible for completing EPs (both PBRF-eligible staff members and other TEO staff). It may also be of interest to panel members, TEC staff, and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Introduction to Pacific Research

Pacific

The term 'Pacific' refers to Pacific peoples living in a Pacific nation, as well as Pacific peoples living in New Zealand while connected through their heritage and ancestry to a Pacific nation (the term 'Pasifika' is often used to denote this group of Pacific peoples).

Broad coverage

Pacific research encompasses research that reflects specific ethnic groups within the Pacific, as well as research that spans Pacific communities.

Particular principles of Pacific research

The following principles inform the Pacific research guidelines:

- The impact of Pacific research on Pacific communities and its relevance to those communities is particularly important, reflecting a commitment of Pacific researchers to benefit their communities through their research. For this reason, Pacific research may be more likely than other kinds of research to be applied in nature – although all forms of research will be accepted.
- Contemporary Pacific research and discourse on Pacific research are emerging. As a result, there are a limited number of leaders in Pacific research; and those with significant research experience often commit significant resources to developing new and emerging Pacific researchers.
- Pacific research is reflective of the traditions of the past, as well as the present and future. It often embodies paradigms, perspectives and critical stances that are not always captured in mainstream research.

Pacific research is an inclusive concept, incorporating research approaches that are both ethnic-specific and pan-Pacific in scope.

Guidelines for Pacific Research

General expectations for standard of evidence to be supplied

Pacific research covers a wide range of subject areas and results in many types of research output. In cases where the quality-assurance process or the channel for dissemination of an NRO may be unfamiliar to panel members, staff members are advised to provide information on both the quality-assurance processes and the dissemination channel.

While conventional methods of quality assurance (such as peer review of journals and curating of exhibitions) will apply to Pacific research, other quality-assurance processes may also apply. One measure of quality assurance for Pacific research is the extent to which it has been disseminated to the community (which involves evidence of feedback from the community) prior to wider dissemination. Sometimes there is a delay in receiving feedback, and acknowledgement of the research occurs sometime in the future. The effort required in the targeting and dissemination of Pacific research, and the quality of dissemination channels themselves, may vary. Staff members should, therefore, indicate the type of approach used to disseminate research (including targeted dissemination). They should also indicate, where possible, any evidence of feedback or acknowledgement that may indicate quality assurance.

In addition to generally used forms of quality assurance, indicators of research quality for Pacific research may include:

- Endorsement by community leadership, prior to wider dissemination
- Endorsement through fono or Pacific media (recognising that these may be community, national, regional, or pan-Pacific), prior to wider dissemination
- Evidence of dissemination or uptake of research findings by Pacific regional media, and Pacific research communities
- Endorsement and uptake across Pacific communities.

See also Guidelines for Special Input Requirements: Pacific Research on page 158.

Elaboration of the Definition of Research

Pacific research is a broad descriptor that covers a wide range of subject areas and includes various Pacific approaches to research. It is expected that much of the research will be multidisciplinary and may include a range of methodological approaches.

An EP or a specific research output does not need to demonstrate all the following characteristics. But it should show a clear relationship with Pacific values and knowledge bases, and with a Pacific group or community.

Paradigm

Pacific research:

- Is informed by and embedded within the continuum of Pacific world-views, knowledge, practices, and values
- Is conducted in accordance with Pacific ethical standards, values and aspirations (such as responsiveness and reciprocity)
- Involves research processes and practices that are consistent with Pacific values, standards and expectations

- Includes methods, analysis and measurements that recognise Pacific philosophy and spirituality and experience
- Includes data derived from the broad range of Pacific knowledge and experience.

Participation

Pacific research:

- Involves the active participation of Pacific peoples (as researchers, advisers, stakeholders)
- Demonstrates that Pacific peoples are more than just subjects of research
- Demonstrates communal contact – that is, it recognises and validates the relationships between the researcher and the 'researched'
- Engages the Pacific community in the initial stages of the research.

Contribution

Pacific research:

- Contributes to and enhances the Pacific knowledge base in all subject areas
- Contributes to a greater understanding of Pacific cultures, experiences and world-views
- Is relevant and responsive to the needs of Pacific peoples
- May lead to action by Pacific communities
- Protects Pacific knowledge
- Contributes to Pacific knowledge, spirituality, development and advancement
- Is responsive to changing Pacific contexts.

Capacity and capability

Pacific research:

- Builds the capacity and capability of Pacific researchers
- Enhances the capacity of relevant Pacific communities to access and use the research.

Research that falls within the broad ambit of Pacific research (as outlined above) may be undertaken by Pacific or non-Pacific peoples.

Types of research output

Pacific research includes many types of research outputs. It is common for Pacific research to to be presented and disseminated in multiple ways that involve different types of research output for different audiences (eg one research project may result in a number of different outputs and be presented through a range of channels). Full and equivalent consideration will be given to all types of research outputs.

Because Pacific research is a newly documented field, the following research output types are likely to be particularly common: oral presentations and addresses, working papers and web-based presentations. The research process, in requiring validation by the community, may be a more lengthy process than normally expected. This may affect the quantity and types of research output produced.

"Types of research output" continues …

Outputs that are generated from research as defined in the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20) will be likely to include:

- Occasional papers, working papers
- Oral presentation or address
- Composition
- Performance (including choreography)
- Traditional dance, theatre, story-telling
- Literature (novels, poetry, etc)
- Art work
- Reports and presentations to the community.

The presentation of research through oral forms (such as an address) is often very important, since the person and the delivery are considered a crucial part of the research engagement with the community. Oral research outputs must be available for the panel to review if required (eg audio tapes, videotapes, written copies, or slides of their oral output). Alternatively, the quality of the oral presentation may be verified by a senior individual who witnessed the presentation (eg by a scholar of renowned repute, or an academically credentialled expert).

Applied research and action research are common approaches in Pacific research. They may result in new service models, which are themselves examples of research output. The service itself (as well as supporting specifications, manuals, policies, or videos) may be submitted as a research output.

Research-based dictionaries and translations are valid research outputs. Similarly, teaching materials (eg language-teaching materials) that conform to the PBRF Definition of Research are a valid research output.

Special circumstances

The development, exploration and articulation of a Pacific epistemology has a relatively recent history. For example, methodological approaches and multidisciplinary practices are in comparatively early stages of development. Pacific research leaders often have strong commitments to the establishment of a Pacific research environment, as well as significant and sustained community responsibilities, and this means there are high demands on their time.

Panels should note that the following circumstances may affect the quantity of Pacific research produced over the assessment period:

- Considerable demands being placed on a relatively small number of established Pacific researchers to nurture emerging Pacific researchers and build a Pacific research environment
- The long periods of research time that often needs to be spent in communities, which results in the research taking longer than comparable types of research
- Significant and sustained involvement in Pacific communities and community activities as a result of their leadership in Pacific research.

Where any of these circumstances affect staff members, this should be clearly indicated in the Special Circumstances field of their EP.

Use of specialist advisers

Principles relating to the use of specialist advisers to assist panels in assessing Pacific research are:

- No panel should assume that an individual Pacific specialist adviser can advise on all Pacific matters
- Not all EPs containing Pacific research will require specialist advice.

The use of specialist advisers to assist panels in assessing Pacific research should be considered when:

- An NRO is in a Pacific language, includes Pacific concepts, or includes aspects of Pacific culture
- Guidance is needed to assess the PE or CRE components of an EP
- Any matters relating to the EP require elaboration or clarification beyond that provided in this section of the Guidelines
- Journals, and other channels for dissemination of Pacific research, are unknown or unfamiliar to the panel
- Names of individuals and/or groups cited in an EP are unknown or unfamiliar (eg in relation to PE factors).

Elaboration of the descriptor and tie-points for the RO component

RO descriptor

Pacific research emphasises the following:

- High utility and accessibility, particularly for Pacific communities
- High level of engagement with, and practical outcomes for, Pacific communities
- Significant impact on Pacific communities leading to changes in policies and practices eg health promotion, economic development, social policies, and creative activities
- Challenges to both existing Pacific and mainstream research paradigms
- Channels of dissemination that are consistent with the types of research output expected to be most likely presented by Pacific researchers.

Innovative and new research relating to Pacific research could include: the documentation and reclaiming of indigenous or traditional knowledge; new interpretations of existing knowledge; and alternative perspectives on (and approaches to) existing knowledge, new methodologies and development of new insights.

Tie-point 6

Pacific research demonstrating significant and substantial contribution to the wider research community, disciplines or subject areas, at a regional or global level, would demonstrate performance at this level. World-class in reference to Pacific research would indicate research standing with the best of its kind, and/or leading.

Tie-points 4 and 2

The general Guidelines apply (see Scoring an EP: Allocating Points for Research Outputs on page 165).

Elaboration of the descriptor and tie-points for the PE component

PE descriptor

Pacific research emphasises the following:

- Community, or group, recognition of the standing of the researcher and quality of research, including recognition within and across Pacific communities
- Invitations to act as role models for new and emerging researchers
- Invitations by a community to undertake research
- Acknowledgement of the researcher's esteem by other Pacific and non-Pacific researchers.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Peer Esteem on page 166).

Elaboration of the descriptor and tie-points for the CRE component

CRE descriptor

Pacific research emphasises the following:

- Developing and contributing to Pacific research courses
- Supporting and promoting a research culture within and across Pacific communities and groups through guidance, leadership and facilitation
- Contributing to Pacific student development through mentoring and helping new researchers to publish
- Expanding the pool of Pacific researchers through developing pathways for Pacific students into graduate research degree programmes
- Contributing to Pacific research leadership
- Creating a network of Pacific researchers
- Engaging at the interface between Pacific approaches and other approaches to research
- Using Pacific research approaches to inform other disciplines and subject areas
- Creating avenues for disseminating Pacific research and practice
- Creating avenues for, and access to, Pacific research funding and reviewing processes
- Developing Pacific research standards of excellence and guidelines
- Contributing to Pacific research-based policies and practices
- Developing and maintaining strong and effective links with end users of Pacific research, including the transfer of knowledge to participants and/or stakeholders (such as Pacific communities)
- Contributing to the further development of research capacity in the broad areas of Pacific knowledge and development through supervision, peer reviewing and mentoring.

Tie-points

The general Guidelines apply (see Scoring an EP: Allocating Points for Contribution to the Research Environment on page 167).

CHAPTER 3
QUALITY EVALUATION: ASSESSING, SCORING AND ASSIGNING A QUALITY CATEGORY TO EVIDENCE PORTFOLIOS

Overview of this Chapter

Chapter 3 of the Guidelines provides guidance on the peer review panels' assessment of evidence portfolios (EPs). It also covers the work of the moderators and the Moderation Panel.

It is intended to be used by:

- Staff in TEOs who are responsible for completing and assessing EPs
- Members of peer review panels
- TEC staff
- Other stakeholders or participants in the PBRF process.

It contains the following sections …… on these pages:

Section A: Introduction to the Assessment Process

Introduction

This section of the Guidelines provides an introduction to the roles and responsibilities of peer review panels and the process by which EPs are assessed.

It will be of particular interest to the TEC peer review panel chairs, panel members, and those staff in TEOs involved in assessing EPs within their institution. It will also be of interest to PBRF-eligible staff members in TEOs and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Role of the Peer Review Panel

Role

The role of a peer review panel is to assign a Quality Category to the EPs that have been allocated to it. This involves individual panel members reviewing each EP in detail and then assigning preparatory and preliminary scores for each of the three components of the EP, followed by the full panel reviewing those scores and assigning a Quality Category to each EP via a process of holistic assessment. These processes are all carried out in accordance with policies, guidelines and procedures established by the TEC.

Responsibilities of a Panel Chair

Responsibilities

The responsibilities of a peer review panel chair, when acting as a chair, are to:

- Ensure that the panel operates within the policies, guidelines and procedures established by the TEC
- Chair a meeting of the panel to review and calibrate the scores and to assign EPs to Quality Categories
- Ensure panel decisions are documented and that critical issues necessary for a fair review are appropriately addressed
- Ensure that the panel completes its preparation and evaluation work to agreed timeframes
- Ensure that all panel members have an opportunity to contribute to the process and participate fully in the panel's activities
- Take due regard of the decisions of the moderators and the Moderation Panel
- Report to the TEC Board at the end of the Quality Evaluation.

Responsibilities of Panel Members

Responsibilities

Panel members are to participate fully in the evaluation process within their panel. Specifically, their responsibilities are to:

- Help revise and update panel-specific guidelines
- Understand the broad criteria under which the evaluations are to be made, and apply these objectively to the work of the panel
- Be diligent in their preparation for meetings and in completing tasks allocated to them by the panel chair (eg undertaking initial assessment of EPs allocated to them)
- Contribute fully, constructively and dispassionately to all panel processes and take collective ownership for the panel decisions
- Maintain confidentiality of both the deliberations and decisions of the panel
- Exercise due skill and care in the performance of their responsibilities
- Identify instances where they may have a conflict of interest and to raise this with the panel chair prior to the conflict occurring.

Important

It is important to note that panel members have been appointed to the panels for their specific expertise and knowledge, and are not to act as representatives of their employer or discipline.

Responsibilities of the Panel Secretariat

Responsibilities

A secretariat will provide policy, technical and administrative support to each panel chair and members.

The Panel Assessment Process

Allocation of EPs

Panel chairs will allocate EPs to at least two panel members for pre-meeting assessment and scoring.

In allocating EPs to panel members, the chair will have regard to:

- The expertise of the panel members in the subject areas in which the staff member is being assessed
- Any declared conflict of interest (see this chapter Section G: Guidelines for Conflict of Interest and Confidentiality on page 179).
- Achieving a balance of workload across panel members.

Pre-meeting assessment and scoring: responsibilities

Panel members will work within the established policies, guidelines and procedures for the PBRF and within the specific guidelines for their particular panel.

Panel members' responsibilities in assessing the EPs assigned to them are to:

- Follow the assessment process outlined later in this chapter (see Section D: Assessing and Scoring the Three Components of an EP on page 159)
- Confirm they have no conflicts of interest that prevent them from assessing the EPs assigned to them
- Review all the material in the EPs assigned to them
- Request and/or review any of the NROs, if required
- Identify if specialist advice or cross-referral is required
- Determine component scores for each EP, using the PBRF assessment policies, the descriptors and tie-points for each component, and the panel-specific guidelines – and taking into account any advice from the moderators
- Complete all documentation required for this part of the assessment process
- Maintain confidentiality in relation to all material in, and discussions relating to, the EPs reviewed.

Lead panel member

One of the panel members responsible for an EP's pre-meeting assessment and scoring will be designated the 'lead' panel member. The lead panel member will:

- Co-ordinate the discussion between the assigned panel members during the detailed assessment and provision of an initial score
- Record any discussion points with other panel members and/or additional advisers (eg where the EP has been referred to specialist advisers or cross-referred to another panel)
- Forward the agreed sets of scores to the panel secretariat prior to the meeting
- Lead any discussion on that EP at the panel meeting
- Be the point of first contact for any provision of additional input and clarification of scores if that is required.

The steps in the assessment process

The process of assessing an EP starts with preparatory scores and ends with a Final Quality Category. The steps in this process are:

- *Preparatory* scores for each of the three components
- *Cross-referral* scores for each of the three components (where appropriate)
- *Preliminary* scores for each of the three components
- *Indicative* Quality Categories based on the preceding sets of scores
- *Calibrated panel* scores for each of the three components based on the calibration of the preceding sets of scores
- *Calibrated Panel* Quality Categories based on these calibrated scores
- *Holistic* Quality Categories based on a holistic judgement of each EP
- *Final* Quality Categories.

More detail on each of these steps follows.

Determining *preparatory* scores

The first stage of the assessment results in the generation of a set of *preparatory* scores for each of the three components of an EP.

In this first stage, each panel member will assign two sets of component scores. These are:

- *Prep–NoSpecial* component scores
- *Prep–Special* component scores.

Assigning *Prep–NoSpecial* scores

Where panel members assign component scores to each of the three components of the EP and do **not** take into account any special circumstances, this will generate *Prep–NoSpecial* scores.

Assigning *Prep–Special* scores

Where panel members assign component scores to each of the three components of the EP and **do** take into account any special circumstances, this will generate *Prep-Special* scores.

Determining *cross-referral* scores

It may be decided that the EP should be referred to a specialist adviser and/or cross-referred to another panel (see this chapter Section C: Allocating EPs to Panel Members and Obtaining Additional Input, especially from page 154 onwards).

If the EP does involve specialist advice or a cross-referral, then this stage of the assessment will also result in the generation of a set of *cross-referral* scores for each of its three components.

Each specialist adviser or cross-panel member will assign two sets of component scores. These are:

- *Cross-referral–NoSpecial* component scores
- *Cross-referral–Special* component scores.

Note: Specialist advisers may be required simply to provide advice on a particular NRO or on the RO component score generally – in this case, they are not required to submit any component scores.

Determining *Cross-Referral–NoSpecial* scores

Where advisers or panel members assign component scores to each of the three components of the EP and do **not** take into account any special circumstances, this will generate *Cross-referral–NoSpecial* scores.

Determining *Cross-Referral–Special* scores

Where panel members assign component scores to each of the three components of the EP and **do** take into account any special circumstances, this will generate *Cross-referral-Special* scores.

Determining *preliminary* scores

The panel members assigned to work together on the pre-meeting assessment and scoring will determine one set of component scores. These scores are known as the:

- *Preliminary* component scores.

These preliminary scores will be based on a calibration of the *preparatory* and *cross-referral* scores, taking special circumstances into account.

The moderators will give guidance to panels on the weightings for special circumstances from analysis within and between panels based on the *preparatory* and *cross-referral* scores.

Communicating the scores

The lead panel member will communicate the following sets of scores to the TEC Secretariat:

- *Prep–Special* component scores
- *Prep–Special* component scores
- *Cross-referral–NoSpecial* component scores
- *Cross-referral–Special* component scores
- *Preliminary* component scores.

Deriving *Indicative* Quality Categories

The TEC's decision support system (DSS) will be used to store the sets of scores and to derive their Quality Categories.

