Decommissioning of the National Research Cyclotron Facility, Camperdown

Application Number: **01575** Commencement Date: **09/12/2022** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Decommissioning of the National Research Cyclotron Facility, Camperdown

1.1.2 Project industry type *

Commonwealth

1.1.3 Project industry sub-type

—

1.1.4 Estimated start date *

01/02/2027

1.1.4 Estimated end date *

30/06/2028

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The proposed action is for the full decommissioning of the National Research Cyclotron Facility (NRCF), operated by the Australian Nuclear Science and Technology Organisation (ANSTO) at 81 Missendon Road, Camperdown NSW, Australia. The NRCF is located near the Royal Prince Alfred (RPA) Hospital within the

grounds of the Sydney Local Health District (SLHD). The NRCF operated for ~10 years until 2021 when the site moved to a permanent state of shutdown. The project area is 0.35 hectares and the disturbance footprint (which is the building footprint to be demolished) is 0.17 hectares.

Central to NRFC is a 18 Megaelectron Volt (MeV) proton cyclotron, a small machine which acts as a particle accelerator to produce a small number of niche radioisotopes, such as Carbon-11 and Fluorine-18, used primarily for research purposes and in radiopharmaceuticals. This cyclotron was commissioned in 2012. Research into new radiopharmaceuticals and the production of nuclear medicines are now wholly carried out from ANSTO's Lucas Heights campus in southern Sydney.

Prior to the commissioning of the 18MeV cyclotron, a larger 30 MeV cyclotron (known as the National Medical Cyclotron) operated in the building from 1990 until decommissioning in 2011. This cyclotron was removed, however most of the supporting infrastructure remained in situ for operation with the 18 MeV cyclotron. The decommissioning of the 30 MeV cyclotron was referred to the Minister for the Environment in 2010 - see EPBC referral 2010/5645.

ANSTO is a lease holder of the building which houses the cyclotron facility. As part of its lease obligations with SLHD, ANSTO is required to decommission the facility (including the removal of the cyclotron, all supporting infrastructure, building shell and concrete slab). The site will then be returned to Sydney Local Health District. The future use of the site will be incorporated into SLHD's master planning for the RPA Hospital campus.

ANSTO will be required to seek a licence to decommission the NRCF from the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

ANSTO has characterised the facility for the waste streams which will be produced and disposed as recyclable wastes or landfill waste, meeting the requirements of the International Atomic Energy Agency (IAEA) General Safety Requirements Part 3 (**Ref 1 - IAEA General Safety Requirements Part 3**) and the NSW EPA Waste Classification Guidelines Parts 1 (**Ref 2 - Waste Classification Guidelines Part 1: Classifying waste**) and 3 (**Ref 3 - Waste classification guidelines Part 3: Waste containing radioactive material**).

Some equipment and supporting infrastructure will be retained by ANSTO and transported to Lucas Heights, NSW, including the 18MeV Cyclotron and the nine (9) hot cells. The remaining infrastructure and demolition waste will be disposed via recycling routes or as landfill where there are no alternative reuse/recycling options. Some areas within the facility, particularly the existing cyclotron vault, have been characterised by ANSTO as having elevated levels of radioactivity, and as a result will be decommissioned and wastes disposed appropriately to meet the requirements of the set by ARPANSA and the NSW Environment Protection Agency (EPA). Wastes which will be reused by ANSTO, or recycled or disposed to landfill will be transported by road.

Key Activities

The key activities involved with the establishment of the NMF will be (**Att A - DRAFT Decommissioning Plan – October 2024, page 8**):

- Removal of the 18MeV cyclotron and transport to the Lucas Heights Campus for storage prior to disposal.
- Removal and disposal of the liquid waste tanks in the basement.
- Removal and disposal of all service and ancillary equipment (e.g. active ventilation, stack etc.)
- Standard demolition works for the building structures/systems determined by characterization to be radiologically exempt and free from radiological contamination.
- Transporting of radiological contamination-free waste to a recycling facility.
- Installation of an enclosure over the vault structure.
- Packaging of activated, transport to an authorized facility and disposed as restricted waste.
- Final radiation surveys necessary to meet the requirements for release from regulatory control.

- Handover to the SLHD.

ANSTO has identified the following activities as likely to have minor impacts to the environment and is the basis for this referral. Further information on these potential impacts and the control measures is provided in section 4 of this referral and **Att B - EPBC Act Referral Self-Assessment on Impacts to the Environment for the Decommissioning of the ANSTO Camperdown Facility**.

Activity: Demolition of building.

Impact: Emissions of radioactive and chemical contaminants into the environment.

The decommissioning of the NRCF will inherently produce dusts through the demolition of the building.

Demolition activities will be undertaken by a suitably qualified and experienced Principal Contractor who will be managed by ANSTO. Before commencing the construction work, the Principal Contractor will be required to complete and implement a project /construction environmental management plan. Mitigation measures will include, but not limited to dust suppression methods, tenting of the facility at certain times, and sediment controls

Activity: Transport of wastes for recycling or landfill

Impact: Contaminants released into the environment from inappropriate containment of wastes.

There is a risk that restricted wastes transported by truck to Kemps Creek Waste Management Facility, and low-level solid radioactive waste to ANSTO Lucas Heights, and equipment to ANSTO Lucas Heights for repurposing could be released to the environment because of inappropriate containers and covering of the wastes in transit, and in the event of a vehicular accident.

Wastes will be transported by suitably licenced transporting companies and in suitable and approved containers for the types of waste.

Activity: Increase demand on surrounding road infrastructure during the site preparation and construction phases.

Impact: It is estimated approximately 300 heavy vehicle movements will be conducted throughout all stages of the demolition.

Most of the activity will occur over a 3-month period during weekdays. A traffic management plan will be prepared for the preparation, demolition, and waste disposal activities.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

***Australian Nuclear Science and Technology Organisation Act 1987* (ANSTO Act)**

ANSTO is a statutory body of the Commonwealth. Commonwealth land is not subject to state or territory law (Section 52(2) of the Australian Constitution). As such, NSW legislation does not apply and approvals by State or local authorities are not required.

The *Australian Nuclear Science and Technology Organisation Act 1987* (ANSTO Act) establishes ANSTO, its functions and the general regulatory environment it is bound by. Section 7A of the ANSTO Act stipulates that State (i.e. NSW) law does not apply to the organisation, its property or transactions or anything done by

or on behalf of the organisation. This includes the use or proposed use of land or premises, or the environmental consequences of the use of the land or premises. The project is not subject to formal consent from The City of Sydney Council.

Notwithstanding, ANSTO must comply with Commonwealth environmental legislation, including the:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and relevant regulatory framework; and,
- *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act), administered by the ARPANSA.

Environment Protection and Biodiversity Conservation Act 1999

ANSTO has reviewed the proposed action its potential impacts to the environment against the requirements of Part 3 of the EPBC Act, specifically with regards to whether the proposed action may have a significant impact on matters of national environmental significance (MNES), and consequently whether the proposed action should be referred to the Minister for the Environment. To assist in informing ANSTO's view on whether the proposed action should be referred, ANSTO consulted the following documents:

- **Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance**
- **Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.**

ANSTO has completed a self-assessment on the potential impacts to both MNES and actions by the Commonwealth (**Att B - EPBC Act Referral Self-Assessment on Impacts to the Environment for the Decommissioning of the ANSTO Camperdown Facility**). In summary, the self-assessment found that the proposed action triggers the requirement for referral under s.28 Actions by Commonwealth Agencies. ANSTO has self-assessed the impacts and does not believe the impacts are likely to be significant toward the environment and should not be considered as a controlled action. Further details are provided section 4 of this referral and in **Att B - EPBC Act Referral Self-Assessment on Impacts to the Environment for the Decommissioning of the ANSTO Camperdown Facility**.

Australian Radiation Protection and Nuclear Safety Act 1998

In accordance with the ARPANS Act, the action will be the subject of an application to ARPANSA for a licence to decommission the Camperdown facility. While the Camperdown facility has not produced radioisotopes since 2021, the facility is currently operating and being maintained in accordance with ARPANSA operating licence F0251 as a prescribed radiation facility.

ARPANSA's objective, as expressed in the ARPANS Act, is 'to protect the health and safety of people, and to protect the environment, from the harmful effects of radiation'. To meet that principal objective, a framework for regulation of the Commonwealth's radiation and nuclear activities has been developed which reflects best international best practice in radiation and nuclear regulation, and is consistent with the requirements for radiation protection and nuclear safety of the Australian State and Territory regulatory authorities.

