

25 October 2023

Department of Water and Environmental Regulation, Native Vegetation Regulation Locked Bag 10 JOONDALUP DC WA 6919

Attention:

Dear

RE: NATIVE VEGETATION CLEARING APPLICATION – MUCHEA AIR WEAPONS RANGE

On behalf of our client, PCB Asbestos & Demolition Pty Ltd (PCB; the applicant), please find enclosed a native vegetation clearing application (Purpose Permit) related to the remediation of asbestos within the Department of Defence's Muchea Air Weapons Range. The applicant previously submitted a native vegetation clearing referral (Ref 10029-1) to the Department and was advised a clearing permit is required. This letter provides context for the remediation project and the environmental controls to be implemented to mitigate risks to native vegetation within the site.

BACKGROUND

The Muchea Air Weapons Range is approximately 35 km north-east of Perth and 8 km north-west of RAAF Pearce. The property tenure is Vacant Crown Land with a lease agreement in place between the Department of Defence and the Western Australian State Government. Landowner consent from the Department of Planning, Lands and Heritage is provided in Attachment 1.

The Muchea Air Weapons Range was established during the second world war and is currently used for bombing practice and for training aircrew instructors (GHD, 2020). It also hosts a small arms range and is used by the Army for other training activities including air to ground gunnery, driver training and general field training (GHD, 2020). The site previously contained a radar tracking station that operated between 1960 and 1964 which included a former powerhouse, housing area, observation tower and a rocket gunnery range (GHD, 2020).

A Detailed Site Investigation (DSI) completed by GHD (2019) identified a potential risk to human health associated with the presence of asbestos containing materials (ACM), friable asbestos and asbestos fines in shallow soils in the vicinity of the buildings associated with the former radar tracking station. The Department of Defence Contamination Risk Assessment Tool assessed the risk as 'high'.

The Department of Defence has a long-term aim to eliminate asbestos risk from its Estate. Consistent with this aim, the Department initiated a remediation project at the Muchea Air Weapons Range. Seven discrete areas have been identified for remediation (Attachment 2 - Figure 1).

SITE IDENTIFICATION

Pertinent site details are provided in Table 1.

TABLE 1: SITE DETAILS

Lot Details	Lot 500 on Deposited Plan 54937
Certificate of Title	LR3151/411
Tenure	Vacant Crown Land
Access Arrangement	Lease in place between the State Government and the Department of Defence
Estimated clearing required	0.43 ha
Project Area	7.71 ha

PROJECT DELIVERY

The planned remedial works will involve the removal of asbestos fragments and asbestos impacted soil from seven areas (Attachment 2 - Figure 1), with works being conducted in accordance with the Asbestos Management Plan (GHD, 2020) and Asbestos in Soils (ASBINS) Remediation Risk Assessment (Morgan Environmental, 2022). The works are scheduled to commence prior to the end of December 2023 under dry soil conditions.

It is anticipated that majority of the asbestos fragments occur around the footprints of the former structures, some ACM may extend beyond into adjacent bushland. The successful clean up and removal of asbestos from the Site may require some clearing of native vegetation. The seven remediation areas cover approximately 0.8 ha, of which an estimated 0.43 ha is vegetated.

Impacted native vegetation will be areas surrounding the footprints for the former buildings or structures and comprises mostly dead plants (see photos of the remediation areas in Attachment 3) with some evidence of recent fire. Some live vegetation may need to be cleared when chasing out asbestos impacted soils. Therefore, a slightly larger area than expected has been identified at each of the remediation areas i.e., not all of the 0.43 ha may need to be cleared.

The direct impact to native vegetation is of a very minor nature as the remediation areas are mainly former building slabs surrounded by bare soils and limited native vegetation. The concrete slabs will remain in situ and upon successful remediation (i.e., confirmation of the removal of all known asbestos by the Department of Defence's appointed Licenced Asbestos Assessor), the seven areas will be left for natural regeneration. Where Good quality vegetation has been cleared, it will be reinstated with like for like plants sourced from a Nursery Industry Accreditation Scheme Australia accredited supplier.

