

Referral of proposed action

What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided sufficient information is provided in the referral.

Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on the following matters protected by Part 3 of the EPBC Act:

- World Heritage properties (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- Wetlands of international importance (sections 16 and 17B)
- Listed threatened species and communities (sections 18 and 18A)
- Listed migratory species (sections 20 and 20A)
- Protection of the environment from nuclear actions (sections 21 and 22A)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
 - actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land);
 - actions taken on Commonwealth land that may have a significant impact on the environment generally;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from the Department's website:

• the Policy Statement titled Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. Additional sectoral guidelines are also available.

- the Policy Statement titled Significant Impact Guidelines 1.2 Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies.
- the Policy Statement titled Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources.
- the interactive map tool (enter a location to obtain a report on what matters of NES may occur in that location).

Can I refer part of a larger action?

In certain circumstances, the Minister may not accept a referral for an action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act). If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the Referrals Gateway (1800 803 772).

Do I need a permit?

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

Is your action in the Great Barrier Reef Marine Park?

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from http://www.gbrmpa.gov.au/ or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379 Townsville QLD 4810 AUSTRALIA Phone: + 61 7 4750 0700 Fax: + 61 7 4772 6093

www.gbrmpa.gov.au

What information do I need to provide?

Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently. If a section of the referral document is not applicable to your proposal enter N/A.

You can complete your referral by entering your information into this Word file.

Instructions

Instructions are provided in blue text throughout the form.

Attachments/supporting information

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. Aerial photographs, in particular, can provide a useful perspective and context. Figures should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

Please ensure any attachments are below three megabytes (3mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referrals Gateway (email address below) for advice. Attachments larger than three megabytes (3mb) may delay processing of your referral.

Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.

How do I pay for my referral?

From 1 October 2014 the Australian Government commenced cost recovery arrangements for environmental assessments and some strategic assessments under the EPBC Act. If an action is referred on or after 1 October 2014, then cost recovery will apply to both the referral and any assessment activities undertaken. Further information regarding cost recovery can be found on the <u>Department's website</u>.

Payment of the referral fee can be made using one of the following methods:

• EFT Payments can be made to:

BSB: 092-009 Bank Account No. 115859 Amount: \$7352 Account Name: Department of the Environment. Bank: Reserve Bank of Australia Bank Address: 20-22 London Circuit Canberra ACT 2601 Description: The reference number provided (see note below)

• **Cheque** - Payable to "Department of the Environment". Include the reference number provided (see note below), and if posted, address:

The Referrals Gateway Environment Assessment Branch Department of the Environment GPO Box 787 Canberra ACT 2601

Credit Card

Please contact the Collector of Public Money (CPM) directly (call (02) 6274 2930 or 6274 20260 and provide the reference number (see note below).

Note: in order to receive a reference number, submit your referral and the Referrals Gateway will email you the reference number.

How do I submit a referral?

Referrals may be submitted by mail or email.

Mail to:

Referrals Gateway Environment Assessment Branch Department of Environment GPO Box 787 CANBERRA ACT 2601

• If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are required.

Email to: epbc.referrals@environment.gov.au

- Clearly mark the email as a 'Referral under the EPBC Act'.
- Attach the referral as a Microsoft Word file and, if possible, a PDF file.
- Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

What happens next?

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

The proposed action is NOT LIKELY to have a significant impact and does NOT NEED approval

No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any other Commonwealth, state or local government requirements).

The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the particular manner to the Department.

The proposed action is LIKELY to have a significant impact and does NEED approval

If the action is likely to have a significant impact a decision will be made that it is a *controlled action*. The particular matters upon which the action may have a significant impact (such as World Heritage values or threatened species) are known as the *controlling provisions*.

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

The proposed action would have UNACCEPTABLE impacts and CANNOT proceed

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

Compliance audits

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "*Is your action in the Great Barrier Reef Marine Park,"* p.2, for more details).

For more information

- call the Department of the Environment Community Information Unit on 1800 803 772 or
- visit the web site http://www.environment.gov.au/topics/about-us/legislation/environment-protection-andbiodiversity-conservation-act-1999

All the information you need to make a referral, including documents referenced in this form, can be accessed from the above web site.

Project title:

1 Summary of proposed action

NOTE: You must also attach a map/plan(s) and associated geographic information system (GIS) vector (shapefile) dataset showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(i).

1.1 Short description

Use 2 or 3 sentences to uniquely identify the proposed action and its location.

The Swanbank Renewable Energy and Waste Management Facility is an operational facility that is located in the south-east of Ipswich City in Queensland, along Swanbank Road. The current landfill is nearing capacity, necessitating extension of the landfill's footprint in the near future. An area to the south of the existing landfill has been identified as the most economically and technically rational area for expansion, and is referred to as the 'Stage 1B Extension Area'. The extension area is currently used for administration activities and waste storage, but does not currently support any landfilling activities. Two areas of remnant vegetation are proposed for removal as part of the landfill extension, and the potential presence of two EPBC Act listed fauna species within the extension area has been identified (koala - *Phascolarctos cinereus*; greyheaded flying fox - *Pteropus poliocephalus*).

1.2 Latitude and longitude

Location point	Latitude		Longitude			
	degrees	minutes	seconds	degrees	minutes	seconds
Lot 103 on SP189609						
North-western corner (point C on map)	27	39	34.655	152	49	22.257
Northern boundary (point D on map)	27	39	35.610	152	49	27.599
Northern boundary (point E on map)	27	39	41.913	152	49	30.845
Northern boundary (point F on map)	27	39	40.345	152	49	38.790
Northern boundary (point G on map)	27	39	36.410	152	49	40.899
North-eastern corner (point H on map)	27	39	37.239	152	49	48.060
South-eastern corner (point I on map)	27	39	51.959	152	49	45.292
Southern boundary (point J on map)	27	39	56.805	152	49	33.934
Southern boundary (point K on map)	27	39	53.336	152	49	22.898
South-western corner (point L on map)	27	39	51.730	152	49	20.095
Lot 3 on RP214256						
North-western corner (point A on map)	27	39	46.465	152	49	02.643
North-eastern corner (point B on map)	27	39	48.868	152	49	19.822
South-eastern corner (point L on map)	27	39	51.730	152	49	20.095
South-western corner (point M on map)	27	39	48.979	152	49	02.182

Refer to Attachment A (Site Locality Map) for identification of co-ordinate locations.

1.3 Locality and property description

Provide a brief physical description of the property on which the proposed action will take place and the project location (eg. proximity to major towns, or for off-shore projects, shortest distance to mainland).

The Swanbank Renewable Energy and Waste Management Facility is located on Swanbank Road, approximately 7 km south-east of the Ipswich city centre and 30 km south-west of the Brisbane city centre. A total area of 250 ha is under the ownership of REMONDIS for the Swanbank Renewable Energy and Waste Management Facility. The Stage 1B Extension Area is comprised of Lot 103 SP189609 and Lot 3 RP214256, encompassing an area of 40.28 ha within the larger 250 ha area.

The area encompassed by the Swanbank Renewable Energy and Waste Management Facility, including the Stage 1B Extension Area, has historically been mined and the majority of land has been cleared of vegetation. The Stage 1B Extension Area features cleared areas, access roads, site buildings and a water-filled excavation pit, together with two areas of remnant vegetation.

The waste management site forms part of the larger Swanbank Enterprise Park, which is a 500 ha master planned industrial development. Activities undertaken within Swanbank Enterprise Park include a power station (established in the early 1960s) along with recycling operations and quarries. Major roadways in the vicinity include Redbank Plains Road, the Cunningham Highway and the Centenary Highway.

A Site Locality Map is provided as Attachment A, together with a preliminary site layout.

1.4	Size of the development footprint or work area (hectares)	The proposed action will encompass the extent of Lot 103 on SP189609 (35.98 ha) and Lot 3 on RP214256 (4.298 ha), totalling an area of 40.28 ha.
1.5	Street address of the site	Swanbank Road
		SWANBANK OLD 4306

1.6 Lot description

Describe the lot numbers and title description, if known.

Lot	Plan	Tenure	Owner	Area
103	SP189609	Freehold	REMONDIS Australia Pty Ltd	35.98 ha
3	RP214256	Freehold	REMONDIS Australia Pty Ltd	4.298 ha

1.7 Local Government Area and Council contact (if known) If the project is subject to local government planning approval, provide the name of the relevant council contact officer.

Brett Davey Ipswich City Council Planning and Development Department PO Box 191 IPSWICH QLD 4305

Telephone: (07) 3810 6888

1.8 Time frame

Specify the time frame in which the action will be taken including the estimated start date of construction/operation.

Construction of the extended landfill is anticipated to commence in January 2016, and will be operational by July 2016. The Stage 1B Extension is predicted to be operational for a period of ten years.

1.9 Alternatives to proposed action Were any feasible alternatives to taking the proposed action (including not taking the action) considered but are not proposed?		Х	No
			Yes, you must also complete section 2.2
1.10	Alternative time frames etc	Х	No
include alternative time frames, locations or activities?			Yes, you must also complete Section 2.3. For each alternative, location, time frame, or activity identified, you must also complete details in Sections 1.2-1.9, 2.4-2.7 and 3.3 (where relevant).
1.11	State assessment Is the action subject to a state	Х	No
or territory environmental impact assessment?			Yes, you must also complete Section 2.5
1.12	Component of larger action	Х	No
	component of a larger action?		Yes, you must also complete Section 2.7
1.13	Related actions/proposals	Х	No
	other actions or proposals in the region (if known)?		Yes, provide details:
1.14	Australian Government	Х	No
	Has the person proposing to take the action received any Australian Government grant funding to undertake this project?		Yes, provide details:
1.15	Great Barrier Reef Marine Park Is the proposed action inside the Great Barrier Reef Marine Park?	Х	No Yes, you must also complete Section 3.1 (h), 3.2 (e)

2 Detailed description of proposed action

NOTE: It is important that the description is complete and includes all components and activities associated with the action. If certain related components are not intended to be included within the scope of the referral, this should be clearly explained in section 2.7.

2.1 Description of proposed action

This should be a detailed description outlining all activities and aspects of the proposed action and should reference figures and/or attachments, as appropriate.

The company

REMONDIS Australia Pty Ltd (REMONDIS) currently provides a range of waste collection services for more than 15,000 commercial customers and, through partnerships with local authorities, approximately 2 million residential premises. The range of services offered by REMONDIS includes:

- **Recycling:** Recycling provides potential cost savings to general waste, diverts waste from landfill and can be measured for sustainability reporting.
- **Recovery:** General waste is the material produced that cannot be reused or recycled for an alternative purpose, typically disposed at a landfill, buried and left to decompose.
- **Liquid:** Liquid collection, transport and treatment, ranging from grease traps, septic waste, holding tanks, and oily water to flammable liquids.
- **Municipal:** Collection and management of household general and green wastes and recyclables.
- **Re-Earth:** Organics waste management, converting kerbside organics and biosolids to valuable compost products.
- **Processing:** Transfer Stations and Materials Recovery Facilities are essential for waste processing, treatment and disposal of waste.