Within that regulatory framework, ARPANSA's Operations Services Branch:

- assesses applications for licences against accepted standards for radiation protection and nuclear safety;
- makes recommendations to the CEO on the issuing of licences;
- undertakes inspections of licenced activities to confirm compliance with legislative requirements; and
- takes any enforcement actions necessary to ensure compliance, safety of people and protection of the environment.

To ensure compliance with ARPANSA environmental protection requirements, ANSTO regularly monitors its liquid, gaseous and solid waste discharges with the objective of minimising its environmental footprint and maintaining compliance with the regulation. This is overseen by ANSTO's Environmental Monitoring team.

ANSTO collaborates and shares information openly with the public (**Ref 6 - Local Environmental Monitoring**) as well as government owned statutory corporations such as the Sydney Water Corporation for authorised discharge of trade waste, noting the discharge of trade waste from Camperdown is conducted as part of ANSTO's Waste Management Services processes in accordance with **Att C - Sydney Water Trade Waste Agreement #4423**. This discharge consent is periodically reviewed to provide assurance that ANSTO's discharges remain within authorised radiological and non-radiological limits and pose no threat to the environment.

NSW Environmental Protection Agency

While the decommissioning of the NRCF will be conducted in compliance with ARPANSA and EPBC legislation, waste disposal activities will need to comply with NSW EPA requirements, primarily NSW EPA Waste Classification Guidelines Parts 1 (**Ref 2 - Waste Classification Guidelines Part 1: Classifying waste**) and 3 (**Ref 3 - Waste classification guidelines Part 3: Waste containing radioactive material**). To correctly classify the waste streams from the demolition of the NRCF, ANSTO has conducted a detailed characterisation of the facility. The waste transport consignees and waste accepting facilities will be required to hold the appropriate EPA licences to handle the wastes. ANSTO will ensure waste receipts are collected for each waste consignment and maintained as records.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

This project will undergo several unique stakeholder engagement tasks during the planning phases, which will be aimed at specific audiences relating to particular important themes and decisions. The following stakeholders have been identified and will be consulted at varying times throughout the project.

- Sydney Local Health District, surrounding business community University of Sydney resident colleges, local residents, staff patientis and visitors.
    - ANSTO and SLHD have set up a combined communications working group specifically for stakeholder management and consulted. The group meets regularly as per the agreed Terms of Reference for the working group.
- Public Works Committee (PWC)
    - ANSTO have submitted a PWC referral for the project to the Department of Finance. Feedback from the department is that EPBC approval must be completed before the submission is referred to the Committee.
- Federal Government
    - Communication to the relevant federal members of parliament will be coordinated by ANSTO's Government Affairs team.
- ARPANSA
    - Any public consultation as required by the ARPANS Act and Regulations will be coordinated by ANSTO's Regulatory and Governance team.
- Eora Nation / Central Metropolitan Aboriginal Land Council representatives.
- NSW EPA
- ANSTO's Regulatory and Governance team will lead consultation with NSW EPA
- NSW emergency services
- Australia Federal Police
- Transport regulators (including the National Heavy Vehicle Regulator and Transport for NSW)
- Sydney City Council
- Relevant waste management facilities
- Comcare and Safework NSW.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234

Referring party details

Name	Michael Baker

Job title	Manager, Regulatory Affairs and Compliance - Environment and Sustainability
Phone	0429155994
Email	mhb@ansto.gov.au
Address	178 New Illawarra Road, Lucas Heights NSW 2234

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234

Person proposing to take the action details

Name	Jakob Vujcic
Job title	General Manager, Regulatory and Governance
Phone	02 9717 3844
Email	vujcicj@ansto.gov.au
Address	New Illawarra Road, Lucas Heights NSW 2234

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

ANSTO has a strong track record of environmental stewardship largely due to its investment in an environmental management system (EMS). The processes, procedures and minimum requirements for environmental protection prescribed within ANSTO's EMS will underpin all the actions conducted during this work ensuring that there is no significant impact to the environment. ANSTO's commitment to minimising its environmental footprint is detailed within the ANSTO Health, Safety, Community and Environmental Policy (**Att D - Health Safety Community and Environment Policy**).

The process for identifying, risk assessing, controlling and reviewing environmental aspects and environmental compliance obligations is embedded within all business processes throughout ANSTO.

ANSTO is subject to strict ongoing radiological environmental regulation by the ARPANSA. To comply with the ARPANS Act, ANSTO is required to obtain approval from ARPANSA for Plans and Arrangements, including for under a decommissioning licence. Such plans are periodically reviewed and updated by ANSTO. ANSTO's commitment to the environment is also demonstrated through its continued certification to the international environmental management standard, ISO14001. Part of this commitment is through the ongoing resourcing the Environmental Monitoring Group which provides regular ongoing monitoring of emissions from ANSTO.

In addition, ANSTO has demonstrated its ability to work with government departments to ensure environmental safety outcomes are met. For example, ANSTO has ensured full compliance with the 29 conditions applied following the approval of the construction of the Open Pool Australian Light-water (OPAL) nuclear reactor in 1999 by the then Minister for the Environment and Heritage.

ANSTO's Environmental Sustainability Strategy (**Ref 7 - ANSTO Environmental Sustainability Strategy**) outlines the organisation's high-level environmental goals and targets. This Strategy includes long-term, ambitious objectives which seek to significantly reduce ANSTO's greenhouse gas emissions, water consumption and waste production. The Strategy also includes objectives to improve ecological outcomes within ANSTO's Bushland Perimeter.

In 1992, ANSTO was subject to action under the NSW Environmental Planning and Assessment Act 1979 in the NSW Land and Environment Court. The action related to a breach of NSW planning law. No adverse environmental impacts were alleged or found.

Previous EPBC referrals submitted are provided below:
2023/9756 - 2025 OPAL Spent Fuel Shipment
2023/9748 - New nuclear medicine manufacture and production facility at Lucas Heights
2022/9352 - Phase A HIFAR Decommissioning
2022/9355 - Legacy Mineral Sands Remediation and Disposal
2021/9025 - Intermediate Level Solid Waste Storage Facility

2021/8998 - Return of Australian Intermediate Level Radioactive Waste from the UK
2016/7841- Transport of OPAL Spent Fuel to France in 2018
2016/7733 - Extension and upgrade waste management facilities, Lucas Heights
2015/7437 - Transport of intermediate level radioactive waste to Lucas Heights
2012/6697 - Synroc Waste Treatment Facility
2012/6598 - ANSTO Nuclear Medicine Mo99 Facility
2012/6564 - Interim Waste Storage Facility
2010/5645 - Decommissioning of NMC and Camperdown Facility
2008/4615 - Decommissioning of Moata Research Reactor
2008/4459 - Construction of Nuclear Materials Store
2007/3672 - Shipment of Spent Nuclear Fuel to USA
2006/2740 - Upgrade Of Nuclear Production Equipment
2003/1114 - Extension to Lucas Heights production building
2001/405 - Placement of fill excavated from the site for the Replacement Research Reactor
2001/342 - Waste Treatment and Packaging Building

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

ANSTO's commitment to the protection of the environment from its activities is directed by the ANSTO Health, Safety, Community and Environmental Policy (**Att D - Health Safety Community and Environment Policy**).

For construction, decommissioning or maintenance activities, ANSTO has in place a planning framework to ensure activities such as the Proposed Activity, are conducted to prevent harm to the environment (detailed in **Att E - AP-5400 Project Environmental Protection Requirements**).

Initially, all construction and decommissioning projects must complete a screening checklist (**Att F - AF-1376 Project Environmental Planning Checklist**) to determine what degree of regulatory approvals may be required, and what further environmental planning is required. It is at this stage, the self-assessment to determine whether an EPBC Referral is conducted.

Prior to the commencement of works, ANSTO will prepare a Project/ Construction Environmental Management Plan (**Att G - AF-5947 Project - Construction Environmental Management Plan**) to identify and mitigate the components within the site preparation and construction phase which may have an impact on the environment.