Note: The DSS will provide for the award of "C(NE)" and "R(NE)" Quality Categories for new and emerging researchers at this and subsequent stages in the assessment. See this chapter Section B: Assessing New and Emerging Researchers on page 151 for more information on the assessment criteria for new and emerging researchers.

Determining *calibrated panel* component scores

At the full panel meetings, discussion (including the use of exemplar EPs to calibrate the various component scores) will lead to an agreement on the following scores:

- *Calibrated Panel* component scores.

Deriving *Calibrated Panel* Quality Categories

Following the agreement on the *calibrated panel* component scores for an EP, the DSS will be used to derive:

- *Calibrated Panel* Quality Categories.

Determining *Holistic* Quality Categories

This *Calibrated Panel* Quality Category for each EP will then be reviewed by the full panel, as part of the holistic assessment process.

The purpose of the holistic assessment is to ascertain which of the available Quality Categories is most appropriate for an EP, taking all relevant factors into consideration. In forming their holistic judgement about the Quality Category to be assigned to an EP, the panel will take the following information into account:

- The Quality Categories arising out of each of the stages of the assessment process
- The scoring of the RO, PE and CRE at each of the stages of the assessment process
- Notes indicating uncommon factors about the EP (eg in relation to quantity and/or quality issues)
- Whether special circumstances apply and, if so, whether the circumstances in question are sufficient to affect which Quality Category should be assigned to the EP
- Whether the EP is eligible for the assignment of a "C(NE) or "R(NE)"
- The fact that the eight-step scoring system does not facilitate the use of fractional scores
- The potential for the PE and CRE component scores to be influenced by the placement in EPs of particular types of information
- The additional rules applying to the assignment of a "C" Quality Category (see "Additional rules" on page 163)
- Whether the evidence in the PE component is congruent with the judgements made about the appropriate score for the RO component
- The Quality Category descriptors
- The fact that there is no requirement for the component scores and Quality Category to be in agreement if the holistic assessment of an EP produces a different result.

The full panel will then determine:

- *Holistic* Quality Categories.

Assigning *Final* Quality Categories

Following the determination of *Holistic* Quality Categories, information relating to the Final Quality Categories assigned to EPs as part of the 2003 Quality Evaluation (if any) will be made available to the panels.

The panels will then consider this information, and will assign:

- *Final* Quality Category.

Defensible decisions

In deciding on the assignment of a Quality Category to an EP, panels will need to ensure that their decisions are defensible.

The Scoring System

The points scale

The first stage in the assessment of EPs is based on allocating points for each of the three components of the EP. The points scale used has the following characteristics:

- The scale has a range from 0 – 7
- '7' is the highest point on the scale and '0' is the lowest
- A score of '0' would reflect that no evidence has been provided in the EP for that component
- Only **whole** scores can be allocated (eg scores of 4.5 or 3.25 will not be allowed).

Descriptors and tie-points

The descriptors and tie-points for each of the three components are used to assist with the scoring.

The descriptors provide an introduction to the component being assessed.

The tie-points encapsulate the standard expected for that score.

Role of the tie-points

The tie-points at 2, 4 and 6 are used to distinguish between different descriptions of quality for each of the components.

The Weighting System

The status of the weighting system

The weighting system is **not** intended as a mechanical or absolute method for determining Quality Categories. The various weightings may be overridden as part of the holistic assessment of EPs.

The weighting scale

A weighted score will be calculated for each component of each EP.

The same weightings will be used for all EPs, to ensure maximum comparability in judgements across panels.

These weightings are set out in the following table.

Component	Weighting
Research Output (RO)	70
Peer Esteem (PE)	15
Contribution to the Research Environment (CRE)	15

Treatment of new and emerging researchers

Panels will take into account whether an individual is a new and emerging researcher.

For the award of the "C(NE)" Quality Category, specific assessment criteria exist for new and emerging researchers. (See this chapter Section B: Assessing New and Emerging Researchers on page 151.)

The weightings of 70 and 15 and 15 (set out in the table immediately above) apply when a new and emerging researcher's EP is being considered for the assignment of an "A" or "B" Quality Category.

Calculating the weighted score

The score for each component is multiplied by the weighting for that component. The weighted total for each EP will be calculated automatically by the TEC's decision support system (DSS).

The maximum weighted score available is 700. This would require each component of an individual's EP to receive a score of 7.

Example of calculation

This table below provides an example of how a total weighted score is calculated.

EP Component	Raw Score (0 – 7)	Weighting (%)	Weighted Score
RO	4	70	280
PE	6	15	90
CRE	5	15	75
Total Weighted Score			**445**

Total weighted score provides initial placement into a Quality Category

The purpose of the total weighted score is to provide an initial placement of each EP into one of the six available Quality Categories.

This initial placement does not necessarily determine the Final Quality Category that will be assigned to an EP. The Final Quality Category is a decision of the panel based on its calibration of panel members' results, its holistic judgement of the EP, and the Quality Category awarded to the EP in 2003 (if any).

Relationship of total weighted score and Indicative Quality Category

The table below shows the Quality Categories associated with the range of weighted scores for all PBRF-eligible staff members **except** new and emerging researchers.

Total weighted score	Quality Category
600 – 700	A
400 – 599	B
200 – 399	C
Less than 200	R

Relationship of total weighted score and Indicative Quality Category for new and emerging researchers

This table shows the Quality Categories associated with the range of weighted scores for new and emerging researchers**.**

Specific assessment criteria exist for the award of "C(NE)" for new and emerging researchers and apply at the holistic assessment phase. (See also this chapter Section B: Assessing New and Emerging Researchers on page 151 for information on this.)

Total weighted score	Quality Category
600 – 700	A
400 – 599	B
200 – 399	C(NE)
Less than 200	R(NE)

What do the Quality Categories Mean?

Important considerations

While the following descriptors provide a useful reference point, they are 'generalised' in approach. In determining or assigning Quality Categories, panels are expected to take account of other factors including (but not limited to) special circumstances, the specific assessment criteria for new and emerging researchers, and the overall principle of holistic assessment of EPs.

Quality Category descriptors

Quality Category "A": For an EP to be assigned an "A" it would normally be expected that the staff member has, during the assessment period in question, produced research outputs of a world-class standard, established a high level of peer recognition and esteem within the relevant subject area of their research, and made a significant contribution to the New Zealand and/or international research environments.

Quality Category "B": For an EP to be assigned a "B" it would normally be expected that the staff member has, during the assessment period in question, produced research outputs of a high quality, acquired recognition by peers for their research at least at a national level, and made a contribution to the research environment beyond their institution and/or a significant contribution within their institution.

Quality Category "C": For an EP to be assigned a "C" it would normally be expected that the staff member has, during the assessment period in question, produced a reasonable quantity of quality-assured research outputs, acquired some peer recognition for their research, and made a contribution to the research environment within their institution. *This Quality Category is available for the EPs of all PBRF-eligible staff members **except** new and emerging researchers.*

Quality Category "C(NE)": For an EP to be assigned a "C(NE)" a new or emerging researcher would normally be expected, during the assessment period in question, to have produced a reasonable platform of research, as evidenced by having: **either** a) completed their doctorate or equivalent qualification and produced at least two quality-assured research outputs **or** b) produced research outputs equivalent to a doctorate and at least two quality-assured research outputs. *This Quality Category is available for the EPs of new and emerging researchers only.*

Quality Category "R": An EP will be assigned an "R" when it does not demonstrate the quality standard required for a "C" Quality Category or higher. *This Quality Category is available for the EPs of all PBRF-eligible staff members **except** new and emerging researchers.*

Quality Category "R(NE)": an EP will be assigned an "R(NE)" when it does not demonstrate the quality standard required for a "C(NE)" Quality Category or higher. *This Quality Category is available for the EPs of new and emerging researchers only.*

Section B:
Assessing New and Emerging Researchers

Introduction

This section of the Guidelines sets out the assessment criteria for new and emerging researchers.

It is intended to help panel members assess an EP. It may also be of interest to staff members in TEOs who are responsible for completing and assessing EPs, and to other stakeholders in the PBRF.

It contains only one topic, Assessing New and Emerging Researchers.

Assessing New and Emerging Researchers

Available Quality Categories

EPs from staff members who meet the criteria for new and emerging researchers may be assigned the following Quality Categories: "A", "B", "C(NE)" and "R(NE)". (For these criteria, see New and Emerging Researchers on page 35.)

Criteria for "A" and "B" Quality Categories

In order to be eligible for the "A" and "B" Quality Categories, new and emerging researchers must meet the standards that apply to all other staff members.

Criteria for a "C(NE)" Quality Category

In order for a new and emerging researcher to secure the new Quality Category "C(NE)", evidence will need to be provided that includes **at least** the following:

- a) The successful completion of a doctoral degree or equivalent during the assessment period for the Quality Evaluation **AND** 'Other' research outputs of an adequate quality and quantity, bearing in mind the time period during which the staff member has been PBRF-eligible (a minimum of two quality-assured research outputs would normally be expected)

  OR

- b) Research outputs equivalent to a) above.

Doctoral degree or equivalent

In most disciplines, a doctoral degree is regarded as the appropriate entry-level degree for an academic appointment involving research; in some other disciplines, however, either a Masters degree (in, for example, Creative and Performing Arts) or a professional qualification (such as in Law or Education) may be the customary qualification for a research career. Staff members without a doctoral degree would normally need to provide evidence of more than the minimum number of research outputs (ie 2).

Assigning an "R(NE)" Quality Category

The EPs of new and emerging researchers that do not meet the standards set out above will be assigned a "R(NE)" Quality Category.

Importance of PE and CRE components	Evidence of peer esteem or contribution to the research environment are not required in order for a new and emerging researcher's EP to be assigned a "C(NE)" Quality Category. New and emerging researchers will not be disadvantaged when they are being assessed for the "C(NE)" Quality Category if they provide only limited evidence in these components. However, new and emerging researchers are encouraged to complete these components of their EP, as this may allow the EP to be considered for a higher Quality Category.
Assigning an "R(NE)" Quality Category	The EPs of new and emerging researchers that do not meet the standards set out above will be assigned an "R(NE)" Quality Category.
When are these criteria applied?	These criteria will be applied throughout the assessment process.

Section C: Allocating EPs to Panel Members and Obtaining Additional Input

Introduction

This section of the Guidelines provides guidance to help panel chairs allocate EPs to panel members for pre-meeting assessment and scoring, and to determine when EPs require additional input from outside the panel.

It may also be of interest to staff members in TEOs who are responsible for completing and assessing EPs, and to other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Allocating EPs to Panels and Panel Members

Allocating an EP

Although the TEO has nominated a panel for each EP, the TEC (through the panel chairs) will make the final decision on the allocation of EPs.

This table shows the steps in allocating an EP to a panel and it panel members.

Step	Action
1	Check that the panel covers the subject area identified in the EP. ▪ If **yes**, go to step 2 ▪ If **no**, see "Transferring an EP to another panel" below.
2	If additional input is required for the assessment of the EP, then make arrangements for this to be obtained. **See** Obtaining Additional Input on page 154.
3	Confirm/select at least two panel members to assess and initially score the EP. **See** this chapter Section G: Guidelines for Conflict of Interest and Confidentiality on page 179.
4	Select one of the panel members as the lead panel member.

Transferring an EP to another panel

Participating TEOs will have selected a panel, subject area and provided a primary field of research for each EP submitted to the TEC. These selections will be checked against the PBRF Guidelines for panel selection and finalised for the panel chairs' approval.

The transfer of an EP might be required for several reasons including, but not restricted to, the following:

- The primary subject area of research falls within the coverage of another panel
- Conflict of interest exists within the primary panel
- Relevant subject-area expertise may reside in a different panel.

On the advice of panel chairs, the TEC will transfer an EP to another panel. The panel secretariat will be responsible for recording the reason for the transfer. The new panel is responsible for assessing and reporting on the EP.

Where an EP has been transferred, the EP will be cross-referred to the original panel for additional input. Where the original panel is unable to provide additional input (eg owing to a lack of expertise or a conflict of interest), specialist advice will be sought.

Notification of TEOs

The TEO will be notified if an EP is transferred to another panel. This will take place at the end of the assessment process, as part of the reporting of results. The notification will include reasons why the transfer took place.

Obtaining Additional Input

When is additional input needed?

Additional input is needed when:

- The members of a panel cannot provide all the expertise necessary to fully review an EP that has been correctly assigned to it (ie the panel is the best one to undertake the assessment but it needs assistance in doing so)
- The EP has been transferred from the panel it was initially allocated to, and so additional advice from the original panel is required (see "Transferring an EP to another panel" above)
- A staff member has requested that another panel participates in the assessment of their EP.

Sources of additional input

There are two main sources of additional input:

- Cross-referral to another panel
- A specialist adviser.

More information on these can be found in the following topics.

Cross-Referrals to another Panel

General principles

The general principle for handling EPs that cross subject areas and panels is that one panel will be allocated the EP. The panel to which the EP is originally allocated will take primary responsibility for assessing it.

Cross-referral

Typically, an EP will be cross-referred to another panel (or other panels) when a significant proportion, but not a majority, of the outputs listed in the RO component falls within the subject areas covered by the other panel(s).

Using a Specialist Adviser

When to use a specialist adviser

Specialist advisers will be used when the other option for special advice, ie cross-referral to another panel, is not available.

A specialist adviser may therefore be used in the following circumstances:

- Where the relevant subject-area expertise for assessing a particular EP is not sufficiently available within a particular panel or across the panels

  OR

- Where conflicts of interest prevent a panel member with the relevant expertise from participating in the assessment of a particular EP

  OR

- Where members of a panel with the relevant subject-area expertise cannot reach a consensus on the scoring of components of an EP and the panel chair considers that specialist advice is required to assist in the assessment.

Responsibility for decision

The responsibility for determining whether a specialist adviser is necessary lies with the chair of the panel responsible for the EP.

In considering the use of specialist advisers, panel chairs will balance the need to guarantee the fairness, rigour and integrity of the assessment process against the need to avoid excessive costs, delays and administrative complexity.

Once the decision has been made, the panel secretariat will ensure that the specialist advice is obtained.

Selecting a specialist adviser

The table below shows the process for selecting specialist advisers.

Step	Action
1	Panel chairs consult with panel members to identify: ▪ Which subject areas covered by the panel may require specialist advisers ▪ Who would be best to fulfil the role with respect to the subject area in question.

table continues…

2	The chair, in consultation with the TEC Secretariat, develops a list of subject areas and corresponding specialist advisers.
3	The list is updated if additional requirements for specialist advisers are identified during the Quality Evaluation.
Note	The need for a specialist adviser may not be identified until the EPs have been received by the TEC.

Location of specialist advisers

A specialist adviser may be located either in New Zealand or overseas.

The TEC appoints the specialist adviser

The specialist adviser will be approached by the TEC to secure their agreement to fulfil the role.

The specialist adviser will be formally appointed by the TEC. This appointment will be for one Quality Evaluation only.

Rules for specialist advisers

Each specialist adviser will:

- Be required to sign the Confidentiality Agreement and complete the Declaration of Conflicts of Interest before receiving any EPs or NROs
- Receive a copy of these Guidelines and any other necessary documentation that will facilitate their task
- Receive a briefing on the assessment process and their responsibilities
- Receive clear and specific instructions on what is required; in most cases, the specialist adviser's focus will be on the quality of the research outputs
- Receive a copy of the EP and, if necessary, copies of the NROs.

Rules for specialist advice

The specialist advice will be provided to the panel. This advice:

- May be general in its scope, or may include recommendations on the component score(s) to be assigned to the EP component(s) for which the advice was requested
- Will **not** include advice on the Quality Category to be assigned to the EP
- Will be in the form of a brief written report
- Will be sent to the panel chair and the panel members responsible for the pre-meeting assessment and scoring of the EP.

The panel secretariat will make the specialist advice available to the rest of the panel, if required.

Communicating with specialist advisers

Specialist advisers will only be permitted to communicate with panel chairs, the relevant assessing panel members, and the TEC Secretariat.

Reporting on use of specialist advisers

TEOs will **not** be notified of the use of specialist advisers for individual EPs. Instead each panel will include, in its report at the end of the Quality Evaluation, a list of the specialist advisers it has used.

Guidelines for Special Input Requirements: Māori Research

Māori Knowledge and Development Panel

The Māori Knowledge and Development Panel will normally assess all EPs that contain kaupapa Māori or Māori-centred research.

This means that the panel will consider all EPs where there is evidence of research based on Māori world-views (both traditional and contemporary) and Māori methods of research. While other methodologies may also be used in the research, the inclusion of Māori methodologies will be the important criterion.

The panel-specific guidelines provide a full description of the coverage of this panel (see Māori Knowledge and Development on page 106).

Use of Māori specialist advisers

A panel will decide whether input from a Māori specialist adviser is required for an EP that has been allocated to it. A Māori specialist adviser would be required when the EP contains:

- Research involving Māori

  AND/OR
- Research that is specifically relevant to Māori.

Descriptions of these two kinds of research are given immediately below.

Research involving Māori

Research involving Māori is research where:

- One or more NROs address an issue of importance for Māori and show evidence of involvement with Māori

  OR
- The NROs are of such a nature that they are able to contribute to the understanding of issues affecting Māori.

Research specifically relevant to Māori

Research specifically relevant to Māori is research where:

- One or more of the NROs are specifically relevant to Māori

  OR
- Research impact or uptake may provide an opportunity to increase the understanding of issues affecting Māori.

Role of Māori specialist advisers

The role of Māori specialist advisers is to provide panels with advice on the quality of research outputs dealing with matters relevant to Māori.

Guidelines for Special Input Requirements: Pacific Research

Pacific research guidelines

Some of the quality-assurance mechanisms that are noted in the Pacific research guidelines (see Chapter 2 Section I: Pacific Research on page 133) differ from the mechanisms employed for other types of research. In particular, some of these mechanisms may be qualitative in nature, and may require ethnic and local knowledge (eg of notable individuals and institutions) that may not be held by panel members.

In particular, panel members should note that the opportunities for publication of Pacific research in mainstream journals, or through other mainstream dissemination channels, may be limited. Pacific research is often published as occasional papers, on websites and through a variety of Pacific media. Key Pacific journals that may not be widely known are nevertheless important sites for publishing because they reach Pacific communities, including communities of Pacific academics. Increasingly, such channels are developing quality-assurance processes.

