



EPBC Referral Self-Assessment on Impacts to the Environment for the Decommissioning of the National Research Cyclotron Facility

This self-assessment informs the decision by ANSTO to whether a referral to the Minister for the Environment is required for the proposed action.

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1. Purpose and scope

1.1 Purpose

Under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.

In addition, under the EPBC Act,

1. any person who proposes to take an action which is either situated on Commonwealth land or which may impact on Commonwealth land, and/or
2. representatives of Commonwealth agencies who propose to take an action that may impact on the environment anywhere in the world,

will require approval from the minister if the action has, will have, or is likely to have, a significant impact.

1.2 What is an action?

‘Action’ is defined broadly in the EPBC Act and includes: a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things.

1.3 Matters of National Environmental Significance

Matters of National Environmental Significance Matters of national environmental significance are:

- listed threatened species and ecological communities
- migratory species protected under international agreements
- Ramsar wetlands of international importance
- the Commonwealth marine environment
- World Heritage properties
- National Heritage places
- the Great Barrier Reef Marine Park, and
- nuclear actions, and
- a water resource, in relation to coal seam gas development and large coal mining development.

1.4 What is a significant impact?

A ‘significant impact’ is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. You should consider all of these factors when determining whether an action is likely to have a significant impact on matters of national environmental significance.

1.5 When is a significant impact likely?

To be ‘likely’, it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility. If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.

This self-assessment incorporates the referral thresholds as indicated in:

- [Significant Impact Guidelines 1.1 - Matters of National Environmental Significance](#)
- [Significant impact guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#)

1.6 How to use this form

The completion of this form should be informed by the results of [AF-1376 Project Environmental Planning Checklist](#)

Project team

- Project team should complete **section 2** of this form and attach relevant project documents which can support how the proposed action will or will not have a significant impact on matters of national environmental significance.
- The information to be provided in this form will inform the responses required within the EPBC referral.

Regulatory and Governance in consultation with project team

- A search using the protected matters search tool must be conducted. This search will inform many of the inputs in **section 4**.
- Using the information provided by the project team, answer the questions in **section 4**.
- Questions in **green** and **red** must be answered.
 - Where any question in **red** is answered yes, a referral must be submitted.
- Where a question in **green** has been answered yes, information (informed by the protected matters search) in **blue** must be completed, subsequent questions in orange must be answered.
- All questions in **yellow** must be answered.
- **Where an inherent likelihood (consulting AG-2395) is rated 'likely' or above, information on 'Mitigation controls', 'Certainty of control effectiveness', and 'Significance assessment' must be completed.**

Results of self-assessment

- Where a proposed action is determined to require referral, this self-assessment should be provided as an attachment to the referral.
- Where a proposed action is determined not to require referral, this self-assessment should be saved in the appropriate project and Regulatory and Governance team information management systems.

2. Description of the Action (Project team to lead input)

2.1 Project description

Embed in this document.

- In Word, go to the 'Insert' tab on the ribbon above.
- Select 'Object' under the 'Text' section in the ribbon.
- In the dialogue box, click the tab 'Create from file'. Find the location of the PMST PDF you saved.
- Check the box 'Display as icon', then press 'OK'.

Create link from Sharepoint

- After saving the file in Sharepoint / Onedrive – create a link to it, remembering to add staff who can view it, and paste below.

Provide a description of the proposed action, preferably as documented project plan

The Australian Nuclear Science and Technology Organisation (ANSTO) is proposing to commence the decommissioning of the National Research Cyclotron Facility (NRCF), located within the inner Sydney city suburb of Camperdown, NSW.

2.2 Alternatives to undertaking the proposed action

Provide details of alternatives to undertaking the proposed action.

The options considered by ANSTO were:

- Removal of Activated Concrete Only - Maintaining Remaining Building
- Removal of Entire Vaults - Maintaining Remaining Building
- Deferred Removal of Vaults
- Full Building Demolition (standard demolition methods)

Option 4 - Demolish Building in Full was determined to be the most viable D&D method by having the greatest potential benefits with the least challenges along with being the best option for minimising project risks.

