Australian Government
Department of the Environment and Energy

Referral of proposed action

Proposed action title:

Aura - Precinct 2 Telecommunications Facility

1 Summary of proposed action

NOTE: In addition to completing the fields below, you must also attach a map of the area affected by the action that includes the following features (if relevant): the location of the action; the approximate boundary of the areas and habitat mentioned in items 3.1 and 3.2; and to the extent practicable and relevant, the tenure of the project area of the proposed action (e.g. freehold, leasehold etc.).

It is the Department's preference that maps are provided in A4 size and that the geographic information system (GIS) vector (shapefile) dataset associated with the maps is also provided.

1.1 **Short description**

Use 2 or 3 sentences to uniquely identify the proposed action and its location. It is important clearly describe the scope of the action accurately because this description lays the basis for the assessment and approval decision-making processes. For the purposes of the EPBC Act, an action includes:

- a project; and
- a development; and
- an undertaking; and
- an activity or series of activities; and
- an alteration of any of the above.

An action does not include:

- a decision by a government body to grant a governmental authorisation for another person to take an action; and
- grant funding from a government body,

where, a government body is the Commonwealth, a Commonwealth agency, a State or self-governing Territory; an agency of a State or a self-governing Territory or an authority established by a law applying in a Territory that is not a self-governing Territory.

The description should refer, as appropriate, to relevant maps.
You should obtain your own advice on whether the action you propose to refer constitutes an 'action' for the purposes of the EPBC Act.

The proposed action is the construction of a telecommunications facility on Lot 4000/SP283680 and upgrading an existing track through Lot 4000/SP83680 and a small section of Lot 108/SP131671 and an unnamed future road. The proposed telecommunications facility will be located within Precinct 2 of the Caloundra South Master Planned Community, now known as Aura (shown on Attachment A as the PDA boundary).

The major components of the proposed telecommunications facility are a maximum 30 metre tall monopole, panel antennas, remote radio units (RRUs) and an equipment shelter. The proposed maintenance access track will consist of a 3 metre gravel track with a further 1 metre of clearing either side.

1.2 **Latitude and longitude**

Latitude and longitude details are used to accurately map the boundary of the proposed action. If these coordinates are inaccurate or insufficient it may delay the processing of your referral.

	Latitude			Longitude		
location point	degrees	minutes	seconds	degrees	minutes	seconds
Monopole	26	48	12.532	153	4	58.637

The location of the proposed action (the Project Area) is provided above as a single pair of latitude and longitude references and is shown in Attachment A.

Also attach the associated GIS-compliant file that delineates the proposed referral area. If the area is less than 5 hectares, please provide the location as a point layer. If greater than 5 hectares, please provide a polygon layer. If the proposed action is linear (e.g. a road or pipeline) please provide a polyline layer (refer to GIS data supply guidelines at Attachment A).

Do not use AMG coordinates.

1.3 **Locality and property description**

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

The proposed action will be located on Queensland's Sunshine Coast, approximately 2km south-west of Caloundra City. The proposed telecommunications facility and maintenance access track on Lot 4000/SP283680 are located within the master planned community known as Aura (formally known as Caloundra South) (Attachment A). The Aura master planned community development was the subject of a separate EPBC Act referral in 2010, the Caloundra South Master Planned Community, EPBC Act ref. no. 2011/5987. The project was assessed and approved with conditions on 6 June 2013. These conditions were subsequently amended on 15 April 2014 and 5 August 2016.

Historically, the Aura site was once covered by a pine plantation, which was subsequently cleared and the site used for cattle grazing. Construction of Precinct 1 of Aura commenced in January, 2015 and is now complete. Construction of Precinct 2 of Aura commenced in November 2015, and works are still continuing. The proposed action will be located in Precinct 2, in an area identified in the approved Master Plan for future rehabilitation. The proposed action would be undertaken before the surrounding rehabilitation areas are completed and accepted off-maintenance.

The proposed maintenance access track will also traverse a small portion of Lot 108/SP131671 and an unnamed future road. Lot 108/SP13167 has a land use of parkland (Koala Court Park).

1.4	**Size of the development footprint or work area (hectares)**	Approximately 0.1770 ha
1.5	**Street address of the site**	Bellvista Boulevard, Caloundra West

1.6 **Lot description**

Describe the lot numbers and title description, if known.

The proposed telecommunications facility is located within Lot 4000/SP283680.

The proposed maintenance access track is situated on Lot 4000/SP283680 and a small area of Lot 108/SP131671 and an unnamed future road corridor.

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.

The Project Area is located within the Sunshine Coast Regional Council local government area. Lot 4000/SP83680 is located within a Priority Development Area, where the planning for the site is under the jurisdiction of the State Government represented by the Minister for Economic Development Queensland (MDEQ).

Lot 108/SP131671 and the unnamed future road corridor are under the jurisdiction of Sunshine Coast Council. An access agreement will be sought from Sunshine Coast Council to use the site for access to the proposed telecommunications facility.

1.8 **Time frame**

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

Construction is planned in the second half of 2017, based on the current forecast of residential demand of new residents living at Aura. Construction and commissioning of the telecommunications facility and maintenance access track is expected to take approximately six weeks.

1.9	**Alternatives to proposed action** Were any feasible alternatives to taking the proposed action (including not taking the action) considered which are not proposed?	X	No
			Yes, please also complete section 2.2
1.10	**Alternative time frames,**	X	No

	locations or activities Does the proposed action 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 and 5 (where relevant).
1.11	**Commonwealth, State or Territory assessment** Is the action subject to other a Commonwealth, State or Territory environmental impact assessment?	X 	No Yes, please also complete section 2.5
1.12	**Component of larger action** Is the proposed action a component of a larger action?	X 	No Yes, please also complete section 2.7
1.13	**Related actions/proposals** Is the proposed action related to other actions or proposals in the region?	 X	No Yes, provide details: The telecommunications facility is required to improve mobile service coverage within the Aura master planned community (Caloundra South). Aura was the subject of a separate EPBC Act referral in 2010, the Caloundra South Master Planned Community (EPBC 2011/5987). The project was assessed by Public Environment Report and the Minister granted approval with conditions on 6 June 2013 (EPBC 2011/5987). These conditions were subsequently amended on 15 April 2014 and 5 August 2016.
1.14	**Australian Government funding** Has the person proposing to take the action received any Australian Government grant funding to undertake the proposed action?	X 	No Yes, please also complete section 2.8
1.15	**Great Barrier Reef Marine Park** Is the proposed action inside the Great Barrier Reef Marine Park?	X 	No Yes, please also complete section 3.1 (h), 3.2 (e)

2 Detailed description of proposed action

NOTE: You **must** complete each of the sections below. Please ensure that the description is complete and includes all components and activities associated with the action. If relevant, each of the matters below need to be addressed in respect of each alternative location, time frame, or activity that is identified as part of the description. 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

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

The proposed action is the construction of a telecommunications facility and maintenance access track. The telecommunications facility will provide greater mobile network coverage and capacity to the surrounding area. A General Arrangement drawing of the proposed action is provided as Attachment B.

The proposed action consists of the following elements:

- Maximum 30m tall monopole;
- Panel antennas;
- Remote radio units mounted on the monopole just below the antennas;
- A prefabricated equipment shelter to house the necessary base-station equipment;
- An overhead cable ladder gantry connecting the equipment shelter to the monopole;
- A surrounding compound with a security fence and gate access; and
- Upgrading the existing cleared track to a 3m wide gravel maintenance track extending from Koala Court, plus additional clearing of vegetation 1m either side of the track.

The telecommunications facility will be consistent with the design and height standards typical of the telecommunication facilities utilised in urban areas throughout Australia. The facility is designed and sited to minimise visual impact from the surrounding residential development as much as reasonably possible, whilst satisfactorily meetings its network objectives.

2.2 Feasible alternatives to taking the proposed action

If you have identified that alternatives to taking the action were considered, but are not proposed (in section 1.9), please complete this section. Please provide a detailed description outlining any feasible alternatives to taking the proposed action (including not taking the action) that were considered but are not proposed. (Please note that these do not include any proposed alternative locations, time frames, or activities that form part of the proposed action which are to be discussed below at section 2.3).

Nil

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), please complete this section. Please 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, please also complete (where relevant) the details in sections 1.2-1.9, 2.4, 2.7, 3 and 5. 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.

Nil

2.4 Context, including any relevant planning framework and state/local government requirements

Please 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) and social and economic context including as population size, economic opportunities and employment information. Describe any applicable Commonwealth or state legislation or policies (other than those related to other environmental impact assessment which are to be discussed below at section 2.5).

Federal

The proposed telecommunications facility and maintenance access track on Lot 4000/SP283680 is within Precinct 2 of Aura. The Aura master planned community development was the subject of a separate EPBC Act referral in 2010, the Caloundra South Master Planned Community, EPBC Act ref. no. 2011/5987. The project was assessed and approved with conditions on 6 June 2013. These conditions were subsequently amended on 15 April 2014 and 5 August 2016.

State

Aura is consistent with the South East Queensland Regional Plan (2009-2031), which is the key document for managing the growth and development of South East Queensland. It is a statutory document made under the *Sustainable Planning Act 2009*. The Regional Plan identifies Caloundra as a Major Activity Centre serving "*the sub-regional catchment and accommodating key concentrations of employment*". It has established a requirement to undertake the necessary planning to accommodate an additional 34,750 dwellings in Caloundra over the period of the plan. Aura is intended to cater for a large portion of these additional dwellings.

The Aura site is within an area declared by the Queensland State Government to be an Urban Development Area (UDA) (now known as a Priority Development Area (PDA) pursuant to the *Urban Land Development Authority Act 2007* (ULDA Act) (now repealed and replaced by the *Economic Development Act 2012* (ED Act)). All development applications in Aura are assessed against the Approved Caloundra South Urban Development Area Development Scheme and the approved Plan of Development (POD).

