Title of Proposal - Bulli Creek Solar Farm, Bulli Creek, Southern Queensland

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Energy Generation and Supply (renewable)

1.2 Provide a detailed description of the proposed action, including all proposed activities.

In February 2015, Bulli Creek Solar Farm Pty Ltd has obtained planning approval from Toowoomba Regional Council (Application no. MCUI/2014/3278) to build a large-scale solar farm over multiple stages on within 13,340 acres (5,398 ha) of freehold land at Bulli Creek, 34km west of the township of Millmerran in southern Queensland. The proposed works will be constructed in stages across three adjoining properties (across four titles)that are currently, and have been historically, cleared and used for grazing cattle and growing fodder crops. The solar farm will be built within this cleared land, with only individual or small stands of non-threatened shade trees for cattle being removed within this footprint.

The proposed site is optimal for a large-scale solar farm due to its proximity to the major 330kV Bulli Creek substation on the arterial power interconnector between NSW and Queensland. To connect the solar farm to Queensland's transmission network, the project requires an easement along an existing 330kV transmission line owned and operated by Powerlink. The widening of this existing easement corridor is approximately 4.5 km in length to the northern most corner of the participating freehold, then a further 7km to centrally located proposed substation within the freehold.

Appendix 1 provides a copy of the approved condition package from Toowoomba Regional Council regarding the Project.

The development will comprise a ground-mounted solar farm, deployed in stages across the properties. The solar arrays will be erected on a metal-framed supporting structure, likely to be pile driven, with the individual solar panels framed in a tempered glass panel.

Due to the modularity of solar array technology plus the flat or gently sloping gradient on site, minimal heavy machinery is required for construction of the solar farm, with no heavy machinery required post construction. This enables the construction period to be managed and confined within a relatively short period within minimal disturbance.
The construction of the solar farm would require:
• The widening of an existing electricity infrastructure corridor as described above, that connects the proposed Bulli Creek Solar Farm to a nearby sub-station located in Western Creek State Forest;
• Temporary laydown area for equipment and shipping containers in the vicinity of the site

office;
• Staggered delivery of shipping containers of equipment throughout an approximate 10 month construction period per stage;
• Pile driving equipment in install the piers that support the solar array;
• Mechanical installation of the mounting structure and PV modules;
• Trenching of underground cabling;
• Installation of electrical cablings, inverters and associated electrical equipment;
• Preparation and installation of kiosk transformer and associated upgrade works to existing distribution lines if required; and,
• Commissioning and testing of the solar farm.

Infrastructure associated with the project, in particular the solar array, will be predominantly located within existing areas of cleared flat terrain across the project site. Under the current development plan, pre-existing wildlife corridors across the site will be retained.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Subject site 1	1	-28.000711601894	150.90095037496
Subject site 1	2	-28.000711601894	150.90077871359
Subject site 1	3	-28.000711601894	150.90095037496
Subject site 1	4	-28.015867235663	150.86387151754
Subject site 1	5	-28.004803833145	150.8575200466
Subject site 1	6	-28.016473416659	150.83537572897
Subject site 1	7	-28.030414637652	150.83211416281
Subject site 1	8	-28.024201925224	150.82267278707
Subject site 1	9	-27.990707715684	150.82885259664
Subject site 1	10	-27.994042447593	150.85013860739
Subject site 1	11	-27.966452017128	150.84773534811
Subject site 1	12	-27.966906861652	150.85425848043
Subject site 1	13	-27.977519356232	150.85957998312
Subject site 1	14	-28.000711601894	150.90095037496
Subject site 2	1	-28.001014735464	150.90129369772
Subject site 2	2	-28.00707722779	150.91674322164
Subject site 2	3	-28.041626918128	150.92206472433
Subject site 2	4	-28.047081118553	150.91416830099
Subject site 2	5	-28.063896495136	150.91571325338
Subject site 2	6	-28.066774539184	150.88378423727
Subject site 2	7	-28.059806510481	150.88550085104
Subject site 2	8	-28.05041410487	150.86335653341
Subject site 2	9	-28.045414586656	150.86747640646

Area	Point	Latitude	Longitude
Subject site 2	10	-28.030869212286	150.83262914694
Subject site 2	11	-28.025868785708	150.84344381369
Subject site 2	12	-28.029657008994	150.84962362326
Subject site 2	13	-28.028899375004	150.86352819479
Subject site 2	14	-28.021322741776	150.8731412319
Subject site 2	15	-28.014957957772	150.86799139059
Subject site 2	16	-28.001014735464	150.90163702047
Subject site 2	17	-28.001014735464	150.90129369772
Easment to powerstation	1	-27.96614878638	150.84807867086
Easment to powerstation	2	-27.966300401861	150.84653371847
Easment to powerstation	3	-27.922929695762	150.84224218405
Easment to powerstation	4	-27.922929695762	150.84361547506
Easment to powerstation	5	-27.966300401861	150.84807867086
Easment to powerstation	6	-27.96614878638	150.84807867086

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

The project site is situated on either side of the Gore Highway within the locality of Bulli Creek, approximately 275 km due-west of Brisbane, and 35 km due-west of Milmerran. The site is located within the Toowoomba Regional Council Local Government Area (LGA).