2.3 Timing duration and frequency of the activity and its impacts

Provide details of the intended duration, timing (including day/night and seasonal) and frequency of higher impact activities.

Estimated start date – Demolition establishment in December 2026.

Estimated end date – Site release to NSW Health in February 2029.

2.4 Context of the proposed action

Describe the location, geographical context, current uses of the land where the proposed action is proposed.

- a. What is the location of the proposed action and proximity to significant infrastructure?
- b. Reasons behind the selection of the site for the proposed action.
- c. Is the action being conducted on Commonwealth land?
- d. What are the historic uses of the land?
- e. What are the current uses of the land?
- f. What are the current uses of land which may be indirectly impacted by the action?
Consider land uses which may be impacted from: the altering of watercourses, increased traffic.

This research facility, located near the Royal Prince Alfred (RPA) Hospital within the grounds of the Sydney Local Health District in the inner-south west suburb of Camperdown, NSW.

The facility operated for 30 years until 2021 when the site moved to a permanent state of shutdown.

Central to this facility is the cyclotron, a small machine which acts as a particle accelerator to produce a small number of niche radioisotopes used largely for research purposes and in radiopharmaceuticals.

Research into new radiopharmaceuticals and the production of nuclear medicines are now wholly carried out from ANSTO's Lucas Heights campus in southern Sydney. ANSTO supplies around 80 per cent of Australia's nuclear medicines directly from this campus, producing up to 12,000 patient doses each week.

ANSTO is a lease holder of the building which houses the cyclotron facility. As part of its lease obligations with Sydney Local Health District, ANSTO is required to decommission the facility and demolish the building. 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.

Details of the proposed action are contained in the Decommissioning Plan.

2.5 Sensitivity of the environment

Describe the environmental setting (native bushland, urbanised, revegetated), conditions and specific sensitivities or vulnerabilities.

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. 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.

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. 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 consistent with soils found in the region.

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 to transport restricted waste.

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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 Radiation Protection Series C-2 ARPANSA Code for the Safe Transport of Radioactive Material, rev 1.

Kemps Creek Waste Management Facility

The Kemps Creek facility is a waste collection and management facility licensed 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 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 Australian Nuclear Science and Technology Organisation Act 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.

The study area is located in the Sutherland Shire local government area and is surrounded on the eastern, western and southern sides by intact vegetation.

Threatened ecological communities

A search for threatened species using the Protected Matters Search Tool within the EPBC Referral Portal did not identify any threatened ecological communities near to the project site.

Two threatened ecological communities may be found along the likely transport routes, one for the transport route of restricted waste to the Kemps Creek Waste Management Facility - PCT849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion; and one along the route to the LHSTC – PCT1803 - Coastal Upland Swamp in the Sydney Basin Bioregion. This vegetation community is mapped as a small patch along the northern site boundary of the LHSTC near New Illawarra Road. .

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Other (non-threatened) vegetation communities known to exist along the transport routes and LHSTC include:

- PCT835 - Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion
- PCT920 - Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion
- PCT1776 - Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast
- PCT1787 - Red Bloodwood - Scribbly Gum - Stringybark open forest on sandstone ridges along the western side of the Woronora and Hornsby plateaus
- PCT1845 - Smooth-barked Apple - Red Bloodwood - Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney
- Urban exotic/native vegetation.

Threatened species

A search for threatened species using the Protected Matters Search Tool within the EPBC Referral Portal identified 83 threatened faunal and floral species and 56 migratory species that are possibly found in vicinity of the project area. Due to the highly urbanised nature of the project area, none of the listed floral or faunal species are expected to be found within the project area. The transport route to ANSTO Lucas Heights will traverse through *Phascolarctos cinereus* (Koala) habitat. Transport movements will be planned during daytime hours, therefore it is unlikely that vehicle hits will be a risk to koalas.

Vegetation

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

The Lucas Heights site was developed from the 1950s and was, based on historical aerial photos, cleared of a majority of its native vegetation around 1955. There is limited to no remnant vegetation within the LHSTC.

Soil characteristics

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

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 sclerophyll 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

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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.