Under the ED Act, the Minister for Economic Development Queensland (MEDQ) granted the Reconfiguration of Lot (ROL) approval under the Caloundra South Urban Development Area Development Scheme for the whole of Precinct 2 on 12 February, 2015 (Ref DEV2013/430). The ROL application has been the subject of 3 changes with the most recent being approved on 5 September, 2016. The use of the land for a telecommunications facility was assessed by the MDEQ in conjunction with the ROL and the ROL approval includes the creation of Lot 80013 which is identified as an access track and Lot 80009 which is identified as a telecommunications site. The ROL was accompanied by the POD document which designates a Telecommunications Facility up to a maximum height of 30m as Exempt Development with no further assessment being required. Therefore in accordance with the POD, the Telecommunications Facility can proceed to certification of operational works and building works. The siting and use of the Telecommunications Facility within Precinct 2 has also been approved within the Conservation Infrastructure Agreement by Sunshine Coast Council and the State Government, executed 2 November, 2015.

Legislation

In addition to meeting the outcomes of the Caloundra South PDA Development Scheme, the proposed action has been considered in relation the following legislation, as outlined in Table 2.4a.

Table 2.4a: Applicable Queensland Legislation and Approvals Framework

Legislation / Policy	Requirements	Relevance to the Proposed Action
Nature Conservation Act 1992 (NC Act) (including Regulations and Conservation Plans)	This Act aims to protect Threatened species and recognised conservation areas. It requires application to the EHP (Department of Environment and Heritage Protection) to use, take or interfere with protected species.	No threatened flora or fauna species protected by the NC Act are known to occur with the Project Area, however the Wallum Froglet, Wallum Rocketfrog and Wallum Sedge Frog are known to occur within the wider Aura site, and these species are listed as Vulnerable under the NC Act.
Vegetation Management Act 1999 (VM Act 1999) (including regulations and policies)	This Act aims to halt broad scale clearing in Queensland and protect mapped remnant vegetation from unauthorised clearing. It recognises regional ecosystems and has a vegetation community focus.	The proposed action will not require clearing of remnant vegetation.

2.5 Environmental impact assessments under Commonwealth, State or Territory legislation

If you have identified that the proposed action will be, is being or has been subject to a Commonwealth, State or Territory environmental impact statement (in section 1.11), please complete this section. Please describe any environmental assessment of the relevant impacts of the proposed action that has been, is being, or will be carried out under Commonwealth, State or Territory legislation. Specify the type and scope of the assessment (for example, whether the assessment relates to part or the whole of the proposed action, or the proposed action, as a component of a larger action), the relevant legislation and the current status of any assessments or approvals. Where possible, provide contact details for the relevant assessment contact officer. Further, please 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

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.

The Aura site has an Approved Cultural Heritage Management Plan in place with the Kabi Kabi First Nation People. This is registered with the Queensland State Government.

Public Consultation
The Precinct 2 Reconfiguration of Lot application and accompanying POD included the location and details of the proposed action within the Aura site. Public notification of the Precinct 2 ROL and POD commenced on 9th October 2014 and ended on the 10th November 2014. There are no records of any submissions having been received in relation to the proposed Telecommunications Facility.

The EPBC Act referral and Public Environment Report for the Caloundra South Master Planned Community (EPBC 2011/5987) was also open for public comment as part of the referral process. In accordance with the Approved Environmental Engagement Plan prepared pursuant to the EPBC Act Approval, Stockland continues to engage with targeted stakeholders regarding rehabilitation of the Aura site through the Community Reference Group.

2.7 A staged development or component of a larger action

If you have identified that the proposed action is a component of a larger action (in section 1.12), please complete this section. Please 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 action (e.g. 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).

Nil

2.8 Related actions

If you have identified that the proposed action has related actions (in section 1.13), please complete this section. Please provide information about the related actions including, as appropriate:

- the nature, scope and location of the related action;
- the nature and scope of the assessment under the relevant legislation;
- a statement confirming how the action relates to the Proposed Action;
- the key documents produced as part of the assessment, by whom and when (using active statements), and the extent to which the assessment of the action is relevant to the assessment of the impacts of the Proposed Action on the matters protected by the Controlling Provisions of the EPBC Act and the related findings of this Report. Please cross reference to the analysis of the impacts of the Proposed Action below;
- public consultation during the assessment including the extent (i.e. duration and means) and results; and
- if available, the conclusion of the assessment and final decision following assessment, i.e. approval, approval subject to conditions or refusal.

The proposed action will provide telecommunications infrastructure adjacent to an emerging residential area. The Aura project has already been assessed and approved under the EPBC Act (EPBC Act ref. no. 2011/5987). The proposed action does not increase the development footprint of the approved action, and is a permitted use under the State approved Master Plan, Reconfiguration of Lot (ROL) approval and Infrastructure Agreement. It is reasonable to consider this action separately as at the time of the Caloundra South Referral (EPBC Act ref. no. 2011/5987) the infrastructure requirements were still in the planning phase.
The Project Area and proposed action will not impact on the conditions of EPBC ref 2011/5987. The Project Area sits amongst land to be rehabilitated as a future conservation area, including land identified as being "Frog Zone" for the protection of Wallum Sedge Frog and Acid Frog species. Under EPBC 2011/5987 Stockland are required to provide 152ha of compensatory Wallum Sedge Frog habitat, and impact no more than 152ha of breeding habitat. The total land available across the Aura development for the provision of the 152ha of compensatory habitat is currently approximately 288ha, which is significantly in excess of the EPBC condition requirements. Given the above, the small loss of area within the future Frog Zone (approximately 0.1301ha) for the construction of the proposed telecommunications facility and maintenance access track will not affect the ability of Stockland to deliver its commitment of providing 152ha of compensatory habitat.

3 Description of environment & likely impacts

Note: If you have identified alternatives in relation to location, time frames or activities as part of the proposed action at section 1.10 and 2.3, please complete this section in relation to each of the alternatives identified.

3.1 Matters of national environmental significance

Describe the affected area and the likely impacts of the proposed action on 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.

For each matter protected by the EPBC Act, provide a description of the matter including, as appropriate:

- a brief description of the matter (for example, for threatened species, the population size, habitat, breeding, diet and life cycle etc);
- the status, extent and condition of the matter within the affected area and also more broadly in the region; and
- the key threats and threatening processes and beneficial actions and processes for the Protected Matter(s) excluding those from the proposed action, for example, under relevant approved conservation advices, recovery plans or threat abatement plans, management plans or other strategic plans, management principles or obligations under International Conventions.

- Having identified the relevant matters protected under the EPBC Act, identify the impacts the proposed action will or is likely to have on these matters (e.g. light, noise, biodiversity loss, water quality etc). For each type of impact, provide a concise description of the likely nature, scope and consequences of the impact on the Protected Matter(s). In doing so, consider factors such as, as appropriate: whether the impact is a direct or indirect impact - **note that, even if your proposed action 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) by its indirect impacts**;
- the timing and duration of the likely impact, for example, one-off, re-occurring or ongoing, short term or long term;
- the extent of the impact, for example, uncertain or certain, permanent/irreversible or temporary/ reversible, and localised or broad-scale;
- the likely consequence of the impact on the Protected Matter(s), including both adverse and beneficial impacts and any related social and economic impacts;
- the likelihood of the impact affecting the Protected Matter(s); and
- whether there are any measures available to prevent and avoid, or mitigate and repair the consequences of, the impact.

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 also consider whether a bioregional plan is relevant to your proposed action. The Minister has prepared four marine bioregional plans (**MBP**) in accordance with section 176 of the EPBC Act. It is likely that the MBPs will be more commonly relevant where listed threatened species, listed migratory species or a Commonwealth marine area is considered.

3.1 (a) World Heritage Properties

Description

There are no World Heritage Properties within or adjacent to the proposed action.

Nature and extent of likely impact

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

N/A

3.1 (b) National Heritage Places

Description

The Glass House Mountains are approximately 15km to the south-west of the Project Area. They are iconic to the State of Queensland as well as to the Sunshine Coast area. The Glass House Mountains were named by Captain Cook as he sailed up to the coast of Queensland in 1770. There are several definitions as to which Glass House Mountains constitute the Glass House Mountains. For the purposes of this referral it is assumed that the Glasshouse Mountains are those peaks included in the National Heritage Listing. The listing defines the Glasshouse Mountains as follows:

…..Beerwah (556 meters); Coonowrin (crookneck) (377 metres); Tibrogargan and Cooee (364 and 177 metres); Ngungun (253 metres); the coochin Hills (235 and 230 metres); miketeebumulgrai 199.5 metres and Elimbah (saddleback) 109 metres. In addition there are a further three areas: (Beerburrum (278 metres); Tunbubudla (the twins) (294 and 338 metres) and Tibberoowuccum (220 metres) which currently comprise section of the Beerburrum Forest Reserve.

Several of the mountains are also protected as the Glass House Mountains National Park. It consists of a flat plain punctuated by volcanic plugs, and cores of extinct volcanoes that formed 27 to 26 million years ago.

The Glass House Mountains can be seen as far away as the Scenic Rim on the Queensland and New South Wales border and the immediate view field is estimated to be an area close to 25 to 40km, including views from the ocean off parts of the southern Sunshine Coast. The mountains can be viewed in their wider setting from Mary Caincross Park and Mount Beerburrum and Wild Horse Mountain. From the lookouts, panoramic views can be experienced of the family of mountains with their massive jagged peaks arising from an extensive plain with forested foothills reserves, agricultural land, small village roads, highways and coastal urban development.

Nature and extent of likely impact

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

The Project Area is approximately 18km away from the Glass House Mountains, and will ultimately be on the north western fringe of urban development within the Aura site at the furthermost point from the Glass House Mountains. It will not obscure the view to the Mountains or create a significant change to the view of the coastline to the mountains, and consequently is not considered to have a significant impact on the National Heritage values of the Glass House Mountains.