REMONDIS is committed to the principles of sustainability, acknowledging that this calls for a triple bottom line approach to business, balancing environmental, social and economic accountability. REMONDIS's accreditations to Australian and international standards ensure that services are continually monitored to ensure consistency, quality and adherence to prevalent legislation. REMONDIS's accreditations include:

- Certified Environmental Management System (ISO 14001)
- Certified Quality System (AS 4801)
- Certified OHS System (ISO 9001)

The proposal

REMONDIS currently operates a waste disposal and storage facility at Swanbank, which was established in 1997 as the first privately owned and operated engineered landfill facility in Australia. The landfill is licenced for the disposal of general, commercial, putrescible and regulated wastes. The Swanbank landfill was constructed on a disused open-cut coal mine and has an expected working life of 50 years. The landfill incorporates the latest technology in liner design, leachate and gas collection and monitoring systems. A continuous program of rehabilitation has been implemented, resulting in landscaping as each disposal cell is filled.

The Swanbank site receives waste from Brisbane City Council's four sites located at Chandler, Ferny Grove, Nudgee and Willawong, in addition to waste generated from within the Ipswich City Council area. Operations within Stage 1 of the landfill facility are nearing completion on Lot 104 on RP839073, and it is proposed to relocate operations to the south onto Lot 103 on SP189609. The potential for expansion within Lot 3 RP214256 is also being considered, and therefore this Lot was also encompassed by this assessment.

2.2 Alternatives to taking the proposed action

This should be a detailed description outlining any feasible alternatives to taking the proposed action (including not taking the action) that were considered but are not proposed (note, this is distinct from any proposed alternatives relating to location, time frames, or activities – see section 2.3).

N/A – As the existing landfill is nearing capacity, no alternative to taking the proposed action has been considered.

2.3 Alternative locations, time frames or activities that form part of the referred action

If you have identified that the proposed action includes alternative time frames, locations or activities (in section 1.10) you must complete this section. Describe any alternatives related to the physical location of the action, time frames within which the action is to be taken and alternative methods or activities for undertaking the action. For each alternative location, time frame or activity identified, you must also complete (where relevant) the details in sections 1.2-1.9, 2.4-2.7, 3.3 and 4. Please note, if the action that you propose to take is determined to be a controlled action, any alternative locations, time frames or activities that are identified here may be subject to environmental assessment and a decision on whether to approve the alternative.

N/A –The Stage 1B Extension Area is directly to the south of the existing operational landfill and was selected as the most economically and technically rational area for expansion, particularly noting that the area has already been subject to extensive land disturbance. The timeframe for the project has been controlled by the local demand for waste management, noting that the existing landfill is nearing capacity.

2.4 Context, planning framework and state/local government requirements

Explain the context in which the action is proposed, including any relevant planning framework at the state and/or local government level (e.g. within scope of a management plan, planning initiative or policy framework). Describe any Commonwealth or state legislation or policies under which approvals are required or will be considered against.

Sustainable Planning Act 2009

REMONDIS intends to submit a Development Application for a Material Change of Use under the *Sustainable Planning Act 2009* in order to expand the existing Swanbank landfill site into the proposed Stage 1B area. With regards to approval requirements associated with the Material Change of Use application, the following points are noted:

• Environmental Protection Act 1994

As part of the Material Change of Use process, applications for an Environmentally Relevant Activity (ERA) require an Environmental Authority to be issued under the Queensland *Environmental Protection Act 1994.* The existing facility has two Environmental Authorities (EPPR00823413 and EPPR00823513) that approve the following:

- ERA 33 Crushing, milling, grinding or screening, >5,000t/yr
- ERA 53 Composting & soil conditioner manufacturing, >200t/yr
- ERA 56 Regulated waste storage
- ERA 58 Regulated waste treatment
- ERA 60 Waste disposal, threshold >200,000t/yr

The Environmental Authorities encompass Lot 103 on SP189609, and therefore an application for a new or amended Environmental Authority is not required for the Swanbank Landfill Stage 1B Extension.

• Vegetation Management Act 1999

Assessment of vegetation protected under the Queensland *Vegetation Management Act 1999* is undertaken as part of a Material Change of Use application. Schedule 24 of the *Sustainable Planning Regulation 2009* identifies vegetation clearing that is exempt development. In this regard, Part 16 of Schedule 24 states that vegetation clearing is exempt if undertaken for community infrastructure listed in Schedule 2 of the Regulation. Part 2 (16) of Schedule 2 identifies 'waste management facilities' as community infrastructure. This exemption applies to all remnant vegetation within the Stage 1B Extension Area. Accordingly, it will not be necessary for the Department of Natural Resources and Mine to assess vegetation clearing as part of the Material Change of Use application for the Swanbank Landfill Stage 1B Extension.

 <u>South East Queensland Koala Conservation State Planning Regulatory Provisions</u> As part of a Material Change of Use application, development in areas mapped as a Priority Koala Assessable Development Area or Koala Assessable Development Area need to be assessed under the South East Queensland Koala Conservation State Planning Regulatory Provisions which was developed under the Sustainable Planning Act 2009. The Stage 1B Extension Area is not located within either of these priority area types, and as such the South East Queensland Koala Conservation State Planning Regulatory Provisions will not be triggered for the Swanbank Landfill Stage 1B Extension.

Nature Conservation Act 1992

The Queensland Department of Environment and Heritage Protection (DEHP) administer the Queensland *Nature Conservation Act 1992* (NC Act).

The Stage 1B Extension Area is located within a High Risk Trigger Area identified by the Protected Plants Flora Survey Trigger Map that has been produced by the Queensland Department of Environment and Heritage Protection (DEHP). This initiates the need to undertake targeted searches for flora species that are protected plants (endangered, vulnerable or near threatened) pursuant to the NC Act. A targeted flora survey in accordance with DEHP's *Flora Survey Guidelines – Protected Plants* has been undertaken within the Stage 1B Extension Area and will be used to support an application to DEHP for clearing approval. The Protected Plant Assessment Report is provided as Attachment D.

An ecological field survey within the Stage 1B Extension Area documented the presence of fauna habitat features and potential animal breeding places within the site. Section 332 of the Queensland *Nature Conservation (Wildlife Management) Regulation 2006* prohibits tampering with a native animal breeding place except under specific conditions which include the activity being part of an approved Species Management Program. A generic Species Management Program has been prepared by DEHP and entities can register their intent to operate under the conditions of this program. Prior to any vegetation clearing, REMONDIS will register for approval to use DEHP's generic Species Management Program.

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

If you have identified that the proposed action will be or has been subject to a state or territory environmental impact statement (in section 1.11) you must complete this section. Describe any environmental assessment of the relevant impacts of the project that has been, is being, or will be carried out under state or territory legislation. Specify the type and nature of the assessment, the relevant legislation and the current status of any assessments or approvals. Where possible, provide contact details for the state/territory assessment contact officer.

Describe or summarise any public consultation undertaken, or to be undertaken, during the assessment. Attach copies of relevant assessment documentation and outcomes of public consultations (if available).

N/A – The proposed action is not subject to a State environmental impact statement.

2.6 Public consultation (including with Indigenous stakeholders)

Your referral must include a description of any public consultation that has been, or is being, undertaken. Where Indigenous stakeholders are likely to be affected by your proposed action, your referral should describe any consultations undertaken with Indigenous stakeholders. Identify the relevant stakeholders and the status of consultations at the time of the referral. Where appropriate include copies of documents recording the outcomes of any consultations.

N/A – No public consultation has been undertaken.

2.7 A staged development or component of a larger project

If you have identified that the proposed action is a component of a larger action (in section 1.12) you must complete this section. Provide information about the larger action and details of any interdependency between the stages/components and the larger action. You may also provide justification as to why you believe it is reasonable for the referred action to be considered separately from the larger proposal (eg. the referred action is 'stand-alone' and viable in its own right, there are separate responsibilities for component actions or approvals have been split in a similar way at the state or local government levels).

N/A – The proposed action is not a component of a larger action.

3 Description of environment & likely impacts

3.1 Matters of national environmental significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest.

Your assessment of likely impacts should refer to the following resources (available from the Department's web site):

- specific values of individual World Heritage properties and National Heritage places and the ecological character of Ramsar wetlands;
- profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- Significant Impact Guidelines 1.1 Matters of National Environmental Significance; and
- associated sectoral and species policy statements available on the web site, as relevant.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The Minister has prepared four marine bioregional plans (MBP) in accordance with section 176. It is likely that the MBP's will be more commonly relevant where listed threatened species, listed migratory species or a Commonwealth marine area is considered.

Note that even if your proposal will not be taken in a World Heritage area, Ramsar wetland, Commonwealth marine area, the Great Barrier Reef Marine Park or on Commonwealth land, it could still impact upon these areas (for example, through downstream impacts). Consideration of likely impacts should include both direct and indirect impacts.

3.1 (a) World Heritage Properties

Description

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any World Heritage Properties that are in proximity to the Stage 1B Extension Area.

Nature and extent of likely impact

Address any impacts on the World Heritage values of any World Heritage property.

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any World Heritage Properties that are in proximity to the Stage 1B Extension Area.

3.1 (b) National Heritage Places

Description

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any National Heritage Places that are in proximity to the Stage 1B Extension Area.

Nature and extent of likely impact

Address any impacts on the National Heritage values of any National Heritage place.

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any National Heritage Places that are in proximity to the Stage 1B Extension Area.

3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

Description

One Wetland of International Importance was identified by the EPBC Act Protected Matters Search Tool, namely the Moreton Bay Ramsar site. The Moreton Bay Ramsar site is located approximately 45 km (measured as a straight line) east of the Stage 1B Extension Area. The location of the Moreton Bay Ramsar site is shown in Attachment B.

The Swanbank Renewable Energy and Waste Management Facility is located within the upper reaches of the Bremer River catchment. A second-order drainage feature is present within the Stage 1B Extension Area. Although waterway mapping shows this drainage feature as leaving the site and joining a number of other waterways, the path of the drainage feature has been modified and it terminates in a water-filled excavation pit within the Stage 1B Extension Area. The closest waterway downstream from the Stage 1B Extension Area joins numerous other small waterways and flows for a distance of approximately 17 km (measured as the meandering waterway path) before joining the Bremer River, which then flows into the Brisbane River at a distance of approximately 8 km downstream (measured as the meandering waterway path). The Brisbane River then flows for approximately 75 km (measured as the meandering the Moreton Bay Ramsar site.

Nature and extent of likely impact

Address any impacts on the ecological character of any Ramsar wetlands.

The substantial distance (100 km waterway path) between the Stage 1B Extension Area and the Moreton Bay Ramsar site is such that no potential impacts to this MNES are predicted to occur, particularly taking in to consideration the hydraulic disconnection of the drainage feature in the Stage 1B Extension Area and downstream waterways, as well as the highly urbanised nature of downstream environments and the presence of multiple waterway barriers.