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 laminitic lenses within the Hawkesbury Sandstone such as at Duffys Forest.

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:

- i) Some of the samples exhibited elevated pH levels marginally above the accepted criteria. This presents a low potential risk to current and future receptors.
- ii) The belowground presence of widespread/gross soil contamination was not identified from the concentrations detected for all contaminants.
- iii) 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

Commonwealth Heritage

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.

Indigenous Heritage

No Indigenous heritage sites or values 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.

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 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.

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Hydrology

Generally, the relief of the land slopes down from the east to the west, towards Johnston’s Creek. Locally, surface runoff from the site is expected to drain to the north into the Johnston’s Creek Catchment stormwater drainage system. 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). There are two in-use registered monitoring bores within 500 m of the NRCF, both approximately 400 m to the north-east. 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. 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.

2.6 Sources of information

(e.g. floral and faunal studies, heritage surveys – please embed or link as per the instructions provided in section 2.1)

Provide details of the sources of information obtained to inform the outcomes of this self-assessment.

3. Results of Protected Matters Search Tool (PMST)

Steps to generate a report out of the PMST.

- Go to: [https://pmst.awe.gov.au/#/map/\(m:ex/group/e3435f10-1e6d-479c-bfab-24cc54331913\)?lng=151.18123054504397&lat=-33.889274256835144&zoom=18&baseLayers=Imagery,ImageryLabels](https://pmst.awe.gov.au/#/map/(m:ex/group/e3435f10-1e6d-479c-bfab-24cc54331913)?lng=151.18123054504397&lat=-33.889274256835144&zoom=18&baseLayers=Imagery,ImageryLabels)

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- The link above should default to the Lucas Heights campus.
- Expand 'draw' on the left sidebar and click 'draw a polygon'
- Draw as close as possible to likely project area. Multiple areas can be drawn if there are more than one project site.
- Expand 'Report' and check the checkbox 'Drawings'.
- A new dialogue box will appear asking you to select a buffer distance. Select 2 km, this will generally encompass all features within the ANSTO Buffer Zone. Click 'Explore'
- A new dialogue box will appear, click 'Generate PDF Report'.
- Select the file from your downloads and save it a folder location.

Insert or link PMST report here.

[https://pmst.awe.gov.au/#/map/\(m:ex/group/e3435f10-1e6d-479c-bfab-24cc54331913\)?lng=151.18123054504397&lat=-33.889274256835144&zoom=18&baseLayers=Imagery,ImageryLabels](https://pmst.awe.gov.au/#/map/(m:ex/group/e3435f10-1e6d-479c-bfab-24cc54331913)?lng=151.18123054504397&lat=-33.889274256835144&zoom=18&baseLayers=Imagery,ImageryLabels)

4. Significance assessment for MNES

4.1 Nuclear Actions

Nuclear Actions <i>EPBC Act s.21 Protection of the environment from nuclear actions</i>	
Will the action involve:	<p> <input type="checkbox"/> Establishing or significantly modifying a nuclear installation. A nuclear installation being: </p> <ul style="list-style-type: none"> a) a nuclear reactor for research or production of nuclear materials for industrial or medical use (including critical and sub-critical assemblies); b) a plant for preparing or storing fuel for use in a nuclear reactor as described in paragraph a); c) a nuclear waste storage or disposal facility with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section; d) a facility for production of radioisotopes with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section. <p> <input type="checkbox"/> Transporting spent nuclear fuel or radioactive waste products arising from reprocessing </p> <p> <input type="checkbox"/> Establishing or significantly modifying a facility for storing radioactive waste products arising from reprocessing </p> <p> <input type="checkbox"/> Mining or milling uranium ores </p> <p> <input type="checkbox"/> Establishing or significantly modifying a large-scale disposal facility for radioactive waste </p> <p> <input type="checkbox"/> Decommissioning or rehabilitating any facility or area in which one of the above has been undertaken </p> <p> <input type="checkbox"/> Any other type of action set out in the EPBC Regulations. </p> <hr/> <p> For the avoidance of doubt, proposed projects involving the recovery of sands or rare earths may constitute a 'nuclear action' if the proposed project falls within the above definition. </p> <p> A decision about whether a disposal facility is large scale will depend on factors including the activity of the radioactive materials to be disposed of (see regulation 2.02 of the Environment Protection and Biodiversity Regulations 2000). </p>

Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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4.2 Flora, Fauna and Ecological Communities

Are any listed threatened flora, fauna or migratory species, or ecological communities likely found within the project area?	Yes <input type="checkbox"/>	Provide relevant details of listings below and complete s.4.2.1 - 4.2.5	No <input checked="" type="checkbox"/>	Only complete s.4.2.5 (section in yellow) below, then proceed to s.4.3
Protected Matters Search – Listed threatened flora				
Common name	Scientific name	EPBC listing	Presence text	Relevant to action (provide reason)
Protected Matters Search – Listed threatened fauna				
Common name	Scientific name	EPBC listing	Presence text	Relevant to action (provide reason)
Protected Matters Search – Migratory				
Common name	Scientific name	EPBC listing	Presence text	Relevant to action (provide reason)
Protected Matters Search – Listed threatened ecological communities				
Community name	EPBC listing	Presence text	Relevant to action (provide reason)	

Significance Assessment – Flora, Fauna and Ecological Communities					
<i>EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
4.2.1 MNES – Extinct in the wild species	4.2.1.a. adversely affect a captive or propagated population or one recently introduced / reintroduced to the wild.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Flora, Fauna and Ecological Communities						
EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
<input type="checkbox"/> Species identified in PMST - complete this section	4.2.1.b. interfere with the recovery of the species or its reintroduction into the wild.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
4.2.2 MNES – Critically endangered, endangered, vulnerable species <input type="checkbox"/> Species identified in PMST - complete this section	4.2.2.a. lead to a long-term decrease in the size of a population.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.b. reduce the area of occupancy of the species.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.c. fragment an existing population into two or more populations.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.d. adversely affect habitat critical to the survival of a species.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.e. disrupt the breeding cycle of a population.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.f. modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
	4.2.2.g. result in invasive species that are harmful to a critically endangered or endangered species becoming established in	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	

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Significance Assessment – Flora, Fauna and Ecological Communities						
<i>EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:		Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	the endangered or critically endangered species' habitat.					
	4.2.2.h. introduce disease that may cause the species to decline.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.2.i. interfere with the recovery of the species.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
4.2.3 MNES – Listed migratory species <input type="checkbox"/> Species identified in PMST - complete this section	4.2.3.a. substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.3.b. result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.3.c. seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
4.2.4 MNES – Critically endangered and endangered	4.2.4.a. reduce the extent of an ecological community.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Flora, Fauna and Ecological Communities						
EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
ecological communities <input type="checkbox"/> Species identified in PMST - complete this section	4.2.4.b. fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission line.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.4.c. adversely affect habitat critical to the survival of an ecological community.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.4.d. modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.4.e. cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.2.4.f. cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: – assisting invasive species, that are harmful to the listed ecological community, to become established, or – causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Flora, Fauna and Ecological Communities						
<i>EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:		Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	into the ecological community which kill or inhibit the growth of species in the ecological community.					
	4.2.4.g. interfere with the recovery of an ecological community.		Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
4.2.5 Commonwealth entity-specific matters This section must be completed.	4.2.5.a. involve medium or large-scale native vegetation clearance.	No clearance activities will be conducted.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.2.5.b. involve any clearance of any vegetation containing a listed threatened species which is likely to result in a long-term decline in a population or which threatens the viability of the species.	No clearance activities will be conducted.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.2.5.c. introduce potentially invasive species.	No live plant material is planned to be introduced through the decommissioning project.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.2.5.d. involve the use of chemicals which substantially stunt the growth of native vegetation.	Native vegetation in the surrounding area of the project area is limited to that of a highly urbanised landscape. The potential of emissions of radioactive contaminants to the environment are limited to the production of dusts from the	Very unlikely	<ul style="list-style-type: none"> • Tenting of vaults at time of wire-cutting concrete for offsite disposal. • Bunding to prevent the release of waste liquid to the environment. 	High	Due to the engineering controls implemented, releases of airborne or liquid radioactive contaminants to the environment are considered unlikely. It is highly unlikely that any residual emissions are

