

**ESS Neutron Scattering Systems Project  
Neutron Beam Instrument Design Update Review**

**Committee Charge - NMX**

The purpose of this Design Update Review is to advise the NSS management on the status of the instrument project. In particular, the review should assess pertinent technical and project management changes since the project passed TG2 in December 2014, identify key interfacial issues that need to be managed and to determine whether the project is on track for completion of installation and cold commissioning in 2022.

Specific questions that the committee should address are provided below:

- 1) Do the high-level system requirements match the science case for NSS approved scope?
- 2) Is the proposed engineering design expected to meet the functional and performance requirements, and are interfaces properly identified and defined?
- 3) Have appropriate options and alternatives been considered in selecting the design approach? Are there further value engineering opportunities that should be considered?
- 4) Is the project schedule reasonable and are the cost estimates in line with the cost book value?
- 5) Have major project risks and safety hazards been identified, characterized, and mitigated where appropriate?

The committee is asked to compile a set of comments and recommendations along the lines of enquiry stated above, in the form of a short report to be submitted within two weeks of the review meeting.