The project will be constructed in stages across four freehold lots on adjoining properties over a period of up to eight (8) or more years. All lots are currently, and have historically been, used for cattle grazing or cultivation.

Existing retained vegetation across the four lots currently ranges from 10% to 40% of the total area of each lot, mostly along watercourses that will not be cleared by the project. These vegetated watercourses provide wildlife corridors and linkages across the properties to larger

core conservation hubs (e.g. larger tracts of remnant vegetation within Bulli State Forest, Western Creek State Forest, Whetstone State Forest and Wondul Range National Park). Some patches of remnant vegetation are connected to remnant patches within adjoining State Forest.

The remaining landscape is dominated by low density pasture dominated by exotic grasses with some native grasses, and some small stands of shade trees for cattle. The native pasture is highly modified and is floristically non-diverse and retains almost none of the pre-European characteristics of the ecological community.

Watercourses within the development area consist of stream order 1 or 2, or ephemeral drainage lines, and are in generally good condition with mapped and unmapped vegetation

along the banks. Some erosion along creeks is evident, however poses no environmental issues.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

5,398ha

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title.5/DY1025, 37/DY1103, 4/DY1024, 39/DY916

1.8 Primary Jurisdiction.

Queensland

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

No

1.10 Is the proposed action subject to local government planning approval?

Yes

1.10.1 Is there a local government area and council contact for the proposal?

Yes

1.10.1.0 Council contact officer details

1.10.1.1 Name of relevant council contact officer.

Steven Bell

1.10.1.2 E-mail

Steven.Bell@tr.qld.gov.au

1.10.1.3 Telephone Number

07 4692 0123

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 01/2018

End date 07/2020

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

A copy of the town planning report prepared by RPS is provided in Appendix 7. This report provides an overview of the legislative context of the application under the provisions of the *Qld Sustainable Planning Act 2009.* The report also outlines the key assessment details, such as the level of assessment, referral triggers and the assessment of impacts against the relevant codes and planning scheme.

Under the provisions of the Toowoomba Regional Planning Scheme 2012 (the Planning Scheme), the site is located within the Rural – 200 Hectare Precinct, and is mapped within the

Biodiversity Areas, Bushfire Hazard (Medium Risk) and Good Quality Agricultural Land Overlays. The proposal was defined as a ‘Utility Installation’. On Council’s advice, the

proposal was subject to Impact Assessment and associated procedures including public notification.

The site is within 25m of the Gore Highway, a state controlled road. As such, referral to the Queensland State Assessment and Referral Agency was required. Referral to Qld SARA was undertaken and subsequent approval was given to the proponent. The assessment revealed that the project will not:

- Result in an increase in the number of allotments directly adjoining a state controlled road.

- Result in a significant increase in the number of vehicles accessing the site via Gore Highway (once operational).

- Result in an adverse change in storm water flows affecting the Gore Highway.

- Result or create driver distraction given a vegetated landscape buffer is to be provided along the common frontage with the Gore Highway Development conditions were imposed by Council and the Department of State Development, Infrastructure and Planning (DSDIP) and are attached in this referral. Details of the planning framework are also provided in the attached Town Planning Report (Appendix 7).

In addition, the proposed solar farm was assessed against the following legislative framework:

- *Environmental Protection Act 1994 (EP Act):* The EP Act protects environmental values through development and implementation of environmental protection policies and regulates

environmentally relevant activities prescribed in the Environmental Protection Regulation 1998 (EP Reg).

- *Environmental Protection (Water) Policy 1997*: The EPP Water administers the protection of environmental values from activities that may result in the release of contaminants to

waterways.

- *Environmental Protection (Air) Policy 2008*: The EPP Air governs the protection of ambient air quality and specifies indicators and air quality goals for the control of the release of airborne contaminants that are regulated through issued permit.

- *Environmental Protection (Noise) Policy 2008*: The EPP Noise specifies an acoustic quality objective for the protection of the well-being and amenity of individuals and the community in surrounding residential area.