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Significance Assessment – Flora, Fauna and Ecological Communities					
EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	cutting of the concrete in the vault areas.		Local Air Scrubbers. • Dust suppression system. • Regular dust monitoring.		expected to stunt vegetation growth. Referral required? <input type="checkbox"/>
	4.2.5.e. involve large-scale controlled burning or any controlled burning in sensitive areas, including areas which contain listed threatened species.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.2.5.f. cause a long-term decrease in, or threaten the viability of, a native animal population or populations, through death, injury or other harm to individuals.	Highly unlikely	Same as 4.2.5.d.	High	Due to the engineering controls implemented, releases of airborne or liquid radioactive contaminants to the environment are considered unlikely. Due to the urban environment of the project area, very limited native fauna exist in the vicinity, further lowering the likelihood. Referral required? <input type="checkbox"/>
	4.2.5.g. displace or substantially limit the movement or dispersal of native animal populations.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Flora, Fauna and Ecological Communities					
EPBC Act s.18 Listed threatened species and communities; s.20 Listed migratory species; s.26 Commonwealth land; s.28 Commonwealth agencies					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	minimal native faunal species found, and highly unlikely to be any threatened species. Inherently, impacts from the proposed action to local fauna are expected to be highly unlikely.				
4.2.5.h. substantially reduce or fragment available habitat for native species.	No clearance activities will be conducted.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
4.2.5.i. reduce or fragment available habitat for listed threatened species which is likely to displace a population, result in a long-term decline in a population, or threaten the viability of the species.	No clearance activities will be conducted.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
4.2.5.j. introduce exotic species which will substantially reduce habitat or resources for native species.	No live plant or animal material is planned to be introduced through the decommissioning activities.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>

Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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4.3 Cultural Heritage

Are any listed World Heritage Places found in or within 2km of the project area?	Yes <input type="checkbox"/>	Provide details of relevant listings below and complete s.4.3.1 & s.4.3.3	No <input checked="" type="checkbox"/>	Only complete s.4.3.3 (section in yellow) below, then proceed to s.4.4
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Are any listed Commonwealth Heritage Places found in or within 2km of the project area?	Yes <input type="checkbox"/>	Provide details of relevant listings below and complete s.4.3.2 & s.4.3.3	
Protected Matters Search – Commonwealth Heritage Places			
Name	State	Listing status	Relevant to action (provide reason)

Significance Assessment – Cultural Heritage <small>EPBC Act s.12 World Heritage; s.15B National Heritage; s.26 Commonwealth land; s.27B Commonwealth Heritage Places Overseas, s.28 Commonwealth agencies</small>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood <small>Use AG-2395</small>	Mitigation controls <small>(e.g. alternative locations and timing)</small>	Certainty of control effectiveness <small>(high, medium or low)</small>	Significance assessment
4.3.1 MNES – World heritage properties <input type="checkbox"/> Matter identified in PMST - complete this section	4.3.1.a. one or more of the World Heritage values to be lost.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.3.1.b. one or more of the World Heritage values to be degraded or damaged.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.3.1.c. one or more of the World Heritage values to be notably altered, modified, obscured or diminished.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
4.3.2 MNES – National heritage places	4.3.2.a. one or more of the National Heritage values to be lost.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.3.2.b. one or more of the National Heritage values to be degraded or damaged.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Cultural Heritage						
<i>EPBC Act s.12 World Heritage; s.15B National Heritage; s.26 Commonwealth land; s.27B Commonwealth Heritage Places Overseas, s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
<input type="checkbox"/> Matter identified in PMST - complete this section	4.3.2.c. one or more of the National Heritage values to be notably altered, modified, obscured or diminished.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>	
4.3.3 Commonwealth entity-specific matters This section must be completed	4.3.3.a. permanently destroy, remove or substantially alter the fabric of a heritage place.	No heritage places will be physically impacted by the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.3.3.b. involve extension, renovation, or substantial alteration of a heritage place in a manner which is inconsistent with the heritage values of the place.	No heritage places will be physically impacted by the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.3.3.c. involve the erection of buildings or other structures adjacent to, or within important site lines of, a heritage place which are inconsistent with the heritage values of the place.	No heritage places will be physically impacted by the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.3.3.d. substantially diminish the heritage value of a heritage place for a community or group for which it is significant.	There are no heritage places in the vicinity of the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.3.3.e. substantially alter the setting of a heritage place in a manner which is inconsistent with the heritage values of the place.	There are no heritage places in the vicinity of the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.3.3.f. substantially restrict or inhibit the existing use of a heritage place as a cultural or ceremonial site.	There are no heritage places in the vicinity of the proposed action.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>

