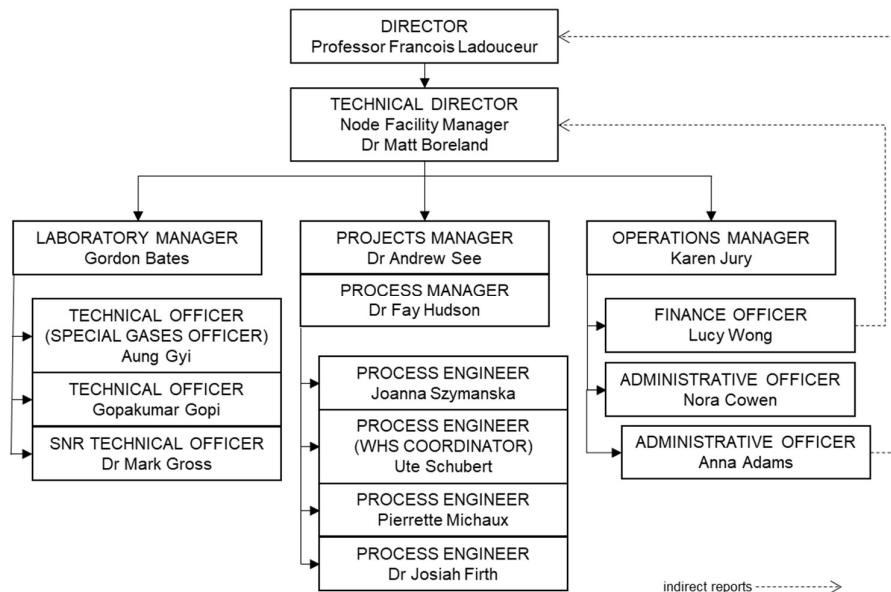


ANFF-NSW ACCESS & PRICING POLICY (Feb 2025) ANFF-NSW@UNSW HUB

This Access & Pricing Policy applies to the ANFF-NSW Hub located at UNSW

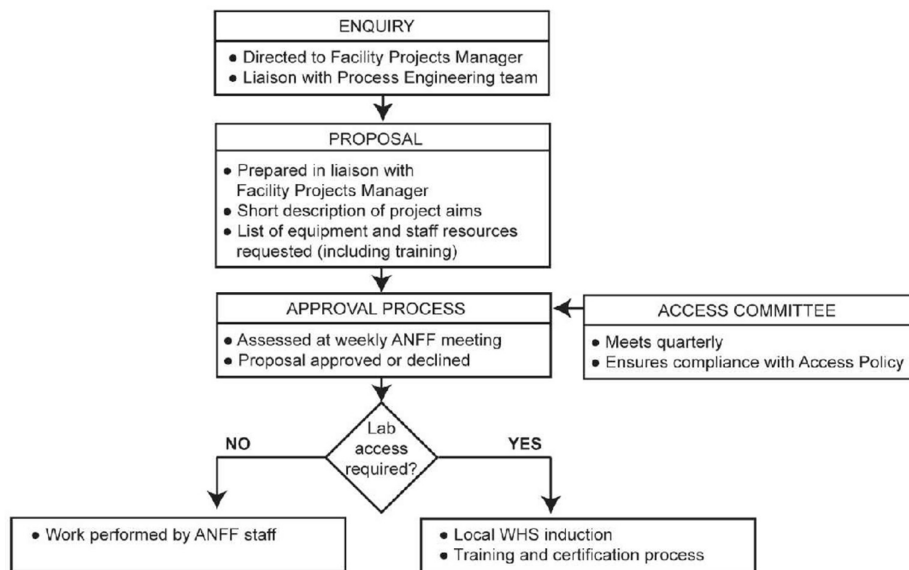
1. Organizational Matters and Policies

1. Established under the National Collaborative Research Infrastructure Strategy (NCRIS), the Australian National Fabrication Facility (ANFF) is a national network of eight Nodes.
2. ANFF's core aim is to provide micro- and nano-fabrication facilities for Australia's researchers.
3. The ANFF-NSW Node ANFF NSW is a joint node with facilities at both the UNSW, the University of Sydney (USYD) and the University of Technology Sydney (UTS).
4. ANFF-NSW@UNSW is the ANFF-NSW Hub located at UNSW.
5. User access at all ANFF Nodes must be consistent with general NCRIS principles as laid out in the national "ANFF Access and Pricing Policy".
6. In addition to the policies detailed in this document, all ANFF-NSW@UNSW users must adhere to ANFF-NSW@UNSW Health and Safety guidelines as well as to all relevant UNSW policies and procedures.
7. The organization and staffing of the ANFF-NSW@UNSW Hub is summarized in the following Organizational Chart:



8. ANFF-NSW's funding streams, across all three hubs, include co-funding from the Federal Government (via NCRIS), NSW State and the host Universities (UNSW, USYD, UTS). To date, this funding has surpassed \$50M. This funding is used by ANFF-NSW to support salaries and operational costs, and to purchase fabrication equipment as specified in Funding Agreements with the funding bodies. More details about ANFF-NSW's funding streams can be found in section 7.