- *Aboriginal Cultural Heritage Act 2003:* This act recognizes and protects significant Indigenous cultural heritage in Queensland. The Aboriginal Cultural Heritage Act sets out requirements for the protection and management of Indigenous cultural heritage.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

The community engagement plan is attached (Appendix 8). After proactive engagement with neighbours no objections were lodged by any member of the public during the planning approval process with Tooowoomba Regional Council.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

To assess the impact of the project on the environmental matters, two ecological assessments were undertaken by RPS (2013 and 2015) and submitted to Council and to the State of

Infrastructure, Local Government and Planning (DILGP) (previously State Development, Infrastructure and Planning) as part of the development application. In 2017, targeted surveys were undertaken by Green Tape Solutions.

The ecological report prepared in 2013, assessed the potential impacts of the overall the project on local and regional environmental values. RPS conducted a desktop analysis to determine the potential for Endangered, Vulnerable or Neat Threatened (EVNT) species, significant regional ecosystems and Threatened Ecological Communities (TEC). The

desktop investigations were followed by a field assessment to verify the presence of regional ecosystems, HVR, TEC's, declared weeds, significant habitat, watercourses, erosion, pest animals and opportunistic sightings of EVNT flora and fauna. The survey results and discussion sections outlined in the ecological report, concluded that the project footprint is unlikely to have any significant environmental impact on the ecological values.

In 2015, an Environmental Works Plan (EWP) was subsequently prepared to outline measures to minimise potential environmental impacts associated with the clearing of the 43m easement. The EWP has been prepared in accordance with Queensland Government guidelines for developing an EWP prepared by the Department of National Parks, Sport and Racing (DNPSR).

The Queensland Parks and Wildlife Service (QPWS) approved the EWP and settled an Occupation Permit to allow the proponent optionality to occupy and clear vegetation along

the section of the connection easement that traverses the state forest while registration of the easement is pending (if required). QPWS further advised the proponent in writing that due to the low quality of the scrub no timber was considered worthy of salvaging.

In September 2017, Green Tape Solutions undertook additional field assessment to assess the potential impacts of the project on threatened fauna species within the easement corridor. This

targeted bat surveys aimed at verifying the presence of *Nyctophilus corbeni* in the Western Creek State Forest corridor, The survey was undertaken in accordance with the EPBC survey guidelines (DEWHA, 2010). A Bat Call Analysis report (Green Tape Solutions, 2017b) and an Addendum report to Environmental Work Plan (Green Tape Solutions, 2017a) outline the methodology used during the survey and provide further details on the assessment and field results. No threatened species were confirmed present within the corridor.

A copy of all reports (EA, EWP and Addendum report, and the Bat Call Analysis report) are attached as Appendices 9, 10, 11 in Section 2 of the EPBC referral.

Subsequent assessments of the site and plans submitted and approved to Council included the Construction Environmental Management Plan (CEMP), Landscape Management Plan (LMP) and Bushfire Management Plan (BMP). A Rehabilitation Plan has also been submitted to and endorsed by Council.

Heritage studies and consultation with appropriate Indigenous stakeholders for the project has also been completed. The local Bigambul mob has signed a Terms of Reference with the project by way of fulfilment of cultural heritage duty of care obligations.

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

No

Section 2 - Matters of National Environmental Significance

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

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Corben’s Long-eared Bat (Nyctophilus corbeni)	Nyctophilus corbeni (Corben’s Long-eared Bat)

Species	Impact
	is one of the two species that is known to occur within proximity of the site, with confirmed records in Wondul Range National Park to the east of the project site. The ecological assessment undertaken within the area to be cleared within Western Creek State Forest noted the presence of a large number of habitat features, including standing dead trees, trees with hollows and log piles from previous clearing, which may provide suitable roosting and foraging habitat for this species. Threatened species surveys undertaken by RPS (2013 and 2015) and GTS (2017) did not detect the presence of this species. It should be acknowledged that the presence of Nyctophilus corbeni could not be distinguishable reliably from other sympatric Nyctophilus species using songmeter detectors and processing with zero-crossing analysis. However, Nyctophilus gouldi and Nyctophilus bifax were both captured in the harp traps during the September survey and it would be highly likely that the calls recorded on the songmeters match these two non-threatened species (calls recorded contemporaneously with and at the same location of capture). As the clearing will only be required on the edge of the existing easement, only a small number of hollow-bearing trees will be removed. No further fragmentation of the habitat will be created and may impact on some individuals but is unlikely to have a significant impact upon an important population of this species. Additional information regarding the impact of the project on this species is provided in Sections 3 and 4 of the attached EPBC Self-Assessment report prepared by Green Tape Solutions (2017) (Appendix 12).
Delma torquata (Collared Delma)	Delma torquata (Collared Delma) is known to occur within the Bulli State Forest area, with confirmed records located within very close proximity (less than 1 km) of the site. This species normally inhabits eucalypt dominated woodland and open forest, particularly in association with suitable micro-habitats such as rocky exposed outcrops (DoEE, 2017b). This species is sedentary and is considered to be