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

Description

The Project Area is approximately 40m from Lamerough Creek which flows to the Pumicestone Passage via the Pelican Waters canal development. Pumicestone Passage forms part of the Moreton Bay Ramsar Wetland and is a Nationally Important Wetland subject to the Ramsar Convention on Wetlands 1971. A map showing the Project Area in relation to Pumicestone Passage is provided in Attachment A. The Project Area is outside the boundaries of Pumicestone Passage, being approximately 4km from the Passage in a direct line and approximately 7 km following Lamerough Creek.

Nature and extent of likely impact

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

Construction and operation of the proposed action will be carried out in accordance with the existing DoEE approved construction environmental management plan for Precinct 2 as part of approval EPBC 2011/5987. Consequently no direct or indirect impacts to a declared Ramsar wetland are expected.

3.1 (d) Listed threatened species and ecological communities

Description

The EPBC Act Online Protected Matters Search Tool (Attachment C), accessed in November 2016, identified a total of 15 threatened flora species and 19 threatened terrestrial vertebrate species potentially occurring within 1km of the Project Area. Terrestrial vertebrate species included 10 bird species, 1 frog, 1 reptile and 7 mammal species. The database also identified one (1) Threatened Ecological Community that may occur within the search area, namely, Lowland Rainforest of Subtropical Australia. This database is partially predictive, and may not provide verified observations or records.

The Aura site (as shown by the PDA boundary on Attachment A), has been the subject of numerous field inspections to map habitat types and search for threatened flora and fauna. Field inspections of the Aura site were conducted during Summer in January 2016, spring in October and November 2010, at the end of summer in February 2009 and in the summer and winter periods of 1999.

During the field surveys in 2009 and 2010 two EPBC Act listed threatened species were identified within the Aura site, however none have been recorded from within the Project Area. A single Grey Headed Flying Fox (*Pteropus poliocephalus*) was observed flying over the Aura site in 2009 however no camps or roots were found on site (see Table 3.1a for more detail). Wallum Sedge Frogs (*Litoria olongburensis*) have been recorded in areas of the Aura site that support Wallum habitat.

The Project Area supports regrowth Melaleuca/Forest red gum and does not support Lowland Rainforest of Subtropical Australia.

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.

As stated above, two EPBC Act threatened species were identified within the wider Aura site, however none have been recorded from within the Project Area.

The suitability of the Project Area for listed threatened species is discussed in Table 3.1a along with the potential to impact these species. Mitigation of impacts is detailed in Section 5.

Table 3.1a: EPBC Act Listed Species Possibly Occurring Within the Locality

Species	EPBC Act Status[1]	Type of Presence[2]	Habitat Preference[3]	Likelihood of Occurrence
Flora				
Attenuate Wattle *Acacia attenuata*	V	Species or species habitat likely to occur within area	High rainfall areas on the coastal lowland sand plains of southeast Queensland.	Low likelihood of occurrence. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Allocasuarina emuina *Emu Mountain Sheoak*	E	Species or species habitat likely to occur within area	Open and closed heath on fine-grained rhyolite rocky slopes and in wallum heath on undulating coastal plain with soils ranging in texture from sands, sandy loams and light to medium clays, usually with a weak acidic reaction. Typically found in relatively flat, low-lying coastal areas at elevations of between 5 and 70 m above sea level and on a range of inclinations from flat to slopes of 20 degrees.	Not expected to occur. No suitable habitat present within the Project Area. The Project Area was previously a pine plantation, a land use which is a known threat to this species. Detectable year round, but not recorded in previous threatened flora survey efforts across the Aura site by Arup 2016, BAAM 2010 and LMAR 1999.
Hairy-joint Grass	V	Species or species	Edges of rainforest and in	Not expected to occur.

Arthraxon hispidus		habitat may occur within area	wet Eucalyptus forests, often near creeks or swamps, as well as woodland. Also been recorded growing around freshwater springs on coastal foreshore dunes, in shaded small gullies, on creek banks, and on sandy alluvium in creek beds in open forests and also with bog mosses in mound springs.	No suitable habitat present within Project Area. There are no records in verifiable databases of this species in the Caloundra region and the species was not recorded in previous threatened flora survey efforts across the Aura site by Arup 2016, BAAM 2010 and LMAR 1999.
Three-leaved Bosistoa *Bosistoa transversa*	V	Species or species habitat likely to occur within area	Three-leaved Bosistoa grows in wet sclerophyll forest, dry sclerophyll forest and rainforest up to 300 m in altitude.	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Stinking Cryptocarya *Cryptocarya foetida*	V	Species or species habitat may occur within area	Found in littoral rainforest, usually on sandy soils, but mature trees are also known on basalt soils	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Leafless Tongue-orchid *Cryptostylis hunteriana*	V	Species or species habitat may occur within area	Banksia (*Banksia* spp.) / Mahogany (*Eucalyptus* spp.) Wallum Heath	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Swamp Stringybark *Eucalyptus conglomerata*	E	Species or species habitat likely to occur within area	Edge of wallum areas where forests take over	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Macadamia Nut *Macadamia integrifolia*	V	Species or species habitat likely to occur within area	Frows in remnant rainforest preferring partially open areas such as rainforest edges.	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999, and there are no records in verifiable databases of this species in the Caloundra region.
Small-fruited Queensland Nut	V	Species or species habitat likely to occur	Complex notophyll vine forest, simple notophyll	Not expected to occur.

Macadamia ternifolia		within area	vine forest with emergent Aruacaria and Argyrodendron species.	No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999, and there are no records in verifiable databases of this species in the Caloundra region.
Rough-shelled Bush Nut *Macadamia tetraphylla*	V	Species or species habitat likely to occur within area	Occurs in subtropical rainforest and complex notophyll vineforest growing on moderate to steep hillslopes on alluvial soils at well-drained sites.	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Lesser Swamp-orchid *Phaius australis*	E	Species or species habitat likely to occur within area	Coastal wet heath/sedgeland wetlands, swampy grassland or swampy forest and often where Broad-leaved Paperbark or Swamp Mahogany are found. Typically restricted to the swamp-forest margins, where it occurs in swamp sclerophyll forest (Broad-leaved Paperbark/Swamp Mahogany/Swamp Box (*Lophostemon suaveolens*)), swampy rainforest (often with sclerophyll emergents), or fringing open forest.	Not expected to occur. A large species easily detected year round, but not detected in previous threatened flora surveys by Arup 2016, BAAM 2010 and LMAR 1999.
Mt Berryman *Phebalium* *Phebalium distans*	CE	Species or species habitat may occur within area	This species has a very confined distribution and is always found in semi-evergreen vine thicket on red volcanic soils or communities adjacent to this vegetation type.	Not expected to occur. No suitable habitat present within the Project Area. Detectable year round, but not recorded in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Wallum Leek –orchid *Prasophyllum wallum*	V	Species or species habitat likely to occur within area	Grows in wallum communities, on stabilised dunes and in open dry heath.	Not expected to occur. Not expected to occur, due to previous site disturbance (pine plantation) and lack of suitable habitat. Not detected in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Quassia *Samadera bidwillii*	V	Species or species habitat likely to occur within area	Occurs within the Burnett Mary, Fitzroy, Mackay Whitsunday, and Burdekin (Queensland) Regions in lowland rainforest or on forest margins.	Not expected to occur. Outside of known distribution area. Not detected in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999, and there are no records in verifiable databases

				of this species in the Caloundra region.
Glossy Spice Bush *Triunia robusta*	E	Species or species habitat likely to occur within area	The main habitat is notophyll vine forest, or mixed tall open forest developing a rainforest understorey in the absence of fire	Not expected to occur. No suitable habitat present with Project Area. Not detected in previous threatened flora survey efforts by Arup 2016, BAAM 2010 and LMAR 1999.
Fauna				
Regent Honeyeater *Anthochaera phrygia*	CE	Foraging, feeding or related behaviour likely to occur within area	It is an uncommon winter visitor to Queensland. Most records occur on the western slopes of the Great Dividing Range with few on the east coast. They occur in response to winter flowering E. tereticornis.	Low liklihood of occurring. May use habitats adjacent to the site seasonally when nectar is available. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.
Australasian Bittern *Botaurus poiciloptilus*	E	Species or species habitat likely to occur within area	Terrestrial freshwater wetlands and, rarely, estuarine habitats. It favours wetlands with tall, dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water	Not expect to occur. No suitable habitat present within the Project Area. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.
Curlew Sandpiper *Calidris ferruginea*	CE	Species or species habitat may occur within area	Mainly occrs in intertidal mudflats in sheltered coastal areas such as estuaries, bays, inlets and lagoons and also around non-tidal swamps, lakes and lagoons near the coasts, and ponds in saltworks and sewerage farms.	Not expected to occur. No suitable habitat present. All records of this species within the general locality are along the coastal foreshore within Pumicestone Passage.
Eastern Bristlebird *Dasyornis brachypterus*	E	Species or species habitat likely to occur within area	Prefers tall, dense, grassy ground-cover in open *Eucalyptus* forests or woodlands, often at the ecotone, or interspersed, with mature subtropical rainforest. The ground-layer vegetation in these habitats is usually about 1.0–1.5 m tall and fairly dense, providing about 65–90% coverage. Typical ground cover includes tussock-grasses such as *Sorghum leiocladum*, and other grasses including *Imperata cylindrica*, *Poa labillardiera*, *P. sieberiana* and *Themeda triandra*, with a variety of scattered small shrubs,	Not expect to occur. No suitable habitat present within the Project Area. Only occurs at high elevation in the northern part of its range. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.