2. Access Policy and Process for New Users or Job Requests



2.1 Proposals

1. ANFF-NSW@UNSW's Projects Manager is the first point of contact for all potential users of facilities ANFF-NSW@UNSW.
2. The Projects Manager will liaise with the potential user and with the ANFF-NSW@UNSW Process Engineering team to assess the scope of the work required and to prepare an ANFF-NSW Proposal describing the proposed work and the equipment and staff resources required.
3. ANFF-NSW@UNSW Proposals are assessed by the Node Director, the Facility Business Manager/Technical Director, the Projects Manager, the Laboratory Manager and the Process Manager at weekly ANFF-NSW@UNSW meetings. All users are welcome to attend weekly ANFF-NSW@UNSW meetings. Potential users may present their Proposals for assessment in person if they wish, otherwise their Proposals will be presented by the Projects Manager.
4. Where requested equipment or staff resources are oversubscribed (defined as being unavailable within one month of request), or where a Proposal is likely to be declined, the ANFF-NSW Access Committee will be invited to take part in the assessment of the Proposal.

2.2 Safety

1. In addition to having an ANFF-NSW@UNSW Proposal formally approved, users requesting direct access to the ANFF-NSW@UNSW laboratories must also complete the local safety induction procedures (as described in the ANFF-NSW@UNSW Health and Safety guidelines).

2.3 Payment Advice

1. In addition to other requirements, the ANFF-NSW@UNSW Node User Agreement and ANFF-NSW@UNSW Node Payment Form must be completed and returned to the Projects Manager before user access can be booked or a job can commence.

2.4 Reviews & Renewals

1. Approvals of ANFF-NSW@UNSW Proposals is valid for 12 months. At ANFF's discretion proposals can be renewed for projects which will continue beyond 12 months; or a new proposal might be required.
2. ANFF-NSW reserves the right to revoke Approvals of ANFF-NSW@UNSW Proposals with seven days' written notice.
3. The ANFF-NSW Access Committee regularly reviews all ANFF Proposals (approved, declined and revoked) to ensure compliance with the ANFF-NSW Access and Pricing Policy.
4. The ANFF-NSW Access Committee comprises the Node Director, the Facility Manager/Technical Director, the Projects Manager, the Laboratory Manager and representatives from the major user groups. The ANFF CEO may also attend Access Committee meetings.

3. Pricing Policy

3.1 Billing

1. Access charges are charged by calendar month in arrears.
2. Regular users of ANFF-NSW@UNSW facilities may choose to set up a Subscription whereby discounted access charges are deducted from a subscription fee paid in advance. Further details are available from the ANFF-NSW Technical Director.

3.2 Rates

1. **TIER-1** equipment includes fume cupboard, microscope and the 4-point probe. Use of Tier-1 tools is free of charge for all users
2. **TIER-2** equipment includes Dektak 2A, PDMS Station and Muffle Furnace. Use of Tier-2 tools will be charged at a rate of \$10 per hour for publicly-funded users (students or research staff from UNSW or external institutions), and \$30 per hour for industry (R&D).
3. **TIER-3** equipment includes Thermal Evaporators, Furnaces, Wire Bonders, Probe Station, Plasma Ashers, Ellipsometer and Parylene Coater. Use of Tier-3 tools will be charged at a rate of \$30 per hour for publicly-funded users (students or research staff from UNSW or external institutions), and \$90 per hour for industry (R&D).
4. **TIER-4** equipment includes UV Mask and Maskless Aligners, Atomic Layer Deposition Systems, Reactive Ion Etchers, E-beam Evaporators, Sputterer, Atomic Force Microscope and Pulsed-Laser Deposition Systems. Use of Tier-4 tools will be charged at a rate of \$50 per hour for publicly-funded users (students or research staff from UNSW or external institutions), and \$150 per hour for industry (R&D).
5. **TIER-5** equipment includes Ion Implanter, Electron Beam Lithography Systems, LPCVD Furnaces, and Molecular Beam Epitaxy System. Use of Tier-5 tools will be charged at a rate of \$70 per hour for publicly-funded users (students or research staff from UNSW or external institutions), and \$210 per hour for industry (R&D).
6. **SUPPORT:** User support and training provided by ANFF-NSW@UNSW Staff will be charged at a rate of \$50 per hour for publicly-funded users (students or research staff from UNSW or external institutions), and \$150 per hour for industry (R&D).
7. **COMMERICAL RATES:** Work completed by, or on behalf of, industry users which cannot be classified as industry R&D will be charged at commercial rates as agreed with the ANFF-NSW Node Director and Technical Director.
8. **DECRA SPECIAL RATES***:** Early Career Researcher discounts of up to 50% off the standard access rates are available upon request. Further details are available from the ANFF-NSW Technical Director.
9. **UPDATES:** Access fees are reviewed on a periodical basis.