Evaluating NROs presented in a Pacific language

If an NRO is focused on the analysis of Pacific cultures, concepts, values, or methodologies, it should be evaluated in its original language by the relevant panel (with the advice, as required, of a Pacific specialist adviser with skills in the language and subject area).

The subject matter of the NRO may be provided to the panel, if requested, in English translation **provided** that it will not be compromised in meaning.

Pacific specialist advisers

The role of Pacific specialist advisers is to provide advice on Pacific research and on the quality-assurance mechanisms for Pacific research outputs presented in an EP.

The format of EPs provides for TEOs to indicate whether the EP includes any Pacific research. Panels will have due regard to this information when determining whether input from a Pacific specialist adviser is required.

Critical skills required of Pacific specialist advisers

Pacific specialist advisers must be familiar with the relevant local protocol, language and customs to ensure they are conversant with local quality-assurance mechanisms. They should also have the relevant regional knowledge of these quality-assurance mechanisms.

Section D: Assessing and Scoring the Three Components of an EP

Introduction

This section of the Guidelines provides guidance on scoring the three components of an EP.

It is intended to be used by panel members. It may also be of interest to staff members in TEOs who are responsible for completing and assessing EPs, and to other stakeholders in the PBRF.

It contains the following topics …… on these pages:

General Guidelines for Assessing an EP

The three key components

An EP is assessed on each of its three components:

- Research outputs (RO)
- Peer esteem (PE)
- Contribution to the research environment (CRE).

General assessment principles

The following principles should be used in assessing EPs:

- The Quality Evaluation is a standards-referenced rather than a norm-referenced assessment regime – so there are no predetermined limits on the proportion of PBRF-eligible staff members who can be assigned to particular Quality Categories
- The standards used are based on the descriptors (with specific tie-points) for each of the three components of the EP
- The process is one of holistic assessment (which is based on **all** the information provided in the full EP, the descriptors and tie-points for each of the three components of the EP, and the descriptors for each Quality Category)
- The assessment is primarily about quality, not quantity
- Only the information contained in the EP, along with any NROs examined by the panel, will be used for assessment purposes

"General assessment principles" continues …

- There are explicit assessment criteria for the assessment of new and emerging researchers for the "C(NE)" Quality Category
- There is provision for the recognition of special circumstances affecting the quantity of entries in all components of the EP
- In the RO component, research outputs that meet the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20.) are essential; but they are not sufficient in themselves for achieving a funded Quality Category other than in exceptional circumstances
- Particular attention should be given to those EPs that:
  - are on, or close to, the boundaries between Quality Categories *and/or*
  - have a lower quantity in any of the three components because of special circumstances *and/or*
  - have unusual combinations of scores across the three components (eg 7 for RO but 2 for PE and 2 for CRE).

The 'Quantity' of Research

Quantity in the context of quality

The PBRF is primarily concerned with the quality of research and not the quantity of research output. However, the Quality Category to which an EP is assigned depends upon there being an adequate platform of research and the quantity of research is important in this context.

Platform of research

The research platform is the body of research outputs as described in the (up to) four NROs **and** the (up to) 30 'other' research outputs.

Other things being equal, research output scores are likely to be higher where the platform of research in an EP shows evidence of a greater breadth and/or depth of research activity.

However, there will always be exceptions to this (eg an EP where the quantity of ROs is relatively low, but which includes one or two outstanding research outputs that have had a major impact on a discipline).

Minimum requirement

At least one NRO is required before an EP can be accepted for assessment by the TEC.

Where an EP contains four or more research outputs, it is generally advised that a staff member submits four of these as their NROs. Staff members should ensure that their EP does not contain, for example, two NROs and a number of 'other' research outputs.

Special circumstances

Where there are fewer than four NROs in an EP, and where the reason for this falls within the criteria for special circumstances, details should be provided in the Special Circumstances fields of the EP. Each case will be looked at on its merits.

Where a panel concludes there is insufficient reason (in terms of Special Circumstances) for an EP's having fewer than four NROs, this may be reflected in the Final Quality Category assigned to the EP.

Questions to consider in assessing quantity

The following table outlines the issues panel members will consider when they assess the RO component and look at the adequacy of quantity.

Question	Factors/Considerations
Does the EP meet the general expectation set for the **quantity** of research outputs?	▪ Any factors outlined in panel-specific guidelines ▪ Does the staff member meet the criteria for a new and emerging researcher? ▪ Information contained in the Special Circumstances field of the EP ▪ The type of research outputs produced (eg in some subject areas, a book would normally be weighted more than an article) ▪ Particular weight should be given to NROs.
Is there an adequate platform of research for that score?	▪ See Scoring an EP: Allocating Points for Research Outputs on page 165 ▪ Consider both the NROs and the 'other' research outputs, but give greater weight to the NROs ▪ As a general rule, the research platform would be expected to be broader (ie contain more quality-assured research outputs) if higher scores are allocated, but there could be exceptions to this ▪ Special circumstances are not considered in the assessment of quality.
Are there any uncommon factors associated with the research outputs?	▪ Consider both quality and quantity ▪ Record these factors for the panel to consider.
Score the research output between 0 and 7	▪ Use the descriptors for the tie-points to guide the scoring ▪ Give greater weight to quality factors rather than quantity factors.
Which of the tie-point (ie scoring) descriptors best reflects the quality of the research output in the EP?	▪ See Scoring an EP: Allocating Points for Research Outputs on page 165.

Concerns about quantity

Where a panel member has concerns about the quantity of research outputs (ie it fails to meet the expectations), this should be discussed with the other panel members assessing the EP. If all agree that the quantity of research does not meet the expectations set out in these Guidelines (taking special circumstances into account where appropriate), then this should be recorded in their notes.

Panel meeting calibration

In the panel meeting, the panel will calibrate both quality (the scoring according to the tie-point descriptors) and quantity (the factors that determine whether research outputs meet the guidelines, and the appropriate breadth of the research platform at each tie-point).

Assessing the EP's Research Outputs

Critical importance

The RO component is the most important of the assessment components in the Quality Evaluation. This can be seen in its weighting – it accounts for 70% of the overall assessment of the staff member's EP (although the holistic assessment of EPs may override this weighting).

In addition, the RO component can influence the Quality Category assigned to an EP. For example, a staff member whose EP provides only limited evidence of peer esteem or contribution to the research environment may nevertheless have a "C" or "B" Quality Category assigned if their research outputs are of high quality. Conversely a staff member with high evidence of peer esteem or contribution to the research environment, but with no evidence of high-quality research outputs, would be unlikely to have an "A" or "B" Quality Category assigned to their EP.

Note: The assessment criteria for new and emerging researchers is different to that relating to other staff (see this chapter Section B: Assessing New and Emerging Researchers on page 151). New and emerging staff members may be awarded a "C(NE)" Quality Category **without any evidence** of peer esteem or contribution to the research environment.

General principles

The following general principles apply to the assessment of research outputs:

- Each research output must fall within the Definition of Research for the PBRF (see Chapter 1 Section D: What Counts as Research? on page 20). Please **note** that changes have been made to the PBRF Definition of Research for the 2006 Quality Evaluation.
- Any research output included in the EP, including confidential outputs, must have been produced (ie published, publicly disseminated, presented, performed, or exhibited) within the assessment period.
- All research outputs must be able to be made available to, and be assessed by, a peer review panel.
- All research activity will be considered on its merits – regardless of whether it is concerned with basic, fundamental, strategic, artistic or applied research. The assessment of research activity will treat the outputs of practice-based research fairly, in relation to the outputs of other research.

- All types of research output will be considered on their merits. One type of research is not considered to be of greater quality per se than another, simply because of the nature of the output type (eg a performance should not be considered of lesser standing than a publication in a journal).
- The absence of quality assurance for an output will not automatically be taken to imply low quality.

Additional rules

When Quality Categories are being determined or assigned, the following additional rules should be applied to the RO component score:

- A score of at least 2 will be required for the award of a "C" Quality Category
- An EP will not meet the minimum requirements for a component score of 2 if the only NRO in the EP is a masters or doctoral thesis.

Note: While these are necessary conditions, they do not imply that an RO score of 2 would automatically give a Quality Category of "C".

Establishing Expectations in Scoring the Three Components of the EP

Independent assessment of each component

The three components (RO, PE, CRE) will be assessed using the descriptors and tie-points for each component (see the next four topics in this Section, on pages 164 to 167) as well as the guidelines provided by the panel(s) to which the EP has been assigned or cross-referred.

Special circumstances

Special circumstances must be considered throughout the assessment process (see "Determining *preparatory* scores" and "Determining *cross-referral* scores", which begin on page 144, and also Chapter 2 Section F: Dealing with Special Circumstances on page 61).

New and emerging researchers

The assessment process provides specific assessment criteria for new and emerging researchers (see Assessing New and Emerging Researchers on page 151).

Allocating scores

Each of the EP's three components will be scored separately, using the 0 – 7 points scale shown in the following table.

Score	Significance
7	Maximum
6	Tie-point
5	
4	Tie-point
3	
2	Tie-point
1	Minimal evidence
0	No evidence supplied

Descriptions of scores

The following four topics provide more detailed descriptions of the criteria that panel members should take into account when assigning a score to each of the components of the EP.

Scoring the RO Component

World class

The use of 'world-class' in relation to the RO component is not intended to suggest that those research outputs should relate to international themes or cross-national comparisons, or that they should be the focus of international interest. Nor does world-class imply research outputs generated by international collaborations. World-class denotes a standard, not a type or focus of research.

Research outputs that deal with topics or themes of primarily local, regional or national focus or interest can be of world-class standard. For example, research concerning Māori or Pacific topics or themes may rank with the best research of its type conducted anywhere in the world.

The scope of world-class characteristics, as indicated in the tie-point descriptors in the next three topics, may overlap. It should be noted that the characteristics are not ranked in any particular order, that other characteristics may also denote world-class research outputs, and that the characteristics are not cumulative.

Scoring an EP: Allocating Points for Research Outputs

Points Scale

The following table provides a detailed description of the outputs to be assessed when assigning a score to the RO component of the EP.

Note: Scores of 6, 4 and 2 are tie-points; the descriptions alongside them are the tie-point descriptors.

Component		**Research Output (RO)**
Descriptor		This component is concerned with the production of quality research outputs. As part of the evidence in this component, staff members will present up to four NROs (ie their best research outputs). All NROs presented in the EP must be peer-reviewable (ie they can be reviewed by the panel or assessor if required). Research outputs are any form of assessable output embodying the findings of research and generated out of research activities, and include: ▪ printed academic work ▪ published and unpublished work ▪ work published in non-print media ▪ other forms of outputs such as patents, materials, products, performances, and exhibits. All outputs submitted in the RO component must meet the PBRF Definition of Research. They therefore exclude activities related to professional practice, scientific and technical information services and artistic work that do not embody the results of investigation. The EP may include research primarily concerned with methodological, theoretical and analytic issues (basic or strategic research), and/or applied research primarily directed to and impacting on practices, technologies or policies. The absence of peer review will not of itself be taken to imply low quality. Evidence of research outputs having been reviewed through peers is one measure of quality. However, other quality-assurance processes, including referees and commissioning processes (but not limited to these examples) shall also be given regard. There is potential for overlap between the RO and PE components. Assessors need to ensure that they adequately differentiate between pre-publication/production review as it relates to the quality-assurance process for the RO component and post-publication/production review that may be presented as part of the PE component. Most of the assessment time should be spent on the RO component.
Scores	7	
	6	The EP would be expected to demonstrate leadership and accomplishment in research exemplified by a platform of world-class research that includes highly original work which ranks with the best of its kind. In doing so, the EP would likely be characterised by, for example, outputs that represent intellectual or creative advances, or contributions to the formation of new paradigms, or generation of novel conceptual or theoretical analysis and/or theories or important new findings with wider implications. In doing so it could indicate research that is exemplary in its field and/or at the leading edge and/or highly innovative. It would be expected to demonstrate intellectual rigour, imaginative insight or methodological skill or to form a primary point of reference to be disseminated widely. A significant proportion of research outputs should be presented through the most appropriate and best channels. The research outputs would be likely to result in substantial impact or uptake. Such impacts could also include: product development, uptake and dissemination; or significant changes in professional, policy, organisational, artistic, or research practices.
	5	
	4	The EP demonstrates a platform of significant research output that has generated substantial new ideas, interpretations or critical findings and that makes a valuable contribution to existing paradigms and practices. The research outputs generate new information or ideas and are well researched and technically sound. The EP typically includes research outputs that are presented in reputable channels considered as being at least at a middle level of excellence. The research is likely to contribute to further research activities and to have demonstrable impacts reflected in developments that may include: product development, uptake and dissemination; or changes in professional, organisational, policy, artistic, or research practices.

	3	The EP demonstrates a platform of research activity (or developing research activity) and output that is based on a sound/justifiable methodology, and that makes a contribution to research within the discipline and/or to applied knowledge. This could be demonstrated by the production of research outputs that have been subject to quality-assurance processes.
	2	
	1	Minimal evidence of research outputs. The research outputs are assessed as having limited or no significance/impact, as contributing little or no additional understanding or insight in the discipline/field, and/or as lacking in the appropriate application of theory and/or methods.
	0	No evidence of research outputs.

Scoring an EP: Allocating Points for Peer Esteem

Points Scale

The following table provides a detailed description of the outputs to be assessed when assigning a score to the PE component of the EP.

Note: Scores of 6, 4 and 2 are tie-points; the descriptions alongside them are the tie-point descriptors.

Component		**Peer Esteem (PE)**
Descriptor		This component is concerned with recognition of the staff member's research by peers. Indicators of peer esteem include: ▪ Research-related fellowships, prizes, awards, invitations to share research knowledge at academic and end-user conferences and events. ▪ The ability to attract graduate students or to sponsor students into higher-level research qualifications, positions or opportunities because of the staff member's research reputation. ▪ Research-related citations and favourable review. In considering the former, it must be noted that the quantum of citations may be a poor proxy for esteem. Some research work may be cited frequently because it is considered to be an example of poor research. Consequently emphasis should be placed on evidence of positive review and citation. ▪ Participation in editorial boards.
Scores	7	The EP would be expected to demonstrate that the staff member has attracted world-class recognition through their research. This could be reflected by some or all of the following: the receipt of prestigious prizes, or fellowships of leading learned societies/academies or prestigious institutions, or special status with professional or academic societies, or editorship, membership of editorial panels or refereeing of top-ranked journals, or awards for research as well as invited attendance, or examination of PhDs and presentation at prestigious academic and industry conferences/events. An ability to attract overseas/top research students and scholars as well as to mentor their own students into postdoctoral and other fellowships, scholarships and positions in centres of research excellence could be demonstrated in the EP. A consistent record of favourable citations of research should combine with strong evidence of positive research reviews, contribution to knowledge in the discipline (including overseas where relevant), and movement into creative practice.
	6	
	5	The EP shows that the staff member, through their research, is recognised within New Zealand or elsewhere and is esteemed beyond their own institution. The EP demonstrates peer esteem by providing evidence of some or all of the following: the receipt of prizes, membership of a professional society or similar with restricted or elected membership or honours or special status with professional or academic societies, editorship or membership(s) of editorial panels of reputable journals within New Zealand or elsewhere, research fellowships of esteemed institutions, reviewing of journal submissions and book proposals, PhD examination or invitations for keynote addresses for conferences/events that are at a middle level of excellence. A consistent record of research citation and positive reviews of specific research outputs and/or overall contribution to research knowledge in a discipline or substantive area of knowledge or practice can be expected. The EP could demonstrate graduate students moving into research scholarships or postdoctoral fellowships or junior lectureships in departments with good research ratings.
	4	
	3	***(see next page)***

	2	The EP demonstrates a developing recognition among peers of the staff member's research contribution and developing rigour in the application of research techniques. This may be evidenced through attracting awards and invitations to present research to informed audiences, within and possibly beyond the applicant's immediate institution, as well as positive reviews and citations, or being asked to referee research outputs. Where the staff member has an involvement primarily in commissioned research outputs, reference to letters of commendation or other evidence of esteem by commissioning agents could be expected.
	1	Minimal evidence of peer esteem generated through research activities.
	0	No evidence of peer esteem generated through research activities.

Scoring an EP: Allocating Points for Contribution to the Research Environment

Points Scale

The following table provides a detailed description of the outputs to be assessed when assigning a score to the RO component of the EP.

Note: Scores of 6, 4 and 2 are tie-points; the descriptions alongside them are the tie-point descriptors.

Component		**Contribution to the Research Environment (CRE)**
Descriptor		This is concerned with the contribution to the development of research students, to new and emerging researchers and to a vital, high-quality research environment. This component has a number of aspects, including: ▪ Research and disciplinary leadership – including membership of research teams, and contributions to disciplinary development and debate and public understanding of the discipline. ▪ Contribution through students and emerging researchers – supporting and mentoring students to achieve postgraduate qualifications and to develop as researchers. ▪ Contribution to institutional vitality – supporting the development of research both within and across institutions (eg hosting visiting researchers). Attracting research funding may be an important contribution to institutional vitality, but the amount of research income in itself will not be taken into account.
Scores	7	The EP would be expected to demonstrate a contribution to New Zealand and/or international research environments (for example, through extensive research networks and/or collaborations) in addition to a strong contribution to the research environment in their organisation(s). The EP may show a history of attracting renowned scholars to the TEO and/or New Zealand. Evidence of research and disciplinary leadership may include some or all of the following: membership(s) of renowned collaborative research teams; membership(s) of research selection panels in New Zealand and elsewhere; research leadership at the highest levels (eg leading/participating in major research consortia including researchers outside of New Zealand); organising and hosting world-class conferences; the development of research infrastructure, or significant contributions to research-focused conferences or attracting funding. The EP is likely to show a strong and consistent history of successful supervision of students, particularly at PhD level, and could provide evidence of supporting research students to access and produce research outputs that are quality-assured (possibly in combination with academic staff). The EP could demonstrate contributions to developing new research capacity that go beyond student supervision, including among Māori researchers and Pacific researchers. Other contributions to debate in the discipline, both in New Zealand and beyond, and/or public understanding of developments in or implications for the discipline may be expected.
	6	
	5	***(see next page)***

	4	The EP demonstrates research and disciplinary leadership within the broader discipline in addition to contributing to the individual's own TEO research environment. Research and disciplinary leadership may include some or all of the following: collaborative research across disciplinary boundaries or across organisations and/or membership(s) of research selection panels or leading research consortia within New Zealand; and/or show evidence of attracting researchers and scholars to the TEO, and/or research funding; and/or organising and hosting conferences. The EP could show supervision of research activities of students and supporting them to produce research outputs, possibly in conjunction with academic staff. The EP could show a contribution to developing new researchers, including Māori researchers and Pacific researchers, or generating research opportunities (by attracting external funding as a research programme or project leader). Other contributions to debate in the discipline and/or public understanding of developments/implications in the discipline may be expected.
	3	
	2	The EP is likely to show contributions to the research environment primarily within the TEO or locality. Research and disciplinary leadership is likely to be reflected in participating in committees of organisational bodies or discipline-related bodies dealing with research matters. The EP could show contributions within the TEO, such as hosting of visiting researchers, organisation/hosting of conferences/seminars, and/or assisting in attracting research money, or as a named researcher in externally funded research programmes or projects. Other contributions to the discipline may be demonstrated such as successful supervision of masters and PhD students, including Māori students and Pacific students.
	1	Minimal evidence of contribution to research environment.
	0	No evidence of contribution to research environment.

