



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 02147/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

24 MAR 2017

s.73 - Irrelevant information

Birds Injured Rehabilitated and Orphaned Assoc. Inc.

s.73 - Irrelevant information

Dear s.73 - Irrelevant info

Thank you for your email of 30 January 2017 concerning the protection of native wildlife. I am responding on the Minister's behalf.

The Queensland Government greatly appreciates the valuable contribution wildlife carers and wildlife rescue and care organisations provide and commends them for their tireless efforts in caring for sick, injured and orphaned wildlife.

One of the main roles of the Department of Environment and Heritage Protection is to act as an environmental regulator. It does this by administering a range of environmental regulations and laws including, for wildlife care organisations, providing timely assessments of applications for permit authorities under the *Nature Conservation Act 1992* (NC Act) and assessing compliance with their conditions. The department does not act to manage or co-ordinate independent wildlife rescue and care organisations as such.

The need for the establishment of a representative body for wildlife rehabilitation in Queensland was identified by the department in 2002 and as a result of departmental-led public consultations across the state, the Queensland Wildlife Rehabilitation Council (QWRC) was created in 2004. I understand that Birds Injured Rehabilitated and Orphaned Assoc. Inc. is a member of QWRC and I encourage you to work with QWRC to support improved standards and outcomes of native wildlife rehabilitation and release throughout Queensland.

You mention the role of the RSPCA in your correspondence. The department and the RSPCA have entered into various partnerships and Memoranda of Understanding in order to enhance protected wildlife rescue, care and rehabilitation in Queensland. Given the issues you describe regarding the role of the RSPCA, I would advise you to contact RSPCA Queensland directly on (07) 3426 9999 to discuss your concerns.

In regard to your comments about the need for methods of land clearing that are sensitive to native wildlife, I understand there are a number of measures that contribute to that outcome. For example, one of the policies in the *Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006 – 2016* is aimed at protecting koala populations by achieving koala-sensitive design and promoting safe koala movement. Additionally, the role of spotter/catchers in Queensland is important to minimise the adverse effects on animal welfare and conservation during the destruction or modification of wildlife habitats.

The Palaszczuk Government has an ongoing commitment to reduce land-clearing. The Government's strengthened vegetation management legislation was voted down by the Opposition and cross-benchers in Parliament in 2016. Addressing reckless land clearing remains a priority.

Should you have any further enquiries, please contact Mr Michael Joyce, Acting Director, Southern Wildlife Operations of the Department of Environment and Heritage Protection on telephone (07) 4796 7787.

Yours sincerely

s.73 - Irrelevant information



**Danielle Cohen**  
**Chief of Staff**

Released by DES  
RTI Act 2009



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 03608/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

Mr Des Boyland  
Policies and Campaigns Manager  
Wildlife Preservation Society of Queensland  
Suite 1, Level 1  
30 Gladstone Road  
HIGHGATE HILL QLD 4101

Ms Courtney Melton  
Intern  
Wildlife Preservation Society of Queensland  
Suite 1, Level 1  
30 Gladstone Road  
HIGHGATE HILL QLD 4101

Dear Mr Boyland and Ms Melton

Thank you for your correspondence dated 14 February 2017 to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef regarding Wildlife Queensland's Policy for Vegetation Management.

Your correspondence has been referred to the Department of Environment and Heritage Protection for their advice.

Yours sincerely

s.73 - Irrelevant information

**REBECCA BEVAN**  
**Office Manager**  
**Office of the Minister for Environment and Heritage Protection**  
**and Minister for National Parks and the Great Barrier Reef**



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 03608/17

07 MAR 2017

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

Mr Des Boyland  
Policies and Campaigns Manager  
Ms Courtney Melton  
Wildlife Queensland Intern  
Wildlife Preservation Society of Queensland  
Suite 1, Level 1  
30 Gladstone Road  
HIGHGATE HILL QLD 4101

B/C Chief of Staff to the  
Honourable Dr Anthony Lynham MP  
Minister for State Development and  
Minister for Natural Resources and Mines  
PO Box 15216  
CITY EAST QLD 4002

Referred by direction for consideration. Copy of the inwards  
correspondence is attached.

Danielle Cohen  
Chief of Staff

Dear Mr Boyland and Ms Melton

Thank you for your letter of 14 February 2017 concerning the Wildlife Preservation Society of Queensland's policy for vegetation management.

I understand and support your policy that adequate protection for vegetation is important to protect and enhance Queensland's biodiversity. Last year's rejection by the Queensland Parliament of our amendments to the *Vegetation Management Act 1999* has unfortunately prevented the Government actioning its election commitment to restore the vegetation management framework to what it was before changes were made by the previous government.

While this is a setback, the Queensland Government remains committed to strengthening the State's land clearing laws and will continue to pursue the matter, aiming to pass amendments before 2020, within the period of the first phase of the Reef 2050 Long Term Sustainability Plan.

In the interim, for catchments in the Great Barrier Reef, there are existing land clearing laws which prohibit clearing in riparian zones in three priority catchments—the Burdekin, Wet Tropics and Mackay Whitsundays. In addition, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) also regulates actions that are likely to result in a significant impact on the reef and other matters of national environmental significance, and offers protections in relation to large scale land clearing.

However, as Queensland's vegetation management laws fall under the portfolio responsibilities of the Honourable Dr Anthony Lynham MP, Minister for State Development and Minister for Natural Resources and Mines, a copy of your letter has been forwarded to the Office of Minister Lynham for consideration.

I hope this information has been of assistance to you. Should you or your staff have any further enquiries, please contact Ms Danielle Cohen, Chief of Staff in my office on (07) 3719 7330.

Yours sincerely

**SIGNED**

**DR STEVEN MILES MP**  
**Minister for Environment and Heritage Protection and**  
**Minister for National Parks and the Great Barrier Reef**

**BAKER-LOWE Andrew**

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**From:** Environment <Environment@ministerial.qld.gov.au>  
**Sent:** Tuesday, 14 February 2017 12:43 PM  
**To:** DLO EHP  
**Subject:** FW: Wildlife Queensland's Policy for Vegetation Management  
**Attachments:** Minister Miles.docx; Approved Policy Document.docx

**From:** Policy Support [mailto:polycysupport@wildlife.org.au]  
**Sent:** Tuesday, 14 February 2017 12:30 PM  
**To:** Environment <Environment@ministerial.qld.gov.au>  
**Subject:** Wildlife Queensland's Policy for Vegetation Management

Dear Minister Miles,

Please see attached correspondence.

Kind Regards,

Courtney Melton  
Wildlife Queensland Intern

Des Boyland  
Policies and Campaigns Manager

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Please consider the environment before printing this email.

03605/17

Hon. Dr Steven Miles MP  
Minister for Environment and Heritage Protection, Minister for National Parks and the Great Barrier Reef  
GPO Box 2454  
BRISBANE QLD 4001

By email: [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

Dear Minister Miles,

We have been directed by the State Council of Wildlife Preservation Society of Queensland (Wildlife Queensland) to forward you a copy of the recently developed policy on Vegetation Management.

As you may be aware, Wildlife Queensland is a long established and respected wildlife-focused conservation group with over 6500 supporters spread across numerous branches throughout Queensland, and even interstate. Wildlife Queensland aims to protect flora and fauna, influence choices about developments that impact our environment, educate the community about the environment and actively engage the community with hands-on, wildlife focused projects.

Effective management of vegetation is critical for the conservation of biodiversity, preservation of the Great Barrier Reef, and mitigation of greenhouse gas emissions.

In Queensland, vegetation clearing is considered the largest pressure on threatened fauna and flora species. Between the years of 2007 and 2015, the number of native flora listed as threatened has increased by 275 species, and the number of threatened fauna listed as threatened has increased by 61 species (Department of Environment and Heritage Protection 2016). Furthermore, it is Wildlife Queensland's understanding that the conservation status of approximately 700 flora species is still in need of assessment.

Undoubtedly you appreciate the full-scale impact of vegetation clearing on biodiversity cannot be entirely recognised, as following the fragmentation of the landscape there is a stationary period of species richness (a comprehensive but relatively simplistic measure of biodiversity calculated by the number of different species identified in a unit area). As a result there is an effective extinction debt, which could imply there is a greater impact on species due to current clearing that will become apparent in future, but remain undetected in current assessments.

From your actions to date it is obvious you are aware vegetation clearing is the most immediate threat to the Great Barrier Reef. In Queensland's *Reef 2050 Long Term Sustainability Plan 2015*, a priority action statement to 'strengthen the Queensland Government's vegetation management legislation to protect remnant and high value regrowth native vegetation, including riparian zones' was included. To date, despite government efforts there has been a failure to commit to this objective. Vegetation management and regulation has loosened considerably in amendments to the *Vegetation Management Act 1999* by the Newman Government, resulting in an overwhelming increase in State clearing rates. Between the years 2014 and 2015 more than 269 000 hectares of woody vegetation was cleared in Queensland, a 91% increase in clearing rates compared to the 2011 to 2012 record (Department of Environment and Heritage Protection 2016).

The current and increasing rates of vegetation clearing in Queensland has contributed to observable increased greenhouse gas emissions. Climate change is thought to exacerbate pressures to fauna and flora from fragmentation and habitat loss, and is also a driving force in the degradation to the health and long term sustainability of the Great Barrier Reef.

Wildlife Queensland's overarching goal is to achieve enhanced vegetation management in Queensland for rural and urban lands, resulting in both the decreased loss and improved connectivity of native vegetation. Supporting this overarching goal are the following aims:

- Advocate for the amendment of the existing vegetation management legislation.
- Limit broad-scale clearing to approved and permitted activity following the successful amendment of existing legislation. The cumulative impact of clearing small areas, especially in urban and rural residential areas, must also be considered and approved.
- Build the capacity to maintain, value and manage native vegetation.
- Advocate a landscape approach to vegetation management.

Highlights of the Actions included in the policy document to achieve these goals, include:

- Amendments to the legislation:
  - o Removal of the established permitted assessment of vegetation clearing for the purpose of high value agriculture
  - o Removal of those exemptions surrounding vegetation clearing for mining
  - o Re-establish the protection of high value regrowth areas on not only leasehold land, but also freehold and Indigenous land
  - o Reinstate the requirement for a riverine protection permit before any clearing of vegetation in any watercourse can be committed
- Limit the reliance of management on Self-Assessable Codes and the use of Trigger Maps. Instead, require professional flora and fauna surveys for development projects and ensure these surveys meet a prescribed standard. As a minimum, ensure surveys satisfy the requirements outlined in the *Terrestrial Vertebrate Fauna Survey Guidelines 2014* and the *Flora Survey Guidelines 2016*.
- Concurrence powers be established for the Queensland Herbarium, Department of Science, Information Technology and Innovation, and Department of Environment and Heritage Protection, in accordance with the *Planning Act 2016*.
- Advocate for investment in creating wildlife corridors for improved connectivity across the landscape that promotes an approach to managing ecological processes that does not solely focus on "place". Specifically, enhance the ability of native fauna and flora species to disperse across a modified landscape.
- Shift the focus of vegetation management of rural lands, to further include urban and industrial areas.

Wildlife Queensland applauds any positive step you could make to help in the fruition of this vegetation management policy. Your willingness to engage with Wildlife Queensland will be viewed as genuine support for improved vegetation management practice, for the preservation of the environment and its wildlife.

Yours sincerely,

s.73 - Irrelevant information

Courtney Melton 14-02-17  
Wildlife Queensland Intern

s.73 - Irrelevant information

Des Boyland 14/2/2017  
Policies and Campaigns Manager

# Vegetation Management Policy

## 1 SCOPE

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This policy establishes the perspective of the Wildlife Preservation Society of Queensland (WPSQ) regarding vegetation management. This document reviews and updates any previous comment on WPSQ vegetation management policy, to reflect the current thinking of the organisation and formally address the required reform of legislation in Queensland. This policy will provide sufficient context relating to vegetation management in Queensland, outline the goals of WPSQ, and the required actions to achieve them. This policy is confined to the impact of State government legislation regarding vegetation management.

## 2 CONTEXT

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### Current Status of Vegetation and Legislative Turmoil

The *Vegetation Management Act 1999* was enacted to regulate vegetation clearing such that remnant vegetation was conserved in **endangered\*** and **of-concern ecosystems**. Additionally the Act sought to prevent biodiversity loss, maintain ecological processes and manage the environmental impacts of clearing to reduce emissions of greenhouse gas and promote sustainable land use. This legislation does not include grasslands, which constitute more than a third of Queensland. While the goals of the *Vegetation Management Act 1999* and its implementation were not perfect, its enactment ceased broad-scale clearing and assigned higher conservation status to **high value regrowth**. Amendments to the Act in 2013 by the Liberal National Party government have resulted in significant escalation of clearing rates, with consequential negative impacts on the environment and its wildlife.

In 2013 the Liberal National Party government amended the *Vegetation Management Act 1999* which saw a major loosening of vegetation legislation and regulation in Queensland. Significant amendments which contributed to this loosening of the legislation included, but were not limited to:

- *Replacement of vegetation clearing permits with self-assessable codes for thinning remnant bushlands, clearing encroaching woodland, and fodder harvesting within four regions (under Area Management Plans).*
- *The introduction of the **high value agriculture clearing** and **irrigated high value agriculture clearing** permit processes.*
- *The removal of the protective status for regrowth vegetation.*
- *The addition of "sustainable land use" as a new Purpose for the Act. As the sustainable land use was not defined, it lead to an unacceptable level of arbitrariness in the legislation.*
- *Landholders deemed liability was removed from the *Vegetation Management Act 1999*.*

*\*Bold type indicates definitions are provided.*

This resulted in an escalation of clearing rates. Between the years of 2014 and 2015, more than 296 000 hectares of **woody vegetation** was cleared in Queensland, a 91% increase in clearing rates compared to the 2011 to 2012 record (Department of Environment and Heritage Protection<sup>1</sup> 2016). As a consequence of the relaxed laws on vegetation regulation and protection, environmental problems such as declining biodiversity and the declining health of the Great Barrier Reef, have been exacerbated.

The Wildlife Preservation Society of Queensland acknowledges that Commonwealth legislation and bylaws and other associated legal instruments enacted by the various local authorities, also do contribute both positively and negatively to vegetation management within the State.

### **Biodiversity Crisis**

There is at present a biodiversity crisis on earth, as we continue to reach unprecedented levels of species loss every year (Driscoll et al. 2012). The clearing of vegetation to convert the land for urban, rural residential and agricultural use is the primary driver of biodiversity decline globally, with the consequent **habitat fragmentation**, loss and incursions by invasive species being the specific pressures (McAlpine, Fensham & Temple-Smith 2002; Estavillo, Pardini & Da Racha 2013; Driscoll et al 2012). Clearing can disrupt prevailing climate condition, where loss of native vegetation can increase regional temperatures and reduce annual rainfall (Driscoll et al. 2012). This variable climate puts further pressure on species by impairing their ability to persist in areas that were once their **ecological niches**, as well as their ability to disperse to any remaining suitable habitat across a fragmented landscape.

In Queensland, vegetation clearing is now considered the largest pressure on threatened fauna and flora species (Cocklin & Dibden 2013; Department of Environment and Heritage Protection<sup>1</sup> 2016). Under the *Nature Conservation Act 1992*, a species is listed as threatened if it is classified as 'vulnerable', 'endangered', or 'extinct in the wild'. Between the years of 2007 and 2015, the number of native flora listed as threatened has increased by 275 species, and the number of threatened fauna listed as threatened has increased by 61 species (Department of Environment and Heritage Protection<sup>1</sup> 2016). Additionally, it is the Wildlife Preservation Society of Queensland's understanding that the conservation status of approximately 700 flora species is still in need of assessment. Moreover, there has been an increase in the number of Australian **endemic species** classified as 'extinct in the wild' during this time period (Department of Environment and Heritage Protection<sup>1</sup> 2016).

In addition it is thought that the full-scale impact of vegetation clearing on biodiversity cannot be entirely appreciated, as following the fragmentation of the landscape there is a stationary period of species richness. Species richness is a comprehensive but relatively simplistic measure of biodiversity determined by the number of different species identified in a unit area (Brown & Reilly 2016). As a result of a stationary period of species richness, there is an effective "**extinction debt**" (McAlpine, Fensham & Temple-Smith 2002). This means there may be a greater impact on species observed in the future as a result of current clearing, with more species listed as threatened than described in current assessments. Assessment has been focused on species spatial distribution, with very little temporal assessment of records in cleared areas. Many species of least concern and restricted to South East Queensland and the Brigalow Belt, may be currently threatened by clearing but have not been appropriately assessed.

## Coastal Ecosystems and the Great Barrier Reef

Vegetation clearing poses a number of immediate and indirect threats to coastal ecosystems (Thornburn, Wilkinson & Silburn 2013). The conversion of woody vegetation to pastoral land and land for urban and rural residential development degrades the soil leading to increased erosion, which results in impaired water quality (Erftemeiger, Riegl, Hoeksema & Todd 2012). Furthermore, this land-use change subjects the Great Barrier Reef to agricultural and urban runoff, where nutrient loads and pesticides enter into the Reef via catchments (Marine Pollution Bulletin 2012). Most notably, the clearing of vegetation and following land-use change has had severe adverse impacts on the health and long-term viability of the Great Barrier Reef (Broadie & Waterhouse 2012).

The Great Barrier Reef is currently in such poor condition that the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the World Heritage Committee considered inscribing it as **World Heritage in Danger** (Grech, Pressey & Day 2015). To avoid this, the Australian federal government made a commitment to UNESCO and the World Heritage Committee to focus collective government effort on restoring the health and preservation value of the Reef, specifically in regards to improved land management. This commitment was enacted in the form of the *Reef 2050 Long Term Sustainability Plan 2015* which identified vegetation clearing as the most immediate threat to the Reef. This Plan included a priority action statement to 'strengthen the Queensland Government's vegetation management legislation to protect remnant and high value regrowth native vegetation, including riparian zones' (Department of Environment and Energy 2015). Thus far the government has not adhered to the commitment made to UNESCO and the World Heritage Committee, failing to act on those promises made for improved management of vegetation, specifically in Queensland.

## Greenhouse Gas Emissions and Climate Change

Vegetation clearing for agricultural and urban land-use is a major source of global greenhouse gas emissions. The burning of knocked down trees for clearing, above-ground cleared vegetation decay, and the decay of the tree root structures, results in emission of carbon dioxide (Henry, Danaher, McKeon & Burrows 2002). Increased emissions and the associated adverse impacts of cumulative climate change, are a major threat on fauna and flora species world-wide (Driscoll et al. 2012; Kettle & Koh 2014). The current and increasing rates of clearing in Queensland has contributed to observable increased greenhouse gas emissions (Ngugi, Johnson & McDonald 2011). Climate change is thought to exacerbate pressures to fauna and flora such as fragmentation and habitat loss, supporting a cyclic relationship between pressures from vegetation clearing or modification to the vegetation's ecological structure, and the intensification of the resulting ecological consequence (Lindenmayer et al. 2010).

## Future Action Needed

In March 2016, the Labor government proposed the enactment of the *Vegetation Management (Reinstatement) and Other Legislation Amendment Bill 2016*, as a step in the right direction to reinstate a number of pre-2013 restrictions to vegetation clearing. These amendments were designed to reinstate the protection of riverine and riparian vegetation, the requirement for

offset measures, and the “onus of proof”, where landholders would be held accountable for the vegetation illegally cleared on their property unless proven otherwise. Later in August 2016, this Reinstatement Bill was rejected in Parliament with the minority Labor government failing to get enough support for the new laws to pass.

For the sustainable and effective management of vegetation in Queensland, there needs to be a cultural shift in how people view their environment. This shift needs to remove the stigma associated with preservation of vegetation as a sign of impaired development ability. There needs to be a better understanding at the local, regional and state level that highlights just how sensitive the environment is to vegetation clearing, and its adverse impacts to ecological systems.

Clearing for urban and rural residential development and resource extractions is a major concern and is largely omitted from any legislation. There is little in place to restrict any form of vegetation clearing in South East Queensland, with approval for a number of large projects granted, with little mind for the subsequent environmental degradation.

Certain legislative provisions need to be reinstated and others further enhanced, to ensure vegetation is protected. Exemptions for intensive development such as high value agricultural clearing need to be removed, to protect threatened fauna and flora species and avoid the major decline of water quality impacting upon the Great Barrier Reef. Additional to reinstating protective measures, vegetation management needs to include more than that for rural areas and address the impact of urban and rural residential development, and the mining industry. There is a clear need for collective political support for improved vegetation management in Queensland (Society for Conservation Biology Oceania 2016). Furthermore, this management practice needs to reflect the scientific evidence for best practice.

### 3 GOALS:

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The overarching goal is to achieve enhanced vegetation management in Queensland for rural and urban lands, resulting in both the decreased loss and improved connectivity of native vegetation. Supporting this overarching goal are the following aims:

- Advocate for the amendment of existing vegetation management legislation.
- Limit broad-scale clearing to approved and permitted activity following the successful amendment of existing legislation. The cumulative impact of clearing small areas, especially in urban and rural residential areas, must be considered and approved.
- Build the capacity to maintain, value and manage native vegetation.
- Advocate a **landscape approach** to vegetation management.

## 4 ACTIONS:

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### Advocate for the amendment of existing vegetation management legislation

#### *Alterations*

- Remove the established permitted assessment of vegetation clearing for the purpose of “high value agriculture” and “irrigated high value agriculture”.
- Redefine high-value regrowth to encompass that of the last 20 years, as opposed to the year of 1989.
- Remove those exemptions surrounding vegetation clearing for mining, ensuring clearing for infrastructure and accompanying activity such as clearing for roads and building buffer zones, are included in the cumulative environmental impact assessment.
- Replace “purpose tests” with “ecological impact statements”.

#### *Reinstatements*

- Reinstatements the “onus of proof” for cleared vegetation to ensure landholders take responsibility and are held accountable for illegal clearing on their property.
- Re-establish the protection of high-value regrowth areas on not only leasehold land, but also freehold and Indigenous land.
- Reinstatements the requirement for a riverine protection permit before any clearing of vegetation in any watercourse can be committed.
- Reinstatements the requirement for environmental offsets. However, offsetting should not be treated as a complete, comprehensive replacement of that habitat lost.

#### *Additional Provisions*

- Limit the reliance of vegetation management on self-assessable codes and guidelines.
- Limit the reliance of conservation of significant, threatened, and/or endangered flora species on the use of **Trigger Maps**.
- Ensure the habitat of threatened species is not adversely impacted by clearing.
- Ensure the disturbance/clearing of grasslands is included in the regulation of **endangered** and **of-concern ecosystems**.
- Require all fauna and flora surveys for development undertaken in Queensland meet a set of prescribed survey standards. As a minimum, surveys must satisfy the requirements outlined in the *Terrestrial Vertebrate Fauna Survey Guidelines 2014* and the *Flora Survey Guidelines 2016*. This will ensure uniformity, and maintain a minimum quality of survey reports generated across the State.

**Limit broad-scale clearing to approved and permitted activity following the successful amendment of existing legislation. The cumulative impact of clearing small areas, especially in urban and rural residential areas, must be considered and approved.**

- Redefine “vegetation thinning” to avoid outcomes comparable to broad scale clearing under the guise of thinning.
- Require professional fauna and flora surveys of the area before any clearing activity is undertaken. Surveys must comply with prescribed survey standards. Furthermore surveys must be undertaken and permits assessed and issued, by accredited persons/organisations.
- Concurrence powers be established for the Queensland Herbarium, Department of Science, Information Technology and Innovation and Department of Environment and Heritage Protection, in accordance with the *Planning Act 2016*.

**Build the capacity to maintain, value, and manage native vegetation.**

- Identify knowledge needs.
- Modify the current approach to informing the general public of the current condition of biodiversity in Queensland, and the role of vegetation clearing in its evident decline.
- Ensure retrospectivity in proposed legislation for the management of vegetation across the State. Specifically, ensure there are appropriate precautionary measures taken in future to avoid “panic clearing”.
- Address habitat loss, climate change and cumulative impact on the Great Barrier Reef formally in the Queensland vegetation management framework.
- Commit to the IUCN recommendations made for reduced clearing within catchment areas, the waters of which flow into and impact upon the Great Barrier Reef.

**Advocate a landscape approach to vegetation management.**

- Advocate investment in creating wildlife corridors for improved connectivity across the landscape that promotes an approach to managing ecological processes that does not solely focus on “place”. Specifically, enhance the ability of native fauna and flora species to disperse across a modified landscape.
- Advocate to increase the current required buffer zone of natural vegetation for watercourses. The increase to buffer zone area will vary and must be calculated based on **stream order**, and location, purpose, and intensity of use.
- Shift the focus of vegetation management of rural lands, to further include urban and industrial areas.
- Encourage coordination in regional planning initiatives, to assist in the complementarity of planning documents.

## 5 RELEVANT LEGISLATION AND ASSOCIATED LEGAL INSTRUMENTS

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- *Economic Development (Vegetation Management) By-Law 2013*
- *Environment Protection and Biodiversity Conservation Act 1999*
- *Environmental Offsets Act 2014*
- *Fisheries Act 1994*
- *Flora Survey Guidelines 2016.*
- *Land, Water and Other Legislation Amendment Act 2014*
- *Nature Conservation (Wildlife Management) Regulation 2006*
- *Nature Conservation Act 1992*
- *Planning Act 2016*
- *Reef 2050 Long-Term Sustainability Plan 2016*
- *Reef Quality Protection Plan*
- *Regional Planning Interests Act 2014*
- *South East Queensland Regional Plan 2009*
- *State Planning Policy 2009*
- *Terrestrial Vertebrate Fauna Survey Guidelines 2014*
- *Vegetation Management (Reinstatement) and Other Legislation Amendment Bill 2016*
- *Vegetation Management Act 1999*

## 6 DEFINITIONS:

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### **Ecological Impact Statements:**

A document which illustrates the environmental impacts of a proposed action, positive or negative. These environmental impacts include those to water, land, air, structures, living organisms and/or intrinsic environmental values. The *National Environmental Policy Act 1969* indicates when an Ecological Impact Statement is required (Argonne National Laboratory, Office of Environmental Management 2012; Queensland Government, Department of Environment and Heritage Protection<sup>2</sup> 2016).

### **Ecological Niches:**

The position of a species within its environment, including the role it plays, and all interactions with both biotic (living) and abiotic (non-living) factors (Arrington 2013).

### **Endangered Ecosystems:**

An ecosystem is listed as an “endangered ecosystem” under the *Vegetation Management Act 1999* if remnant vegetation is less than 10% of its pre-clearing extent, or if there is 10-30% of remnant vegetation remaining but the remnant vegetation is less than 10 000ha. Additionally an ecosystem is “endangered” if only 10% of precleared vegetation is unaffected by severe degradation or biodiversity loss, or only 10-30% of precleared remnant vegetation remains unaffected by severe degradation or biodiversity loss, or it is a threatened ecosystem (Department of Environment and Heritage Protection<sup>3</sup> 2014).

**Endemic Species:**

A species which can only be found, unless otherwise introduced, in a specific region or area. That is, besides that location which it is 'endemic' to, this species cannot be found anywhere else in the world (Vreugdenhil et al 2003).

**Extinction Debt:**

The consequence of the considerable time lag between loss and fragmentation of habitat and observable species extinction (Ford et al 2009).

**Habitat Fragmentation:**

The process of landscape disruption that sees once vast areas of habitat segmented into disjointed habitat patches, primarily driven by human activity such as land clearing and the displacement of native vegetation species for others (Franklin, Noon & George 2002).

**High Value Regrowth:**

That vegetation found on land that was leased under the *Land Act 1994* for agricultural purposes and vegetation of an endangered, of-concern and least-concern ecosystem in a location not cleared since December 1989. Furthermore, High Value Regrowth does not apply to freehold or indigenous land (Persijn & Ayriss 2013).