3.1 (d) Listed threatened species and ecological communities

Description

Threatened ecological communities

A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point identified three threatened ecological communities that may occur in proximity to the State 1B Extension Area. All three communities identified by the search are listed as critically endangered under the EPBC Act, and are identified as follows:

- Lowland Rainforest of Subtropical Australia
- Swamp Tea-tree (*Melaleuca irbyana*) Forest of South-east Queensland
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

Regional Ecosystem mapping prepared by the Queensland Department of Natural Resources and Mines (DNRM) did not identify the presence of any regional ecosystems analogous to threatened ecological communities within the Stage 1B Extension Area. A field survey was undertaken to identify and map the vegetation communities within the Stage 1B Extension Area, following the Queensland Haerbarium's vegetation mapping method (Neldner *et al.* 2012). The field survey confirmed that no threatened ecological communities are present. The large proportion of the site has been previously disturbed. A field-verified remnant vegetation map is provided in the Ecological Assessment Report (refer Attachment C), together with descriptions of the structure and composition of vegetation communities within the study site. Regional Ecosystem mapping prepared by DNRM did not identify the presence of threatened ecological communities within the landscape adjoining the site.

Threatened flora species

A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point identified 13 threatened flora species that have the potential to occur in proximity to the site. Field surveys in search of threatened flora species were undertaken within the Stage 1B Extension Area following DEHP's *Flora Survey Guidelines*.

The field surveys did not identify the presence of any EPBC Act (or NC Act) listed species. The Ecological Impact Assessment Report is provided as Attachment C, and the Protected Plant Assessment Report that addressed NC Act requirements is provided as Attachment D (noting that many of the State listed species are also federally listed). Several previous ecological assessments have been undertaken within the Swanbank landfill site, as referenced and summarised in Attachment C, and these studies did not identify any threatened flora species.

A likelihood of occurrence assessment was undertaken for flora species identified by the Protected Matters Search Tool for the 10 km search radius. This assessment involved identification of the required habitat characteristics for each species as described by the EPBC Act Species Profile and Threats (SPRAT) database, and evaluation of whether field-verified habitats within the Stage 1B Extension Area are potentially suitable for these species. The documented distribution and locations of herbarium records (accessed through Australia's Virtual Herbarium) were also considered. Specific ratings were as follows:

- Low: potentially suitable habitat is absent
- Moderate: potentially suitable habitat is present, but no previous records exist in the local region
- High: potentially suitable habitat is present and records exist in the local region

The results of the likelihood of occurrence assessment are provided in Table 1 below (and see Attachment C), and did not identify any EPBC Act listed flora species that are likely to occur within the Stage 1B Extension Area.

Species	EPBC Act	Likelihood and justification
	Status	
Arthraxon hispidus	Vulnerable	Low. Although marginally suitable habitat is present
Hairy-joint grass		(eucalypt forest), this species has a preference for wet
		habitats. Wet areas were sparse within the site and
		were typically infested by weeds. The species has not
		previously been recorded in the Ipswich region (AVH
		2015).
Bosistoa selwynii	Vulnerable	Low. Suitable habitat (lowland subtropical rainforest) is
Heart-leaved bosistoa		absent. The species has not previously been recorded in
		the Ipswich region (AVH 2015).
Bosistoa transversa	Vulnerable	Low. Suitable habitat (lowland subtropical rainforest) is
Three-leaved bosistoa		absent, and the species has not previously been
		recorded in the Ipswich region (AVH 2015).
Corchorus cunninghamii	Endangered	Moderate. Potentially suitable habitat (grassy open
Native jute		forest on exposed slopes) is present, but the species
		has not previously been recorded in the Ipswich region
		(AVH 2015).
Cycas ophiolitica	Endangered	Moderate. Potentially suitable habitat (sandstone-
		based soils) is present within the site, but the species
		has not previously been recorded south of the
		Rockhampton region (AVH 2015).
Notelaea Ipsviciensis	Critically	Moderate. Potentially suitable habitat (sandstone-
Cooneana olive	endangered	based soils) is present within the site. No populations
		nave been recorded to the south of Ipswich-Redbank
		Plains Road, with the closest location 4 km to the north
Natalaan Havdii	Mulaavabla	or the site (AVH 2015).
Notelaed Iloyuli	vuinerable	Moderate. Marginally suitable habitat is present,
		although preferred habitat (moist guilles) was not
		the site (AVH 2015)
Phaius australis	Endangered	Low Suitable babitat (swamps or wetlands) is absent
Lesser swamp-orchid	Lindangered	and the species has not previously been recorded in the
		Inswich region (AVH 2015)
Phehalium distans	Critically	Low . Suitable babitat (microphyll to notophyll vine
Mount Berryman phebalium	endangered	forest) is absent, and the species has not previously
	endangerea	been recorded in the Ipswich region (AVH 2015).
Plectranthus habrophyllus	Endangered	Low. Suitable habitat (rocky outcrops) is absent.
Sophora fraseri	Vulnerable	Low. Suitable habitat (rainforest margins) is absent.
Streblus pendulinus	Endangered	Low. Suitable habitat (rainforest) is absent. The species
Siah's backbone	5	has not previously been recorded in the Ipswich region
		(AVH 2015).
Thesium austral	Vulnerable	Moderate. Potentially suitable habitat (woodland) is
Austral toadflax		present, but there is only one previous record of this
		species in the Ipswich region and it is from 1930 (AVH
		2015).

Table 1 – Likelihood of occurrence assessment for threatened flora species

Threatened fauna species

A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point identified 41 threatened fauna species that have the potential to occur in proximity to the site. Field surveys in search of threatened fauna species were undertaken within the Stage 1B Extension Area in accordance with DEHP's *Fauna Survey Guidelines*.

<u>Koala</u>

The field survey did not directly observe any EPBC Act (or NC Act) listed fauna species. However, bark exfoliations consistent with scratch-marks by koala (*Phascolarctos cinereus*) were noted during the field survey, and this species has previously been recorded in the surrounding landscape (Wildlife Online database, and ALA 2015). The evidence of koala activity within the study site, as recorded during the field survey in the form of scratch-marks, was limited to the area mapped as koala habitat in Figure 3 of Attachment C.

To collect information concerning levels of koala activity, the study site was stratified into assessment units and scat searches were undertaken in accordance with the Spot Assessment Technique (SAT) developed by Phillips and Callaghan (2011) (and see Attachment C for details). No koala scats were found from across more than 60 trees that were searched. Based on the absence of scats, it is likely that koala activity within the Stage 1B Extension Area is infrequent. It is likely that koalas more frequently use the large areas of bushland to the east of the study site, and only occasionally transition through the study site rather than regularly use the study site. The site perimeter has a fence that is topped with three strands of barbed wire, which would limit opportunities for koalas to move into the site, although opportunity for koala movement into the study site is provided under a gate along the northern boundary of the study site. It is also relevant to note that large vehicles and machinery currently operate within the study site and are likely to discourage use of the existing site by koalas.

An assessment of the koala habitat was undertaken in accordance with the koala habitat assessment tool provided by the *EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)* (DotE 2014). The tool identified that the study site meets the criteria to be considered 'habitat critical to survival of koala' with a score of 6, noting that this score is on the low-end of the range of scores for critical habitat (minimum score of 5 required for critical habitat). The assessment is provided in Attachment C and is summarised as follows:

- High level of koala activity recorded in the vicinity (score of 2)
- High level of suitability of vegetation structure and composition (score of 2)
- Moderate level of habitat connectivity (score of 1)
- Moderate level of existing threats (score of 1)

Although classified as habitat critical to the survival of koala, it is also relevant to note that the value of the potential koala habitat within the study site is reduced by the proximity to existing landfill and waste management activities, and the likelihood of koalas transitioning through the site is also reduced by the existing fence around the perimeter.

Other species

A likelihood of occurrence assessment was undertaken for fauna species identified by the Protected Matters Search Tool. This assessment involved identification of the required habitat characteristics for each species as described by the EPBC Act Species Profile and Threats (SPRAT) database, and evaluation of whether field-verified habitats within the Stage 1B Extension Area are potentially suitable for these species. The documented distribution and locations of records (accessed through the Atlas of Living Australia) were also considered. Specific ratings were as follows:

- Low: potentially suitable habitat is absent
- Moderate: potentially suitable habitat is present, but no previous records exist in the local region
- High: potentially suitable habitat is present and records exist in the local region

The results of the likelihood of occurrence assessment are provided in Table 2 below. In addition to koala, one vulnerable fauna species was identified as likely to occur within the Stage 1B Extension Area, namely grey-headed flying fox (*Pteropus poliocephalus*). No evidence of flying fox roosts within the Stage 1B Extension Area was recorded during the field survey, but it is possible that flying foxes may occasionally forage within the site.

Several previous ecological assessments have been undertaken within the Swanbank landfill site, as referenced and summarised in Attachment C, and these studies did not identify any threatened fauna species.

Note that the search results included several exclusively marine bird species (albatrosses), exclusively marine reptile species (turtles) and one exclusively marine fish species. These exclusively marine species are all highly unlikely to occur within the Stage 1B Extension Area due to the substantial distance from marine habitats. Accordingly, species that are exclusively marine have not been listed in Table 2.

Species	EPBC Act Status	Likelihood and justification
Anthochaera Phrygia Regent honeyeater	Endangered	Low. Suitable habitat (box-ironbark woodland with low to moderate relief) is absent and no previous records exist within 10 km (ALA 2015).
<i>Botaurus poiciloptilus</i> Australasian bittern	Endangered	Moderate. Marginally suitable habitat (waterbody) is present, but the species has a preference for vegetated wetlands. No vegetated wetlands are present. Two previous records within 10 km exist (ALA 2015). It is possible that this species may occasionally be present.
<i>Cyclopsitta diophthalma coxeni</i> Coxen's fig-parrot	Endangered	Low. Suitable habitat (rainforest) is absent and no previous records exist within 10 km (ALA 2015).
<i>Dasyornis brachypterus</i> Eastern bristlebird	Endangered	Low. Suitable habitat (heath or woodland with heath understorey) is absent and no previous records exist within 10 km (ALA 2015).
<i>Erythrotriorchis radiates</i> Red goshawk	Vulnerable	Moderate. Marginally suitable habitat is present, but the species has a preference for riparian forests. The species is unlikely to nest within the site but may occasionally forage.
<i>Geophaps scripta scripta</i> Squatter pigeon	Vulnerable	Moderate. Potentially suitable habitat (open forest) is present, but no previous records exist within 10 km (ALA 2015).
<i>Lathamus discolour</i> Swift parrot	Endangered	Low. Suitable habitat (box-ironbark woodland) is absent.
Poephila cincta cincta Black-throated finch	Endangered	Low. The species has been absent from Brisbane and surrounds since the 1930s (DotE 2015).
<i>Rostratula australis</i> Australian painted snipe	Endangered	Moderate. Marginally suitable habitat (waterbody) is present, but the species has a preference for vegetated wetlands. No vegetatedwetlands are present. Two previous records within 10 km exist (ALA 2015). It is possible that this species may occasionally be present.
<i>Turnix melanogaster</i> Black-breated button-quail	Vulnerable	Low. Suitable habitat (vine forest or rainforest) is absent.
<i>Chalinolobus dwyeri</i> Large-eared pied bat	Vulnerable	Low. Suitable roosting habitat (caves) is absent and no records exist within 10 km (ALA 2015). No maternity