ENVIRONMENTAL MANAGEMENT

Prior to commencing site works, PCB will apply to the Department of Defence for an Environmental Clearance Certificate (ECC). The application process involves reviewing risks to the environment and documenting management measures to mitigate those risks. A review of the potential risks from the remediation project on native vegetation and the fauna associated with that vegetation include the following:

- Direct loss of native vegetation through excessive clearing;
- Damage to native vegetation from trampling or vehicles;

- Injury or mortality to native fauna;
- Introduction and spread of plant disease (such as dieback) and weeds;
- Litter; and
- Fire.

PCB has prepared a Construction Environmental Management Plan (CEMP) outlining the management and mitigation measures to be implemented (Attachment 4). At the minimum, PCB will implement the following measures:

- Conduct pre-start meeting with site personnel to discuss site environmental management requirements;
- Conduct visual inspection to confirm maximum extent of works;
- Delineate the maximum extent of clearing as shown in Attachment 2 Figure 1 using flagging to demarcate the extent of asbestos removal works;
- Take photos pre-remediation and post-remediation documenting the extent of clearing/works;
- Ensure all vehicles and personnel remain within demarcated work areas or existing tracks/firebreaks;
- Where possible, clearing of trees and significant shrubs will be avoided;
- Manual clearing will be used where possible around mature trees;
- Workers will agitate the soil and bushes prior to clearing, working in a line and conduct clearing in one direction to allow dispersal of fauna;
- Record any injuries or mortality to native fauna during site works;
- No pets or firearms to be brought on to site by contractors;
- All relevant site personnel to complete Green Card training;
- Comply with the requirements of the dieback management plan (Attachment 5) noting that remediation will be conducted under dry soil conditions and any imported soils are to be certified dieback free;
- All equipment, machinery and vehicles to be free of soil and vegetative material upon entry to the site;
- Dieback hygiene kits to be provided for use by site personnel;
- All wastes collected or generated during works to be removed off-site and disposed at an appropriate facility;
- No hot works to be conducted on site;
- No fires permitted to be started within the site;
- Site work is not permitted in Extreme fire risk conditions; and
- PCB will nominate a site supervisor that will be responsible for the compliance and documentation of environmental management requirements.

• Reinstate good quality vegetation using locally native plant species sourced from a NIASA accredited supplier.

ECOLOGICAL ASSESSMENT

PCB commissioned Western Ecological to undertake an ecological assessment of the remediation areas. The assessment comprised a reconnaissance flora and vegetation survey and a basic terrestrial fauna survey. A copy of the assessment has been uploaded to the IBSA portal (IBSASUB-20231015-A2A04CEF). The following provides a summary of the findings from Western Ecological (2023).

Flora and Vegetation

The desktop assessment gathered contextual information on the survey area which was verified during a field survey. This included:

- Nine threatened ecological communities (TECs) and five Priority Ecological Communities (PECs) occur within 20 km of the project area. Four of the significant ecological communities were identified as having a high likelihood of occurrence within the project area:
 - Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain Endangered (Commonwealth and State);
 - Banksia Woodlands of the Swan Coastal Plain ecological community Endangered (Commonwealth), Priority 3 (State);
 - SCP21c Low lying *Banksia attenuata* woodlands or shrublands Endangered (Commonwealth and State), Priority 3 (State);
 - SCP23b Swan Coastal Plain *Banksia attenuata Banksia menziesii* woodlands Endangered (Commonwealth), Priority 3 (State).
- 46 conservation significant flora species occur within 20 km of the survey area. Four species were considered to have a high likelihood of occurrence within the survey area:
 - Darwinia foetida Critically Endangered (Commonwealth), Endangered (State);
 - Leucopogon squarrosus subsp. trigynus Priority 2 (State);
 - *Platysace ramosissima* Priority 3 (State)
 - *Verticordia serrata* var. *linearis* Priority 3 (State)

The filed survey was completed in spring (November 2022). A summary of the flora and vegetation values of the survey area include:

- Flora:
 - No Threatened or Priority flora were recorded.
 - No Declared Pests or Weeds of National Significance were recorded.
 - 46 conservation significant flora identified in the desktop assessment, four were considered to have a high likelihood of occurrence.
 - A total of 60 flora species were recorded including 44 (73%) native species and 16 (27%) introduced.