**High Value Agriculture Clearing:**

The clearing of native vegetation to establish, cultivate and harvest crops. It does not include clearing for grazing activities or plantation forestry (Department of Natural Resources and Mines 2013).

**Irrigated High Value Agriculture Clearing:**

The clearing of native vegetation to establish, cultivate and harvest crops, or pasture (e.g. a dairy producer irrigating pasture) that will be supplied with water by artificial means. It does not include clearing for plantation forestry (Department of Natural Resources and Mines 2013).

**Landscape Approach:**

From Wildlife Queensland's perspective a landscape approach to vegetation management:

- recognises biophysical processes and their importance in supporting not only the environmental but also the economic and social values that society may need for that landscape considering the future;
- understands vegetation is a key tool for ensuring all biophysical processes continue to function if not improve or at least maintain environmental outcomes;
- recognises relevant spatial scale for each process and resource under consideration;
- requires spatial maps and other tools to: express vegetation management priorities and demonstrate landscape processes and functions.

**Of-Concern Ecosystems:**

An ecosystem is listed as an "of-concern ecosystem" under the *Vegetation Management Act 1999* if remnant vegetation is 10-30% of its pre-clearing extent, or if there is more than 30% of remaining remnant vegetation, the extent is less than 10 000ha, Additionally the ecosystem is "of-concern" if only 10-30% of precleared vegetation remains unaffected by moderate degradation or biodiversity loss (Department of Environment and Heritage Protection<sup>3</sup> 2014).

**Offsets:**

In the context of vegetation management, offsets are measures taken to counterbalance the impacts of vegetation cleared for industry, development and agricultural purposes. As outlined in the *Environmental Offsets Act 2014* an offset can include work conducted to maintain the viability of a prescribed environmental matter, the preparation of a plan for the managing of the prescribed environmental matter, as well as initiatives for scientific research and the implementation of education programs. An environmental offset can include but is not limited to specific revegetation initiatives. Environmental offsets can also include the delivery of an activity that provides benefits to environmental, social, cultural or economic matters (Department of Environment and Heritage Protection<sup>3</sup> 2014).

**Stream Order:**

A simplified method for the classification of streams based on their relative size and location within a catchment area. Stream classification is determined by the number of tributaries upstream. This is because tributaries alter their physical characteristics, join and eventually transform into rivers. First and Second Order streams are commonly referred to as 'headwater' streams, as they exist at the head of the catchment. Accurate spatial information on the stream location and catchment boundaries is necessary to guide the effective management of waterways and catchments.

**Trigger Maps:**

In Queensland, native plants to Australia are protected under the *Nature Conservation Act 1992*. The clearing, harvesting, growth and trade of protected flora species is regulated by the *Nature Conservation (Wildlife Management) Regulation 2006*. The protection of native plants applies for those plants that reside in the wild, and does not apply to those that are exempt from this plant protection framework, as outlined in the *Nature Conservation (Wildlife Management) Regulation 2006*. Examples of exemptions include but are not limited to, a situation in which a person wishes to remove a protected plant to avoid or reduce risk of death or serious injury, or a situation in which a person wishes to remove a protected plant to avoid or reduce risk of serious damage to buildings or property.

If a proposed project for the modification or clearing of vegetation is not classified as exempt, proponents are required to consult the Protected Plants Flora Survey Trigger Map prior to the commencement of any work. This consultation will highlight whether the proposed project falls into a high-risk area. A high-risk area is one that contains or is likely to contain endangered, vulnerable or near threatened (EVNT) native plant species. The distribution of EVNT species is illustrated by point-locations of these species, according to a range of data sets including HERBRECS, Corveg, and databases of regional offices, local naturalist clubs and expert panels. There remains a large proportion of Queensland that does not have any or has extremely basic botanical data documented. This threatens the viability of some of the application of Trigger Map assessment (Franks 2014).

If the project area is deemed a high-risk area, a flora survey must be carried out and the project may require a permit for any proposed clearing to occur. The onus is on the proponent to organise the completion of the survey by a suitably qualified person. The flora survey if required, must comply with the *Flora Survey Guidelines 2016*, which details who is suitably qualified to undertake such a survey, the parameters of the subject area that must be surveyed, the methods that must be undertaken for the successful completion of the survey, and the

specific criteria and documentation that must be included in the final flora survey report. If there are issues in meeting the specific requirements for the flora survey as outlined in the guidelines document, a proponent may lodge a request form for Variation from the *Flora Survey Guidelines*. The results of the flora survey will determine whether the proposed project of vegetation modification or clearing is approved.

**Woody Vegetation:**

Native shrubs and trees that are more than two meters in height. The vegetation has multiple roles, including a source of refuge for a diverse range of fauna, protection of the land and economic and recreational value (Office of Environment and Heritage NSW 2015).

**World Heritage in Danger:**

A site of World Heritage can be inscribed as World Heritage in Danger if there are conditions threatening those elements which granted the property World Heritage Significance initially via either ascertained danger or potential danger. Ascertained danger to a natural property can include decline in populations of endangered species or species of outstanding universal value by natural factors or human-made factors, deterioration of the natural beauty or scientific value of a site (human-induced), or the integrity of the site is threatened by human encroachment. Potential danger to a natural property can include modified legal protective status of the area, the property is threatened by planned resettlement or development activity, there is an outbreak or threat of armed conflict which threatens the property, there is an incomplete or inadequate management plan for the site, or those impacts of climatic or geological nature (UNESCO World Heritage Centre 2016).

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RTI Act 2009



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 03608/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

07 MAR 2017

Mr Des Boyland  
Policies and Campaigns Manager  
Ms Courtney Melton  
Wildlife Queensland Intern  
Wildlife Preservation Society of Queensland  
Suite 1, Level 1  
30 Gladstone Road  
HIGHGATE HILL QLD 4101

Dear Mr Boyland and Ms Melton

Thank you for your letter of 14 February 2017 concerning the Wildlife Preservation Society of Queensland's policy for vegetation management.

I understand and support your policy that adequate protection for vegetation is important to protect and enhance Queensland's biodiversity. Last year's rejection by the Queensland Parliament of our amendments to the *Vegetation Management Act 1999* has unfortunately prevented the Government actioning its election commitment to restore the vegetation management framework to what it was before changes were made by the previous government.

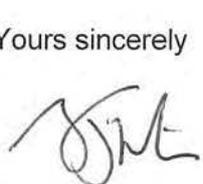
While this is a setback, the Queensland Government remains committed to strengthening the State's land clearing laws and will continue to pursue the matter, aiming to pass amendments before 2020, within the period of the first phase of the Reef 2050 Long Term Sustainability Plan.

In the interim, for catchments in the Great Barrier Reef, there are existing land clearing laws which prohibit clearing in riparian zones in three priority catchments—the Burdekin, Wet Tropics and Mackay Whitsundays. In addition, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) also regulates actions that are likely to result in a significant impact on the reef and other matters of national environmental significance, and offers protections in relation to large scale land clearing.

However, as Queensland's vegetation management laws fall under the portfolio responsibilities of the Honourable Dr Anthony Lynham MP, Minister for State Development and Minister for Natural Resources and Mines, a copy of your letter has been forwarded to the Office of Minister Lynham for consideration.

I hope this information has been of assistance to you. Should you or your staff have any further enquiries, please contact Ms Danielle Cohen, Chief of Staff in my office on (07) 3719 7330.

Yours sincerely

 No doubt we will talk much about trees this year.

**DR STEVEN MILES MP**  
**Minister for Environment and Heritage Protection and**  
**Minister for National Parks and the Great Barrier Reef**

GENERAL  
CORRESPONDENCE

REQUEST FORM

MINISTERIAL OFFICER

Minister's Office reference: MIN/18/ 482

Minister's Office to complete

Dan Lato (CoS)  Angus Sutherland (SPA) **D**

Date: **2 / 2 / 18**  Virginia Dale (PA)  URGENT (Due Date / / )

Environment  National Parks  Science  Arts  Corporate

ACTION REQUESTED

SIGN OFF BY

- |  |   |
|--|---|
| <input type="checkbox"/> Letter of Response & Correspondence Brief (if required) | <input type="checkbox"/> Minister                                     |
| <input type="checkbox"/> Contact by Phone within 48 hours                        | <input type="checkbox"/> Chief of Staff                               |
| <input type="checkbox"/> Dot point brief   |   |
| <input type="checkbox"/> Meeting Brief   |   |
| <input type="checkbox"/> Refer to other Minister/MP                              | <input type="checkbox"/> Ministerial Office Interim response required |
| <input type="checkbox"/> Refer to Department                                     | <input checked="" type="checkbox"/> Noted no action required          |
| <input type="checkbox"/> .....   |   |

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RTI Act 2009

DEPARTMENT ACTION: DLO to complete

DLO Received: **6/2/18** Dept Reference: **CTS 03673/18**

Reply Due to ESU/ DLO : \_\_\_/\_\_\_/\_\_\_ DG Office: \_\_\_/\_\_\_/\_\_\_ Mins Office: \_\_\_/\_\_\_/\_\_\_

ODG / DLO Comments:

CSS - FY1 only

If you require any further assistance regarding this request, please contact the relevant Department Liaison Officer.



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 07047/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email environment@ministerial.qld.gov.au

2 MAY 2017

B/C Electorate Office of  
Ms Nikki Boyd MP  
Member for Pine Rivers  
Shop 5A, 199 Gympie Road  
STRATHPINE QLD 4500

Referred by direction for information.  
Representations from your office originating on  
28 February 2017 relate.

s.73 - Irrelevant inform

Vice President  
Pine Rivers Koala Care Association Inc  
prkcaivicepresident@gmail.com

s.73 - Irrelevant informat

**Danielle Cohen**  
Chief of Staff

Dear s.73 - Irrelevant

I wish to thank you and Mr Mike Fowler for meeting with me on 16 March 2017 and presenting your Association's concerns regarding koala sustainability and vegetation management laws. I refer also to representations made on behalf of the Pine Rivers Koala Care Association Inc by Ms Nikki Boyd MP, Member for Pine Rivers.

The protection of koalas in Queensland is a matter I take very seriously and I appreciate the input your Association has provided.

I would also like to let you know that the Department of Environment and Heritage Protection has advised that, following recently revised arrangements for wildlife hospital services across South East Queensland, volunteer wildlife carers will soon be able to call the 1300 ANIMAL number to receive advice about which koala facilities have a vet on site at any given time. I know that this has been a concern for your Association and I am pleased to be able to advise that this service is being implemented. I have asked that a departmental officer makes contact with you to advise when this service has been made available.

Please find attached responses to your questions, as well as responding to the representations made by Ms Boyd regarding the Moggill Hospital. I also encourage your members to visit the department's website at <www.ehp.qld.gov.au> to keep up to date on information regarding its ongoing koala strategy review.

I hope the attached information is of assistance. Should you or your members have any further enquiries, please contact Ms Danielle Cohen, Chief of Staff in my office on (07) 3719 7330.

Yours sincerely

**SIGNED**

**DR STEVEN MILES MP**  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Att

## Responses to questions

**Question 1** - *How does the future of the planning laws look to connect corridors when developments appear in known koala areas?*

As you may be aware, the Department of Environment and Heritage Protection (EHP) is currently undertaking a review of koala policies and management initiatives. This review was instigated after the UniQuest report indicated koala populations in South East Queensland (SEQ) have declined significantly.

The Koala Expert Panel has provided an interim report containing the work undertaken to date which is available on EHP's website at <[www.ehp.qld.gov.au/wildlife/koalas/review-conservation-measures](http://www.ehp.qld.gov.au/wildlife/koalas/review-conservation-measures)>. A final report, containing the overall recommendations from the panel, is due mid-2017.

Simultaneous to EHP's review process, the Department of Infrastructure, Local Government and Planning (DILGP) is reviewing the South East Queensland Regional Plan (SEQRP) and the State Planning Policy (SPP) in time for the new *Planning Act 2016* which comes into force in July 2017. The Koala Expert Panel is providing recommendations on what these instruments should achieve in relation to koala conservation.

**Question 2** - *Is it possible for a Local Government Area Plan to put in place an Environmental Levy, so that non-profit Associations and groups don't have to put in for grants?*

EHP is not responsible for the management of local government rates and charges. Please refer to DILGP's website for information on this issue: <[www.dilgp.qld.gov.au/local-government/finance/rates-and-charges.html](http://www.dilgp.qld.gov.au/local-government/finance/rates-and-charges.html)>.

**Question 3** - *How can the need for 60 to 100m buffer with habitat left around developments be implemented, instead of broad land clearing of entire properties, with no large fines implemented. For example: if an area has many endangered trees, only one fee is paid by the property developer. There is no incentive to do the right thing.*

The Queensland Government protects native vegetation from development through a number of different regulatory instruments such as the *Vegetation Management Act 1999* (VM Act) and the South East Queensland Koala Conservation State Planning Regulatory Provisions (Koala SPRP).

An assessment of the likely effectiveness of providing habitat buffers around developments, and of related suggested enforcement mechanisms is within the remit of the Koala Expert Panel. The Panel's final report is due mid-2017. In the meantime, I encourage your group to use the information links below or call 13QGOV (13 74 68) for further information.

- For concerns relating to requirements of developers with regards to koala habitat retention or offsetting, see <[www.ehp.qld.gov.au/wildlife/koalas/legislation/](http://www.ehp.qld.gov.au/wildlife/koalas/legislation/)> for more information.
- For enquiries regarding the VM Act, please seek advice from the Department of Natural Resources and Mines on 134VEG (13 58 34) or visit <[www.qld.gov.au/environment/land/vegetation/development/](http://www.qld.gov.au/environment/land/vegetation/development/)>.

Local governments may also have additional vegetation management provisions within their planning schemes. Please contact your local council for more information.

**Question 4 - Did the previous SEQ Regional Plan meet the previous SEQ Regional Plan's objectives?**

Regional plans seek to balance the State Government's interests at a regional level, including koala conservation and biodiversity outcomes.

DILGP, the agency responsible for the management of the SEQRP, is currently undertaking a review process as part of drafting the new regional plan *ShapingSEQ*. This draft document contains a summary of the current regional plan's progress to date and can be found at <[www.shapingseq.com.au/](http://www.shapingseq.com.au/)>.

As mentioned in the response to Question 1, the Koala Expert Panel is working with EHP and DILGP to identify where the planning framework requires improvement to secure the future of koalas in South East Queensland. This process included the submission of comments to DILGP for inclusion into *ShapingSEQ*.

**Question 5 - What is the importance of Regional biodiversity values and Regional biodiversity Corridors that connect or improve connectivity through significant rehabilitation of natural assets that offer survival for koalas existing in the Urban Footprint?**

EHP has been working with DILGP in the development of *ShapingSEQ*, to ensure the regional plan provides good biodiversity outcomes. The regional biodiversity network was created to maximise the benefits for biodiversity outside the urban footprint while supporting existing measures in the urban footprint. The network consists of existing matters of state environmental significance, regional biodiversity values and corridors.

Regional biodiversity values are broad landscape themes of biodiversity that are to be incorporated in local government planning schemes.

Regional biodiversity corridors are areas where focused regional offset investment and rehabilitation efforts can occur- to build up and support existing ecosystems. While the regional biodiversity values are located outside the urban footprint, biodiversity corridors traverse across the urban footprint to support matters of state environmental significance in the urban landscape.

**Question 6 - Is there consideration and acceptance of the findings of the Expert Panel on Koalas to be implemented in the State Planning Framework? Including this planning into legislation, will offer a developer a planning directive without compromising the survival of the koala.**

As stated in the response to Question 1, the koala expert panel, EHP and DILGP are working together to facilitate the panel's recommendations into the planning review process.

The panel's final report, due mid-2017, will contain its final recommendations for appropriate and realistic actions to address population decline. The panel's process for developing these recommendations has included significant consultation with experts, including koala ecologists and planners, regarding the various issues and threats to koalas.

It should be noted that addressing planning and legislation issues alone will not ensure the survival of koala populations in South East Queensland. Management of dogs, disease and roads will also be matters that the Expert Panel will consider. Therefore, it is expected that the Panel's recommendations will inform both and use planning and operational initiatives for koala conservation.

The South East Queensland Wildlife Hospital Network has been formed with funding of \$6 million over four years and is currently developing operating protocols. Consisting of the Department of Environment and Heritage Protection (EHP), Currumbin Wildlife Hospital Trust, RSPCA Queensland and Australia Zoo Wildlife Warriors, the Network has been created to improve capacity for the rescue, care and rehabilitation of sick and injured wildlife throughout the region.

A benefit of the Network will be that a material change to veterinary services provided by Moggill Koala Hospital is implemented to improve overall animal welfare for sick and injured koalas. This change involves the re-direction of koalas from the Moggill Koala Hospital to Australia Zoo or the RSPCA on weekends and after hours. Both of those institutions either have a vet present or on call nearby. This aims to minimise time between rescue and treatment by a veterinarian.

Hours of operation for wildlife care facilities closest to your area currently are:

- RSPCA Wildlife Hospital currently operates with vets onsite between 8am and 9pm. Outside of these hours a vet is on call at all times. RSPCA have advised that they are extending that service from mid May 2017 to a vet present at all times at the wildlife hospital.
- Australia Zoo Wildlife Warriors Wildlife Hospital has vet nurses available 24/7. Vets are available onsite between 8am and 6pm. Outside of these hours a vet is on call to be available at all times.
- Moggill Koala Hospital is staffed with wildlife officers during business hours. A vet may be present during those hours depending on other duties including other threatened species programs.

Please note that operating times of wildlife facilities may need to change in response to seasonal variations and the volume of wildlife coming into care. Further to this, the capacity for any individual facility to provide care is impacted by the number and species currently under care and the complexity of treatment required.

A further benefit of the Network is the development of a central, coordinated point of contact which will streamline incident notification and response, minimising the amount of time it takes for animals to reach a wildlife veterinarian for treatment. This will be given effect through the RSPCA 1300 ANIMAL (1300 264 625) hotline that operates on a 24/7 basis.

An EHP officer will contact Pine Rivers Koala Care Association in the near future. As a long standing contributor to the welfare and conservation of wildlife, EHP would like to discuss with you how the network can best support your work.

Meeting with Mr Steven Miles, Environmental Minister and s.73 - Irrelevant information Pine Rivers Koala Care Association Inc, s.73 - Irrelevant inf Wildlife Rescue, Pine Rivers Koala Care Association Inc

**Date:** Thursday 16<sup>th</sup> March 2017  
**Time:** 11.00am

HANDLED TO  
MINISTER  
16/3/17

- . Sustainability of Koalas
- . Vegetation Management Laws

Question: How does the future of the planning laws look to connect corridors when developments appear in known Koala areas.

Question: Is it possible for a Local Government Area Plan to put in place an Environmental Levy, so that non-profit Associations and groups don't have to put in for grants.

Question: How can the Need for 60 to 100m buffer with habitat left around developments be implemented, instead of broad land clearing of entire properties, with no large fines implemented. For example : if an area has many endangered trees, only one fee is paid by the property developer. There is no incentive to do the right thing.

Question: Did the previous SEQ Regional Plan meet the previous SEQ Regional Plan's objectives?

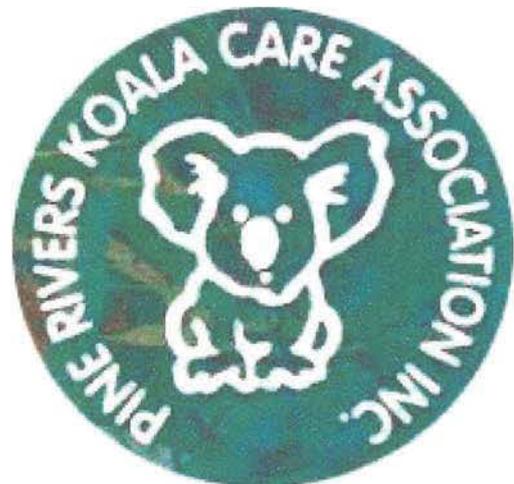
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Pine Rivers Koala Care Association Inc  
24/7 Wildlife Rescue

s.73 - Irrelevant information

*Handwritten notes:*  
EHP to  
draft  
for  
my response  
sig pls



Meeting with Mr Steven Miles, Environmental Minister and s.73 - Irreleva Vice President, Pine Rivers Koala Care Association Inc, s.73 - Irrelevant in Wildlife Rescue, Pine Rivers Koala Care Association Inc

**Date:** Thursday 16<sup>th</sup> March 2017

**Time:** 11.00am

**Venue:** Minister Miles Office, Kallangur

### Agenda

s.73 - Irrelevant information

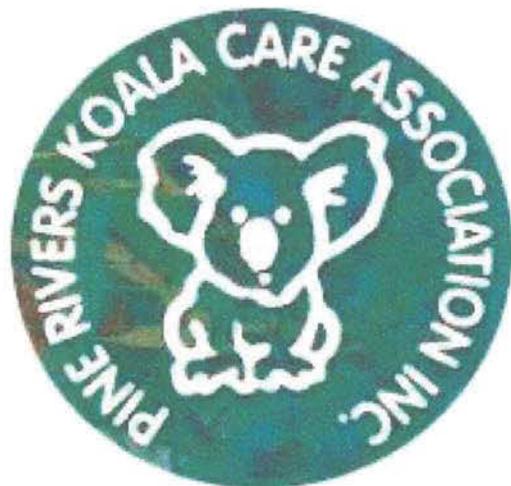
. Vegetation Management Laws

s.73 - Irrelevant information

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Pine Rivers Koala Care Association Inc  
24/7 Wildlife Rescue

s.73 - Irrelevant infor





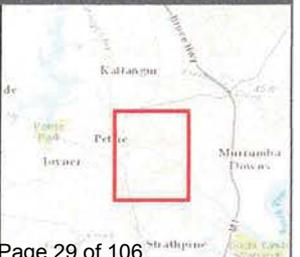
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28 South Environmental LEGEND LOCATION DIAGRAM

**Figure 9**  
**Koala Radio Tracking Data**

- Tracking First Location
- Tracking Data Point
- Road
- Rail
- ▭ Cadastral Parcels
- ▭ Study Area

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WORK REQUEST NUMBER: 652230

DATA SOURCES:  
DCDB © State of Queensland 2015  
Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

ISSUE DATE	AUTHOR	QA CHECK	APPROVED	MAP REV.	REVISION NOTE
11/11/2016	MG	MT	MT	File C A	Issued For Information



Hon Dr Steven Miles MP  
 Minister for Environment and Heritage Protection and  
 Minister for National Parks and the Great Barrier Reef

Ref CTS 07047/17

1 William Street Brisbane Qld 4000  
 GPO Box 2454 Brisbane  
 Queensland 4001 Australia  
 Telephone +61 7 3719 7330  
 Email environment@ministerial.qld.gov.au

02 MAY 2017

s.73 - Irrelevant informat

Pine Rivers Koala Care Association Inc  
 prkcaivicepresident@gmail.com

s.73 - Irrelevant infor

Dear

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I hope the attached information is of assistance. Should you or your members have any further enquiries, please contact Ms Danielle Cohen, Chief of Staff in my office on (07) 3719 7330.

Yours sincerely

**DR STEVEN MILES MP**  
 Minister for Environment and Heritage Protection and  
 Minister for National Parks and the Great Barrier Reef

*Look forward to seeing you again soon so we can keep progressing these issues.*

Att

## Responses to questions

**Question 1** - *How does the future of the planning laws look to connect corridors when developments appear in known koala areas?*

As you may be aware, the Department of Environment and Heritage Protection (EHP) is currently undertaking a review of koala policies and management initiatives. This review was instigated after the UniQuest report indicated koala populations in South East Queensland (SEQ) have declined significantly.

The Koala Expert Panel has provided an interim report containing the work undertaken to date which is available on EHP's website at <[www.ehp.qld.gov.au/wildlife/koalas/review-conservation-measures](http://www.ehp.qld.gov.au/wildlife/koalas/review-conservation-measures)>. A final report, containing the overall recommendations from the panel, is due mid-2017.

Simultaneous to EHP's review process, the Department of Infrastructure, Local Government and Planning (DILGP) is reviewing the South East Queensland Regional Plan (SEQRP) and the State Planning Policy (SPP) in time for the new *Planning Act 2016* which comes into force in July 2017. The Koala Expert Panel is providing recommendations on what these instruments should achieve in relation to koala conservation.

**Question 2** - *Is it possible for a Local Government Area Plan to put in place an Environmental Levy, so that non-profit Associations and groups don't have to put in for grants?*

EHP is not responsible for the management of local government rates and charges. Please refer to DILGP's website for information on this issue: <[www.dilgp.qld.gov.au/local-government/finance/rates-and-charges.html](http://www.dilgp.qld.gov.au/local-government/finance/rates-and-charges.html)>.

**Question 3** - *How can the need for 60 to 100m buffer with habitat left around developments be implemented, instead of broad land clearing of entire properties, with no large fines implemented. For example: if an area has many endangered trees, only one fee is paid by the property developer. There is no incentive to do the right thing.*

The Queensland Government protects native vegetation from development through a number of different regulatory instruments such as the *Vegetation Management Act 1999* (VM Act) and the South East Queensland Koala Conservation State Planning Regulatory Provisions (Koala SPRP).

An assessment of the likely effectiveness of providing habitat buffers around developments, and of related suggested enforcement mechanisms is within the remit of the Koala Expert Panel. The Panel's final report is due mid-2017. In the meantime, I encourage your group to use the information links below or call 13QGOV (13 74 68) for further information.

- For concerns relating to requirements of developers with regards to koala habitat retention or offsetting, see <[www.ehp.qld.gov.au/wildlife/koalas/legislation/](http://www.ehp.qld.gov.au/wildlife/koalas/legislation/)> for more information.
- For enquiries regarding the VM Act, please seek advice from the Department of Natural Resources and Mines on 134VEG (13 58 34) or visit <[www.qld.gov.au/environment/land/vegetation/development/](http://www.qld.gov.au/environment/land/vegetation/development/)>.

Local governments may also have additional vegetation management provisions within their planning schemes. Please contact your local council for more information.

**Question 4 - Did the previous SEQ Regional Plan meet the previous SEQ Regional Plan's objectives?**

Regional plans seek to balance the State Government's interests at a regional level, including koala conservation and biodiversity outcomes.

DILGP, the agency responsible for the management of the SEQRP, is currently undertaking a review process as part of drafting the new regional plan *ShapingSEQ*. This draft document contains a summary of the current regional plan's progress to date and can be found at <[www.shapingseq.com.au/](http://www.shapingseq.com.au/)>.

As mentioned in the response to Question 1, the Koala Expert Panel is working with EHP and DILGP to identify where the planning framework requires improvement to secure the future of koalas in South East Queensland. This process included the submission of comments to DILGP for inclusion into *ShapingSEQ*.

**Question 5 - What is the importance of Regional biodiversity values and Regional biodiversity Corridors that connect or improve connectivity through significant rehabilitation of natural assets that offer survival for koalas existing in the Urban Footprint?**

EHP has been working with DILGP in the development of *ShapingSEQ*, to ensure the regional plan provides good biodiversity outcomes. The regional biodiversity network was created to maximise the benefits for biodiversity outside the urban footprint while supporting existing measures in the urban footprint. The network consists of existing matters of state environmental significance, regional biodiversity values and corridors.

Regional biodiversity values are broad landscape themes of biodiversity that are to be incorporated in local government planning schemes.

Regional biodiversity corridors are areas where focused regional offset investment and rehabilitation efforts can occur- to build up and support existing ecosystems. While the regional biodiversity values are located outside the urban footprint, biodiversity corridors traverse across the urban footprint to support matters of state environmental significance in the urban landscape.

**Question 6 - Is there consideration and acceptance of the findings of the Expert Panel on Koalas to be implemented in the State Planning Framework? Including this planning into legislation, will offer a developer a planning directive without compromising the survival of the koala.**

As stated in the response to Question 1, the koala expert panel, EHP and DILGP are working together to facilitate the panel's recommendations into the planning review process.