Species	Impact
	sensitive to disturbance. A population of this species is known to occur within the Bulli State Forest which is geographically isolated from other known populations as a result of land clearing associated with agricultural land uses. Therefore, the Bulli State Forest population is an important population of this species. Although suitable habitat, including rocky outcrops were identified within open woodland communities within the project area, these patches will be retained and protected through the construction and operational stage. Field investigation undertaken by Green Tape Solutions (2017) within the powerline easement revealed that the habitat within the corridor is not suitable for this species and that no suitable habitat for this species will be directly or indirectly impacted by the proposed action. Furthermore, no further fragmentation of the habitat will be created. Consequently, the proposed action is not likely to result in a significant impact upon important population of this species. Additional information regarding the impact of the project on this species is provided in Sections 3 and 4 of the attached EPBC Self-Assessment report prepared by Green Tape Solutions(Green Tape Solutions, 2017) (Appendix 12).

2.4.2 Do you consider this impact to be significant?

No

2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

No

2.7 Is the proposed action to be taken on or near Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

Two ecological assessments reports (RPS, 2013 and RPS, 2015), a bat trapping survey and Collared Delma ecology investigation (GTS, 2017) were undertaken to describe the flora and fauna features present within the project area.

The first report was prepared in 2013 and provides a review of the ecological values of the properties surveyed, and an assessment of potential environmental constraints with respect to the proposed solar farm development. The second report (RPS 2015) provides a detailed assessment of the ecological values within the easement corridor (State Forest easement). In August 2017, Powerlink requested that two small areas (easements Z and B) along the corridor be added to the State Forest section of the easement. An addendum report to the EWP was prepared by Green Tape Solutions (2017) to assess the ecological values of these two additional easements.

An EPBC Act Self-Assessable Report was also prepared by Green Tape Solutions in 2017 to summarise the Matters of National Environmental Significance (MNES) occurring on site and assess the overall project's impacts upon these MNES.

All four reports are attached with this application.

Appendix 9 - 2013 Ecological Assessment Report (RPS) - Refer to Section 3 which describes the Matters of Local, State and National Environmental Significances located within the site.

Appendix 10 - Environmental Works Plan, Easement through State Forest to Bulli Creek

Substation (RPS) Refer to Sections 3.3 and 3.4 which describe the Matters of Local, State and National Environmental Significances located within the easement corridor

Appendix 11 – Addendum to Environmental Works Plan (Green Tape Solutions, 2017)- describes the ecological values within the easement B and Z.

Appendix 12 - EPBC Self-Assessment Report - Refer to Section 3 which describes the Matters of National Environmental Significances within the site.

3.2 Describe the hydrology relevant to the project area (including water flows).

The site is located predominantly on lands associated with old loamy and sandy plains. Site drainage patterns follow a general south-east to north-west direction and exits the site via a fourth order watercourse. At least 24 small to medium sized dams are located on the site.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

The results of the ecological assessments show that the development area supports patches of remnant and regrowth vegetation.

Within the development area itself, high ecological values habitat is mostly associated with watercourses and areas immediately surrounding the watercourses which are setback from the solar farm footprint by buffer zones (20m). Significant habitat features recorded within this area includes tree hollows, large trees with nests, coarse woody debris and fallen timber with hollows, vertical earth banks, tussock grasses and aquatic habitat. Remnant and non-remnant vegetation on deep sandy substrates and rocky outcrops contained several habitat trees, a dense shrub layer providing shelter and refuge values for small birds, as well as rocks and crevices. Based on the current development layout that is attached as part of section 1 of this EPBC referral, these areas will not be disturbed and therefore, the ecological impact of the project with the main development area is low.

Many habitat features were identified along the easement corridor located beside the existing electricity corridor within the Western Creek State Forest. These features include standing dead trees (‘stags’), trees with hollow, log piles from previous clearing and coarse woody debris/fallen logs with hollows.

A number of declared weed species were identified within the project area. Velvety tree-pear (*Opuntia tomentosa*) and common pest pear (*O. stricta*), were present as low density infestations, particularly along watercourses, with some infestations within open paddocks.

Harrisia cactus (*Harrisia martinii*) and Groundsel bush (*Baccharis halimifolia*) were noted in paddocks surrounding the proposed electricity corridor in Western Creek State Forest and along roads. No pest fauna species were directly observed; however, evidence of site occupation of feral pigs (scats and diggings) were observed near watercourses.

Soil types for the project area have been classified and mapped in the 'Soils of the Inglewood-Talwood-Tara- Glenmorgan Area, Southern Queensland' (Isbell 1957). The majority of the site is dominated by a grey clay association, particularly in the east, with solodized-solonetz association to the west. Lithosols derived from sandstone and lateritic material occurs patchily in elevated areas of the site.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

There are no outstanding natural features present within the study area.

3.5 Describe the status of native vegetation relevant to the project area.

Based on RE mapping and site verification across the properties, the vegetation within the development area contains areas of remnant and regrowth vegetation classified as:

- RE11.3.2 *Eucalyptus populnea* woodland on alluvial plains, classified under the Vegetation Management Act 1999 (VM Act) as Of Concern;

- RE11.9.5 – *Acacia harpophylla and/or Casuarina cristata* open forest on fine-grained sedimentary rocks, classified under the VM Act as Endangered (E);

- RE11.7.4 – *Eucalyptus decorticans and/or Eucalyptus spp., Corymbia spp., Acacia spp., Lysicarpus angustifolius* woodland on Cainozoic lateritic duricrust, classified under the VM Act as Least concern;

- RE11.7.7 – *Eucalyptus fibrosa subsp. nubila +/- Corymbia spp. +/- Eucalyptus spp*. woodland on Cainozoic lateritic duricrust, classified under the VM Act as Least Concern;

- RE11.5.1/11.7.4/11.7.7 (mosaic) - *Eucalyptus crebra and/or E. populnea, Callitris glaucophylla, Angophora leiocarpa, Allocasuarina luehmannii* woodland on Cainozoic sand plains and/or remnant surfaces / *Eucalyptus decorticans and/or Eucalyptus spp., Corymbia spp., Acacia spp., Lysicarpus angustifolius* woodland on Cainozoic lateritic duricrust / Eucalyptus fibrosa subsp. nubila +/- Corymbia spp. +/- Eucalyptus spp. woodland on Cainozoic lateritic duricrust, all classified under the VM Act as Least Concern;

- RE11.5.4/11.7.4 (mosaic) – *Eucalyptus chloroclada, Callitris glaucophylla, C. endlicheri, Angophora leiocarpa* woodland on Cainozoic sand plains and/or remnant surfaces / Eucalyptus

decorticans and/or Eucalyptus spp., Corymbia spp., Acacia spp., Lysicarpus angustifolius woodland on Cainozoic lateritic duricrust, classified under the VM Act as Least Concern; and,

- RE11.7.4/11.7.5 (mosaic) classified under the VM Act as Least Concern.

Small areas of the Brigalow community (RE11.9.5) were identified within the project development area; however, these areas were assessed as not meeting the size, structure or floristic diversity criteria for the Brigalow (Acacia harpophylla dominant and codominant) TEC under the EPBC Act.

The ecological assessment of the proposed electricity corridor identified that the area to be cleared consists of remnant vegetation with a number of watercourses crossing the proposed easement. Vegetation was ground-truthed as:

- RE11.7.2 *Acacia spp.* woodland on Cainozoic lateritic duricrust. Scarp retreat zone, classified under the VM Act as Least Concern; and,

- RE 11.5.1/11.5.1a *Eucalyptus crebra* and/or *E. populnea*, *Callitris glaucophylla, Angophora leiocarpa, Allocasuarina luehmannii* woodland on Cainozoic sand plains and/or remnant surfaces (classified under the VM Act as Least Concern).

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The topography of the subject site is predominantly level to gently undulating (elevation range 350-370m) with small isolated rises throughout (elevation <390m) and no obvious gradient.

3.7 Describe the current condition of the environment relevant to the project area.

The landscape is rural, characterised by cattle pasture grasslands and fodder crops with patches of remnant woodland vegetation and scattered trees.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

There are no Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

3.9 Describe any Indigenous heritage values relevant to the project area.

There are no Indigenous heritage values relevant to the project area.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

All lots for the project site are freehold. Approximately 4.5 km of the 12km easement corridor is owned by the Queensland state forest.

3.11 Describe any existing or any proposed uses relevant to the project area.

All lots are currently, and have historically been, used for cattle grazing or cultivation. The proposed use is a large scale solar farm and will require minimum clearing.

Section 4 - Measures to avoid or reduce impacts

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

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

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

As stipulated by the conditions imposed as part of the development approval (Toowoomba Regional Council, 2015), a ‘no clearing zone’ buffer area of 20m must be established and maintained over existing vegetated areas along creeks and ridges. This zone is identified on the approved plans and in the Referral Agency Response Vegetation Plan (Appendix 6). This condition will ensure that the significant ecological habitat, connectivity and corridor values associated with these areas of remnant and regrowth vegetation, and watercourses are retained, thereby minimising the potential impact of the development on possible MNES within the project area.

The area to be cleared within Western Creek State Forest are considered more likely to support MNES, threatened species and threatened species habitat; however, the ecological surveys undertaken by RPS (2013 and 2015) and by Green Tape Solutions (2017) did not identify any such species. Given that this area is adjacent to an existing electricity easement, the proposed electricity corridor is already disturbed and is unlikely to support an important population of threatened flora or fauna species. Despite the lack of threatened species, fauna spotter-catcher services will be undertaken within the proposed clearing by a suitably qualified and/or experienced ecologist, to ensure the safety of the wildlife during vegetation clearing. This requirement forms part of the mitigation measures outlined as part of the Environmental Works Plan (EWP).

The approved EWP (Appendix 10) also requires that a series of mitigation measure be implemented to minimise some of the impacts of the clearing or to manage environmental issues identified during the ecological assessment. These mitigation measures include:

- treatment of restricted invasive plants declared under the *Biosecurity Act 2014* to avoid spread;

- remediation of watercourse;

- engagement of spotter-catcher services during clearing operations; and,

- ongoing maintenance undertaken by the land custodians (DNPSR/QPWS, Powerlink). Maintenance activities include management of fuel load through fire management planning and planned burns, weed control and pest animal management.

Section 4.2 of the EWP requires that if fences are to be re-established following clearing (for example, for stock exclusion or control), they are to be re-installed to a condition equal to or better than the current installation. In addition to this requirement, unless the fencing is required for security or electrical safety purposes, it is recommended that re- installed fences incorporate design features or modifications to minimise the risk of wildlife entanglement (referred to as ‘fauna-friendly fencing), for example, avoiding the use of barbed wire or at the minimum, using plain or borderline (white plastic-coated) wire as the top strand and attachment of metal reflective tags on the top strand.

The proponent is open to assisting in improving biodiversity values on the site following construction, including reseeding disturbed areas with native grasses. This may be extended to include rehabilitation to assist with remediation of disturbed areas following clearing, for example, through the use of suitable low-growing native species to assist with soil binding and site stabilisation, and to improve habitat values e.g. through providing food and shelter resources for fauna species.

Potential impacts on the environmental matters are limited to the clearing of some canopy trees adjacent to the existing power line easement. The installation of a solar farm retains existing grassland vegetation with a minimal level of ground disturbance.

Finally, a Construction Environmental Management Plan (CEMP) was prepared by RPS in 2017 and recently approved by Council. The CEMP is attached in Appendix 13. By implementing key actions as outlined in the CEMP, environmental impacts will be further minimised any impacts on fauna and flora during the construction and operational phases.

It is considered that the proposed development will not significantly adversely impacts upon the MNES.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

No Matters protected by the EPBC Act will be affected by the proposed action.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

A total of 23 EPBC-listed threatened flora and fauna species were identified by desktop searches as potentially occurring within a 10 km radius of the project site. Based on an assessment of the likelihood of occurrence, nine (9) species were assessed as being possibly likely to occur within the project area but were not identified present on site during the field investigations. The desktop assessment revealed that two (2) species, *Delma torquata* (Collared Delma) and *Nyctophilus corbeni* (Corben's Long-eared Bat) were assessed as being likley to occur as these species have been recorded within 5 km of the project area. However, further field investigations revealed that these sepcies were not found on site. The other species identified by desktop searches are considered as unlikely to occur.

Two ecological assessments were undertaken by RPS and an additional bat survey and Collared Delma ecological investitation was undertaken by Green Tape Solutions (2017) to describe the flora and fauna feature present within the project area. The first assessment was undertaken in 2013 and outlined that the project footprint is unlikely to have any significant environmental impact on the MNES. The second assessment provides a detailed of the potential impacts of the widening of the easement corridor (State Forest easement). Again, the assessment revealed that the impact of the proposed widening would not be significant.