Section E:
Selecting, Obtaining and Examining Nominated Research Outputs (NROs)

Introduction

This section of the Guidelines provides guidance on selecting, obtaining and examining nominated research outputs (NROs).

It is intended to be used by panel members. It may also be of interest to staff members in TEOs who are responsible for completing and assessing EPs, and to other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Selecting NROs for Examination

Why NROs are selected for examination

All the NROs cited in an EP must be available to a panel on request. Examination of one or more NROs listed in an EP may be necessary to enable a panel member to form a reliable judgement about the overall quality of the RO component and to score it appropriately. Panel members select which particular NROs they want to examine.

There are, however, a number of broad principles and considerations that panel members should bear in mind in selecting an NRO for examination. These are outlined below.

Number of NROs to be examined

Each peer review panel is expected to examine at least 15% of the NROs listed in the EPs that it is responsible for assessing.

As a rule of thumb, each assessor will review at least 15% of the NROs from the EPs they are assigned. However, the actual proportion reviewed may vary from assessor to assessor.

Panels may examine more than 15% of NROs if they deem this to be appropriate and necessary. (For individual panels' approaches to this, see Chapter 2 Section H: Panel-Specific Guidelines for Completing an EP, which begins on page 72.)

Guidelines for selection

The following list gives guidelines on the circumstances where an NRO is likely to be selected for examination:

- There is serious doubt about the appropriate score for the RO component of an EP; and, in the absence of examination of the output, there is a significant risk of an error of judgement being made (eg there is uncertainty as to whether the quality of the RO component is just above or just below a particular tie-point)
- A significant proportion of NROs (and 'other' research outputs) listed in the EP are non-quality-assured (and/or are confidential)
- The rigour of the quality-assurance processes is unclear to the panel member
- There is doubt over whether a particular NRO meets the PBRF Definition of Research
- Additional questions arise about the quality of the RO component, after the examination of a particular NRO
- An EP has been cross-referred to another panel (in this case it may be prudent for a panel member in the receiving panel to select one or more of the NROs for examination).

No type excluded

No particular type of research output (such as confidential outputs) should be excluded when considering which of the NROs to select for examination.

Different NROs may be selected

There is no requirement for the two (or more) panel members responsible for assessing an EP to select the same NROs for examination.

Obtaining the Selected NROs

Obtaining a selected NRO

Panel members will usually obtain NROs for examination through a request to the TEC Secretariat. The TEC will then request the TEO to provide the NRO.

If, however, the required NROs are readily available to the panel member (eg via their institution's library or electronically), the panel member is not obliged to make their request via the TEC Secretariat but may obtain a copy of the output(s) themselves. Where an NRO is obtained directly by the panel member, this must be recorded on the relevant form provided to panel members as it will form part of the official record of the panel processes followed.

10-working-days deadline

Where the TEC Secretariat requests an NRO from a TEO, this must be received by the TEC within 10 working days of receipt of the request by the TEO.

If deadline not met

Where the TEO does not make an NRO available for examination within the 10-day deadline without good reason, that NRO will not be considered in the panel's assessment of the EP.

Costs of providing the NRO	The TEO will meet costs of supplying the NRO to the TEC.
Unavailable for use	Requested NROs will not be available for use by the TEO during the period they are held for use by the panels.
Return of copies	The TEC will meet the costs of returning NROs to the TEO. However, TEOs must indicate whether **copies** of NROs that they provide to the TEC need to be returned to them.
Insurance	All NROs supplied by TEOs will be insured by the TEC to a maximum value of $100 per research output. It would be prudent for a TEO to insure any requested NROs that it values in excess of $100. **Note**: The TEC will insure a requested NRO only for the period between its arrival at the TEC and its return to the TEO.
Claims for lost or damaged NROs	Claims for lost or damaged NROs need to be made to the TEC on the relevant form (available from the TEC website) as soon as the loss or damage has been identified. In the case of NROs lost in transit to the TEC, the TEO should pursue a claim through the courier company concerned.

Examining NROs

Issues to consider in examining an NRO	When examining an NRO, the following issues should be considered: ▪ Does the output meet the PBRF Definition of Research? ▪ Are the details concerning the NRO, as stated in the EP, accurate? ▪ Is the research methodology clear, sound and appropriate? ▪ What kind of contribution does the NRO make to human knowledge, understanding or creativity (eg theoretical, conceptual, empirical, practical, artistic, etc)? ▪ Does the NRO best fit with the standard expected for the scores (tie-points) 2, 4 or 6?
Full analysis of each NRO is not required	Panel members are **not** expected to undertake a full, in-depth, rigorous and critical analysis of each NRO selected for examination (as they would if they were conducting a formal peer review of the output in question). For example, in the case of a written NRO it is expected that the panel member will peruse items such as the abstract (if there is one), the research methodology, the summary or conclusions, and the list of references. This will enable the panel member to check and clarify (as required) the nature, integrity and general quality of the outputs in question; and in so doing the panel member will be able to make a more-informed judgement about the overall quality (and score for) the RO component of the EP.

Issues with output details

The main reason for panel members to examine an NRO is not to check its details but to form a judgement about the quality of the RO component of that particular EP.

Nevertheless, in the process of examining an NRO, panel members may discover mistakes in the information provided in the EP (such as the title or location of the output, or the pagination, etc) or may have concerns about particular aspects of the output (eg the authorship or the contribution of the staff member in question). Such mistakes or concerns should be brought to the attention of the TEC Secretariat.

Note: Fundamental or serious errors in an EP must be brought to the attention of the TEC Secretariat (see "Nature and categories of errors" on page 226).

Additional advice

Panel members can request additional advice from another panel (through cross-referral) or from a specialist adviser where this is required in order to assess an EP in a fair and reliable manner (see Obtaining Additional Input on page 154).

Section F:
The Moderation Process

Introduction

This section of the Guidelines sets out the function of moderation within the Quality Evaluation and the processes by which that moderation will be carried out.

It is intended for panel members, TEOs and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Membership and Purpose of the Moderation Panel

Function

The function of moderation is to ensure that standards are consistent across peer review panels and that the PBRF guidelines are properly adhered to.

Panel membership

The Moderation Panel will consist of three moderators and the 12 peer review panel chairs. One of the moderators will be appointed as Principal Moderator and will act as chair of the Moderation Panel. The other two moderators are appointed as Deputy Moderators.

Secretariat

The Moderation Panel will be supported by its own secretariat.

Purpose of the moderation process

The moderation process is designed to promote systematic reflection on the issues of consistency, standards and cross-panel calibration by:

- Creating an environment in which the judgements of the peer review panels generate consistency on a cross-panel basis, while at the same time not reducing the panel judgements to a mechanistic application of the assessment criteria
- Providing an opportunity for independent review of the standards and processes being applied by panels
- Ensuring the consistent application of the special circumstances provisions and the consistent assessment of new and emerging researchers
- Establishing mechanisms and processes by which material differences or apparent inconsistencies in standards and processes can be addressed by panels
- Advising the TEC Board on any issues regarding consistency of standards across panels.

The Moderation Panel also acts as a support mechanism for panel chairs.

The Moderation Process

Four stages

There are four stages in the moderation process. These are described in the following table.

Stage	Event	Description	Timing
1	Initial Moderation Panel meeting	Moderation Panel reviews the scoring data to ensure the consistent application of assessment standards across panels.	November 2006
2	Second Moderation Panel meeting	Moderation Panel reviews the Final Quality Categories assigned by panels to ensure consistency across panels.	December 2006
3	Reconvening of panels (where required)	In the event that an inconsistent application of assessment standards is identified, panels may be reconvened to review their assessments.	January 2007
4	Moderation Panel reporting	The Moderation Panel reports to the TEC Board on the moderation process.	February 2007

Initial Moderation Panel Meeting

Purpose

The purpose of the initial Moderation Panel meeting is to create an environment in which the judgements of the panels are based on the consistent application of principles and standards across all the panels, while at the same time not reducing the individual panel judgements to a mechanistic application of the assessment criteria.

Participants

The participants in the meeting are:

- The Principal Moderator and the two Deputy Moderators
- The chairs of each peer review panel
- The Moderation Panel Secretariat.

What happens prior to the meeting

Prior to the meeting the Moderation Panel Secretariat will prepare:

- A review of the status of the EPs for each of the panels
- An analysis of the preparatory and preliminary scores generated by panel members, to identify any patterns of average scores or any distribution of Quality Categories that might suggest the potential for, or risk of, systematic bias or error in assessing EPs (these scores will be analysed by panel, subject area, TEO, and academic unit)
- An analysis of the standard deviations, standard errors, and box and whisker diagrams outlining the spread of results at each of the levels
- An analysis of the application of the special circumstances provisions and the assessment of new and emerging researchers
- An analysis of the results of any cross-referrals
- A comparison of the Quality Categories assigned in 2003 against the Indicative Quality Categories arising out of the preparatory and preliminary scores assigned by panel members.

What happens at the meeting

The main activities for the initial Moderation Panel meeting are:

- Reviewing the preparatory and preliminary results of the data checking and verification processes conducted by the TEC
- Identifying any patterns or variations in the preparatory and preliminary scores across the panels that might indicate potential bias, error, or the inconsistent application of assessment criteria
- Discussing any particular issues that have emerged for members of the panels that might impact on the consistent application of standards
- Agreeing to consistent approaches to issues that have been identified as being capable of compromising the integrity and consistency of the PBRF standards – for example, the consistent and appropriate treatment of special circumstances, new and emerging researchers, applied and practice-based research, use of specialist advice, handling of confidential outputs, or the approach to the assessment of unusual or uncommon types of research outputs.

Outcomes of the meeting

As a result of the meeting, the chair of each panel will, with assistance from their secretariat, be in a position to:

- Promote the principles of consistency
- Ensure adherence to agreed procedures and standards
- Identify areas of potential risk
- Communicate to panel members the Moderation Panel's agreed approach to any identified issues.

Information supplied to panels

The Moderation Panel will provide any background information considered necessary to assist panel members in understanding the nature and impact of any issues that have been identified as being capable of compromising the integrity and consistency of the PBRF standards.

Second Moderation Panel Meeting

Purpose

The purpose of the second Moderation Panel meeting is to provide an independent review of the standards that have been applied by panels in the assignment of Quality Categories to EPs.

Participants

The participants in the meeting are:

- The Principal Moderator and the two Deputy Moderators
- The chairs of each peer review panel
- The Moderation Panel Secretariat.

What happens prior to the meeting

Prior to the meeting, the Moderation Panel Secretariat will prepare an analysis of the Quality Categories agreed within each panel and across all panels.

What happens at the meeting

The second Moderation Panel meeting will involve an independent review of cross-panel consistency. The chair of each panel will briefly present their draft panel report, which may include comment on the practices of panel members, the panel process, and any issues that arose during the review process.

The Moderation Panel will consider:

- Whether there is evidence to suggest that the assessment system has not been applied according to the relevant guidelines
- Whether the pattern of Quality Category profiles generated by each panel appears credible and justified.

Where there are possible material inconsistencies and/or an inadequate explanation of recommendations, the Moderation Panel will ask the panel(s) concerned to review the Quality Categories they have assigned to their EPs, and/or provide further explanation of them.

Main areas of focus

It is not expected that there will be uniformity of results or that panels, subject areas, or TEOs will have similar profiles of Quality Categories. Instead, the Moderation Panel will focus on:

- Any 'outlier' results in respect of subject areas, TEOs or panels
- The extent to which panels have departed from, or confirmed, the quality profiles generated from the preparatory and preliminary scores
- A comparison of the 2006 aggregate Quality Categories profile and distribution against the 2003 aggregate profile and distribution
- The adequacy of the panels' reporting and explanations of their Quality Category recommendations.

The Moderation Panel will not direct

The Moderation Panel will not direct any panel as to what Final Quality Categories might be assigned. The final decision on Quality Categories is a matter for each panel's judgement.

Reconvening of Panels

Purpose

Where a panel has been required to undertake a review of their recommendations, it may need to be reconvened (by teleconference wherever possible). This is to address any material differences or apparent inconsistencies in standards, without having to physically reconvene the panel.

Participants

The participants in any such reconvening are:

- The chair and members of the panel required to review its recommendations
- The Principal Moderator and the Deputy Moderators
- The secretariat for that panel and the Moderation Panel Secretariat.

Before the panel reconvenes

Prior to the reconvening, the Moderation Panel will provide direction on the matters to be considered and how these should be addressed.

Following the reconvening

Following any such reconvening, the chair of the panel will be required to report in writing to the Principal Moderator:

- The reasons for the Moderation Panel's request for the review
- The outcomes of the panel's reconsideration, with explicit listing of any amendments resulting from that review
- A commentary justifying the outcome (ie any amendment to, or confirmation of, their original recommendations).

This report will be required in time for the Moderation Panel to prepare its own report to the TEC Board, and the information should also be included in the panel's own report to the TEC Board.

Moderation Panel Reporting

Purpose

The purpose of Moderation Panel reporting is to advise the TEC Board on the consistent application of principles and standards within and across panels. This report is intended to provide additional confidence in the recommendations presented to the Board by each of the panels.

Inputs

Inputs to the Moderation Panel's report to the TEC Board include:

- Panel reports to the Board
- Additional reports from the chairs of panels that were asked to review their recommendations
- Relevant benchmarking information.

Key Issues

The key material to be included in the Moderation Panel's report includes:

- The extent to which the Moderation Panel is satisfied that the assessment standards have been applied on a consistent basis
- Brief discussion of the recommendations from each panel, highlighting any issues that the Moderation Panel wishes to comment on and/or provide recommendations on
- Information on the application of assessment standards, particularly on an intertemporal basis, and in relation to the application of the special circumstances provisions and the assessment of new and emerging researchers
- Any areas where refinement of the Quality Evaluation might be required
- A commentary on the overall Quality Evaluation process, highlighting issues that may impact on consistency across some or all panels
- A commentary from the moderators addressing any matters of particular significance.

Section G:
Guidelines for Conflict of Interest and Confidentiality

Introduction

This section of the Guidelines provides guidance on conflict of interest and the maintenance of confidentiality during the Quality Evaluation process.

It is intended help panel chairs, panel members, specialist advisers and TEC staff conform to TEC policy. It may also be of interest to PBRF-eligible staff members, and other stakeholders in the PBRF.

It contains the following topics …… on these pages:

Conflict of Interest

Definition

A conflict of interest in the PBRF context is any situation where a panel member has an interest which conflicts or might conflict or might be perceived to conflict with the interests of the TEC in running a fair, impartial and effective peer review process.

While the conflict of interest itself is unlikely to be improper, it could lead to improper conduct or allegations of such conduct if not declared.

Note: In this context the term 'panel member' should be read to include panel chairs, specialist advisers, the TEC Secretariat, and other staff involved in the TEC processes.

Principles

The TEC's policy on conflict of interest is guided by the following principles:

- All conflicts of interest must be declared
- The action required depends on the nature of the conflict
- The panel chair has discretion to take decisions on the action required in any situation
- All actions on declared conflicts will be recorded
- Individual panel members can exclude themselves from panel discussions even if this is not required by the policy.

Identifying a conflict of interest

In determining whether a conflict is present or not, there are two questions to ask:

- Would a reasonably informed objective observer infer from the circumstances that the panel member's professional judgement is likely to be compromised in evaluating another researcher's EP?
- Does the interest create an incentive for the panel member to act in a way that would be contrary to the objectives of a fair, impartial and effective peer review process?

When to declare a conflict of interest

A panel member may declare a conflict of interest at any time during the Quality Evaluation process. When first appointed, all panel chairs and members must declare all known or potential conflicts of interest.

Other conflicts must be declared as soon as practicable after the person concerned realises that a conflict exists.

Interests Register

All conflicts of interest must be declared and entered on an Interests Register. This will be compiled prior to the first panel meeting.

Updating the Interests Register

The Interests Register must be updated at the start of any panel meeting.

Conflict at institutional and faculty level

Panel members who are employed by participating TEOs are able to assess the EPs of staff members from within their own institutions and faculties, provided there are no other interests that would give rise to a conflict.

Examples of possible conflicts of interest

Examples of possible conflicts of interest include, but are not limited to:

- Assessment of one's own EP
- Assessment of the EP of a colleague within the same academic unit and, in particular, the same disciplinary grouping or research team or research centre
- Assessment of the EP of a close colleague or someone reporting directly to the panel member or to whom the panel member reports
- Assessment of the EP of a family member/partner or close personal friend
- Assessment of an EP which cites, as one of its NROs, a work that the panel member has co-authored
- Where a panel member has a direct research collaboration or a past research collaboration that has generated research outputs presented in the EP
- Assessment of an EP of a colleague with whom the panel member has a direct teaching collaboration
- Assessment of the EP of an academic who is undertaking doctoral work under the supervision of the panel member
- Where both the panel member and the staff member may receive a personal financial benefit from a high Quality Category
- Having participated in the TEO's assessment of the EP(s)
- Having advised on the preparation of the EP
- Any situation where the panel member considers they might not provide an objective review of another researcher's EP because of a direct or indirect conflict of interest, or where a reasonable observer would consider the panel member to be conflicted.