3.3 Pricing & Tool Lists

1. The current pricing structure is summarized in Table 1 below.
2. The current ANFF-NSW@UNSW Tool List is summarized in Appendix 1. More detailed tool specifications along with details of the extensive wet chemical processing capability offered at ANFF-NSW are available from the ANFF website (www.anff-nsw.org) or by direct enquiry with ANFF-NSW@UNSW's staff.

Table 1 Access Hourly Charges at ANFF-NSW@UNSW*

	Publicly-funded		Privately-funded
	UNSW Students or Research Staff	Non-UNSW Students or Research Staff/start-up	Industry Users (R&D work)**
Tier-1 (Fume Cupboard, Microscope, etc..)	\$0	\$0	\$0
Tier-2 (PDMS station, etc..)	\$10	\$10	\$30
Tier-3 (Thermal evaporator, Plasma Asher, Furnace, etc..)	\$30	\$30	\$90
Tier-4 (Mask Aligner, Reactive Ion Etcher, PECVD, E-beam Evaporator, etc..)	\$50	\$50	\$150
Tier-5 (Ion Implanter, EBL, etc..)	\$70	\$70	\$210
ANFF Staff Support (in addition to any applicable tool charges)	\$50	\$50	\$150

* Hourly rates all cover basic costs including clean-room garments, standard chemicals, standard metals and standard resists. Specialty materials (including precious metals, selected specialty gases) will be charged at cost plus a 10% surcharge to partially offset administrative/ordering costs.

** Work completed by or on behalf of industry users which cannot be classified as industry R&D will be charged at commercial rates as agreed with the ANFF-NSW Node Director.

*** 50% off discount applies for the first year. 25% off discount applies for the second year as an early career incentive

4. Confidentiality and Intellectual Property Policy

1. University of New South Wales staff and student users of the ANFF-NSW@UNSW laboratories have developed and acquired, and use in connection with their operation, valuable, confidential and proprietary technical and economic information related to their processes, technologies, manufacturing lines, equipment, products, operations, customers, suppliers and other aspects of their operation. Such information is referred to below as "ANFF Information".
2. ANFF Users must treat as confidential all *ANFF Information* to which they may be exposed and not disclose any ANFF Information to any third party without prior written permission from the ANFF-NSW Node. This does not restrict an ANFF User's use or disclosure of any information that is now or, through no act of the ANFF User or their employer, later becomes generally available to the public.
3. ANFF Users must not photograph or otherwise make any electronic, optical or magnetic recording of the ANFF-NSW@UNSW laboratories or other Node facilities without prior written permission from the ANFF-NSW Node.
4. Should an ANFF User's Node access be revoked, obligations of non-disclosure of ANFF Information remain in effect.
5. Work undertaken by an ANFF User in the ANFF-NSW@UNSW laboratories or otherwise making use of the facilities of ANFF-NSW@UNSW is governed by the UNSW Intellectual Property Policy <https://www.unsw.edu.au/content/dam/pdfs/governance/policy/2022-01-policies/ippolicy.pdf>
6. Ownership of any background intellectual property brought to a project by either an ANFF User or a UNSW staff member shall remain with the originator and/or the originator's organization,
7. Intellectual property developed by an ANFF User using the ANFF facilities with no direct contribution from ANFF staff shall be owned by the ANFF User and/or the ANFF User's organization,
8. Intellectual property developed collaboratively by an ANFF User and by UNSW staff shall be shared between the ANFF User and/or the ANFF User's organization and UNSW in proportion to each party's contribution to that intellectual property,
9. Intellectual property developed by UNSW staff completing ANFF commercial jobs shall be owned by UNSW.

5. Research Export Controls

1. ANFF Users must comply with Australia's export restrictions on defense and strategic goods and technology including dual-use items in applied research not already in the public domain. More information can be found at research.unsw.edu.au/research-export-controls .

