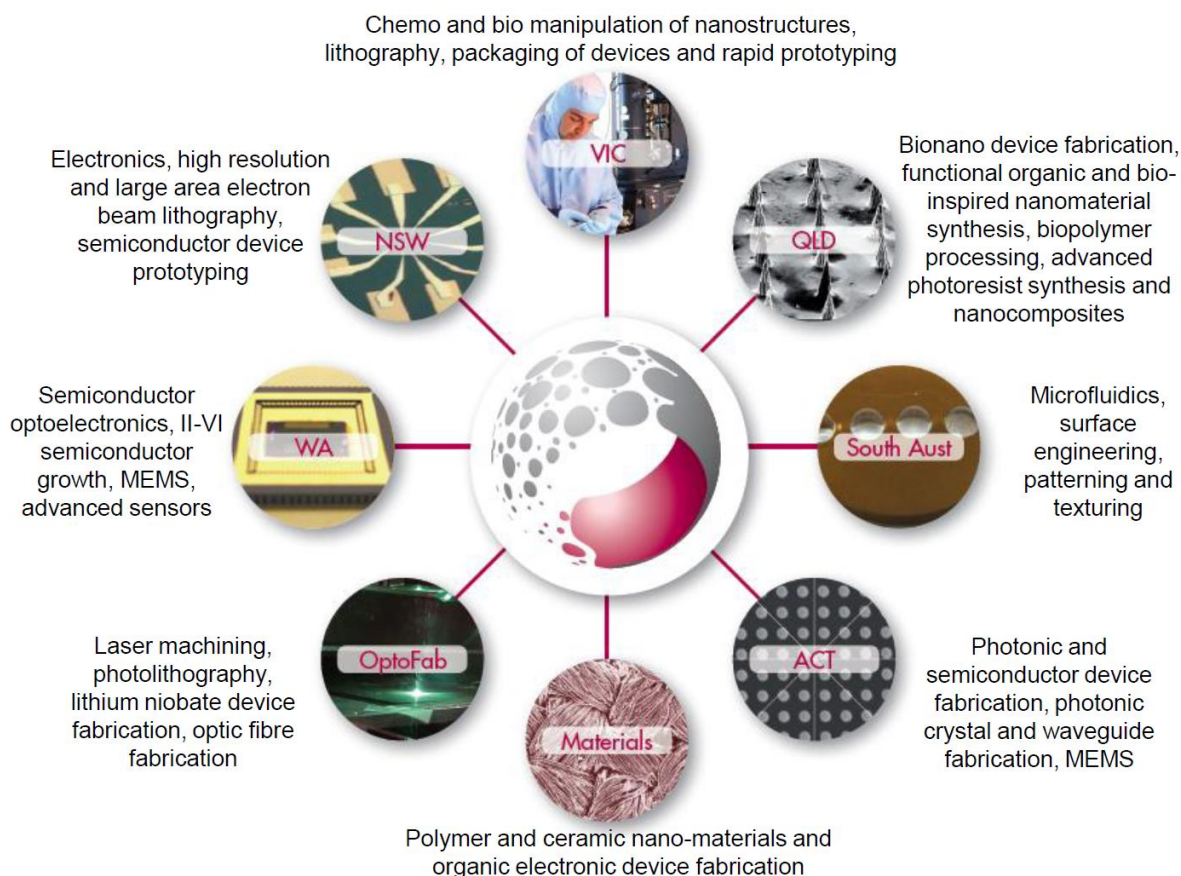




Australian National Fabrication Facility (ANFF): Advice for ARC and NHMRC projects commencing in 2016

Established under the National Collaborative Research Infrastructure Strategy (NCRIS), ANFF provides researchers and industry with access to state-of-the-art fabrication capabilities through a network of 8 nodes including 21 institutions throughout Australia. The ANFF facility portfolio consists of over 500 instruments valued at approximately \$200m.

The 8 Nodes of ANFF draw on existing infrastructure and expertise providing a research environment that supports world class interdisciplinary research in their respective fields. These fields include:



This document provides advice on both how ANFF can help with planning your research project and how to include ANFF facility access time in your application.

How can ANFF help in planning ARC and NHMRC funded research projects?