The panel's final report, due mid-2017, will contain its final recommendations for appropriate and realistic actions to address population decline. The panel's process for developing these recommendations has included significant consultation with experts, including koala ecologists and planners, regarding the various issues and threats to koalas.

It should be noted that addressing planning and legislation issues alone will not ensure the survival of koala populations in South East Queensland. Management of dogs, disease and roads will also be matters that the Expert Panel will consider. Therefore, it is expected that the Panel's recommendations will inform both and use planning and operational initiatives for koala conservation.

The South East Queensland Wildlife Hospital Network has been formed with funding of \$6 million over four years and is currently developing operating protocols. Consisting of the Department of Environment and Heritage Protection (EHP), Currumbin Wildlife Hospital Trust, RSPCA Queensland and Australia Zoo Wildlife Warriors, the Network has been created to improve capacity for the rescue, care and rehabilitation of sick and injured wildlife throughout the region.

A benefit of the Network will be that a material change to veterinary services provided by Moggill Koala Hospital is implemented to improve overall animal welfare for sick and injured koalas. This change involves the re-direction of koalas from the Moggill Koala Hospital to Australia Zoo or the RSPCA on weekends and after hours. Both of those institutions either have a vet present or on call nearby. This aims to minimise time between rescue and treatment by a veterinarian.

Hours of operation for wildlife care facilities closest to your area currently are:

- RSPCA Wildlife Hospital currently operates with vets onsite between 8am and 9pm. Outside of these hours a vet is on call at all times. RSPCA have advised that they are extending that service from mid May 2017 to a vet present at all times at the wildlife hospital.
- Australia Zoo Wildlife Warriors Wildlife Hospital has vet nurses available 24/7. Vets are available onsite between 8am and 6pm. Outside of these hours a vet is on call to be available at all times.
- Moggill Koala Hospital is staffed with wildlife officers during business hours. A vet may be present during those hours depending on other duties including other threatened species programs.

Please note that operating times of wildlife facilities may need to change in response to seasonal variations and the volume of wildlife coming into care. Further to this, the capacity for any individual facility to provide care is impacted by the number and species currently under care and the complexity of treatment required.

A further benefit of the Network is the development of a central, coordinated point of contact which will streamline incident notification and response, minimising the amount of time it takes for animals to reach a wildlife veterinarian for treatment. This will be given effect through the RSPCA 1300 ANIMAL (1300 264 625) hotline that operates on a 24/7 basis.

An EHP officer will contact Pine Rivers Koala Care Association in the near future. As a long standing contributor to the welfare and conservation of wildlife, EHP would like to discuss with you how the network can best support your work.

# Media response

**Re:** Koalas  
**For:** ABC Toowoomba  
**Date:** Monday 27 March 2017

**Please attribute to a spokesperson for the Department of Environment and Heritage Protection:**

***Is the Minister/Department happy with a decision by the Federal Environment Department to allow clearing of koala habitat for QGC's project Anya near Dalby? Does the Minister accept that offsetting the habitat by creating koala habitat somewhere else is unlikely to assist the displaced koalas? Should the Government stop clearing habitat given the animal is nearing endangered status?***

As this is a controlled action under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), koala offsets are assessed in accordance with the Commonwealth EPBC Act environmental offsets policy.

Under the *Queensland Environmental Offsets Act 2014* the state is not able to require an offset if the Federal Government has already imposed an offset condition for an impact or matter that is the same or substantially the same. This avoids the duplication of offset conditions between the Federal and State Governments.

The Australian Government's EPBC Act public notices and referrals website provides full information on how this project has been considered including impacts on koalas. It is available at: <http://epbcnotices.environment.gov.au/entity/annotation/bd8f43ca-db0d-e711-88e4-005056ba00a7/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1490595193171>

The decline in the koala population especially in South East Queensland, is the result of a number of factors — none of which should be considered in isolation. While habitat loss is clearly one of the most significant problems affecting koalas in South East Queensland it needs to be addressed in conjunction with other factors such as disease management, traffic, dog attacks and the availability of effective rescue and rehabilitation programs.

The Queensland Government has assembled a Koala Expert Panel to provide recommendations on the most appropriate and realistic actions to reverse the decline in koala population sizes, including recommendations on planning instruments and how they can give consideration to koala conservation.

**ENDS**

For further media enquiries contact Media Services on (07) 3339 5831 or email [media@ehp.qld.gov.au](mailto:media@ehp.qld.gov.au)



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 09950/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

B/C Chief of Staff to the  
Honourable Jacqui Trad MP  
Deputy Premier, Minister for Transport and  
Minister for Infrastructure and Planning  
PO Box 15009  
CITY EAST QLD 4002

24 MAY 2017

s.73 - Irrelevant information

Referred by direction for consideration. Copy of the inwards correspondence is attached.

Danielle Cohen  
Chief of Staff

Dear s.73 - Irrelevant in

Thank you for your email of 17 April 2017 concerning the proposed clearing of endangered regional ecosystems in the Carseldine Urban Village, the contribution of vegetation clearing to climate change, and the development of a koala recovery plan. I am responding on the Minister's behalf.

The proposed Carseldine Urban Village forms part of the broader Fitzgibbon Priority Development Area (PDA), a declared PDA under the Economic Development Regulation 2013. All development applications within this PDA are assessed by Economic Development Queensland, a specialist land use planning and property development unit established within the Department of Infrastructure, Local Government and Planning.

The endangered regional ecosystem you have identified within the Carseldine Urban Village, commonly known as 'scribbly gum woodlands on tertiary surfaces', is highly valued within its natural range and provides habitat for threatened wildlife including the koala and wallum froglet. The total area of this particular regional ecosystem within the Carseldine Urban Village is less than 0.01% of its current remnant extent, with the most significant tracts located in coastal protected areas further north including the Glasshouse Mountains National Park, Tewantin National Park, Noosa National Park and Great Sandy National Park. These areas are provided ongoing management by the Queensland Parks and Wildlife Service and permanent security as part of Queensland's protected area estate.

The Queensland Government recognises the environmental and social value of the long-standing remnant vegetation within the Carseldine area and the biodiversity it supports. The majority of remnant bushland encompassing the Carseldine Urban Village is proposed to be retained within the 'bushland and open space' zoning and will continue to provide important ecological linkages to bushland and riparian areas further north and south, with strategic rehabilitation and enhancement proposed by Economic Development Queensland as part of the Fitzgibbon Bushland Management Plan.

As the Honourable Jackie Trad MP, Deputy Premier, Minister for Transport and Minister for Infrastructure and Planning has jurisdiction over this matter and is delegated the approval of all development applications within this PDA to Economic Development Queensland, a copy of your correspondence has been forwarded to the Office of the Deputy Premier for consideration.

Should you have any further enquiries, please contact Ms Catherine George, Manager, Conservation and Biodiversity Policy of the Department of Environment and Heritage Protection on telephone (07) 3330 5313 or email <catherine.george@ehp.qld.gov.au>.

Yours sincerely

**SIGNED**

**Danielle Cohen**  
Chief of Staff

Released by DES  
RTI Act 2009

**BAKER-LOWE Andrew**

---

**From:** Environment <Environment@ministerial.qld.gov.au>  
**Sent:** Tuesday, 18 April 2017 8:11 AM  
**To:** DLO EHP  
**Subject:** FW: Save endangered koala bushland on State government land

**From:** Mtcoottha Electorate Office [mailto:Mount.Coot-tha@parliament.qld.gov.au]  
**Sent:** Tuesday, 18 April 2017 4:21 AM  
**To:** Environment <Environment@ministerial.qld.gov.au>  
**Subject:** FW: Save endangered koala bushland on State government land

**From:** s.73 - Irrelevant information  
**Sent:** Monday, 17 April 2017 9:11 PM  
**To:** Mtcoottha Electorate Office <Mount.Coot-tha@parliament.qld.gov.au>  
**Subject:** Save endangered koala bushland on State government land

Dear Sir,

As you are aware, Queensland needs to manage vegetation clearing to protect habitat for our precious native wildlife, reduce our carbon emissions, and to keep the air we breathe clean. "At a time when the rest of the world is reducing their carbon pollution, Queensland is driving Australia's emissions up thanks to the LNP's tree-clearing laws". (<http://www.stevenmiles.com/saveourtrees>)

**Queensland is facing significant loss of biodiversity with the current rate of land clearing and the loss of remnant forests forever.**

On State-owned land in Carseldine, two remnant endangered ecosystems are located within the footprint of the State government's proposed Carseldine Urban Village. This bushland provides habitat for threatened species listed under the *Nature Conservation Act 1992*. The remnant endangered ecosystems should also be protected by the *Vegetation Management Act 1999*. **Existing laws must be enforced to protect our precious wildlife.**

The Queensland Government has promised to restore vegetation clearing laws to further protect our biodiversity. **The government must start by protecting remnant endangered ecosystems located on their very own property!**

The Carseldine Urban Village proposal provides an opportunity for the Queensland Government - and for yourself as Environment Minister- to demonstrate a true commitment to reducing land clearing and protecting our biodiversity.

**The first action in undertaking a recovery plan for koalas (and our other threatened wildlife) in South east Queensland should be to prevent the further loss of habitat for these species.**

**I urge the Queensland Government to stand up for our environment. Now, more than ever, we need your support to enforce habitat protection and save Queensland's environment and climate from this reckless destruction.**

Thank you,  
s.73 - Irrelevant information



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 09950/17

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

24 MAY 2017

s.73 - Irrelevant information

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Should you have any further enquiries, please contact Ms Catherine George, Manager, Conservation and Biodiversity Policy of the Department of Environment and Heritage Protection on telephone (07) 3330 5313 or email <catherine.george@ehp.qld.gov.au>.

Yours sincerely

s.73 - Irrelevant information

**Danielle Cohen**  
**Chief of Staff**

Released by DES  
RTI Act 2009



Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 20751/16

Level 13  
400 George Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

15 SEP 2016

s.73 - Irrelevant information

Dear s.73 - Irrelevant informa

Thank you for your email of 16 August 2016 concerning your support for the rally on the proposed new tree clearing laws.

As you are aware, the Queensland Government introduced the Vegetation Management (Reinstatement) and Other Legislation Amendment Bill 2016 to deliver on the election commitment to reinstate Queensland's nation leading tree clearing laws that were in place from 2004 to 2013. Unfortunately Parliament did not pass the bill after it was debated on 17 and 18 August 2016.

The impact of clearing native forests is recognised as a serious threatening process to the habitat of our precious wildlife and birds by this government.

I recognise your concern for the clearing of vegetation in Logan and its impact on native birds and on the resources of BIRO bird carers. I also understand the difficulty of returning rehabilitated birds to their "home" habitat or a suitable release environment as close as possible to the original site in circumstances where large areas of native vegetation are being cleared.

The Deputy Premier has announced the Government's commitment to continue pushing for stronger tree clearing laws at the next election, and will now focus on ensuring the administrative process in assessing clearing permits is more rigorous.

While vegetation clearing can no longer be regulated by a local law, it can be managed by a local government planning scheme under the *Sustainable Planning Act 2009*. I understand that the Logan City Council does manage vegetation clearing through its planning scheme which has recently been amended. Further information is available at [www.logan.qld.gov.au/planning-and-building/planning-and-development/logan-planning-scheme/logan-planning-scheme-2015-version-2.1](http://www.logan.qld.gov.au/planning-and-building/planning-and-development/logan-planning-scheme/logan-planning-scheme-2015-version-2.1) (please refer to Schedule 6, Section 6.2.3).

I hope this information has been of assistance to you. Should you have any further enquiries, please contact Mr Philip Halton, Chief of Staff in my office on (07) 3719 7330.

Yours sincerely

**DR STEVEN MILES MP**  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

17-359

File C

Page 40 of 106

Rel

University of Queensland and Ministerial Office

s.73 - Irrelevant information@pf.uq.edu.au

[environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

5 September 2017

SUBJECT: URGENT - UQ REMOVAL OF VEGETATION

Dear s.73 - Irrelevant information and Hon Dr Steven Miles, QLD Minister for Environment and Heritage Protection,

I understand that UQ seek to resume the removal of 108 trees at the St Lucia campus 6 September 2017.

Please halt any actions until obligations under the relevant legislation have been met. This project beginning in Springtime will cause major trauma to native wildlife – removal of vegetation during breeding season is unethical and unlawful.

I am concerned that there has not been sufficient time for the fauna spotter to assess the site prior to works. I am concerned there has been a failure to plan this project properly. The University Of Queensland needs a proper wildlife management plan that considers animal welfare and minimises animal harm and I ask that you correct your recent conduct.

I am concerned that communications from UQ have been providing misleading information.

I am concerned that the site is in very close proximity to a major riparian corridor being that of the Brisbane River, so it is of extremely high value to urban wildlife.

I am concerned that animals need food now, removal of their food source will lead to their death. Revegetating the site after completion of the site is not a solution.

I look forward to your reply. Thank you

Best Regards,

s.73 - Irrelevant information

# Qld Herbarium Travel Approval

**QH 24630/17**

<b>TO:</b>	Director, Queensland Herbarium
<b>FROM:</b>	Hans Dillewaard, Principal Botanist
<b>CC:</b>	Tim Ryan, Don Butler
<b>Date:</b>	7 <sup>th</sup> September 2017
<b>Subject</b>	Travel to Cairns for Magistrates Court Appearance in relation to Vegetation Management Act Tree Clearing Case for Strathmore Station

<b>Approval is sought for the following staff:</b>	Hans Dillewaard
<b>When:</b>	Monday 11 <sup>th</sup> September – Wednesday 13 <sup>th</sup> September 2017
<b>Travel Details:</b>	Monday 11 <sup>th</sup> September – Travel to Cairns, Tuesday 12 <sup>th</sup> September to Wednesday 13 <sup>th</sup> September – Cairns Magistrates Court, Wednesday 13 <sup>th</sup> September – Return to Brisbane.  (Please note that return date may change depending on court proceedings)
<b>Airport Parking approval required:</b>	YES  (In accordance with the department's Travel Booking Procedure, prior approval from the delegate is required if an employee wishes to use airport parking facilities)
<b>Estimated Cost:</b>	\$ Nil (DNRM to pay all costs. Air fares and accommodation have been arranged and paid. Travel allowance to be invoiced post travel)
<b>Internal Order:</b>	80017139
<b>Purpose of Travel:</b>	To appear as an Expert Witness in the Cairns Magistrates Court for the Strathmore Tree Clearing case
<b>Why is this essential travel</b>	As part of court proceedings for the Strathmore Station Tree Clearing case at the Cairns Magistrates Court.
	s.73 - Irrelevant information

**Director Approved (Signature)**

**Name:** Dr Gordon Guymer.

**Date:**

7/9/2017



Office of the Hon Dr Anthony Lynham MP  
Minister for State Development and  
Minister for Natural Resources and Mines

Ref MO/17/4548  
CTS 25339/17

1 William Street Brisbane  
PO Box 15216 City East  
Queensland 4002 Australia  
Telephone +61 7 3719 7360  
Email sdnrm@ministerial.qld.gov.au  
www.statedevelopment.qld.gov.au  
www.dnrm.qld.gov.au

16 OCT 2017

s.73 - Irrelevant information

Traprock Group Association Inc.  
"Spring Creek"  
GORE QLD 4352



Dear s.73 - Irrelevant

I refer to your email dated 7 September 2017 copied to the Honourable Dr Anthony Lynham MP, Minister for State Development and Minister for Natural Resources and Mines. Minister Lynham has asked me to respond on his behalf.

It is noted that the letter concerning the Protected Plants Flora Survey Trigger Maps attached to your email was addressed to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection. However, as the letter also made reference to the *Vegetation Management Act 1999* (Vegetation Management Act), I would like to take this opportunity to provide the following information.

In Queensland, clearing of native woody vegetation is regulated under the Vegetation Management Framework (the VM framework). The VM framework consists of the Vegetation Management Act, the Vegetation Management Regulation 2012, the *Planning Act 2016*, the Planning Regulation 2017 and associated policies and codes.

The VM framework is administered by the Department of Natural Resources and Mines and clearing of native woody vegetation in areas that are category X on the regulated vegetation management map on freehold land do not require an approval under the VM framework. This is relevant to the VM framework only and does not provide exemption from any other mechanisms or legislative requirements that may also be relevant.

Should you have any questions relating to the requirements under the VM framework please contact Mrs Kellie Bryant, Acting Senior Natural Resource Management Officer, Natural Resource Assessment, Department of Natural Resources and Mines on 4531 8515.

Yours sincerely

s.73 - Irrelevant information

**Paul Woodland**  
Chief of Staff

Cc: The Honourable Steven Miles MP



# North Queensland Wildlife Care Inc.

PO Box 1446, AITKENVALE Q. 4814



26 October 2017

The Hon Dr Steven Miles  
Minister for the Environment and Heritage Protection  
GPO Box 2454  
BRISBANE QLD 4001

Dear Dr Miles

## LAND CLEARING - COLLINSVILLE SOLAR FARM

North Queensland Wildlife Care Inc (NQWC) is a community organization located in Townsville and which provides wildlife rescue, care and rehabilitation services to wildlife in the region. We are writing regarding the impact on wildlife of land clearing on the site of the proposed Collinsville Solar Farm.

In May 2017 and in October 2017 pre-construction land clearing was conducted on the site of the solar farm, and we understand that thousands of trees have now been cleared. As a result of the clearing activities, the following animals were rescued by spotter catchers and taken to wildlife carers in Townsville, four hours' drive north, for care:

### May 2017 clearing activities

#### *Insectivorous bats*

- 18 Gould's wattled bats - most injured with severe fractures and bruising
- 4 yellow bellied sheathtail bats - all with bruising

#### *Birds*

- 7 nestling pale headed rosellas
- 4 nestling cockatiels

### October 2017 clearing activities

#### *Insectivorous bats*

- Gould's wattled bats
  - 53 adult females from maternity colonies, including 4 injured - severe bruising, degloving of skin on the wrist, fractures and lacerations. A proportion of them were pregnant with twins
  - 62 babies - including 14 which were orphans or rejected by mothers, 2 aborted babies, and 7 babies dead during or shortly after transit
- Broad-nosed bats
  - 15 females - most pregnant - including 2 injured adults

- Chocolate wattled bats
  - 5 adults
- Northern freetail bats
  - 2 males, injured
- Beccarri's freetail bats
  - 1 adult male, injured
- Yellow bellied sheathtail bats
  - 1 adult male, injured

### **Birds**

- 15 nestling magpies
- 6 nestling butcher birds
- 9 nestling tawny frogmouths
- 3 nestling yellow throated miners
- 2 nestling nightjars

This amounts to 204 animals taken into care by NQWC. Despite the best efforts of the spotter catchers, several other animals died or had to be euthanized on site during or shortly after the clearing or during transportation. Furthermore, despite the best efforts of the carers, several birds and microbat babies died in care as it was impossible to provide the required standard of care to such large numbers of animals arriving with little prior notice. Because of NQWC's limited capacity to care for large numbers of microbats, many of these animals had to be transported to other care groups in South East Queensland, a trip that resulted in further deaths of tiny babies and abortions. The large number of animals affected directly and indirectly by the clearing operations is directly linked to these operations taking place during the worst possible time of year for these species, ie during the breeding season. We are appalled that clearing was conducted at this time of year, when postponing activities by a few weeks would have prevented such losses. Although most of the animals in care will be able to be released (after at least 4 months of rehabilitation), the species' ability to breed in the future will be severely reduced given the destruction and fragmentation of a large part of their habitat.

We have no information regarding permits, if any, issued under the *Sustainable Planning Act 2009* or the *Vegetation Management Act 1999* and authorizing land clearing at the site. Thus we are assuming that the clearing was conducted lawfully. Likewise, we assume that a Species Management Program (SMP) was approved and implemented. We note that the large number of microbats present on site would have triggered an SMP "High Risk of Impacts" as these animals are known to be colonial breeders and thus at greater risk from the impacts of clearing. Indeed several maternity colonies were destroyed. Therefore we are surprised that little seems to have been done to avoid or minimise both the immediate and the long term impact of removing or altering many species' breeding places, especially of colonial breeders, at the site as required under SMP guidelines. The most obvious measure would have been to postpone the clearing for a few weeks. DEHP's SMP Information Sheet recommends '*Consideration of seasonal factors e.g. completing works outside of breeding season*' as a core management strategy to avoid or minimize interference with a species' breeding place. It is important to note that the animals in this area were already under great pressure, as the area had barely recovered from Cyclone Debbie and was suffering from the cumulative impacts of other recent clearing activities nearby.

Another useful measure would have been to provide sufficient advance notice to wildlife care groups that clearing was to take place and that their services may be required. This did not happen.

We would appreciate if you would confirm that the land clearing operations at the Collinsville Solar Farm were conducted lawfully. If so, we would also be grateful if you would advise why the Queensland Government did not require the clearing to be conducted outside the breeding season, given the obvious potential risk to many nesting bird species and colonial microbats. More generally, we urge your Department to consider strengthening the requirements for SMPs prepared by proponents in clearing operations by prohibiting land clearing in spring in order to avoid many animals' breeding season and by requiring proponents to take effective measures to ensure that the care of rescued animals is a priority. Finally we would be grateful if you would advise what measures are taken by DEHP to ensure that SMPs, when they are in place, are adequately implemented and monitored to ensure compliance.

We look forward to your reply.

Yours sincerely

s.73 - Irrelevant information

Daniel Edney  
Vice-President  
North Queensland Wildlife Care Inc

Released by DES  
RTI Act 2009



Department of  
**Environment and  
Heritage Protection**

Ref CTS 30552/17

4 December 2017

Mr Daniel Edney  
Vice-President  
North Queensland Wildlife Care Inc.  
PO Box 1446  
AITKENVALE QLD 4814

Dear Mr Edney

Thank you for your letter of 26 October 2017 to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef concerning the impact on native wildlife due to vegetation clearing at the Collinsville Solar Farm. The Minister has asked me to respond on his behalf.

The Department of Environment and Heritage Protection can confirm that a High-Risk Species Management Program (HR-SMP), for the Collinsville Solar Farm was approved on 28 September 2017. This approval allows the proponent to tamper within animal breeding places where there is a high risk of impact in accordance with a proposed impact management plan. This impact management plan is designed so that that all activities minimise the immediate and long-term impact of removing or altering an animal breeding place.

As part of this approval, there is a requirement for the proponent to maintain an electronic register of all animal breeding places that are tampered with during the course of the project. This register must be submitted to the department within six months of interacting with a high risk species. A completed register must then be submitted to the department at the expiry of the HR-SMP.

Based on the information that you have provided with your letter, the department will investigate to assess whether there have any breaches of the HR-SMP itself, or other relevant sections of the *Nature Conservation Act 1992* and subordinate legislation.

Should you have further enquiries, please contact Mr Samuel Dawes, Senior Wildlife Officer - Conservation and Biodiversity Operations Branch of the Department of Environment and Heritage Protection on telephone (07) 3330 5373 or via email at <samuel.dawes@ehp.qld.gov.au>.

Yours sincerely

s.73 - Irrelevant information

Nick Weinert  
**Acting Deputy Director-General  
Conservation and Sustainability Services**

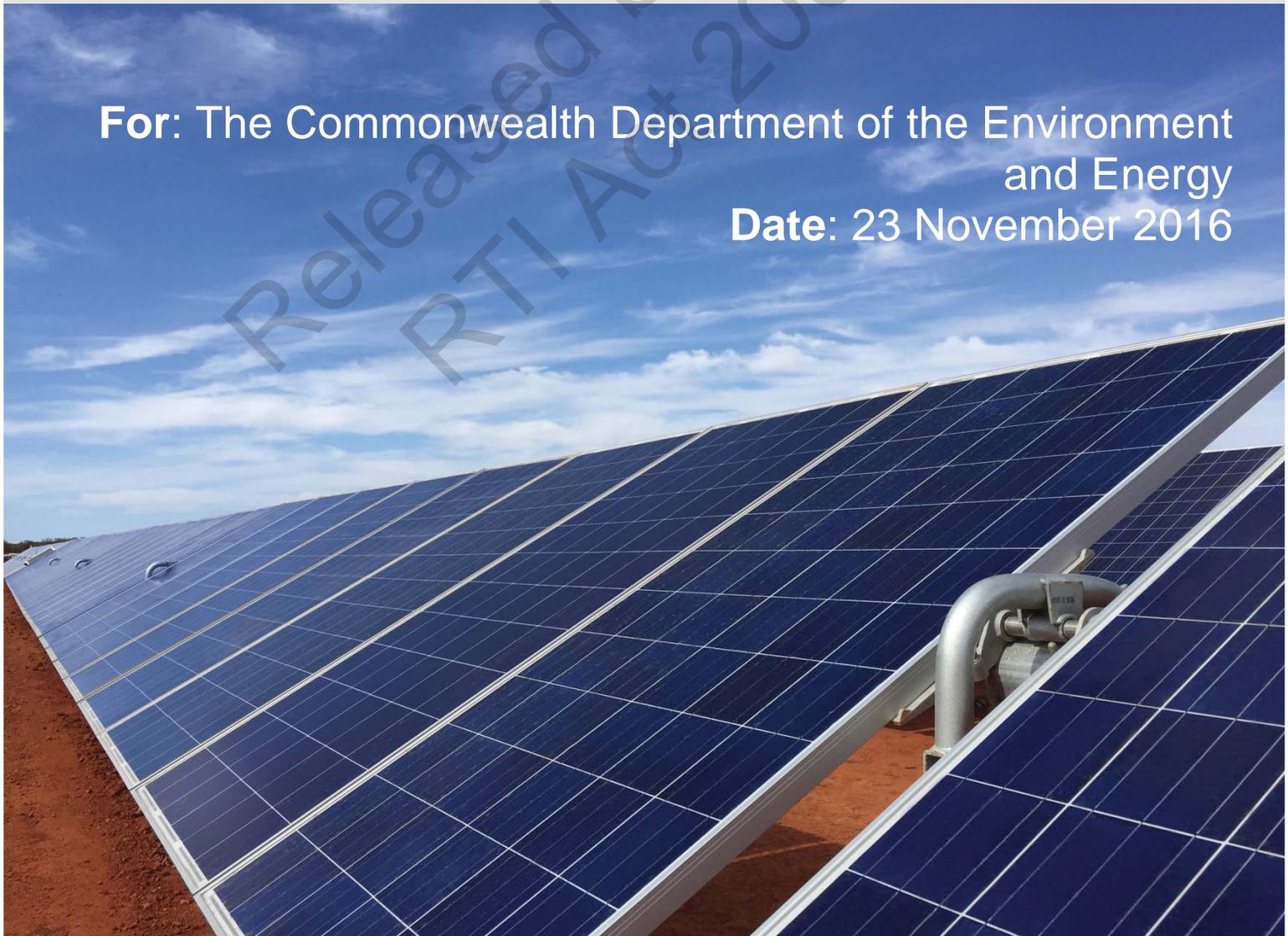
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# Edify Energy Solar Farm Development at Collinsville Queensland

EPBC Act Referral

For: The Commonwealth Department of the Environment  
and Energy  
Date: 23 November 2016



# Referral of proposed action

**Proposed action title:** Solar Farm Development, north-west of Collinsville, Queensland

## 1 Summary of proposed action

### 1.1 Short description

Edify Energy is proposing to construct and operate solar power photovoltaic (PV) electricity generating facilities totalling 115 MW AC at Strathmore Road, Springlands (approximately 10 km north-west of Collinsville in Queensland) (**Solar Farm**).

57.5 MW AC of the Solar Farm has been awarded funding from the Australian Renewable Energy Agency (ARENA) and a Queensland Government Power Purchase Agreement (PPA). The Solar Farm will connect directly to the existing power network at the Strathmore Substation at the same location.