For specific tasks, a Safe Work Method and Environmental Statement (**Att H - AF-2315 Safe Work Method and Environmental Statement (SWMES)**) will be completed which may provide further information on the identification and mitigation of specific hazards to the environment.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234

Proposed designated proponent details

Name	Jakob Vujcic
Job title	General Manager, Regulatory and Governance
Phone	02 9717 3844
Email	vujcicj@ansto.gov.au
Address	New Illawarra Road, Lucas Heights NSW 2234

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234
Representative's name	Michael Baker
Representative's job title	Manager, Regulatory Affairs and Compliance - Environment and Sustainability
Phone	0429155994
Email	mhb@ansto.gov.au

Address	178 New Illawarra Road, Lucas Heights NSW 2234

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234
Representative's name	Jakob Vujcic
Representative's job title	General Manager, Regulatory and Governance
Phone	02 9717 3844
Email	vujcicj@ansto.gov.au
Address	New Illawarra Road, Lucas Heights NSW 2234

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

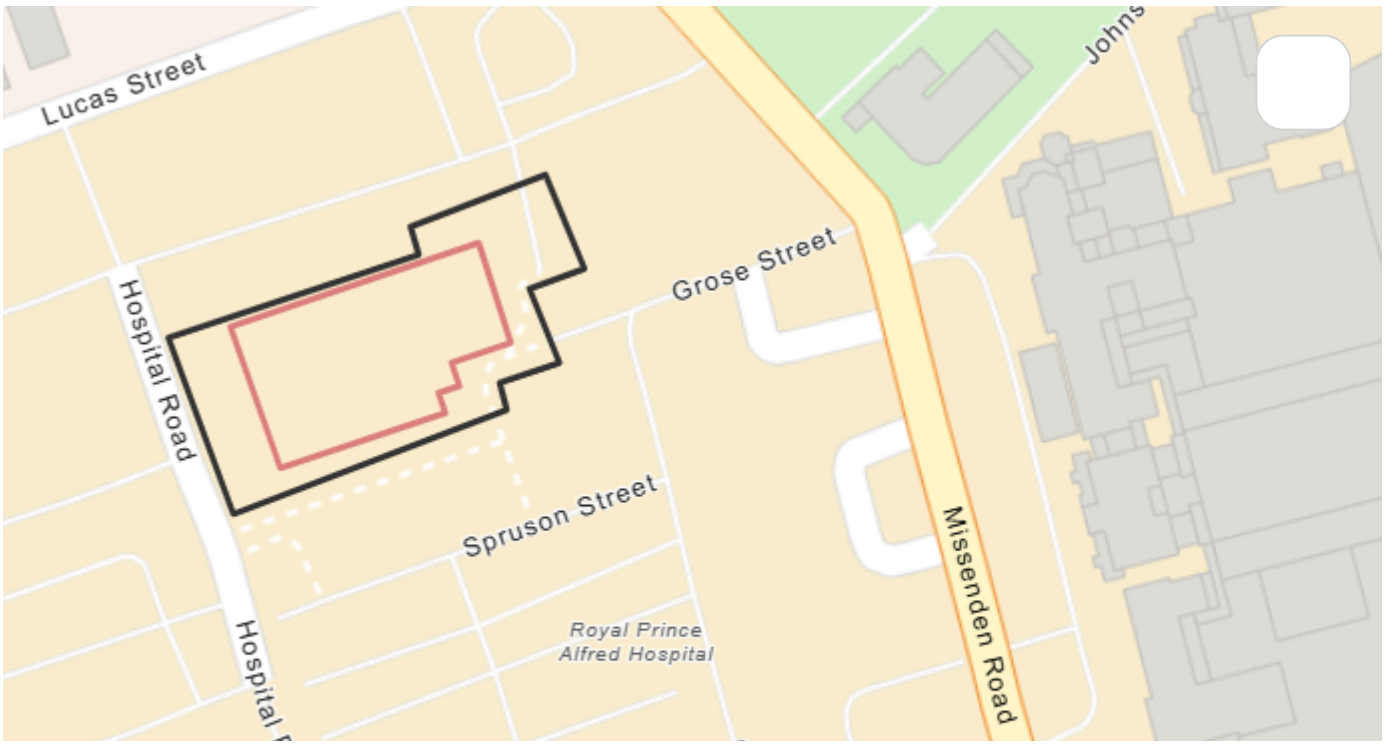
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Referring party

2. Location

2.1 Project footprint



Disturbance Footprint (0.17 Ha)
Project Area (0.35 Ha)

Maptaskr © 2025 -33.888821, 151.182998

Powered By Esri - Sources: Esri, TomTom, Garmin, F…

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

81 Missendon Road, Camperdown NSW 2050

2.2.2 Where is the primary jurisdiction of the proposed action? *

New South Wales

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The Camperdown Cyclotron facility at 81 Missenden Road, Camperdown NSW is an ANSTO operated facility in a building and land leased from the NSW Health department. The facility is covered by the ANSTO Act.

ANSTO's lease with SLHD will expire June 2029 in which ANSTO must return the land back to SLHD in accordance with the agreed end state as set out in the Lease agreement.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

Camperdown Facility

The NRCF is located on leased land at 81 Missenden Rd, Camperdown NSW, approximately 5 km southwest of the Sydney central business district (**Att I – Site location maps)**. The facility consists of a 2-story building with a basement and equipped underground transfer system to the Royal Prince Alfred Hospital running eastward along Grose Street outside of the leased premises. The current cyclotron facility was commissioning 2011 with the installation of the 18 MeV cyclotron. As mentioned in section 1.1.1, prior to the current cyclotron and associated infrastructure, the building housed the 30 MeV National Medical Cyclotron (NMC), jointly operated by ANSTO and the Royal Prince Alfred Hospital. The NMC and the building were constructed from 1987 and operational from 1991. The original cyclotron was decommissioning in 2010 (see EPBC referral 2010/5645 - Decommissioning of NMC and Camperdown Facility). Prior to the NMC, the area was used for light industrial / warehousing by the Royal Prince Alfred Hospital (**Att J – Historical Site Assessment for Camperdown Facility, pp. 2-4**)

The NRCF is immediately located within the Royal Prince Alfred hospital precinct of the Sydney Local Health District and as such is highly trafficable with pedestrians and vehicles. The facility is located in proximity to commercial, high density residential, educational (e.g. the University of Sydney) and sporting facilities.

The entirety of the project's delineated boundaries, including the cyclotron facility, adjacent thoroughfares, and the designated waste management site, have been fully established and operational.

A due diligence soil contamination assessment was conducted by Getex in April 2022 (**Att K – GETEX Due Diligence Contamination Assessment, page 6**). No gross contamination from the samples taken from the site were above investigation levels. Further analysis of radiological contamination from these sample was conducted by ANSTO – the radioactivity in the soil samples was commensurate with worldwide background soil concentrations (**Att L - Certificate of Analysis - radioactivity in soil samples, page 1**).

Road transport from Camperdown to Kemps Creek and Lucas Heights

The decommissioning strategy for the facility will include utilising local, major state and highway roads for the conveyance of dismantled equipment and waste materials. The designated transport route to the Kemps Creek waste management facility and ANSTO's Lucas Heights facility will incorporate a network of primary roads, potentially traversing both residential and commercial zones. Additionally, the route is planned to navigate through or near water catchment regions and watercourses, employing well-established roads, expressways, and motorways. The transport routes will likely pass near to remnant native bushland. The ecological condition of these road verges will vary between highly degraded / highly weed infested, to minimally disturbed parklands. The approved packaging and coverings for the waste and reusable equipment will employ controls to significantly minimise the risk of any release of contaminants to the environment as a result of the normal transport activity or in the event of an accident.

The transport of waste to the Kemps Creek facility will be conducted by a suitably licenced waste transporter, licenced to transport restricted waste.

The transport of low level radioactive solid waste and reusable equipment will be transported to the LHSTC by ANSTO staff using ANSTO heavy vehicles. These activities will be conducted in accordance with **Ref 8 – Radiation Protection Series C-2 ARPANSA Code for the Safe Transport of Radioactive Material, rev 1**).

Further information relating to the packaging and transport of equipment and wastes is detailed in **Att A - DRAFT Decommissioning Plan – October 2024, pages 54-57**.

Kemps Creek Waste Management Facility

The Kemps Creek facility is a waste collection and management facility licenced by the NSW Environment Protection Authority (EPA). The facility is of highly degraded nature. ANSTO understands the facility is operated to contain and treat surface and groundwater contaminants to prevent contamination to the wider environment.