ANFF was established to support fabrication research in Australia such as projects funded through the ARC and NHMRC programs. ANFF can help with a successful proposal by providing project advice and a supportive research environment for the researcher, providing project advice, such as:

- **Facilities Required:** Understanding the ANFF portfolio available in planning your project. A searchable facility database is available at www.anff.org.au
- **Planning:** ANFF staff can provide advice on components of your project which require ANFF facilities and the approximate number of instrument hours required. Please contact the appropriate Node or [ANFF Ltd.](#)
- **Budgeting:** Information or quotes on the facility access and ancillary costs (e.g. project-specific accessories) required for your project can be obtained directly from the Nodes. Instrument access charges can be obtained through the ANFF [access and pricing policy](#). Please note that ANFF instrument charges *do not* fall under the category of “Bench Fees or similar laboratory access fees” (section A5.3.1 of the funding rules for ARC Discovery Projects).
- **Information on subsidies:** Most ANFF facility access is heavily subsidised for university or government programs. This should be recognised as an in-kind contribution, for example in section E2 of an ARC Discovery Project application. Contact [ANFF Ltd](#) or the relevant Node for a statement on the extent to which access charges are subsidised by University or Government funding.
- **Provide a supportive “Research Environment”.** For an ARC discovery project, if a significant portion of the experimental component of a research project is planned to be conducted in an ANFF laboratory, it is important to discuss the details with the relevant Node and articulate in the grant application how these provide the most supportive environment. The main elements of a supportive research environment which ANFF provide are as follows:
 - **Training:** ANFF provides regular training courses on the key capabilities of each Node. Dedicated technical staff are also on hand to either perform complex experimental procedures or provide one-on-one training of new users tailored to their individual research problem.
 - **Technical Support:** Dedicated technical staff of all ANFF facilities are on hand to ensure they are operating at an optimal level and also to provide advice during user sessions.
 - **Research Support:** Each Node of ANFF houses a critical mass of academic knowledge, technical know-how and world class research facilities to provide Australia’s most well supported academic centres in fields listed on page 1. By performing projects in the relevant Nodes the researcher will become part of the ANFF collaborative network and be mentored by leaders in the Nodes respective fields.

Details of how to include facility access costs in ARC and NHMRC grant applications follow.

ARC Example

Grant proposals to the ARC must be submitted in their online Research Management System (RMS). For ARC Discovery Project applications 2016, you should include the access costs as a line item in the 'Project Costs' table (Part D) under 'Other' as shown in the examples below.

In the following example, the project requires access to an Electron Beam Lithography (EBL) unit for one sample per week, at 2 hours per sample, for 40 weeks in Year 1, which equates to 80 h of beam time. At \$50 per hour for access charges, this translates to a total cost of \$4,000 for instrument access in Year 1 of the project (see Step 4).

STEP 1: If your project involves contributions from an organisation such as your host university, you will need to add the detail of your host university under 'Add Organisation Participant...' In the example below, The University of New South Wales was added as the Administering Organisation participant.

Participants

#	Name	Participant Type	
1	The University of New South Wales	Administering Organisation	▼ ▲ ✕
2	The University of Melbourne	Other Eligible Organisation	▼ ▲ ✕
3	United Nations High Commissioner for Refugees	Other Organisation	▼ ▲ ✕

-- Select Organisation Role -- Search

Can't find the organisation you are looking for? If you know the Australian Business Number please add the organisation for use with RMS. Otherwise, please contact the ARC for assistance.

Participants

#	Name	Participant Type	
1	The University of New South Wales	Administering Organisation	▼ ▲ ✕
2	The University of Melbourne	Other Eligible Organisation	▼ ▲ ✕
3	United Nations High Commissioner for Refugees	Other Organisation	▼ ▲ ✕

Administering Organisation UNSW Search

Name

The University of New South Wales Add



STEP 2: Within the proposal summary screen, click on 'D - Project Costs'.