### 1.2 Latitude and longitude

Latitude	Longitude
-20° 28' 47.363'''	147° 44' 32.837'''
-20° 28' 52.075'''	147° 44' 50.288'''
-20° 29' 4.783'''	147° 45' 6.374'''
-20° 29' 5.946'''	147° 45' 39.440'''
-20° 29' 49.359'''	147° 46' 14.731'''
-20° 30' 8.393'''	147° 46' 9.743'''
-20° 30' 11.850'''	147° 46' 32.525'''
-20° 30' 15.726'''	147° 46' 40.765'''
-20° 30' 26.655'''	147° 46' 51.515'''
-20° 30' 50.970'''	147° 46' 35.317'''
-20° 30' 58.059'''	147° 46' 11.539'''
-20° 30' 48.532'''	147° 44' 44.031'''
-20° 30' 35.458'''	147° 44' 37.867'''
-20° 30' 43.749'''	147° 44' 2.949'''
-20° 30' 36.633'''	147° 43' 1.906'''
-20° 30' 35.088'''	147° 42' 57.371'''
-20° 30' 31.990'''	147° 42' 55.642'''
-20° 30' 28.046'''	147° 42' 56.423'''
-20° 30' 14.083'''	147° 43' 13.606'''
-20° 30' 4.048'''	147° 43' 25.378'''
-20° 29' 52.465'''	147° 43' 41.962'''
-20° 29' 43.646'''	147° 43' 54.738'''
-20° 29' 23.403'''	147° 43' 53.130'''
-20° 29' 13.234'''	147° 43' 55.891'''
-20° 29' 4.118'''	147° 43' 59.093'''
-20° 28' 59.823'''	147° 44' 4.633'''
-20° 28' 57.844'''	147° 44' 9.733'''
-20° 28' 53.285'''	147° 44' 22.203'''

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### 1.3 Locality and property description

The Solar Farm will be located approximately 10 km north-west of Collinsville, Queensland (see **Figure 1**). The Project Area (see **Figure 2**):

- fronts Strathmore Road, Springlands;
- comprises 1,531 ha of the south west portion of Lot 2 on RP742329, which is freehold land tenure; and
- is adjacent to the Strathmore Substation operated by Powerlink.

**NB:** It is important to note that "Project Area" is represented on all attached figures as "Survey Area".

The Project Area has been used for cattle grazing and lies to the west of the existing Strathmore substation which is considered a juncture/node of the electrical transmission for north Queensland. The substation sits on a separate land tenure title. The Project Area also borders Glencore's Collinsville Coal Mine along its southern boundary with the dis-used Collinsville Coal Fired Power Station located further to the south-east.

Several electrical transmission easements traverse the Project Area connecting to the Strathmore substation. Other infrastructure present includes access tracks, fences and a number of small dams.

The Solar Farm Development Footprint has been designed to make use of the predominantly cleared and flat areas adjacent to the existing high voltage infrastructure on the Project Area, has been designed avoid and minimise impacts to areas of environmental constraint, and incorporates buffers to protect areas with environmental value.

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### 1.4 Size of the development footprint or work area (hectares)

The proposed Solar Farm Development Footprint is approximately 455 ha.

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### 1.5 Street address of the site

Delamothe Road (also known as Strathmore Road), Springlands, Queensland.

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### 1.6 Lot description

The total area of Lot 2 on RP742329 the lot is 8,203 ha, of which the proposed Development Footprint will occupy approximately 455 ha.

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### 1.7 Local Government Area and Council contact (if known)

The proposed action is within the Whitsunday Regional Council Local Government area. The Council has assigned Matthew Twomey as the Council Officer for the approved Development Application (07 4945 0641).

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### 1.8 Time frame

The proposed action is anticipated to commence in February 2017. The construction and installation timeframe will occur over a 9 month period. Testing and commissioning will follow, with commencement of operations in December 2017. The Solar Farm is expected to operate for approximately 30 years.

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1.9	<b>Alternatives to proposed action</b>	X	No. There are no alternatives to the proposed action.
			Yes, please also complete section 2.2
1.10	<b>Alternative time frames, locations or activities</b>	X	No. Timing for the project is linked to ARENA funding and the action is proposed to be undertaken in accordance with the timing described in Section 1.8.
			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	<b>Commonwealth, State or Territory assessment</b>	X	No, the proposed action does not require any environmental impact assessment under Commonwealth, State or Territory legislation.

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		Yes. Please see Section 2.5 for details.
1.12	<b>Component of larger action</b>	X No
		Yes, please see Section 2.7 below.
1.13	<b>Related actions/proposals</b>	X No, the proposed action is not related to other actions or proposals.
		Yes. The proposed action is related to other possible actions. Please see Section 2.8 for details.
1.14	<b>Australian Government funding</b>	No
		X Yes, the Proponent was successful in obtaining funding under the Federal Government's ARENA large scale solar photovoltaics – competitive round. The proposed action will be part funded under this program in accordance with an agreed Funding Agreement with ARENA. The proposed action has also been awarded a 20 year PPA with the Queensland Government under its Solar 150 program.
1.15	<b>Great Barrier Reef Marine Park</b>	X No, the proposed action is not inside the Great Barrier Reef Marine Park.
		Yes, please also complete section 3.1 (h), 3.2 (e)

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RTI Act 2009

## 2 Detailed description of proposed action

### 2.1 Description of proposed action

The proposed action involves the establishment of 115 MW AC of solar power photovoltaic (PV) facilities at Strathmore Road, Springlands (see **Figure 2**). The energy will be grid-connected through the immediately adjacent and existing Strathmore Substation (managed by Powerlink) for transmission to the National Electricity Market (NEM).

The project has secured an ARENA funding grant and a Queensland Government Power Purchase Agreement (PPA) for 57.5 MW (AC) of power. This represents approximately half of the capacity of the proposed action. In accordance with the ARENA and Queensland Government funding model, the following timeframes for project delivery need to be met:

- Financial Close - Dec 2016/Jan 2017.
- Commissioning completed and hand over - no later than Jan 2018.

The Project Area was chosen because of its proximity to the Strathmore Substation which is regionally significant. It is a nodal juncture of several existing and proposed high voltage transmissions lines which provide electricity to the entire North Queensland region including the Bowen and Galilee Basins. Establishment of a renewable power generation facility adjacent to significant grid infrastructure will enable significant areas of the region to have connection to a renewable power source. The Project Area also has optimal broadacre surrounds and receives high sunshine hours and very little rainfall (on average approx. 500 mm annually).

The proposed Development Footprint within the Project Area is approximately 455 ha.

#### Design process to avoid impacts to Matters of National Environmental Significance (MNES)

Avoiding impacts to the environment is a critical part of the design philosophy of Edify Energy. The proposed action is specifically designed (footprint, construction processes, operational elements) to avoid impacts to MNES. This design process occurred over two phases.

The first phase was guided by a Preliminary Environmental Assessment of the Project Area undertaken in June 2016 (RPS 2016a). The assessment identified the key features of the environment including known and potential occurrences of MNES. As a result of this work a potential (broad scale) Development Footprint was designed that largely avoided MNES habitats and locations.

The second phase involved more detailed ecological surveys in November 2016 of the potential Development Footprint and surrounds (RPS 2016b). This process involved more detailed and intensive surveys and resulted in significant refinements of the footprint to ensure that there were no direct impacts to important habitat or locations of MNES. In addition, the revised Development Footprint (the subject of this referral) was designed to include internal buffers to protect MNES.

The detailed design work has led to a strategically located Development Footprint that does not significantly impact MNES (see Section 3).

#### General description of the action

The proposed action will consist of solar panels mounted on a frame which track the sun to produce energy. The panels will be connected to inverter stations which convert the DC power to AC power, and step the voltage up to 33kV. A medium voltage AC network will be installed in underground trenches to connect each inverter to a substation. The substation will step up the voltage to 132kV for injecting the green energy into the transmission network operated by Powerlink. The development will contain the following infrastructure:

- photovoltaic solar panels;
- internal access tracks;
- underground medium voltage network;
- administration and amenities building;
- vehicle car park;
- security fencing; and
- substation.

#### Solar Array Areas

The development will consist of a number of solar array areas or blocks comprised of photovoltaic modules arranged in a series of long rows. See **Figure 3** for a map showing the indicative layout of the arrays within the Development Footprint. The modules are mounted on frames which follow the sun to optimize energy generation. The frames are fixed to piles driven into the soil. The rows interconnect to form a single array block of approximately 5 MW (AC). In each block there will be a prefabricated, containerized inverter and integrated transformer to convert and step up the voltage level. Electrical connections will also be constructed between the PV arrays, as well as associated monitoring and protection equipment and central inverters via underground or frame secured cabling.



**Image 1: Pictures illustrating type of solar arrays/trackers to be used for the proposed action**

The solar module frames and inverter stations will be installed on piles and sit above ground level. This ensures retention of existing grassland vegetation and habitats in situ with a minimal level of ground disturbance. Regrowth of vegetation will be enabled following temporary disturbance during installation.

#### **Medium Voltage Reticulation**

Each array will be connected to a switchboard by an underground medium voltage system. The cables will be installed in trenches not expected to be below 1m in depth and 1m in width. The excavation will comply with the Soil and Erosion Sediment Control Report and Regulations for construction within Queensland. The medium voltage switchboard will be connected through a step up transformer and to the Strathmore substation via an overhead line constructed by Powerlink across their land.

Temporary disturbances to vegetation from the underground installation of the cables will rehabilitate naturally with native grasses.

#### **Solar Substation**

A high voltage substation will connect the solar farm to the national transmission network. The substation footprint will be approximately 50m by 30m. The substation will provide switching and protection of the electrical network and will be fenced separately from the solar farm for safety reasons.

#### **Project phase description**

Detailed components of the proposed action are discussed below in relation to the following project phases:

- Pre-mobilisation.
- Construction.
- Commissioning and operation.
- De-commissioning.

It is important to note that activities within the Project Area throughout the various phases will be guided by and comply with the mitigation, management and monitoring measures defined in the *Solar Farm Environmental Management Plan* (see **Attachment D**). These measures are discussed in Section 5 of this referral and address issues related to:

- Traffic Movement.
- Air Quality and Dust.
- Noise and Vibration.
- Solar Panel Glare and External Lighting.
- Land and Soil Management.
- Stormwater Management.
- Waste.
- Chemical Storage and Spill Management.
- Flora and Fauna, with specific measures to address key MNES including Koala, Ornamental Snake, Black Ironbox and Brigalow TEC.

#### **Pre-mobilisation**

Pre-mobilisation activities and their indicative timeframes (there may be overlap in timing) will include:

- Fencing of site offices and facilities for construction will be completed in the first three weeks and will consist of temporary fencing.
- Site fencing of the whole Development Footprint will commence as one of the first work fronts and continue in parallel to the other construction activities. The fence will be compliant with the Development Consent, and designed to enable movement of fauna across the Development Footprint post construction.
- Removal of any woody vegetation within the Development Footprint (~3 weeks).
- Laydown of temporary offices and facilities within the developable footprint to minimise the temporary disturbance. These will be temporary prefabricated buildings used for construction projects (~2 weeks).

The current site works requirements include:

- Office facilities (1,400 sq metres)
  - Changing rooms.
  - Toilets.
  - Showers.
  - Offices.
  - First aid.
  - Lunch rooms.
  - Parking x 12.
- Lay down area x 2 (approximately 1,800 sq metres and 2,300 sq metres).
- Guard room (18 sq metres).

#### **Construction**

Construction activities will include the installation of the PV arrays and supporting infrastructure.

The PV arrays and site office components will largely be built off-site and transported to the site in modulated sections. Construction on-site will be limited to the unloading and joining together of the modulated sections, and trenching electrical and control cabling to the electricity grid and control room. Construction activities are planned to occur during daylight hours only.

The proposed action will consist of installing the following components:

- Arrays of solar PV modules arranged in a series of long rows (generally 85 m) typically no higher than 2.1 m above the ground and supported by a steel and/or aluminium mounting structure including framing and piles which are either screwed or driven into the ground.
- A series of prefabricated, containerised inverters transformers distributed throughout the PV arrays.
- Electrical connections between PV arrays, associated monitoring and protection equipment, and central inverters via underground or frame secured cabling.
- A tracker actuation system.
- Network interconnection facilities to connect the project to either or both of the high voltage distribution system via a new terminal or an overhead transmission line to Strathmore substation, including a main power transformer, switchgear, protection, metering and communications equipment.

Construction activities for the PV arrays and their indicative timeframes (there may be overlap in timing) will include:

- Pile driving or screwing mounting pylons (~4 months).
- Trenching or underground cabling connecting PV (~2 months).
- Mounting pre constructed PV modules (~4 months)
- Network interconnection (~1 week).
- Establishing revegetation as screening (~1-2 years).

To facilitate the future operational and maintenance activities on site the following infrastructure will be constructed:

- Site office and operations and maintenance facilities.
- Site entry road, internal access tracks and car park.

- Site fencing and associated security equipment.

Further details relating to construction of this infrastructure are as follows:

#### *Operations and Maintenance Building*

The building will be a prefabricated design approx. 6m by 8m and single storey. The facility will provide a working area for staff, ablutions and amenities including:

- Office.
- Toilet.
- Kitchen.
- First Aid area.
- Meeting room.
- Reception area.

#### *Site fencing and security*

The whole site will be secured with appropriate fencing and lockable gates will be placed at the main entrance, providing restricted access. Fencing will be designed with consideration for Koala movement (see Section 3.1(d)).

#### *Parking*

Parking for staff and visitors will be provided.

#### *Access roads*

Townsville or Brisbane will be the main port of entry for much of the equipment, with the remainder being sourced locally or interstate. The primary transport route will be via the Bruce Highway, connecting to Strathmore Road to the site.

The development will use a new site entry point on the western boundary of the property along Strathmore road. The access will be designed to accommodate B Double vehicles delivering construction material directly to construction staging and assembly areas on site.

#### *Internal roads*

A number of internal access roads will connect with the site entry to the various work fronts for construction and materials. These roads are expected to be unsealed, single to dual vehicle width and include areas for maneuvering. They will be located entirely within the mapped Development Footprint (see **Figure 2**).

#### **Commissioning and operation**

The commissioning phase of the project will involve testing of PV system prior to connection to network. It is anticipated that this will take approximately 2 months.

Operational elements of the proposed action include:

#### *Operating hours*

Once in operation, the normal operating hours of the solar farm will be during daylight hours between the hours of sunrise (say) 7:00 am to sunset 6:00 pm. There is no (very low levels of) noise in operations.

#### *Water supply*

As there is no reticulated water to site, any water use will need to be brought on to the site, or captured on site. Discussions have begun with Glencore who have offered additional water which may be used for firefighting and track maintenance.

#### *Water demand*

Water may also be required for routine cleaning of panels and potentially for dust suppression on site. This activity will likely take place once per annum based upon current Australian best practice. This may require a small mobile water tanker, although dry techniques are being investigated. Water consumption for this activity is expected to be lower than current agricultural activity on the site.

During construction, water will be trucked in and waste water will be pumped out by engaging the services of a local service provider.

#### *Sewerage*

Solid waste and putrescible waste disposal will be by the regular service of a licensed waste management contractor. Site storage of waste will be in approved waste containers provided by the contractor.

#### *Stormwater management*

There are no major earthworks anticipated for the proposed action and as a result there will be no significant changes to the drainage regime of the site. The stormwater management provisions for the solar farm are designed in accordance with the Australian Rainfall and Runoff Guidelines.

### *Vegetation management*

Regular vegetation maintenance will occur within the potential Development Footprint throughout the operational phase to control re-emerging woody vegetation and weeds and to maintain low fuel loads to reduce risks associated with wildfire.

The current level of vegetation without maintenance is low and below the lower level of the solar panels. Any vegetation maintenance will involve the slashing of grasses in the areas to be covered by and surrounding the solar panels and the application of selective herbicides to control emerging woody vegetation and weeds to maintain a grassland environment. The grass will remain in place under solar panels and there will be not likely to be a requirement to spray grasses with herbicides.

### *Fire management*

Bushfire management will be undertaken in accordance with the Solar Farm – Bushfire Management Plan (RPS 2016d). Asset Protection Zones will be maintained within the Development Footprint and bushfire management will not result in impacts to nearby vegetation.

### **Decommissioning**

Upon decommissioning of the solar farm, the site will be subject to certain rehabilitation regimes to restore the land to a standard appropriate for rural use. Restoration of the disturbed areas within the Development Footprint will include removal of all above ground structures and footings and capping of services.

## **2.2 Feasible alternatives to taking the proposed action**

The proposed location has features that make it highly desirable for the proposed development in that it is perfectly located adjacent to Powerlink's Strathmore substation which is a key node for Queensland's electricity grid and the confluence of several transmission lines. This juncture point will result in the project being able to supply electricity to a wide portion of the community including the growing resources sector in the Bowen and Galilee basins.

Although alternative sites were considered in the preliminary planning stages, there are a limited number of sites that are located adjacent to substations with this capacity to service industry and community needs.

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

Not applicable.

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

On 30 July 2015, a Development Permit (Negotiated) for a Material Change of Use – Major Utility (solar power PV facility) was issued by the Whitsunday Regional Council (WRC). A copy of this approval is included at **Attachment B1, B2 & B3**. The development application was assessed in accordance with the *Sustainable Planning Act 2009* (Qld), which aims to achieve ecological sustainability in project developments. Under this Act, the WRC assessed the proposed action under the Integrated Development Assessment System (IDAS). The IDAS enables all social, environmental and economic matters to be addressed at the same time. It is important to note that under Queensland planning law, the Development Permit "attaches" to the land (i.e. Lot 2 on RP742329).

For the purposes of the *Environmental Protection Act 1994* (Qld), the proposed action will not involve any "prescribed ERAs" and as such, an environment authority will not be required.

Further, for the purposes of the *Nature Conservation Act 1992* (Qld), a flora survey trigger map obtained from the Queensland Department of Environment and Heritage Protection indicates that the Development Footprint is not in a "high risk area". This means that vegetation clearing can generally proceed without the need for a flora survey or protected plants clearing permit, subject to some requirements under this Act.

## **2.5 Environmental impact assessments under Commonwealth, State or Territory legislation**

See Section 2.4. No further environmental impact assessment (beyond this EPBC referral) is required under Commonwealth, State or Territory legislation.

## 2.6 Public consultation (including with Indigenous stakeholders)

The Proponent has completed statutory public notification pursuant to the *Sustainable Planning Act 2009* (Qld), as part of the development application process associated with the WRC development approval. A single submission was received from an adjoining coal mine operator, Glencore. Glencore requested the applicant consider impacts from their operations (i.e. vibration from blasting and dust) when designing and operating the facility. The proponent undertook additional consultation with Glencore and these potential issues are manageable.

As part of the requirements of the ARENA funding arrangements, the Proponent must develop a Community Engagement Plan in accordance with their standards, plus implement those actions and provide ongoing progress. The proponent is currently preparing the Community Engagement Plan and must have it submitted with ARENA prior to financial sign off.

The Proponent has engaged with the local Birriah people (Registered Aboriginal Party) and concluded a Cultural Heritage Management Agreement on 17 November 2016. The agreement deals with matters including the protection, maintenance and use of land containing Aboriginal places and/or objects, the right for Aboriginal people to access, or use Aboriginal places and/or objects and any provision for the rehabilitation of Aboriginal places or objects.

## 2.7 A staged development or component of a larger action

The proposed action is not a staged development or component of a larger action. It is a standalone, financially viable development. As discussed previously, it has received both an ARENA funding grant and a Queensland Government Power Purchase Agreement (PPA) to produce 57.5 MW (AC) of power. This represents funding in relation to half of the proposed 115 MW capacity of the site. The remainder of the funding for the 455 ha project will come from commercial banks, the Proponent, and the Proponent's equity partner, Wircon GmbH from Germany.

All necessary elements (e.g. infrastructure, connections to the power network, access roads) for the project to independently and successfully operate are included in the proposed action. It is not co-dependent on any other actions occurring.

While the Whitsunday Regional Council has issued a Development Approval across a larger part of Lot 2 on RP742329, the proponent is only currently seeking to develop 455 ha of the south west corner of the Lot. This area provides the capacity necessary for the proposed action and it was chosen given the lack of environmental constraint, and for its proximity to the Strathmore Substation. It is important to note that under the Queensland *Sustainable Planning Act 2009*, the Development Approval "attaches" to the land (i.e. Lot 2 on RP742329). The Development Approval is not "owned" by the Proponent, which means that the approval for solar farm development was given for this particular site, rather than to the Proponent. This means that any future development need not necessarily be developed by the Proponent.

There are no current designs or detailed plans for future development across the broader property (Lot 2 on RP742329).

Beyond the proposed action, the proponent may look at the feasibility for the broader property (Lot 2 on RP742329) to support a separate standalone solar project. Should this proceed through future environmental planning and assessment processes, it could be considered as a related action as it would:

- potentially be undertaken by the same proponent;
- be of a similar nature; and
- occur on the same property.

However, any future proposal would be standalone, not co-dependent on the proposed action, and importantly would be financed separately. Critical issues that would need to be resolved to enable any future solar development on the broader property include information relating to environmental values and constraints, securing long term commercial power purchase offtake agreements (PPAs), and confirmation of maximum available capacity on the electrical network (which is a dynamic, market driven assessment) to receive power from the facility.

Any future project would be separately referred under the EPBC. Given the standalone nature of the referred action and the proponent's intention to refer any potential, future actions, the referral of this proposed action will not have a material effect on the Minister's ability to consider and assess the potential impacts of any future proposal.

## 2.8 Related actions

To facilitate connection to the National Electricity Market, Powerlink will construct a connection from Strathmore Substation to the proposed substation within the Development Footprint (see **Figure 2**). The Powerlink works will occur within their land and will comprise the construction of an overhead line approximately 1 km in length. This activity will occur on disturbed land and will not impact on any matters of national environmental significance.

## 3 Description of environment & likely impacts

### 3.1 Matters of national environmental significance

#### 3.1 (a) World Heritage Properties

##### Description

The project is located approximately 65 km from the Great Barrier Reef World Heritage Area (GBRWHA) boundary. The Project Area sits to west of Clark Range. Runoff from the Project Area flows in a westerly direction before eventually draining to the Burdekin River.

##### Nature and extent of likely impact

There will be no impacts to the GBRWHA as a result of the proposed action.

All construction work (which has low ground disturbance) will be undertaken in accordance with an approved sediment and erosion control plan. Any potential risk of sedimentation affecting the reef is too small to be quantified. Post construction the area will be revegetated in accordance with *Solar Farm Environmental Management Plan* to prevent any ongoing risk of erosion. The Development Footprint will not be further disturbed during operation.

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#### 3.1 (b) National Heritage Places

##### Description

The project is located approximately 65 km from the Great Barrier Reef National Heritage Place boundary. The Project Area sits to west of Clark Range. Runoff from the Project Area flows in a westerly direction before eventually draining to the Burdekin River.

##### Nature and extent of likely impact

There will be no impacts to the GBR National Heritage Place as a result of the proposed action.

All construction work (which has low ground disturbance) will be undertaken in accordance with an approved sediment and erosion control plan. Any potential risk of sedimentation affecting the reef is too small to be quantified. Post construction the area will be revegetated in accordance with *Solar Farm Environmental Management Plan* to prevent any ongoing risk of erosion. The Development Footprint will not be further disturbed during operation.

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

##### Description

The nearest Ramsar wetland is Bowling Green Bay Ramsar site, which is located over 100 km to the north west of the Project Area.

##### Nature and extent of likely impact

No impacts will occur to a Wetland of International Importance as a result of the proposed action.

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#### 3.1 (d) Listed threatened species and ecological communities

##### Description

Searches of the online EPBC Protected Matters Search Tool (PMST) were performed on 31 May 2016 and 14 November 2016 for the proposed Development Footprint area (with a 10 km buffer). These searches identified the potential for:

- 14 listed threatened fauna species;
- 3 listed threatened flora species; and
- 3 listed threatened ecological communities to be present within the footprint and surrounding area.

The threatened fauna, flora and ecological communities identified by the EPBC PMST reports are presented in Table 1, Table 2 and Table 3 below, together with a discussion of their likelihood of occurrence within the proposed Development Footprint and adjacent areas.

The likelihood of occurrence assessment categorised MNES into the following four categories:

- **Known:** the species or ecological community was or has been observed on the Project Area.
- **Potential:** suitable or potentially suitable habitat for the species or ecological community occurs on the Project Area but there are no recorded observations.
- **Unlikely to occur:** there is no habitat or very marginal habitat for the species or ecological community, and a very low probability that it occurs on the Project Area.
- **Not occurring:** the Project Area and surrounds are unsuitable for the species or ecological community.

A detailed impact assessment is then presented for the species or ecological communities that are considered known or have the potential to occur.

The key resources used in this assessment were:

- Solar Farm Preliminary Ecological Assessment (RPS 2016a).
- Solar Farm Ecological Values Assessment (RPS 2016b) (**Attachment C**).
- Solar Farm Environmental Management Plan (RPS 2016c) (**Attachment D**).
- Wildlife Online (WildNet database).
- EPBC Act referral guidelines for the vulnerable Koala (combined populations of Qld, NSW and ACT) (DoE 2014).
- EPBC Act draft referral guidelines for the nationally listed Brigalow Belt reptiles (DoE 2011).
- EPBC Act Species Conservation Advice where available.
- Online SPRAT profiles.

Details regarding the flora and fauna assessments carried out within the proposed Development Footprint and surrounds are provided below in Section 3.3(a).

**Table 1: Likelihood of occurrence of EPBC Act listed threatened ecological communities within the proposed Development Footprint and surrounds**

Ecological Community name	Listing status	Likelihood of occurrence	Details
Brigalow ( <i>Acacia harpophylla</i> dominant and co-dominant)	Endangered	<b>Known</b>	<p>The Brigalow ecological community is characterised by the presence of Brigalow (<i>Acacia harpophylla</i>) being one of the three most abundant tree species. Occasionally Brigalow may be subdominant to other tree species. A prominent shrub layer is usually present. The REs associated with the community include 6.4.2, 11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14, 11.12.21, 12.8.23, 12.9/10.6, 12.12.26. In Queensland, the community occurs mostly within the Brigalow Belt North, Brigalow Belt South, Darling Riverine Plains and Southeast Queensland bioregions, with smaller amounts in the Mitchell Grass Downs, Mulga Lands and Einasleigh Uplands Bioregions (DoEE 2016).</p> <p>Vegetation surveys of the Project Area identified four patches of <i>Acacia harpophylla</i> dominated woodland, mapped as RE 11.3.1 (RPS 2016b). Assessment against the key diagnostic characteristics and condition thresholds within the EPBC Act Approved Conservation Advice for Brigalow was not undertaken for these patches of vegetation as the survey data did not provide detailed condition descriptions. However, a precautionary approach is being taken and these areas are being assumed to be potential Brigalow.</p> <p>Potential impacts to this ecological community as a result of the proposed action are discussed in detail below.</p>
Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin	Endangered	Not occurring	<p>The Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin (natural grasslands) predominantly occurs within the Brigalow Belt North Bioregion on flat to gently undulating landforms (DoEE 2016).</p> <p>The Listing Advice (TSSC 2008) defines the subregions that the ecological community occurs within. These are:</p> <ul style="list-style-type: none"> <li>• Brigalow Belt North subregions: <ul style="list-style-type: none"> <li>◦ Northern Bowen Basin.</li> </ul> </li> </ul>

Ecological Community name	Listing status	Likelihood of occurrence	Details
			<ul style="list-style-type: none"> <li>○ Anakie Inlier.</li> <li>○ Basalt Downs.</li> <li>○ Isaac-Comet Downs.</li> <li>○ Nebo-Connors Range</li> <li>○ South Drummond Basin.</li> <li>• Brigalow Belt South subregions: <ul style="list-style-type: none"> <li>○ Claude River Downs.</li> <li>○ Buckland Basalts.</li> </ul> </li> </ul> <p>The Project Area <u>does not occur</u> within one of these subregions. It occurs within the Bogie River Hills subregion. The threatened ecological community is therefore not present on the Project Area.</p>
Semi-evergreen vine thickets of the Brigalow belt (North and South) Nandewar Bioregions	Endangered	Not occurring	<p>Semi-evergreen vine thicket is characterised by the dominance of trees with microphyll sized leaves, the presence of emergent Bottle Trees (<i>Brachychiton</i> spp.) and their occurrence in a subtropical seasonally dry climate on high to moderate fertility soils. In Queensland the community commonly occurs on undulating plains derived from fine sedimentary rocks and basalt hills and plains, and less commonly on coastal dunes. Associated REs with this community include 11.2.3, 11.3.11, 11.4.1, 11.5.15, 11.8.3, 11.8.6, 11.8.13, 11.9.4, 11.9.8, 11.11.18 (DoEE 2016).</p> <p>The proposed development area and surrounds do not support any of the REs associated with the ecological community, and field surveys did not find suitable habitat (RPS 2016a, RPS 2016b).</p> <p>It is therefore considered that the ecological community does not occur within the proposed Development Footprint or surrounding area.</p>

**Table 2: Likelihood of occurrence of EPBC Act listed threatened fauna species within the proposed Development Footprint and surrounds.**

Species name	Listing status	Likelihood of occurrence	Details
<i>Calidris ferruginea</i> Curlew Sandpiper	Critically Endangered Migratory	Unlikely	<p>The Curlew Sandpiper breeds in the northern hemisphere and migrates to Australia. In Australia, the species generally occurs around the coast but can also occur in inland. In Queensland, there are scattered records in the Gulf of Carpentaria, with widespread records along the coast south of Cairns (TSSC 2015a).</p> <p>Habitat for the species mainly comprises intertidal mudflats in sheltered coastal areas (such as estuaries, bays, inlets and lagoons), and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. The species is also recorded inland (though less often) including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters (TSSC 2015a).</p> <p>There are no records of the species within 10 km of the Project Area and there is no preferred habitat. It is considered unlikely to the species to occur.</p>
<i>Erythrotrorchis radiates</i> Red Goshawk	Vulnerable	Unlikely	<p>The Red goshawk occurs in coastal and sub-coastal areas of tropical and warm-temperate Australia (Marchant and Higgins 1993). It nests in large trees, and nest trees are invariably within 1 km of permanent water. Forests of intermediate density or ecotones between habitats of differing densities are favoured (DERM 2012).</p> <p>The Project Area is situated within the known range of the species but it has not been recorded within 10 km of the Project Area. Habitat quality for the species is considered marginal. The open vegetation structure provides limited ambush opportunities for the species and the Project Area is more likely used for flyover with some minor opportunistic foraging potential (RPS 2016a).</p> <p>It is considered unlikely that the species occurs within the Project Area or adjacent areas.</p>

Species name	Listing status	Likelihood of occurrence	Details
<i>Geophaps scripta scripta</i> Squatter Pigeon	Vulnerable	Known	<p>The Squatter pigeon (southern subspecies) occurs mainly in grassy woodlands and open forests that are dominated by eucalypts. It has also been recorded in sown grasslands with scattered remnant trees, disturbed habitats, in scrub and acacia growth, and remains common in heavily-grazed country north of the Tropic of Capricorn. It is almost always found close to bodies of water (DoEE 2016). In the Greater Townsville area, it is generally found in drier areas or where there are large expanses of thinly wooded grassland.</p> <p>A total of 32 Squatter Pigeon were observed during field investigations of the Project Area. The species is commonly observed in the region (RPS 2016a).</p> <p>Potential impacts to this species as a result of the proposed action are discussed in detail below.</p>
<i>Neochmia ruficauda ruficauda</i> Star Finch	Endangered	Not occurring	<p>The distribution of the Star finch (eastern subspecies) is very poorly known. It was last seen in the Townsville region in 1978 (Wieneke 1989). The subspecies now occurs only in central Queensland. Based on the small number of accepted records, the distribution of the subspecies is believed to extend north to Bowen, west to beyond Winton and, based on recent records, south to near Wowan. Within this range it occurs mainly in grasslands and grassy woodlands that are located close to bodies of fresh water (DoEE 2016).</p> <p>The Project Area occurs outside the known current distribution of the species. It is therefore considered that the species does not occur within the proposed Development Footprint or surrounding area.</p>
<i>Numenius madagascariensis</i> Eastern Curlew	Critically endangered Migratory	Unlikely	<p>The Eastern Curlew breeds in the northern hemisphere and migrates to Australia. Within Australia, the species has a primarily coastal distribution. It is found in all states, particularly the north, east, and south-east regions including Tasmania. The species is rarely recorded inland (TSSC 2015b).</p> <p>Habitat for the species is most commonly associated with sheltered coasts (especially estuaries, bays, harbours, inlets and coastal lagoons), with large intertidal mudflats or sandflats. Occasionally, the species occurs on ocean beaches, coral reefs, rock platforms, or rocky islets.</p> <p>The birds are often recorded among saltmarsh and on mudflats fringed by mangroves, and sometimes within the mangroves. The birds are also found in coastal saltworks and sewage farms (TSSC 2015b).</p> <p>There are no records of the species within 10 km of the Project Area and there is no preferred habitat. It is considered unlikely to the species to occur.</p>
<i>Poephila cincta cincta</i> Southern Black-throated Finch	Critically Endangered	Unlikely	<p>The Black-throated finch (southern subspecies) occurs mainly in grassy, open woodlands and forests, typically dominated by Eucalyptus (especially <i>E. platyphylla</i>), <i>Corymbia</i> and <i>Melaleuca</i>, and occasionally in tussock grasslands or other habitats (for example freshwater wetlands), often along or near watercourses, or in the vicinity of water (DEWHA 2009). It is likely that permanent sources of water provide refuge for this species during the dry season, especially during drought years.</p> <p>There are no wildlife online records of this species within 10 km of the Project Area and the closest known record is in excess of 60 km to the north-west.</p> <p>Habitat on the Project Area is marginal and the species is considered unlikely to occur.</p>

Species name	Listing status	Likelihood of occurrence	Details
<i>Rostratula australis</i> Australian Painted Snipe	Endangered	Not occurring	<p>The Australian painted snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains (DoEE 2016). Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire.</p> <p>There are no wildlife online records of this species within 10 km of the Project Area. Preferred habitat does not occur on the Project Area and it is considered that the species does not occur within the proposed Development Footprint or surrounding area.</p>
<i>Tyto novaehollandiae kimberli</i> Masked Owl	Vulnerable	Not occurring	<p>The Masked Owl occurs across tropical northern Australia, west to the Kimberley (WA). In Qld, it occurs in the northern third from Townsville north and west to the NT border (Curtis <i>et al.</i> 2012). The species is recorded from riparian forest, rainforest, open forest, Melaleuca swamps, edges of mangroves, and along the margins of sugar cane fields (DoEE 2016)</p> <p>There are no records of the species within 10 km of the subject Project Area and it is not considered to be a local resident in the region.</p> <p>It is considered that the species does not occur within the proposed Development Footprint or surrounding area.</p>
<i>Dasyurus hallucatus</i> Northern Quoll	Endangered	Unlikely	<p>The Northern Quoll is known to occur south to Gracemere and Mount Morgan, south of Rockhampton and north to Cooktown. It occupies a diversity of habitats including rocky areas, eucalypt forest and woodlands, rainforests, sandy lowlands and beaches, shrubland, grasslands and desert. However habitat generally encompasses some form of rocky area or hollow logs for denning purposes with surrounding vegetated habitat used for foraging and dispersal (DoEE 2016).</p> <p>There are no records of the species within 10 km of the Project Area and field surveys did not identify any preferred habitat within the Development Footprint or immediately adjacent areas.</p> <p>There are no wildlife online records of the species within 10 km of the survey area. A large, structurally diverse rocky range containing potential denning opportunities is located over 2.5 km east of the proposed Development Footprint. Foraging and dispersal habitat, is currently considered to be land within 2 km of denning and shelter habitats, existing quoll records, and native vegetation within the species home range (up to 100 ha for breeding males). Given the location of this potential habitat it is considered unlikely that the species would occur within the Development Footprint.</p>
<i>Macroderma gigas</i> Ghost Bat	Vulnerable	Unlikely	<p>The current range of this species is discontinuous with several geographically isolated colonies, occupying habitats ranging from arid desert environments to rainforest. They roost in caves, rock crevices and mine shafts with a stable temperature of 23 °C – 28 °C, and humidity between 50 – 100%. Previous studies indicated that foraging areas were on average 1.9 km from the roost site with a mean area of 61 ha (TSSC 2016a).</p> <p>There are no records of the species within 10 km of the Project Area. Roosting habitats, including maternity roosts, are unlikely to occur within the Development Footprint or immediately adjacent areas.</p> <p>Habitat in the form of caves and rock crevices are located within ranges, approximately 3.3km east of the Development Footprint, but the Project Area is not within the known foraging range of the species. It is considered unlikely for this species to occur.</p>

Species name	Listing status	Likelihood of occurrence	Details
<i>Petauroides volans</i> Greater Glider	Vulnerable	Unlikely	<p>This species occurs only in eastern Australia from the Windsor Tablelands in north Queensland to central Victoria. The species is restricted to Eucalypt forest and woodlands due to a diet consisting of eucalypt leaves and flowers. The species is most abundant in tall, moist eucalypt forest with abundant hollows, but prefers habitats with a diversity of Eucalypt species (TSSC 2016b).</p> <p>The closest confirmed record for the species is approximately 60 km south-east of the Project Area. The habitat within the Development Footprint and surrounds is considered to be drier than that preferred by the species, and the vegetation structure is too open and not of sufficient height for the species (RPS 2016a).</p> <p>The Greater Glider is therefore considered unlikely to occur within the proposed Project Area.</p>
<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT) Koala	Vulnerable	Known	<p>Distribution of the Koala extends from Cairns to the NSW border within a range of habitats including temperate, sub-tropical and tropical forest, woodland and semi-arid vegetation dominated by Eucalyptus. The highest density of the Koala population in Queensland occurs in South-east Queensland. Lower densities occur through central and eastern areas (DoEE 2016).</p> <p>There are areas of suitable habitat for the species adjacent to the Development Footprint and a single Koala was observed during field surveys in mid November 2016 (RPS 2016b). The species had previously not been recorded within 10 km of the proposed action.</p> <p>Potential impacts to this species as a result of the proposed action are discussed in detail below.</p>
<i>Denisonia maculata</i> Ornamental Snake	Vulnerable	Potential	<p>The species is known from the Brigalow Belt North and parts of the Brigalow Belt South regions in central Queensland. Preferred habitat for the species is within or close to habitat that is favoured by frogs, the main prey item for the species. It is known to prefer woodlands and open forests associated with moist areas, particularly gilgai mounds and depressions and also lake margins and wetlands (DoEE 2016).</p> <p>The species has been recorded in the following REs - 11.3.3, 11.4.3, 11.4.6, 11.4.8, 11.4.9, 11.5.16 (DoEE 2016). It is important to note that none of these REs are present within or adjacent to the Project Area.</p> <p>There have been no confirmed sightings of the species within the proposed development area, or within 10 km of the Project Area. However the Project Area is within the modelled distribution of the species and potentially suitable microhabitat is present in the form of cracking clays (RPS 2016a).</p> <p>Taking a precautionary approach, it is considered that areas adjacent to the Development Footprint may provide marginal, potential habitat for the species.</p> <p>Potential impacts to this species as a result of the proposed action are discussed in detail below.</p>
<i>Egernia rugosa</i> Yakka Skink	Vulnerable	Unlikely	<p>The Yakka Skink is known to be distributed from the coast to the hinterland of sub-humid to semi-arid eastern Queensland. It is known to occur in open dry sclerophyll forest, woodland and scrub and within these habitats is commonly found in cavities under and between partly buried rocks, logs, trees stumps, root cavities and abandoned animal burrows. In cleared areas, the species can persist where there are shelter sites such as raked log piles, deep gullies, tunnel erosion/sinkholes and rabbit warrens (DoEE 2016).</p> <p>The Yakka Skink is considered unlikely to occur within the proposed development area as there have been no confirmed records of this species within 10 km of the Project Area, and the Project Area does not contain suitable microhabitats such as rocks, logs or animal burrows (RPS 2016a).</p>

**Table 3: Likelihood of occurrence of EPBC Act listed threatened flora species within the proposed development area and surrounds.**

Species	Listing status	Likelihood of occurrence	Details
<i>Cycas ophiolitica</i>	Endangered	Unlikely	<p>This species grows on hilly terrain in sparse grassy open forest between 80-400 m above sea level. The species prefers red clay soils, but can also be found in shallow, stony soils derived from sandstone and serpentinite and in mudstone and alluvial loams. The majority of the species records occur along the coastal/sub-coastal strip north of Gladstone and south of St Lawrence, however modelling for the species suggests it may occur from Collinsville to Bundaberg (RPS 2016a).</p> <p>The closest confirmed record of the species is well south of the Project Area and field investigations of the proposed development area only identified marginal potential habitat (RPS 2016a).</p> <p>It is considered unlikely for the species to occur within the Project Area.</p>
<i>Eucalyptus raveretiana</i> Black Ironbox	Vulnerable	Known	<p>This species of Eucalypt normally occurs in riparian woodlands on alluvial flats along river banks on sandy and/or alluvial soils. <i>E. raveretiana</i> occurs from Rockhampton to Charters Towers and the lower Burdekin. It inhabits riparian woodlands on alluvial flats along river banks on sandy and/or alluvial soils (DoEE 2016).</p> <p>Preferred habitat in the form of sandy soils and alluvial flats associated with permanent and semi-permanent watercourses are present within the area (outside the Development Footprint).</p> <p>The species was recorded within the riparian areas adjacent to the Development Footprint.</p> <p>Potential impacts to this species as a result of the proposed action are discussed in detail below.</p>
<i>Omphalea celata</i>	Vulnerable	Unlikely	<p>This is a small tree that grows to 12 m high. It is known to occur in vine thicket along creeks or gullies, but is known to occur in only three locations in central east Queensland: Hazelwood Gorge (Eungella), Gloucester Island near Bowen and Cooper Creek near Nebo (DEWHA 2008).</p> <p>The Project Area occurs outside the known distribution of the species and no individuals were observed during field investigations. The Project Area also does not contain vine thicket habitat (RPS 2016a).</p> <p>The species is therefore considered unlikely to occur within the proposed development Project Area or adjacent areas.</p>

### Nature and extent of likely impact

The likelihood of occurrence assessment identified that:

- One threatened ecological community (Brigalow) is known to occur within the Project Area.
- Two threatened fauna species (Squatter Pigeon and Koala) are known to occur within the Project Area.
- One threatened fauna species (Ornamental Snake) has the potential to occur within the Project Area.
- One threatened flora species (Black Ironbox) is known to occur within the Project Area.

The nature and extent of potential impacts to these five MNES as a result of the proposed action are discussed below.

All other EPBC Act listed threatened species or ecological communities identified through the EPBC PMST report either do not occur within the Project Area or were considered unlikely to occur.

### Brigalow (*Acacia harpophylla* dominant and co-dominant)

The threatened ecological community (TEC), Brigalow (*Acacia harpophylla* dominant and co-dominant) is listed as endangered under the EPBC Act. The community has declined to approximately 10% of its original distribution, with approximately 804,264 ha of its estimated original extent of 7,324,560 ha remaining:

- 661,314 ha in Queensland; and
- 142,950 ha in New South Wales.

Mapping of the indicative extent of the endangered Brigalow community in Queensland and NSW indicates that the Brigalow TEC is distributed throughout central and south-east Queensland in highly fragmented patches from Charters Towers in the north to the Qld/NSW border in the south (EA 2003). Patches of the community are also indicatively mapped in areas in NSW including an area near Narrabri and an area near Bourke (EA 2003).

The community is characterised by the presence of Brigalow (*Acacia harpophylla*) as one of three dominant tree species. Other species that may be co-dominant or dominant with Brigalow are *Casuarina cristata*, other species of *Acacia* or species of *Eucalypts*. The community usually supports a prominent shrub layer, and the structure of the vegetation can range from open forest to open woodland (DoEE 2016). The community is defined to include 16 Regional Ecosystems in Queensland (6.4.2, 11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14, 11.12.21, 12.8.23, 12.9/10.6, 12.12.26).

The requirements relevant for a patch to be considered the EPBC Act listed Brigalow ecological community (within Queensland) are described below in accordance with the Approved Conservation Advice for the community (DoE 2013a).

#### Step 1 Key diagnostic characteristics

- The presence of *Acacia harpophylla* as one of the most abundant tree species in the patch. **AND**
- In Queensland- the patch is in one of the following Qld bioregions (including outliers) **and** it meets the description of one of the 16 Qld REs determined at the time of the national listing of the Brigalow ecological community under the EPBC Act. The 16 REs are, as described by the Queensland Herbarium (2013):
  - In the Qld Brigalow Belt Bioregion – REs 11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14 and 11.12.21.
  - In the Qld Southeast Queensland Bioregion – REs 12.8.23, 12.9-10.6 and 12.12.26; or,
  - In the Qld Mulga Lands Bioregion – RE 6.4.2. **AND/OR**
- The vegetation in the patch is brigalow regrowth with species composition and structural elements broadly typical of one of the identified Qld REs or NSW vegetation communities (although species density may be reduced). This can be assumed to be the case where it has been at least 15 years since it was last comprehensively cleared (not just thinned); unless direct evidence proves otherwise.

#### Step 2 Condition thresholds

- The patch is 0.5 ha or more in size; **AND**
- Exotic perennial plants comprise less than 50% of the total vegetation cover of the patch, as assessed over a minimum sample area of 0.5 ha (100 m by 50 m), that is representative of the patch.

#### Survey

A reconnaissance survey of the Project Area was undertaken by two RPS ecologists, from 1st to 3rd June 2016 (RPS 2016a). The reconnaissance survey was undertaken via field traverses of the Project Area and did not involve fine scale vegetation mapping, targeted surveys or in depth fauna surveys. The aim of the survey was to confirm the landscape scale habitat features for threatened flora and fauna with a potential to occur onsite and inform future survey requirements.

A detailed vegetation survey was undertaken by four ecologists from 13 -17th November 2016 (RPS 2016b). The flora investigation verified the existing Regional Ecosystem (RE) mapping within the Project Area using a quaternary level vegetation assessment of the communities present as defined in the 'Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland' (Nelder et al. 2012). The assessment involved field traverses and point surveys and the location of community boundaries was documented. Mapping of vegetation communities was then refined to more accurately describe the REs present.

#### Community presence and regional context

Vegetation surveys of the Project Area identified four patches of *Acacia harpophylla* dominated woodland, mapped as RE 11.3.1 (see **Figure 4**). Assessment against the key diagnostic characteristics and condition thresholds within the EPBC Act Approved Conservation Advice for Brigalow was not undertaken for these patches of vegetation as the survey data did not provide detailed condition descriptions. A conservative approach has instead been taken in assessing the presence of the community within the Project Area, and vegetation supporting REs consistent with the community's description have been mapped as potential Brigalow TEC. As such, the areas of vegetation mapped as RE 11.3.1 within the Project Area are considered to be potential EPBC Act listed Brigalow TEC.

These patches are located in the corridor of remnant vegetation between the northern and southern portions of the proposed Development Footprint, adjacent to Strathmore Road. The combined area of the five potential Brigalow TEC patches is estimated to be 39.7 ha. The closest mapped brigalow community to the Development Footprint is mapped immediately north of southern section of the development footprint (RPS 2016b).

Preliminary surveys of these vegetation patches found that the communities present were generally in poor condition, with a low species diversity. Most patches were observed to consist entirely of *A. harpophylla*, however some areas supported a diversity of species including *Terminalia oblongata*, *Eremophila mitchellii*, *Archidendropsis basaltica*, *Owenia acidula* and *Carissa ovata*.

The observed patch of potential Brigalow TEC is located at the very northern limit of the indicative community's extent (EA 2003).

#### Analysis of potential impacts

There will be no direct impacts to the 39.7 ha area of potential Brigalow TEC within the Project Area. The area of potential Brigalow TEC was identified early in preliminary ecological field investigations (RPS 2016a), and further refined in subsequent ecological investigations (RPS 2016b). As a result, the Development Footprint was specifically designed to ensure direct impacts to the TEC were avoided.

Given the current poor condition of the vegetation, the potential for indirect impacts is considered limited. However, taking a precautionary approach a number of management measures will be applied to ensure no indirect impacts occur. The potential indirect impacts and relevant management measures are discussed in Table 8 below. Further details of measures specific to Brigalow TEC can be found in the EMP (RPS 2016c).

**Table 4: Potential indirect impacts to Brigalow TEC and proposed management measures**

Potential indirect impact	Description of impact	Proposed management measures
Increased risk of fire	Fire is identified as a key threat to remaining patches of Brigalow TEC as unnatural, intensive fires can degrade the community through changes in vegetation structure and removal of important fauna habitat features (e.g. litter, woody debris) (DoEE 2016).  Clearing and development associated with the proposed action has the potential to increase the risk of bushfire and introduce invasive weeds/grasses into the area. Increased weed cover consequently increases the fuel load within areas of the community, and could result in more frequent and intense fires (DoEE 2016).	The proponent will implement a Bushfire Management Plan (RPS 2016d) to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.  Importantly, Asset Protection Zones will be maintained within the Development Footprint to ensure that bushfire hazard reduction activities do not impact on the surrounding vegetation (including the potential Brigalow TEC).
Increased weed incursion	The introduction and/or increase in the cover of weed species within areas of Brigalow TEC can result in changes in community vegetation structure and decreased habitat value for native species (DoEE 2016). Patches of the community that are fragmented as a result of development are at greater risk of weed incursion. Other areas of the community at increased risk to weed incursion are areas of patchy regrowth and areas in low rainfall (DoEE 2016).	The proponent will implement a number of weed control measures through the Environmental Management Plan (RPS 2016c). These will include specific measures to be undertaken at all times during construction and operation to minimise weed invasion across the Project Area.  The proposed action will also avoid direct impacts to patches of the potential Brigalow TEC and consequently avoid further fragmentation of the community.
Sediment and erosion	Clearing of vegetation and construction activities associated with the proposed action have the potential to increase erosion of soils and cause sedimentation in adjacent areas and watercourses. Such changes in land and soil can degrade areas of vegetation communities such as Brigalow TEC, and subsequently reduce habitat availability for flora and fauna.	A range of standard erosion and sedimentation management measures will be implemented by the proponent during all phases of the project to ensure erosion is not exacerbated by project activities. These measures are detailed in the EMP (RPS 2016c).

#### Significance of potential impacts

All direct and indirect impacts associated with the proposed action that could potentially affect the 39.7 ha area of potential Brigalow TEC have been considered. Based on the analysis above, the majority of these impacts pose a low risk and can be expected to have a negligible impact on the community. The proposed Solar Farm development will be subject to a range of management measures and controls which are considered adequate in managing these potential impacts.

Based on the lack of direct impacts and measures to manage potential indirect impacts, significant impacts to Brigalow TEC will not occur as a result of the proposed action.

Table 5 outlines the EPBC Act significant impact criteria and their relevance to Brigalow.

**Table 5: EPBC Act significant impact criteria and analysis for the potential Brigalow TEC**

EPBC Act significant impact criteria (DoE 2013)	Analysis against criteria
<i>Reduce the extent of an ecological community</i>	The proposed action will not result in a reduction in the extent of the community. The proposed development will not directly clear any of the area of potential Brigalow TEC. Potential indirect impacts will be avoided and minimised through specific management measures.
<i>Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines</i>	Fragmentation of the potential area of Brigalow TEC will not occur. The area of Brigalow TEC is outside the Development Footprint and will not be subject to any clearing or operational activities.

EPBC Act significant impact criteria (DoE 2013)	Analysis against criteria
<i>Adversely affect habitat critical to the survival of an ecological community</i>	The proposed action will not adversely affect habitat critical to the survival of Brigalow TEC. Areas considered critical to the survival of the Brigalow ecological community include all patches that meet the key diagnostic characteristics and condition thresholds for the ecological community; particularly where these include native vegetation. All areas of potential Brigalow TEC and surrounding vegetation will be avoided. Potential indirect impacts will be managed through specific measures required by the projects' EMP.
<i>Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns</i>	The proposed action will not impact abiotic factors necessary for the area of potential Brigalow TEC to survive. Potential indirect impacts to abiotic factors will be minimised through the implementation of the EMP.
<i>Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting</i>	The proposed action will not cause a substantial change in the species composition of Brigalow TEC. Potential changes to the structure of the vegetation through indirect impacts will be mitigated through a range of measures in the EMP.
<i>Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:</i> <ul style="list-style-type: none"> <li>• <i>assisting invasive species, that are harmful to the listed ecological community, to become established, or</i></li> <li>• <i>causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community.</i></li> </ul>	The proposed action will not result in a reduction in the quality or extent of Brigalow TEC. Potential indirect impacts to these factors will be minimised through the implementation of the EMP.
<i>Interfere with the recovery of an ecological community</i>	The proposed development will not interfere with the recovery of the ecological community. Several specific management measures will be in place to ensure the area of potential Brigalow TEC is protected and indirect impacts from the development are avoided.

### Squatter Pigeon (southern) (*Geophaps scripta scripta*)

The Squatter Pigeon is a medium-sized ground-dwelling pigeon listed as vulnerable under the EPBC Act. The species occupies a wide range of habitat types including areas of grassy woodlands and open forests. It is not known to be associated with specific vegetation communities across its range but is commonly recorded adjacent or near to permanent freshwater sources (DoEE 2016). The species is often recorded in areas of disturbed habitat including heavily grazed grasslands, scrub, and areas adjacent to roads and railway lines.

The species is distributed throughout the inland slopes of the Great Dividing Range, from the dry tropics of central Queensland to the south east of the state across a range of approximately 440,000 km<sup>2</sup> (DoEE 2016). The current population size of the Squatter Pigeon is estimated at 40,000 breeding birds, although the accuracy of this figure has been reported as low as systematic surveys of the species have not been undertaken. The population of Squatter Pigeon is thought to be stable in central to northern Queensland at present (TSSC 2015c), given its ubiquitous nature and relatively abundant occurrence.

The subspecies remains common north of the Carnarvon Ranges in central Queensland, where it is likely distributed as a single, continuous sub-population (TSSC 2015c). The contraction of the species range in a northward direction has led to the isolation of sub-populations of which the following are considered important to the species (noting none of these are relevant to the proposed action):

- Populations occurring in the Condamine River catchment and Darling Downs of southern Queensland.
- The populations known to occur in the Warwick-Inglewood-Texas region of southern Queensland.
- Any populations potentially occurring in NSW.

### Survey

Fauna was opportunistically observed during a preliminary field investigation of the Project Area over three days in June (2016) (RPS 2016a) and during a further field survey that was conducted over four days in November 2016 (RPS 2016b). A ground traverse of the proposed Development Footprint was undertaken. No targeted surveys or dawn bird surveys were undertaken.

### Species presence and regional context

During site investigations approximately 35 squatter pigeons were observed (RPS 2016b) within the Development Footprint. The grassy woodlands of the Project Area provide excellent habitat for squatter pigeon with a generally short, well grazed grassy understorey consisting of native and introduced grasses and several potentially permanent water resources in the form of farm dams. Habitat of this type is widespread across the region.

Given the context about the species population status within the region (TSSC 2015c), it is considered highly unlikely that these birds are part of an important sub-population.

### Analysis of potential impacts

The proposed action will lead to a range of permanent and temporary impacts within the Development Footprint. It is considered likely that the Squatter Pigeon will be excluded from the Development Footprint during the construction period. However, post construction there will be little ongoing disturbance and ground cover under the solar arrays will return to grass. It is considered likely that the species will be able to utilise the site once operation has commenced.

Potential indirect impacts to the species from the proposed action are considered negligible.

Based on the lack of impacts to an important sub-population and the temporary effects of the proposed action, significant impacts to the Squatter Pigeon will not occur as a result of the proposed action.

Table 6 addresses the species specific significant impact criteria as identified in the significant impact guidelines (DoE 2013).

**Table 6: EPBC Act significant impact criteria and analysis for Squatter Pigeon**

EPBC Act significant impact criteria (DoE 2013)	Analysis against criteria
<i>Lead to a long-term decrease in the size of an important population of a species</i>	The proposed action will not lead to a long term decline of the population within the region and this area is not considered to support an important sub-population
<i>Reduce the area of occupancy of an important population</i>	The proposed action will not reduce the area of occupancy of the species and this area is not considered to support an important sub-population
<i>Fragment an existing important population into two or more populations</i>	The proposed action will not lead to fragmentation and this area is not considered to support an important sub-population
<i>Adversely affect habitat critical to the survival of a species</i>	The proposed action will not adversely affect habitat critical to the survival of the species. Suitable habitat is widespread throughout the region and the area is not considered to support an important sub-population
<i>Disrupt the breeding cycle of an important population</i>	Given the availability of suitable habitat within the landscape, the proposed action will not significantly disrupt the breeding cycle of the species. The area is also not considered to support an important sub-population
<i>Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline</i>	The proposed action will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. Suitable habitat is widespread in the region and disturbances from the proposed action will be temporary
<i>Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat</i>	The proposed action will not result in invasive species that are harmful to the Squatter Pigeon. The nature of the proposed action means there is a very low risk of this occurring
<i>Introduce disease that may cause the species to decline</i>	The proposed action will not introduce disease that may cause the species to decline. The nature of the proposed action means there is a very low risk of this occurring
<i>Interfere substantially with the recovery of the species</i>	There will be minimal impacts to the Squatter Pigeon and the proposed action will not interfere substantially with the recovery of the species

### Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT)

#### Background

The combined Qld, NSW and ACT Koala populations are listed as vulnerable under the EPBC Act. The Koala's range extends from north-eastern Queensland to the Victorian border. The distribution of the species within this range is influenced by a number of environmental factors including altitude, temperature and the availability of water within the leaves of feed trees (DoEE 2016). Its distribution is not continuous as habitat is separated by areas of development, cleared land or unsuitable habitat.

The Koala inhabits a range of temperate, sub-tropical and tropical forest, woodland and semi-arid communities dominated by *Eucalyptus* species within its Qld/NSW/ACT distribution. Habitat has been defined as "any forest or woodland containing species that are known Koala food trees, or shrubland with emergent food trees (DoEE 2016)". Feed trees are predominately *Eucalyptus* spp., however their diet may also include *Corymbia* spp., *Angophora* spp. and *Lophostemon* spp. (DoEE 2016). Koalas are vulnerable to dehydration as they obtain all water requirements through the consumption of leaves. The water available to vegetation, or lack thereof, indirectly limits the value of particular trees to Koala, especially vegetation in exposed and elevated locations (e.g. hilltops, hillslopes, ridges etc).

Home ranges of the species are variable and may overlap between individuals as they are not territorial. Males tend to have larger ranges than females, and individuals in habitats of poorer quality tend to have larger ranges. Individuals do not make large movements on a daily basis, preferring to change trees a small number of times in a single day (DoEE 2016).

### Species presence within the region

Koalas are very sparsely distributed in North Queensland. In the Brigalow Belt North Bioregion, Koala's are estimated to occur in abundances in the vicinity of 0.01/ha to 0.005/ha (pers. comm. Alistair Meltzer) and have been sporadically observed in the Collinsville area, including two confirmed sightings documented on the Atlas of Living Australia. The first historical record is from 1987, and was made approximately 5 km south-east of the within the Project Area on the south side of Collinsville, whilst the second, from 2007, was taken approximately 7 km east of the within the Project Area, in Conway National Park, previously Sonoma State Forest. Furthermore, a targeted Koala study undertaken in Conway National Park by Alistair Meltzer (Central Queensland University) in 2007 recorded 12 Koalas in the area (pers. comm. Alistair Meltzer) and is probably the most significant Koala population in the area.

Primary or key food species known to occur in the region include *Eucalyptus crebra*, *E. melanophloia*, *E. coolabah*, *E. tereticornis*, *E. camaldulensis* and *E. platyphylla* (seasonally) (pers. comm. Alistair Meltzer; Meltzer et al. 2014), where the genus *Corymbia* spp. is considered of limited foraging value (pers. comm. Alistair Meltzer; Meltzer et al. 2014).

The Conway National Park population provides an indication of the species preferred habitat in the local area. The population was found to occupy suitable vegetation (i.e. food trees) on sandy creek flats, river flats and also around the headwaters of the Pelican Creek catchment. This area is considered to be refugial habitat into which Koala populations converge during dry periods, such as during El Niño events and should be considered primary Koala habitat for the local population (pers. comm. Alistair Meltzer). This area of habitat is located approximately 7 km east of the proposed within the Project Area. Although connectivity between the refugial habitat and the Project Area has been severed (i.e. Bowen Developmental Road and Collinsville-Bowen railway), the significance of the severance could not be confirmed. Considering the regularity that southern Koala populations cross roads or are involved in accidents, this barrier is probably unlikely to prevent Koala dispersal to the surrounding landscape when environmental conditions are more suitable.

### Survey

A reconnaissance survey of the Project Area was undertaken by two RPS ecologists, from 1st to 3rd June 2016 (RPS 2016a). The reconnaissance survey was undertaken via field traverses of the Project Area and did not involve fine scale vegetation mapping, targeted surveys or in depth fauna surveys. The aim of the survey was to confirm the landscape scale habitat features for threatened flora and fauna with a potential to occur onsite and inform future survey requirements.

A detailed vegetation survey and targeted survey for Koala was also undertaken by four ecologists from 13-17th November 2016 (RPS 2016b). The targeted Koala surveys used a range of survey methods to detect the species, including diurnal searches, nocturnal spotlighting (driving and on foot), call playback (22 sites) and searches for scats and scratches. These surveys were undertaken in suitable habitat over a period of three nights (13-15th November), totalling 36 survey hours.

Detailed vegetation surveys were also undertaken within the Project Area to further assess the value and condition of habitat for Koalas. A qualitative assessment of potential Koala habitat was then undertaken that defined the habitat values across the Project Area (RPS 2016b). It is important to note that this approach was taken in addition to applying the Koala habitat assessment tool (DoE 2014) on the Development Footprint area. The habitat values were assessed in accordance with the following criteria:

- No Habitat Value = area contains no habitat or food trees.
- Very Low Value = area contains habitat trees but no food trees.
- Low Value = area contains habitat trees and primary food trees occupy less than 50% of canopy vegetation.
- Moderate Value = area contains habitat trees and primary food trees occupy greater than 50% of canopy vegetation.
- High Value = area contains habitat trees and a diversity of food trees with long term access to groundwater (i.e. near watercourses predominantly).

The detailed survey results were also used to calculate the value of potential Koala habitat within the Development Footprint in accordance with the Koala habitat assessment tool (DoE 2014).

### Species presence within the Project Area

No Koalas or signs of Koalas (i.e. scats, tree scratches or calls) were noted during the preliminary site investigation in June 2016. However, one Koala was detected within the south eastern corner of the Project Area during the subsequent targeted Koala survey in mid November 2016. The Koala was observed at night within the riparian zone of a third order watercourse. The record is located (see **Figure 5**) within good condition vegetation with limited weed invasion. The area contained the following REs:

- 11.3.4a – *Corymbia tessellaris* woodland on floodplains.
- 11.3.30 – *Eucalyptus crebra* and/or *Corymbia dallachiana* woodland on sandy plains.

The riparian vegetation within the Project Area contains the highest diversity and density of Koala food trees, and the quality of the foliage in terms of moisture content is higher due to greater water availability (particularly along the more significant watercourses). This is expected given that the Project Area is located in a seasonally dry to semi-arid environment (average annual rainfall 500-700mm) and riparian areas have access to more water. The level of rainfall at the Project Area has the potential to exclude Koalas during the dry season, though there may still be suitable habitat under wet season conditions (RPS 2016b). The riparian vegetation was assessed as High Value for the Koala (see **Figure 5**).

Vegetation (see **Figure 5**) within the other areas of the Project Area was assessed (RPS 2016b) as a mixture of high (focused on the riparian zones), moderate, low, very low, and no habitat value.

**Development Footprint design to avoid habitat critical to the survival of the Koala**

Given the discovery of a Koala and the variety of Koala habitat value across the Project Area, every effort was made to design the Development Footprint to avoid impacts to habitat critical to the survival of the species (defined as a habitat score of 5 or greater in accordance with the Koala referral guidelines and habitat assessment tool (DoE 2014)).

As a result of this avoidance process, the 455 ha Development Footprint contains no habitat critical to the survival of the species. Potential habitat within the Development Footprint was assessed in detail using the Koala habitat assessment tool (see **Figure 6**). Within the 455 ha footprint, approximately:

- 172 ha had a habitat score of 0 (i.e. it was not Koala habitat). This area does not support any Koala food or habitat trees.
- 282 ha had a habitat score of 4 (see Table 7). As defined by the Koala referral guidelines (DoE 2014) these areas are therefore not considered to contain habitat critical to the survival of the species.

**Table 7: habitat assessment score for potential Koala habitat within the Development Footprint (RPS 2016b)**

Attribute	Score	Inland	Score and comments
<b>Koala Occurrence</b>	+2 (high)	Evidence of one or more Koalas within the last 5 years.	<b>Score = 0</b> The Koala record was more than 2 km from the potential Koala habitat to the north of Strathmore Road.
	+1 (medium)	Evidence of one or more Koalas within 2 km of the edge of the Development Footprint within the last 10 years.	
	0 (low)	None of the above.	
<b>Vegetation Composition</b>	+2 (high)	Has forest, woodland or shrubland with emerging trees with 2 or more known Koala food tree species, <b>OR</b>	<b>Score = 1</b> One species of Koala food tree present.
	+1 (medium)	Has forest, woodland or shrubland with emerging trees with only 1 species of known Koala food tree present.	
	0 (low)	None of the above.	
<b>Habitat Connectivity</b>	+2 (high)	Area is part of a contiguous landscape $\geq 1000$ ha.	<b>Score = 2</b> The Project Area is part of a contiguous landscape that exceeds 1,000 ha.
	+1 (medium)	Area is part of a <b>contiguous landscape</b> $< 1000$ ha, but $\geq 500$ ha.	
	0 (low)	None of the above.	
<b>Key Existing Threats</b>	+2 (high)	Little or no evidence of Koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for Koala occurrence. Areas which score 0 for Koala occurrence and have no dog or vehicle threat present	<b>Score = 1</b> Areas of the Development Footprint score a 0 for Koala occurrence. There is likely to be some dog threat present onsite, though vehicle threat is minor.
	+1 (medium)	Evidence of infrequent or irregular Koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for Koala occurrence, <b>OR</b> Areas which score 0 for Koala occurrence and are likely to have some degree dog or vehicle threat present.	
	0 (low)	Evidence of frequent or regular Koala mortality from vehicle strike or dog attack in the study area at present, <b>OR</b> Areas which score 0 for Koala occurrence and have a significant dog or vehicle threat present.	

Attribute	Score	Inland	Score and comments
Recovery Value	+2 (high)	Habitat is likely to be important for achieving the interim recovery objectives.	<p><b>Score = 0</b></p> <p>The habitat is unlikely to be important for achieving the interim recovery objectives for Koala in the inland context of the species range.</p> <p>The first key recovery objective in the inland context is to protect and conserve the quality and extent of habitat refuges for the persistence of the species during droughts and periods of extreme heat, especially in riparian environments and other areas with reliable soil moisture and fertility. Development Footprints of the site are not refugial, offering sparse, open woodlands with limited foliage cover and shade. Riparian vegetation of higher order watercourses and their associated alluvial floodplains are not located in the Development Footprint. A 50m vegetated buffer will be applied to 3<sup>rd</sup> order watercourses. The second recovery objective in the inland context of the species is to maintain the quality, extent and connectivity of large areas of Koala habitat surrounding habitat refuges.</p> <p>It is assumed that woodlands and riparian vegetation in the south-east of the survey area is refugial habitat. Landscape connectivity with this area will be maintained by retaining the minimum 50m riparian vegetation protection and also floodplain vegetation where primary food trees occur. A second known Koala refuge area is located to the east of the Bowen Developmental Rd and existing rail lines. Extensive areas of connected vegetation link the two refugial areas.</p>
	+1 (medium)	Uncertain whether the habitat is important for achieving the interim recovery objectives.	
	0 (low)	Habitat is unlikely to be important for achieving the interim recovery objectives.	
			<p><b>Total habitat score = 4</b></p> <p><b>Habitat is <u>not critical</u> to the survival of the species</b></p>

#### Analysis of potential impacts

Based on the avoidance measures undertaken in the design of the Development Footprint, there will be no direct impacts to habitat critical to the survival of the species. There will be impacts to approximately 282 ha of Low Habitat Value areas that score 4 using the Koala habitat assessment tool (see Table 7). However, these areas provide limited value for the species and as indicated in the Koala referral guidelines (DoE 2014) these impacts are not considered significant.

The Project Area more broadly does contain a range of High Value Koala habitat that would be considered habitat critical to the survival of the species (particularly focused within the riparian areas). These areas will be avoided by the proposed action. The only activity that has the potential to lead to direct impacts is the construction of connecting infrastructure between different sections of the Development Footprint (e.g. cabling) (see **Figure 2**). These activities will result in very limited disturbance (less than 2 ha in total) and will be undertaken using micro-siting to ensure that no important Koala food or habitat trees are impacted.

A range of indirect impacts may occur as a result of the proposed Solar Farm construction and ongoing operational activities. These potential impacts to Koala habitat will be appropriately minimised through a number of specific management measures in the relevant project management plans. The potential indirect impacts and relevant management measures are discussed in Table 8 below. Further details of measures specific to Koala can be found in the EMP (RPS 2016c).

**Table 8: Potential indirect impacts to Koala and proposed management measures**

Potential indirect impacts	Description	Proposed management measures
Mortality from vehicles	Mortality from vehicles is identified as a key threat in the Koala referral guidelines (DoE 2014). Vehicle movement during construction and in a very limited way during operation has the potential to increase the risk of mortality from vehicles.	The proponent will implement a number of traffic control measures through the Environmental Management Plan (RPS 2016c). These will include specific measures in relation to speed restrictions (max 20km/hr within the Development Footprint), site inductions, and signage.
Mortality from dogs/dingoes	Mortality from dogs/dingoes is identified as a key threat in the referral guidelines (DoE 2014). The proposed action has the potential to increase the presence of dogs if waste is not appropriately managed.	The proponent will implement a range of management measures through the Environmental Management Plan (RPS 2016c) to ensure waste is appropriately managed.

Potential indirect impacts	Description	Proposed management measures
Increased risk of fire	Fire has the potential to degrade habitat and lead to mortality of individual Koalas. The proposed action has the potential to increase fire risk if relevant activities and areas are left unmanaged or managed inappropriately.	The proponent will implement a Bushfire Management Plan (RPS 2016d) to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.  Bushfire Asset Protection Zones will be maintained <u>within</u> the Development Footprint and will not impact on surrounding vegetation.
Fragmentation of habitat	Maintaining landscape connectivity is a critical component to achieving the recovery objectives of the species. The proposed action has the potential to fragment the landscape through the use of fencing around the Development Footprint.	The proponent will implement a number of measures through the Environmental Management Plan to facilitate landscape connectivity (RPS 2016c). These will include retaining all vegetation outside the Development Footprint and using fencing that enables safe movement of Koalas across the Project Area.
Disturbance and mortality during construction	Although it is considered highly unlikely that Koalas will be present in the Development Footprint, clearing of low habitat value areas during construction has the potential to lead to harm to individual Koalas should they be present.	The proponent will implement a number of measures through the Environmental Management Plan to protect Koalas during construction (RPS 2016c). These will include specific measures to conduct pre-clearance surveys and the use of a fauna spotter.

### Significance of potential impacts

All potential direct and indirect impacts associated with the proposed action on the Koala have been considered. Based on the avoidance of direct impacts to habitat critical to the survival and the management of potential indirect impacts, significant impacts to the Koala will not occur as a result of the proposed action.

Table 9 addresses the species specific significant impact criteria as identified in the Koala referral guidelines (DoE 2014).

**Table 9: EPBC Act significant impact criteria from the Koala guidelines**

EPBC Act significant impact criteria for Koala (DoE 2014)	Analysis against criteria
<i>Adversely affecting habitat critical to the survival of the Koala</i>	The proposed action will not directly impact habitat critical to the survival of the species. The Development Footprint has been specifically designed to avoid areas of Koala habitat with a score of 5 or greater using the koala habitat assessment tool.
<i>Interfering substantially with the recovery of the Koala through the introduction or exacerbation of key threats in areas of habitat critical to the survival of the Koala</i>	Potential indirect impacts from the proposed action on habitat critical to the survival will be mitigated and managed through a range of measures. These measures are considered appropriate for reducing risks to the species and are incorporated into the Environmental Management Plan (RPS 2016c) and Bushfire Management Plan (RPS 2016d).

### Ornamental Snake (*Denisonia maculata*)

#### General description

The Ornamental Snake is thought to be endemic to the Brigalow Belt North and parts of the Brigalow Belt South biogeographic regions in central-eastern Queensland (RPS, 2016b). Suitable habitat for the species comprises open-forests to woodlands associated with gilgai formations and wetlands (DSEWPaC, 2011). These moist habitats provide habitat for frogs, which are the primary food source for the Ornamental Snake.

The species is most commonly recorded in areas with vegetation communities dominated by Brigalow (*Acacia harpophylla*), Gidgee (*Acacia cambagei*), Blackwood (*Acacia argyrodendron*) or Coolibah (*Eucalyptus coolabah*) and grasslands on Gilgai (melon-hole mounds and depressions) (RPS, 2016b).

The most common Queensland RE in which the species has been recorded is RE 11.4.3. Other common RE types where the species has been recorded are (DoEE 2016):

- 11.4.3 – Open forest dominated by Brigalow and/or Belah clay soils not associated with current alluvium.
- 11.4.6 – Gidgee woodland clay soils not associated with current alluvium.
- 11.4.8 – Woodland to open forest dominated by Dawson Gum (*Eucalyptus cambageana*) and Brigalow or, sometimes in the north of the species range, Blackwood/Black Gidgee. Yapunyah (*E. thozetiana*) is sometimes present on shallower clay soils not associated with current alluvium
- 11.4.9 – Open forest, occasionally woodland, dominated by Brigalow on clay soils not associated with current alluvium. A low tree mid-storey of Yellow-wood (*Terminalia oblongata*) and False Sandalwood (*Eremophila mitchellii*) is usually present. Belah sometimes dominates in place of Brigalow in the overstorey and Bauhinia (*Lysiphyllum cunninghamii*) sometimes co-dominates.

Other REs in which the ornamental snake has been recorded includes (Agnew 2010 pers. comm, cited in DoEE 2016):

- 11.3.3 – Coolibah woodland adjacent to large areas, treeless, ephemeral wetland on alluvium (river and creek flats).
- 11.5.16 – Brigalow and/or Belah open-forest in depressions in Cainozoic old loamy and sandy plains. Associated with gilgai with one-metre local relief and 5-6 m in diameter.

Microhabitat features preferred by the species include deep cracks formed in vertisols with shrink-swell properties and gilgai formations (Wilson & Taylor 2012 cited in RPS, 2016b). These microhabitats are thought to retain moisture, providing a valuable and easily accessible refuge site during dry periods (RPS, 2016b). Other potential microhabitats used for shelter include (DSEWPac, 2011):

- live or decaying plant material, such as tussock bases, rotting logs or tree bases; and
- debris situated at the soil surface, such as coarse woody debris, leaf litter, rocks or artificial debris.

As a 'vulnerable' species under the EPBC Act, it is relevant to consider whether a population of Ornamental Snake is considered 'important'. According to the Commonwealth's referral guidelines for nationally listed Brigalow Belt reptiles (DSEWPac, 2011), important habitat is used as a surrogate for important populations in the assessment of whether an action is likely to have a significant impact on the Ornamental Snake. The guidelines state that 'suitable habitat' for any one of the listed Brigalow Belt reptiles is considered 'important' if it is:

- habitat where the species has been identified during a survey;
- near the limit of the species' known range;
- large patches of contiguous, 'suitable habitat' and viable landscape corridors (necessary for the purposes of breeding, dispersal or maintaining the genetic diversity of the species over successive generations); or
- a habitat type where the species is identified during a survey, but which was previously thought not to support the species.

The guidelines define 'suitable habitat' for the Ornamental Snake as:

*Open-forests to woodlands associated with gilgai formations and wetlands. These are commonly mapped as QLD REs 11.3.3, 11.4.3, 11.4.6, 11.4.8, 11.4.9, 11.5.16 or mapped as cleared but where the above REs formerly occurred*

The guidelines define 'known important habitat' for the Ornamental Snake as:

*Gilgai depressions and mounds and habitat connectivity between gilgai and other suitable habitats.*

### **Surveys**

A reconnaissance survey of the Project Area was undertaken by two RPS ecologists, from 1st to 3rd June 2016 (RPS, 2016a). The reconnaissance survey was undertaken via field traverses of the Project Area and did not involve fine scale vegetation mapping, targeted surveys or in depth fauna surveys. The aim of the survey was to confirm the landscape scale habitat features for threatened flora and fauna with a potential to occur onsite and inform future survey requirements.

A follow-up, detailed vegetation survey, habitat assessment and targeted survey for Koala was undertaken by four ecologists from 13-17th November 2016 (RPS, 2016b). The flora investigation verified the existing Regional Ecosystem (RE) mapping of the Project Area using a quaternary level vegetation assessment of the communities present as defined in the 'Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland' (Nelder et al. 2012). The assessment involved field traverses and point surveys and the location of community boundaries was documented. Vegetation communities were therefore remapped to more accurately describe the REs present.

Habitat suitability assessment for the Ornamental Snake was carried out within areas considered to have any potential to support the species. This assessment focussed on the presence of broad-scale habitat features such as cracking clay soils and gilgai, the presence of other microhabitats or refuge sites and ecological condition.

### **Species presence and regional context**

The Project Area is located within the modelled distribution of the species (DSEWPac, 2011). However the Ornamental Snake has not been identified within the Project Area and the closest record is approximately 20 km to the south-west (RPS, 2016a; RPS, 2016b).

Approximately 203 ha of marginal, potential habitat for Ornamental Snake has been identified within the Project Area (see **Figure 7**). The potential habitat area has been mapped as RE 11.4.4 but was considered non-remnant at the time of survey. It has been defined as potential habitat on a precautionary basis due to the presence of some gilgai (noting that it has been subject to compaction due to grazing). The area is considered to be marginal at best (RPS, 2016b) and it is considered unlikely that the area represents 'important habitat' for the reasons outlined in the table below.

**Table 10: Assessment of important habitat criteria for the Ornamental Snake**

Criteria for assessing important habitat (DSEWPAC 2011)	Analysis against criteria
<i>Habitat where the species has been identified during a survey</i>	There are no records of the species occurring within the Project Area, with the nearest record approximately 20 km to the southwest.
<i>Near the limit of the species' known range</i>	The Project Area is not located near the limit of the species' known range.
<i>Large patches of contiguous, 'suitable habitat' and viable landscape corridors (necessary for the purposes of breeding, dispersal or maintaining the genetic diversity of the species over successive generations)</i>	<p>Potential habitat within the Project Area is considered to be marginal at best and unlikely to be considered 'suitable habitat' or to represent a viable landscape corridor for the following reasons:</p> <ul style="list-style-type: none"> <li>• The species is not known to be associated with RE 11.4.4. None of the REs specifically identified as suitable habitat in the Commonwealth's referral guidelines are present within the Project Area or surrounds.</li> <li>• The ecological condition of the potential habitat area was assessed as poor due to weed invasion and soil compaction from cattle.</li> <li>• There is a general lack of habitat complexity. While the area contains some broad scale habitat features suitable for the species (ie, gilgai), other microhabitat features (such as fallen timber or wooden debris) are absent.</li> </ul>
<i>A habitat type where the species is identified during a survey, but which was previously thought not to support the species</i>	The species is not known to be associated with any of the REs present within the Project Area.

**Analysis of impacts**

The proposed Development Footprint intersects with approximately 26 ha of the area identified as marginal, potential habitat for Ornamental Snake (see **Figure 7**). The Development Footprint intersects with the fringing areas of this potential habitat, retaining the consolidated, contiguous areas that make up the majority (87%) of mapped potential habitat. The footprint design ensures that continuity of the potential habitat area is achieved, maintaining connectivity at a landscape level if the species were to occur.

The proposed action involves minimal ground disturbance which would only be associated with temporary construction impacts. Potential microhabitats relating to gilgai and cracking clay soils would therefore remain largely undisturbed within the Development Footprint. While the species is not considered likely to occur within the Project Area, if they were to occur, individuals would still be able to access any undisturbed habitat features intersected by the Development Footprint.

Potential indirect impacts to potential Ornamental Snake habitat have been considered and include degradation of microhabitat features associated with:

- the introduction of exotic weed species;
- increased run-off, sedimentation and erosion;
- pollution from chemical or fuel spills; and
- increased risk of fire.

While the species is not considered likely to be present within the Project Area, a precautionary approach has been adopted and a suite of mitigation and management measures specifically designed to address these potential indirect impacts will be implemented as part of the Solar Farm Environmental Management Plan (EMP).

**Significance of potential impacts**

The potential direct and indirect impacts associated with the proposed action have been assessed in relation to the Ornamental Snake. The Project Area contains only marginal, potential habitat areas and these areas are considered unlikely to represent important habitat for the species. This in turn means that an important population is unlikely to be present. Significant impacts to the Ornamental Snake will not occur as a result of the proposed action.

The following table addresses the criteria identified in the referral guidelines to define a high risk of significant impacts and addresses issues relating to uncertainty of the significance of potential impacts.