ANSTO Lucas Heights Science and Technology Centre (LHSTC)

ANSTO's Lucas Heights Science and Technology Centre is situated approximately 29 km to the south-west of the Sydney CBD. The nearest suburban areas are Engadine (1.7 km away), Barden Ridge (2.6 km away), and Heathcote (3.2 km away). The OPAL nuclear reactor is situated within the LHSTC. The LHSTC is of a highly disturbed nature, as a result of the establishment of the site in the in the mid-1950's, which involved the clearing of the site to near-bedrock. The LHSTC is situated on Commonwealth land and is not subject to NSW State environmental legislation (refer section 7A ANSTO 1987) and local planning provisions.

The current condition of the environment relative to the LHSTC is that of a well-maintained urban campus fit for car, truck and pedestrian thoroughfare.

The low level solid radioactive waste will be stored in the appropriate ARPANSA licensed waste storage facility for the type and activity of waste. Other reusable equipment being transported to Lucas Heights will be stored and repurposed in a safe manner to avoid any impact to the local environment.

3.1.2 Describe any existing or proposed uses for the project area.

The Camperdown Cyclotron Facility is currently non-operational, before its decommissioning, it was instrumental in the production of short half-life radiopharmaceuticals ideal for detection and treatment within the industry.

Upon decommissioning, stewardship of the land will transition to the Sydney Local Health District (NSW Health), which will be responsible for determining its subsequent utilization.

In preparation for this transfer, ANSTO has conducted a thorough assessment of the site to identify any potential land contamination (**Att K – GETEX Due Diligence Contamination Assessment** and **Att L - Certificate of Analysis - radioactivity in soil samples**). The results of this assessment found no observable contamination above typical values in the region.

During the decommissioning of the facility, if contamination is found to have been as a result of ANSTO operations, ANSTO will undertake necessary remediation efforts to address any detected contamination and restore the land. Any remediation of the land required for radiological contamination will be conducted in accordance with ARPANSA clearance requirements.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

There are no outstanding natural features and/or any other important or unique values of national environmental significance within the cyclotron facility.

The transport route will be along highways and main roads none of which contain outstanding natural features and/or any other important or unique values of national significance. Prior to transport approval of the route will be provided by the National Heavy Vehicle Regulator (NHVR) and Transport for NSW.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

Generally, the relief of the landscape surrounding the project area slopes down from the east to the west (**Att M - Civil Stormwater Engineering Services – Erosion and Sediment Control Report, Page 5**). The project area is situated on flat, level ground that is not within any marine area. There is stormwater infrastructure present surrounding the battery limits of the site.

The project is required to have a sediment and erosion plan in place to ensure any decommissioned derived waste does not infiltrate the stormwater system.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Vegetation mapping and plant communities

There are no remnant native stands of vegetation within or in proximity to the project area. The flora identified within the project area consists of planted ornamental native and introduced species including:

- *Eucalyptus radiata* (Narrow-leaf peppermint)
- *Nandina domestica* (Oriental bamboo)
- *Callistemon viminalis* (Weeping bottlebrush)

Due to the highly urbanised nature of the area, native fauna is very limited. Sporadic sightings of possums (brush-tail and ring-tail) are possible. Avian species likely to be found near the project area include: Australian raven, masked lapwing, willie wag-tail, wattlebirds, noisy minor, pied currawong, Australian magpie, magpie lark, Australian white ibis, and silver gull.

The waste and equipment transportation routes to the Kemps Creek Waste Management Facility (restricted and free release waste) in western Sydney and to ANSTO's Lucas Heights facility (reusable equipment and low level solid radioactive waste) in south-west Sydney will generally be along state main roads and motorways. These transport routes have not yet been determined however will likely take the most straight-forward route avoiding tunnels for any waste/items considered hazardous. Along these transport routes, there are sections of native bushland close to the road verges. These include (**Ref 9 - The Native Vegetation of the Sydney Metropolitan Area - Version 3.1**):

Camperdown to Lucas Heights

- PCT835 - Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (not EPBC listed, low confidence)
- PCT920 - Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion (not EPBC listed, low confidence)
- PCT1776 - Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast (not EPBC listed, medium confidence)
- PCT1787 - Red Bloodwood - Scribbly Gum - Stringybark open forest on sandstone ridges along the western side of the Woronora and Hornsby plateaus (not EPBC listed, medium confidence)
- PCT1845 - Smooth-barked Apple - Red Bloodwood - Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney (not EPBC listed, medium confidence)

Camperdown to Kemps Creek

- PCT849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (EPBC listed, medium confidence)

All wastes and equipment will be transported in the appropriate approved containers and vehicles licenced to transport the goods, refer to **Att A - DRAFT Decommissioning Plan – October 2024, pages 54-57** for a high-level of description of the transport containers to be utilised for each waste type. ANSTO considers it very unlikely that contaminants will be introduced to the environment as a result of the transport activities.

The Lucas Heights campus where waste storage facilities exist would best be described as containing cultivated grasses, garden beds and sporadic native and introduced trees. Fauna sighted in the project area include common species of snakes (Red Bellied Black and Eastern Brown), goanas, and birds (Masked Lapwing and Magpies being common).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

There is no soil or vegetation of national environmental significance within the cyclotron facility.

The vegetation surrounding the facility is limited to ornamental shrubs with two medium-sized eucalypts (*Eucalyptus radiata*) likely planted around the time of the construction of the NMC.

The soil landscape is characterised Residual, Blacktown Soil Landscape. This type of landscape is characterized by gently undulating rises on Wianamatta Group shales and Hawkesbury Shale, local relief to 30 m, slopes usually <5% and broad rounded crests and ridges with gently inclined slopes. This landscape contains cleared Eucalypt woodland and tall open-forest (dry schlerophyll forest). The soils comprise of shallow to moderately deep (<100 cm) Red and Brown Podzolic Soils on crests, upper slopes and well-drained areas. Deep Yellow Podzolic Soils and Soloths on lower slopes and in areas of poor drainage. The limitations to development are moderately reactive highly plastic subsoil, low soil fertility and poor soil drainage Fill material consisted of dark brown and brown loose and clayey loam fill, orange/yellow sand and reddish-brown clays within instances of crushed rock and . at depths ranging 0.0-1.35mbgl. Across the Site the natural soil horizons were reddish brown clays, dark red clays and white clays with minor instances of red shale rock at depths of 0.25m to 5.0m (**Att K – GETEX Due Diligence Contamination Assessment, page 12**)

The bedrock underlying the Site to be Ashfield Shale of the Wianamatta Group consisting of laminate and dark grey siltstone and Bringelly Shale which consists of shale, with occasional calcareous claystone, laminate and coal. This unit is occasionally underlain by claystone and laminite lenses within the Hawkesbury Sandstone such as at Duffys Forest (**Att K – GETEX Due Diligence Contamination Assessment, page 12**).

A Soil Contamination Assessment has been undertaken by Getex to assess for the presence of widespread/gross soil contamination. Soil samples were taken from 11 locations which were then analysed for a broad range of identified potential contaminants. This assessment determined the following (**Att K – GETEX Due Diligence Contamination Assessment, page 6**):

1. Some of the samples exhibited elevated pH levels marginally above the accepted criteria. This presents a low potential risk to current and future receptors.
2. The belowground presence of widespread/gross soil contamination was not identified from the concentrations detected for all contaminants.
3. No identified contamination would preclude the continued present Commercial/Industrial use under the current conditions.
   The transport route will be along highways and main roads none of which contain soil or vegetation of national significance. Prior to transport approval of the route will be provided by the National Heavy Vehicle Regulator (NHVR) and Transport NSW.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

No Commonwealth heritage places have been identified that are in proximity to the project area, or any proposed transport routes for reusable instruments/infrastructure or waste arising from the decommissioning of the facility.

The nearest listed Commonwealth heritage place to the project area is the Pyrmont Post Office, approximately 2.5 km to the north-east of the project area. No activities are expected to have direct or indirect impact to this heritage place.