- Vegetation:
 - One TEC occurred within the survey area:
 - Banksia Woodland of the Swan Coastal Plain ecological community Endangered (Commonwealth), Priority 3 (State).
 - One vegetation type occurred in the survey area: Banksia woodland.
 - The vegetation condition was assessed to be mainly Degraded.

Fauna

The fauna desktop assessment involved searches of the DBCA Threatened Fauna Database, NatureMap and the Protected Matters Search Tool (PMST) to identify fauna species of conservation significance potentially occurring in the survey area. These searches were centred on the mid-point of the survey area with a 20 km buffer applied to the DBCA Threatened Fauna Database and a 10 km buffer applied to NatureMap and the PMST. Results of the databases searches identified the following:

- DBCA Threatened Fauna Database 33 conservation significant vertebrate fauna species (three reptile species, 22 bird species and eight mammal species).
- NatureMap 438 vertebrate fauna species (13 amphibian species, 46 reptile species, 108 bird species and 13 mammal species).
- PMST 31 threatened species, eight migratory species and 12 listed marine species.

The basic field survey was concurrently with the flora and vegetation survey (14 November 2022) by a qualified Zoologist. The field survey consisted of habitat assessments and opportunistic fauna observations, to define the fauna values of the survey area.

A total of 20 fauna species were recorded during the field survey. One species of conservation significance was indirectly recorded; the Southern Brown Bandicoot, which is listed as Priority 4 under the *Biodiversity Conservation Act 2016* (BC Act). All other fauna species recorded are common and widespread. One fauna habitat type was recorded: Banksia Woodland.

During the field survey, three fauna species of conservation significance were given particular consideration. These were as follows:

- Carnaby's Black Cockatoo (*Zanda latirostris*) listed as Endangered under the EPBC Act and BC Act.
- Baudin's Black Cockatoo (*Zanda baudinii*) listed as Vulnerable under the EPBC Act and BC Act.
- The Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) (FRTBC) listed as Vulnerable under the EPBC Act and BC Act.

Suitable habitat for Back Cockatoo species is present in the survey area in the form of Banksia Woodland (0.43 ha). Although very limited in the survey area itself, foraging habitat (*Banksia attenuata* and *Banksia menziesii*) was recorded. However, the survey area did not contain any potential breeding habitat (Eucalyptus trees with a Diameter at Breast Height [DBH] > 500mm). During the field survey, no Black Cockatoos were observed, and no foraging evidence was recorded.

ASSESSMENT OF IMPACTS

Based on the predicted extent of disturbance (Attachment 2 – Figure 1), a maximum of 0.43 ha of vegetation may be cleared for the asbestos removal project.

An assessment of the proposed clearing against the Ten Clearing Principles listed under Schedule 5 of the *Environmental Protection Act 1986* is presented in Table 2.

TABLE 2: ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

PRINCIPLE	ASSESSMENT	CONCLUSION
(a) Native vegetation should not be cleared if it comprises high level of biological diversity.	A total of 60 flora species were recorded during the Spring survey (Western Ecological 2023). This included 44 native species and 16 introduced or naturalised species (Western Ecological 2023). No species of conservation significance, i.e., threatened or priority listed taxa, were recorded. The species richness for the seven sampled quadrats ranged from 17 to 27. This level of diversity is considered low for Banksia woodland vegetation communities on the Swan Coastal Plain. The low species diversity is attributed to past disturbances which have impacted vegetation condition, which was assessed as Completely Degraded to Good.	Clearing is not at variance with this principle.
(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	 One habitat type was recorded within the application area - Banksia woodland (<i>B attenuata, B. menziesii</i>). The habitat quality was assessed as Good to Degraded due to historic disturbances. The fauna assessment by Western Ecological (2023) recorded 20 species during the field survey. All recorded species are relatively common and widespread. Evidence (diggings) of a Priority 4 listed fauna species (Quenda) was recorded during the survey. A targeted black cockatoo assessment was completed by Western Ecological (2023). The assessment found: No trees of a suitable DBH occur within the application area. the application area contains suitable foraging habitat for all three black cockatoo species. Areas of Banksia provide high foraging value for Carnaby's cockatoo and medium quality foraging habitat for Baudin's cockatoo and forest red-tailed black cockatoo. The impact to cockatoo foraging habitat is minimal (up to 0.43 ha) and unlikely to be a rignificant investor. 	Clearing may be at variance with this principle.