Action Centre / DP160100006

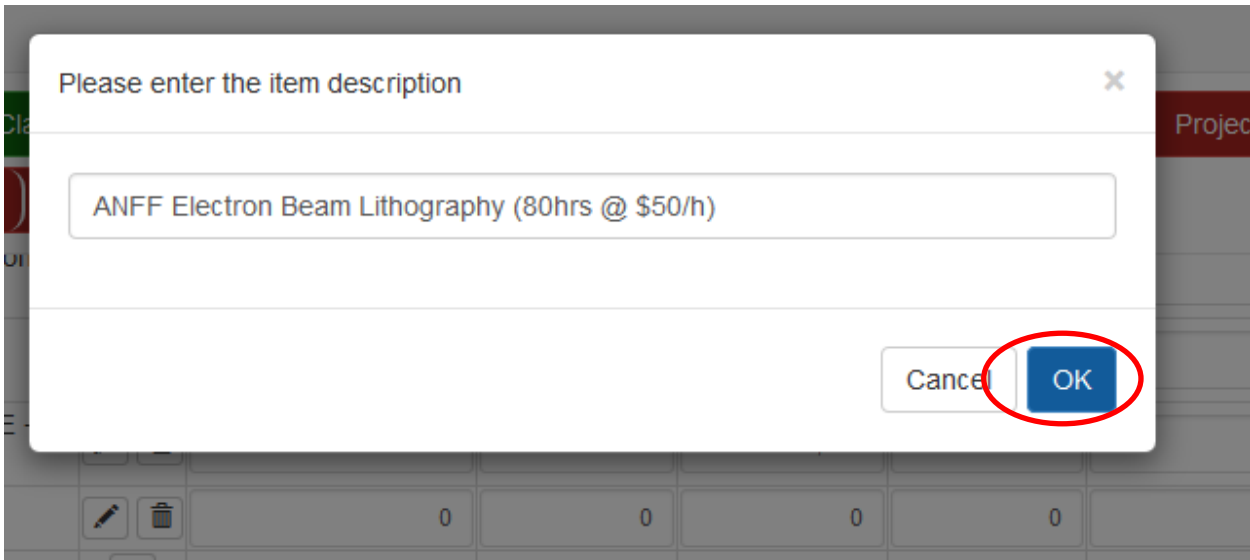
A) Administrative Summary B) Classifications and Other Statistical Information C) Project Description (Invalid) **D) Project Cost (Invalid)**

E) Budget Justification (Invalid) F) Personnel and ROPE (Invalid) G) Research Support

STEP 3: Under the heading 'Other', click on the plus sign.

Other	+	8,000	
Mt John Observatory usage fees	 	8,000	

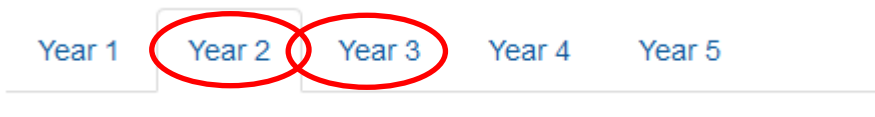
In the resulting **item description** text box, type in 'ANFF Electron Beam Lithography (80hrs @ \$50/h)', then press the 'OK' button.



Step 4: Click on the **ARC** column of the newly created row and enter the amount required for this item; e.g. \$4,000.

Other	+	12,000	
Mt John Observatory usage fees	 	8,000	
ANFF Electron Beam Lithography (80hrs @ \$50/h)	 	4,000	

STEP 5: Click on subsequent years, e.g. **Year 2 and Year 3**, above the budget table and then repeat step 5, with the requested amount adjusted for higher or lower instrument usage as the requirement of the project changes over time.



STEP 6: Justify the funding requested for ANFF instrument access in **Part E1 - 'Budget Justifications'**

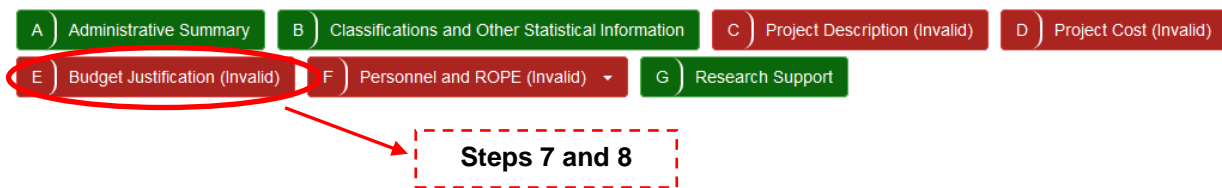
The following example text may be used as a basis for your justification:

"This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/ fabrication/ characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."