			woody herbs, patches of ferns and vine tangles.	
Red Goshawk *Erythrotriorchis radiatus*	V	Species or species habitat likely to occur within area	Red Goshawks inhabit a variety of habitats, but are more common in open eucalypt woodland. Requires larger tracts of habitat with a high density of medium to large bird species.	Not expect to occur. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.The scarcity of records of this species within the local area and the fragmented nature of the habitat suggest that it is unlikely to occur.
Swift Parrot *Lathamus discolor*	CE	Species or species habitat may occur within area	The Swift Parrot is an uncommon visitor to south-east Queensland. Records occur during the cooler months when small groups may be found feeding on winter flowering trees (e.g. *Eucalyptus tereticornis*).	Not expect to occur. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999. There are no records in verifiable databases of this species in the Caloundra region. The habitat available in the Project Area is marginal as there is no open eucalypt forest. May rarely feed in adjacent remnant habitat, where *E. tereticornis* is present.
Eastern Curlew, Far Eastern Curlew *Numenius madagascariensis*	CE	Species or species habitat may occur within area	Migratory bird species occupying widespread coastal areas in the north-east and south-east of Australia. Found on intertidal mudflats and sandflats. It is rarely seen inland. Breeds in Russua and north-eastern china.	Not expected to occur. No suitable habitat present. All records of this species within the general locality are along the coastal foreshore within Pumicestone Passage.
Southern Black-throated Finch *Poephila cincta cincta*	E	Species or species habitat may occur within area	Occurs mainly in grassy, open woodlands and forests, typically dominated by *Eucalyptus*, *Corymbia* and *Melaleuca*, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water.	Not expect to occur. Suitable grassy understorey is not available. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.
Australian Painted Snipe *Rostratula australis*	E	Species or species habitat likely to occur within area	Australian Painted Snipe is a secretive, cryptic, crepuscular species that occurs in terrestrial shallow wetlands, both ephemeral and permanent, usually freshwater but occasionally brackish. It also uses inundated grasslands, saltmarsh, dams, rice crops, sewage	Low likelihood of occurrence. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999. May occasionally use the Project Area, particularly following inundation, although the species has not been recorded within the Caloundra area in

			farms and bore drains.	verifiable databases.
Black-breasted Button-quail *Turnix melanogaster*	V	Species or species habitat likely to occur within area	Predominantly recorded from closed dry rainforest and vine thickets with abundant leaf-litter. However, occasionally recorded from scrubs including brigalow, belah, bottletree thickets and in dry eucalypt forests where there is a dense understorey such as lantana and grass groundcover. Along the Fraser and Cooloola Coast the species has also been recorded in coastal scrubs with low soil moisture and dense shrubs.	Not expect to occur. No suitable habitat present within the Project Area. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.
Wallum Sedge Frog *Litoria olongburensis*	V	Species or species habitat may occur within area	This species is one of the 'acid' or 'wallum' frogs that inhabit wetlands with low pH water on low nutrient soils (usually sands) of coastal lowlands. Vegetation within inhabited areas varies and can include heathland, Melaleuca, sedgeland, and Banksia woodland. Upright sedges, such as Baumea, Schoenus and Chorizandra species, are used as perching substrate while foraging.	Moderate likelihood of occurrence. Wallum Sedge Frog has been found within the Aura site during targeted surveys, however it has not been found with the Project Area by BAAM 2010, Ecosmart 2010, AWC 2014 and AWC 2015. Wallum Sedge Frog breeding and foraging habitat within Precinct 2 was most recently surveyed and mapped in 2014 (AWC) using the pre-construction survey methodology outlined in the Approved Caloundra South Wallum Sedge Frog Management Plan. The mapping shows that the Project Area does not support Wallum Sedge Frog breeding habitat (Attachment D). A site inspection was also carried out on the 10th November 2016 by AWC to groundtruth the location of the telecommunication facility in respect to mapped Wallum Sedge Frog breeding habitat and a copy of the Technical Memorandum is provided as Attachment E . The site inspection confirmed the accuracy of the 2014 survey and concluded that the Project Area is well outside of the known and mapped Wallum Sedge Frog breeding habitat.
Large Pied Bat Chalinolobus dwyeri	V	Species or species habitat may occur within area	The Large Pied Bat inhabits both wet and dry sclerophyll forests, although most records occur in dry forests,	Not expected to occur. No suitable habitat present within the Project Area. Not detected in previous

			particularly those with ecotones to wet forests.	threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999, and there are no local records in verifiable databases. In South East Queensland, records of this species have been in mountainous country with few recorded in lowlands areas.
Northern Quoll Dasyurus hallucatus	E	Species or species habitat likely to occur within area	The northern quoll occurs open dry sclerophyll forest and woodland. They are most abundant in hilly or rocky areas close to permanent water. Quolls are likely to disappear in areas where less than 50-70% woodland remains within a 4km radius.	Not expected to occur. The extent of current disturbance on and surrounding the Project Area is likely to exclude the Northern Quoll, which is sensitive to anthropogenic impacts.
Spotted-tailed Quoll Dasyurus maculatus maculatus	E	Species or species habitat may occur within area	Spotted-tailed Quolls occur in a wide variety of habitats including rainforests, wet and dry sclerophyll forests, coastal heath, scrub and sometimes Red Gum forests along inland rivers. They are found from sea-level to sub-alpine regions where they shelter in rock caves and hollow logs or trees, with basking sites usually nearby.	Not expected to occur. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999, and there are no local records in verifiable databases. Most records of the species occur in areas with highly suitable habitat (such as rocky areas) or contiguous forest that allows the species to avoid threatening pressures (e.g. introduced predators). The Project Area does not contain rocky areas and is located within a highliy modified landscape.
Greater Glider *Petauroides volans*	V	Species or species habitat may occur within area	Mature forests and woodlands.	Not expect to occur. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010, Hyder Consulting 1999, and there are no local records in verifiable databases. The Project Area supports re-growth vegetation only with no large hollow bearing trees, and therefore does not support suitable habitat for this species.
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	V	Species or species habitat known to occur within area	Temperate, sub-tropical and tropical forest, woodland and semi-arid communities dominated by *Eucalyptus* species	Not expect to occur. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010, Hyder Consulting 1999, and there are

Phascolarctos cinereus				no local records in verifiable databases.
Grey-headed Flying Fox *Pteropus poliocephalus*	V	Species or species habitat may occur within area	Two habitat characteristics are important for Grey-headed Flying-foxes - foraging resources and roosting sites. As the species is a canopy-feeding frugivore and nectarivore, it utilises vegetation including rainforests, open eucalypt forests, woodlands, paperbark swamps and banksia woodlands. Roosts are commonly within dense vegetation close to water, primarily rainforest patches, stands of paperbark, mangroves or riparian vegetation, but colonies may use exotic vegetation in urban areas.	Not expect to occur. There are no Grey-headed Flying Fox camps within the Aura site with the closest known camp located approximately 30km west in the Sunshine Coast hinterland. This species may be an occasional visitor to the site during local flowering events but there is no significant population or suitable foraging habitat within the Project Area.
Water Mouse *Xeromys myoides*	V	Species or species habitat known to occur within area	This species requires relatively large areas of intertidal flats over which to forage, together with suitable adjacent areas for nest sites. Home ranges of around 0.7 ha have been recorded and individuals are known to cover distances of up to 2.9 km within these areas. Food for this species primarily consists of marine crustaceans, bivalves and other invertebrates.	Not expect to occur. No suitable habitat present within the Project Area. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999.
Collared Delma *Delma torquata*	V	Species or species habitat may occur within area	Rocky sloped or ridge-top areas, in Eucalypt and Acacia dominated woodland with leaf litter 3 to 10cm deep and a sparse understorey of tussock grass and shrubs or semi-evergreen vine thicket; shelters under loose rocks, flattish bedrock outcroppings, logs or mats of leaf litter, or in cracks and crevices among tussock grasses; it is often found in areas with many small rocks (<30cm) and fewer large rocks, and in areas with reasonably sparse vegetation (DoEE, 2016).	Not expect to occur. No suitable habitat present within the Project Area. Not detected in previous threatened fauna survey efforts by BAAM 2010, Ecosmart Ecology 2010 and Hyder Consulting 1999, and the species has not been recorded within the Caloundra area in verifiable databases.

The assessment of the suitability of the Project Area for listed threatened species (Table 3.1a) found that the Wallum Sedge Frog was the only species that had a Moderate liklihood of occurance, and all other species assessed are not expected to occur or have a low liklihood of occurance within the Project Area. The following discussion of potential impacts to threatened species therefore focuses mostly on the Wallum Sedge Frog. The EPBC Act Significant Impact Guidelines provides criteria for determining if an action will have a significant impact on Threatened Species, as described in Table 3.1b below. The likelihood of this impact occurring is also outlined. Mitigation of impacts is detailed in Section 5.