The Cubbitch Barta National Estate Area is located adjacent to the broader Lucas Heights Science and Technology Centre, which will be the end-location of the transportation route of reusable instruments/infrastructure from the project area. The exact storage locations of these have not been ultimately determined, however it is highly likely these will be transported and stored in existing ARPANSA licensed facilities within ANSTO, over 500 metres to the north of the Cubbitch Barta National Estate Area. All items to be returned to Lucas Heights will be immobilised and do not a present a risk of contamination to the surrounding environment, both during transportation to and storage at Lucas Heights. No direct or indirect impacts are expected to this heritage place.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

ANSTO Conducted a search of the Aboriginal Heritage Information Management System (AHIMS). No Indigenous heritage sites or values have been identified within 200 metres of the project area. There are two sites identified approximately 850 metres from the site. It is not foreseeable that these sites will be impacted by the proposed action. Without controls, the proposed action would have the potential to produce small amounts of airborne or waterborne low-level radioactive and chemical contaminants. Inherently, these impacts would be unlikely to impact these sites. With the controls which are being proposed by the project such as dust mitigation, sediment control and waste transport containers (**Att A - DRAFT Decommissioning Plan – October 2024, pages 47-49, 54-57, 75**), it is very unlikely there will be any impact on Indigenous heritage values.

The AHIMS search result will not be published due to sensitivity requirements expressed by the NSW Government – AHIMS Web Services.

As described in relation to Commonwealth heritage places, the Cubbitch Barta National Estate Area is located adjacent to the broader Lucas Heights site, which will be the end-location of the transportation route of reusable instruments/infrastructure from the project area. The instruments/infrastructure to be returned to Lucas Heights are to be held in facilities within the established Lucas Heights Science and Technology Centre. All items to be returned to Lucas Heights will be immobilised and do not a present a risk of contamination to the surrounding environment, both during transportation to and storage at Lucas Heights. No direct or indirect impacts are expected to this heritage place.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

Generally, the relief of the land slopes down from the east to the west (**Att M - Civil Stormwater Engineering Services – Erosion and Sediment Control Report, Page 5**), towards Johnston's Creek (**Ref 10 – Johnstons Creek Catchment: Floodplain Risk Management Plan, Fig. 2**). Locally, surface runoff from the site is expected to drain to the north into the Johnston's Creek Catchment stormwater drainage system (**Att K – GETEX Due Diligence Contamination Assessment, page 13)**. The Johnston's Creek Catchment drains into Sydney Harbour, at Rozelle Bay There are no water reservoirs within the near vicinity to the NRCF. No groundwater was observed through the soil sampling program (down to a depth of 5 m - **Att K – GETEX Due Diligence Contamination Assessment, page 22)**. There are two in-use registered monitoring bores within 500 m of the NRCF, both approximately 400 m to the north-east (**Att K – GETEX Due Diligence Contamination Assessment, page 13)**. It is highly unlikely these bores will be impacted by the proposed action.

During the planning stage, the project has engaged a civil stormwater consultant to provide an erosion and sediment control report and plan (**Att M – Erosion and Sediment Control**). This plan investigates the existing stormwater system within the immediate area along with outlining sediment and erosion controls to mitigate any environmental impacts encountered throughout the decommissioning phase of the project. This plan will be further developed through the engagement of the Principal Contractor.

A site visit was undertaken on 8 October 2024 to identify the existing site's stormwater drainage strategy and overland flow paths. Upon inspection, the site's topography was predominately grading from east to west, with the high point near the main entry (east) and the low end at the corner of Hospital Rd and the through road of the neighbouring 25 Lucas St site. The in-ground stormwater pit and pipe network followed a similar connection strategy. However, almost all inspected pits had varying levels of ponding / trapped water.

The natural low point of the site is at the corner of Hospital Rd and the through road of the neighbouring 25 Lucas St site. Existing electrical substations are also located at this point. Considering sediment and erosion control measures, the proposed above-ground sediment basin is to be positioned near the site's low point to allow gravity drainage of the surface flows from the wider site catchment. The sediment basin is to ensure adequate clearance and no impacts to the below-ground utilities servicing the substation.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S18	Threatened Species and Ecological Communities	No	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth heritage places overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	Yes	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The nearest World Heritage property is the Hyde Park Barracks located approximately 3.6 kilometres to the north-east of the project site. Other World Heritage sites within 5 km include Cockatoo Island to the north and the Sydney Opera House to the north-east.

Any impacts, (albeit minimal) to the local environment will be limited to potential dusts production and surface water contamination. Demolition of the vault areas will include wire cutting of concrete sections of the vault walls which have been incidentally irradiated during the life of the facility. This activity may produce dusts, however, will be confined to the immediate local area and will not destroy or damage any World Heritage values. Dust suppression methods, such as tenting of the building and use of local air scrubbers at various stages of the project, dust suppression system; regular dust monitoring, use appropriate approved transport containers of wastes and equipment being transported.

The proposed decommissioning of the Camperdown cyclotron facility is unlikely to have a direct and/or indirect impact on World Heritage properties due to the nature of the action and the distance to the closest listing.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

A Protected Matters Search was conducted for the project area, there are no national heritage sites or values identified within the vicinity of the project area and therefore no impacts are likely on national heritage sites or values.

The nearest National Heritage Place is the Cyprus Hellene Club – Australian Hall located approximately 2.1 kilometres to the north-east of the project site. Other National Heritage Place within 5 km include: Hyde Park Barracks to the north-east; Cockatoo Island to the north; the Sydney Opera House to the north-east, Sydney Harbour Bridge to the north-east, First Government House Site to the north-east, Centennial Park to the east. The Cubbitch Barta National Estate is situated to the south of the Lucas Heights Science and Technology Centre (LHSTC) where some low-level radioactive waste, instruments, infrastructure will be transported to.

Any impacts, (albeit minimal) to the local environment will be limited to dusts production and surface water contamination. Demolition of the vault areas will include wire cutting of concrete sections of the vault walls which have been incidentally irradiated during the life of the facility. This activity may produce dusts, however, will be confined to the immediate local area and will not destroy or damage any National Heritage Place values. Dust suppression methods, such as tenting of the building and use of local air scrubbers at various stages of the project, dust suppression system; regular dust monitoring, use appropriate approved transport containers of wastes and equipment

The low-level radioactive waste, instruments, infrastructure to be transported to the LHSTC will be conducted using approved containers for the hazards contained.

The transport of materials to the Kemps Creek Waste Management Centre and LHSTC will not be conducted in proximity to any National Heritage Places.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed decommissioning of the Camperdown cyclotron facility is unlikely to have a direct and/or indirect impact on any Ramsar wetlands due to the nature of the action and the distance to the closest listing. There are no Ramsar wetlands matters within the project site, however one occurs within the wider locality being the Towra Point Nature Reserve Park, which is located around 12 kilometres to the south of the project site. The water catchment area for the Camperdown facility is the Johnston's Creek catchment, which drains into Whyte's Bay in Sydney Harbour. All low instrumentation and infrastructure being transported to the Lucas Heights Science and Technology Centre for storage or re-purposing, and all wastes being transported to appropriate waste collection facilities will be immobilised. The likelihood of contamination to waterways and further to the Towra Point Nature Reserve Park from this activity is considered very unlikely.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Acacia pubescens	Downy Wattle, Hairy Stemmed Wattle
No	No	Acacia terminalis subsp. Eastern Sydney (G.P.Phillips 126)	Sunshine Wattle (Sydney region)

Direct impact	Indirect impact	Species	Common name
No	No	Allocasuarina glareicola	
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	No	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Cryptostylis hunteriana	Leafless Tongue-orchid
No	No	Dasyornis brachypterus	Eastern Bristlebird
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Diomedea epomophora	Southern Royal Albatross
No	No	Diomedea sanfordi	Northern Royal Albatross
No	No	Eucalyptus camfieldii	Camfield's Stringybark
No	No	Falco hypoleucos	Grey Falcon
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Genoplesium baueri	Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid
No	No	Grantiella picta	Painted Honeyeater
No	No	Heleioporus australiacus	Giant Burrowing Frog
No	No	Hirundapus caudacutus	White-throated Needletail

Direct impact	Indirect impact	Species	Common name
No	No	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
No	No	Lathamus discolor	Swift Parrot
No	No	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
No	No	Litoria aurea	Green and Golden Bell Frog
No	No	Macquaria australasica	Macquarie Perch
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pachyptila turtur subantarctica	Fairy Prion (southern)
No	No	Persicaria elatior	Knotweed, Tall Knotweed
No	No	Petauroides volans	Greater Glider (southern and central)
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	Pimelea curviflora var. curviflora	
No	No	Pimelea spicata	Spiked Rice-flower
No	No	Prostanthera densa	Villous Mintbush
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pycnoptilus floccosus	Pilotbird
No	No	Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood
No	No	Rhodomyrtus psidioides	Native Guava
No	No	Rostratula australis	Australian Painted Snipe
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Sternula nereis nereis	Australian Fairy Tern

Direct impact	Indirect impact	Species	Common name
No	No	Syzygium paniculatum	Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche eremita	Chatham Albatross
No	No	Thalassarche salvini	Salvin's Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Thesium australe	Austral Toadflax, Toadflax
No	No	Tringa nebularia	Common Greenshank, Greenshank

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion
No	No	Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Coastal Upland Swamps in the Sydney Basin Bioregion
No	No	Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion
No	No	Eastern Suburbs Banksia Scrub of the Sydney Region
No	No	River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
No	No	Western Sydney Dry Rainforest and Moist Woodland on Shale

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.4.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

ANSTO has self-assessed the potential significance of impacts to threatened species and ecological communities (**Att B - EPBC Self assessment - Camperdown decommissioning**). This self assessment was conducted using the guidance provided in **Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance** and **Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies**.