Table 2 – Likelihood of occurrence assessment for threatened fauna species

		roost sites are known in Queensland (DotE 2015).
Dasyurus maculatus	Endangered	Low. Marginal habitat is present, but the suitability is
maculatus		reduced by disturbance within the site. No records exist
Spot-tailed quoll		within 10 km (ALA 2015).
Petrogale penicillata	Vulnerable	Low. Suitable habitat (rocky escarpments and
Brush-tailed rock-wallaby		outcrops) is absent and no records exist within 10 km
		(ALA 2015).
Phascolarctos cinereus	Vulnerable	High. Suitable habitat (Eucalypt forest and woodlands)
Koala		is present and previous records exist in proximity to the
		site (ALA 2015).
Potorous tridactylus	Vulnerable	Low. Preferred habitat (dense vegetation) is absent
Long-nosed potoroo		and no records exist within 10 km (ALA 2015).
Pteropus poliocephalus	Vulnerable	High. Suitable habitat (Eucalypt forest and woodlands)
Grey-headed flying-fox		is present and previous records exist in proximity to the
		site (ALA 2015).
Neoceratodus forsteri	Vulnerable	Low. A waterbody is present, but is hydraulically
Australian lungfish		disconnected and no previous records exist.
Phyllodes imperialis	Endangered	Low. Host plant (<i>Carronia multisepalea</i>) is absent and
smithersi		no records exist within 10 km (ALA 2015).
Pink underwing month		
Coeranoscincus reticulatus	Vulnerable	Low. Suitable habitat (rainforest or wet schlerophyll) is
Three-toed snake-tooth		absent and no records exist within 10 km (ALA 2015).
skink		
Delma torquata	Vulnerable	Low. Suitable habitat (ironbark woodland) is absent
Collared delma		and no records exist within 10 km (ALA 2015).
Furina dunmalli	Vulnerable	Low. Suitable habitat (brigalow on cracking clays and
Dunmall's snake		clay loams) is absent and no records exist within 10 km
		(ALA 2015).

Nature and extent of likely impact

Address any impacts on the members of any listened threatened species (except a conservation dependent species) or any threatened ecological community, or their habitat.

Threatened ecological communities

N/A - No threatened ecological communities occur within the Stage 1B Extension Area, or are mapped within the adjoining landscape, such that no impacts to threatened ecological communities are predicted to occur as a result of the proposed activity.

Threatened flora

N/A - No threatened flora species are known or considered likely to occur within the Stage 1B Extension Area, such that no impacts to threatened flora species are predicted to occur as a result of the proposed activity.

Threatened fauna

Ecological impacts that may occur as a result of the project are described in the Ecological Assessment Report provided as Attachment C. In brief, these included:

- Vegetation clearing and fragmentation
- Direct fauna injury and mortality during earthworks
- Disturbance to fauna
- Direct loss of breeding habitat
- Importation and/or spread of weeds
- Introduction and/or proliferation of pest fauna
- Degradation of habitat through dust, sedimentation and erosion
- Degradation of aquatic environments
- Impacts on adjacent bushland

With respect to the above, potential impacts specific to EPBC Act threatened fauna are identified as follows (and see Attachment C):

<u>Koala</u>

The proposal has the potential to result in the loss of up to 1.47 ha of koala habitat through vegetation clearing. The impact of vegetation clearing on the koala population is expected to be minor due to the small extent of the proposed vegetation clearing in comparison to the availability of suitable foraging habitat in the surrounding landscape. Koalas occurring within the site may be at risk of direct injury or mortality during clearing, however, mitigation measures to avoid direct injury and mortality impacts to koalas onsite have been identified (refer Item 4 and Attachment C).

While the clearing within the study site will not result in fragmentation or isolation of koala habitat, the clearing may expose adjacent koala populations to:

- An increase in the potential for vehicle impact because of the proximity of the bushland habitat area to the extended landfill site
- A reduction in the condition of the adjacent bushland habitat because of increased exposure to the edge of the landfill site, including dust, odour, noise, weeds and pathogens
- An increase in exposure to dog attack from the proximity of the new landfill site to the bushland habitat area

Measures to mitigate the above potential impacts have also been identified (refer Item 4 and Attachment C).

Adjacent koala populations may also experience temporary disturbance during earthworks as a result of elevated light, noise and vibration levels; however, these impacts will be over a short timeframe, and it is also relevant to note the existing levels of disturbance associated with activities in the study site and surrounds.

Grey-headed flying-fox

Vegetation clearing is likely to result in the loss of some grey-headed flying-fox foraging habitat. The extent of potential grey-headed flying-fox habitat is similar to that of potential koala habitat (1.47 ha). The impact of vegetation clearing on the grey-headed flying-fox population is expected to be negligible due to the small extent of the proposed vegetation clearing in comparison to the foraging range of grey-headed flying-foxes and availability of suitable foraging habitat in the surrounding landscape.

The study site contains suitable foraging habitat for grey-headed flying fox, but is not used by this species as a roosting camp. No direct mortality of grey-headed flying-fox is expected as a result of the project, as vegetation clearing and earthworks would be undertaken during the day and grey-headed flying fox would only visit the as the study site at nocturnally.

3.1 (e) Listed migratory species Description

A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point identified 32 migratory fauna species that have the potential to occur in proximity to the site. Field surveys within the Stage 1B Extension Area did not observe any EPBC Act migratory species. The Ecological Impact Assessment Report is provided as Attachment C.

A likelihood of occurrence assessment was undertaken for migratory species identified by the Protected Matters Search Tool. This assessment involved identification of the required habitat characteristics for each species as described by the EPBC Act SPRAT database, and evaluation of whether field-verified habitats within the Stage 1B Extension Area are potentially suitable for these species. The documented distribution and locations of records (accessed through the Atlas of Living Australia) were also considered. Specific ratings were as follows:

- Low: potentially suitable habitat is absent
- Moderate: potentially suitable habitat is present, but no previous records exist in the local region
- High: potentially suitable habitat is present and records exist in the local region

The results of the likelihood of occurrence assessment are provided in Table 2 below. One migratory fauna species was considered likely to occur within the Stage 1B Extension Area, namely rainbow beeeater (*Merops ornatus*). Potentially suitable habitat for this species is present within the Stage 1B Extension Area in the form of remnant woodlands, and this species has previously been recorded in the local region (ALA 2015).

Note that the search results included several exclusively marine bird species (albatrosses) and reptile species (turtles). These exclusively marine species are all highly unlikely to occur within the Stage 1B Extension Area due to the substantial distance from marine habitats. Accordingly, species that are exclusively marine have not been listed in Table 3.

Species	EPBC Act	Likelihood and justification
	Status	
Ardea alba	Migratory	Moderate. Preferred habitat (swamps, marshes etc) is
Great egret		absent, but the species may occasionally be present in
		the site.
Ardea ibis	Migratory	Low. Suitable habitat (grasslands and wetlands) is
Cattle egret		absent.
Rostratula benghalensis	Endangered;	Moderate. Marginally suitable habitat (waterbody) is
Australian painted snipe	migratory	present, but the species has a preference for vegetated
		wetlands. No vegetation wetlands are present. Two
		previous records within 10 km exist (ALA 2015). It is
		possible that this species may occasionally be present.
Haliaeetus leucogaster	Migratory	Low. Preferred breeding habitat (close to water, mainly
White-bellied sea-eagle	5 /	in tall open forest/woodland) is absent.
Hirundapus caudacutus	Migratory	Moderate. Marginally suitable habitat (open forest) is
White-throated needletail	5 /	present, but the species is almost exclusively aerial. It
		is possible that this species may occasionally be
		present.
Merops ornatus	Migratory	High. Potentially suitable habitat (woodlands) is
Rainbow bee-eater	5 ,	present, and previous records exist within 10 km(ALA
		2015).
Monarcha melanopsis	Migratory	Low. Suitable habitat (vine forest or rain forest) is
Black-faced monarch		absent.
Myiagra cyanoleuca	Migratory	Low. Suitable habitat (heavily vegetated gullies) is
Satin flycatcher		absent.
Rhipidura rufifrons	Migratory	Moderate. Local records exist, but habitat within the
Rufous fantail		site is not ideal (wet sclerophyll with dense
		understorey).
Symposiachrus trivirgatus	Migratory	Moderate. Local records exist (ALA 2015), but habitat
Spectacled monarch		within the site is not ideal (rainforests and wet gullies).

Table 3 – Likelihood of occurrence assessment for migratory species

Nature and extent of likely impact

Address any impacts on the members of any listed migratory species, or their habitat.

General ecological impacts that may occur as a result of the project are identified in Item 3.1(d) and are further described in the Ecological Assessment Report provided as Attachment C. The primary impact relevant to rainbow bee-eater is the loss of potential habitat through vegetation clearing.

3.1 (f) Commonwealth marine area

(If the action is <u>in</u> the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

Description

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any Commonwealth Marine Areas that are in proximity to the Stage 1B Extension Area.

Nature and extent of likely impact

Address any impacts on any part of the environment in the Commonwealth marine area.

N/A – A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point did not identify any Commonwealth Marine Areas that are in proximity to the Stage 1B Extension Area.

3.1 (g) Commonwealth land

(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

Description

If the action will affect Commonwealth land also describe the more general environment. The Policy Statement titled *Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* provides further details on the type of information needed. If applicable, identify any potential impacts from actions taken outside the Australian jurisdiction on the environment in a Commonwealth Heritage Place overseas.

A search undertaken using the EPBC Act Protected Matters Search Tool for a 10 km radius surrounding a central point identified Commonwealth land in proximity to the Stage 1B Extension Area, including the following Defence areas and facilities:

- Amberley AP90 Small Arms Range (Purga), located approximately 7.3 km to the south-west of the Stage 1B Extension Area
- Commonwealth Centre 3rd Floor, located approximately 8 km to the north-west of the Stage 1B Extension Area
- Ipswich Training Depot, located approximately 7.7 km to the north-west of the Stage 1B Extension Area

The locations of the above sites are identified in Attachment B.

Nature and extent of likely impact

Address any impacts on any part of the environment in the Commonwealth land. Your assessment of impacts should refer to the *Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* and specifically address impacts on:

- ecosystems and their constituent parts, including people and communities;
- natural and physical resources;
- the qualities and characteristics of locations, places and areas;
- the heritage values of places; and
- the social, economic and cultural aspects of the above things.

Due to the distance between the Commonwealth land and the Stage 1B Extension Area (i.e. at least 7 km), no impacts to Commonwealth land are predicted to occur as a result of the proposal.

