



Policies and Procedures

Appendix 2. Peer review in JNCC evidence and advice provision

JNCC Evidence Quality Assurance (EQA) Policy

2018/19
(Document version 16; 15 May 2019)

<https://jncc.gov.uk/about-jncc/corporate-information/evidence-quality-assurance/>

To find out more about JNCC visit <https://jncc.gov.uk/about-jncc/>

Appendix 2. Peer review in JNCC evidence and advice provision¹⁰

1. Introduction

Peer review is the expert assessment of concepts, methods and outcomes in evidence gathering and advisory processes; it can be a powerful tool in evidence quality assurance (EQA). Evidence provided by JNCC should be subject to a level of assessment proportionate to the proposed use (potential impact) of the evidence and its likely contribution to that use. Peer reviews can be conducted during the planning phase (development of a specification), whilst research is being undertaken, when the work is being finalised and when the end product is produced. Expert opinions and knowledge can also be peer reviewed.

Peer review can be formal or informal and conducted using a range of methods including: consultations; peer review panels; working groups; steering committees; scientific advisory committees; and expert consultations. Reviewers can come from within JNCC, Statutory Nature Conservation Bodies (SNCBs), partner groups, or be fully external and independent of government organisations. The selection of reviewers will depend on the scope and use of the evidence.

Peer review is helpful in assuring that data collection is fit for purpose, of suitable quality, and that the resulting evidence is interpreted appropriately by audiences. Independent expert scrutiny can be particularly important in cases where evidence is complex and likely to have a significant impact on decision-making and policy development. Peer reviewing provides an opportunity to ensure transparency in the evidence-gathering process.

2. When is peer review required?

It is the responsibility of advisors and project managers to quality assure evidence and advice and, as part of this process, to decide on any need for, and type of, peer review that will be required to meet Quality Assurance (QA) standards.

If required, peer review should be planned as part of project delivery, and sufficient time and resources built into project plans to ensure that the chosen peer review methods can be undertaken satisfactorily. External reviewers might need to be paid for their time and their travel and subsistence for taking part in meetings. Plans for peer review should be included in any project initiation documents, including the business case, and the project audit document (PAD).

Peer review is not always appropriate or possible, particularly if advice is time-constrained. A general risk assessment approach can help in deciding whether peer review is needed, at what stages in a project or advisory work it should be used, and which method would be most effective.

Refer to the risk ratings in the Evidence Quality Policy, section 5.2.

In applying the risk-based approach, the following considerations might be useful:

- The degree of potential political, environmental, economic and social impact.
- Likelihood of establishing a precedent.

¹⁰ This appendix is an edited version of EQGN 2, written in 2013-14 by Helen Baker and edited by Richard Ferris and Matt Smith

- How contentious the advice or decision is likely to be.
- The novelty of the issue being explored.
- Complexity of the issue and the existing evidence base.
- Difficulty of the analysis required.
- Timescale available for delivering advice.

Projects and advisory work with medium- or high-risk assessments are likely to demand peer review at some stage, whilst many low-risk activities are likely to require minimal or no peer review. Once a risk assessment has been made the level of peer review should be assessed for each stage of the project.

3. Levels of peer review

Listed in the table below is an indication of the types of advice that JNCC provides, the likely sources of information, and an indication of the proposed level of peer review staff could consider applying to these types of evidence products. Explanations of the different levels of peer review are presented in section 3 of this document.

Type of product	Source of evidence	Level of review
Quick advice	Expert knowledge ± limited review	1
Limited (shallow) reviews	Expert knowledge + limited review	1/2A
Moderate reviews	Expert knowledge + moderate review	2A/2B
Substantial (deep) reviews	Thorough review of evidence ± expert knowledge	2B-3B
Systematic reviews	Fully systematic review of evidence ± expert knowledge	2B-4
Survey products (including GIS)	Data collection, analysis and interpretation	3B-4
Methodologies (tools and models)	Thorough review of evidence collection methods and interpretation	3B-4

The table above presents a generic guide and there will be varying needs for the differing types of advice that JNCC produces. When deciding the level of review required, staff will need to take account of the risk model (EQA policy section 5.2), time constraints, and resource availability. Peer review within JNCC is likely to be a two-way process, with staff required to act as reviewers and experts. This will be necessary for the peer review system to be streamlined and sustainable.