Project area

A Protected Matters Search was conducted for the project area, with eight (8) threatened ecological communities and fifty-seven (57) listed threatened species identified as potentially occurring in proximity of the project site.

Due to the highly urbanised nature of the project area and surroundings, no ecological communities are situated within the project area or surrounds. The likelihood of threatened species to be found is very unlikely. Native vegetation and habitat to support threatened faunal species is sparse and highly fragmented from remnant corridors. Within the project are and the immediate surroundings, there is very minimal vegetation.

Transport of waste and equipment for disposal and storage

It is not practicable to conduct a Protected Matters Search on the possible transport routes, as these have not been finalised and will not until the waste transport contractors are selected. It is likely however that the transport route of restricted waste to the Kemps Creek Waste Management Facility will traverse near to one endangered ecological community, PCT849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain. This ecological community has fragments situated along the M4 motorway and along access roads to the Kemps Creek Waste Management Facility.

It is very unlikely that the transport of materials will have any direct or indirect impacts on the environment adjacent to any transport routes, even in the event of an accident. Wastes and equipment will be transported in the appropriate containers and covered/enclosed vehicles to minimise any emission or loss of containment to the environment along the transport route. Information on the transport containment controls is provided in **Att A - DRAFT Decommissioning Plan – October 2024, pages 54-57.**

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper

Direct impact	Indirect impact	Species	Common name
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
No	No	Diomedea epomophora	Southern Royal Albatross
No	No	Diomedea sanfordi	Northern Royal Albatross
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Hirundapus caudacutus	White-throated Needletail
No	No	Limosa lapponica	Bar-tailed Godwit
No	No	Monarcha melanopsis	Black-faced Monarch
No	No	Motacilla flava	Yellow Wagtail
No	No	Myiagra cyanoleuca	Satin Flycatcher
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Rhipidura rufifrons	Rufous Fantail
No	No	Symposiachrus trivirgatus	Spectacled Monarch
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche eremita	Chatham Albatross
No	No	Thalassarche salvini	Salvin's Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Tringa nebularia	Common Greenshank, Greenshank

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

ANSTO has self-assessed the potential significance of impacts to migratory species (**Att B - EPBC Self assessment - Camperdown decommissioning**). This self assessment was conducted using the guidance provided in **Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance** and **Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies**.

Project area and the transport of waste and equipment for disposal and storage

A Protected Matters Search was conducted for the project area, with twenty-four (24) migratory species identified as potentially being found in proximity of the project site or with habitat supporting them.

Due to the highly urbanised nature of the project area and surroundings, the likelihood of migratory species or habitat to support them within the project area is considered to be very unlikely.

It is very unlikely that the transport of materials will have any direct or indirect impacts on the environment adjacent to any transport routes, even in the event of an accident. Wastes and equipment will be transported in the appropriate containers and covered/enclosed vehicles to minimise any emission or loss of containment to the environment along the transport route. Information on the transport containment controls is provided in **Att A - DRAFT Decommissioning Plan – October 2024, pages 54-57.**

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

ANSTO has self-assessed the proposed action to decommissioning the NRCF as not a nuclear action. ANSTO has considered this determination on the basis of the isotopes which were produced in the facility while it was operational, and the isotopes which remain in the facility as a result of proton activation of the vault walls. This determination is based upon section 22(1)(f) of the EPBC Act and sections 2.01 and 2.02 of the EPBC Regulations.

Radioactivity during operations

During operations, the maximum amount of radioactivity permitted in the hot cells following each cyclotron run would be either 3.7 x 10^11 Bq of fluorine-18 or 2.2 x 10^11 Bq of carbon-11. The half-life for fluorine-18 and carbon-11 are 110 minutes and 28 minutes respectively. This means the residual activity after 1 day for each isotope after each cyclotron run would be approximately 4.5 x 10^7 Bq for fluorine-18, and 3.3 x 10^3 Bq for carbon-11.

The activity values as prescribed in Schedule 1 of the Australian Radiation Protection and Nuclear Safety Regulations 2018 (ARPANSA Regulations) for fluorine-18 and carbon-11 respectively are: 1 x 10^6 and 1 x 10^6. Calculating the activity division steps for each isotope, these equate to 3.7 x 10^5 Bq for fluorine-18 or 2.2 x 10^5 Bq for carbon-11. These are both less 1 x 10^6 times the ‘excessive’ activity limit for unsealed sources as prescribed in 2.02 of the EPBC Regulations. Considering the short half-life of each isotope and that the maximum allowable radioactivity in the hot cells at any one time is below the ‘excessive’ threshold as prescribed in the EPBC Regulations, ANSTO determines the historical use of the facility does not constitute a nuclear action.

Radioactivity during decommissioning

Since operations ceased in 2021, no new radionuclides have been produced in the facility. Neutron capture (neutrons being a by-product of the production of fluorine-18 and carbon-11) within the reinforced concrete of the vault walls, has resulted in a small amount of radioactive elements being present in the concrete. These radioisotopes include: calcium-41, iron-55, cobalt-60, nickel-63, ceasium-134, europium-152, and europium-154. The total mass of activated concrete from the vault walls is estimated as 500 tonnes. For each radioisotope, the activity steps have been calculated and assessed against section 2.02 of the EPBC Regulations and Schedule 1 of the ARPANS Regulations.

Calcium-41: Total activity = 1.76 x 10^9 Bq, Activity value (Schedule 1 ARPANS Regulations) = 1.0 x 10^5 Bq, Activity Division Step = 1.76 x 10^4 Bq.

Iron-55: Total activity = 2.09 x 10^10 Bq, Activity value = 1.0 x 10^6 Bq, Activity Division Step = 2.09 x 10^4.

Cobalt-60: Total activity = 3.93 x 10^9 Bq, Activity value = 1.0 x 10^5 Bq, Activity Division Step = 3.93 x 10^4.

Nickel-63: Total activity = 4.67 x 10^9 Bq, Activity value = 1.0 x 10^8 Bq, Activity Division Step = 4.67 x 10^1.

Ceasium-134: Total activity = 1.67 x 10^7 Bq, Activity value = 1.0 x 10^4 Bq, Activity Division Step = 1.67 x 10^3.

Europium-152: Total activity = 1.19 x 10^10 Bq, Activity value = 1.0 x 10^6 Bq, Activity Division Step = 1.19 x 10^4.

Europium-154: Total activity = 9.86 x 10^8 Bq, Activity value = 1.0 x 10^6 Bq, Activity Division Step = 9.86 x 10^2.

Total sum of activity division steps = 9.19 x 10^4, which is less than 1 x 10^6 ‘excessive threshold for unsealed sources, therefore the proposed action is not considered a nuclear action from a decommissioning perspective as prescribed in 2.02 of the EPBC Regulations.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed decommissioning of the NRCF is unlikely to have a direct and/or indirect impact on Commonwealth Marine Area due to the nature of the action and the distance to the closest listing. A Protected Matters Search was conducted for the project area, there are no Commonwealth marine areas identified within the vicinity of the project area. The risk of contaminants propagating into the Port Jackson catchment is assessed as very low, and therefore the risk to contaminants entering Commonwealth marine areas is also considered as very low.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There is no risk to the Great Barrier Reef as a result of this project due to the vast distance.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

This project does not involve coal mining or coal seam gas extraction.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Commonwealth land area
No	No	Commonwealth Land - Australian Telecommunications Commission
No	No	Defence - FOREST LODGE (SYDNEY) TRG DEP
No	No	Defence - SYDNEY UNIVERSITY REGIMENT - DARLINGTON

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The land is owned and leased to ANSTO by the NSW Government, Department of Health – Sydney Local Health Service. The nearest Commonwealth-owned land is the Sydney University Regiment located about 700 m to the east-south-east of the project area. Other Commonwealth-owned land is situated approximately 1-2 km to the north-east and north-west of the project area.