Chair's responsibility

The chair of each panel, on the advice of the panel secretariat, will decide whether a conflict of interest exists in any instance. The chair is also responsible for ensuring that:

- All conflicts are recorded in the Interests Register
- Appropriate action is taken in respect of the conflict of interest
- The action taken with respect to declared conflicts is recorded in the minutes.

Actions to take

The nature of the action to be taken will depend on the extent of the conflict of interest. It may include, but is not limited to, one of the following actions by a panel member:

- Having no involvement in the EP assessment – and leaving the room when the EP is being discussed
- Having no involvement in the EP assessment – but remaining in the room when the EP is being discussed by the panel, and participating in the discussion if asked by the panel
- Possible involvement in the EP assessment and full participation in the panel discussion of the EP.

The chair has a conflict

Where the chair has a conflict of interest, this should be discussed with the secretariat assigned to that panel. In these circumstances, the panel will be asked to select a panel member to act as chair for the period that the chair is unable to participate.

Specialist advisers

The policy on conflict of interests also applies to all specialist advisers assisting a panel.

Role of moderators

As far as possible, a member of the Moderation Panel will be present during panel meetings when the EP of a peer review panel member is being assessed.

Conflict of Interest Raised by PBRF-Eligible Staff Member

Policy

In exceptional circumstances, PBRF-eligible staff members may submit a notice of conflict of interest in relation to a panel member.

"Policy" continues …

The following policy applies when an PBRF-eligible staff member wishes to submit such a notice:

- The circumstances giving rise to the conflict must fall within the guidelines on conflict of interest (see Conflict of Interest on page 179)
- The notice must be in writing, and must be specific as to the panel member affected and the circumstances giving rise to the notice
- The notice must be sent through the PBRF Office of the staff member's TEO (a notice received directly from a staff member will be returned to them, explaining that it must be relayed through the PBRF Office of their TEO)
- The chair will notify the panel member that a notice of conflict of interest has been received, giving the name of the PBRF-eligible staff member and the nature of the conflict. The panel member will be given an opportunity to discuss this with the chair if required
- The chair of the panel will determine what action, if any, is required.

Information required

Sufficient information must be provided in the notice to enable the panel chair to decide what action, if any, is required.

This information will include the circumstances giving rise to the potential conflict of interest. It should also include:

- Names
- Dates
- The location of the events
- A comprehensive summary of the actions or inactions leading to the alleged conflict.

Deadline for submitting notice of conflict of interest

The notice must reach the PBRF Panel Manager at the TEC no later than 31 July 2006. Notices received after this date will not normally be considered.

Notices received after 31 July 2006 will need to include the reason(s) why the matter was not raised by the cut-off date.

Where notice involves a panel chair

Where the PBRF-eligible staff member wishes to raise a matter in respect of a panel chair, the Principal Moderator will consider the notice. The decision on what action, if any, should be taken will rest with the Principal Moderator.

Confidentiality: General Policy

Responsibility

Panel members are responsible for taking all reasonable steps to maintain the security and confidentiality of the information provided to them, both during the Quality Evaluation and after it has ended.

Note: There is no time limit on how long confidentiality must be maintained.

General policy

All panel members, panel chairs, specialist advisers, and TEC Secretariat staff must sign the TEC's Confidentiality Agreement at the time of their appointment.

Confidentiality: Detailed Policies

The contents of EPs	The information contained in an EP should not be disclosed to any third person, other than a fellow panel member, a specialist adviser (where appropriate), or an employee of the TEC assisting the panels. This includes any research outputs the panel may receive as well as the Quality Category assigned to a staff member.
Confidential research	If any information in an EP or in supporting material is noted as confidential, care must be taken to ensure that this material is not disclosed (whether inadvertently or not) to any other person, except in the course of the proper activities of the panel.
Panel discussions and communication	All discussions and communications about EPs between panel chairs, panel members, specialist advisers, and TEC Secretariat staff must remain confidential. **Note**: This policy applies to both formal and informal discussions within and outside panel meetings.
Transmission of information	Care must be taken in sending information during the Quality Evaluation round, whether in hard copy or by electronic means. Material must not be sent or received by fax unless the intended recipient is present at the fax machine to receive the material at the time it is being sent. Similarly, care must be taken with passwords and security access information where information is being communicated by electronic means.
Storage and destruction of information	Hard copies of EPs and related information must be kept secure at all times to avoid the accidental disclosure to people not formally involved in the panel processes. All copies of panel-related information stored on electronic filing systems must be kept on personal directories not available to other persons. At the end of the 2006 Quality Evaluation round, hard copies of EPs or evaluative material must be returned to the TEC, or shredded or put in a confidential waste bin, or dealt with as otherwise directed by the TEC. Soft copies must be deleted promptly from the electronic filing system.
Official Information Act	All information received by panels, plus any notes prepared by panel chairs, panel members or specialist advisers, fall under the coverage of the Official Information Act 1982 and **may** be released on request. Judgement must, therefore, be exercised in making comments in such notes. The TEC will be responsible for dealing with any requests for information under the Official Information Act 1982.

Release of information	Release of any information is the responsibility of the TEC Board. Panel chairs, panel members and specialist advisers are not authorised to release any information on the outcomes of the peer review process. They may, however, share information that has already been publicly released by the TEC.
Other uses	Information received during the peer review process cannot be used for any purpose other than as provided for in the peer review process.
After the Quality Evaluation	After the Quality Evaluation, panel chairs, panel members and specialist advisers may talk generally about the panel peer review process but must not talk about individual EPs or assessments, or groups of EPs or assessments, and must not reveal panel decisions or the nature and content of discussions between panel members.

CHAPTER 4
POSTGRADUATE RESEARCH-BASED DEGREE COMPLETIONS

Overview of this Chapter

Chapter 4 of the Guidelines provides information on the PBRF's Postgraduate Research-Based Degree Completions (RDC) measure.

It contains only one section, Section A: The Research Degree Completions (RDC) Measure, which starts on the following page.

Section A:
The Research Degree Completions (RDC) Measure

Introduction

This section of the Guidelines provides information on the contribution that the RDC measure makes to the overall calculation of a TEO's PBRF funding.

It contains the following topics …… on these pages:

What is the RDC Measure?

Definition

The Postgraduate Research-Based Degree Completions (RDC) measure is a measure of the number of research-based postgraduate degrees completed within a TEO where there is a research component of 0.75 EFTS or more.

Contribution to funding

Of the total funds to be allocated through the PBRF in any one year, 25% are allocated based on the RDC measure.

What the measure includes

The RDC measure includes all completions of research-based postgraduate degrees (including but not restricted to PhD or Masters programmes) with an externally assessed wholly research component greater than or equal to 0.75 EFTS.

The measure is, strictly speaking, one of research *course* completions which is used as a proxy for the completion of research degrees.

Meanings of 'completion' and 'externally assessed'

Completion

To be submitted as a 'completion', the student has to have completed the research component of the degree (ie the course) successfully.

Note: This definition of 'completion' for the PBRF is identical to that used in the Ministry of Education's Single Data Return.

Externally assessed

For the purposes of the PBRF, 'externally assessed' means 'assessed by someone from another TEO in New Zealand or overseas, or by somebody in industry or in a public or private sector organisation. The external assessor should have the necessary expertise and/or skills for the assessment.'

The requirement for external assessment applies at the level of each individual student being assessed.

The evidence required to verify that external assessment has occurred is discussed in Validation and Verification of Research Degree Completions on page 220.

Foreign wholly-research students

Foreign-student completions in qualifying postgraduate research-based degrees can be included in the RDC measure.

Purpose of the measure

The RDC measure serves two key purposes:

- It provides a proxy (along with a number of other proxies) for research quality. The underlying assumption is that students choosing to undertake lengthy, expensive, advanced degrees (and especially doctorates) will tend to search out departments and supervisors with high reputations (in the relevant fields) for quality in research (and research training).
- It captures, at least to some degree, the connection between staff research and research training, thus providing some assurance of the future capability of tertiary education researchers.

How the RDC Measure is Calculated

Rolling average

The RDC measure will be calculated as a three-year rolling average from 2006.

Calculation of the 3-year rolling average

The rolling average is calculated using the following weightings:

- 50% for the RDC in the previous year
- 35% for the year before the previous year
- 15% for the year before that.

For example, the RDC calculations for 2006 and 2007 are as follows:

Funding Year	Calculation Method
2006	15% of the RDC for the year ended 31 December 2002 plus 35% of the RDC for the year ended 31 December 2003 plus 50% of the RDC for the year ended 31 December 2004
2007	15% of the RDC for the year ended 31 December 2003 plus 35% of the RDC for the year ended 31 December 2004 plus 50% of the RDC for the year ended 31 December 2005

Additional weighting factors

The RDC measure is also weighted in the funding formula for the following factors:

- The cost of the subject area
- Maori and Pacific student completions (an equity weighting)
- The volume of research in the course.

Subject-area Weighting

The subject-area weighting will be the same as that applied in the Quality Evaluation measure of the PBRF, as shown in the following table.

Subject Area	Weighting
Arts, Social Sciences, Business, Accountancy, Law, Teaching	1
Science, Computing, Nursing, Music, Fine Arts	2
Engineering, Agriculture, Architecture, Audiology, Veterinary Science, Medicine, Dentistry, Specialist Large Animal Science	2.5

Cost weighting

The cost weighting (for the subject area) will be determined by the funding category in the course register, as shown in the following table.

Student Component: Funding Category	Weighting
A, I, J	1
B	2
C, G, H	2.5

Equity weighting

The following table shows the equity weighting that will be applied for each individual completion.

Ethnicity	Weighting
Māori	2
Pacific	2
All other ethnicities	1

Identification of ethnicity

The ethnicity of students will be based on the student enrolment file for the latest enrolment by that student in the course.

Research-component weighting

The research-component weighting uses a 'volume of research factor' (VRF). The VRF is based on the volume of research included in the particular degree programme completed.

Research-Component Weighting	VRF
Less than 0.75 EFTS	0
0.75 EFTS to 1.0 EFTS research component	EFTS value of research component
Masters course of 1.0 EFTS thesis or more	1
Professional doctorate with research component	EFTS value of research component
Doctorate	3

How the RDC Information is Collected

Yearly collection

RDC information will be collected annually using the Ministry of Education's Single Data Return (SDR). This will include information contained in the course register, the student enrolments files, and the course completions file.

The course register includes a field that enables TEOs to identify those courses that qualify for the RDC measure. It also allows TEOs to clarify the level of the course.

TEOs need to provide the TEC with information on all new courses that meet the research requirement (ie they have an EFTS value between 0.75 and 1.0). TEOs will also need to identify those courses which have been divided into two parts to allow for part-time enrolments or to reflect the normal pattern of enrolment, but which qualify because their total EFTS value when combined is 0.75 EFTS or more. Participating TEOs will be responsible for identifying these courses.

CHAPTER 5
EXTERNAL RESEARCH INCOME

Overview of this Chapter

Chapter 5 of the Guidelines provides information on the PBRF's External Research Income (ERI) measure.

It contains only one section Section A: The External Research Income (ERI) Measure, which starts on the following page.

Section A:
The External Research Income (ERI) Measure

Introduction

This section of the Guidelines provides information on the contribution that the RDC measure makes to the overall calculation of a TEO's PBRF funding.

It contains the following topics …… on these pages:

What is the ERI Measure?

Definition

The External Research Income (ERI) measure is the total of a TEO's research income (as further defined below) that is received by the TEO and/or any 100% owned subsidiary of the TEO.

Contribution to funding

Of the total funds to be allocated through the PBRF in any one year, 15% are allocated based on the ERI measure.

Principles behind the ERI measure

The principles underpinning the ERI measure are:

- The generic principles that underpin the whole PBRF are applicable to ERI (see Guiding Principles of the PBRF on page 13).
- Except where otherwise amended by these Guidelines, generally accepted accounting principles as applied in New Zealand are to be used in the calculation of ERI.
- The ERI return will be certified by the TEO and subject to audit (see Validation and Verification of External Research Income on page 220).
- Only research funding from outside the tertiary sector (and contestable funding from within the tertiary sector) can be included as ERI.
- For transfers of funds between TEOs (such as sub-contracting for collaborative research contracts), TEOs must allocate external funds among themselves and must document the arrangements before counting these funds as ERI. Transfers of funds between TEOs and from TEOs to subsidiaries are otherwise not eligible.
- All eligible forms of ERI are treated equally in the funding formula.

ERI Inclusions and Exclusions

General principles

What is included in, and excluded from, the ERI measure is determined by:

- The purpose for which the income is received
- The nature of the entity receiving the income.

Income must be for research

Income included in the ERI must be for purposes of research as defined for the PBRF (see Chapter 1 Section D: What Counts as Research? on page 20).

See also Eligibility of Income from Trusts on page 196, which outlines some issues in relation to income from trusts.

Eligible recipients of income

Research income can be included in the ERI measure if it is received by a TEO and/or the 100% owned subsidiaries of a TEO.

Non-eligible recipients of income

The research income of the following recipients is **not** eligible for inclusion in the TEO's ERI:

- TEO staff members who receive ERI in their personal capacity (ie the ERI is received by them and not their employer)
- Subsidiaries and associates that are less than 100% owned by the TEO
- Controlled trusts (see "Test for inclusion" on page 196)
- Partnerships
- Joint ventures.

Date of ownership

For the purposes of the PBRF, the date at which ownership of a subsidiary is to be determined is 31 December of the year preceding the return. For example, for ERI returns for the 2005 year, ownership is determined on 31 December 2004.

Part year ownership

Where a subsidiary becomes 100% owned during the year, ERI can only be included for the period that a subsidiary has been 100% owned.

Included items

The following items may be included as ERI:

- Grants providing a stipend to a research student and/or the cost of a student's research degree (**note** that the research degree in these cases does not have to comply with the 0.75 EFTS required for the RDC measure – but it does require a research component)
- Funds provided specifically for the purpose of travel when used to enable access to a programme of research (the staff member(s) using the funds should be active in the research programme, rather than being an observer or visitor)
- Funds supplied for clinical trials provided the purpose of the trial meets the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20)

- Funds that support any other part of the full costs of a research programme (eg support for travel to conferences directly associated with a research programme even where the research programme itself may be otherwise funded internally)
- Capital grants provided to purchase assets explicitly for the purpose of conducting research (irrespective of whether or not such grants are ultimately applied to operating costs or to the purchase of research equipment)
- Capital which is provided specifically for research purposes and which is treated as an equity contribution in the TEO's financial statements (eg capital grants received for establishing Centres of Research Excellence)
- Income from CoREs (Centres of Research Excellence)
- Funds from the Strategic Development Fund provided specifically for the purpose of research.

Excluded items

The following items are excluded from ERI:

- Funding for student places provided through the student component of the EFTS funding formula
- Interest income accruing to research grants and contract research funds already received by the TEO
- Goods or services or cash contributions received on condition that the TEO uses them to purchase goods or services from the funder
- Grants provided to purchase assets, unless explicitly and exclusively for research purposes
- Income which is not earmarked by the donor for research, but which may be spent on research at the discretion of the TEO?
- Income received for purposes other than research (eg profits from workshops or fee-paying courses)
- Consultancy fees for projects that do not meet the PBRF Definition of Research – this will mean that consultancy agreements which include both research *and* consultancy elements must be apportioned so that only the research income is included as ERI
- Proceeds from the sale of intellectual property, whether or not that property is derived from research
- Revenue from activities associated with research (eg derived from goods or services that are a by-product of the research)
- Services provided in kind (ie where there has been no monetary payment) such as the free use of a laboratory for research purposes
- Funds that originate from the TEO or its 100% owned subsidiaries
- The GST component in any research funds received
- Funding received from the PBRF.

Collaborative Research Agreements

Joint research between TEOs

Where TEOs are jointly undertaking research, they must determine how any ERI should be apportioned between them.

To the extent that TEOs are not able to agree and the head research contract does not make specific provision for apportionment, the income in question must be excluded from the ERI measure.

The onus of establishing that the contract is joint research, and not a sub-contract arrangement, is on the TEOs.

It is anticipated that parties entering into external research contracts on a collaborative basis will explicitly acknowledge the ERI sharing arrangements in the head contract. Sector groups may, however, enter into some collective agreement on the method of apportionment to be used. For example, the NZVCC has agreed that PBRF-eligible ERI will be included in the ERI return for the university undertaking sub-contracted work and removed from the ERI return of the university letting the contract.

Joint research between a TEO and third party

Where collaborative research occurs with an organisation outside the tertiary sector, the income received by the TEO can be counted as ERI (ie it is not necessary to apportion the income under the head research contract as required for collaborative research arrangements between TEOs).

Eligibility of Income from Trusts

Test for inclusion

ERI includes income for research purposes from trusts where:

EITHER

The trust is not controlled by the TEO or the TEO is not the settlor, beneficiary or trustee. For example, research grants from Community Trust, Wellcome Trust or Lion Foundation are all legitimate ERI if they meet the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20).

OR

The trust is controlled by the TEO and the trust deed specifies that the funds from the trust are to be used solely for research.

OR

The TEO can prove that the funds have been provided to the trust specifically to support or fund research and that the funds have not been provided to the trust by the TEO or its 100% owned subsidiary.

Interest on trust income

Interest earned by a trust where distributions are exclusively for the purpose of research may be counted as ERI once it is distributed to a TEO as research funding. This is because there will be no practical way to establish the source of a donation from an arms-length trust (such as a community trust). Once the funds are available within the TEO, no interest can be recognised if the funds are invested by the TEO.

Recognition of Revenue and Liabilities

Recognition of revenue

TEOs should not include income for research work in the ERI calculation until that work has been undertaken. Further guidance is offered on matters of income recognition below.