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Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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4.4 Landscape, soils, geology and geotechnical

Significance Assessment – Landscape, soils, geology and geotechnical <i>EPBC Act s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
4.4.1 Commonwealth entity-specific matters This section must be completed	4.4.1.a. substantially alter natural landscape features.	The decommissioning activities will involve minimal soil/rock excavation once the building has been removed. The disturbed footprint will be returned to a level hardstand area for future use by NSW Health.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.4.1.b. cause subsidence, instability or substantial erosion.	Minimal and localised erosion may occur during the final stages of removal of the existing building and remediation.	Extremely unlikely	A sediment and erosion plan will be prepared and implemented by the appointed Principal Contractor. This plan will be informed by the hydrological assessment to ensure controls are appropriate throughout the project life.	High	The amount of erosion is expected to be minimal and contained. This is due to the flat nature of the land and the minimal excavation activities being conducted. Referral required? <input type="checkbox"/>
	4.4.1.c. involve medium or large-scale excavation of soil or minerals.	The proposed action will not excavate large volumes of soil or rock, these will be primarily	Unlikely	In the event of any soil contamination found beneath the	High	Likely not to be significant based on the unlikely nature of further

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Significance Assessment – Landscape, soils, geology and geotechnical						
<i>EPBC Act s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
			facility, the remediation will be amended to appropriately characterise, treat and dispose of any contaminated soils.		excavation being required. Referral required? <input type="checkbox"/>	
	4.4.1.d. alter coastal processes, including wave action, sediment movement or accretion, or water circulation patterns.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>	
	4.4.1.e. permanently alter tidal patterns, water flows or water quality in estuaries.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>	
	4.4.1.f. reduce biological diversity or change species composition in estuaries.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>	
	4.4.1.g. extract large volumes of sand or substantially destabilise sand dunes.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>	

Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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4.5 Water (including surface and groundwater and the marine environment)

Is the proposed action likely to occur in or near to the Great Barrier Reef?	Yes <input type="checkbox"/>	Complete s.4.5.1 & s.4.5.4	No <input checked="" type="checkbox"/>	Only complete s.4.5.4
Is the proposed action likely to occur in or affect the quality of a RAMSAR listed wetland?	Yes <input type="checkbox"/>	Provide details of relevant listings below and complete s.4.5.2 & s.4.5.4		
Is the proposed action likely to occur in or affect the quality of the Commonwealth marine area?	Yes <input type="checkbox"/>	Complete s.4.5.3 & s.4.5.4		
Protected Matters Search – RAMSAR listed wetland				
Name	State	Listing status	Relevant to action (provide reason)	