3.1 (h) The Great Barrier Reef Marine Park

Description

N/A - The Stage 1B Extension Area is not located in proximity to the Great Barrier Reef Marine Park.

Nature and extent of likely impact

Address any impacts on any part of the environment of the Great Barrier Reef Marine Park.

N/A - The Stage 1B Extension Area is not located in proximity to the Great Barrier Reef Marine Park.

Note: If your action occurs in the Great Barrier Reef Marine Park you may also require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If so, section 37AB of the GBRMP Act provides that your referral under the EPBC Act is deemed to be an application under the GBRMP Act and Regulations for necessary permissions and a single integrated process will generally apply. Further information is available at www.gbrmpa.gov.au

3.1 (i) A water resource, in relation to coal seam gas development and large coal mining development

Description

If the action is a coal seam gas development or large coal mining development that has, or is likely to have, a significant impact on water resources, the draft *Policy Statement Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources* provides further details on the type of information needed.

N/A – The proposed action is not a coal seam gas development of coal mining development.

Nature and extent of likely impact

Address any impacts on water resources. Your assessment of impacts should refer to the draft *Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources.*

N/A – The proposed action is not a coal seam gas development of coal mining development.

3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

You must describe the nature and extent of likely impacts (both direct & indirect) on the <u>whole</u> environment if your project: • is a nuclear action;

- will be taken by the Commonwealth or a Commonwealth agency;
- will be taken in a Commonwealth marine area;
- will be taken on Commonwealth land; or
- will be taken in the Great Barrier Reef marine Park.

Your assessment of impacts should refer to the *Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* and specifically address impacts on:

- ecosystems and their constituent parts, including people and communities;
- natural and physical resources;
- the qualities and characteristics of locations, places and areas;
- the heritage values of places; and
- the social, economic and cultural aspects of the above things.

3.2 (a)	Is the proposed action a nuclear action?	Х	No
			Yes (provide details below)

If yes, nature & extent of likely impact on the whole environment

3.2 (b)	(b) Is the proposed action to be taken by the	Х	No	
	Commonwealth or a Commonwealth		Ves (provide details below)	
	agency?		res (provide details below)	

If yes, nature & extent of likely impact on the whole environment

3.2 (c)	Is the proposed action to be taken in a	Х	No
_	Commonwealth marine area?		Yes (provide details below)

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))

3.2 (d)	i) Is the proposed action to be taken on	Х	No	
			Yes (provide details below)	

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(g))

3.2 (e)	Is the proposed action to be taken in the	Х	No
	Great Barrier Reet Marine Park?		Yes (provide details below)

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))

3.3 Other important features of the environment

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed above). If at Section 2.3 you identified any alternative locations, time frames or activities for your proposed action, you must complete each of the details below (where relevant) for each alternative identified.

3.3 (a) Flora and fauna

<u>Flora</u>

The field survey observed that the large proportion of the site has already been subject to vegetation removal as a result of previous disturbance activities. Within vegetated portions of the site, the field survey recorded a diversity of native flora species within the Stage 1B Extension Area, together with a high abundance of exotic flora species. A total of 132 flora species were recorded during the field surveys, including 72 native species and 60 introduced species.

Tree species that were recorded within portions of the site that supported woody vegetation were primarily Eucalypts, with several large and small shrub species also recorded. Native ground layer species included a diversity of grasses and herbs. A list of flora species recorded during the field survey is provided in Attachment C, and further details regarding vegetation characteristics are provided in items 3.3(c) and 3.3(e) below.

No flora species of conservation significance were recorded within the Stage 1B Extension Area and surrounding 100 m wide buffer, or are considered likely to occur. Refer to item 3.1(d) and Attachment C.

<u>Fauna</u>

Various habitat types were noted within the study site. These included the following:

- Open eucalypt and acacia woodland
- Open grassed banks
- Rock piles and exposed rocky outcrops
- Dense shrub (lantana) areas
- Waterway, pools and reed beds

Representative photographs of the study site are provided in Attachment C.

Fauna observed within the study site consisted primarily of water bird species such as dusky moorhen (*Gallinula tenebrosa*) and azure kingfisher (*Alcedo azurea*) in association with the drainage line and water-filled pit. Woodland bird species were also present and included such species as double-barred finches (*Taeniopygia bichenovii*) and spangled drongo (*Dicrurus bracteatus*). Wedge-tailed eagles (*Aquila audax*), Torresian crows (*Corvus orru*) and black kites (*Milvus migrans*) were frequently recorded, possibly attracted to the area by the landfill.

Evidence of koalas was observed in the eastern part of Lot 103 SP189609 in the form of scratch marks on grey gums (refer item 3.1(d) above). A wallaby scat was observed where the fence had been pushed up from the adjacent bushland block.

No evidence of frogs or aquatic species such as turtles or crayfish was observed on site, although some of the habitat associated with the drainage line appeared to be suitable for frogs. A list of fauna species recorded during the field survey is provided in Attachment C.

3.3 (b) Hydrology, including water flows

The Stage 1B Extension Area is located within the Bundamba Creek catchment which forms part of the upper catchment of the Bremer River. A second-order drainage feature is present within the Stage 1B Extension Area, flowing in an east to west direction. Although waterway mapping shows this drainage feature as leaving the site and joining a number of other waterways, the path of the

drainage feature has been modified and it terminates in a water-filled excavation pit within the Stage 1B Extension Area. A low number of smaller ponded waterbodies are also present, most of which are of artificial origin.

The closest waterway downstream from the Stage 1B Extension Area joins numerous other small waterways and flows for a distance of approximately 17 km (measured as the meandering waterway path) before joining the Bremer River, which then flows into the Brisbane River at a distance of approximately 8 km downstream (measured as the meandering waterway path). The Brisbane River then flows for approximately 75 km (measured as the meandering waterway path) before reaching Moreton Bay.

3.3 (c) Soil and Vegetation characteristics

Soils and geology

The soils within the study site are described as loam, silty loam or sandy clay loam Chromosols (ASRIS 2015). The undisturbed soils within the Stage 1B Extension Area were sandy soils with exposed rocky outcrops and loose surface sandstone rock.

With regards to geological characteristics, the study site is located on Ipswich Coal Measures, which is described as "shale, conglomerate, sandstone, coal, siltstone, basalt, tuff" (Geological Survey of Queensland 1980).

Vegetation

The field survey documented the presence of five distinct vegetation community types within the Stage 1B Extension Area. These are detailed in Attachment C, and brief descriptions are provided as follows:

- Regional Ecosystem 12.9-10.19/12.9-10.2 The canopy layer was dominated by *Eucalyptus fibrosa* (broad-leaved ironbark) and *Corymbia citriodora* (lemon-scented gum) throughout the upper and lower slopes, with associated *E. acmenoides* (white mahogany), *E. major* (grey gum), *Corymbia henryi* (large-leaved spotted gum) and *E. crebra* (narrow-leaved ironbark).
- Regional Ecosystem 12.9-10.3 The canopy layer and sparse sub-canopy layer were both dominated by *E. moluccana* (gum-topped box), with associated broad-leaved ironbark.
- Non-remnant woodland The canopy layer and sub-canopy were both dominated by broadleaved ironbark and associated lemon-scented gum and grey gum.
- Non-remnant riparian vegetation The canopy layer was dominated by *E. tereticornis* (forest red gum) with associated *Angophora leiocarpa* (smooth-barked apple) and gum-topped box.
- Regrowth vegetation Non-woody regrowth vegetation was dominated by introduced grasses and featured scattered exotic shrubs (refer item 3.3(g) below).

3.3 (d) Outstanding natural features

The Stage 1B Extension Area is located within the Swanbank Industrial Estate which accommodates a number of existing heavy industrial land uses including power generation, waste transfer facilities, extractive industries, sand blasting operations and electrical infrastructure. As a developing industrial area within a highly modified natural environment, the locality does not contain any outstanding natural features.

3.3 (e) Remnant native vegetation

The field survey identified two areas of remnant vegetation within the Stage 1B Extension Area, namely, a polygon of Regional Ecosystem (RE) 12.9-10.3 in the south-western extent, and a mixed polygon of RE 12.9-10.19 and RE 12.9-10.2 in the north-eastern extent. Table 4 below provides a description of each mapped RE types and the status of the RE under the Queensland *Vegetation*

Management Act 1999 (VM Act). A field-verified remnant vegetation map is provided within Attachment C, together with detailed descriptions of the vegetation communities.

RE	VM Act status	Description
12.9-10.2	Least concern	Corymbia citriodora subsp. variegata +/- Eucalyptus crebra
		open forest on sedimentary rocks
12.9-10.3	Of concern	Eucalyptus moluccana open forest on sedimentary rocks
12.9-10.19	Least concern	Eucalyptus fibrosa subsp. fibrosa woodland on sedimentary
		rocks

Table 4 – Regional Ecosystems within the Stage 1B Extension Area

3.3 (f) Gradient (or depth range if action is to be taken in a marine area)

The Stage 1B Extension Area decreases in elevation from a north-east to south-west direction. The elevation ranges from 100 metres above sea level along the north-eastern boundary, down to 42 metres above sea level along the south-western boundary.

3.3 (g) Current state of the environment

Include information about the extent of erosion, whether the area is infested with weeds or feral animals and whether the area is covered by native vegetation or crops.

The Stage 1B Extension Area has been subject to extensive disturbance as a result of historic mining and current waste management activities. The large portion of the Stage 1B Extension Area has been cleared of native vegetation. Two relatively small areas of remnant vegetation are present in the south-western and north-eastern portions of the site, with an area of non-remnant woodland also present in the north.

The field survey recorded 60 weed species within the Stage 1B Extension Area, including seven species that are declared pests pursuant to the Queensland *Land Protection (Pest and Stock Route Management) Act 2002.* Weed species that were most prevalent in the various vegetation community types included the following:

- Areas of remnant vegetation were in reasonable condition, although exotic grass species such as *Megathyrsus maximus** (Guinea grass), *Chloris gayana** (Rhodes grass) and *Cenchrus setaceus** (African fountain grass) were prevalent in some areas.
- Riparian vegetation (non-remnant) was highly disturbed. The shrub layer was dominated by Lantana camara* (lantana) and other pest species including Baccharis halimifolia* (groundsel bush) and Solanum mauritianum* (wild tobacco). The ground layer was dominated by introduced species such as Guinea grass, Rhodes grass and Paspalum urvillei* (vasey grass), with localised dense infestations of the exotic vine Neonotonia wightif* (glycine).
- Regrowth vegetation was dominated by introduced grasses including Guinea grass, Johnson grass and Rhodes grass, and scattered shrub species included lantana and wild tobacco.

3.3 (h) Commonwealth Heritage Places or other places recognised as having heritage values

No Commonwealth Heritage Places or other places recognised as having heritage values are known within the Stage 1B Extension Area or adjacent landscape.

3.3 (i) Indigenous heritage values

No indigenous heritage values are known. The Stage 1B Extension Area has been subject to broad scale disturbance, including historic mining activities.