Table 3.1b: Threatened Species Significance Criteria

Significance Criteria	Potential Impact
Lead to a long term decrease in the size of the population	It is not expected that the proposed action will lead to a long term decrease in the size of the population of Wallum Sedge Frog. The Wallum Sedge Frog has been found within the wider Aura site during targeted surveys by BAAM 2010, Ecosmart 2010, AWC 2014 and AWC 2015, however the Project Area does not support Wallum Sedge Frog breeding habitat, and there are no records of Wallum Sedge Frog occurring within this area from previous targeted surveys or site inspections. Wallum Sedge Frog breeding and foraging habitat within the Aura site (as shown as the PDA boundary of Attachment A) was most recently surveyed and mapped in 2014 (AWC) using the pre-construction survey methodology outlined in the Approved Caloundra South Wallum Sedge Frog Management Plan. Mapping shows that the Project Area does not support Wallum Sedge Frog breeding habitat (Refer to Attachment D for mapping). A site inspection was also carried out on 10 November 2016 by AWC to groundtruth the location of the telecommunication facility in respect to mapped Wallum Sedge Frog breeding habitat. The site inspection confirmed the accuracy of the 2014 survey and concluded that the Project Area is well outside of the known and mapped Wallum Sedge Frog breeding habitat within the Aura site (refer to Attachment E for a copy of the Technical Memorandum). It is not expected that the proposed action will result in a change in hydrology or surface water quality of existing mapped areas of breeding habitat during the construction or operation of the proposed action. It is not expected that the proposed action will result in any impacts to created wallum sedge frog breeding habitat, as per the Caloundra South EPBC approval (ref 2011/5987). It is unlikely that the proposed action will result in short term or long term impacts on the Wallum Sedge Frog population, indicating that a reduction in population size would not result from Project activities.
Reduce the area of occupancy	The Project Area does not support Wallum Sedge Frog breeding habitat, and there are no records of Wallum Sedge Frog occurring within this area from previous surveys (BAAM 2010, Ecosmart 2010, AWC 2014, AWC 2015). Therefore the proposed action is unlikely to reduce the area of occupancy of the Wallum Sedge Frog.
Fragment an existing population	The proposed action is located on the outer boundary of a conservation corridor that contains areas of Wallum Sedge Frog breeding habitat (refer to Attachment D for mapping). The location of the proposed action will not dissect existing patches of Wallum Sedge Frog breeding habitat and therefore the proposed action is not expected to fragment the existing population of Wallum Sedge Frog occupying parts of the Aura site.
Adversely affect critical habitat	The Project Area does not support Wallum Sedge Frog

	breeding habitat, and there are no records of Wallum Sedge Frog occurring within this area from previous surveys (BAAM 2010, Ecosmart 2010, AWC 2014, AWC 2015). The nearest location of known Wallum Sedge Frog breeding habitat is approximately 25m from the proposed maintenance track location and approximately 125m from the proposed compound for the Telecommunications Facility (refer to Attachment D for mapping). It is not expected that the proposed action will result in a change in hydrology or surface water quality of existing mapped areas of habitat during the construction or operation of the proposed action and therefore it is unlikely that the proposed action will adversely affect critical habitat.
Disrupt the breeding cycle of a population	The Project Area does not support Wallum Sedge Frog breeding habitat and changes to hydrology and water quality are not expected. The proposed action is therefore unlikely to disrupt the breeding cycle of the Wallum Sedge Frog population occupying parts of the Aura site.
Modify, destroy, remove isolate or decrease the availability or quality of habitat to the extent that the species is likely to the extent that the species is likely to decline.	The proposed action is not expected to modify, destroy, remove, isolate or decrease the quality of habitat for the Wallum Sedge Frog, to the extent that the species is likely to decline. The Project Area does not support Wallum Sedge Frog breeding habitat, and there are no records of Wallum Sedge Frog occurring within this area from previous surveys (BAAM 2010, Ecosmart 2010, AWC 2014, AWC 2015). It is not expected that the proposed action will result in a change in hydrology or surface water quality of existing mapped areas of habitat during the construction or operation of the proposed action. The proposed action is located on the outer boundary of a Conservation Area and will not dissect existing mapped areas of Wallum Sedge Frog breeding habitat (refer to Attachment D for mapping). Accordingly, it is unlikely that the Project would cause the species to decline.
Result in invasive species that are harmful.	The proposed maintenance access track will involve upgrading an existing access track. Cane Toads are known to use tracks to colonise new habitat, but are likely to be already present. The maintenance track would service the telecommunications and compound facility only and traffic is expected to be minimal following completion of construction of the proposed action. To minimise the introduction of invasive species during construction, the works will be undertaken in accordance with the Approved Environmental Management Plan (Attachment E) which includes pest and weed management measures, including the control of Cane Toads. Weed control will be undertaken in accordance with the Precinct 2 Environmental Rehabilitation Plan.
Introduce disease	The proposed maintenance access track will service the telecommunications and compound facility only and traffic is expected to be minimal following completion of construction of the proposed action. To minimise the introduction of disease during construction, the works will be undertaken in accordance with the Precinct 2 Construction Environmental Management Plan which includes measures to minimise the introduction and spread of disease, including measures to prevent the introduction of Chytrid fungus on vehicles and footwear.
Interfere with the recovery of the species	The proposed action is not likely to interfere with the recovery of the Wallum Sedge Frog. The location of the proposed action does not support Wallum Sedge Frog breeding habitat and there are no records of Wallum Sedge Frog occurring from within this area. It is not expected that the proposed action will result in a change in hydrology or surface water quality of existing mapped areas of habitat during the construction or operation of the proposed action.

	The proposed action is located on the outer boundary of a conservation area and will not dissect existing mapped areas of Wallum Sedge Frog breeding habitat. Measures will be enacted to control the establishment or expansion of pest species and disease in accordance with the Approved Environmental Management Plan (Attachment E).

3.1 (e) Listed migratory species

Description

The EPBC Act Online Protected Matters Search Tool, accessed in November 2016, identified a total of 6 terrestrial migratory birds and 3 migratory wetland birds as potentially occurring within 1km of the location of the proposed action (Attachment C). This database is partially predictive, and may not provide verified observations or records.

The Aura site (as shown by the PDA boundary on Attachment A) has been the subject of numerous field inspections to map habitat types and search for threatened flora and fauna. Field inspections were conducted at the end of summer in mid-February 2009 and spring 2010. These field inspections were intended to supplement and update previous reports and field investigations conducted in summer and winter periods of 1999.

During the 1999, 2009 and 2010 field surveys five EPBC Act migratory species were identified in the Aura site, however were not observed using the habitat within the location of the proposed action. These species are:

- Rainbow Bee-eater (*Merops ornatus*);
- Black-faced Monarch (*Monarcha melanopsis*);
- Rufous Fantail (*Rhipidura rufifrons*);
- Cattle Egret (*Ardea ibis*); and
- Latham's Snipe (*Gallinago hardwickii*).

These species are abundant and widespread within the local area and region. No populations of these birds within the wider Aura site are likely to represent a significant portion of the species population.

Nature and extent of likely impact

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

The suitability of the location of the proposed action for listed migratory species has been assessed and the results are provided in Table 3.1c.

The location of the proposed action does not provide important habitat for migratory bird species and no notable populations of migratory species were observed using the habitat present during previous surveys and site inspections.

Migratory species of the families Scolopacidae (snipe, godwits, curlews, sandpipers, stints and allies), Charadriidae (plovers, dotterels and allies) and Laridae (gulls, terns and allies) are generally restricted to coastal habitats including estuarine, sand and mudflat habitats. Although they may be located on large inland waterbodies, no suitable/potential habitat occurs within the location of the proposed action, and these species were not observed utilising the site during previous surveys.

Based on the results of the Likelihood of Occurrence of migratory bird species, no further assessment is provided of the nature and extent of likely impact and the location of the proposed action does not provide important habitat for migratory bird species.

Table 3.1c: EPBC Act Listed Migratory Bird Species Possibly Occurring Within the Locality[1]

Species	Type of Presence	Habitat Preference[2]	Likelihood of Occurrence
Terrestrial			
Oriental Cuckoo, Horsfield's Cuckoo *Cuculus optatus*	Species or species habitat known to occur within area	Rainforest, leafy trees, river flats, roadsides, mangroves. Breeds in northern hemisphere.	Low likelihood of occurrence. May occasionally use the Project Area, however is more likely to use the adjacent remnant vegetation along Lamerough Creek. Not observed during previous survey efforts (BAAM 2010, Ecosmart Ecology 2010, Hyder Consulting 1999)
White-throated Needletail *Hirundapus caudacutus*	Species or species habitat known to occur within area	White-throated Needletail is a regular visitor to a variety of habitat types (including urban areas) in south-east Queensland. Being an aerial insectivore, it does not rely on terrestrial habitats for foraging. It is reputed to follow low pressure systems, foraging on insects caught in up-draughts. All breeding occurs in the northern hemisphere.	Moderate likelihood of occurrence. The White-throated Needletail has been recorded in the locality. It would be expected to forage over the area of the proposed action occasionally.

Black-faced Monarch Monarcha melanopsis	Species or species habitat known to occur within area	Usually found in rainforests or wet sclerophyll forests, but may also be located in dry forests, particularly those associated with gullies or during migration. The species often occurs in pairs that together defend small territories.	Moderate likelihood of occurrence. The Black-faced Monarch is common within the locality and was observed in previous studies in Paperbark (Melaleuca sp.) and Forest Red Gum (Eucalyptus tereticornis) riparian habitat located to the south of the proposed action.
Spectacled Monarch Monarcha trivirgatus	Species or species habitat known to occur within area	The Spectacled Monarch inhabits dense rainforests and wet sclerophyll forests although it may be occasionally located in mangroves.	Moderate likelihood of occurrence. The species is common within south-east Queensland and the local area. It has been recorded in the locality and may occasionally use the Project Area, however is more likely to use the adjacent remnant vegetation along Lamerough Creek.
Satin Flycatcher Myiagra cyanoleuca	Species or species habitat known to occur within area	Satin Flycatcher inhabits a wide variety of habitats, but is very uncommon in south-east Queensland and many records are mis-identifications of Leaden Flycatchers.	Not expected to occur. No confirmed records have been noted through inspection of verifiable databases and not observed during previous survey efforts (BAAM 2010, Ecosmart Ecology 2010, Hyder Consulting 1999). It is therefore considered unlikely that the species would occur.
Rufous Fantail Rhipidura rufifrons	Species or species habitat known to occur within area	In south-east Queensland, the Rufous Fantail inhabits dense moist rainforests and wet sclerophyll forests. It often occurs in pairs that together defend small territories.	Moderate likelihood of occurrence. The species is common within south-east Queensland and the local area. It has been recorded in the locality and may occasionally use the Project Area, however is more likely to use the adjacent remnant vegetation along Lamerough Creek.
Migratory Wetland Species			
Curlew Sandpiper *Calidris ferruginea*	Species or species habitat may occur within area	Mainly occurs in intertidal mudflats in sheltered coastal areas such as estuaries, bays, inlets and lagoons and also around non-tidal swamps, lakes and lagoons near the coasts, and ponds in saltworks and sewerage farms.	Not expected to occur. No suitable habitat present. All records of this species within the general locality are along the coastal foreshore within Pumicestone Passage.
Latham's Snipe Gallinago hardwickii	Species or species habitat may occur within area	Freshwater wetlands on or near the coast, generally among dense cover. They also use crops and pasture.	Not expected to occur. The species is unlikely to occur within the location of the proposed action as no suitable habitat is present.
Osprey* Pandion haliaetus	Breeding habitat known to occur within area	This species feeds on fish in rivers, lakes, estuaries and inshore waters. Breeding pairs require nesting sites	Not expected to occur. No foraging habitat available. The low abundance of large

		near suitable foraging areas.	trees means roosting and nesting is currently unlikely.
Eastern Curlew, Far Eastern Curlew *Numenius madagascariensis*	Species or species habitat may occur within area	Migratory bird species occupying widespread coastal areas in the north-east and south-east of Australia. Found on intertidal mudflats and sandflats. It is rarely seen inland. Breeds in Russua and north-eastern china.	Not expected to occur. No suitable habitat present. All records of this species within the general locality are along the coastal foreshore within Pumicestone Passage.
Tringa nebularia Common Greenshank, Greenshank	Species or species habitat likely to occur within area	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass.	Not expected to occur. The species is unlikely to occur within the Project Area as no suitable habitat is present.

