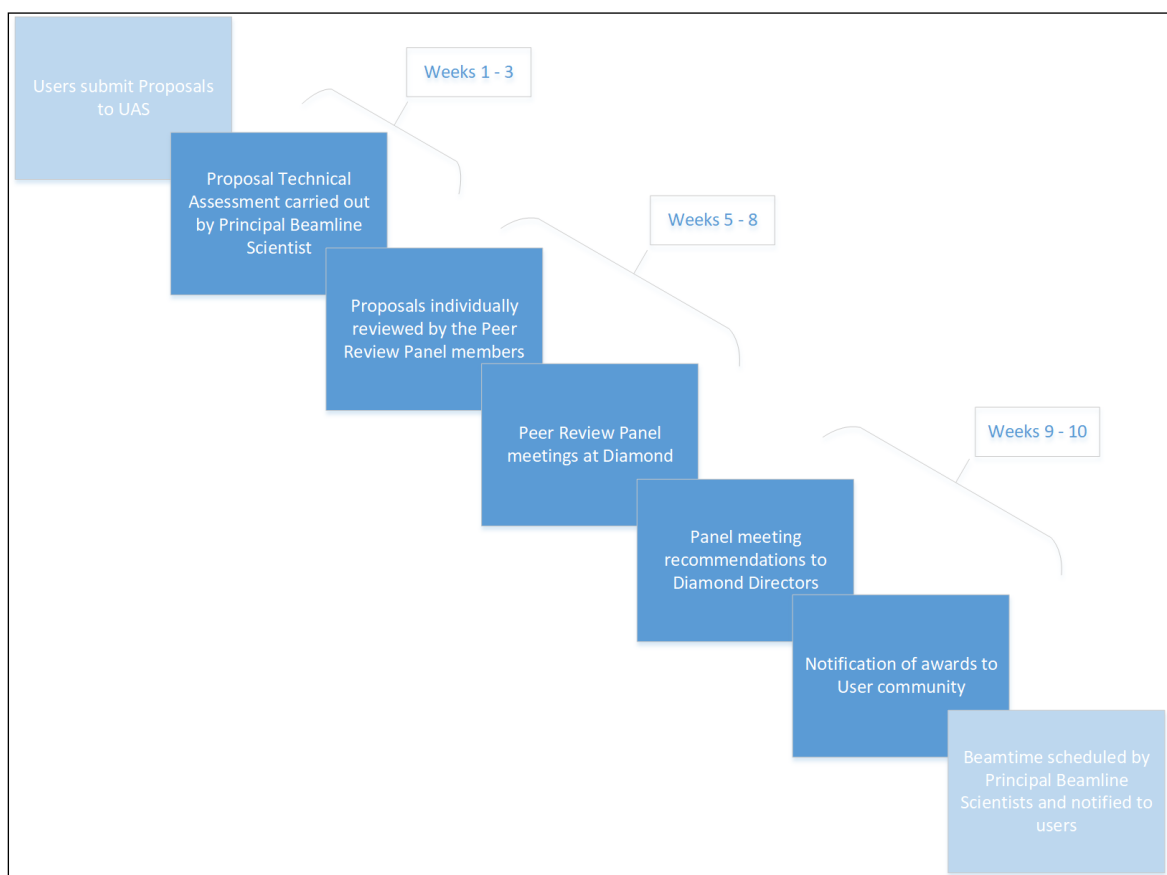


## The Diamond Peer Review Process

### Guidance for Peer Review

#### 1. Proposal Process

The process of reviewing proposals at Diamond is described and summarised in Figure 1. This document provides guidance for the sections of the process that occur between weeks 1 and 10 after the call deadline, highlighted below in Figure 1.



**Figure 1:** The Peer Review Process at Diamond

#### 1.1 Technical Assessment

After the call deadline the Principal Beamline Scientists (PBS) will carry out the technical assessment. The main purpose of this assessment is to determine whether the proposal is feasible. Each proposal will be graded:

- Yes: the proposal is technically feasible
- No: the proposal is not feasible
- Partially: only part of the proposal is feasible

Where the proposal is graded as being partially feasible, the PBS will provide a comment to explain what might or might not be possible.

The PBS may also contact the Principal Investigator for clarification about the proposed work or suggest that the proposal would be better suited to an alternative instrument. Details of any conversations will be included in the technical assessment, which will be uploaded to UAS.

The PBS will recommend an appropriate number of shifts for the proposed work that will include any setup time needed specifically to prepare their instrument for the user experiment.

Finally, for instruments in panels 2-12, the PBS will suggest three people from the peer review panel who would be appropriate to carry out the individual review of each proposal. Between the technical assessment and the individual peer reviews, the User Office and Senior Managers (Directors or Science Group Leaders) will review and balance the proposals assigned to peer reviewers to ensure an even distribution of reviews across the panel.

For instruments in panel 1 (the MX beamlines), the User Office will select one reviewer to be the Lead speaker for each proposal. All Panel 1 reviewers will read the proposals for new BAGs.

## **1.2 Individual Peer Review**

The User Office will ensure the final peer reviewer details for each proposal are present in UAS and notify all peer reviewers that they can now begin the process of the individual peer review. We will mark a conflict where the reviewer and proposal are from the same institute. If the panel member is aware of any other conflict, this can be noted and uploaded to UAS – this should be done in parallel to notifying the User Office, who will arrange an alternative reviewer.