3.3 (j) Other important or unique values of the environment

Describe any other key features of the environment affected by, or in proximity to the proposed action (for example, any national parks, conservation reserves, wetlands of national significance etc).

White Rock Conservation Park is located approximately 3.4 km to the south-east of the Stage 1B Extension Area. Connectivity to the White Rock Conservation Park is limited by cleared landscapes to the south of the study site, as well as the Centenary Highway which is the major road linking Ipswich and Warwick.

3.3 (k) Tenure of the action area (eg freehold, leasehold)

The Stage 1B Extension is proposed to occur within two Lots, both of which are freehold properties under the ownership of REMONDIS.

3.3 (I) Existing land/marine uses of area

The area is currently used by REMONDIS for administration activities and waste storage. The Stage 1B Extension Area features cleared areas, access roads, site buildings and a water-filled excavation pit.

3.3 (m) Any proposed land/marine uses of area

The proposed use of the land is landfilling.

4 Measures to avoid or reduce impacts

Note: If you have identified alternatives in relation to location, time frames or activities for the proposed action at Section 2.3 you will need to complete this section in relation to each of the alternatives identified.

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

For any measures intended to avoid or mitigate significant impacts on matters protected under the EPBC Act, specify:

- what the measure is,
- how the measure is expected to be effective, and
- the time frame or workplan for the measure.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

Provide information about the level of commitment by the person proposing to take the action to implement the proposed mitigation measures. For example, if the measures are preliminary suggestions only that have not been fully researched, or are dependent on a third party's agreement (e.g. council or landowner), you should state that, that is the case.

Note, the Australian Government Environment Minister may decide that a proposed action is not likely to have significant impacts on a protected matter, as long as the action is taken in a particular manner (section 77A of the EPBC Act). The particular manner of taking the action may avoid or reduce certain impacts, in such a way that those impacts will not be 'significant'. More detail is provided on the Department's web site.

For the Minister to make such a decision (under section 77A), the proposed measures to avoid or reduce impacts must:

- clearly form part of the referred action (eg be identified in the referral and fall within the responsibility of the person proposing to take the action),
- be must be clear, unambiguous, and provide certainty in relation to reducing or avoiding impacts on the matters protected, and
- must be realistic and practical in terms of reporting, auditing and enforcement.

More general commitments (eg preparation of management plans or monitoring) and measures aimed at providing environmental offsets, compensation or off-site benefits CANNOT be taken into account in making the initial decision about whether the proposal is likely to have a significant impact on a matter protected under the EPBC Act. (But those commitments may be relevant at the later assessment and approval stages, including the appropriate level of assessment, if your proposal proceeds to these stages).

Mitigation of general ecological impacts

The Ecological Impact Assessment report (Attachment C) details a number of mitigation actions for each of the identified potential impacts. Key actions are identified in Table 5 below, together with the how the measure is expected to be effective and the time frame for the measure.

Action	How the measure will be effective	Timeframe	
Construction personnel should be educated in relation to their role in fauna and weed management.	By making personnel aware of their obligations.	Prior to vegetation clearing and ground disturbance activities.	
Minimise clearing of vegetation within the site, as possible.	By providing stepping stones for some species that will continue to inhabit the site.	During design and vegetation clearing.	
The extent of vegetation to be cleared is to be clearly marked.	By avoiding any accidental clearing.	During vegetation clearing.	
Vegetation clearing is to be undertaken in a sequential manner.	By allowing mobile fauna species a means of escape into unaffected adjacent habitats.	During vegetation clearing.	
A spotter-catcher is to be present	By preventing injury to fauna, and by	During vegetation	

Table 5 – Ecological impact mitigation measures

for all clearing operations.	safely relocating fauna to suitable habitat that will not be impacted.	clearing.
Vegetation containing nests, tree hollows or hollow logs should be gently tapped by the machinery operator prior to clearing.	By allowing mobile fauna species time to escape.	During vegetation clearing.
Cleared vegetation is to be stockpiled for a short period of time after clearing.	By allowing any remaining fauna species time to escape.	During vegetation clearing.
Cleared habitat features and potential breeding places should be retained and relocated to suitable habitat areas not affected by clearing.	By facilitating 'no net loss' of habitat features and potential breeding places.	During vegetation clearing.
Where lighting is required adjacent to remnant vegetation, directional lighting should be used.	By avoiding lighting disturbance to sensitive habitat.	During construction and operation.
All plant and equipment should be serviced and maintained according to service schedules.	By avoiding noise disturbance to sensitive habitat.	During construction and operation.
Weed and pest species control and prevention measures are to be implemented.	By preventing introduction and/or spread of weeds and pests.	During construction and operation.
An Erosion and Sedimentation Plan should be developed and implemented.	By reducing the potential for run-off, sedimentation and erosion.	During construction and operation.

Mitigation of ecological impacts to koalas

Many of the above-listed general impact mitigation measures are also relevant in terms of mitigation of potential impacts to koalas. With regards to additional requirements during clearing of koala habitat, the following requirements of the Queensland *Nature Conservation (Koala) Conservation Plan 2006* will be implemented:

- Clearing in the koala habitat area must be in the presence of a koala spotter. Prior to the commencement of, and during felling operations, it is the responsibility of the koala spotter to identify trees in which a koala is present and any trees where their crown overlaps trees in which a koala is present and to the person(s) conducting the clearing.
- Clearing must be undertaken in a sequential manner. The direction of sequential clearing should be away from threatening processes or hostile environments, and towards any retained vegetation or habitat links.
- No more than 50 percent of the area is cleared in any one stage. Between each stage, a period of at least 12 hours that starts at 6 pm and finishes at 6 am is required, during which time no trees are removed.
- Clearing of trees is carried out in a way that ensures, while the clearing is being carried out, appropriate habitat links are maintained within the clearing site and between the site and its adjacent areas, to allow koalas living on the site to move out of the site.
- No tree in which a koala is present, and no tree with a crown overlapping a tree in which a koala
 is present, is cleared. A koala spotter is not to physically move koalas from a tree in which they
 are residing to another location. Each tree identified by the koala spotter as being a risk to koalas
 if felled, should not be felled, damaged or interfered with until the koala has moved from the
 felling site of its own volition.

Relevant mitigation measures identified by the *EPBC Act referral guidelines for the vulnerable koala* (DotE 2014) and reproduced in Table 6 below will also be implemented throughout the construction and operational phase of the project.

Potential impact	Mitigation measure	Mitigation standards	Effectiveness
Dog attack in adjacent bushland	Dog proof and koala proof fencing	 Fencing that is both dog proof and koala proof along the eastern and southern boundaries, AND Fences are a minimum 3 m high (dog proof), AND Have a minimum 50 cm wide scratch panelling installed along the length of the outer side of the fence (koala proof), AND A maintenance and monitoring plan is in place with agreement from the neighbouring property owners. 	High
	Dog control strategy	 Dog control carried out using a method that is known to be effective in comparable circumstances (i.e. may include shooting, poison baiting, etc) and by a qualified professional, AND Timing and level of effort of dog control is appropriate to the circumstances and the desired outcomes. 	Moderate
Vehicle strikes	Koala proof fencing	 Koala proof fencing along the eastern and southern boundaries, AND Fences are a minimum 3 m high, AND Be 3 m from any retained trees on either side of the fence, and clear of all overhanging branches, AND Have a minimum 50 cm wide scratch panelling installed along the length of the outer side of the fence, AND A maintenance and monitoring plan is in place with agreement from the neighbouring property owners. 	High
	Speed limits and signage	 Limit speed on all access roads adjacent to the bushland habitat, AND Place signage to alert drivers of koala presence in adjacent bushland habitat. 	Low

Table 6 – Mitigation of potential impacts to koala

5 Conclusion on the likelihood of significant impacts

Identify whether or not you believe the action is a controlled action (ie. whether you think that significant impacts on the matters protected under Part 3 of the EPBC Act are likely) and the reasons why.

5.1 Do you THINK your proposed action is a controlled action?

No, complete section 5.2

Х

Yes, complete section 5.3

5.2 Proposed action IS NOT a controlled action.

Specify the key reasons why you think the proposed action is NOT LIKELY to have significant impacts on a matter protected under the EPBC Act.

The proposed action is not considered to constitute a controlled action as no significant impacts on a matter protected under the EPBC Act are anticipated. Matters that may potential occur within, or in proximity to, the Stage 1B Extension Area included the following:

- Koala, listed as a vulnerable species
- Grey-headed flying fox, listed as a vulnerable species
- Rainbow bee-eater, listed as a migratory species

Assessment against the criteria provided in DotE's *Significant Impact Guidelines v 1.1* are provided below for each of the three species (Tables 7 to 9) to support the conclusion no significant impacts to these matters are predicted to occur as a result of the project.

It is important to note that the Stage 1B Extension Area is located within a highly modified and well established industrial area that accommodates a number of heavy industrial land uses. As such, the site does not accommodate significant natural features or provide extensive quality habitat for protected fauna. Instead, the majority of the site supports disturbed areas that are largely devoid of vegetation or have been colonised by introduced weeds.

It is also to be noted that comprehensive mitigation measures will be implemented throughout the construction phase to avoid or minimise the impact of the project on flora and fauna (refer Item 4).

<u>Koala</u>

The potential to realise a significant impact upon koala within the Stage 1B Extension Area has been considered against criteria identified by DotE (Table 7). Although classified as habitat critical to the survival of koala in accordance with the koala habitat assessment tool, it is also relevant to note that:

- The score of the koala habitat is on the low-end of the critical habitat range;
- Evidence collected using the Spot Assessment Technique indicates that koala use of the site is very infrequent;
- A small extent of koala habitat (1.47 ha) is proposed for removal;
- The value of the potential koala habitat within the study site is reduced by the proximity to existing landfill and waste management activities (including operation of heavy machinery); and
- The likelihood of koalas transitioning through the site is reduced by the existing barbed-wire fence around the perimeter.

A significant impact is not predicted as:

- The site does not support a resident koala population, but rather supports infrequent transitional movement by koalas;
- Measures identified in Item 4 are expected to manage the potential to directly or indirectly impact this species;
- Suitable habitat is well represented in landscapes that surround the site and will persist; and

• This species is not considered to be dependent upon any habitat within the site for any particular lifecycle stages.