1. Based on the results of the EPBC Act Online Protected Matters Search Tool.
2. Information on habitat requirements from Biodiversity Assessment and Methodology (2009).

3.1 (f) Commonwealth marine area

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

Description

There are no Commonwealth marine areas within or adjacent to the Project Area.

Nature and extent of likely impact

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

N/A

3.1 (g) Commonwealth land

(If the action is on Commonwealth land, please 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.

There are no Commonwealth lands within or adjacent to the proposed action.

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.

N/A

3.1 (h) The Great Barrier Reef Marine Park

Description

The Project Area is not within or adjacent 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.

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

N/A

3.1 (i) A water resource, in relation to coal seam gas development or 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.

The Project is not a coal seam gas development or large 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

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 whole environment if the proposed action:

- 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?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment		

3.2 (b)	**Is the proposed action to be taken by the Commonwealth or a Commonwealth agency?**	X	No
			Yes (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 Commonwealth marine area?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))		

3.2 (d)	**Is the proposed action to be taken on Commonwealth land?**	X	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 Great Barrier Reef Marine Park?**	X	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))		

3.3 Description of the project area and affected area for the proposed action

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, please also complete each of the details below (where relevant) for each alternative identified.

3.3 (a) Flora and fauna

Flora

The wider Aura site (including the Project Area within Lot 4000) was previously covered by a pine plantation, which was subsequently cleared and the site used for cattle grazing. The Project Area within Lot 108/SP131671 and an unnamed future road comprises a degraded bushland. The Project Area currently supports regrowth Melaleuca/Forest red gum community and does not support remnant vegetation. Previous investigations of the Aura site did not locate flora species listed under the *Nature Conservation Act 1992 (NC Act)*.

Fauna

Site investigations conducted as part of the wider Aura development in February 2009 and October/November 2010 were targeted at significant species. No significant fauna species were found within the Project Area, however Wallum Froglet and Wallum Rocketfrog were observed within the wider Aura site, and both species are listed as Vulnerable under the NC Act. The Wallum Sedge Frog is also listed as Vulnerable under the NC Act.

The Wallum Froglet was found to be abundant and widespread across the Aura site, particularly in open modified habitats. The Wallum Rocketfrog was also recorded in a number of locations in the northern portion of the site in highly modified landscapes.

3.3 (b) Hydrology, including water flows

The Project Area is approximately 40m from Lamerough Creek. Lamerough Creek drains into Pumicestone Passage, which forms part of the Moreton Bay Ramsar Wetland, however the location of the proposed action itself is outside of the boundaries of the Pumicestone Passage.

As part of the wider Aura project, surface water quality monitoring has been undertaken in Lamerough Creek since mid-2014, and a routine monitoring program has been undertaken in accordance with the Caloundra South Water Quality Management Plan.

3.3 (c) Soil and Vegetation characteristics

Review of the geological mapping data of the Project Area (NRM, 2016) indicates the presence of Triassic to Jurassic aged Landsborough Sandstone formation typically comprising *"Lithofeldspathic labile and quartzose sandstone, siltsone, shale, minor coal, ferruginous oolite marker"*.

3.3 (d) Outstanding natural features

There are no outstanding natural features present.

3.3 (e) Remnant native vegetation

The Project Area does not support native remnant vegetation.

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

The Project Area has a flat gradient.

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 Project Area currently supports a regrowth Melaleuca/Forest red gum community that is degraded by previous land uses. The wider Aura site (including the Project Area within Lot 4000) was previously covered by a pine plantation, which was subsequently cleared and the site used for cattle grazing. The site remains degraded with pine regrowth and exotic grasses present. The Project Area within Lot 108/SP131671 and the unnamed future road comprises a degraded bushland. Whilst this area has not been used as pine plantation in recent years, the site is degraded by pine regrowth and other weed species.

There is an existing formed gravel track extending from Koala Court, Little Mountain to the approximate location of the proposed telecommunications facility. This gravel track will be upgrade as part of the proposed action.

The Project Area does not support remnant vegetation and previous investigations of the Aura site did not locate flora species listed under the *Nature Conservation Act 1992 (NC Act)*.

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

The Glass House Mountains are approximately 18km to the south-west of the Project Area and is further discussed in Section 3.1b.

3.3 (i) Indigenous heritage values

In November 2007, a Cultural Heritage Survey was undertaken of the Aura site by Davies Heritage Consultants Pty Ltd in association with the Gubbi Gubbi (Ganggala: 2007 and Davies: 2007), who at the time of survey had a registered Native Title Claim over the land. The study involved:

- A field survey with Stockland, the Gubbi Gubbi and an Archaeologist (Davies Heritage Consultants);

- Research into known sensitive sites, including a search of the Aboriginal Cultural Heritage Register;
- Preparation of a predictive model to select the most likely locations for cultural heritage items;
- A detailed ground surface survey along transects chosen through the predictive model;
- An assessment of the significance of any sites/places located; and
- Recommendation of mitigation and management options for any sites/places located.

The Cultural Heritage Survey found that the Aura site had been highly disturbed through vegetation clearing and agricultural activities; therefore evidence of aboriginal occupation is likely to have been disturbed. The majority of archaeological material was removed from the Aura site for preservation purposes by the Gubbi Gubbi.

The location of the proposed action will occur in areas already subject to significant ground disturbance and no works will occur in areas of remnant vegetation or along the bank of Lamerough Creek.

The Kabi Kabi First Nation Aboriginal Party filed a native title claim over an area including the Sunshine Coast Regional Council Local Government area in 2013. The Aura site has an Approved Cultural Heritage Management Plan in place with the Kabi Kabi First Nation People. This is registered with the Queensland State Government.

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).

Within the Aura site (as shown by the PDA boundary in Attachment A), the proposed action is located within an area identified for future rehabilitation as a conservation corridor under the approved Wallum Sedge Frog Management Plan and Development Scheme approvals. The proposed action would be undertaken before the surrounding rehabilitation areas are completed and accepted off-maintenance.

3.3 (k) Tenure of the action area (e.g. freehold, leasehold)

The tenure of the Project Area is outlined in Table 3.3a.

Table 3.3a: Applicable Queensland Legislation and Approvals Framework

Land parcel	Tenure
Lot 4000/SP283680	Freehold
Lot 108/SP131671	Reserve - Parkland
Unnamed future road corridor	Reserve – Future road corridor

3.3 (l) Existing uses of area of proposed action

Approximately 0.1301m^2 of the Project Area is within Lot 4000/SP283680 which forms part of the Aura master planned residential community development. Construction of the Aura development commenced in January 2015 in Precinct 1 and Precinct 2. Within the Aura site, the Project Area occupies a small area of Frog Zone Conservation Area, as defined by the Caloundra South Wallum Sedge Frog Management Plan. The Project Area does not support existing or created Wallum Sedge Frog habitat.

Lot 108/SP131671 forms part of Koala Court Park. There is no boundary fencing between the park and unnamed future road corridor so this area is also likely used as part of the Koala Court Parkland.

3.3 (m) Any proposed uses of area of proposed action

The area will be used for a telecommunications facility and maintenance access track.

4 Environmental outcomes

Provide descriptions of the proposed environmental outcomes that will be achieved for the matters protected by the EPBC Act that are likely to be affected by the proposed action. Include details of the baseline data upon which the outcomes are based, and the confidence about the likely achievement of the proposed outcomes. Where outcomes cannot be identified or committed to, provide explanatory details including any commitments to identify outcomes through an assessment process.

If a proposed action is determined to be a controlled action, the Department may request further details to enable application of the *Outcomes-based Conditions Policy 2016* (http://www.environment.gov.au/epbc/publications/outcomes-based-conditions-policy-guidance), including information about the environmental outcomes to be achieved by proposed avoidance, mitigation, management or offset measures, details of baseline data, milestones, performance criteria, and monitoring and adaptive management to ensure the achievement of outcomes. If this information is available at the time of referral it should be included in the description of the proposed measures.

General commitments to achieving environmental outcomes, particularly relating to beneficial impacts of the proposed action, CANNOT be taken into account in making the decision about whether the proposal is likely to have a significant impact on a matter protected under the EPBC Act. However, those commitments may be relevant at the later assessment and approval stages, including the appropriate level of assessment, and conditions of approval, if your proposal proceeds to these stages.

The location of the proposed action has been selected to minimise impacts to Matters of National Environmental Significance (MNES) by:

- avoiding known breeding habitat for MNES (Wallum Sedge Frog);
- using an existing track for access; and
- locating the telecommunications facility and compound in an area that has already been subjected to significant disturbance from previous land use activities.

The Aura site is subject to stringent environmental requirements as part of EPBC Act Approval 2011/5987. The existing DoEE approved management plans for the Aura site define performance criteria, management measures, monitoring and reporting requirements for construction activities occurring on site. The proposed action will be implemented in accordance with the relevant aspects of DoEE approved management plans and strategies prepared for the Aura site.