6. Appendix 1: Tool List at ANFF_NSW@UNSW

For further details and latest updates see also <https://www.anff-nsw.org/>

Capabilities	Tool	Pricing Tier
Lithography	Raith 150TWO EBL system	5
	Raith Pioneer TWO EBL system	5
	Karl Suss MA6/BA6 mask aligner	4
	DMO ML3 Pro direct writer	4
	NMP Bath (photomask cleaning)	1
	Karl Suss MJB3 mask aligner	4
	Suite of resist spinners	1
Soft Lithography	PDMS Station	2
Dry Etching	STS ICP-RIE system	4
	Oxford PlasmaPro 100 Cobra ICP RIE	4
	GP-RIE	4
	Oxford RIE	4
	O2 plasma ashers (two available)	3
Thin Film Deposition	Lesker Thermal Evaporator	3
	P-type Evaporator (Auto 306)	3
	SET AI Evaporator (Auto 306)	3
	Oxford PECVD	4
	Lesker PVD 75 e-beam evaporator	4
	HHV Sputterer	4
	Parylene Coater	3
	Picosun R-200 ALD system	4
	Savannah ALD	4
Epitaxial growth	Veeco Gen930 III-V MBE	5
	Pascal laser-molecular beam epitaxy systems	4
Packaging	TPT HB10 Thermosonic Au Ball Bonder	3
	FS Bondtech 53XX-BDA	3
	K & S AI Wedge Bonder	3
	OEG MR200	3
	Dicing Saw	4
Thermal Processing & Ion Implantation	UDOX oxidation furnace (MOS)	3
	Boron diffusion furnace	3
	Phosphorus diffusion furnace	3
	GP anneal furnace	3
	Clean anneal furnace (MOS)	3
	Jipelec rapid thermal annealer (MOS)	3
	Clean Si Oxidation Furnace (MOS)	3
	Muffle furnace	2
	ULVAC MILA-5000 Annealing Furnace	3
	IBS Ion Implanter	5
Metrology	Dektak XT and 150 profilometers	3
	4-point Probe	1
	Bruker Edge AFM	4
	JA Woollam spectroscopic ellipsometer	3
	Cascade Probe Station	3
	Olympus DSX1000 Digital Microscope	3
	Suite of optical microscopy tools	1

7. Appendix 1: Summary of Funding Agreements for the ANFF-NSW Node

1. FY2007 - FY2011 ('NCRIS Project'):
 - (i) \$3M Federal NCRIS funding (distributed via ANFF Ltd);
 - (ii) \$2M NSW Government funding through the Science Leveraging Fund;
 - (iii) \$1M funding from the University of New South Wales.
2. FY2009 - FY2014 ('EIF-SuperScience Project'):
 - (i) \$4.38M Federal EIF-Super Science funding (distributed via ANFF Ltd);
 - (ii) \$455k NSW Government funding through the Science Leveraging Fund;
 - (iii) \$1.24M funding from the University of New South Wales.
3. Jul-2013 - Dec-2014 ('CRIS Project'):
 - (i) \$1.123M Federal CRIS funding (distributed via ANFF Ltd);
 - (ii) \$289k NSW Government funding through the Research Attraction and Acceleration Program (RAAP);
 - (iii) \$360k funding from the University of New South Wales.
4. FY2014-FY2017 ('NCRIS2013 Project'):
 - (i) \$3.6M Federal NCRIS2013 funding (distributed via ANFF Ltd);
 - (ii) \$445k NSW Government funding through the RAAP;
 - (iii) \$1.08M funding from the University of New South Wales.
5. FY2018-FY2019 ('NCRIS2013 Project'):
 - (i) \$2.2M Federal NCRIS2013 funding (distributed via ANFF Ltd);
 - (ii) 273k NSW Government funding through the RAAP;
 - (iii) \$1.4M funding from the University of New South Wales.
6. FY2020-2023 ('NCRIS2013 Project'):
 - (i) \$6.6M Federal NCRIS2013 funding (distributed via ANFF Ltd) ;
 - (ii) \$5.3M of Federal NCRIS 2013 RIIP capital funding (Research Infrastructure Investment Program distributed via ANFF Ltd)
 - (iii) \$1.48M RIIP co-funding from UNSW, and \$1.470k of co-funding from USYD
 - (iv) \$838k NSW Government funding through the RAAP (inc. \$350k RIIP co-funding);
 - (v) \$7.4M institutional funding from the University of New South Wales (inc.\$3.9M cleanroom upgrades). and \$750k from The University of Sydney
7. 2024- 2028 ('NCRIS2022 Project' & 'NCRIS 2023'): funding to date
 - (i) Federal \$3.5M
 - \$3.2M to Federal NCRIS2022 opex funding (distributed via ANFF Ltd) ;
 - \$317k to Federal NCRIS2023 capex funding (distributed via ANFF Ltd) ;
 - (ii) NSW Government NCRIS Support Funding \$1.6M
 - \$535k NSW Govt NCRIS2022 co-funding
 - \$1.1M NSW Govt NCRIS2023 co-funding
 - (iii) Institutional co-funding \$2.2M (NCRIS2022 & NCRIS2023 combined)