Impact criteria	Potential to occur
Lead to a long-term	Unlikely.
decrease in the size of	The EPBC Act referral guidelines for the vulnerable koala (DotE 2014) do
an important	not define an 'important population'.
population of a species.	Evidence collected using the Spot Assessment Technique indicates that
	koala use of the site is very infrequent. Therefore, loss of habitat within
	the site is unlikely to result in a decrease in the population size.
	Extensive suitable habitat will remain in the surrounding landscape, and
	mitigation measures will be implemented within the site to avoid any
	impacts on adjacent bushland (refer Item 4 and Attachment C).
	Mitigation measures will also be implemented to avoid any direct impacts
	to koala (refer Item 4 and Attachment C).
Reduce the area of	Unlikely.
occupancy of an	The EPBC Act referral guidelines for the vulnerable koala (DotE 2014) do
important population.	not define an 'important population'.
	Evidence collected using the Spot Assessment Technique indicates that
	koala use of the site is very infrequent. Therefore, loss of habitat within
	the site is unlikely to reduce the area of occupancy of an important
	population. Extensive suitable habitat will remain in the surrounding
	landscape, and mitigation measures will be implemented within the site
	to avoid any impacts on adjacent bushland (refer Item 4 and Attachment
	Unlikely
important population	Unlikely. Vegetation that will be removed is on the periphery of a much larger
into two or more	vegetation that will be removed is on the periphery of a much larger
	fragment the local population into two or more populations
Adversely affect habitat	
critical to the survival	Although the koala habitat assessment technique identifies the site as
of a species.	supporting critical habitat, it is to be noted that:
	 The score of the koala habitat is on the low-end of the critical habitat
	range:
	 Evidence collected using the Spot Assessment Technique indicates
	that koala use of the site is very infrequent;
	• A relatively small extent of koala habitat (1.47 ha) is proposed for
	removal;
	• The value of the potential koala habitat within the study site is
	reduced by the proximity to existing landfill and waste management
	activities (including operation of heavy machinery); and
	 The likelihood of koalas transitioning through the site is reduced by
	the existing barbed-wire fence around the perimeter.
	Extensive suitable habitat will remain in the surrounding landscape, and
	mitigation measures will be implemented within the site to avoid any
	impacts on adjacent bushland (refer Item 4 and Attachment C).
Disrupt the breeding	
cycle of an important	Evidence collected using the Spot Assessment Technique indicates that
population.	koala use of the site is very infrequent. There is no evidence that koala
	use the site during preeding; rather koalas are likely to only transition
	unough the site. Extensive suitable habitat will remain in the
	within the site to avoid any impacts on adjacent husbland (refer Item 4
	within the site to avoid any impacts on adjacent bushland (refer Item 4

Table 7 – Significance of impacts to koala

	and Attachment C).
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	Unlikely. Evidence collected using the Spot Assessment Technique indicates that koala use of the site is very infrequent. Therefore, loss of habitat within the site is unlikely to result in decline of the species. Extensive suitable habitat will remain in the surrounding landscape, and mitigation measures will be implemented within the site to avoid any impacts on adjacent bushland (refer Item 4 and Attachment C).
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	Unlikely. Although the proposed action has the potential to increase spread of weeds, mitigation measures that will be implemented include monitoring and management of weeds (refer Item 4 and Attachment C).
Introduce disease that may cause the species	Unlikely. The proposal is not predicted to introduce any disease that may affect
to decline. Interfere substantially with the recovery of the species.	 koalas. Unlikely. The <i>EPBC Act referral guidelines for the vulnerable koala</i> (DotE 2014) define impacts that are likely to substantially interfere with the recovery of the koala as one or more of the following: Increasing koala fatalities in habitat critical to the survival of the koala due to dog attacks to a level that is likely to result in multiple, ongoing mortalities. Increasing koala fatalities in habitat critical to the survival of the koala due to vehicle-strikes to a level that is likely to result in multiple, ongoing mortalities. Facilitating the introduction or spread of disease or pathogens for example Chlamydia or <i>Phytophthora cinnamomi</i>, to habitat critical to the survival of the habitat. Creating a barrier to movement to, between or within habitat critical to the survival of the koala. Changing hydrology which degrades habitat critical to the survival of the koala. Changing hydrology which degrades habitat critical to the survival of the koala. With regards to the above, the following is noted: Effective mitigation measures to avoid dog attacks will be implemented (refer Item 4 and Attachment C) such that multiple, ongoing mortalities are not predicted.
	 ongoing mortalities are not predicted. Introduction or spread of diseases that may affect koalas will not occur as a result of the project. An existing barrier to movement is in place in the form of a fence around the perimeter of the site; the fence is topped with strands of

barbed-wire. As the site is on the periphery of a larger area of potential koala habitat, no fragmentation of habitat will occur as a
result of the project such that the proposal does not represent a barrier to movement.
• No changes in hydrology will occur as a result of the project to the extent that carrying capacity of habitat is reduced.

Grey-headed flying-fox

The potential to realise a significant impact upon grey-headed flying fox within the Stage 1B Extension Area has been considered against criteria identified by DotE (Table 8). In conclusion, a significant impact is not predicted as:

- The site does not support an important population of grey-headed flying fox or habitat critical to the survival of this species;
- The site does not support a grey-headed flying fox roost, but rather only forms a small proportion of foraging habitat within the range of this species;
- Measures identified in Item 4 are expected to manage the potential to directly or indirectly impact this species;
- Suitable habitat is well represented in landscapes that surround the site and will persist; and
- This species is not considered to be dependent upon any habitat within the site for any particular lifecycle stages.

Impact criteria	Potential to occur
Lead to a long-term	Unlikely.
decrease in the size of	The Stage 1B Extension Area is highly disturbed and does not support an
an important	'important population' of this species as defined under the EPBC Act for
population of a species.	the following reasons:
	 A key source population for either breeding or dispersal does not reside within the site;
	 A population that is necessary for maintaining genetic diversity does not reside within the site; and
	 The site is not near the limit of the species' range.
	Furthermore, the site forms a small proportion of foraging habitat within the surrounding landscape. Extensive suitable alternative habitat will persist in the local landscape such that a decrease in the size of a local grey-headed flying-fox population is not predicted. Mitigation measures will be implemented within the site to avoid any impacts on adjacent
	bushland (refer Item 4 and Attachment C).
Reduce the area of	Unlikely.
important population.	'important population' of this species as defined under the EPBC Act for the following reasons:
	 A key source population for either breeding or dispersal does not reside within the site;
	• A population that is necessary for maintaining genetic diversity does not reside within the site; and
	 The site is not near the limit of the species' range.
	Furthermore, the site forms a small proportion of foraging habitat within the surrounding landscape, and grey-headed flying-fox do not reside within the site. Extensive suitable alternative habitat will persist in the local landscape such that a significant reduction in the area of occupancy is not predicted. Mitigation measures will be implemented within the site to avoid any impacts on adjacent bushland (refer Item 4 and Attachment C).

Table 8 – Significance of impacts to grey-headed flying fox

Fragment an existing important population into two or more populations.	 Unlikely. The Stage 1B Extension Area is highly disturbed and does not support an 'important population' of this species as defined under the EPBC Act for the following reasons: A key source population for either breeding or dispersal does not reside within the site; A population that is necessary for maintaining genetic diversity does not reside within the site; and The site is not near the limit of the species' range. Furthermore, vegetation that will be removed is on the periphery of a much larger area of habitat, and therefore the proposed activity will not result in fragment the local population into two or more populations.
of a species.	 The Stage 1B Extension Area is highly disturbed and does not constitute 'habitat critical to the survival' of grey-headed flying-fox for the following reasons: The site is not used for breeding, roosting, or dispersal of this species; The site is only a small proportion of available foraging habitat and is therefore not necessary for the long-term maintenance of the species; The site is only a small proportion of available foraging habitat and is therefore not necessary to maintain genetic diversity and long term evolutionary development; and The site is not necessary for reintroduction of populations or recovery of the species.
Disrupt the breeding cycle of an important population.	 Unlikely. The Stage 1B Extension Area is highly disturbed and does not support an 'important population' of this species as defined under the EPBC Act for the following reasons: A key source population for either breeding or dispersal does not reside within the site; A population that is necessary for maintaining genetic diversity does not reside within the site; and The site is not near the limit of the species' range. Furthermore, a flying-fox roost is not present within, or in proximity to, the site such that no disruption of the breeding cycle is predicted.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.	Unlikely. The vegetation that will be removed is on the periphery of a much larger area of habitat, and therefore the proposed activity will not result in fragmentation or isolation of the habitat. Furthermore, the site forms a small proportion of foraging habitat within the surrounding landscape, and extensive suitable alternative habitat will persist in the local landscape such that the species is not predicted to decline as a result of the proposal. Mitigation measures will be implemented within the site to avoid any impacts on adjacent bushland (refer Item 4 and Attachment C).
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	Unlikely. Although the proposed action has the potential to increase spread of weeds, mitigation measures that will be implemented include monitoring and management of weeds (refer Item 4 and Attachment C).

Introduce disease that	Unlikely.
may cause the species	The proposal is not predicted to introduce any disease that may affect
to decline.	grey-headed flying-foxes
Interfere substantially	Unlikely.
with the recovery of	Based on the above, no interference with the recovery of the species is
the species.	predicted.

Rainbow bee-eater

The potential to realise a significant impact upon rainbow bee-eater within the Stage 1B Extension Area has been considered against criteria identified by DotE (Table 9). In conclusion, a significant impact is not predicted as:

- The site does not support an important population of this species;
- The site does not support an ecologically significant proportion of the population of this species;
- Measures identified in Item 4 are expected to manage the potential to directly or indirectly impact this species;
- This species is well represented in landscapes that surround the site, where suitable alternative habitat is prevalent and will persist; and
- This species is not considered to be dependent upon any habitat within the site for any particular lifecycle stages.

Impact criteria	Potential to occur
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.	 Unlikely. The Stage 1B Extension Area is highly disturbed and does not constitute 'important habitat' for this migratory species as defined under the EPBC Act for the following reasons: It does not support an ecologically significant proportion of the local rainbow bee-eater population. Habitat within the site is not of critical importance to the species at a particular life-cycle stage. The species is not at the limit of its range at this location. The species is not declining within this area.
	Furthermore, vegetation that will be removed is on the periphery of a much larger area of woodland, and therefore the proposed activity will not result in fragmentation or isolation of habitat. Mitigation measures will be implemented within the site to avoid any impacts on adjacent bushland (refer Item 4 and Attachment C).
Result in an invasive species that is harmful to the migratory habitat for the migratory species.	Unlikely. Although the proposed action has the potential to increase spread of weeds, mitigation measures that will be implemented include monitoring and management of weeds (refer Item 4 and Attachment C).
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	Unlikely. The Stage 1B Extension Area is highly disturbed and does not support an ecologically significant proportion of the local rainbow bee-eater population. No breeding sites of this species were recorded within the site, and the loss of a small proportion of habitat from the landscape will not seriously disrupt the lifecycle of this species. Suitable habitat is well represented in landscapes that surround the site and as such will continue to support breeding, feeding and resting behaviour of this species in the local landscape.

Table 9 – Significance of impacts to rainbow bee-eater

5.3 Proposed action IS a controlled action

Type 'x' in the box for the matter(s) protected under the EPBC Act that you think are likely to be significantly impacted. (The 'sections' identified below are the relevant sections of the EPBC Act.)