The proposed action will not change achievement of the environmental outcomes committed to as part of the Aura development. The Project Area and proposed action will not impact on the conditions of EPBC reff 2011/5987. The Project Area sits amongst land to be rehabilitated as a future conservation area, including land identified as being "Frog Zone" for the protection of Wallum Sedge Frog and Acid Frog species. Under EPBC 2011/5987 Stockland are required to provide 152ha of compensatory Wallum Sedge Frog habitat, and impact no more than 152ha of breeding habitat. The total land available across the Aura development for the provision of the 152ha of compensatory habitat is currently approximately 288ha, which is significantly in excess of the EPBC condition requirements. Given the above, the small loss of future Frog Zone associated with the construction of the proposed telecommunications facility will not affect the ability of Stockland to deliver its commitment of providing 152ha of compensatory habitat.

5 Measures to avoid or reduce impacts

Note: If you have identified alternatives in relation to location, time frames or activities as part of the proposed action at sections 1.10 and 2.3 please 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 each proposed measure, specify:

- a concise description of the nature, scope, work plan and consequence of the measure for the relevant impact and any statutory or policy basis for the measure;
- in doing so, include analysis and findings on whether each measure is likely to achieve the environmental outcomes for the matters protected by the EPBC Act which are likely to be affected by the proposed action, including noting:
  - the likely effectiveness of the measure in avoiding or mitigating the relevant impact on the matters protected by the EPBC Act;
  - the level of commitment by the person proposing to take the action to achieve the proposed environmental outcomes and implement the proposed mitigation measures. For example, identify 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);
  - any likely residual impacts (being, impacts likely to occur having implemented mitigation and/or avoidance measures) and, if such impacts will or are likely to occur, the measure available to compensate or offset these residual impacts. Please consider the Department's *EPBC Act, the EPBC Environmental Offsets Policy* (October 2012) (and *How to use the Offsets Assessment Guide*) and the *draft Policy Statement on EPBC Act Advanced Environmental Offsets*;

- the likely consequences for the matters protected by the EPBC Act should the measure not be effective; and
- any other likely consequences of the measure including both adverse and beneficial, such as efficiency, cost and cost-effectiveness and public acceptability (noting however, beneficial consequences of the measure will not be considered in deciding whether or not the proposed action is likely to have a significant impact on the matters protected by the EPBC Act).

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.

Note, the 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 (e.g. 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.

The proposed action will be implemented in accordance the relevant aspects of DoEE approved management plans and strategies prepared for the Aura site under EPBC Act Ref 2011/5987. Of particular relevance to the proposed action is the Environmental Management Plan (Attachment E), Wallum Sedge Frog Management Plan (Attachment G) and the Water Quality Management Plan (Attachment H).

The Environmental Management Plan applies to all development activities within Aura and contains performance criteria, management measures, monitoring and reporting requirements for the following environmental values:

- Acid sulphate soils;
- Erosion and sediment control;
- Pest and Weed Species
- Vegetation Management and Rehabilitation

The Wallum Sedge Frog Management Plan is the overarching strategy to ensure the long-term viability of the population of Wallum Sedge Frog present at Aura. The plan includes measures to protect Wallum Sedge Frog from during construction activities as well as detailed strategies for habitat conservation, re-creation and connectivity, and on-going site investigations. Implementation of the Wallum Sedge Frog Management Plan commenced in January 2015 and is ongoing.

The Water Quality Management Plan outlines performance criteria and monitoring requirements for groundwater and surface water quality. Surface water monitoring in the Lamerough Creek catchment includes ambient monitoring at two locations on Lamerough Creek, real time turbidity monitoring at one location on Lamerough Creek and construction stage monitoring of erosion and sediment controls. Surface water monitoring in Lamerough Creek commenced in February 2014 and is ongoing.

The proposed action will also be undertaken in accordance with the Approved Aura Cultural Heritage Management Plan in place with the Kabi Kabi First Nation People. This is registered with the Queensland State Government.

6 Conclusion on the likelihood of significant impacts

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

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

X	No, complete section 5.2
	Yes, complete section 5.3

6.2 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 by reference to each relevant matter protected by the EPBC Act.

The proposed action is not expected to have a significant impact on MNES as:

1. the site of the proposed action has been selected to avoid impacts to existing habitat for MNES (Wallum Sedge Frog), and will not impact on Stockland's ability to achieve compliance with the compensatory habitat commitments for Wallum Sedge Frog under the Aura EPBC 2011/5987 approval;
2. the Project Area will not impact on views or vistas of the Glass House Mountains National Landscape, and will ultimately form part of the urban landscape within the Aura development; and
3. the Project Area is approximately 7km upstream of the Pumicestone passage boundary and the existing water quality and environmental management measures adopted for works at the Aura site will apply.

Based on the above no impacts to MNES are expected as a result of the proposed action.

6.3 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 significantly 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 by reference to each matter protected by the EBPC Act identified in section 3 above.

7 Environmental record of the person proposing to take the action

		Yes	No
7.1	**Does the party taking the action have a satisfactory record of responsible environmental management?** **Provide details** The Aura project commenced in January 2015. As part of the EPBC Act conditions of approval (EPBC Act 2011/5987), Stockland is required to complete an Annual Compliance Report which documents how the conditions of approval and requirements of approved plans have been achieved. Stockland delivered its first Annual Compliance Report in April 2016. Stockland, its contractors and consultants have worked closely with the Commonwealth, State and Local governments to progressively achieve the required environmental management outcomes for Aura site and take this project forward over the longer term. With a development timeline of up to 30 years, Stockland is committed to maintaining the project's excellent environmental record for the duration of the development process. Stockland is well recognised for its commitment to excellence in sustainability and the delivery of real and tangible sustainability outcomes that are voluntary and beyond compliance. This is evidenced by the Aura project being awarded a 6 Star Green Star Communities Rating from the Green Building Council of Australia. Stockland has received the following sustainability awards: • Consistently rated as one of the top two most sustainable real estate companies in the world by the Dow Jones Sustainability World Indices (DJSI) • Rated Global Real Estate Industry Leader in the Dow Jones Sustainability Indices Review for 2013, 2015 • Rated as Industry Leader with Gold Class distinction in RobecoSAM's 2016 Sustainability Yearbook • First Australian company to issue a Green Bond, (to a value of €300m) in November 2014 • Listed on the FTSE4Good Index since 2008 • WGEA (Workplace Gender Equality Agency) Employer of Choice for Gender Equality citation since 2014 • Awarded 2015 Australian Diversified Property Sector Leader by GRESB (Global Real Estate Sustainability Benchmark) and ranked 46th of 688 listed and unlisted REITs from around the world • Finalist for the 'Excellence Awards' at the 2015 World Procurement Leaders Awards for our industry leading internal Project Management and Procurement model • Consistent industry-leading approach to sustainable design and development: o Highest number of Green Star rated shopping centres in Australia, including 5 Star Green Star – Retail Design rating for Stockland Wetherill Park, NSW o First Green Star rated Retirement Village – Selandra Rise, Vic o First 6 Star Green Star Interior Rating – Stockhome, Sydney, NSW o One of the first 6 Star Green Star Master Planned communities – Aura, Sunshine Coast, Qld o First Green Star rated Retirement Living community centre – Affinity, WA Stockland has received the following sustainability awards: • Consistently rated as one of the top two most sustainable real estate companies in the world by the Dow Jones Sustainability World Indices (DJSI) • Rated Global Real Estate Industry Leader in the Dow Jones Sustainability Indices Review for 2013, 2015 • Rated as Industry Leader with Gold Class distinction in RobecoSAM's 2016 Sustainability Yearbook	X	

- First Australian company to issue a Green Bond, (to a value of €300m) in November 2014
- Listed on the FTSE4Good Index since 2008
- WGEA (Workplace Gender Equality Agency) Employer of Choice for Gender Equality citation since 2014
- Awarded 2015 Australian Diversified Property Sector Leader by GRESB (Global Real Estate Sustainability Benchmark) and ranked 46th of 688 listed and unlisted REITs from around the world
- Finalist for the 'Excellence Awards' at the 2015 World Procurement Leaders Awards for our industry leading internal Project Management and Procurement model
- Consistent industry-leading approach to sustainable design and development:
    - Highest number of Green Star rated shopping centres in Australia, including 5 Star Green Star – Retail Design rating for Stockland Wetherill Park, NSW
    - First Green Star rated Retirement Village – Selandra Rise, Vic
    - First 6 Star Green Star Interior Rating – Stockhome, Sydney, NSW
    - One of the first 6 Star Green Star Master Planned communities – Aura, Sunshine Coast, Qld
    - First Green Star rated Retirement Living community centre – Affinity, WA

With reference to the issues outlined within this referral, biodiversity conservation is considered to embody the most important elements for further discussion with regards to Stockland's environmental history. In terms of leading practice in biodiversity, Stockland has shown that it is committed to meeting conservation obligations and to go beyond the mandatory level of requirements in priority areas. This has been illustrated in the following projects:

- As part of Aura, Stockland established the Community Stewardship Program in 2014, which is coordinated by SEQ Catchments Ltd. Members meet on a quarterly basis to review research, land care and rehabilitation opportunities within the conservation areas of Aura. Over 18 community interest groups are represented, including representation from government and industry.
  Rehabilitation and conservation projects delivered through the Community Stewardship program include:
    - Little Italy – community participation in recreation of Wallum Sedge Frog habitat and trials of rehabilitation techniques
    - National Tree Day – planting of 600 trees and educational activities with students of Unity College.
    - World Wetlands Day 2015 - community participation in planting at the frog ponds within the Environmental Protection Zone
- 'Brightwater' (a residential development on the Sunshine Coast) established 46 ha of conservation area on site this project, and involved the largest relocation in the southern hemisphere of sensitive coastal wallum heath land. The $5 million translocation project involves moving 12.2 ha of heath land vegetation from a 215 ha development site to a degraded reserve at the nearby University of the Sunshine Coast campus. The vegetation was moved 'intact', which involves cutting out the vegetation in slabs (with the plant canopy, stems, roots and soil relatively undisturbed) and transporting the slabs to the reserve and reconstructing the heathland. The translocation was completed in 2008 and is undergoing a close monitoring regime run by the university.
- North Shore (a residential development in Townsville) – presented several challenges for management of threatened species, which was achieved through conservation of 330ha for threatened species (i.e. Black-throated Finch & Stripe-tailed Delma), fire management, seed collection for revegetation and conservation and enhancement of on-site river ecosystems to protect receiving waters (i.e. Halifax Bay, Great Barrier Reef).