Recognition of liabilities

Where a research contract specifies a clear requirement for a condition to be satisfied, and that condition has not been satisfied, then an obligation or liability exists and the research funds cannot be fully recognised as ERI. In some cases, it may be necessary to make an apportionment. This apportionment should reflect the underlying substance of the research contract. In some circumstances the proportion of total project costs expended may be the appropriate basis. The liability will therefore be the costs to complete as a proportion of total project costs multiplied by the research revenue.

Criteria for recognition of liabilities

To ensure greater consistency in the treatment of research income, TEOs must use the following criteria for recognition of liabilities.

A liability should only be recognised in the statement of financial position when:

- It is probable that the future sacrifice of service potential or future economic benefits will be required

  AND

- The amount of the liability can be measured with reliability.

Definition of liability

The definition of liability identifies three essential characteristics, all of which should be present for a liability to be recognised. These characteristics are set out in the following table:

Essential Characteristics	Interpretation
There must be a present obligation – ie, the TEO must have a duty or responsibility, which has not yet been satisfied, to act or perform in a certain way	For example, there is a contractual obligation to carry out the research or, more specifically, to deliver some research output
There must be adverse financial consequences for the entity, in that the entity is obliged to sacrifice service potential or future economic benefits to one or more other entities	There must be some obligation to repay or refund the research income, in whole or in part
The transaction or other event which gives rise to the obligation to sacrifice service potential or future economic benefits must have occurred	It must be clear that at the time of reporting there would be an obligation to repay

Entities and Responsibilities in Calculating ERI

Three entities

There are three entities involved in calculating the ERI measure. These are:

- The TEO
- TAMU (the Tertiary Advisory Monitoring Unit of the Ministry of Education)
- The TEC.

Their responsibilities

The following table outlines the responsibilities of the entities involved in calculating, and collecting information for, the ERI measure.

Entity	Responsibilities
TEO	▪ Completes an ERI return as part of the TAMU framework ▪ Prepares auditable workpapers that support its determination of ERI ▪ Provides a declaration on the preparation of the return ▪ Provides an independent audit opinion – this opinion will attest to the accuracy of the return and the correct application of these ERI requirements ▪ Provides the ERI information and audit opinion within the required timeframes.
TAMU	▪ Collects ERI information from participating TEIs ▪ Provides robust and accurate information to the TEC.
TEC	▪ Collects ERI information from participating PTEs ▪ Calculates the ERI component in the PBRF formula for each participating TEO ▪ Reports ERI information to the sector, including disclosure of the ERI information that has been collected.

Calculation of the ERI Measure

Rolling average

The ERI measure is calculated as a three-year rolling average.

Calculation of the 3-year rolling average

The rolling average is calculated using the following weightings:

- 50% for the ERI in the previous year
- 35% for the year before the previous year
- 15% for the year before that.

For example, the ERI calculations for 2006 and 2007 are as follows:

Funding Year	Calculation Method
2006	15% of the ERI for the year ended 31 December 2002 plus 35% of the ERI for the year ended 31 December 2003 plus 50% of the ERI for the year ended 31 December 2004

2007	15% of the ERI for the year ended 31 December 2003 plus 35% of the ERI for the year ended 31 December 2004 plus 50% of the ERI for the year ended 31 December 2005

Timings for ERI Information Collection

Yearly collection

ERI information will be collected annually as part of the normal year-end TAMU reporting cycles.

Timings for information collection

The key events and timings for the collection of ERI information are shown in the following table.

Target Date	Requirement
30 April	Financial Viability Returns to TAMU
30 May	Audit opinion to be received by TAMU

Preparing for the Collection of ERI Information

Checklist of questions

TEOs may wish to consider the following questions when preparing to collect ERI information:

- Have auditable workpapers been prepared that provide evidence of the total ERI?
- Is the basis for all research funding to be included in the ERI clearly established and documented (ie are contracts complete and referenced)?
- Does the documentation for all ERI to be included align with the PBRF Definition of Research (see Chapter 1 Section D: What Counts as Research? on page 20)?
- Where collaborative research is to be included in ERI, have the respective shares of each organisation involved in the research been properly established and agreed? If not, has the income been eliminated from the calculation of ERI?
- Where consultancy (or other non-research activities) and research are part of the same contract, has an appropriate allocation been made?
- Where ERI has been received from controlled trusts, is there evidence to prove that the funds were given to the trust for the purpose of research; or is there evidence to demonstrate that the sole purpose of the trust is to fund research?

CHAPTER 6
REPORTING THE PBRF RESULTS

Overview of this Chapter

Chapter 6 of the Guidelines provides information on how the PBRF results will be reported by the TEC to the tertiary education sector and the wider community.

It contains only one section, Section A: Reporting the PBRF Results, which starts on the following page.

Section A:
Reporting the PBRF Results

Introduction

This section of the Guidelines provides information on the TEC's framework for reporting the PBRF results, and especially the results of the 2006 Quality Evaluation round, to the tertiary education sector and the wider community.

It contains the following topics …… on these pages:

Reporting Purpose and Principles

Purpose

The reporting of the PBRF results will ensure public access to a wide range of information relating to research performance and activities of the participating TEOs. This information is expected to enhance accountability, both at the institutional and sub-institutional levels. It should also improve the ability of stakeholders (such as students and potential students, research funders and providers, the government, and business) to make informed decisions. For instance, the reporting of results should assist students in making choices about where to study, particularly at the research-degree level.

Principles underpinning the reporting framework

A number of broad principles underpin the public reporting of the PBRF results. These include:

- Protecting the confidentiality of individual staff members' Quality Categories
- Maintaining the confidence and co-operation of the academic community
- Minimising transaction and compliance costs
- Minimising incentives for game-playing by TEOs
- Contributing to international benchmarking of research performance within disciplines (as a tool to inform specific policy and funding decisions)
- Protecting the integrity of long-established academic disciplines while at the same time recognising emerging disciplines and multidisciplinary subject areas
- Having a sufficient level of disaggregation so that the quality scores and other published information are useful and meaningful for accountability purposes and for relevant stakeholders (eg students, research funders)
- Providing information of a comparative nature that will assist TEOs to benchmark their research performance and enable them to improve their decision making with respect to priority setting and the allocation of resources

"Principles underpinning the reporting framework" continues …

- Ensuring an appropriate alignment between the panels, subject areas, and cost weightings
- Adopting a consistent reporting framework over two or more Quality Evaluation rounds in order to facilitate comparisons over time
- Providing, wherever possible, the information necessary for evaluating the implementation of the PBRF and its impacts on the tertiary education sector.

Reporting Framework

Reporting on the 2006 Quality Evaluation

At the conclusion of the 2006 Quality Evaluation, a major report on the overall results will be prepared and publicly released. This report will follow the precedent of the comprehensive performance information reported in 2003. It will include a brief summary of the Quality Evaluation process, a commentary on the major findings, and a detailed description of the results and the projected funding impacts.

Implications of 'partial' round

Because the 2006 Quality Evaluation is a 'partial' round, staff members who were assessed in 2003 are not required to submit a revised EP. As a result, the reporting of the 2006 Quality Evaluation results will include Quality Categories assigned in 2003.

Five levels

The results of the 2006 Quality Evaluation will be reported at the following levels:

- For each participating TEO
- For each peer review panel
- For each subject area at the aggregate level
- For each subject area at the TEO level
- For each academic unit nominated by participating TEOs.

This information is being provided to enable stakeholders to ascertain not merely the average research quality of different TEOs, subject areas, etc, but also the quality profile at each of the levels of analysis.

Basis of results

The nature of the results reported will vary according to their level.

At all levels, however, information will be provided on the average quality score for all PBRF-eligible staff members (weighted on a FTE basis) together with data on the distribution of PBRF-eligible staff members across the six Quality Categories.

A PBRF-eligible staff member who did not have an EP submitted in the 2003 or the 2006 Quality Evaluation will be 'mapped' to the main area of degree-level teaching that they are involved in.

Individual staff members' Quality Categories

At the conclusion of the 2006 Quality Evaluation, TEOs that have submitted EPs will be notified of the results. This notification will include a confidential report on the Quality Categories that the peer review panels have assigned to individual staff members from that TEO.

It is assumed that each TEO will inform individual staff members about the Quality Category assigned to their EP. Where this does not happen, a staff member will have the right (under the Privacy Act 1993) to apply to their TEO or to the TEC for the release of that Quality Category.

If an EP was transferred to a panel different from the one requested in that EP, this information will be supplied to the TEO along with the reason for the transfer. It is assumed that TEOs will pass this information to the relevant staff members when the results of the Quality Evaluation are released.

There will be no **public** release by the TEC of the Quality Categories assigned to individual staff members' EPs.

Other information to be made available

At the conclusion of the 2006 Quality Evaluation, a variety of other information will be made publicly available. This includes:

- The public reports prepared by each panel (which are likely to contain the panel's observations on the subject areas and research performance demonstrated through the assessment of the EPs, comment on the differences between the distribution of Quality Categories for different subject areas, etc)
- The discussion of recommendations from the Moderation Panel's report for the TEC Board (which is likely to contain a brief discussion of the recommendations from each panel highlighting any issues of significance, cross panel-consistency, etc)
- The final report by the PBRF Manager to the TEC Board on the management and implementation of the Quality Evaluation
- An analysis of trends in relation to the results of the 2003 Quality Evaluation
- A commentary on the major changes since 2003, including the impact of the new "C(NE)" and "R(NE)" Quality Categories.

Report on funding

Each year the TEC will publicly report on the annual funding allocated to each participating TEO via the PBRF. This will include information on the funding of:

- The Quality Evaluation
- The RDC measure (including equity weightings)
- The ERI measure.

In addition, each year the TEC will publish the most recent annualised information available on the number of research degree completions in each TEO (including equity weightings) and the level of PBRF-eligible external research income generated by each TEO.

TEOs that merge

The Quality Evaluation results for TEOs that have merged between 31 December 2002 and 31 December 2005 will be reported separately. This will apply for the 2006 round only. Any staff members employed by the 'new' combined entity (ie since the merger) will be reported against that entity.

Demographic data (at the TEO level only)

The TEC will report a range of demographic data about PBRF-eligible staff members. This will include data on ethnicity, gender, age, and full-time versus part-time staff.

Other uses for PBRF data

In line with its policy on access to PBRF data, the TEC may from time to time release PBRF information to third parties.

The TEC may also from time to time use PBRF data to inform evaluative or similar work. Additional consultation with the sector on this matter is planned for the second half of 2005.

Quality Evaluation Data to be Reported

Five levels of reporting

As noted above, the TEC will report Quality Evaluation data at five levels: for each participating TEO; for each peer review panel; for each subject area (at the aggregate level); for each subject area (at a TEO level); and for each academic unit nominated by participating TEOs.

TEO level

The following 2006 Quality Evaluation information will be publicly reported for each participating TEO:

- The average quality score for all PBRF-eligible staff members (weighted on a FTE basis)
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "A" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "B" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R(NE)" Quality Category
- The total number of PBRF-eligible staff members (weighted on a FTE basis) at the PBRF Census date
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) who met the criteria for new and emerging researchers
- The total number of EPs assessed
- Standard deviations, standard errors, and box and whisker diagrams outlining the spread of results for each TEO (including the median, hinges, and smallest and largest data values)

- Analysis of trends in relation to the results of the 2003 Quality Evaluation
- The total number of postgraduate research degree completions (including equity weightings) in the preceding 4 years, ie 2002-2005
- The external research income (ie that which is eligible for the purposes of the PBRF) received in the preceding 4 years, ie 2002-2005
- Basic demographic data at an aggregated level.

Panel level

The following 2006 Quality Evaluation information will be publicly reported in terms of each peer review panel:

- The average quality score for all PBRF-eligible staff members (weighted on a FTE basis)
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "A" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "B" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) who met the criteria for new and emerging researchers
- The total number of EPs assessed
- Standard deviations, standard errors, and box and whisker diagrams outlining the spread of results for each panel (including the median, hinges, and smallest and largest data values)
- Analysis of trends in relation to the results of the 2003 Quality Evaluation
- The total number of PBRF-eligible staff members (weighted on a FTE basis).

Subject areas (at an aggregate level)

Forty-two separate subject areas have been identified for reporting purposes. (For a full list of subject areas see Peer Review Panels and Subject Areas on page 65.)

The following 2006 Quality Evaluation information will be publicly reported for each subject area:

- The average quality score for all PBRF-eligible staff members (weighted on a FTE basis)
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "A" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "B" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C" Quality Category

- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "R(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) who met the criteria for new and emerging researchers
- The total number of EPs assessed
- Standard deviations, standard errors, and box and whisker diagrams outlining the spread of results for each subject area (including the median, hinges, and smallest and largest data values)
- Analysis of trends in relation to the results of the 2003 Quality Evaluation
- The total number of PBRF-eligible staff members (weighted on a FTE basis).

Subject areas (at a TEO level)

The following 2006 Quality Evaluation information will be publicly reported for each of the 42 subject areas within a participating TEO that have five or more FTE staff members:

- The average quality score for all PBRF-eligible staff members (weighted on a FTE basis)
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "A" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "B" Quality Category
- Combined reporting of the proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C" or "C(NE)" Quality Category
- Combined reporting of the proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "R" or "R(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) who met the criteria for new and emerging researchers
- The total number of EPs assessed
- Standard deviations, standard errors, and box and whisker diagrams outlining the spread of results for each subject area (including the median, hinges, and smallest and largest data values)
- Analysis of trends in relation to the results of the 2003 Quality Evaluation
- The total number of PBRF-eligible staff members (weighted on a FTE basis).

Subject areas at a TEO with fewer than five PBRF-eligible FTE staff members will be reported under a separate category of 'Other'.

Nominated academic units

In the PBRF Census, all PBRF-eligible staff members (not just those who submit EPs to the TEC) will be allocated by their TEO to an academic unit within that TEO. Participating TEOs will also nominate the academic units for their institution.

The following 2006 Quality Evaluation information will be publicly reported for each nominated academic unit with five or more FTE staff members:

- The average quality score for all PBRF-eligible staff members (weighted on a FTE basis)
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received an "A" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "B" Quality Category
- Combined reporting of the proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "C" or "C(NE)" Quality Category
- Combined reporting of the proportion of all PBRF-eligible staff members (weighted on a FTE basis) whose EPs received a "R" or "R(NE)" Quality Category
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) who met the criteria for new and emerging researchers
- The proportion of all PBRF-eligible staff members (weighted on a FTE basis) submitted to the TEC for a quality rating
- Standard deviations, standard errors, and box and whisker diagrams outlining the spread of results for each nominated academic unit (including the median, hinges, and smallest and largest data values)
- The total number of PBRF-eligible staff members (weighted on a FTE basis)
- The total number of EPs assessed by the TEC.

Academic units with fewer than five PBRF-eligible FTE staff members will be reported under a separate category of 'Other'.

Calculation of average quality scores

In calculating the average quality scores at each of the five levels, the TEC will use the following conventions:

- Average quality scores will use an 11-step rating scale (0 – 10).
  Note: This rating scale is unrelated to the 0 – 7 rating scale used by peer review panels in scoring the RO, PE and CRE components of EPs.
- The 'Averages and Totals' at each level will be rounded to two decimal places.

Calculation of average numerical rating

The following table sets out the steps used to calculate the average numerical rating.

Step	Action
1	Multiply each individual staff member's Quality Category score equivalent (ie "A" = 5, "B" = 3, "C" = 1, "C(NE)" = 1, "R" and "R(NE)" = 0) by that person's FTE
2	Sum the results of Step 1 for the reporting level in question
3	Calculate the total number of PBRF-eligible FTE staff members in the TEO/peer review panel/subject area/academic unit in question
4	Divide the result of Step 2 by the result of Step 3

CHAPTER 7
COMPLAINTS ABOUT QUALITY CATEGORIES ASSIGNED TO EVIDENCE PORTFOLIOS

Overview of this Chapter

Chapter 7 of the Guidelines outlines the TEC's policies on complaints about the Quality Categories assigned to evidence portfolios (EPs).

It contains only one section, Section A: Handling Complaints about Quality Categories, which starts on the following page.

Section A:
Handling Complaints about Quality Categories

Introduction

This section of the Guidelines provides guidance on complaints about Quality Categories assigned to evidence portfolios (EPs). It specifies the nature of the complaints that the TEC will accept and investigate, and sets out the procedures for these complaints.

It contains the following topics …… on these pages:

Which Complaints will be Accepted and Investigated

Procedural errors only

The TEC will accept and investigate only those complaints concerning possible administrative or procedural errors – for example:

- The failure to assign a Quality Category to an EP
- A peer review panel's failure to follow the processes outlined in the Guidelines (eg a particular conflict of interest may not have been identified or managed appropriately).

Exclusions

The TEC will **not** accept or investigate complaints relating to substantive decision making by a peer review panel, including:

- The criteria for assessing EPs
- The guidelines on the conduct of the assessment process
- The composition of a particular peer review panel
- The judgements made by peer review panels concerning the quality of EPs.

Making a Complaint

Who may make a complaint?

Only a TEO may make a complaint.

Any complaints received from individual staff members will be referred back to the relevant TEO.

Complaints must be in writing

All complaints must be in writing. Each complaint must state the reasons for that complaint.

Where a TEO wishes to complain about the Quality Category assigned to more than one EP, a separate complaint (with accompanying reasons for the complaint) must be lodged with the TEC for each of the EPs.

Within 15 working days	Any complaint must be lodged within 15 working days of the TEO having been notified of the Quality Evaluation results.
Addressed to the Chief Executive	Any complaint must be addressed to the Chief Executive of the TEC.

Processing Complaints

Response in writing	The TEC will provide a formal response in writing in all cases.
Response time	The TEC will endeavour to deal with all complaints expeditiously. A response will be sent within 60 working days of a written complaint being lodged.
What will happen	On receiving a complaint, the Chief Executive will ask the appropriate TEC Secretariat staff to investigate the matter and provide an initial report. Depending on the nature of the complaint, an external person (or persons) may be asked to assist or advise the TEC. In the event that the complaint is upheld, appropriate action will be taken.

Possible actions The following table shows the kinds of action that may be taken:

Nature of complaint upheld	Possible actions
Simple administrative or data-entry errors concerning a Quality Category	The Quality Category in question will be altered as appropriate.
A failure of due process during the Quality Evaluation	▪ The matter will be reported to the TEC Board and advice sought on how the issue should be addressed ▪ Resolution could include reconvening the relevant peer review panel.

Fee required	TEOs will pay a fee of $200 per complaint to have their complaints investigated.
No further redress within the TEC	The TEC will not undertake further investigation of a complaint once it has made a formal response to the TEO in question, even though the TEO may remain dissatisfied with the response.
Other options	Complainants who are dissatisfied with the TEC's investigation and response to the complaint may seek a judicial review or may complain directly to the Office of the Ombudsmen.

CHAPTER 8
DATA CHECKING AND VERIFICATION

Overview of this Chapter

Overview

Chapter 8 of the Guidelines provides information on the checking, verification and validation of PBRF data.

It contains the following sections …… on these pages:

Section A: Validation and Verification

Introduction

This section of the Guidelines provides information on the framework and processes for checking, verifying and validating PBRF data.

It contains the following topics …… on these pages:

Data Checking and Verification Principles

Responsibilities

The Ministry of Education (MoE) and the TEC have agreed the following responsibilities in checking and validating PBRF data:

Data Type	Institutions	Responsibility
PBRF Census (Staffing Return)	All TEOs	MoE validates and TEC verifies
Postgraduate Research-Based Degree Completions	All TEOs	MoE validates and verifies
External Research Income (ERI) Audit Certificates	All TEOs	MoE validates
ERI information	TEIs only	MoE verifies
ERI information	PTEs only	TEC verifies
Evidence Portfolio (EP) information	All TEOs	TEC validates and verifies

Support of base principles

Data validation and checking supports many of the guiding principles of the PBRF – in particular the principles of consistency, credibility, efficiency, and transparency.

For example, the credibility of the PBRF will be quickly undermined if significant inaccuracies are detected and if no action is taken to address them.

All types of data checked

All types of data submitted for the PBRF from all types of TEOs will be checked. Checking and validation will not be confined to certain data types (eg NROs), nor will it focus only on one type of TEO (eg major institutions).

This principle provides a strong incentive for all TEOs (and their staff members) to provide accurate data to the MoE and the TEC.

Other existing mechanisms

The PBRF contains a range of constraints and mechanisms that will serve to enhance the accuracy and reliability of the data supplied by TEOs to the MoE and the TEC. These include:

- TEO internal quality-assurance processes
- The ability to check other information contained in EPs (eg prizes, citations, etc)
- The relatively small size of the academic community in New Zealand and the panel members' knowledge of the research of their disciplinary colleagues.

Most attention on risk areas

Most attention will be focused on the types of data where inaccuracies pose the greatest risks to the integrity of the PBRF. These areas include:

- Staff eligibility to participate in the PBRF
- The information contained in EPs and, in particular, in its NROs.

Variety of methods

A variety of methods for checking and verifying data will be used including:

- Random sampling
- Scrutiny by panel members
- Comparisons with other available data sets
- Research output cross-checks.

Panel members' role

Panel members will be encouraged to raise with the TEC Secretariat any concerns they have about the accuracy or eligibility of the data contained in EPs.

All such concerns will be properly investigated.

Site visits for data checking and validation

In order to minimise administrative and compliance costs, data checking and verification processes will generally be handled through correspondence rather than site visits.

Nevertheless, both the MoE and the TEC reserve the right to visit TEOs in order to verify data supplied in relation to the PBRF.

Further checking

Where significant errors are detected, the MoE and/or the TEC will make additional checks on other PBRF data submitted by the TEO(s) in question.

Where major errors are confirmed, the TEO(s) will be informed and appropriate changes will be made to the data originally supplied by TEOs.

TEOs to advise of errors

If TEOs discover significant errors in the data they have supplied to the MoE or the TEC, they will be expected to inform the relevant agency immediately.

Sanctions

The TEC will determine if and when sanctions are applied to TEOs. (See The Application of Sanctions on page 227.)

Framework for Checking and Verification of PBRF Data

Checking and verification activities

Checking and verification of PBRF data supplied by TEOs will involve the following activities:

- The validation and verification of staff members' eligibility
- The validation and verification of postgraduate research degree completions
- The validation and verification of external research income
- The validation and verification of EPs
- Corrections to original data
- The application of sanctions
- Reporting on data checking and verification to the TEC Board and the sector (this will be part of the PBRF Manager's final report to the TEC Board on the Quality Evaluation).

Note: TEOs may wish to put internal procedures in place for staff members to confirm the accuracy of data in their EPs. The TEC will have in place processes to check the accuracy of information contained in EPs and, in particular, to independently confirm the existence of research outputs. In addition, panel members can also challenge the accuracy and reliability of information presented in the EP. (See Validation and Verification of EPs on page 223.) There will also be procedures in place for managing inaccurate EP information (see Corrections to Original Data on page 227 and The Application of Sanctions on page 227).

Further detail

These checking and verification activities are discussed in more detail below.

Audit methodology

The audit methodology for the 2006 Quality Evaluation will be developed during the second half of 2005.

Validation and Verification of Staff Eligibility

Responsibilities and stages

The validation and verification of staff PBRF-eligibility data involves the following stages.

Stage	Description
1	The MoE validates the data in the PBRF Census and then forwards the data to the TEC.
2	The TEC validates the data in the EPs against the PBRF Census.
3	An audit of staff PBRF-eligibility is undertaken (this will include an audit of TEOs' application of the substantiveness test).

Audit	The audit may include: ▪ Random checks involving visits to TEOs and requests for TEOs to supply extracts from their payroll and personnel records (including staff employment agreements) ▪ Requests for TEOs to justify their inclusion, or exclusion, of certain staff members.
Scale of the audit	Every participating TEO will be audited. The sample size selected for the audit of staff PBRF-eligibility will be based on an assessment of risk. In the event of errors being identified, the need for an escalated audit will be assessed.
Where errors occur	Wherever significant errors or discrepancies are detected, additional data checking will be undertaken.
Cross-checks across TEOs	The audit may include a comparison across TEOs of the proportions of research fellows and teaching fellows who have been deemed eligible for inclusion in the PBRF. Major disparities will be investigated.

Validation and Verification of Research Degree Completions

Responsibility	The MoE is responsible for the validation and verification of data relating to research degree completions.
Checks	The MoE will use the National Student Index to check whether those completing PBRF-eligible research degrees were in fact enrolled in the relevant programme. The TEC will check to ensure that the degrees in question are flagged as PBRF eligible in the course register and that the data supplied in relation to equity weightings is accurate.
Evidence required	TEOs must provide evidence that all completions have been externally assessed. This may be demonstrated either through a policy governing such assessment arrangements or through a declaration by their CEO.

Validation and Verification of External Research Income

Audit opinion required	Each TEO claiming ERI will need to provide an independent audit opinion. The Audit Office has developed guidance for auditors acting on behalf of the Auditor-General who are engaged by TEOs to provide an audit opinion.
Part of annual audit	Compliance costs will be reduced if TEOs engage their auditors, as part of their annual audit process, to carry out the review work necessary to provide an audit opinion on external research income.

Audit date	Independent audit opinions must be provided to TAMU and the TEC by 30 May each year.
Additional costs	Any additional costs for this audit will be borne by the TEO.
Validation checks	The MoE and the TEC will validate the ERI returns by checking to ensure that independent audit certificates have been received.
Verification	Submitted ERI data may be subject to verification – by the MoE (TAMU) for TEIs, and by the TEC (Monitoring Unit) for PTEs. This verification may include the checking of TEO working papers and analysis of ERI declarations in more detail.
Threshold for audit opinion	TEOs that receive PBRF-eligible external research income worth **less** than $200,000 are not required to submit an independent audit opinion. These TEOs must supply the TEC with independent verification of their PBRF-eligible external research income in the form of either an annual report or copies of the working papers used to calculate the income.
CEOs' External Research Income Declaration	When TEOs submit their independent audit certificates to TAMU and the TEC, each CEO will be required to attach a signed declaration confirming that the ERI data is accurate. The form of this declaration follows.

CEOs' External Research Income Declaration continues …

Chief Executive Officer Declaration for a Tertiary Education Organisation participating in the Performance-Based Research Fund when submitting annual data on external research income to the Tertiary Advisory Monitoring Unit:

I, …….. (full name) being the Chief Executive Officer of …… (organisation name) hereby certify that:

For the year ended 31 December ……. (year) the PBRF external research income for …….. (organisation name) and its wholly owned subsidiaries is $ ……;

I have been responsible for the preparation of the PBRF external research income information and the judgements used therein; and

The PBRF external research income figure has been compiled in accordance with the relevant PBRF requirements and fairly reflects the PBRF external research income for the year ended 31 December ……. (year).

…… (organisation name) by:

Signature of Chief Executive Officer ……..

Name of Chief Executive Officer …….

Dated ……..

Validation and Verification of EPs

Validation and verification processes

Validation and verification of EPs involves the following:

- Declarations by TEO chief executives
- Electronic validation and random checking of EPs followed by reporting back to peer review panels
- Viewing of selected NROs (including cross-checks of NROs and 'other' research outputs)
- Notifications from members of peer review panels where concerns with information are identified, followed by investigation of such concerns.

These are discussed in more detail below.

CEOs' Evidence Portfolio Declaration

A declaration will be required from chief executives of participating TEOs to confirm both the accuracy of information contained in the EPs and the process of assessment within the TEO. The form of this declaration follows.

CEOs' Evidence Portfolio Declaration continues …

Chief Executive Officer Declaration for a Tertiary Education Organisation participating in the Performance-Based Research Fund when submitting evidence portfolios to the Tertiary Education Commission:

I, …….. (full name) being the Chief Executive Officer of

……. (organisation name) hereby certify that to the best of my knowledge all reasonable steps have been taken to ensure that:

a) The information contained in the Evidence Portfolios listed in the attached schedule is complete, accurate and complies with the PBRF Guidelines issued by the Tertiary Education Commission;

b) All the staff members who are being submitted to the Tertiary Education Commission for assessment in the Quality Evaluation meet the requirements for participation in the PBRF;

c) No PBRF-eligible staff members have been excluded from participation in the Quality Evaluation;

d) All the NROs identified in the submitted evidence portfolios are available on request for inspection by the peer review panels; and

e) ……. (organisation name) has complied with all other relevant PBRF guidelines, including those issued by the Ministry of Education.

…….. (organisation name) by

Signature of Chief Executive Officer ……

Name of Chief Executive Officer ……..

Dated ……..

Electronic validation of EPs

On receipt of EPs, the TEC will electronically validate the data received. For the most part, this will involve ensuring that:

- Mandatory data have been included
- Valid format and content have been supplied in those data fields where rules apply.

Other forms of electronic validation (eg verifying ISBN/ISSN numbers through the appropriate website connections) may also be undertaken.

Random checking of EPs

The TEC will conduct random checks of a proportion of EPs, including some from each TEO. This will use a risk-based sample selection that will be developed as part of the overall audit methodology.

Every participating TEO will be audited. The sample size selected for the audit of EP data will be based on an assessment of risk. In the event that errors are identified, an assessment will be made of the need for an escalated audit.

All aspects of EPs will be open to scrutiny, including data in relation to the RO, PE and CRE components.

Where possible and relevant, the data supplied by TEOs will be reviewed in comparison with other data sets, such as:

- TEO research reports
- TEO annual reports
- The grants awarded by research funding bodies (eg the Foundation for Research, Science and Technology, the Royal Society and the Health Research Council).

Because of possible differences in the nature of the data sets, an exact match will not necessarily be expected. Accordingly, investigations will be undertaken only in the event of significant discrepancies.

Viewing of requested NROs

TEOs will be required to provide any requested NRO to the TEC, or its nominated agent, within 10 working days after receipt of the request by the TEO. (Note that if a TEO is unable to comply with such requests within the specific timeframe, that NRO will be discounted from the panel's assessment of the EP.)

In addition to the NROs requested by panels for assessment purposes, the TEC will seek a sample of research outputs for the purposes of verification. The TEC will request from each TEO a number of research outputs – these will reflect each subject area and, where possible, each output type.

Particular attention will be given to the following types of research outputs:

- Those that cannot be checked using electronic databases
- Those that are non-quality-assured
- Those where the date of publication (public dissemination, presentation, performance, exhibition, etc) are at the limits of the assessment period.

The details of each output will be checked to ensure consistency with the information provided in the relevant EP. This may include investigation of quality-assurance processes and the contribution of staff members to multi-authored outputs.

Cross-checks of NROs and 'other' research outputs

A proportion of an EP's research outputs will be cross-checked against a number of publication databases (and other data sources). Primary attention will be on NROs, but 'other' research outputs listed in EPs will also be investigated.

The main focus will be on those types of outputs that are amenable to such checking processes – ie authored and edited books, journal articles, and conference proceedings.

Particular attention will be given to those aspects of the output where inaccurate information could affect perceptions of its quality (eg the number of authors, location details, pagination) and to outputs that bear a date at the limits of the assessment period. Where publication dates appear to be outside the assessment period and no explanation has been supplied in the EP, the relevant research outputs will be sought; a publisher's letter confirming the actual publication date will also be sought if necessary (and if possible).

Panel members' concerns

Panel members will note any concerns over the accuracy and reliability of any of the information contained in EPs.

All panel concerns will be investigated by the TEC Secretariat, and the results will be reported back to the relevant panel chair, the relevant panel members and, if appropriate, all the members of that panel.

Nature and Categories of Research-Output Errors

Nature and categories of errors

The audit of research outputs will focus on two broad categories of errors: 'fundamental' and 'serious'.

Fundamental errors

Fundamental errors are those that render research outputs ineligible (and thus the output is discounted from the assessment process). These errors fall into three sub-categories:

- The output was produced (ie published, performed, exhibited, etc) outside the assessment period for the 2006 Quality Evaluation
- The output was not authored by the person who submitted the relevant EP
- There was no evidence to confirm the output's existence.

Serious errors

Serious errors are those that materially affect a panel assessor's judgement on the quality of research outputs. These errors fall into six sub-categories:

- Claims that an edited book was an authored book
- Failure to include the names of co-authors, thus implying that the research output was sole-authored
- Claims that a conference contribution was a journal article (or a book chapter)
- Significant location errors that might affect an assessor's perception of an research output (eg the wrong publisher)

- Title errors that might affect an assessor's perception of a research output
- Claims that an output had significantly more (or fewer) pages (ie 30% plus or minus) than was actually the case.

The TEC expects TEOs to establish internal procedures that will ensure none of the research outputs presented in EPs contain these kinds of errors.

Reporting on investigation of errors

Wherever the TEC finds errors or discrepancies that may affect the Quality Categories assigned to EPs, the relevant panel will be informed. Such information will be supplied in advance of the panel meetings.

Significantly high numbers of errors and errors of a systematic nature will also be drawn to the attention of the Chair of the Moderation Panel and the TEC Board.

Corrections to Original Data

TEOs to be informed

Where fundamental or serious errors are found during the processes of data checking and verification, the relevant TEO will be informed and given an opportunity to respond. (For definitions of fundamental errors and serious errors, see "Nature and categories of errors" above.)

Changes

Data will be changed only in consultation with TEOs.

High levels of correction

If the error rate is above a tolerable level, then a further examination will be undertaken on other information submitted by that TEO.

The Application of Sanctions

Principles

The following principles will apply to the application of sanctions to TEOs:

- Policy making on the issue of penalties is the responsibility of the TEC, not the MoE
- Prior to the TEC applying sanctions, the relevant TEO will be informed and given an appropriate opportunity to respond
- The final decision on the application of any sanction will be the responsibility of the TEC Board
- Any sanctions will vary according to the magnitude, nature and reason for the sanction.

In the event that sanctions are used, their main impact will be to reduce a TEO's potential PBRF revenue and/or average quality score.

Actions to be taken

It is not possible to identify in advance every situation where sanctions may be applied. However, the following table shows actions that will be taken in relation to certain errors.

Error	Sanctions and Consequences
An NRO is found to be ineligible for inclusion in the Quality Evaluation (eg because it was produced outside the assessment period or because it fails to meet the Definition of Research)	▪ Research output excluded from assessment ▪ The TEO will not be able to submit a replacement output ▪ The exclusion of the research output may reduce the Quality Category assigned to the EP, with consequent reduction in the TEO's PBRF revenue and a change to reported quality scores.
Staff member found to be not PBRF-eligible	▪ EP will not be assessed ▪ This may mean a reduction in PBRF funding and a change to reported quality scores.
Failure to include an PBRF-eligible staff member in the PBRF Census	▪ Staff member in question will be included as an "R" or "R(NE)" ▪ Staff member will be included for reporting purposes under the relevant TEO, panel, subject area and academic unit.
A high error-rate or lack of confidence in the data supplied by a TEO	▪ Possible exclusion of all EPs submitted by that TEO from the Quality Evaluation process.

Timings for the Data Checking and Verification Processes

Timing: Quality Evaluation

The following table shows the timings for the validation and verification of PBRF data supplied by TEOs for the 2006 Quality Evaluation.

Activity	Timing
Validation of staff PBRF-eligibility through the PBRF Census	In June 2006.
Verification of staff PBRF-eligibility through the PBRF Census	Shortly after June 2006.
Validation and verification of EPs	Will commence as soon as possible after the TEC receives submissions The bulk of the work will be done during July and August 2006.
Escalated audit	In the event that problems are identified in a TEO's submission, an escalated audit will be conducted during August 2006.

Timing: RDC measure

The following table shows the timings for the validation and verification of RDC data supplied by TEOs.

Activity	Timing
Validation of research degree completions	Conducted annually in September.
Verification of research degree completions for indicative funding allocations	Following receipt of data in September.
Verification of research degree completions for wash-up payments	Conducted annually in March.

Timing: ERI measure

The following table shows the timings for the validation and verification of ERI data supplied by TEOs.

Activity	Timing
Validation of ERI information for the preceding year	Independent audit certificates and accompanying CEO declarations to be received by 31 May annually.

Timing of the specific information requests

Where the TEO is asked specific questions in relation to information provided for the PBRF, the information will normally need to be provided within 10 working days of the request.