Significance Assessment – Water (including surface and groundwater and the marine environment)					
<i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood <small>Use AG-2395</small>	Mitigation controls <small>(e.g. alternative locations and timing)</small>	Certainty of control effectiveness <small>(high, medium or low)</small>	Significance assessment
4.5.1 MNES – Great Barrier Marine Park <input type="checkbox"/> Matter identified in PMST - complete this section	4.5.1.a. modify, destroy, fragment, isolate or disturb an important, substantial, sensitive or vulnerable area of habitat or ecosystem component such that an adverse impact on marine ecosystem health, functioning or integrity in the Great Barrier Reef Marine Park results.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.5.1.b. have a substantial adverse effect on a population of a species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Water (including surface and groundwater and the marine environment) <i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	4.5.1.c. result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological health or integrity or social amenity or human health.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.5.1.d. result in a known or potential pest species being introduced or becoming established in the Great Barrier Reef Marine Park.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.5.1.e. result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, or social amenity or human health may be adversely affected.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.5.1.f. have a substantial adverse impact on heritage values of the Great Barrier Reef Marine Park, including damage or destruction of an historic shipwreck.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
4.5.2 MNES – Wetlands of international importance (RAMSAR)	4.5.2.a. areas of the wetland being destroyed or substantially modified.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>
	4.5.2.b. a substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland.	Choose an item		Choose an item.	Referral required? <input type="checkbox"/>

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Significance Assessment – Water (including surface and groundwater and the marine environment)					
<i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
<input type="checkbox"/> Matter identified in PMST - complete this section	4.5.2.c. the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependant upon the wetland being seriously affected.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.2.d. a substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.2.e. an invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
4.5.3 Commonwealth marine environment <input type="checkbox"/> Matter identified in PMST - complete this section	4.5.3.a. result in a known or potential pest species becoming established in the Commonwealth marine area.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.3.b. modify, destroy, fragment, isolate or disturb an important or substantial area of habitat such that an adverse impact on marine ecosystem functioning or integrity in a Commonwealth marine area results.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.3.c. have a substantial adverse effect on a population of a marine species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>

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Significance Assessment – Water (including surface and groundwater and the marine environment)					
<i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	4.5.3.d. result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological integrity; social amenity or human health.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.3.e. result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity or human health may be adversely affected.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
	4.5.3.f. have a substantial adverse impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck.		Choose an item		Choose an item. Referral required? <input type="checkbox"/>
4.5.4 Commonwealth entity-specific matters This section must be completed.	4.5.4.a. reduce biological diversity or change species composition on reefs, seamounts or in other sensitive marine environments;	No impacts to marine ecosystems expected as a result of the distance from and contained nature of the proposed action.	Extremely unlikely	No further assessment.	Choose an item. Referral required? <input type="checkbox"/>
	4.5.4.b. alter water circulation patterns by modification of existing landforms or the addition of artificial reefs or other large structures.	No impacts to marine ecosystems expected as a result of the distance from and contained nature of the proposed action.	Extremely unlikely	No further assessment.	Choose an item. Referral required? <input type="checkbox"/>
	4.5.4.c. substantially damage or modify large areas of the seafloor or ocean habitat, such as sea grass.	No impacts to marine ecosystems expected as a result of the distance from	Extremely unlikely	No further assessment.	Choose an item. Referral required? <input type="checkbox"/>

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Significance Assessment – Water (including surface and groundwater and the marine environment)						
<i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
		and contained nature of the proposed action.				
4.5.4.d. release oil, fuel or other toxic substances into the marine environment in sufficient quantity to kill larger marine animals or alter ecosystem processes.	Small amounts of radioactive dusts may be produced throughout the decommissioning activities which may enter local drainage systems..	Unlikely	<ul style="list-style-type: none"> Same as 4.2.5.d. 	High	Due to the engineering controls implemented, releases of airborne or liquid radioactive contaminants to the environment are considered unlikely. Further the amount of activated material contained in the facility is sufficiently small enough that there is no risk of harming larger marine animals. Referral required? <input type="checkbox"/>	
4.5.4.e. release large quantities of sewage or other waste into the marine environment.	Discharge of wastes will be minimal.	Highly unlikely	Same as 4.2.5.d.	High	No large releases of radioactive or other wastes are expected to be discharged into the marine environment. Referral required? <input type="checkbox"/>	
4.5.4.f. measurably reduce the quantity, quality or availability of surface or ground water.	There is a possibility that radioactive dusts and other heavy metal contaminants	Highly unlikely	Same as 4.2.5.d.	High	No large releases of radioactive or other wastes are expected to be	