It is important to notify the User Office promptly of any conflicts to enable an early change of reviewer where these exist.

On some occasions, to ensure a proposal is reviewed by an appropriate scientific specialist, a proposal might be passed to a reviewer from a panel who would not normally review for that instrument, this is termed a 'cross-panel review'.

Where a proposal has not been technically assessed as feasible, we still ask for a review of scientific merit.

The individual peer review should consist of reading the proposal and providing a score on a scale of 1 to 5 (defined below), using a suitable number which could include up to 1 (one) decimal point. The review should also include a comment to aid the panel meeting in coming to a final decision about the proposal.

Where a reviewer is unable to attend the review meeting or providing a cross panel review, high quality comments are particularly important.

Diamond has a policy that it can only fund research that is for humane and peaceful purposes. If, during your review you have a proposal which raises questions on this please inform the User Office, but do continue to review the proposal. In the peer review meeting flag it to the Secretary.

Grade	Definition
1	The proposed research is not well planned. Results would not make important contributions to fundamental or applied understanding, and work is not likely to result in publication. The need for synchrotron radiation is not clear.
2	The proposed research is feasible but may not significantly impact a specific field or scientific discipline. Publication may not result from this research. Synchrotron radiation is required.
3	The proposed research is important and is likely to produce publishable results. It is likely to have an impact on a specific field or scientific discipline.
4	The proposed research is of high international quality and has potential for making an important contribution to a specific field or scientific discipline. The work is likely to be published in a leading scientific journal.
5	The proposal involves highly innovative research of great scientific importance. Proposed research will significantly advance knowledge in a specific field or scientific discipline.

### 1.3 Peer Review Meeting

At the meeting of the panel, the two assigned panel members will be invited to lead the discussion of each proposal. The panel meeting will record an agreed unique grading, which will be used to rank the proposals, but will not be communicated to the applicants.

Each proposal should also be given a comment to be passed to the user. Where the proposal is rejected, the comment should be carefully composed to inform the user of what should be included to improve a future proposal. This is particularly important in the case of a borderline rejected proposal. The panel can recommend proposals just below the cut-off to be marked as reserve as sometimes extra time becomes available. In addition, the panel are invited to add any comments that should be communicated internally to Diamond management.

Panel members should be guided to award the recommended number of shifts as indicated by the PBS in their technical assessment since this will include any required setup time.

The limits on available beamtime will be indicated in the review documentation at the meeting and any decisions, in particular in relation to borderline cases, need to be considered and the possibility of reserve proposals stated where necessary.

There are three types of proposal that will be assessed by the peer review panel:

- [Standard Proposals](#): a single proposal to carry out an experiment at Diamond in one allocation period.
- [Block Allocation Group \(BAG\)](#) Proposals: a proposal from a number of Principal Investigators, potentially from several institutes, to carry out research over a 2 year period or longer.
- [Long Term Proposals \(LTP\)](#): a proposal from a single Principal Investigator, to carry out research over a 2 year period.

Having awarded a BAG or an LTP the expectation is that the peer review panel will continue to support the work for the full 2 years. The initial review of a BAG or LTP should take into account the ongoing support being offered and ensure that the science case for the proposal is solid. Often a group will submit continuous BAG proposals: it can be useful to assess the likelihood of ongoing Diamond usage based on previous use.

The number of shifts awarded to a BAG or LTP can vary at each allocation period and support can be withdrawn if the panel are not happy with the progress of the science.

#### 1.4 Decision by Diamond Directors

After the peer review meetings, the User Office pass the panel recommendations to the relevant Science Directors and Science Group Leader who will confirm the final decision. This will be uploaded to UAS and communicated with the users as an automatic email. In addition to the panel comment to users, they will also receive the wording of the technical assessment from the PBS.

Proposals are not reviewed by health and safety in advance of the technical and scientific reviews and all offers are made on the understanding that the proposed experiment can be carried out safely.

### 2. Terms of Reference for Peer Review Panel

- 2.1 To recommend to Diamond Management an allocation of beamtime for users for the following allocation period judged against the criteria of scientific excellence and timeliness, considering technical feasibility and safety issues.
- 2.2 To assess the appropriateness of the amount of beamtime requested for the experiments proposed taking into account the recommendation by Principal Beamline Scientists.
- 2.3 To identify relevant facility development issues, including software development, which may enhance the future capability of Diamond.
- 2.4 To comment on the experimental and user support facilities, including the peripheral laboratories and workshops.
- 2.5 To comment on the operation of the peer review process.

Duration of service will typically by 6 meetings (3 years). If a panel member is invited to become the panel chair, their service as chair will typically be at least 2 meetings (1 year).

### 3. Panel Membership

All peer reviewers are experts in their field who are neither employed by Diamond, nor involved in the management of Diamond. Additionally, each panel meeting will be attended by a secretary, who is a member of the instrument science team. Meetings may also be attended by independent observers as required by Diamond Management. Throughout the process the User Office are available to provide assistance.

All suggestions for panel membership are welcome and can be sent to the Diamond User Office ([useroffice@diamond.ac.uk](mailto:useroffice@diamond.ac.uk)) or the Deputy Director Physical Science, Andy Dent ([andy.dent@diamond.ac.uk](mailto:andy.dent@diamond.ac.uk)).

An honorary payment will be made to panel members for the work which they undertake when scientifically reviewing the proposals submitted to Diamond. In addition reasonable travel and subsistence costs for panel members will be reimbursed.