Matters likely to be impacted
World Heritage values (sections 12 and 15A)
National Heritage places (sections 15B and 15C)
Wetlands of international importance (sections 16 and 17B)
Listed threatened species and communities (sections 18 and 18A)
Listed migratory species (sections 20 and 20A)
Protection of the environment from nuclear actions (sections 21 and 22A)
Commonwealth marine environment (sections 23 and 24A)
Great Barrier Reef Marine Park (sections 24B and 24C)
A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
Protection of the environment from Commonwealth actions (section 28)
Commonwealth Heritage places overseas (sections 27B and 27C)

Specify the key reasons why you think the proposed action is likely to have a significant adverse impact on the matters identified above.

6 Environmental record of the responsible party NOTE: If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

		Yes	No	
6.1	Does the party taking the action have a satisfactory record of responsible environmental management?	х		
	Provide details			
	REMONDIS Australia Pty Ltd operates in complete compliance with the relevant Environmental Authorities that have been approved by the Queensland government. REMONDIS Australia Pty Ltd has not been subject to any proceedings under Commonwealth or State law breaches. REMONDIS Australia Pty Ltd operates within their Environmental Policy (refer 6.3 below) to maintain a record of responsible environmental management.			
6.2	Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?		Х	
	If yes, provide details			
	N/A			
6.3	If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?			
	If yes, provide details of environmental policy and planning framework			
	REMONDIS Australia Pty Ltd operates within their Environmental Policy, a copy of which is provided as Attachment E. This includes implementing and maintaining an Environmental Management System (EMS) as well as site- specific Environmental Management Plans. The EMS is consistent with ISO 14001:2004 (refer Attachment F) and facilitates acceptable environmental performance by increasing environmental awareness, optimising operational control, monitoring compliance and facilitating continuous improvement. A copy of the site-specific Environmental Management Plan is provided as Attachment G.			
6.4	Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?		Х	
	Provide name of proposal and EPBC reference number (if known)			
	N/A			

7 Information sources and attachments

(For the information provided above)

7.1 References

- List the references used in preparing the referral.
- Highlight documents that are available to the public, including web references if relevant.

A comprehensive list of references that were used in preparing the Ecological Impact Assessment report is provided in Attachment C; these references in turn informed preparation of this referral. References cited in this referral document are as follows:

Australia's Virtual Herbarium (AVH) 2015, *Australia's Virtual Herbarium*, Council of Heads of Australasian Herbaria, retrieved 21 May 2015, from: <u>http://avh.chah.org.au</u>

Atlas of Living Australia (ALA) 2015, Atlas of Living Australia, retrieved 18 February 2015, available from: <u>http://www.ala.org.au/</u>

Australian Soil Resource Information System (ASRIS) 2015, Australian soil classification for Swanbank region, retrieved 2 March, 2015, from http://www.asris.csiro.au/mapping/viewer.htm.

Department of the Environment (DotE) (Commonwealth) 2014, EPBC Act Referral Guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory.

Department of the Environment (DotE) (Commonwealth) 2015, Species Profile and Threats Database (SPRAT), retrieved 21 May 2015, from: <u>http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl</u>

Geological Survey of Queensland, Department of Mines, 1980, Moreton Geology, scanned 1:500,000 Geology map.

Neldner VJ, Wilson BA, Thompson EJ and Dillewaard HA, 2012, *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*. Version 3.2. Updated August 2012. Queensland Herbarium, Queensland Department of Science, Information Technology, Innovation and the Arts, Brisbane.

Phillips, S. and Callaghan, J. 2011. The Spot Assessment Technique: a tool for determining localised levels of habitat use by koalas (*Phascolarctos cinereus*)". *Australian Zoologist*, 35: 774–780.

7.2 Reliability and date of information

For information in section 3 specify:

- source of the information;
- how recent the information is;
- how the reliability of the information was tested; and
- any uncertainties in the information.

Information used in the preparation of this referral is based on a number of reports and studies previously developed to inform compliance with Queensland and local government approval processes. These studies have been undertaken by professional consultants who are specialised ecologists with practical experience in surveying and monitoring the local environment. Methods followed during field surveys were in accordance with relevant guidelines published by State and Commonwealth departments.

References that have been cited in preparation of this referral and supporting documentation include databases and documents that have been produced and maintained by State and Commonwealth departments, and as such are considered highly reliable. Other documents included manuscripts in scientific journals that have been subject to peer-review prior to publication, and are therefore also considered as reliable sources of information.

7.3 Attachments

Indicate the documents you have attached. All attachments must be less than three megabytes (3mb) so they can be published on the Department's website. Attachments larger than three megabytes (3mb) may delay the processing of your referral.

		\checkmark	
		attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	✓	Attachment A: Site Locality Plan and
	GIS file delineating the boundary of the referral area (section 1)		Preliminary Layout
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 3)	~	Attachment B: Locality Plan for MNES
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.5)	N/A	
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.6)	~	Attachment D: Protected Plant Assessment
	copies of any flora and fauna investigations and surveys (section 3)	✓	Attachment C: Ecological Assessment Report (provided as Part 1 and Part 2)
	technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3 and 4)	\checkmark	Attachment C: Ecological Assessment Report (provided as Part 1 and Part 2)
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)	N/A	

8 Contacts, signatures and declarations

NOTE: Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (s 489, EPBC Act).

Under the EPBC Act a referral can only be made by:

- the person proposing to take the action (which can include a person acting on their behalf); or
- a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action¹.

Swanbank Landfill Stage 1B Extension

8.1 Person proposing to take action

Project title:

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action.

If the proposed action will be taken under a contract or other arrangement, this is:

- the person for whose benefit the action will be taken; or
- the person who procured the contract or other arrangement and who will have principal control and responsibility for the taking of the proposed action.

If the proposed action requires a permit under the Great Barrier Reef Marine Park Act², this is the person requiring the grant of a GBRMP permission.

The Minister may also request relevant additional information from this person.

If further assessment and approval for the action is required, any approval which may be granted will be issued to the person proposing to take the action. This person will be responsible for complying with any conditions attached to the approval.

If the Minister decides that further assessment and approval is required, the Minister must designate a person as a proponent of the action. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent will generally be the person proposing to take the action³.

1. Name and Title: Ishrar Ali, Manager Landfill and Transfer Stations

- 2. Organisation REMONDIS Australia Pty Ltd
- 3. EPBC Referral Number
 - 4: ACN / ABN 95 002 429 781 / 002 429 781

5. Postal address Level 4, 163 O'Riordan Street, Mascot NSW 2020

6. Telephone: (07) 3294 2400

7. Email: Ishrar.ali@remondis.com.au

8. Name of designated proponent (if not the same person at item 1 above 9. ACN/ABN of

designated proponent (if not the same person named at item 1 above):

COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE

³ If a person other than the person proposing to take action is to be nominated as the proponent, please contact the Referrals Gateway(1800 803 772) to obtain an alternative contacts, signatures and declarations page.

¹ If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Gateway (1800 803 772) to obtain an alternative contacts, signatures and declarations page.

² If your referred action, or a component of it, is to be taken in the Great Barrier Reef Marine Park the Minister is required to provide a copy of your referral to the Great Barrier Reef Marine Park Authority (GBRMPA) (see section 73A, EPBC Act). For information about how the GBRMPA may use your information, see http://www.gbrmpa.gov.au/privacy/privacy_notice_for_permits.

FEE(S) THAT WOULD OTHERWISE BE PAYABLE

I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am: an individual; OR

a small business entity (within the meaning given by section 328-110 (other than subsection 328-119(4)) of the *Income Tax Assessment Act 1997*); OR

not applicable.

If you are small business entity you must provide the Date/Income Year that you became a small business entity:

> Note: You must advise the Department within 10 business days if you cease to be a small business entity. Failure to notify the Secretary of this is an offence punishable on conviction by a fine (regulation 5.23B(3) *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth)).

COMPLETE THIS SECTION ONLY IF YOU WOULD LIKE TO APPLY FOR A WAIVER

not applicable.

I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the <u>EPBC</u> <u>Regulations</u>. Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made: Declaration

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.

I understand that giving false or misleading information is a serious offence.

I agree to be the proponent for this action.

I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature Date 6-10-2015

8.2 Person preparing the referral information (if different from 8.1) Individual or organisation who has prepared the information contained in this referral form.

Name	Megan Ward			
Title	Senior Ecologist			
Organisation	GHD Pty Ltd			
ACN / ABN (if applicable)	008 488 373			
Postal address	GPO Box 668 Brisbane 4001			
Telephone	(07) 3316 3204			
Email	megan.ward@ghd.com			
Declaration	Declaration I declare that to the best of my knowledge the information I have given on, or attache to this form is complete, current and correct. I understand that giving false or misleading information is a serious offence.			
Signature	Mater	Date	06-10-2015	

REFERRAL CHECKLIST

NOTE: This checklist is to help ensure that all the relevant referral information has been provided. It is not a part of the referral form and does not need to be sent to the Department.

HAVE YOU:

Completed all required sections of the referral form?

- Included accurate coordinates (to allow the location of the proposed action to be mapped)?
- Provided a map showing the location and approximate boundaries of the project area?
- Provided a map/plan showing the location of the action in relation to any matters of NES?
- Provided a digital file (preferably ArcGIS shapefile, refer to guidelines at <u>Attachment A</u>) delineating the boundaries of the referral area?
- X Provided complete contact details and signed the form?
- **X** Provided copies of any documents referenced in the referral form?
- Ensured that all attachments are less than three megabytes (3mb)?
- Sent the referral to the Department (electronic and hard copy preferred)?

Geographic Information System (GIS) data supply guidelines

If the area is less than 5 hectares, provide the location as a point layer. If the area greater than 5 hectares, please provide as a polygon layer. If the proposed action is linear (eg. a road or pipline) please provide a polyline layer.

GIS data needs to be provided to the Department in the following manner:

- Point, Line or Polygon data types: ESRI file geodatabase feature class (preferred) or as an ESRI shapefile (.shp) zipped and attached with appropriate title
- Raster data types: Raw satellite imagery should be supplied in the vendor specific format.
- Projection as GDA94 coordinate system.

Processed products should be provided as follows:

- For data, uncompressed or lossless compressed formats is required GeoTIFF or Imagine IMG is the first preference, then JPEG2000 lossless and other simple binary+header formats (ERS, ENVI or BIL).
- For natural/false/pseudo colour RGB imagery:
 - If the imagery is already mosaiced and is ready for display then lossy compression is suitable (JPEG2000 lossy/ECW/MrSID). Prefer 10% compression, up to 20% is acceptable.
 - If the imagery requires any sort of processing prior to display (i.e. mosaicing/colour balancing/etc) then an uncompressed or lossless compressed format is required.

Metadata or `information about data' will be produced for all spatial data and will be compliant with ANZLIC Metadata Profile. (<u>http://www.anzlic.org.au/policies_guidelines#guidelines</u>).

The Department's preferred method is using ANZMet Lite, however the Department's Service Provider may use any compliant system to generate metadata.

All data will be provide under a Creative Commons license (<u>http://creativecommons.org/licenses/by/3.0/au/</u>)