The proposed action is unlikely to have any impact on these Commonwealth-owned lands due to the low likelihood of inherent impacts from the production of airborne or waterborne radiological and chemical contaminants as a result of the decommissioning and transport activities.

4.1.11 Commonwealth heritage places overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

Commonwealth Heritage Places Overseas
This project will not have any impact on Commonwealth heritage places overseas due to the vast distance.

Other Commonwealth Heritage Places
The decommissioning of the Camperdown cyclotron facility is unlikely to have a direct and/or indirect impact on any Commonwealth Heritage Places due to the nature of the action and the distance to the closest listing, being the Pyrmont Post Office, approximately 2.5 km to the north-east of the project area. No activities are expected to have direct or indirect impact to this heritage place.

The Cubbitch Barta National Estate Area is located adjacent to the broader Lucas Heights Science and Technology Centre, which will be the end-location of the transportation route of reusable instruments/infrastructure from the project area. The exact storage locations of these have not been ultimately determined, however it is highly likely these will be transported and stored in existing ARPANSA licenced facilities within ANSTO, over 500 metres to the north of the Cubbitch Barta National Estate Area. All items to be returned to Lucas Heights will be immobilised and do not a present a risk of contamination to the surrounding environment, both during transportation to and storage at Lucas Heights. No direct or indirect impacts are expected to this heritage place.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

Yes

4.1.12.2 Briefly describe the nature and extent of the likely impact on the whole of the environment. *

ANSTO has completed a self-assessment on the potential impacts from the NMF on Commonwealth land and by a Commonwealth agency (**Att B - EPBC Act Referral Self-Assessment on Impacts to the Environment for the Nuclear Medicine Facility project**). Consulting **Ref 5 - Significant impact guidelines 1.2- Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies**, ANSTO has identified a number of potential and likely impacts to the environment, and subsequently assessed the significance of these impacts. In summary the impacts assessed for significance are:

Activity: Demolition of building.

Impact: Emissions of radioactive and chemical contaminants into the environment.

The demolition of the NRCF will be undertaken by a suitably qualified and experienced Principal Contractor who will be managed by ANSTO. Before commencing the construction work, the Principal Contractor will be required to complete and implement a project /construction environmental management plan (P/CEMP - **Att G - AF-5947 Project – Construction Environmental Management Plan**), meeting ANSTO's minimum requirements for protection of the environment (**Att E - AP-5400 Project Environmental Protection Requirements**). Controls which will be required in the P/CEMP, include:

- dust suppression methods, such as tenting of the building and use of local air scrubbers at various stages of the project, dust suppression system; regular dust monitoring, use appropriate approved transport containers of wastes and equipment being transported;
- sediment capture mechanisms, which will be informed through a sediment control plan;
- de-watering of excavated areas;
- noise, night light-spill and vibration suppression;
- further site characterisation post-excavation to assess for any residual surface contamination (and subsequent removal). The site will be decontaminated to a standard that meets the approval of the regulatory agency Australian Radiation Protection and Nuclear Safety Agency (APRANSA); and,
- back-filling with virgin excavated natural material and establishing a hard-stand surface for hand-over with NSW Health (**Att A - DRAFT Decommissioning Plan – October 2024, pages 43-44, 47-48, 75**).

The inherent risk posed by the production of dusts to the air or into stormwater have been determined to be low due to the limited nature of the radioactivity contained in the activated components of the building (noting the amount of activity does not exceed the ‘excessive’ threshold for a nuclear action). The controls to mitigate any releases to the environment further reduce these risks.

Activity: Transport of wastes for recycling or landfill.

Impact: There is a risk that restricted wastes transported by truck to Kemps Creek Waste Management Facility, and low-level solid radioactive waste to ANSTO Lucas Heights, and equipment to ANSTO Lucas Heights for repurposing could be released to the environment as a result of vehicular accident.

The vast majority of waste (≥93% of up to 8,000 tonnes) produced throughout the decommissioning of the NRCF will be below both ARPANSA and NSW EPA free release limits. These free release wastes, primarily concrete, which aim to be recycled through approved recycling facilities. The remainder of the wastes, will be either be transported to the Kemps Creek Waste Management Facility, as restricted waste (490 tonnes of activated concrete), hazardous wastes (<2 tonnes of lead-based wastes which will be recycled), and a small amount of low-level radioactive solid waste which will be transported to ANSTO’s Lucas Heights facility for storage (**Att A - DRAFT Decommissioning Plan – October 2024, pages 47-48**). The transport routes being considered are shown in **Att A - DRAFT Decommissioning Plan – October 2024, pages 56-57**, however these routes will not be finalised until after the award of the Principal Contractor for the project. All wastes will be transported by licenced transport operators, in enclosed trucks and all wastes disposed with evidence of receival at licenced and approved waste management facilities. The restricted waste to be disposed at Kemps Creek Waste Management Facility will be transported in IP1 bags and within enclosed trucks. The low-level radioactive solid waste will be transported to ANSTO Lucas Heights in 200 clamped steel drums and within enclosed trucks. Any contaminated liquid waste which is found or produced throughout the demolition activities will be managed in accordance with either NSW EPA guidelines, standard demolition processes or as per those defined by ANSTO Waste Management Services (**Att A - DRAFT Decommissioning Plan – October 2024, page 49**). Specific information on the packaging of the different wastes for transport is provided in **Att A - DRAFT Decommissioning Plan – October 2024, pages 54-57**.

Activity: Increase demand on surrounding road infrastructure during the site preparation and construction phases.

Impact: It is estimated approximately 300 heavy vehicle movements will be conducted throughout all stages of the demolition. The majority of the activity will occur over a 3-month period during weekdays. This will result in a truck movement of about 5 heavy vehicles per day.

A traffic management plan will be prepared for the preparation, demolition and waste disposal activities (**Att A - DRAFT Decommissioning Plan – October 2024, page 32**). ANSTO intends to limit transport activities to periods of lower pedestrian activity in the area (i.e. outside of standard university study periods). ANSTO does not believe this will have a significant impact on local roads and is less than or equivalent to other medium-scale urban construction/demolition works. Truck access will be conducted on the southern side of the site, to minimise the impact to pedestrian movements in the precinct, nearby accommodation buildings, and the risk of damage to essential services supporting neighbouring buildings (**Att A - DRAFT Decommissioning Plan – October 2024, page 45**).

Due to the relatively low activity and nature of contamination of the wastes to be produced by the decommissioning of the NRCF, the inherent risk to the environment through accidental release during transportation is considered to be low. The controls to be used (containment, licenced transporting companies, mandate of waste receipts) will reduce the risk to very low.

ANSTO therefore does not consider the proposed action constitutes a controlled action by a Commonwealth agency.