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Significance Assessment – Water (including surface and groundwater and the marine environment)					
<i>EPBC Act s.16 Wetlands of international importance; s.23 Marine environment; s.24B Great Barrier Reef Marine Park; s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
	could be produced through the decommissioning activities, particularly wire-cutting of the vault concrete walls.		A sediment and erosion plan will be prepared and implemented by the appointed Principal Contractor. This plan will be informed by the hydrological assessment to ensure controls are appropriate throughout the project life.		discharged into the marine environment. Referral required? <input type="checkbox"/>
	4.5.4.g. channelise, divert or impound rivers or creeks or substantially alter drainage patterns.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
	4.5.4.h. measurably alter water table levels.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>

Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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4.6 Pollution

Significance Assessment – Pollution						
<i>EPBC Act s.26 Commonwealth land; s.28 Commonwealth agencies</i>						
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment	
4.6.1 Commonwealth entity-specific matters This section must be completed	4.6.1.a. generate smoke, fumes, chemicals, nutrients, or other pollutants which will substantially reduce local air quality or water quality.	There is a possibility that radioactive dusts and other heavy metal contaminants could be produced through the decommissioning activities, particularly wire-cutting of the vault concrete walls.	Unlikely	Same as 4.2.5.d.	High	Due to the engineering controls implemented, releases of airborne or liquid radioactive contaminants to the environment are considered unlikely. The action should still be referred. Referral required? <input checked="" type="checkbox"/>
	4.6.1.b. result in the release, leakage, spillage, or explosion of flammable, explosive, toxic, radioactive, carcinogenic, or mutagenic substances, through use, storage, transport, or disposal.	Refer to 4.6.1.a. Transport of solid recyclable and restricted wastes to Kemps Creek Waste Management Facility, low-level solid radioactive waste to ANSTO Lucas Heights, and equipment to ANSTO Lucas Heights for repurposing will be conducted throughout the decommissioning activities.	Unlikely	Refer to 4.6.1.a. The transport of wastes will be conducted suitably enclosed vehicles. Activated components and wastes will be additionally transported in either 200L stainless steel drums or IP1 rated bags. Liquid radioactive wastes produced will	High	Refer to 4.6.1.a. Referral required? <input checked="" type="checkbox"/>

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Significance Assessment – Pollution					
<i>EPBC Act s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
		Small amounts of liquid wastes may be produced and transported.		be treated and transported to ANSTO Lucas Heights in accordance with ANSTO Waste Operations procedures. Waste receipts for all wastes will be collected.	
	4.6.1.c. increase atmospheric concentrations of gases which will significantly contribute to the greenhouse effect or ozone damage.	No ozone depleting substances or significant quantities of GHG will be released to the atmosphere.	Extremely unlikely	No further assessment.	Choose an item. Referral required? <input type="checkbox"/>
	4.6.1.d. substantially disturb contaminated or acid-sulphate soils.	A characterisation study has been conducted of the site. This study found there to be no substantial contamination from ANSTO's historical use of the site.	Extremely unlikely	No further assessment.	Choose an item. Referral required? <input type="checkbox"/>

Did you answer 'Referral required' to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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Significance Assessment – People and communities <i>EPBC Act s.26 Commonwealth land; s.28 Commonwealth agencies</i>					
Is there a real chance or possibility that the action will:	Detail of potential direct or indirect impact	Inherent Likelihood Use AG-2395	Mitigation controls (e.g. alternative locations and timing)	Certainty of control effectiveness (high, medium or low)	Significance assessment
					immediate vicinity of the decommissioning activities as extremely unlikely. Referral required? <input type="checkbox"/>
4.7.1.c. cause physical dislocation of individuals or communities.	The action will not have any physical dislocation impacts on individuals or community.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>
4.7.1.d. substantially change or diminish cultural identity, social organisation or community resources.	There will be no negative impact on social and community resources. The NMRC was used for research of potentially new medical radioisotopes. The NMRC has not been operational for 3 years.	Extremely unlikely	No further assessment.	Choose an item.	Referral required? <input type="checkbox"/>

Did you answer ‘Referral required’ to any of the questions in the Significance Assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, an EPBC referral is required.
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