You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:

"Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame" with a reference to further detail elsewhere in the application.

STEP 7: In **Part E2 - 'Details of non- ARC contributions'**, input information on contributions arising from other sources from the relevant Node. Most ANFF facility access is heavily subsidised for university or government programs.

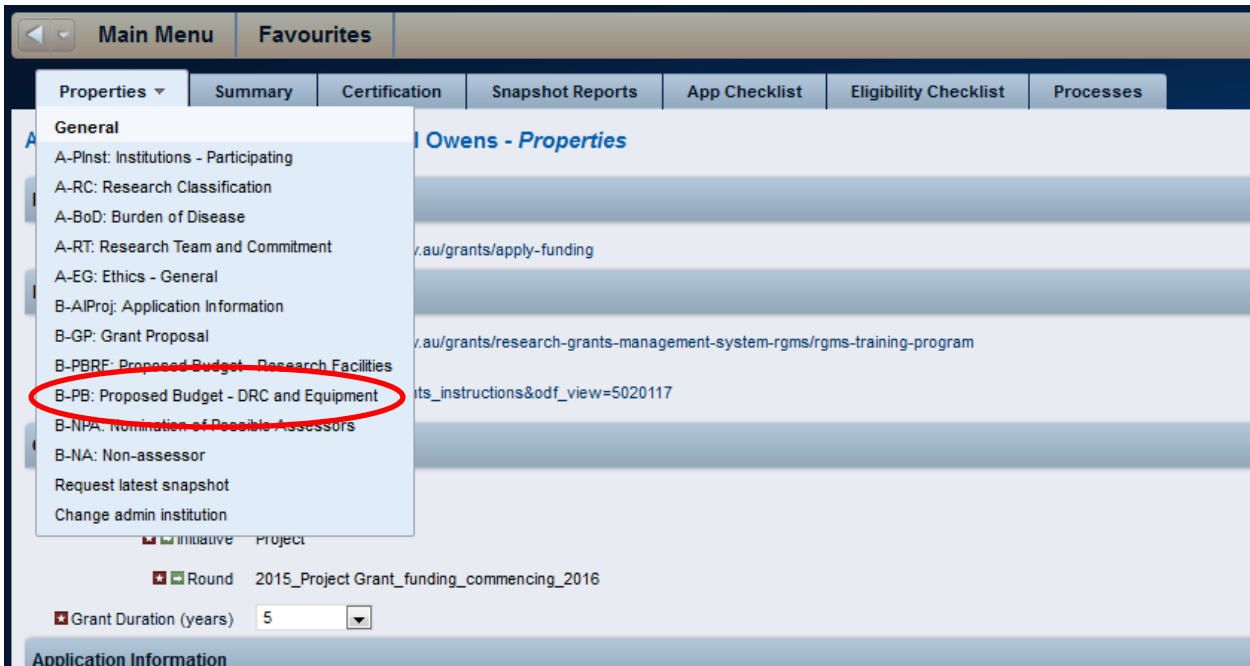


NHMRC Example

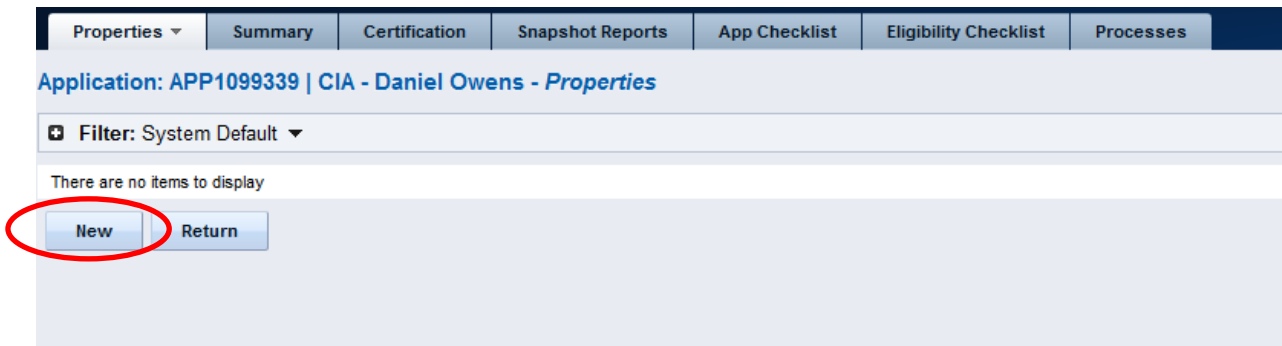
Grant proposals to the NHMRC must be submitted in their online **Research Grants Management System (RGMS)**.