An EPBC Act Self-Assessable report was then prepared by Green Tape Solutions in 2017 to assess the overall project's impacts upon the MNES. The report provides a detailed assessment of the potential project's impacts on the MNES using the EPBC Significant Impact Guidelines. The area to be cleared within Western Creek State Forest is considered more likely to support threatened species and threatened fauna species habitat. Given that this area is adjacent to an existing electricity easement, the action will not significantly contribute to increased fragmentation of fauna habitat and the area would be already subject to edge effects as a result of the existing disturbance.

The installation of a solar farm is bale to retain existing grassland vegetation with a minimal level of ground disturbance. By implementing key recommended actions designed to minimise impacts during the construction and operational phases, it is considered that the proposed development will not significantly adversely impact upon the MNES.

All the reports are attached with this application.

Appendix 9 - 2013 Ecological Assessment Report (RPS, 2013)

Appendix 10 - Environmental Works Plan, Easement through State Forest to Bulli Creek Substation (RPS, 2015)

Appendix 11 – Addendum to Environmental Works Plan, Easement through State Forest to Bulli Creek Substation (Green Tape Solutions, 2017

Appendix 12a - EPBC_SelfAssessment_Bulli Creek Solar Farm (Green Tape Solutions, 2017)

Appendix 12b - Bat Call Analysis Report (Green Tape Solutions, 2017)

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Bulli Creek Solar Farm Pty Ltd is proposing to underake the action. Bulli Creek Solar Farm Pty Ltd is owned by First Solar Australia Pty Ltd . First Solar has a long track record of responsible environmental management in Australia and globally. First Solar has been responsible for the construction, operation and maintenance for 170MW of large scale solar projects across Australia.

First Solar have been responsible for the construction of 3 large scale solar farms within Australia, all three plants were constructed in accodrance with the planning approval with no reportable Enviornmentla Incidents.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

Bulli Creek Solar Farm Pty Ltd has no past or present proceeding under the Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either

(a) the person proposing to take the action or,

(b) if a permit has been applied for in relation to the action – the person making the application.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the

corporation's environmental policy and planning framework.

First Solar is a leading global provider of comprehensive photovoltaic (PV) solar energy solutions that is creating enduring value by enabling a world powered by clean and affordable solar energy.

First Solar provides a safe work environment for all associates, contracts and site visitors. We strive to actively reduce the environmental impact of our activities through our commitments to continuous improvement. We design our PV products to be safe for their intended use and to minimise their environmental footprint.

First Solar is committed to complying with all applicable Environmental, Health and Safety (HES) regulatory requirements and applicable industry codes and standards. We foster a culture where EHS is an integral part of our associates' work and require our contractors and suppliers to adhere to our standards and commitments.

First Solar engages and collaborates with a variety of stakeholders in order to achieve, maintain and improve upon our EHS performance leadership.

First Solar strives to conserve natural resources, minimise waste, protect biodiversity and native habitats, and prevent pollution from the manufacturing, construction, operation and end-of-life management of our PV products and installations.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

Chinchilla Solar Farm located in QLD.

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
ALA. 2016. Atlas of Living Australia Database [Online]. Available: Available online at: http://spatial.ala.org.au/ [Accessed]. BIRD ATLAS BIRD LISTS. 2017. The Atlas of Australian Birds and Birdata [Online]. Available: Available online at: http://birdata.com.au/maps.vm [Accessed]. BIRDLIFE INTERNATIONAL. 2017. Species factsheet [Online]. Available: www.birdlife.org [Accessed]. DEHP 2017. Wildlife Online. In: DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION (ed.). Brisbane. DEWHA 2009. Draft EPBC Act Policy Statement 3.21 – Significant Impact Guidelines for 36 Migratory Shorebird Species In: DEPARTMENT OF THE ENVIRONMENT WATER HERITAGE AND THE ARTS (ed.). Canberra. DOEE 2017a. EPBC Protected Matters Search Tool. In: DEPARTMENT OF THE ENVIRONMENT (ed.). Canberra: Commonwealth of Australia,. DOEE. 2017b. Species Profile and Threats	Very reliable	No uncertainties

Reference Source	Reliability	Uncertainties

Database (SPRAT) [Online]. Australian Government, Canberra: Department of the Environment. Available: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl [Accessed]. DOTE 2013. Matters of National Environmental Significance - Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. In: DEPARTMENT OF THE ENVIRONMENT (ed.). Australian Government. PHILLIPS, S., HOPKINS, M. & J., C. 2007. Koala habitat and population assessment for the Gold Coast City Local Government Agency. Gold Coast: Report prepared for the Gold Coast City Council. PIZZEY AND KNIGHT 2012. The Field Guide to the Birds of Australia. RED GOSHAWK RECOVERY TEAM 2015. Submission concerning the eligibility of the Red Goshawk for inclusion on the EPBC Act threatened species list. In: DOEE (ed.). Canberra. RPS AUSTRALIA EAST 2013. Bulli Creek Solar Farm Ecological Assessment: Ecological Assessment of Karriba (Lot 5 DY1025 & Lot 37 DY1103), Minnaminane (Lot 4 DY1024) and Balinga (Lot 39DY916. RPS AUSTRALIA EAST 2015. Bulli Creek Solar Farm Ecological Assessment/Environmental Works Plan: Environmental Works Plan for Proposed Electricity Corridor in Western Creek State Forest. STRAHAN,