PR	INCIPLE	ASSESSMENT	CONCLUSION
(c)	Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	No threatened or priority flora species were recorded during the Spring survey and are unlikely to be present given historic disturbances within the application area.	Clearing is not at variance with this principle.
(d)	Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.	The vegetation within the application area was assessed to be representative of Banksia Woodlands of the Swan Coastal Plain ecological community. This community is listed at a State level as a Priority 3 PEC and a component of the Commonwealth listed TEC.	Clearing may be at variance with this principle.
(e)	Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	The vegetation within the application area is mapped as Beard Vegetation Association 949, which is well represented at a regional and local scale with more than 30% of its original extent remaining. There is 123,104.02 ha of this Association remaining, representing 56.42% of the pre-European extent and 13.81% within the conservation estate. At a local level, there is 12,599.79 ha remaining within the Shire of Chittering, representing 91.64% of the pre- European extent remaining. The predicted clearing for the remediation project will impact 0.0003% of the remaining extent. At a local government level, the potential clearing will impact 0.003% of Vegetation Association 949.	Clearing is not at variance with this principle.
(f)	Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	The application area does not contain any wetland or riparian vegetation.	Clearing is not at variance with this principle.
(g)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	The maximum extent of clearing is estimated to be 0.43 ha across seven discrete areas. The clearing footprints are small and unlikely to cause land degradation.	Clearing is not at variance with this principle.
(h)	Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	The application area does not intersect any Bush Forever areas, DBCA managed lands or local government reserves. The application area intersects two mapped environmentally sensitive areas (ESAs). The ESAs relate to the presence of nearby conservation category wetlands (CCWs) and land that was included within the now defunct Register of National Estate. The proposed clearing will not impact these ESAs. The application area is within a Priority 1 Public Drinking Water Source Area.	Clearing is not at variance with this principle.

PR	INCIPLE	ASSESSMENT	CONCLUSION
(i)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	According to the Perth Groundwater Map, the maximum groundwater levels are approximately 69 m AHD beneath the application area. The surface level is approximately 80 to 85 m AHD meaning the depth to groundwater is approximately 11 and 16 m below ground level. The nature of the proposed remedial works are unlikely to cause pollution to groundwater. The works will be focused on surficial soils. The remediation work will be completed in accordance with the enclosed CEMP. Water for dust suppression will be sourced from scheme water supplies. There are no surface water bodies within the application area.	Clearing is not at variance with this principle.
(j)	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.	The proposed clearing will be conducted across seven small areas, totalling no more than 0.43 ha. The clearing will not increase surface runoff. Due to the high permeability of the soils and that no waterbodies are within the application area, the proposed clearing will not cause or exacerbate the incidence of intensity of flooding.	Clearing is not at variance with this principle.

Based on the assessment against the ten clearing principles (Table 2), Aurora Environmental considers that the proposed clearing constitute minor clearing. The clearing may be at variance with Principles (b) and (d). However, the potential environmental impacts associated with the asbestos remediation project can be adequately mitigated through the implementation of the enclosed CEMP. As the impacts are minor and the work is required to be conducted under dry soil conditions, Aurora Environmental respectfully requests that the enclosed application is assessed as a matter of priority.

If you believe there is any outstanding information, please do not hesitate to contact the undersigned on 0429 409 146 or paul.zuvela@auroraenvironmental.com.au.

For and on behalf of Aurora Environmental,

Paul Zuvela Principal Environmental Scientist & Director

Attachments:

- 1. Department of Planning, Lands & Heritage Authorisation to Undertake Clearing
- 2. Figure 1 Project Area
- 3. Site Photos (from GHD, 2020 and Tetra-Tech, 2021)
- 4. Construction Environmental Management Plan
- 5. Dieback Management Plan

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