**Table 11: Assessment against Ornamental Snake significant impact criteria**

Criteria defining a high risk of significant impacts (DSEWPAC 2011)	Analysis against criteria
<i>The loss, fragmentation or change in the ecological character or function of important habitat which is likely to adversely affect the recovery of the Ornamental Snake</i>	<p>The Project Area is considered unlikely to contain important habitat.</p> <p>Potential microhabitats associated with gilgai and cracking clay soils will remain largely undisturbed within the Development Footprint and access to these areas will not be impeded should individuals be present in the vicinity.</p> <p>Recovery of the species is therefore considered highly unlikely to be adversely affected by the proposed action.</p>

Criteria defining a high risk of significant impacts (DSEWPAC 2011)	Analysis against criteria
<i>The fragmentation of important habitat or landscape corridors through the introduction of a barrier to dispersal</i>	The Project Area is considered unlikely to contain important habitat. The proposed action will not introduce any barriers to movement should individuals be present in the vicinity.
<i>The introduction of invasive weeds, including the deliberate or accidental sowing of pasture grasses, within 30 m of important reptile habitat without appropriate and ongoing control measures</i>	The Project Area is considered unlikely to contain important habitat. Weed mitigation and management measures will be implemented in accordance with the EMP.
<i>Enabling the access of animal pests, including cats, pigs and cane toads, to important reptile habitat without appropriate and ongoing control measures</i>	The Project Area is considered unlikely to contain important habitat. However, measures to ensure that feral predators are not encouraged by the proposed action will be implemented in accordance with the EMP. This will include appropriate management of site waste.
<i>Cattle grazing activities resulting in the degradation of microhabitat features within important habitat patches (for important gilgai habitats, this only applies when gulgais contain surface water)</i>	The Project Area is considered unlikely to contain important habitat. Cattle grazing which is currently degrading potential habitat areas will be excluded as a result of the proposed action.
<i>Alteration of water quality or quantity affecting four or more hectares of important gilgai or riparian habitat</i>	The Project Area is considered unlikely to contain important habitat. The proposed action will not lead to changes in environmental flows. Potential impacts associated with pollution, run-off, sedimentation and erosion will be managed in accordance with the EMP.
<i>Clearing two or more hectares of important habitat</i>	The Project Area is considered unlikely to contain important habitat.
Criteria relating to uncertainty in the significance of potential impacts	Analysis against criteria
<i>Uncertainty about whether an impact is likely to occur within the modelled distributions of the listed Brigalow Belt reptiles.</i> <i>Uncertainty about whether a patch of non-remnant vegetation or habitat degraded by invasive animal or plant species constitutes suitable habitat for one or more listed Brigalow Belt reptiles.</i> <i>Uncertainty about whether an action is likely to have a direct or indirect impact on important habitat for one or more listed Brigalow Belt reptiles.</i>	While the Project Area occurs within the modelled distribution of the species, it is considered unlikely that: <ul style="list-style-type: none"> <li>the marginal, potential habitat identified constitutes suitable habitat; or</li> <li>the Project Area contains important habitat.</li> </ul>
<i>Uncertainty about whether an action will substantially impede the recovery of one or more listed Brigalow Belt reptile species</i>	The Ornamental Snake has not been recorded within the Project Area or local region and potential habitat is considered marginal at best. Irrespective of this, potential microhabitats associated with gilgai and cracking clay soils will remain largely undisturbed within the Development Footprint and access to these areas will not be impeded should individuals be present in the vicinity. Exclusion of cattle within potential habitat areas is expected to improve the condition and potential for microhabitats to support the species. Recovery of the species is therefore considered highly unlikely to be substantially impeded by the proposed action.
<i>Clearing between one and two hectares of important habitat</i>	The Project Area is considered unlikely to contain important habitat.

### **Black Ironbox (*Eucalyptus raveretiana*)**

#### **General description**

Black Ironbox (listed as vulnerable under the EPBC Act) is a tall and stately eucalypt that normally inhabits riparian woodlands on alluvial flats along river banks on sandy and/or alluvial soils (Calvert et al. 2005; DotE, 2015a as cited in RPS 2016b). The species occurs from Rockhampton to Charters Towers and the Lower Burdekin.

#### **Surveys**

A reconnaissance survey of the Project Area was undertaken by two RPS ecologists, from 1st to 3rd June 2016 (RPS, 2016a). The reconnaissance survey was undertaken via field traverses of the Project Area and did not involve fine scale vegetation mapping, targeted surveys or in depth fauna surveys. The aim of the survey was to confirm the landscape scale habitat features for threatened flora and fauna with a potential to occur onsite and inform future survey requirements.

A follow-up, detailed vegetation survey, habitat assessment and targeted survey for Koala was undertaken by four ecologists from 13-17th November 2016 (RPS, 2016b). The flora investigation verified the existing Regional Ecosystem (RE) mapping of the Project Area using a quaternary level vegetation assessment of the communities present as defined in the 'Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland' (Nelder et al. 2012 as cited in RPS 2016b). The assessment involved field traverses and point surveys and the location of community boundaries was documented. Vegetation communities were therefore remapped to more accurately describe the REs present.

Surveys included traverses of the riparian corridors within the Project Area. The extent of *E. raveretiana* habitat within the riparian corridors was mapped.

**Species presence and regional context**

The Project Area is within the known distribution of the species and contains preferred habitat in the form of sandy soils and alluvial flats associated with permanent and semi-permanent watercourses. These habitat areas are shown in attached

**Figure 8.**

The species was recorded in moderate numbers within these riparian areas. All individuals observed were constrained within the bed and banks of the major watercourses (RPS 2016b).

**Analysis of impacts**

There will be no direct impacts to Black Ironbox as a result of the proposed action. The Development Footprint is located a minimum distance of 30 m from all recorded individuals. This buffer distance accords with the recommendations under 'Threat Abatement and Recovery' in the species SPRAT profile (DoEE 2016).

The Development Footprint includes indicative layouts for infrastructure required to connect the various development patches through either underground cabling or access roads. Route selection for this infrastructure will involve micro-siting with qualified ecologists to avoid any direct impacts to Black Ironbox individuals and maintain a minimum 30 m buffer distance.

Potential indirect impacts to Black Ironbox associated with the proposed action have also been considered. These potential impacts will be avoided or minimised through a number of specific management measures that will be implemented as part of the Solar Farm Environmental Management Plan (EMP). An outline of these potential impacts and the associated management measures is provided in Table 12.

**Table 12: Potential indirect impacts to Black Ironbox and proposed management measures**

Potential indirect impact	Description of impact	Proposed management measures
Increased weed incursion	The introduction and/or increase in invasive weeds is identified as a key threat to the species. Particular issues include Rubber Vine and large exotic grasses.	The proponent will implement a number of weed control measures through the Environmental Management Plan (RPS 2016c). These will include specific measures to be undertaken at all times during construction and operation to minimise weed invasion across the Project Area.
Sediment and erosion	Clearing of vegetation and construction activities associated with the proposed action have the potential to increase erosion of soils and cause sedimentation in adjacent areas and watercourses. Such changes in land and soil can degrade the riparian areas that provide habitat for the species.	A range of standard erosion and sedimentation management measures will be implemented by the proponent during all phases of the project to ensure erosion is not exacerbated by project activities. These measures are detailed in the EMP (RPS 2016c).
Increased risk of fire	Fire can have a detrimental effect on Black Ironbox. Clearing and development associated with the proposed action has the potential to increase the risk of bushfire and introduce invasive weeds/grasses into the area. Increased weed cover consequently increases the fuel load within areas of the community, and could result in more frequent and intense fires (DoEE 2016).	The proponent will implement a Bushfire Management Plan (RPS 2016d) to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.

**Significance of potential impacts**

Direct impacts to riparian habitats for Black Ironbox and recorded individuals will be avoided with a minimum 30 m buffer. Potential indirect impacts have been identified and will be addressed through a set of specific measures implemented under the EMP. Significant impacts to Black Ironbox will not occur as a result of the proposed action.

The following table addresses the significant impact criteria identified in the Commonwealth's Significant Impact Guidelines (DoE 2013).

**Table 13: EPBC Act significant impact criteria and analysis for Black Ironbox**

EPBC Act significant impact criteria (DoE 2013)	Analysis against criteria
<i>Lead to a long-term decrease in the size of an important population of a species</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. There will therefore be no long-term decrease in the size of an important population of the species.
<i>Reduce the area of occupancy of an important population</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. As a result, the proposed action will not reduce the area of occupancy of the species.
<i>Fragment an existing important population into two or more populations</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. As a result, the proposed action will not lead to fragmentation.
<i>Adversely affect habitat critical to the survival of a species</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. As a result, the proposed action will not adversely affect habitat critical to the survival of the species.
<i>Disrupt the breeding cycle of an important population</i>	The proposed action will not interfere with any aspects of species pollination or germination.
<i>Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. As a result, the proposed action will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.
<i>Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat</i>	Weed mitigation and management will be undertaken as part of the proposed action. The proposed action will not result in invasive species that are harmful to Black Ironbox species becoming established within habitat areas.
<i>Introduce disease that may cause the species to decline</i>	The proposed action will not introduce disease that may cause the species to decline.
<i>Interfere substantially with the recovery of the species</i>	The proposed action will not impact on any recorded individuals of the species or associated habitat within the Project Area. As a result, the proposed action will not interfere substantially with the recovery of the species.

### 3.1 (e) Listed migratory species

#### Description

Results from the EPBC Act Protected Matters Report Search Tool indicated that 12 migratory species may occur within, or in areas adjacent to the Project Area.

Using the methodology and resources identified in Section 3.1(d) (above), an assessment of their likely presence within the Development Footprint or adjacent areas was undertaken (see Table 14). A detailed impact assessment is then presented for the species that are considered known or have the potential to occur.

**Table 14: Likelihood of occurrence of EPBC Act listed migratory species within the proposed development area and surrounds.**

Species name	Listing status	Likelihood of occurrence	Details
<i>Apus pacificus</i> Fork-tailed Swift	Migratory	<b>Potential</b>	This species breeds from central Siberia eastwards through Asia. Non-breeding individuals most commonly arrive in Australia in October then return to their breeding grounds from Australia in April (DoEE 2016). Within Queensland, the Fork-tailed Swift is found most commonly west of the Great Divide, including west of Richmond and Winton (DoEE 2016). The species is aerial and may use the airspace above the Project Area between October to April. Potential impacts to this species as a result of the proposed action are discussed in detail below.

Species name	Listing status	Likelihood of occurrence	Details
<i>Crocodylus porosus</i> Salt-water Crocodile	Migratory	Not occurring	The Salt-water Crocodile is found in Australian coastal waters, estuaries, lakes, inland swamps and marshes. It is distributed from Rockhampton in Queensland, through coastal Northern Territory to King Sound (near Broome) in Western Australia (DoEE 2016).  There is no suitable habitat for the species on or near the Project Area and it is considered that the Salt-water Crocodile does not occur.
<i>Cuculus optatus</i> Oriental Cuckoo	Migratory	Unlikely	The oriental cuckoo is distributed throughout coastal and sub-coastal regions of northern and eastern Australia. Broad scale vegetation groups used by the species include monsoon forest, rainforest edges, dense tree canopies within paddocks, mangroves and islands (Pizzey and Knight 2012). This species is a nonbreeding migrant (September-May) to Australia (Pizzey and Knight 2012).  Although the Project Area occurs within the species distribution the open structure of on-site vegetation communities is considered marginal. The species may pass the Project Area during migration but is unlikely to remain resident for extended periods.  Habitat is not considered important and the species is considered unlikely to occur.
<i>Monarcha melanopsis</i> Black-faced Monarch	Migratory	Unlikely	The Black-faced monarch is found along the coast of eastern Australia, becoming less common further south. The species inhabits rainforests, eucalypt woodlands, coastal scrub and damp gullies. It may be found in more open woodland when migrating. It forages for insects among foliage, or catches flying insects on the wing (Marchant & Higgins 1993).  Preferring moist, well vegetated environments, the open Eucalypt woodlands of the Project Area provide only marginal habitat for the species during migration.  Habitat is not considered important and the species is considered unlikely to occur.
<i>Monarcha trivirgatus</i> Spectacled Monarch	Migratory	Not occurring	The Spectacled monarch is found throughout coastal north-eastern and eastern Australia and coastal islands, from Cape York (Qld) to the Watson River on the west coast and to Port Stephens (NSW) on the east coast. It inhabits the understorey of mountain and lowland rainforests, thickly wooded gullies, waterside vegetation including mangroves, mostly well below the canopy (Pizzey and Knight 2012).  Preferring dense vegetation, the open Corymbia and Eucalypt woodlands of the Project Area are not considered suitable habitat for the species.  There is no suitable habitat for the species on or near the Project Area and it is considered that the Spectacled Monarch does not occur.
<i>Motacilla flava</i> Yellow Wagtail	Migratory	Unlikely	The Yellow wagtail is a summer migrant to mostly coastal areas of Australia, especially in the area of Darwin to Broome (Pizzey and Knight 2012). In Queensland, records of the species have been predominantly taken in coastal habitats between Cairns and Townsville. Important habitat for the species includes well-watered open grasslands and the fringes of wetlands. Roosting habitat includes mangroves and other dense vegetation (DoEE 2016).  The Project Area occurs within the species' distribution; however the broad scale habitat features (i.e. open woodland; ephemeral watercourses) present on the Project Area provide only marginal habitat opportunities.  Habitat is not considered important and the species is considered unlikely to occur.

Species name	Listing status	Likelihood of occurrence	Details
<i>Myiagra cyanoleuca</i> Satin Flycatcher	Migratory	Not occurring	<p>The Satin flycatcher is widespread in eastern Australia. In Queensland, it is widespread but scattered in the east (DoEE 2016). Satin flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands. They especially prefer wet sclerophyll forest with a tall shrubby understorey of tall acacias (Blakers <i>et al.</i> 1984), but are sometimes seen in littoral forest (Unpublished data). They are mainly insectivorous, preying on mostly insects, although very occasionally they will also eat seeds. They are arboreal foragers, feeding high in the canopy and subcanopy of trees, usually sallying for prey in the air or picking prey from foliage and branches of trees (Pizzey and Knight 2012).</p> <p>There is no suitable habitat for the species on or near the Project Area and it is considered that the Satin Flycatcher does not occur.</p>
<i>Rhipidura rufifrons</i> Rufous Fantail	Migratory	Not occurring	<p>The Rufous Fantail occurs in the understorey of rainforest, wetter eucalypt forest, gullies, monsoon forest, paperbarks, sub inland and coastal scrubs, watercourses, parks and gardens (Pizzey and Knight 2012).</p> <p>There is no suitable habitat for the species on or near the Project Area and it is considered that the Rufous Fantail does not occur.</p>
<i>Calidris ferrufinea</i> Curlew Sandpiper	Critically endangered Migratory	Unlikely	<p>The Curlew Sandpiper breeds in the northern hemisphere and migrates to Australia. In Australia, the species generally occurs around the coast but can also occur inland. In Queensland, there are scattered records in the Gulf of Carpentaria, with widespread records along the coast south of Cairns (TSSC 2015a).</p> <p>Habitat for the species mainly comprises intertidal mudflats in sheltered coastal areas (such as estuaries, bays, inlets and lagoons), and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. The species is also recorded inland (though less often) including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters (TSSC 2015a).</p> <p>There are no records of the species within 10 km of the Project Area and there is no preferred habitat. It is considered unlikely to the species to occur.</p>
<i>Gallinago hardwickii</i> Latham's Snipe	Migratory	Unlikely	<p>Latham's snipe is a non-breeding visitor to south-eastern Australia, and is a passage migrant through northern Australia (i.e. it travels through northern Australia to reach non-breeding areas located further south) (Higgins &amp; Davies 1996). It occurs in permanent and ephemeral wetlands up to 2,000 m above sea-level and usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies) (DoEE 2016).</p> <p>The Project Area contains only small areas of marginal habitat and the species is considered unlikely to occur.</p>

Species name	Listing status	Likelihood of occurrence	Details
<i>Numenius madagascariensis</i> Eastern Curlew	Critically endangered Migratory	Unlikely	<p>The Eastern Curlew breeds in the northern hemisphere and migrates to Australia. Within Australia, the species has a primarily coastal distribution. It is found in all states, particularly the north, east, and south-east regions including Tasmania. The species is rarely recorded inland (TSSC 2015b).</p> <p>Habitat for the species is most commonly associated with sheltered coasts (especially estuaries, bays, harbours, inlets and coastal lagoons), with large intertidal mudflats or sandflats. Occasionally, the species occurs on ocean beaches, coral reefs, rock platforms, or rocky islets. The birds are often recorded among saltmarsh and on mudflats fringed by mangroves, and sometimes within the mangroves. The birds are also found in coastal saltworks and sewage farms (TSSC 2015b).</p> <p>There are no records of the species within 10 km of the Project Area and there is no preferred habitat. It is considered unlikely for the species to occur.</p>
<i>Pandion haliaetus</i> Osprey	Migratory	Not occurring	<p>The Osprey is a cosmopolitan species that is widely distributed in coastal habitats throughout the world and occurs along the entire Queensland coastline. Preferred habitat for the species includes all coastal habitats and their surrounding waters. Preferred nest sites are tall structures, often the highest in the nearby landscape and include trees; alive and dead, rock pylons and transmission towers. The species may be sedentary or dispersive but tends to maintain a regular breeding site which they develop over many seasons.</p> <p>There is no suitable habitat for the species on or near the Project Area and it is considered that the Osprey does not occur.</p>

## Nature and extent of impacts

### Fork-tailed Swift (*Apus pacificus*)

The Fork-tailed Swift was identified as potentially occurring at the Project Area or adjacent areas.

Individuals of the species have not previously been recorded within the Project Area. While there is potential for individual vagrants to occur within the area, the proposed action is unlikely to result in a significant impact on any of the species as the Project Area:

- is not known to support important habitat for any of the species; and
- is not known to support an ecologically significant proportion of the species.

### 3.1 (f) Commonwealth marine area

(If the action is in 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

The Project Area is not located near the Commonwealth marine area.

#### Nature and extent of impacts

No impacts will occur to the Commonwealth marine area as a result of the proposed action.

### 3.1 (g) Commonwealth land

#### Description

The Project Area is not located near Commonwealth land.

#### Nature and extent of impacts

No impacts will occur to Commonwealth land as a result of the proposed action.

**3.1 (h) The Great Barrier Reef Marine Park**

**Description**

The project is located approximately 65 km from the Great Barrier Reef Marine Park. The Project Area sits to west of Clark Range. Runoff from the Project Area flows in a westerly direction before eventually draining to the Burdekin River.

**Nature and extent of impacts**

There will be no impacts to the Great Barrier Reef Marine Park as a result of the proposed action.

All construction work (which has low ground disturbance) will be undertaken in accordance with an approved sediment and erosion control plan. Any potential risk of sedimentation affecting the reef is too small to be quantified. Post construction the area will be revegetated in accordance with *Solar Farm Environmental Management Plan* to prevent any ongoing risk of erosion. The Development Footprint will not be further disturbed during operation.

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

**Description**

Not applicable.

**Nature and extent of impacts**

Not applicable.

**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**

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**

Not applicable.

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**

Not applicable.

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))**

Not applicable.

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))**

Not applicable.

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))**

Not applicable.

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

#### 3.3 (a) Flora and fauna

##### Flora and fauna assessments

Two flora and fauna assessments have been undertaken at the Project Area:

- RPS (2016a) Solar Farm – Preliminary Ecological Assessment. Work completed in June 2016.
- RPS (2016b) Solar Farm – Ecological Values Assessment. Work completed in November 2016. (**Attachment C**).

##### Survey results

The assessments found that the Project Area contained eight vegetation communities classed as Remnant Vegetation (as per *Queensland Vegetation Management Act 1999*). These are listed in Section 3.3(e) below. One vegetation community (Brigalow) is potentially listed as a threatened ecological community under the EPBC Act.

Three threatened species were also recorded within the Project Area:

- Koala (*Phascolarctos cinereus*).
- Squatter Pigeon (*Geophaps scripta scripta*).
- Black Ironbox (*Eucalyptus raveretiana*).

No significant impacts to these four MNES will occur as a result of the proposed action (see Section 3.1(d) for a detailed discussion).

#### 3.3 (b) Hydrology, including water flows

The topography of the Project Area can generally be described as flat to gently undulating in the west (elevation range 160-170 m).

The Project Area is located predominantly on lands associated with recent Quaternary alluvial watercourses. Site drainage patterns follow a general east to west direction and exit the Project Area from a stream order three watercourse that traverses the site in a south-east to north-west direction.

#### 3.3 (c) Soil and Vegetation characteristics

The Atlas of Australian Soils describes the landscape as undulating or moderately undulating lands with occasional low hills and the soils as hard pedal yellow duplex soils.

The Project Area comprises a mixture of cattle pasture grasslands, remnant woodlands and scattered trees. The Development Footprint is focused on areas of low environmental constraint with minimal remnant vegetation.

A summary description of the remnant vegetation on the Project Area is provided below in Section 3.3 (e). Further detail is provided in **Attachment C** (RPS 2016b).

#### 3.3 (d) Outstanding natural features

No outstanding natural features exist at the Project Area.

#### 3.3 (e) Remnant native vegetation

Surveys conducted as part of the two flora and fauna assessments (RPS 2016a; RPS 2016b) determined that the regional ecosystems present on the Project Area consist of the following:

- 11.3.1 - *Acacia harpophylla* open forest on alluvial plains;

- 11.3.4a – *Corymbia tessellaris* woodland on floodplains;
- 11.3.10 – *Eucalyptus brownii* woodland on alluvial plains;
- 11.3.25 – *Eucalyptus raveretiana*, *Melaleuca fluviatilis*, *Lophostemon grandiflorus*, *Melaleuca bracteata* fringing woodland/low woodland;
- 11.3.30 – *Eucalyptus crebra* and/or *Corymbia dallachiana* woodland on sandy plains
- 11.4.4 – Grassland, either remnant or non-remnant;
- 11.8.14 – *Eucalyptus crebra* and/or *Corymbia dallachiana* woodland on clay plains; and
- 11.12.1 – *Eucalyptus crebra* and/or *Corymbia erythrophloia* low woodland/woodland.

Many areas of the Development Footprint have no remnant vegetation.

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

Not applicable.

### 3.3 (g) Current state of the environment

The Project Area is currently used as a cattle grazing property and contains extensive areas of remnant open woodland and grasslands. Historical clearing of woody vegetation has been undertaken in patches along with potential selective clearing of trees and understorey vegetation at times.

Numerous watercourses drain the Project Area, the largest of which is Crush Creek flowing in a south-westerly direction. Existing infrastructure and improvements on the Project Area includes access tracks, fences and a number of small dams.

No significant areas of erosion were observed during field investigations.

The Project Area contains a moderate to high density of *Vachellia farnesiana*. Although this species is not a prohibited or restricted invasive plant pursuant to Queensland's *Biosecurity Act 2014* it is identified as a Weed of National Significance (WoNS). Rubbervine (*Cryptostegia grandiflora*), also a WoNS, occurs but in lower density.

Feral pig scats were observed during field investigations and based on knowledge of the Collinsville area there is a high likelihood that feral dogs and cats may occur. Future perimeter fencing may assist with management of these species.

The Collinsville Coal Mine, owned and operated by Glencore is located to the south along with the Collinsville Power Station. Easements for the Strathmore Substation and transmission line infrastructure are located on the Project Area. Access to the Project Area is achieved via Strathmore Road, which divides the site, and is situated to the south of the main development area.

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

Not applicable.

### 3.3 (i) Indigenous heritage values

Edify Energy Pty Ltd engaged with the local Birriah people (Registered Aboriginal Party) and concluded a Cultural Heritage Management Agreement on 17 November 2016. The agreement deals with matters including the protection, maintenance and use of land containing Aboriginal places and/or objects, the right for Aboriginal people to access, or use Aboriginal places and/or objects and any provision for the rehabilitation of Aboriginal places or objects. The Proponent is undertaking all reasonable steps to comply with s 28 of the *Queensland Aboriginal Cultural Heritage Act 2003* Duty of Care guidelines and the provisions of the *Queensland Heritage Act 1992*.

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

Not applicable.

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

The Project Area is freehold title.

### **3.3 (l) Existing uses of area of proposed action**

The landscape is rural and characterised by uncultivated cattle pasture grasslands and remnant woodlands. The Project Area is encumbered by numerous easements in favour of various electricity entities.

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

There are no proposed uses (other than as a solar farm) of the Project Area.

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## 4 Environmental outcomes

As discussed in Section 3 of this referral, there are five MNES relevant to the proposed action. These include the Koala, Ornamental Snake, Squatter Pigeon, Black Ironbox, and potential areas of the Brigalow TEC.

No significant impacts to any of these MNES will occur as a result of the proposed action. The following specific outcomes will be delivered:

- Koala: No direct impacts to habitat critical to the survival of the species. Management of potential indirect impacts to the species.
- Ornamental Snake: Maximum impacts of 26 ha to potential, marginal habitat which is not considered to comprise important habitat for the species. Management of potential indirect impacts to potential habitat areas.
- Squatter Pigeon: Minor, temporary disturbance to an area of habitat that is not considered important to the species. No long term disruption to the species' use of the Project Area.
- Black Ironbox: No direct impacts to known occurrences and associated habitat. Minimum 30 m buffer from the edge of the Development Footprint to known occurrences. Management of potential indirect impacts.
- Brigalow TEC: No direct impacts to areas of potential Brigalow TEC. Management of potential indirect impacts to the TEC.

There is a high level of confidence in the ability to deliver these outcomes for the following reasons:

- The Development Footprint has been specifically designed to avoid significant impacts to MNES habitat. The land area within the Development Footprint has the capacity to contain all aspects of development including issues which can often be overlooked such as asset protection zones and perimeter fencing.
- A comprehensive suite of mitigation and management measures are proposed to address potential indirect impacts to MNES habitat adjacent to development (see Section 5 for details). The types of potential indirect impacts that may be relevant are well understood and the proposed measures are standard, best practice.
- Understanding of MNES values within the Project Area and surrounds is based on two survey events by qualified ecologists with experience conducting ecological surveys in the area. The second survey event was very recent, targeted to the key MNES issues relevant to the area and focussed on the proposed Development Footprint.
- The proponent has a strong commitment to good environmental practice. This is demonstrated by their willingness to define and refine the Development Footprint to specifically avoid significant impacts to MNES, despite notable compromises to development outcomes and efficiencies.

## 5 Measures to avoid or reduce impacts

The proponent has undertaken a substantial set of work to understand the MNES values within the Project Area and define the Development Footprint to avoid direct impacts to important habitat areas.

This design process occurred over two phases. The first phase was guided by a Preliminary Environmental Assessment of the Project Area undertaken in June 2016 (RPS 2016a). The assessment identified the key features of the environment including known and potential occurrences of MNES. As a result of this work a potential (broad scale) Development Footprint was designed that largely avoided MNES habitats and locations.

The second phase involved more detailed ecological surveys in November 2016 of the potential Development Footprint and surrounds (RPS 2016b). This process involved more detailed and intensive surveys and resulted in significant refinements of the footprint to ensure that there were no direct impacts to important habitat or locations of MNES. In addition, the revised Development Footprint (the subject of this referral) was designed to include internal buffers to protect MNES.

The detailed design work has led to a strategically located Development Footprint that does not significantly impact MNES. In particular, with the discovery of a Koala during the November 2016 surveys and the variety of Koala habitat value across the Project Area, every effort was made to redesign the Development Footprint to avoid impacts to habitat critical to the survival of the species (defined as a habitat score of 5 or greater in accordance with the Koala referral guidelines and habitat assessment tool (DoE 2014).

As a result of this avoidance and redesign process, the 455 ha Development Footprint contains no habitat critical to the survival of the species. Other MNES outcomes delivered through Development Footprint design and implementation include:

- Maintenance of the majority (87%) of mapped marginal, potential habitat for the Ornamental Snake to ensure continuity of movement should the species occur.
- No direct impacts to known occurrences of Black Ironbox and associated habitat including a minimum 30 m buffer from the edge of the Development Footprint to known occurrences.
- No direct impacts to areas of potential Brigalow TEC.
- Micro-siting of the final infrastructure route needed to connect separated development areas with underground cabling or access roads to avoid any direct impacts to habitat critical to the survival of the Koala and to maintain a 30 m buffer distance from any Black Ironbox individuals.

In addition to avoiding and minimising direct impacts to MNES habitat and occurrences, the full range of potential indirect impacts have also been considered as part of the assessment. A suite of mitigation and management measures will be implemented to address each of these potential indirect impacts and ensure significant impacts to MNES are avoided. These measures, with associated aims, success criteria, responsibilities and timeframes, are outlined in the Solar Farm Environmental Management Plan (EMP) (**Attachment D**). The EMP will be implemented as part of the proposed action.

The following tables outline the key measures that will be undertaken to manage potential indirect impacts to MNES.