Level 1: Self assessment

This level of QA is likely to be acceptable only for particular time-constrained low-risk and some medium-risk evidence and advisory activities. The level of expertise of the staff member is an important factor in judging use for medium-risk projects.

For advice that is time-constrained, self-assessment might be the only option available, but for many medium-risk and high-risk projects it would be best practice to seek the view of another expert (usually a suitably knowledgeable colleague within JNCC).

When undertaking a self-assessment review it is important to ensure the consistency of the advice and evidence being provided. It is important that staff continually work at developing skills necessary to conduct effective reviews and self-assessments.

Level 2A: Internal peer review

This level of peer review follows on from self-assessment and involves peer review by one or more people from within JNCC who possess relevant expertise. Low- and medium-risk work would typically be subject to internal peer review only, but in some cases this might be acceptable or necessary for high-risk work, especially if time-constrained or confidential.

An internal peer reviewer must possess relevant expertise. Reviewers may be:

- A JNCC staff member
- Line managers
- Programme leaders
- Directors

Level 2B: Peer review involving the SNCBs and relevant agencies

A similar approach to 2A can be applied, but also involving relevant staff from the SNCBs and other relevant agencies (e.g. SEPA, EA, CEFAS). Projects and advice that fall within UK coordination are typical candidates for peer review support from the SNCBs, for example collating evidence for national reporting or making changes to UK guidelines.

Level 3A: High level internal peer review

This next level of internal peer review should be carried out in cases where a high level of transparency is necessary due to the potential high risk or impact of the advice or resultant decision, or where there is a high degree of data complexity, novelty, technical difficulty, or financial value. Depending on the project or work, this level of peer review should be carried out by:

- An appropriate Director
- Science Management Board

Level 3B: High level peer review involving the SNCBs and relevant agencies

A similar approach to 3A can be applied, but also involving relevant staff or governance groups from the SNCBs and other relevant agencies. The Chief Scientists' Group (CSG) and relevant senior task and finish groups established by the CSG are likely to have a role. Independent members of the Joint Committee might also be involved in certain areas of work.

Level 3B: High level peer review involving non-governmental partners

In addition to other level 3 approaches, peer review of work with non-governmental partners is often used for long-term contracts or partnerships. Working or steering groups are often in place and will involve partners and usually staff from SNCBs. These groups act like 'internal' review bodies.

Level 4: External independent peer review

This level of peer review applies to instances where an independent review from outside JNCC, the SNCBs and government departments is required. This level should be applied to all high-risk work where time permits, especially when the work is considered controversial

and/or highly challenging, or where JNCC lacks specific skills. This level of peer review should be undertaken by an appropriate external or independent body, such as:

- A qualified and independent expert, or panel of experts, from outside government.
- Relevant partner organisation(s).
- An accredited professional review body external to government.

The following procedures should be followed when conducting an external peer review:

- A clear set of objectives needs to be identified and agreed upon.
- A list of experts with relevant expertise should be drawn up.
- Invitation to undertake the review should be sent to chosen experts (normally those who are available and have been judged to possess the highest level of expertise).
- Declaration of any conflicts of interest should be requested.
- An explanation of the purpose of the review, a proposed timetable for completion and terms of reference should accompany the invitation.
- Confirmation from the reviewer should be obtained, stating that he/she is willing to undertake the commission based upon the proposed terms. A contract will need to be drawn up if reviewers are being paid or travel and subsistence is likely to be provided for meetings.
- A minimum of two reviewers should be appointed (in cases where the topic is highly specialised it may only be possible to identify one suitable expert). However, using more than two reviewers will minimise the risk of late submission or failure to submit by the reviewer and may provide a more even-handed perspective on the topic.
- Reviewers should be made aware of particular contentious or technically challenging aspects of the work.
- A standard review form could be provided, which could include a request for the reviewer to self-assess their expertise (as the Research Councils do).
- Once the review has been undertaken and has been received, all suggested changes should be compiled. It may be necessary to contact the reviewer for further clarification.
- Each suggested amendment must be considered and changes should be made when considered appropriate.
- An accurate record of all proposed changes (both rejected and accepted) must be kept. The record should state how comments were dealt with.
- In some cases it may be deemed appropriate to obtain additional external independent opinion on subjects where reviewers are in disagreement.
- Draft documents, reviews, accounts of how suggestions were handled, and the subsequently amended text should be retained.
- Reviewers should be acknowledged in all publications unless they have requested anonymity.