Reference Source	Reliability	Uncertainties
R. 1995. The Mammals of Australia, Sydney. THREATENED SPECIES SCIENTIFIC COMMITTEE. 2012. Listing advice for Phascolarctos cinereus (Koala) [Online]. Available: http://www.environment.gov.au/biodiversity/threatened/species/pubs/197-listing-advice.pdf [Accessed]. TOOWOOMBA REGIONAL COUNCIL 2015. Development Application Decision Notice: Approval (MCUI/2014/3278).		

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

There are no feasible alternatives to the proposed action. The site was chosen due to the large amount of area that is clear of vegetation on the project site, the proximity to the electrical infrastructure, the exisitng electrical easement and the limited environmental impact that the action will have on the environment.

The subject site is optimal for a large-scale solar farm given its proximity (with easement access) to the major 330kV Bulli Creek substation on the arterial power interconnector between New South Wales and Queensland. Additionally, the subject site has been predominately cleared of vegetation on account of the historic use of the subject site for grazing purposes, has a gentle gradient, is readily accessible via the Gore Highway and has significant existing internal infrastructure on-site that can be utilised as part of the proposed development (e.g. internal roads, vegetative screening, etc).

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Senior Manager

9.2.2 First Name

Tom

9.2.3 Last Name

Best

9.2.4 E-mail

tom.best@firstsolar.com

9.2.5 Postal Address

39 East Esplanade
Manly NSW 2095
Australia

9.2.6 ABN/ACN

ACN

607083858 - Bulli Creek Solar Farm Pty Ltd

9.2.7 Organisation Telephone

(02) 9002 7700

9.2.8 Organisation E-mail

tom.best@firstsolar.com

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

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date: .....

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, Thomas Best, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature:..... Date: 22/09/17

I, _____, the person proposing the action, consent to the designation of _____ as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:..... Date: .....

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Senior Manager

9.5.2 First Name

Tom

9.5.3 Last Name

Best

9.5.4 E-mail

tom.best@firstsolar.com

9.5.5 Postal Address

39 East Esplanade
Manly NSW 2095
Australia

9.5.6 ABN/ACN

ACN

607083858 - Bulli Creek Solar Farm Pty Ltd

9.5.7 Organisation Telephone

(02) 9002 7700

9.5.8 Organisation E-mail

tom.best@firstsolar.com

Proposed designated proponent - Declaration

I, Thomas Best, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:..... Date: 22/09/17

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Director

9.8.2 First Name

Kelly

9.8.3 Last Name

Matthews

9.8.4 E-mail

kelly.mattews@greentapesolutions.com.au

9.8.5 Postal Address

261 Petersen Road
Morayfield QLD 4506
Australia

9.8.6 ABN/ACN

ABN

20162130627 - CO FX PTY LTD

9.8.7 Organisation Telephone

07 5428 6372 / 0423081428

9.8.8 Organisation E-mail

kelly.mattews@greentapesolutions.com.au

Referring Party - Declaration

I, Kelly Matthews, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature:…  …… Date: …22/09/2017……

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. appendix_1_project_location.pdf
2. appendix_2_bulli_2017_05_19_site_layout_south.pdf
3. appendix_3_bulli_2017_05_19_site_layout_north.pdf
4. appendix_4_consent_conditions_from_toowoomba_regional_council.pdf
5. appendix_5_consent_conditions_from_sdip.pdf
6. appendix_6_approved_pmav_from_dilgp.pdf
7. appendix_7_town_planning_report.pdf
8. appendix_8_community_engagement_plan.pdf
9. appendix_9_2013_ecological_assessment_report_-_rps_group.pdf
10. appendix_10_environmental_works_plan.pdf
11. appendix_11_addendum_to_ewp.pdf
12. appendix_12a_epbc_selfassessment_bulli_creek_solar_farm_verc.pdf
13. appendix_12b_epbc_selfassessment_report_-_bat_analysis_report.pdf
14. appendix_13_approved_construction_environmental_management_plan.pdf