**Table 15: Potential indirect impacts to Brigalow TEC and proposed management measures**

Potential indirect impact	Proposed management measures
Increased risk of fire	<ul style="list-style-type: none"> <li>• The Bushfire Management Plan (RPS 2016b) will be implemented to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.</li> <li>• Bushfire Asset Protection Zones will be maintained within the Development Footprint and will not impact on surrounding vegetation.</li> </ul>
Increased weed incursion	<ul style="list-style-type: none"> <li>• Any felled non-native vegetation is to be disposed of at an appropriate waste disposal facility or mulched and reused provided that no seed bearing material is present.</li> <li>• Minimise vegetation and soil disturbance to reduce rate of weed invasion.</li> <li>• Minimise bare ground with mulch and revegetation to reduce or prevent rate of weed invasion.</li> <li>• Stockpiles of native vegetation are to be inspected for weeds species and weeds removed prior to export off site/mulching.</li> <li>• Prior to entering or leaving the site, all vehicles and equipment involved in clearing and weed removal works will be cleaned down to remove soil and plant material to prevent spreading of soil borne disease and weed seeds or plant material.</li> <li>• If water is used to clean equipment and vehicles the wastewater is to be treated by physical or chemical means to ensure weeds and declared plants are not discharged from the site. These clean down areas are to be banded.</li> <li>• Materials (e.g. gravel and sand) brought on to site will be obtained from weed-free sources.</li> </ul>
Sediment and erosion	<ul style="list-style-type: none"> <li>• Implementation of an Erosion and Sediment Control Plan (ESCP) to manage the site during the construction and operational stages.</li> <li>• Limit ground disturbance and vegetation clearing to the minimum extent necessary for safe construction of solar modules.</li> <li>• Topsoil stockpiles are to be protected from sediment runoff by a catch drain constructed along uphill sides</li> </ul>

	<p>and a suitable silt fence/sediment trap constructed on the downhill sides.</p> <ul style="list-style-type: none"> <li>• Install and maintain erosion and sediment control structures where necessary.</li> <li>• In the event of rain and wet soils, movement of vehicles and equipment will be minimised or avoided.</li> </ul>
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**Table 16: Potential indirect impacts to Koala and proposed management measures**

Potential indirect impacts	Proposed management measures
Mortality from vehicles	<p>The proponent will implement a number of traffic control measures through the Traffic Management Plan – Whitsunday PV Power Plant (Bouygues Construction 2016). These will include specific measures in relation to:</p> <ul style="list-style-type: none"> <li>• speed restrictions (max 20km/hr on site);</li> <li>• site inductions; and</li> <li>• signage.</li> </ul>
Mortality from dogs/dingoes	<ul style="list-style-type: none"> <li>• Measures will be implemented to ensure that feral predators are not encouraged by activities within the Development Footprint. This will include appropriate management of site waste.</li> </ul>
Increased risk of fire	<ul style="list-style-type: none"> <li>• The Bushfire Management Plan (RPS 2016b) will be implemented to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.</li> <li>• Bushfire Asset Protection Zones will be maintained within the Development Footprint and will not impact on surrounding vegetation.</li> </ul>
Fragmentation of habitat	<ul style="list-style-type: none"> <li>• Retention of all vegetation outside the Development Footprint.</li> <li>• Use of fencing that enables safe movement of Koalas across the Project Area.</li> </ul>
Disturbance and mortality during construction	<ul style="list-style-type: none"> <li>• All clearing will require a licensed and qualified spotter-catcher to be present to ensure koalas are not present and are not utilising the habitat being cleared.</li> <li>• If any koalas are identified within an area to be cleared, no clearing activities will be undertaken prior to an assessment by a qualified ecologist.</li> </ul>

**Table 17: Potential indirect impacts to Ornamental Snake and proposed management measures**

Potential indirect impacts	Proposed management measures
Introduction of exotic weeds	<ul style="list-style-type: none"> <li>• Any felled non-native vegetation is to be disposed of at an appropriate waste disposal facility or mulched and reused provided that no seed bearing material is present.</li> <li>• Minimise vegetation and soil disturbance to reduce rate of weed invasion.</li> <li>• Minimise bare ground with mulch and revegetation to reduce or prevent rate of weed invasion.</li> <li>• Stockpiles of native vegetation are to be inspected for weeds species and weeds removed prior to export off site/mulching.</li> <li>• Prior to entering or leaving the site, all vehicles and equipment involved in clearing and weed removal works will be cleaned down to remove soil and plant material to prevent spreading of soil borne disease and weed seeds or plant material.</li> <li>• If water is used to clean equipment and vehicles the wastewater is to be treated by physical or chemical means to ensure weeds and declared plants are not discharged from the site. These clean down areas are to be bunded.</li> <li>• Materials (e.g. gravel and sand) brought on to site will be obtained from weed-free sources.</li> </ul>
Sedimentation and erosion	<ul style="list-style-type: none"> <li>• Implementation of an Erosion and Sediment Control Plan (ESCP) to manage the site during the construction and operational stages.</li> <li>• Limit ground disturbance and vegetation clearing to the minimum extent necessary for safe construction of solar modules.</li> <li>• Topsoil stockpiles are to be protected from sediment runoff by a catch drain constructed along uphill sides and a suitable silt fence/sediment trap constructed on the downhill sides.</li> <li>• Install and maintain erosion and sediment control structures where necessary.</li> <li>• In the event of rain and wet soils, movement of vehicles and equipment will be minimised or avoided.</li> </ul>
Increased risk of fire	<ul style="list-style-type: none"> <li>• The Bushfire Management Plan (RPS 2016b) will be implemented to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.</li> <li>• Bushfire Asset Protection Zones will be maintained within the Development Footprint and will not impact on surrounding vegetation.</li> </ul>
Pollution	<ul style="list-style-type: none"> <li>• All hazardous material, including hydrocarbons (fuels) will be securely stored in a designated storage area. All storage tanks to be secured and stored in such a manner to prevent spills. Wherever possible, tanks should be self-bunded or bunded with an impervious surface and a capacity to contain 110% of the largest stage tank capacity.</li> <li>• Minimise the quantities of hazardous substances, fuel, oil and chemicals stored on site.</li> <li>• Spill kits shall be available in all areas where hydrocarbons and chemicals are stored or used.</li> <li>• Accidental leaks of oils etc (e.g. burst hydraulic hoses) will be cleaned up immediately using an on-site spill kit to minimise water contamination.</li> <li>• All equipment is to be inspected at daily start up for fluid, oil or fuel leaks.</li> <li>• Concrete trucks shall be washed out in designated bunded areas.</li> </ul>

	<ul style="list-style-type: none"> <li>• All maintenance activities for machinery are undertaken offsite.</li> <li>• Vehicle wash down shall only be undertaken outside of the riparian buffers in a nominated wash down area.</li> </ul>
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**Table 18: Potential indirect impacts to Black Ironbox and proposed management measures**

Potential indirect impact	Proposed management measures
Increased weed incursion	<ul style="list-style-type: none"> <li>• Any felled non-native vegetation is to be disposed of at an appropriate waste disposal facility or mulched and reused provided that no seed bearing material is present.</li> <li>• Minimise vegetation and soil disturbance to reduce rate of weed invasion.</li> <li>• Minimise bare ground with mulch and revegetation to reduce or prevent rate of weed invasion.</li> <li>• Stockpiles of native vegetation are to be inspected for weeds species and weeds removed prior to export off site/mulching.</li> <li>• Prior to entering or leaving the site, all vehicles and equipment involved in clearing and weed removal works will be cleaned down to remove soil and plant material to prevent spreading of soil borne disease and weed seeds or plant material.</li> <li>• If water is used to clean equipment and vehicles the wastewater is to be treated by physical or chemical means to ensure weeds and declared plants are not discharged from the site. These clean down areas are to be bunded.</li> <li>• Materials (e.g. gravel and sand) brought on to site will be obtained from weed-free sources.</li> </ul>
Sediment and erosion	<ul style="list-style-type: none"> <li>• Implementation of an Erosion and Sediment Control Plan (ESCP) to manage the site during the construction and operational stages.</li> <li>• Limit ground disturbance and vegetation clearing to the minimum extent necessary for safe construction of solar modules.</li> <li>• Topsoil stockpiles are to be protected from sediment runoff by a catch drain constructed along uphill sides and a suitable silt fence/sediment trap constructed on the downhill sides.</li> <li>• Install and maintain erosion and sediment control structures where necessary.</li> <li>• In the event of rain and wet soils, movement of vehicles and equipment will be minimised or avoided.</li> </ul>
Increased risk of fire	<ul style="list-style-type: none"> <li>• The Bushfire Management Plan (RPS 2016b) will be implemented to ensure that the risk of bushfire is minimised and fuel loads are managed to reduce the rate of spread and intensity of bushfires.</li> <li>• Bushfire Asset Protection Zones will be maintained within the Development Footprint and will not impact on surrounding vegetation.</li> </ul>

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## 6 Conclusion on the likelihood of significant impacts

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

- |                                     |                           |
|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | No, complete section 6.2  |
| <input type="checkbox"/>            | Yes, complete section 6.3 |

### 6.2 Proposed action IS NOT a controlled action.

Based on the analysis in this referral, the proposed action will not lead to significant impacts on a matter protected by the EPBC Act.

The Development Footprint has been specifically designed to avoid important areas of MNES, and management measures to be implemented through an EMP and Bushfire Management Plan will ensure potential indirect impacts are minimised.

### 6.3 Proposed action IS a controlled action

N/A

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## 7 Environmental record of the person proposing to take the action

	Yes	No
<p><b>7.1 Does the party taking the action have a satisfactory record of responsible environmental management?</b></p> <p><b>Provide details</b>                      The Proponent is an Australian renewable energy development and investment company. Its primary business is the development and delivery of renewable energy facilities, including the solar farm at this location.</p> <p>The Proponent company has developed an EMP (RPS 2016c) to manage environmental issues at the project site.</p> <p>The Proponent takes its environmental obligations seriously, rigorously assessing its environmental impacts and executing with integrity, ideally improving biodiversity outcomes in the process.</p> <p>The founder and chief executive of the Proponent led the development and delivery of 27 utility scale solar farms in the UK as part of the business Low Carbon (lowcarbon.com) which he co-founded.</p> <p>The Proponent has never been convicted, fined or prosecuted of any environmental breach. The Proponent and its development partner, Solar Choice, have shown great leadership in responsible environmental management in the development of this project and gaining the appropriate approvals.</p>	X	
<p><b>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:</b></p> <p><b>(a) the person proposing to take the action, or</b>  <b>(b) if a permit has been applied for in relation to the action - the person making the application.</b></p> <p><b>If yes, provide details</b></p>		X
<p><b>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.</b></p> <p>The Proponent's business is focussed on improving environmental outcomes through the generation of electricity from renewable sources, primarily solar power. It is determined to deliver the solar farm at this location and has prepared extensively for this project by working through the local, state and federal planning framework.</p> <p>The planning framework applies to the action by way of allowing the action to proceed, with all appropriate approvals and consents being gained.</p>	X	
<p><b>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?</b></p> <p><b>Provide name of proposal and EPBC reference number (if known)</b></p> <p>Edify Energy - Gannawarra Solar Farm Development (2016/7807)</p>	X	

## 8 Information sources and attachments

### 8.1 References

Blakers, M., S.J.J.F. Davies & P.N. Reilly (1984). *The Atlas of Australian Birds*. Melbourne, Victoria: Melbourne University Press.

Curtis LK, McDonald K, Kyne P and Dennis, AJ. (2012) *Queensland's Threatened Animals: Calling it Quits?* CSIRO Publishing, Melbourne.

Department of the Environment (DoE) (2013) *Matters of National Environmental Significance Significant impact guidelines 1.1 - Environment Protection and Biodiversity Conservation Act 1999*. Commonwealth of Australia.

Department of the Environment (2013a) Approved conservation advice for the Brigalow (*Acacia harpophylla* dominant and co-dominant) ecological community. Available from:

<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/028-conservation-advice.pdf>

Department of the Environment (2014) EPBC Act referral guidelines for the vulnerable Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). Commonwealth of Australia, Canberra. Available from:

<http://www.environment.gov.au/biodiversity/threatened/publications/epbc-act-referral-guidelines-vulnerable-Koala>

Department of the Environment and Energy (DoEE) (2016) Species Profile and Threats Database. Available from:

<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>. Accessed on: 18 November 2016.

DERM (2012) Department of Environment and Resource Management National recovery plan for the red goshawk, *Erythrotriorchis radiates*.

DEWHA (2008) Department of Environment, Water, Heritage and Arts Approved Conservation Advice for *Omphalea celata*.

<http://www.environment.gov.au/biodiversity/threatened/species/pubs/64586-conservation-advice.pdf>

DEWHA (2009) Department of the Environment, Water, Heritage and the Arts. Significant impact guidelines for the endangered black-throated finch (southern) (*Poephila cincta cincta*)

DSEWPAC (2011). Draft referral guidelines for the nationally listed Brigalow Belt reptiles. Commonwealth of Australia

Environment Australia (2003) Brigalow (*Acacia harpophylla* dominant and co-dominant Threatened Ecological Community) Indicative Distribution Map. Available from:

<http://www.environment.gov.au/biodiversity/threatened/communities/maps/brigalow-acacia-harpophylla-dominant-and-co-dominant>

Higgins, P.J. & S.J.J.F. Davies (eds) (1996) *Handbook of Australian, New Zealand and Antarctic Birds*. [Oxford University Press](http://www.oxforduniversitypress.com), Melbourne

Marchant, S., and Higgins, P.J. (eds) (1993) *Handbook of Australian, New Zealand and Antarctic Birds*. Volume 2: Raptors to Lapwings. Oxford University Press, Melbourne.

Nelder, V.J., Wilson, B.A., Thompson, E.J. and Dillewaard, H.A. (2012) *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*. Version 3.2. Updated August 2012. Queensland Herbarium Queensland Department of Science, Information Technology, Innovation and the Arts Brisbane.

Pizzey G., Knight F. (2012) *Field guide to the birds of Australia*. Harper Collins, Pymble, N.S.W

RPS (2016a) Solar Farm – Preliminary Ecological Assessment. Report for Edify Energy.

RPS (2016b) Solar Farm – Ecological Values Assessment. Report for Edify Energy.

RPS (2016c) Solar Farm – Environmental Management Plan. Report for Edify Energy.

RPS (2016d) Solar Farm – Bushfire Management Plan. Report for Edify Energy.

Threatened Species Scientific Committee (TSSC) (2008). Commonwealth Listing Advice on Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin. Department of the Environment, Water, Heritage and the Arts.

Threatened Species Scientific Committee (TSSC) (2015a). Approved Conservation Advice for *Calidris ferruginea* (Curlew Sandpiper). Canberra: Department of the Environment.

Threatened Species Scientific Committee (TSSC) (2015b). Approved Conservation Advice for *Numenius madagascariensis* (Eastern Curlew). Canberra: Department of the Environment.

Threatened Species Scientific Committee (TSSC) (2015c). Approved Conservation Advice for *Geophaps scripta scripta* (Squatter Pigeon (southern))

Threatened Species Scientific Committee (TSSC) (2016a) Threatened Species Scientific Committee. Approved Conservation Advice for *Macroderma gigas* (ghost bat). Department of the Environment, Canberra.

Threatened Species Scientific Committee (TSSC) (2016b) Threatened Species Scientific Committee. Approved Conservation Advice for *Petauroides volans* (greater glider). Department of the Environment, Canberra.

Wieneke, J. 1989. The Birds of Townsville and where to find them. Wildlife Preservation Society of Queensland, Townsville.

## 8.2 Reliability and date of information

The information used to undertake the analysis in this referral (listed in Section 8.1 above) is considered appropriate and fit for purpose. Two fauna and flora assessments were carried out this year by suitably qualified ecologists with the specific purpose of understanding MNES values across the Project Area and helping to design the Development Footprint to avoid impacts. Refer to Attachment C (RPS 2016c) for details.

A range of issues specific references have also been used throughout the referral form to further inform the analysis.

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### 8.3 Attachments

		✓ Attached	Title of attachment(s)
<b>You must attach</b>	Figures, maps or aerial photographs showing the locality of the proposed action (section 1)	✓	Figure 1 – Regional map of the Project Area Figure 2 – Project Area and Development Footprint
	GIS file delineating the boundary of the referral area (section 1)	✓	Figure 3 – Indicative layout of solar arrays Attachment A – GIS file of Project Area
	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)	✓	Figure 4 – Potential Brigalow TEC Figure 5 – Koala habitat value map Figure 6 – Koala habitat scores Figure 7 – Ornamental Snake Figure 8 – Black Ironbox
<b>If relevant, attach</b>	Copies of any state or local government approvals and consent conditions (section 2.4)	✓	Attachment B1 – WRC Development Approval Attachment B2 – WRC Development Approval Attachment B3 – WRC Development Approval
	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)	✓	Attachment C – Ecological Values Assessment
	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)	✓	Attachment C – Ecological Values Assessment Attachment D – Environmental Management Plan
	Report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)		

# 9 Contacts, signatures and declarations

**Proposed action title:** Edify Energy - Whitsunday Solar Farm Development

## 9.1 Person proposing to take action

Name and Title: s.73 - Irrelevant i Head of Engineering and Technical

Organisation: Edify Energy Pty Ltd

Trust deed: Not applicable

ACN / ABN: ABN: 85 606 684 995

Postal address: Level 6, 140 Creek Street  
Brisbane, QLD 4000

Telephone: s.73 - Irrelevant inf

Email: s.73 - Irrelevan@edifyenergy.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.  
I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature:

s.73 - Irrelevant information

Date: 22 November 2016

---

## 9.2 Designated proponent

As above.

---

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

Name: s.73 - Irrelevant info

Title: Director

Organisation: Open Lines Consulting Pty Ltd

ACN / ABN (if applicable): ABN: 90 150 901 965

Postal address: GPO Box 1321  
Canberra ACT 2601

Telephone: s.73 - Irrelevant info

Email: s.73 - @openlines.com.au

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: s.73 - Irrelevant information Date: 22 November 2016

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Ref CTS 30673/17

4 December 2017

s.73 - Irrelevant information

Bird & Echidna Species Liaison Officer  
Fauna Rescue Whitsundays Association Inc.  
PO Box 806  
CANNONVALE QLD 4802

Dear s.73 - Irrelevant

Thank you for your email of 7 November 2017 to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef concerning the impact on native wildlife due to vegetation clearing at the Collinsville Solar Farm. The Minister has asked me to respond on his behalf.

The Department of Environment and Heritage Protection can confirm that a High-Risk Species Management Program (HR-SMP) for the Collinsville Solar Farm was approved on 28 September 2017. This approval allows the proponent to tamper with an animal breeding places where there is a high risk of impact in accordance with a proposed impact management plan. This impact management plan is designed so that that all activities minimise the immediate and long-term impact of removing or altering an animal breeding place.

As part of this approval, there is a requirement of the proponent to maintain an electronic register of all animal breeding places that are tampered with during the course of the project. This register must be submitted to the department within six months of interacting with a high risk species. A completed register must then be submitted to the department at the expiry of the HR-SMP.

Based on the information that you have provided with your letter, the department will investigate to assess whether there have any breaches of the HR-SMP itself, or other relevant sections of the *Nature Conservation Act 1992* and subordinate legislation.

Should you have further enquiries during this process, please contact Mrs Jane Burns Acting Senior Wildlife Officer – Conservation and Biodiversity Operations Branch of the Department of Environment and Heritage Protection on telephone (07) 4999 6853 or via email at <jane.burns@ehp.qld.gov.au>.

Yours sincerely,

s.73 - Irrelevant information

~~Nick Weinert~~  
**Acting Deputy Director-General**  
**Conservation and Sustainability Services**

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Department of  
**Environment and  
Heritage Protection**

Ref CTS 31002/17

23 November 2017

s.73 - Irrelevant information

Dear s.73 - Irrelevant

Thank you for your email of 10 November 2017 to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef concerning vegetation clearing in Queensland. The Minister has asked me to respond on his behalf.

As you are aware, a general election has been called for 25 November 2017. Special administrative arrangements apply in the period immediately before an election and the Government assumes a caretaker role during this time, ensuring decisions are not taken which would bind an incoming Government. As such, it is not possible at this time to provide a substantive reply to your letter.

Should you wish to have your issue addressed by the incoming Government, please correspond with the relevant portfolio Minister at the appropriate time.

Yours sincerely

s.73 - Irrelevant information

Nick Weinert  
**Acting Deputy Director-General  
Conservation and Sustainability Services**



Ref CTS 31314/17

4 December 2017

s.73 - Irrelevant information

Dear s.73 - Irrelevant

Thank you for your letter of 15 November 2017 to the Honourable Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef. The Minister has asked me to respond on his behalf.

I understand that an officer from the Nature Refuge Program within the Department of Environment and Heritage Protection contacted you by phone on 24 November 2017 in order to confirm the specific nature of your enquiry. During this conversation, you expressed a desire to have a departmental officer attend your property to help you identify the vegetation species on site, paying particular attention to koala habitat. You also requested that this officer provide you advice as how to best revegetate your property for koalas.

These matters that you have raised regarding your property are best managed by a natural resource management group such as the Queensland Murray Darling Committee (QMDC). The QMDC can provide property-specific advice to help landholders such as yourself protect, enhance and rehabilitate native vegetation and wildlife on your property. The QMDC can be contacted on (07) 4637 6200 or via email to <info@qmdc.org.au>.

Should you have further enquiries, please contact Mr Tim Reid of the Department of Environment and Heritage Protection on telephone (07) 3330 5180 or via email to <tim.reid@ehp.qld.gov.au>.

Yours sincerely

s.73 - Irrelevant information

Nick Weinert  
**Acting Deputy Director-General  
Conservation and Sustainability Services**

s.73 - Irrelevant information

17 November, 2016

Department of Environment and Natural Heritage  
[Brisbane Q.](#)

Dear Sirs,

I reside at s.73 - Irrelevant information in Mackay, and, along with other residents of this area, I am very concerned with the re-fencing proposal of the current Mackay Regional Council (the Council)

I understand that the Council has an application before the Department of Natural Resources to do some limited clearing in Zone C of the Blacks Beach *Beach Management Plan 2010*. I further understand that, as this clearing would threaten critically endangered species within this zone, the Council are waiting an approval from the Department of Natural Resources. The purpose of this clearing is to reposition a recently removed fence to a distance of 20 m from the existing properties.

I am told that the Council has not as yet received this approval to remove vegetation in at least some subsections of this area.

I ask the Department to withhold this approval and to suspend any existing approvals pending on-site and on-plan investigation, and to consider an alternative path for the repositioned fence - one that would have far less impact on the natural environment.

**If the Department is able and willing to intervene until this issue is resolved to the reasonable satisfaction of all parties, then the matter has a very high degree of urgency. Council officers have informed me that the re-fencing is due to commence on Monday, 20 November. (i.e. in a few days.)**

I have attached a map and offer the following for your consideration with reference to that map.

- The orange areas on the attached map are the areas that the Department of Natural Resources has indicated as areas of concern.
- The area planned for fencing is that area marked "Zone C".

- A portion of this Zone directly abuts private property and is shown on the map as "AREA OF CONCERN". (hatched area)
- The repositioned fence would fall within this area.
- It is the vegetation within this area of concern that is considered to be critically endangered (EPBC Act) It would be degraded by the clearing required for the repositioning of the fence at 20 m from property boundaries. (line marked "20m" on the attached map.)
- A viable alternative alignment for the fence at approximately 40-45m has been strongly suggested to the Council. (line marked 40m on the attached map).

This would have the following potential advantages:

- At 40-45 m the fence would lie within an area that was mostly cleared by the Council or its contractors during the last one to two years. Utilising this existing space would minimise any additional clearing required, and this clearing would be largely only of feral species.
- At this distance the fence would lie approximately 20 m inland of the westernmost dunes, and approximately 60 to 80 m west of the high water mark.
- A fence at this distance would be visible from both the beach and from the maintenance track that presently exists adjacent to the properties, and may better discourage pedestrian traffic in the dunes area.
- It would minimise the risk to Council of future disputation with the residents.

I commend this to your urgent attention, and would welcome your intervention. Should you choose to do so, then the Council will need to be so advised today. Contact to the Council directly and to the Council officer directly responsible for the project

s.73 - Irrelevant information







Hon Dr Steven Miles MP  
Minister for Environment and Heritage Protection and  
Minister for National Parks and the Great Barrier Reef

Ref CTS 32126/16

1 William Street Brisbane Qld 4000  
GPO Box 2454 Brisbane  
Queensland 4001 Australia  
Telephone +61 7 3719 7330  
Email [environment@ministerial.qld.gov.au](mailto:environment@ministerial.qld.gov.au)

13 JAN 2017

s.73 - Irrelevant information

Dear s.73 - Irrelevant information

Thank you for your email of 13 December 2016 concerning works on Great Keppel Island and potential disturbance to established dunes and turtle nesting areas. I am responding on the Minister's behalf.

I am advised that a development approval for works to construct a revetment wall and conduct beach nourishment on Great Keppel Island was approved by Livingstone Shire Council during May 2015. The development approval provides a number of conditions to be complied with that minimise impacts to the environment. A copy of the development approval can be obtained from the Livingstone Shire Council.

The proponent has also been issued with a State Marine Park permit from the Queensland Parks and Wildlife Service (QPWS) and a Commonwealth Marine Park permit from the Great Barrier Reef Marine Park Authority (GBRMPA). Both permits required an approved Construction Environmental Management Plan (CEMP) prior to works commencing. The CEMP includes specific requirements to monitor for sea-turtles and sea-turtle eggs. In particular, the proponent is required to have an appropriately qualified Environmental Officer survey the work zone on a daily basis prior to any construction activities occurring.

In addition, the QPWS and GBRMPA permits require appointment of an Environmental Site Supervisor (ESS) to observe the works to ensure compliance with permit requirements, including those relating to the protection of sea-turtle eggs. The ESS is a qualified QPWS officer who is authorised to stop, suspend or modify construction works which, in their opinion, have caused or are likely to cause environmental harm.

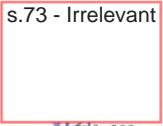
The Department of Environment and Heritage Protection has been advised by the proponent that its Environmental Officers have been trained in this type of work and that every precaution will be taken to avoid any turtle nesting activity. It is an offence to unlawfully interfere with turtle breeding sites under Queensland's nature conservation legislation.

Please be assured that experts from federal, state and local governments have contributed in assessing the works proposed on Great Keppel Island to ensure they are undertaken with the utmost environmental care and attention.

Should you have any further enquiries, please contact Mr Justin Cagney, Acting Compliance Delivery Manager, Environmental Services and Regulation of the Department of Environment and Heritage Protection on telephone (07) 4837 3487.

Yours sincerely

s.73 - Irrelevant



**Philip Halton**  
**Chief of Staff**

Released by DES  
RTI Act 2009



Queensland  
Government

Department of  
**Environment and  
Heritage Protection**

Ref CTS 32732/17

2 January 2018

s.73 - Irrelevant information

CALOUNDRA QLD 4551

Dear s.73 - Irrelevant information

Thank you for your letter dated 14 December 2017 concerning dune vegetation and turtle protection.

Officers of the Department of Environment and Science have conducted an informal investigation based on the advice in your letter.

Impacts on sea turtles and turtle nesting is regulated by the *Nature Conservation Act 1992*. Our records indicate that only one turtle nested on Shelly beach this nesting season. It is not clear that any of the actions could have affected a turtle nest, therefore the issues you have raised does not warrant a formal investigation under the *Nature Conservation Act 1992*.

With regard to the vegetation clearing, while the Department of Environment and Science regulates impacts on coastal areas; the Sunshine Coast Regional Council manages the illegal interference with this dune vegetation. Advice from Council is that they have previously investigated the matter and there was not enough evidence to identify who might be involved. Council informed us they continue to monitor the situation. Please forward to Council in the first instance if you have evidence which may identify in the clearing.

Should you have any further enquiries, please contact Mr Frank Mills, Manager Wildlife Operations Southern of the department on telephone (07) 4936 0521.

Yours sincerely

s.73 - Irrelevant information

RD Williams  
**Acting Deputy Director-General**  
Conservation and Sustainability Services