For NHMRC Project Grant applications 2016, please calculate the annual access fees relevant for the ANFF instrument required (e.g. \$4,000) and then add it to the direct research costs section of the proposed budget. The RGMS system will round all requested items for each year to the nearest \$5,000 quanta.

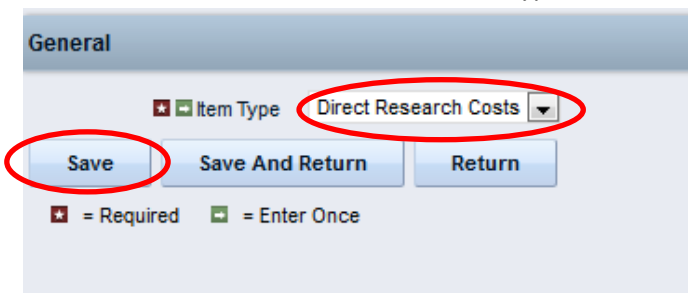
STEP 1: Within your application, navigate to **P-PB Proposed Budget-DRC and Equipment**



STEP 2: Click on **New**



Select **Direct Research Costs** as the item type and click on **Save**



STEP 3: In the resulting screen, enter a description of the item 'e.g. ANFF Electron Beam Lithography'; the specific amounts required in each year (e.g. \$4000 in our example); and a justification (see below).

Once all details are entered, click on **Save And Return**.

Properties ▾ **Processes**

Application: APP1099339 | CIA - Daniel Owens | Application Research Budget: APP_BUDGET-00002798 - General

Hints & Instructions

Additional Information <http://www.nhmrc.gov.au/grants/research-grants-management-system-rgms/rgms-training-program>

Hints And Instructions For This Page /niku/nu#action:gm_hints_instructions&odf_view=b_pb_app_budget

General

Item Type Direct Research Costs

Item (50 character limit including spaces)
ANFF Electron Beam Lithography

Budget Data

Year 1 (\$AUD)	4,000.00
Year 2 (\$AUD)	0.00
Year 3 (\$AUD)	0.00
Year 4 (\$AUD)	0.00
Year 5 (\$AUD)	0.00

Add additional years where required

Justification

Justification (500 character limit including spaces and line breaks.)
EXAMPLE: This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify, e.g. electron beam lithography]. The estimated time required for the synthesis/fabrication /characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time.

Justification

= Required = Enter Once

Justification Example

The following example text may be used as a basis for your justification:

“This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/fabrication/characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time.”

You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:

“Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame” with a reference to further detail elsewhere in the application.

Contacts

ANFF Ltd

Business Development Manager:

Dr Warren McKenzie

+61 2 9385 6382

warren.mckenzie@anff.org.au

Victorian Node

Facility Manager:

Dr Paul Spizzirri

+61 3 9902 9653

paul.spizzirri@monash.edu

NSW Node

Facility Manager:

Dr Linda Macks

+61 2 9385 7845

linda.macks@unsw.edu.au

Optofab Node

Facility Manager:

Dr Benjamin Johnston

+61 2 9850 8960

benjamin.johnston@mq.edu.au

Materials Node

Facility Manager:

A/Prof Peter Innis

+61 2 4221 3600

innis@uow.edu.au

Queensland Node

Facility Manager:

Mr Derek Hirons

+61 7 3346 3460

chdhiron@uq.edu.au

ACT Node

Facility Manager:

Dr Fouad Karouta

+61 2 6125 7174

fouad.karouta@anu.edu.au

SA Node

Facility Manager:

Mr Simon Doe

+61 8 8302 5226

simon.doe@unisa.edu.au

WA Node

Facility Manager:

Prof Mariusz Martyniuk

+61 8 6488 1905

mariusz.martyniuk@uwa.edu.au