Working papers and other relevant documentation should be available for inspection if required.

Confidentiality

All information obtained by the TEC or MoE from TEOs in relation to data checking and verification will be treated on a confidential basis, and will be retained as required. This will be done in compliance with relevant statutory provisions.

Where data checking and verification processes are outsourced, the third parties will be bound by confidentiality and conflict-of-interest policies.

More detailed audit schedule

The TEC will provide a more detailed audit schedule to TEOs following preparation of the audit methodology.

Reporting of Checking and Verification of PBRF Data to the TEC Board

Timing

A report on the conduct and outcome of data checking and verification processes will be prepared by the TEC Secretariat at the conclusion of the 2006 Quality Evaluation round.

Part of PBRF Manager's report

The data checking and verification report will form part of the PBRF Manager's report to the TEC Board on the conduct of the Quality Evaluation.

It is expected that this report will be published.

Section B:
Form of Evidence, Media and Formats Required for Research Outputs

Introduction

This section of the Guidelines provides information about the forms, media and formats that research outputs should be presented in, when they are requested by the TEC.

Research outputs may be requested for the following reasons:

- They are NROs that have been selected for examination by a peer review panel
- They have been selected for examination as part of the audit of research outputs.

This section contains the following topics …… on these pages:

The Form of Evidence Required for Requested Research Outputs

Required forms of evidence

The required forms of evidence for each type of research output are listed in the following pages.

Note: Electronic forms are preferred over all other forms. Electronic forms will generally be able to be submitted by email, provided they are less than 1Mb in size. Larger documents should be sent on CD-ROM or similar.

Other forms of evidence may be acceptable

Forms of evidence other than those listed below may be acceptable, provided agreement is obtained from the TEC and relevant panel chair. Please contact the TEC to seek acceptance of any other form not detailed here.

Required forms

The following table shows the required forms of evidence for each type of research output.

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Artefact, Object, Craftwork	One or more of the following forms are acceptable: ▪ Photograph and associated written documentation ▪ Written documentation ▪ Audio or video recording and associated written documentation ▪ Slides and associated written documentation.	One or more of the following forms are acceptable: ▪ Photograph and associated written documentation ▪ Written documentation ▪ Audio or video recording and associated written documentation ▪ Slides and associated written documentation.

"Required forms" continues …

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Authored book	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the book (if available); **otherwise** a photocopy of the book's title page and bibliographic details (including author(s), publisher, and publication date).
Awarded doctoral thesis	Print or electronic copy on PC CD-ROM or floppy disk. In the case of musical composition, the thesis may take the form of a portfolio of compositions.	Copy of the thesis (if available); **otherwise** a photocopy of the thesis' title page and bibliographic details (including author(s), university at which awarded, and publication date).
Awarded research masters thesis	Print or electronic copy on PC CD-ROM or floppy disk. In the case of musical composition, the thesis may take the form of a portfolio of composition.	Copy of the thesis (if available); **otherwise** a photocopy of the thesis' title page and bibliographic details (including author(s), university at which awarded, and publication date).
Chapter in book	Print or electronic copy on e-mail attachment, PC CD-ROM or floppy disk including a copy of the cover page and table of contents.	Copy or reprint of the chapter (if available) **and** a copy of the book's title page, contents page(s) and bibliographic details (including editor(s), publisher and publication date).
Commissioned report for external body	All of the following must be supplied: ▪ Print or electronic copy on e-mail attachment, PC CD-ROM or floppy disk ▪ Commentary, peer review or similar quality-assurance report from the commissioning body.	Copy of the report which includes title page, authorship details, and delivery or completion date.
Composition	▪ Printed musical score with explanatory notes. In most cases it is essential to provide a score. In the case of an electroacoustic composition, a recording is essential and a score or equivalent is optional. ▪ Audio cassette, CD, CD-ROM, minidisk, with explanatory notes. ▪ If the composition is part of an exhibition, visual documentation such as photograph or video recording, with explanatory notes. ▪ If composition is part of a film, a copy of the film supplied in video or CD format, with explanatory notes.	Documentation that includes the composer, title of the composition, and date of publication.
Conference contribution (all sub-types)	Print or electronic copy on e-mail attachment, PC CD-ROM or floppy disk. A video or audio cassette may accompany written material.	Copy or reprint of the paper/abstract/poster (if available), **and** a copy of the proceedings' title page, contents page(s) and bibliographic details (including editor(s), publisher and publication date).

"Required forms" continues …

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Confidential report for external body	A confidential research output can be in the form of any research output type – but, in all cases, the output type must be entered in the EP as 'Confidential Report'. The staff member must have gained permission for the confidential output to be released to the panel before inclusion in the EP. If permission has not been gained, the output will not be accepted. The output must be accompanied by commentary, peer review or similar quality-assurance report from the commissioning body.	Evidence as appropriate for the research output type.
Discussion Paper	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the discussion paper; **otherwise** a copy of the paper's title page and bibliographic details (including editor(s), publisher, and publication date).
Design output	One or more of the following forms are acceptable: ▪ Print output, eg journal article, conference paper (can be electronic copy on e-mail attachment, PC CD-ROM or floppy disk) ▪ Plan, working drawings and associated written documentation ▪ Computer model and associated documentation ▪ Animation of model output and associated written documentation ▪ Photograph or digital image and associated written documentation ▪ Video and associated written documentation ▪ CD-ROM and associated written documentation ▪ Slides and associated written documentation ▪ Interactive and active website, including downloads and any associated documentation. TEOs are discouraged from submitting a physical model. However, if there is no other alternative, the TEO should seek agreement for its submission from the TEC and the relevant panel chair. A physical model would be accepted only if it is compact and easily transportable. Associated written documentation must be provided.	Copies of any material sufficient to verify the design.
Edited book	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the book; **otherwise** a copy of the book's title page and bibliographic details (including editor(s), publisher, and publication date).

"Required forms" continues …

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Exhibition	All of the following must be supplied: ▪ A video, CD-ROM, or up to three documentary photographs of the exhibition ▪ Accompanying publications – including lists of works, room brochures and exhibition catalogues. The following must also be supplied, if this information is not covered in the EP: ▪ A comment on the scale and complexity of the exhibition and an indication of whether it was a sole-venue exhibition or, if touring, the extent of the tour (national, international; number of venues and length of tour).	Copy of written evidence such as exhibition catalogues, media advertisements/reviews, invitations or awards that set out the author, dates of the exhibition, title of the exhibition, and venue.
Film/video	The following must be supplied: ▪ A comment on the scale and complexity of the film or video if not covered in the EP and ▪ Video and associated written documentation or CD-ROM and associated written documentation.	Copy of the video recording (if available); **otherwise** copies of cover/notes sufficient to verify the recording.
Intellectual property (eg patent, trademark)	Staff members should provide date of acceptance (ie the date the patent or trademark was granted) of the trademark or patent and supporting documentation submitted for trademark or patent registration. Can be provided in print or electronic form.	Copy of the letter confirming the granting of the patents or trademark **and** a copy of the patent application form, showing the name(s) of the inventor(s).
Journal article	Print or electronic copy on e-mail attachment, PC CD-ROM or floppy disk.	Copy or reprint of the article (if available); **and** a copy of the journal's contents page and bibliographic details (including volume and publication date).
Monograph	Print or electronic copy on PC CD-ROM or floppy disk	Copy of the monograph; **otherwise** a copy of the monograph's title page and bibliographic details (including editor(s), publisher, and publication date).
Oral presentation	One or more of the following forms are acceptable: ▪ Transcription in print or electronic form in book, journal, conference proceedings, working paper or other print output ▪ Audio recording and associated notes ▪ Audio-visual recording in accepted format and associated notes ▪ Attestation by a scholar of acknowledged repute, either in New Zealand or elsewhere (the scholar may be an eminent kaumātua or an academically credentialled expert).	Copy of the transcript, recordings or attestation.

"Required forms" continues …

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Performance	If full details of the engagement have not already been supplied in the EP then they will be required. They must include: venue, whether a self-promoted concert or given under the auspices of an organisation (to be named), whether recorded for broadcast or for commercial release (eg a comment on the scale and complexity of the performance). At least one of the following will also need to be provided: ▪ Audio or audio-visual recording ▪ Transcription ▪ Attestation of performance or associated written documentation where appropriate to authenticate a performance or describe the research ▪ Print or electronic publication (eg of script or score) where appropriate.	Copy of written evidence such as a programme setting out the performers, dates of performance, title, and venue.
Scholarly edition	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the scholarly edition; **otherwise** a copy of the scholarly edition's title page and bibliographic details (including editor(s), publisher, and publication date).
Software	All of the following must be supplied: ▪ A copy of the software ▪ Details of the operating system and any other supporting software and firmware required to operate the software ▪ Details of the minimum hardware platform required ▪ Information on installation of the software ▪ Full documentation for the software ▪ Any other information that would inform the panel's assessment of the research output. For some types of software, it may be appropriate to provide a partial or full source code listing, but this is not mandatory.	See column to the left (Form Of Evidence Required).
Technical report	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the technical report; **otherwise** a copy of the technical report's title page and bibliographic details (including editor(s), publisher, and publication date).
Working paper	Print or electronic copy on PC CD-ROM or floppy disk.	Copy of the working paper; **otherwise** a copy of the working paper's title page and bibliographic details (including editor(s), publisher, and publication date).

"Required forms" continues …

Research Output	Form of Evidence Required	Verification Required (for audit purposes)
Other form of assessable output including but not limited to new materials, structures, devices, images, products, buildings, food products and processes, internet publication, published geological and/or geomorphological maps and explanatory texts	For any 'other' research output that is not listed above, the onus is on the staff member to provide research outputs in forms that can be assessed by the panel. Staff members should provide any written documentation or commentary that demonstrates that the presented outputs fall within the PBRF Definition of Research. For any of these outputs, the following are acceptable: ▪ Print output, eg journal article, conference paper (may be provided as electronic copy on e-mail attachment, PC CD-ROM or floppy disk), written documentation ▪ Plan, working drawings and associated written documentation ▪ Computer model and associated documentation ▪ Animation of model output and associated written documentation ▪ Photograph and associated written documentation ▪ Video documentation and associated written documentation ▪ CD-ROM and associated written documentation ▪ Slides and associated written documentation.	See column to the left (Form of Evidence Required).

Media and Formats Required for Requested Research Outputs

To be read in conjunction with preceding topic

The information here should be read in conjunction with the preceding topic The Form of Evidence Required for Requested Research Outputs on page 230, which describes the acceptable form for each type of research output.

Required formats

The following table shows the required formats and media in which research outputs can be presented.

Medium	Format
Audio cassette	Standard Philips cassette. (Must be provided in protective wrapper.)
CD	Standard music CD format or MP3 file. (Must be provided in protective wrapper.)
CD-ROM	Any recognised format including CD-R or CD-RW, provided it can be used on standard CD-ROM drives on Windows or Macintosh platforms using standard software and/or standard file formats for electronic documents or images. (Must be provided in protective wrapper.)

"Required formats" continues …

Medium	Format
Electronic document (includes e-mail)	MS Word (.doc format), Rich Text Format (.rtf format) or Adobe Portable Document Format (.pdf format).
Electronic image	JPG/JPEG or BMP or GIF.
Electronic Presentation	MS PowerPoint format.
Film	Film must be provided in PAL or SECAM format on either VHS video or CD.
Floppy Disk	DSHD format only, formatted for use with Microsoft Windows and using standard file formats for electronic documents or images. (Must be provided in protective wrapper.)
Minidisk	Standard Sony audio format. (Must be provided in protective wrapper.)
Photograph	No smaller than 6x4; larger sizes acceptable. (Must be provided in protective wrapper.)
Slides	35mm diapositive slides or OHP slides only.
Software	All of the following must be provided: ▪ A copy of the software ▪ Details of the operating system and any other supporting software and firmware required to operate the software ▪ Details of the minimum hardware platform required ▪ Information on installation of the software.
Video	VHS video in PAL or SECAM format only. (Must be provided in protective wrapper.)

Unacceptable formats

The following formats will **NOT** be accepted:

- DVD
- DVD-ROM (including DVD+R/+RW or DVD-R/-RW) and DVD-RAM
- S-VHS, VHS-C, DV, mini DV, Beta, etc
- DAT.

GLOSSARY

Term	Meaning
Assessment period	The period between 1 January 2000 and 31 December 2005. Only research outputs produced in this period are eligible for inclusion in an evidence portfolio for the 2006 Quality Evaluation round.
Census	See PBRF Census.
Co-authorship	Process by which a research output is produced by more than one researcher.
Component scores	The scores from '0-7' that are assigned to each of the three components of an evidence portfolio (ie RO, PE and CRE).
Contribution to the research environment (CRE)	Contribution that a PBRF-eligible staff member has made to the general furtherance of research in their TEO or in the broader sphere of their subject area. The Contribution to the Research Environment (CRE) **component** is one of the three components of an evidence portfolio. A contribution to the research environment **type** is one of the defined categories for listing examples of contribution to the research environment in an evidence portfolio. Examples of contribution to the research environment types include membership of research collaborations and consortia and supervision of student research.
Co-production	Process by which a research output is produced by more than one researcher.
Course	The smallest component of a qualification that contributes credit toward the completion of the qualification. Other terms used to describe a course include 'unit', 'paper' or 'module'.
Evidence portfolio (EP)	Collection of information on the research outputs, peer esteem, and contribution to the research environment of a PBRF-eligible staff member during the assessment period that is reviewed by a peer review panel and assigned to a Quality Category.
Excellence	Prime focus of the PBRF is rewarding and encouraging excellence. (For what excellence means in relation to the PBRF see Emphasis on excellence on page 12.)

External Research Income (ERI)	A measure of the income for research purposes gained by a TEO from external sources. (For a comprehensive definition see What is the ERI Measure? on page 193.) ERI is one of the three measures of the PBRF, along with the Research Degree Completions (RDC) measure and the Quality Evaluation.
FTE	Full-time-equivalent
Interdisciplinary research	Research that crosses two or more academic disciplines or subject areas.
Joint research	Research produced by two or more researchers.
Moderation Panel	Panel that meets to review the work of peer review panels, in order to ensure that TEC policy has been followed and that the Quality Evaluation process has been consistent across the panels.
Nominated research outputs (NROs)	The up to four best research outputs that the PBRF-eligible staff member nominates in their evidence portfolio. NROs are given particular scrutiny during the Quality Evaluation process.
Non-quality-assured research output	Research output that has not completed a formal process of quality assurance.
Panel	See Peer review panel and Moderation Panel.
PBRF Census	A process run by the Ministry of Education whereby participating TEOs provide a detailed Census of staff members participating in the PBRF Quality Evaluation process.
PBRF Census date	14 June 2006. The date at which participating TEOs provide a detailed Census of staff members participating in the Quality Evaluation process.
PBRF-eligible staff member	TEO staff member eligible to take part in the PBRF Quality Evaluation process.

Glossary continues …

Peer esteem (PE)	Esteem with which a PBRF-eligible staff member is viewed by fellow researchers. The Peer Esteem (PE) **component** is one of the three components of an evidence portfolio. A peer esteem **type** is one of the defined categories for listing examples of peer esteem in an evidence portfolio. Examples of peer esteem types include conference addresses and favourable reviews.
Peer review panel	Group of experts who evaluate the quality of research as set out in an individual evidence portfolio. There are 12 peer review panels, each covering different subject areas.
Points/points scale	The first stage in the assessment of an evidence portfolio is based on allocating points on a scale of 1 (lowest) to 7 (highest) to each of the three components of an EP.
Postgraduate Research-Based Degree Completions (RDC) Measure	See Research Degree Completions (RDC) Measure.
Primary field of research	The research field of the staff member's research activity during the assessment period, and especially that of the (up to) four NROs selected for their evidence portfolio.
Produced	In the context of the PBRF, 'produced' means published, publicly disseminated, presented, performed, or exhibited.
Quality-assurance process	Formal, independent scrutiny by those with the necessary expertise and/or skills to assess quality.
Quality-assured research output	Research output that has been subject to a formal process of quality assurance.
Quality Category	A rating of researcher excellence assigned to the evidence portfolio of a PBRF-eligible staff member following the Quality Evaluation process. There are six Quality Categories – "A", "B", "C", "C(NE)", "R" and "R(NE)". Quality Category "A" signifies researcher excellence at the highest level, and Quality Category "R" represents research activity or quality at a level which is insufficient for recognition by the PBRF.

Quality Evaluation	The process that assesses the quality of research output produced by PBRF-eligible staff members, the esteem within which they are regarded for their research activity, and the contribution they have made to the research environment. The Quality Evaluation is one of the three measures of the PBRF, along with the Research Degree Completions (RDC) measure and the External Research Income (ERI) measure.
Research	As defined for the purposes of the PBRF (see Chapter 1 Section D: What Counts as Research? on page 20).
Research Degree Completions (RDC) Measure	A measure of the number of research-based postgraduate degrees completed within a TEO where there is a research component of 0.75 EFTS or more. One of the three measures of the PBRF, along with and the External Research Income (ERI) measure and the Quality Evaluation.
Research output (RO)	A research output is a product of research that is evaluated during the Quality Evaluation process. The Research Output (RO) **component** is one of the three components of an evidence portfolio. A research output **type** is one of the defined categories for listing research outputs in an evidence portfolio. Examples include an edited book, journal article, composition, and artefacts.
Specialist Adviser	Expert in a particular subject area who is used to assist a peer review panel in evaluating a particular evidence portfolio.
PBRF Census	A process run by the Ministry of Education whereby participating TEOs provide a detailed Census of staff members participating in the PBRF Quality Evaluation process.
Subject area	One of the 42 PBRF subject areas (see "Panels and subject areas" on page 65).
TEC	Tertiary Education Commission.
TEO	Tertiary Education Organisation.

Glossary continues …

Tie-points	The standards expected for the scores 2, 4 and 6 in each of the three components of an evidence portfolio.
Total weighted score	The sum of the points allocated to each component of the evidence portfolio during the first stage of assessment, multiplied by the weighting for each component.

INDEX

Please **note** that many of the page references in this index refer to the initial page in a sequence of pages.