7.2	**Provide details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:** **(a) the person proposing to take the action, or** **(b) if a permit has been applied for in relation to the action - the person making the application.** **If yes, provide details**		X
7.3	**If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework and if and how the framework applies to the action.** Stockland's environment policy is provided in Attachment I.	X	
7.4	**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?** **Provide name of proposal and EPBC reference number (if known)** Stockland has made the following referrals under the EPBC Act in the the last five years: • 2016/7708 - Stockland WA Development Pty Ltd/Commonwealth Development/Armadale Road, Jandakot Road and Fraser Road, Banjup/Western Australia/Calleya Residential Development, Banjup, WA • 2015/7501 - Stockland Kawana Waters Pty Ltd/Residential development/Nicklin Way, Bokarina/QLD/Bokarina Beach development, Nicklin Way, Bokarina, QLD • 2013/7068 - Stockland WA Development Pty Ltd/Residential development/Marmion Ave/WA/Amberton West urban development - Part lot 9005 Eglington WA • 2012/6597 - Stockland Development Pty Ltd/Residential development/William Palfrey Road, Parkhurst, Rockhampton/QLD/Development of Parkhurst Master Planned Community • 2011/6040 - STOCKLAND DEVELOPMENT PTY LTD/Residential Development/Sunshine Coast/Queensland/Caloundra South Master Planned Community	X	

8 Information sources and attachments

(For the information provided above)

8.1 References

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

The Aura site has been the topic of surveys and investigation by the previous owner, the proponent (Stockland) and local government for over 10 years. There have been numerous environmental and other studies undertaken to date, as summarised in Table 8.1a. Some of this data was collected on behalf of Lensworth for the Caloundra Downs II Informal Land Use Study in 1999. Supplementary investigations were undertaken by Caloundra City Council in 2000 to contribute information to the Caloundra City Plan and then again in 2005 for the Local Growth Management Strategy.

As part of the Caloundra South EPBC referral (EPBC Act ref. no. 2011/5987), Stockland undertook additional investigations on ecology, surface water quality, ground water quality, flooding, acid sulfate soils, cultural heritage, biting insects and agricultural land quality. Stockland continues to undertake monitoring and investigation of surface water, groundwater, flora, fauna and cultural heritage to meet the requirements of the EPBC Act approval conditions and requirements of approved plans.

Table 8.1a: References used in preparing the referral

Reference	Reliability	Uncertainties
Australian Wetlands Consulting (AWC) (2015) Wallum Sedge Frog Management Plan	Accurate at the time of publication.	-
Australian Wetlands Consulting (AWC) (2014) Assessment of Litoria olongburensis habitat within the northern precinct areas of the Caloundra South Urban Development Area	Accurate at the time of publication.	-
Arup (2016) Precinct 2 Environmental Rehabilitation Plan	Accurate at the time of publication.	-
Biodiversity Assessment and Management (BAAM) (2010) Caloundra Downs Development Area – EPBC Act Listed Flora & Fauna Assessment.	Accurate at the time of publication.	-
BMT WBM (2015) Water Quality Management Plan	Accurate at the time of publication.	-
Calibre (2016) Precinct 2 Construction Environmental Management plan	Accurate at the time of publication.	
Davies, S (2007) Cultural Heritage Assessment of Indigenous Values of Caloundra Downs II, South East Queensland.	Accurate at the time of publication.	-
Douglas Parnters (2014) Proposed Residential Subdivision Precinct 2-4 and Western Detention Basin	Accurate at the time of publication.	-
Ecosmart Ecology (2010) Wallum Frog and Wader Report	Accurate at the time of publication.	-
Hyder Consulting (1999) Fauna & Habitat Assessment.	Accurate at the time of publication.	Age of publication may mean some information is out dated.
LAMR (1999) Caloundra Downs II Study – Vegetation & Botanical Issues.	Accurate at the time of publication.	Age of publication may mean some information is out dated.

8.2 Reliability and date of information

For information in section 3 and the map required by section 1, specify:

- source of the information;
- how recent the information is;
- how the reliability of the information was tested; and

- any uncertainties in the information.

Refer to Table 8.1 for the reliability and date of information of references.

8.3 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.

		✓ attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the locality of the proposed action (section 1)	✓	Attachment A – Locality Map Attachment B – General Arrangement Attachment C – PMST_0GI22F Attachment D – WSF Habitat Map Attachment E WSF Technical Memoradum1-15657_13a_TelecommunicationsTower Attachment F – Environmental Management Plan Attachment Ga – Wallum Sedge Frog Management Plan Part 1 Attachment Gb – Wallum Sedge Frog Management Plan Part 2 Attachment H – Water Quality Management Plan Attachment I –Environment Policy
	GIS file delineating the boundary of the referral area (section 1)		
	figures, maps or aerial photographs showing the location of the proposed action in respect to any matters of national environmental significance or important features of the environments (section 3)	✓	
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.5)		
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.6)		
	copies of any flora and fauna investigations and surveys (section 3)		
	technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3) conclusions in the referral (section 3 and 4)		
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)		

9 Contacts, signatures and declarations

NOTE: Providing false or misleading information in response to a requirement under Part 7 of the EPBC Act is an offence punishable on conviction by imprisonment and/or fine (section 489 of the 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 action.

Proposed action title: Aura - Precinct 2 Telecommunications Facility

9.1 Person proposing to take action

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action. It may be a trustee (either being an individual or a body corporate) acting on behalf of the trust for which they have responsibility (but not the trust).

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 GBRMP Act[1], 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.

Name and Title:	Adrian Allen, Project Director
Organisation: (if applicable	Organisation name should match entity identified in ABN/ACN search Stockland Development Pty Ltd
Trust deed: (if applicable):	□ attached; OR □ not applicable
ACN / ABN: (if applicable):	71 000 064 835
Postal address:	PO Box 6020, Meridan Plains, QLD, 4551
Telephone: Email:	07 54910100 Adrian.allen@stockland.com.au

COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE FEE(S) THAT WOULD OTHERWISE BE PAYABLE

I qualify for exemption from fees under section	□ an individual; OR

[1] *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.*

520(4C)(e)(v) of the EPBC Act because I am:

□ a small business entity – aggregated turnover is less than $2million for the previous income year (as prescribed within section 328-110 (other than subsection 328-119 (4)) of the *Income Tax Assessment Act 1997*); OR

□ a small business entity – aggregated turnover for the current financial year is likely to be less than $2million (note that aggregated turnover for one of the previous two income years must also be less than $2million) (as prescribed within section 328-110 (other than subsection 328-119 (4)) of the *Income Tax Assessment Act 1997*) (Cth)).

□ not applicable.

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

Note 1: Please retain evidence (i.e. tax statements) displaying aggregated turnover for the relevant income year. The Department may request this evidence at any stage of the assessment process. Aggregated turnover, for the purposes of the *Environment Protection and Biodiversity Conservation Regulations* 2000 (Cth)), means:

(1) a company annual turnover for the income year **and**

(11) the annual turnover for the income year of any entity that is connected or affiliated with the company at any time during the income year (see section 328-155 of the Income Tax Assessment Act 1997 (Cth)).

Note 2: 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

Note: Applications for a waiver must be supported by information in writing setting out the grounds on which the applicant considers that a waiver should be made and the reasons why it should be made. The Minister may, at his or her discretion, waive all or part of a fee that would otherwise be payable in the following circumstances:

- the action's primary objective is to protect the environment, or protect and conserve heritage, in a way that is consistent with the objects of the EPBC Act;
- it is in the public interest to do so; or
- there are other exceptional circumstances justifying the waiver.

The Minister will consider the application within 20 business days.

I would like to apply for a waiver of full or partial fees under regulation 5.21A of the EPBC Regulations. Under 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:

□ not applicable.

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

Signature:  **Date:** 5/12/16

9.2 Designated proponent

Individual or organisation who is proposed to be designated as the proponent if the Minister decides that the action is a controlled action and further assessment and approval is required. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent may or may not be the person proposing to take the action.

Name of proposed proponent:

If the name of the proposed proponent is not the same person as named at item 1 of section 9.1 above, please complete all of the below fields in section 9.2.

ACN / ABN (if applicable):

Postal address:

Telephone:

Email:

Declaration by the proposed proponent: I ADRIAN ALLEN, the proposed proponent, consent to the proposed designation of myself as the proponent for the purposes of the action described in this referral.

Signature :  **Date:** 5/12/16

Declaration by the person proposing to take the action: I ADRIAN ALLEN, the person proposing to take the action, consent to the proposed designation of..... as proponent for the purposes of the action described in this referral.

Signature :  **Date:** 5/12/16

9.3 Person preparing the referral information (if different from section 9.1)

Individual or organisation who has prepared the information contained in this referral form.

Name: Mellissa Zulpo

Title: Associate Environmental Scientist

Organisation: SMEC Australia Pty Ltd

ACN / ABN (if applicable):	47 065 475 149
Postal address:	PO Box 179, Birtinya, QLD, 4575, Australia
Telephone:	0438192321
Email:	Mellissa.Zulpo@smec.com
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.

Signature: 

Date: 1/12/2016