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth heritage places overseas (S27B)

- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

ANSTO's lease with NSW Health for the land where the NRCF is located is due to lapse in the next few years. Alternatives were considered which could have allowed for the building and parts of its interior to be retained, however ANSTO determined these not in the viable and/or within lease arrangements with NSW Health (**Att A - DRAFT Decommissioning Plan – October 2024, pages 14-19**). The proposed action will allow for the make good on the land allowing it to be fully handed over to NSW Health at the end of the lease arrangement.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	01/10/2024	No	High
#2.	Document	Att B - EPBC Self assessment - Camperdown decommissioning.pdf	18/11/2024	No	High

		ANSTO's EPBC self-assessment of the decommissioning incorporating the significance assessment against thresholds from EPBC Significnace Guidelines 1.1 and 1.2.		
#3.	Link	Ref 1 - IAEA General Safety Requirements Part 3 https://www-pub.iaea.org/MTCD/Publications/PDF/P..		High
#4.	Link	Ref 2 - Waste Classification Guidelines Part 1: Classifying waste https://www.environment.nsw.gov.au/resources/was..		High
#5.	Link	Ref 3 - Waste classification guidelines Part 3: Waste containing radioactive material https://www.epa.nsw.gov.au/-/media/epa/corporate..		High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att B - EPBC Self assessment - Camperdown decommissioning.pdf ANSTO's EPBC self-assessment of the decommissioning incorporating the significance assessment against thresholds from EPBC Significnace Guidelines 1.1 and 1.2.	18/11/2021	No	High
#2.	Document	Att C - Sydney Water Trade Waste Agreement #4423.pdf Trade waste discharge consent between ANSTO and Sydney Water Corporation - redacted version	22/08/2022	No	High
#3.	Document	Att C (SENSITIVE) - Sydney Water Trade Waste Agreement #4423.pdf Trade waste discharge consent between ANSTO and Sydney Water Corporation - sensitive version	22/08/2022	Yes	High
#4.	Link	Ref 2 - Waste Classification Guidelines Part 1: Classifying waste https://www.environment.nsw.gov.au/resources/was..			High
#5.	Link	Ref 3 - Waste classification guidelines Part 3: Waste containing radioactive material https://www.epa.nsw.gov.au/-/media/epa/corporate..			High
#6.	Link	Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/sites/default/files/do..			High
#7.	Link				

		Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Act https://www.dcceew.gov.au/sites/default/files/do..		High
#8.	Link	Ref 6 - Local Environmental Monitoring https://www.ansto.gov.au/science/environment/env..		High

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att D - Health, Safety, Community and Environmental Policy.pdf ANSTO's high level policy detailing its commitments to prevent or minimise its impacts on the environment.	17/06/2021	No	High
#2.	Link	Ref 7 - ANSTO Environmental Sustainability Strategy https://www.ansto.gov.au/science/environment/env..			High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att D - Health, Safety, Community and Environmental Policy.pdf ANSTO's high level policy detailing its commitments to prevent or minimise its impacts on the environment.	16/06/2021	No	High
#2.	Document	Att E - AP-5400 Project Environmental Protection Requirements.pdf This document provides the overarching planning framework and requirements for the protection of the environment from project, construction, decommissioning and maintenance activities at ANSTO.	01/10/2024	No	High
#3.	Document	Att F - AF-1376 Project Environmental Planning Checklist.pdf This checklist informs project planners to understand the environmental regulatory approvals requirement and internal planning requirements for any project conducted at ANSTO.	29/10/2024	No	High
#4.	Document	Att G - AF-5947 Project - Construction Environmental Management Plan.pdf This form is completed for all major projects conducted at ANSTO which may have an impact on the environment. This form may be complemented by a Principal Contractor's own environmental management plan.	31/10/2024	No	High

#5.	Document	Att H - AF-2315 Safe Work Method and Environmental Statement (SWMES).pdf This form assists any staff member of ANSTO (or contractors) to identify, mitigate, and risk assess safety and environmental hazards for high risk or non-routine activities.	29/04/2024	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Document	Att I - Site location maps.pdf Satellite imagery of the project area in relation to the Sydney CBD.	04/10/2024	No	High
#3.	Document	Att J - Historical Site Assessment for Camperdown Facility.pdf Summarises the historical and current use and impact of the NRCF.	06/12/2022	No	High
#4.	Document	Att K - GETEX Due diligence contamination assessment.pdf Summarises the findings from a contaminated lands assessment of the NRCF and surrounds.	11/04/2022	No	High
#5.	Document	Att L - Certificate of Analysis - radioactivity in soil samples.pdf Supporting the contaminated lands assessment, this provides a summary of the radiological contamination assessment.	10/08/2022	No	High
#6.	Link	Ref 8 - Radiation Protection Series C-2 ARPANSA Code for the Safe Transport of Radioactive Materia https://www.arpansa.gov.au/regulation-and-licens..			High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att K - GETEX Due diligence contamination assessment.pdf Summarises the findings from a contaminated lands assessment of the NRCF and surrounds.	10/04/2022	No	High
#2.	Document	Att L - Certificate of Analysis - radioactivity in soil samples.pdf Supporting the contaminated lands assessment, this	09/08/2022	No	High

provides a summary of the radiological contamination assessment.

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att M - Civil Stormwater Engineering Services – Erosion and Sediment Control Report.pdf Summary of the local hydrological conditions and constraints of the NRCF site and surrounds.	20/10/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Link	Ref 9 - Native Vegetation of the Sydney Metropolitan Area - Version 3.1 https://datasets.seed.nsw.gov.au/dataset/the-nat..			High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att K - GETEX Due diligence contamination assessment.pdf Summarises the findings from a contaminated lands assessment of the NRCF and surrounds.	10/04/2022	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Document	Att X (SENSITIVE) - AHIMS search result.pdf Search result for Indigenous heritage sites in proximity to the NRCF.	20/10/2024	Yes	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Att K - GETEX Due diligence contamination assessment.pdf Summarises the findings from a contaminated lands assessment of the NRCF and surrounds.	10/04/2024	No	High
#2.	Document	Att M - Civil Stormwater Engineering Services – Erosion and Sediment Control Report.pdf Summary of the local hydrological conditions and constraints of the NRCF site and surrounds.	20/10/2024	No	High
#3.	Link	Ref 10 – Johnstons Creek Catchment: Floodplain Risk Management Plan https://www.cityofsydney.nsw.gov.au/floodplain-m..			High

4.1.4.3 (Threatened Species and Ecological Communities) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Document	Att B - EPBC Self assessment - Camperdown decommissioning.pdf ANSTO's EPBC self-assessment of the decommissioning incorporating the significance assessment against thresholds from EPBC Significnace Guidelines 1.1 and 1.2.	18/11/2024	No	High
#3.	Link	Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/sites/default/files/do..			High
#4.	Link	Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Act https://www.dcceew.gov.au/sites/default/files/do..			High

4.1.5.3 (Migratory Species) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Document				

		Att B - EPBC Self assessment - Camperdown decommissioning.pdf ANSTO's EPBC self-assessment of the decommissioning incorporating the significance assessment against thresholds from EPBC Significnace Guidelines 1.1 and 1.2.	18/11/2024	No	High
#3.	Link	Ref 4 - Significant Impact Guidelines 1.1 - Matters of National Environmental Significance https://www.dcceew.gov.au/sites/default/files/do..			High
#4.	Link	Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Act https://www.dcceew.gov.au/sites/default/files/do..			High

4.1.12.2 (Commonwealth or Commonwealth Agency) Nature and extent of the likely impact on the whole of the environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High
#2.	Document	Att B - EPBC Self assessment - Camperdown decommissioning.pdf ANSTO's EPBC self-assessment of the decommissioning incorporating the significance assessment against thresholds from EPBC Significnace Guidelines 1.1 and 1.2.	18/11/2024	No	High
#3.	Document	Att E - AP-5400 Project Environmental Protection Requirements.pdf This document provides the overarching planning framework and requirements for the protection of the environment from project, construction, decommissioning and maintenance activities at ANSTO.	30/09/2024	No	High
#4.	Document	Att G - AF-5947 Project - Construction Environmental Management Plan.pdf This form is completed for all major projects conducted at ANSTO which may have an impact on the environment. This form may be complemented by a Principal Contractor's own environmental management plan.	31/10/2024	No	High
#5.	Link	Ref 5 - Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Act https://www.dcceew.gov.au/sites/default/files/do..			High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att A - DRAFT Decommissioning Plan - October 2024.pdf Provides the high-level information on the processes conducted to determine the preferred decommissioning options, and the proposed decommissioning activities and mitigation measures.	30/09/2024	No	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234
Representative's name	Michael Baker
Representative's job title	Manager, Regulatory Affairs and Compliance - Environment and Sustainability
Phone	0429155994
Email	mhb@ansto.gov.au
Address	178 New Illawarra Road, Lucas Heights NSW 2234

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Michael Baker of AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	47956969590
Organisation name	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION
Organisation address	178 New Illawarra Road, Lucas Heights NSW 2234
Representative's name	Jakob Vujcic
Representative's job title	General Manager, Regulatory and Governance
Phone	02 9717 3844
Email	vujcicj@ansto.gov.au
Address	New Illawarra Road, Lucas Heights NSW 2234

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Jakob Vujcic of AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Jakob Vujcic of AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *