Title of Proposal - Lockyer Energy Project, 2.5 km north of Gatton, QLD

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 (non-renewable)

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

Quinbrook Infrastructure Partners is proposing to develop a natural gas-fired power station, the Lockyer Energy Project, on a rural general zoned site on Ranger Road, Adare, approximately 2.5 kilometres (km) north of the town of Gatton in south-east Queensland. The project proposes to develop electricity generation infrastructure comprising a staged development of a gas-fired peaking power generation plant with an initial capacity of 200 to 300 Megawatts (MW) with future expansion increasing capacity to a total of 1,000 MW of up to six open cycle gas turbines. The proposed action and environmental assessment in this referral is for the ultimate 1,000 MW development.

Refer to the locality plan in Figure 1 (Appendix A).

The Lockyer Energy Project is a staged development of a natural gas-fired power generation plant proposed by Quinbrook Infrastructure Partners in response to growing demand for electricity. The following infrastructure components will be required as part of the Project (refer to Concept Plan in Appendix B):
• six open-cycle gas turbines – Stage 1 installation of 200 to 300 MW of generating capacity (i.e. two gas turbines), with expansion stages up to a total of 1,000 MW;
• electrical switchyard;
• gas receiving unit;
• operations building, workshop, administration building and car park; and
• associated safety and monitoring equipment.

The proposed life of the plant is 30 years, operating 450-1800 hours/year (5-20% capacity factor). Stage 1 would have a maximum load of 200-300 MW, Stage 2 an additional 300-400 MW, and Stage 3 and additional 300-400 MW.

The proposed site is located at the intersection of the Roma to Brisbane Gas Pipeline and the Energex 110 kV transmission line. There is other existing gas infrastructure located adjacent the site.

The activities planned for construction of the plant include:
• clearing vegetation and stripping and stockpiling topsoil
• installation of temporary and/or permanent erosion and sediment control measures

- earthworks (cut and fill) to level out the development pad
- dewatering and filling in two farm dams
- construction of stormwater and drainage structures, batters and earth bunds
- rehabilitation, stabilisation and planting of earth bunds and other areas

Refer to the Vegetation Clearing Plan in Appendix C for location of proposed clearing, vegetation to be retained, earthworks and revegetation. Note, there is existing infrastructure (powerlines, underground pipelines) and a large proportion of cleared areas within the 25.3 ha development footprint.

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
General project area	1	-27.536239085968	152.27675734321
General project area	2	-27.536924052848	152.27334557334
General project area	3	-27.536391301199	152.27006254951
General project area	4	-27.533708476863	152.27062044899
General project area	5	-27.534222214253	152.27710066597
General project area	6	-27.536239085968	152.27675734321

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 property is Lot 191 on CSH2361 located between Ford's Road and Ranger Road, Adare. It is approximately 2.5 km north of Gatton in the Lockyer Valley Regional Council local government area, south-east Queensland, and approximately 90 km west of Brisbane. The lot is approximately 200 metres (m) north of the Warrego Highway.

The southern area of the lot is proposed to be developed with the northern portion to remain as its current land use. The nearest residence to the southern portion is located approximately 500 m to the southwest.

Refer to the locality plan in Figure 1 (Appendix A). A polygon shapefile of the proposed development area has also been attached to this referral.

1.6 What is the size of the development footprint or work area?

25.3

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title.191CSH2361

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.

Nicholas Delany

1.10.1.2 E-mail

NDelany@lvrc.qld.gov.au

1.10.1.3 Telephone Number

07 5462 0647

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

Start date 01/2018

End date 01/2020

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

The South East Queensland Regional Plan is currently being reviewed and updated and is proposed to be released in mid 2017. Under the current plan, the project site is located in a Priority Living Area (PLA). PLAs are established for growth of towns to ensure that resource activities are compatible and communities have some input.

The project site is located in the Lockyer Valley Regional Council local government area and under the Gatton Shire Council Planning Scheme. The site is located in a Rural General zone with an area of Rural Agricultural in the southwest corner in line with an area of Class A- Crop Land. A gas and oil pipeline is located along the southern border of the site. Under the planning scheme overlay mapping, the northern portion of the lot (approximately three-quarters of the site) is categorised as Significant Habitat. There is a medium bushfire risk on the site due to the presence of vegetation.

The development has been considered against the Gatton Shire Council Planning Scheme, (former) Integrated Planning Act 1997, Environmental Protection Act 1994, Vegetation Management Act 1999, Water Act 2000.

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

Consultation has occurred with the wider community and key stakeholders as part of the Town Planning assessment and approval process.Westlink Power Project Pty Ltd (the former project facilitator) developed a Community & Stakeholder Consultation Plan to ensure clear, consistent information about the project and the approvals process was provided to all key stakeholders. A copy of the plan and the communications register is attached as Appendix E. The stakeholder engagement included interactions with Jagera Daran as the representatives of the Indigenous stakeholders. This plan Consultation hasalso occurredformed part of the consultation with the wider community and key stakeholders as part of the Town Planning assessment and approval process.

Prior to construction commencing Quinbrook will develop a stakeholder engagement plan into a construction phase plan that will set out targeted stakeholder engagement activities and initiatives. The engagement plan may include:

· A website providing project information, an enquiry portal, an employment enquiry portal and a suppliers enquiry portal

- A 1800 number
- Newsletters
- Information sessions
- Targeted consultations and discussions
- Aboriginal and Torres Strait Islander engagement plan
- Social media plan
- Sponsorship plan
- Training and education initiatives
- A local industry participation plan.

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.

Development approval was obtained on 28 February 2014 for:

- Development permit for a material change of use of the land for electricity generation infrastructure under the Sustainable Planning Act 2009.
- Development permit for environmentally relevant activity no. 14 (electricity generation threshold 1 – generating electricity by using gas at a rate capacity of 10 MW electrical or more) under the Environmental Protection Act 1994
- Development permit for operational work for clearing vegetation made assessable under the (former) Integrated Planning Act 1997.

The approval document and conditions are attached as Appendix D.

The proposed clearing and construction works have the potential to require a Species Management Plan for least concern or special least concern species listed under the Queensland Nature Conservation Act 1992 for potential impacts to fauna breeding places (if any identified within impact areas prior to commencement of construction).

There is also a potential for further assessment prior to clearing and earthworks commencing for

items of cultural heritage significance protected under the Queensland Aboriginal Cultural Heritage Act 2003, particularly where remnant vegetation (i.e. previously undisturbed ground) will be cleared.

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 impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to impact on the members of any listed threatened species (except a conservation dependent species) or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Koala (Phascolarctos cinereus) - vulnerable	Potential impacts to this known threatened

Species	Impact
Habitat requirements: Within the region, koalas occur in sub-humid Eucalyptus-dominated forests and woodlands in riparian and non-riparian environments, and some Acacia-dominated forests and woodlands in non-riparian environments (DEE, 2017). Likelihood of occurrence: Koala was confirmed present within the study area. The species has been historically recorded within the desktop search extent, one individual was observed in the previous field survey (Conics, 2009), and faecal pellets were observed from seven locations across the study area in the recent field survey (GHD, 2017). The species likelihood and significant impact assessments (and Protected matters search report) are attached as Appendix F. The Flora and Fauna Survey Report is attached as Appendix G. Suitable habitat for this species is shown on Figure 3 Habitat for threatened fauna species (attached as Appendix H).	species that may occur as a result of the project include the following: • Loss of approximately 6.5 ha of suitable koala habitat including very sparse to sparse eucalypt food trees (including areas mapped as remnant which have been previously disturbed by vehicle tracks, fenceline/firebreak clearing, farmhouse yard areas and a farm dam) • Direct fauna injury or mortality during vegetation clearing, earthworks and construction activities • Short-term disruption of wildlife behaviours due to restriction of movement, exposure to light, noise, vibration or other construction impacts • Increased risk of the spread or introduction of weed species • Loss of constructed local water sources (two farm dams) and changes to overland flow and hydrology regime across the project footprint (due to proposed cut and fill, earth bunds and drainage structures) • Occasional disturbance to fauna due to exposure to light, noise, vibration or other operational impacts • Introduction and/or proliferation of pest fauna • Long-term restriction on movement of wildlife through fencing and constructed earth bunds, however this is also likely to reduce fauna mortality from the Warrego Highway traffic to the south. The majority of the proposed project footprint is located in non-remnant areas (approximately 18.8 ha of previously cleared and regrowth habitat), however approximately 6.5 ha of mapped remnant vegetation/suitable koala habitat will be cleared as part of the works, which have been previously disturbed by vehicle tracks, fenceline/firebreak clearing, farmhouse yard areas and a farm dam. An assessment of koala habitat value in the study area was undertaken using the koala habitat assessment toolkit in the EPBC referral guidelines for the vulnerable koala (DotE, 2014). Habitat within the study area scored 9 (i.e. scores ? 5 represent habitat critical to the survival of the species). Therefore, the study area represents habitat critical to the survival of the koala. The scores against those criteria are detailed below for the koala: • Koala

Species	Impact
	occurrence +2 (high): Evidence of one or more koalas within the last 5 years • Vegetation composition +2 (high): has forest or woodland with 2 or more known koala food tree species • Habitat connectivity +2 (high): area is part of a contiguous landscape > 500 ha • Key existing threats +1 (medium): Evidence of infrequent or irregular koala mortality from vehicle strike or dog attack in areas that score 1 or 2 for koala occurrence (irregular koala deaths are reported for the area due to vehicle strike on the Warrego Highway (Ipswich Koala Protection Society, 2014)) • Recovery value +2 (high): Habitat is likely to be important for achieving the interim recovery objectives for the relevant context Total score: 9 Approximately 44.6 ha of koala habitat (and grey-headed flying-fox foraging habitat) will be retained within the study area, which connects to more extensive networks of habitat to the north. Areas of habitat within the proposed clearing footprint had lower levels of koala utilisation than the koala habitats retained across the majority of the study area. Given the area to be cleared is relatively small (6.5 ha), has lower levels of koala utilisation relative to other parts of the study area, and will not cause fragmentation of habitats, the impact is not considered to be significant. Assessment against the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 (DotE, 2013) criteria indicated that a significant residual impact on koala as a result of the proposed works is not likely to occur. This assessment is documented in the significant impact criteria tables (attached as Appendix F) (for further details see Flora and Fauna Survey Report attached as Appendix G).
Grey-headed flying-fox (Pteropus poliocephalus) - vulnerable Habitat requirements: The species roosts in rainforest patches, stands of Melaleuca, mangroves and riparian vegetation and forages widely in rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands (DEE, 2017). Likelihood of	Potential impacts to this likely-to-occur threatened species that may occur as a result of the project include the following: • Loss of approximately 6.5 ha of potential grey-headed flying-fox foraging habitat of very sparse to sparse eucalypt food trees (including areas mapped as remnant which have been previously disturbed by vehicle tracks,

Species	Impact
occurrence: The grey-headed flying-fox is considered likely to occur. The species has not been recorded within the desktop search extent. However, suitable habitat was confirmed present within the study area. The species is not uncommon within south-east Queensland. The species likelihood and significant impact assessments (and Protected matters search report) are attached as Appendix F. The Flora and Fauna Survey Report is attached as Appendix G. Suitable habitat for this species is shown on Figure 3 Habitat for threatened fauna species (attached as Appendix H).	fenceline/firebreak clearing, farmhouse yard areas and a farm dam) • Direct fauna injury or mortality during vegetation clearing, earthworks and construction activities • Short-term disruption of wildlife behaviours due to restriction of movement, exposure to light, noise, vibration or other construction impacts • Increased risk of the spread or introduction of weed species • Loss of constructed local water sources (two farm dams) and changes to overland flow and hydrology regime across the project footprint (due to proposed cut and fill, earth bunds and drainage structures) • Occasional disturbance to fauna due to exposure to light, noise, vibration or other operational impacts • Introduction and/or proliferation of pest fauna • Long-term restriction on movement of wildlife through fencing and constructed earth bunds, however this is also likely to reduce fauna mortality from the Warrego Highway traffic to the south. The majority of the proposed project footprint is located in non-remnant areas (approximately 18.8 ha of previously cleared and regrowth habitat), however approximately 6.5 ha of mapped remnant vegetation/potential grey-headed flying-fox habitat will be cleared as part of the works, which have been previously disturbed by vehicle tracks, fenceline/firebreak clearing, farmhouse yard areas and a farm dam. Approximately 44.6 ha of potential grey-headed flying-fox foraging habitat will be retained within the study area, which connects to more extensive networks of habitat to the north. Areas of habitat within the proposed clearing footprint had lower value than potential habitat to be retained across the majority of the study area. No flying-fox roosting camps occur within or immediately adjacent to the study area - the nearest mapped flying-fox roosting camp is located at Gatton, further south of the study area (DEHP, 2016). Given the area to be cleared is relatively small (6.5 ha), has lower habitat value relative to other parts of the study area, and will not cause fragmentation of habitats, the impact is not considered to be

Species	Impact
	significant. Assessment against the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 (DotE, 2013) criteria indicated that a significant residual impact on grey-headed flying-fox as a result of the proposed works is not likely to occur. This assessment is documented in the significant impact criteria tables (attached as Appendix F) (for further details see Flora and Fauna Survey Report attached as Appendix G).

2.4.2 Do you consider this impact to be significant?

No

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

Yes

2.5.1 Impact table

Species	Impact
Rainbow bee-eater (Merops ornatus) - migratory (terrestrial) Habitat requirements: This species inhabits open forests and woodlands, shrublands and open areas, generally located near permanent water and is generally widespread in mainland Australia. It typically breeds throughout most of its range and builds nests in the banks of rivers, creeks and dams (DEE, 2017). Likelihood of occurrence: Rainbow bee-eaters were heard calling across the woodland habitat within the study area. The species has been historically recorded within the desktop search extent. Suitable habitat was present within the study area, which is limited to small, isolated areas of foraging habitat and low-value nesting habitat that are relatively ubiquitous within the surrounding landscape. No significant breeding or nesting habitats occur that would support sufficiently large numbers of individuals to	Potential impacts to this migratory species that may occur as a result of the project include the following: • Vegetation clearing reducing available shelter, forage or nesting habitat • Infilling of farm dams or drainage lines reducing available wetland or waterway habitat • Direct fauna injury and mortality during clearing and earthworks • Indirect disturbance to fauna during construction activities through noise, dust, light or vibration impacts • Degradation of habitat through introduction and/or spread of weeds • Introduction and/or proliferation of pest fauna • Degradation of downstream aquatic habitats through sedimentation or other water quality impacts. Assessment against the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 (DotE, 2013) significant impact criteria for listed migratory species indicated that a significant residual impact on migratory bird species as a result of

Species	Impact
constitute an important population of this species. The species likelihood and significant impact assessments (and Protected matters search report) are attached as Appendix F. The Flora and Fauna Survey Report is attached as Appendix G.	the proposed works is not considered likely to occur. The potential habitat present within the study area is not considered to be 'important habitat' for a migratory species, in that it does not support an ecologically significant proportion of a population of migratory species, is not of critical importance at a particular life-cycle stage, is not at the limit of a species' range and is not within an area where the species is known to be declining. Therefore, the proposed action is not likely to: • Substantially modify, destroy or isolate an area of important habitat for a migratory species • Result in invasive species that are harmful to the migratory species becoming established in an area of important habitat for the migratory species • Seriously disrupt the life-cycle of an ecologically significant proportion of the population of a migratory species. This assessment is documented in Appendix F (for further details see Flora and Fauna Survey Report attached as Appendix G).

2.5.2 Do you consider this impact to be significant?

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 likely to impact on any part of the environment in the Commonwealth land?

No

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

No

2.9 Will there be any 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 impact on any part of the environment in the Commonwealth marine area?

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.

The following information is a summary of the results of the flora and fauna assessment (refer to report attached as Appendix G).

The study area is located within a rural landscape north of the heavily trafficked Warrego Highway. The 70.15 ha lot retains native eucalypt woodland vegetation over a large proportion of its area, particularly the northern extent. Approximately 18.8 ha of the property along the southern boundary where the project site is proposed has been historically cleared for grazing livestock. Although the remaining areas retain native woodland, many of the mature trees have been cleared for timber.

A total of 65 flora species were identified within the study area, including 49 species of least concern status under the NC Act and 16 exotic species. In previous surveys (Conics, 2009), there were 97 flora species recorded across the study area, including 14 exotic species.

The vegetation communities across the study area include:

- Remnant eucalypt open forest – Spotted gum (*Corymbia citriodora subsp. variegata*) dominated open forest community with associated *Eucalyptus crebra* and *E. fibrosa subsp. fibrosa* to 20 m.

- Non-remnant scattered mature eucalypts with cleared understorey – Spotted gum dominated woodland canopy to 16 m height with juvenile eucalypts in the understorey to 7 m height and sparse to mid-dense groundcover of native and exotic grasses and herbs

- Cleared pasture grasses or weedy groundcover

- Aquatic plants in and around constructed farm dams

No TECs were recorded within the study area during the field surveys.

The study area retains large areas of natural woodland (north of the project footprint) that provide moderate to high value habitat for a range of birds, reptiles, mammals and amphibians. The woodland was relatively consistent in its structure and distribution across the study area. The site has evidently been subject to historical logging. This has reduced the abundance of mature, hollow-bearing trees. Local topography provides some variation in habitat values, with localised areas of higher ecological value associated with an ephemeral watercourse in the northern extent of the study area and a rocky gully and hillside in the centre.

Areas within the project footprint had lower habitat values. These areas have predominantly been cleared and historically used for cattle grazing.

Four small permanent dams were present across the study area (two intersecting the project footprint). These provide local habitat values for a range of birds, reptiles, mammals and amphibians.

Seven broad habitat categories were identified across the study area (refer to the Habitat Values Map in Figure 2 attached as Appendix I), including:

- Eucalypt woodland
- Eucalypt woodland on rocky substrate
- Open eucalypt woodland
- Ephemeral watercourse
- Permanent wetland
- Cleared agricultural land and
- Periodically inundated grassland.

A total of 73 fauna species were recorded in the field survey including three species of amphibians, five species of reptiles, eight species of mammals and 55 species of birds.

Koalas were confirmed present from eight (out of nine) spot assessment technique (SAT) search locations across the study area. One koala individual was previously observed in field

surveys in 2009 by Conics.

The rainbow bee-eater (a listed migratory bird species) was also recorded in the study area.

The study area is partially mapped by the Queensland Department of Natural Resources and Mines (DNRM) as essential habitat for the squatter pigeon (regulated through the Queensland Vegetation Management Act 1999), however this mapping is based on a previous record from 1990 and the squatter pigeon is considered unlikely to occur due to its known decline in the region.

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

The study area is within the Brisbane River drainage basin and the Lockyer Creek sub-basin.

No watercourses under the Queensland Water Act are mapped on the property, however two areas of drainage lines exist within the study area.

A northern drainage line on the property flows generally west to east and eventually discharges into Redbank Creek more than 4 km east of the study area. This drainage line has been previously modified by the construction of two farm dams along it as well as larger dams in the adjacent property downstream and culverts under roads and the Warrego Highway.

A southern drainage line is mapped as flowing in a southerly direction under the Warrego Highway and into Lockyer Creek approximately 900 m south of the study area. This drainage line has been modified by construction of two farm dams and is present as overland flow rather than formed drainage lines where it intersects with the development footprint.

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

The geology and soils across the majority of the study area are generally sandstone derived, consisting of fine sandy soils on lower slopes and a rocky outcrop forming a ridgeline and rocky gullies from the centre of the lot towards the south. The low-lying south-western corner features soils derived from colluvial origins (mapped as consisting of residual sand, soil, clay and rock debris).

Vegetation is predominantly eucalypt open forest with a grassy groundcover with disturbed or cleared areas and weed species also present (refer to Section 3.1 above).

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

Approximately 51.4 ha of the study area is mapped as containing remnant vegetation (see Section 3.5 below) that provides habitat for a variety of native species, including the koala. This area forms part of a large contiguous area of potential habitat for native species on surrounding properties. The study area has some connectivity (across local roads, property fences and waterways) with Lilydale State Forest (approximately 2.1 km to the north-west) and the relatively large extent of Lockyer National Park (approximately 2.9 km to the north). These areas will not be impacted by the project, however this area has the potential to provide a substantial expanse of habitat and movement corridor for koala and other native wildlife in the region.

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

The northern two-thirds of the study area (approximately 51.4 ha of the 70.2 ha lot) are mapped as least concern RE 12.9-10.2 / 12.9-10.5a (70% / 30%) (refer to Figure 1 Locality Plan in Appendix A), which are described as:

- Least concern RE 12.9-10.2: *Corymbia citriodora subsp. variegata* +/- *Eucalyptus crebra* open forest on sedimentary rocks

- Least concern RE 12.9-10.5a: *Eucalyptus helidonica, Corymbia citriodora subsp. variegata* open forest +/- *C. trachyphloia subsp. trachyphloia, Eucalyptus fibrosa subsp. fibrosa*, *E. taurina, E. dura, E. baileyana, C. gummifera, Angophora woodsiana* and *Lysicarpus angustifolius*. Occurs on quartzose sandstone scarps and crests.

The majority of the proposed project footprint is located in non-remnant areas, however approximately 6.5 ha of mapped remnant vegetation will be cleared as part of the works (including areas thathave been previously disturbed by vehicle tracks, fenceline/firebreak clearing, farmhouse yard areas and a farm dam).

Refer to Flora and Fauna Assessment Report in Appendix G.

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

The general topography of the study area comprises relatively flat land with low lying areas in the southwest with a gradual increase in elevation northwards, and a higher ridgeline in the centre of the property.

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

The lot is generally dominated by mature and regrowth native vegetation.

Disturbances across the study area include past clearing for grazing purposes (particularly within the development footprint), selective logging of trees throughout the whole property, fencing, firebreaks and vehicle access tracks around the property boundary, farm house and associated cleared yard and fencing, fencing for livestock, and at least three constructed farm dams. There is also evidence of previous fires, some major gully erosion along drainage lines and in low-lying areas, and a number of weed species occurring across the property.

A total of 16 exotic pest flora species were identified within the study area. Pest species were relatively abundant and widespread in distribution, particularly in previously cleared areas or adjacent to cleared areas.

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

Not applicable - no Commonwealth Heritage Places or other places recognised as having heritage values were identified during desktop and site investigations.

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

A search undertaken 8 June 2017 of the Aboriginal and Torres Strait Islander cultural heritage database and register returned no sites or items of Aboriginal cultural heritage significance recorded over the property.

The relevant Aboriginal party for this area is the Jagera People #2.

There is no active native title claim over this area.

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

The property is freehold tenure

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

The proposed action is to be undertaken on a rural/rural-residential property, previously used as cattle grazing land. There is evidence of cattle usage across the whole study area, including cleared areas, fencelines and cattle holding yards, dams, tracks and trampled areas. An uninhabited house and shed is present within the project area.

There is an existing above ground powerline inside the southern property boundary as well as two underground gas pipelines leading to the adjacent gas compressor station.

There is clearing for firebreaks, fencelines and vehicle tracks along all boundaries of the property.

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.

Avoidance

The proposed development has been sited to avoid areas of remnant vegetation that contain higher value koala and grey-headed flying-fox habitat in the northern extent of the study area. No direct impacts to these areas will occur. Approximately 6.5 ha of lower utilised habitat will be removed along the northern boundary of the development footprint, which is at the southern edge of the habitat area and will not fragment habitat to be retained on the remainder of the property. Clearing or associated activities will not adversely impact native vegetation to be retained outside the clearing footprint.

The areas to be replanted are shown on the Vegetation Clearing Plan (attached as Appendix C), however no koala food trees will be replanted in areas adjacent Ford's Road in order to deter koalas from moving towards the Warrego Highway. Proposed replanting of koala and grey-headed flying-fox food trees will occur within the development footprint to reduce the net loss of habitat for these species.

In addition, the existing 50 m boundary firebreak around the vegetation to be retained shall be reduced to 1.5 times the height of the tallest vegetation or 20 m (which is greater), with the difference to be rehabilitated to reflect the existing mapped remnant vegetation (pre-cleared regional ecosystem). This will be reflected on an amended Landscaping and Rehabilitation Plan to be approved by local government prior to commencement of any works on site.

As stated in the existing development approval conditions, all areas of vegetation that are not cleared in accordance with the approval and all rehabilitation areas shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the

Land Title Act 1994, and all Revegetated Earth Bunds identified on Vegetation Clearing Plan 41-22282-L007 prepared by GHD and dated 28 May 2010 shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the *Land Title Act 1994.* The proposed revegetated earth bunds are shown on the Vegetation Clearing Plan (attached as Appendix C).

Ancillary activities and other infrastructure requirements such as stockpile areas and access tracks will utilise existing cleared areas wherever possible to avoid the need for unnecessary or early clearing works.

Mitigation

General environmental management measures include:

- Daily pre-start briefings will take place for all construction staff to provide understanding of clearing processes and areas to be protected from construction

- Clearing activities will only commence once the clearing area has been clearly defined, with individual trees to be marked for removal

- Vehicle accesses, work areas, stockpiles etc will be designated and located outside of vegetation canopy drip-lines in order to minimise compaction of adjacent vegetation root zones)

- Land clearing debris will not be pushed into gullies, waterways or other drainage line or waterlogged areas

- Vegetation clearing will be undertaken sequentially from non-habitat towards habitat areas in order to allow wildlife to move into habitat areas of their own accord

- A koala (fauna) spotter will be present on-site during all vegetation clearance works to inspect for and implement appropriate actions for allowing fauna to move on or otherwise relocating to adjacent suitable habitat

- Any injured wildlife will be immediately taken to the nearest veterinary hospital or wildlife carer as appropriate

- Vegetation cleared on site shall be mulched and used for on-site landscaping works, or if not appropriate to reuse, will be removed and disposed of in an approved facility

- Wildlife friendly fencing will be utilised where additional fencing is proposed around or adjacent to vegetation to be retained, which will be designed to reduce potential injury to native wildlife and allow movement of koalas and other native wildlife

- On-site lighting shall be designed to be wildlife friendly, therefore will not include flood lighting, bare bulbs and lighting pointing upward, and will include light deflectors if necessary adjacent to retained habitat areas and motion sensors with short timers on security lights

- Landscaping works and weed management will be done in accordance with the project's approved Landscape Management and Revegetation Plan

- Waste storage and management will be undertaken in accordance with the project's approved Waste Management Plan and will include appropriate and adequate numbers of waste containers at a central location, waste collection on an impervious paved area, and waste removal from the site at least once per week

- All stormwater management and drainage infrastructure will be designed in accordance with the project's approved Stormwater Management Plan, Gatton Shire Council Planning Scheme, Queensland Urban Drainage Manual, at a minimum, so that there is no worsening of runoff beyond the existing conditions

- Erosion and sediment control measures will be provided generally in accordance with the project's approved Erosion Management Plan and will be implemented prior to, during and post clearing of vegetated areas

- The Site Based management Plan will be implemented prior to commencement of the construction activities that addresses environmental commitments, identification of potential sources of environmental harm and potential impacts of these on the environment, control measures to prevent or minimise the likelihood of environmental harm, contingency plans, monitoring, training, record keeping and other elements under the Environmentally Relevant Activity permit

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.

The proposed action is considered to have the following environmental outcomes relevant to matters of national environmental significance:

- Positioning of the development on the more-disturbed southern extent of the property in order to minimise impacts to existing vegetation communities and habitat, with the majority of the development footprint having no evidence of koala usage. - Clearing of approximately 6.5 ha of potential habitat that has been assessed as habitat critical to the survivial of the koala but which showed limited usage by koalas based on the relative absence of scratches and faecal pellets and contained lower density of koala food trees. - The clearance of this vegetation is considered unlikely to cause fragmentation of koala habitats because the area to be cleared is located at the southern extent of koala habitats present within the study area and surrounding landscape, has substantially lower density of koala food trees than areas to be retained, and has low levels of koala utilisation compared with habitats to be retained (based on the abundance and freshness of koala scratches and faecal pellets observed). - Loss of approximately 6.5 ha of potential grey-headed flying-fox foraging habitat. No flying-fox roosting camps occur within or

immediately adjacent to the study area - the nearest mapped flying-fox roosting camp is located at Gatton, south of the study area (DEHP, 2016). - Potential habitat for matters of national environmental significance to be cleared includes areas mapped as remnant vegetation but which have been previously disturbed by vehicle tracks, fencline/firebreak clearing, farmhouse yard areas and a farm dam and gully erosion. - Approximately 44.6 ha of higher value koala habitat and grey-headed flying-fox foraging habitat will be retained within the study area, which connects to more extensive networks of habitat to the north, therefore extensive suitable habitat will remain in the surrounding landscape. Mitigation measures will be implemented for the project to avoid any impacts on adjacent bushland. - The construction of earth bunds and infrastructure in the proposed development footprint between an area of confirmed high value habitat and an area of known koala mortality (i.e. the Warrego Highway) may have some positive value in deterring movement of individuals onto the highway. The highway is known to represent a mortality source for koalas (Ipswich Koala Protection Society, 2014) and a barrier to koala movement (Bussey and Ellis, 2016). - Areas are required to be replanted in accordance with the approved landscaping plans and shall include koala and grey-headed flying-fox food trees in areas adjacent to habitat to be retained. - As stated in the existing development approval conditions, all areas of vegetation that are not cleared in accordance with the (existing) approval and all rehabilitation areas shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the *Land Title Act 1994*, and all Revegetated Earth Bunds identified on Vegetation Clearing Plan 41-22282-L007 prepared by GHD and dated 28 May 2010 shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the *Land Title Act 1994*. The proposed revegetated earth bunds are shown on the Vegetation Clearing Plan i(attached as Appendix C). - Removal or modification of existing disturbed or constructed aquatic habitat and drainage lines that listed migratory species may inhabit or use temporarily, however no important habitat for migratory species is present or likely to be impacted.

The development is subject to the following plans as conditions of the approval ordered by the Planning and Environment Court dated 28 February 2014 (refer to Appendix D):

- Concept Plan (Plant Layout Option 1) (dated 3 December 2009) (included as Appendix B)

- Vegetation Clearing Plan (dated 28 May 2010) (included as Appendix C)

- Site Based Management Plan (dated 3 September 2009)

- Landscape Management and Revegetation Plan and Draft Landscape Specification (dated 23 February 2010)

- Erosion Management Plan (dated 23 February 2010)

- Stormwater Management Plan (dated 23 February 2010)

- Waste Management Plan (dated 23 February 2010)

- Visual Impact and Landscape Assessment (dated 31 August 2009) and Addendum (dated February 2010)

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.

The majority of the proposed project footprint (approximately 25.3 ha) is located in non-remnant areas (approximately 18.8 ha of previously cleared and regrowth habitat). However, the project will result in the clearing of approximately 6.5 ha of habitat for the koala and foraging habitat for the potentially occurring grey-headed flying-fox. However this area to be cleared is relatively small (with existing impacts from grazing activities, vehicle tracks, fencline/firebreak clearing, farmhouse yard areas and a farm dam), has lower levels of utilisation by koalas than areas to be retained on the remainder of the property, and will not cause habitat fragmentation as it is located at the southern extent of the existing habitat.

While there will be an initial loss of koala food trees as a result of the project, rehabilitation of the site will incorporate local planting of koala food trees within the development footprint (no koala food trees will be replanted in areas directly adjacent to Ford's Road in order to deter koalas from moving towards the Warrego Highway). The net result is therefore unlikely to have a significant adverse impact on habitat critical to the survival of the species.

The listed migratory bird species, rainbow bee-eater, was confirmed present on the property. Habitats present within the study area are limited to small, isolated areas of foraging habitat and low-value nesting habitat that are relatively ubiquitous within the surrounding landscape. No significant breeding or nesting habitats occur that would support sufficiently large numbers of individuals to constitute an important population of this species. The potential habitat present within the study area is not considered to be 'important habitat' for this or any other potentially occurring migratory species, in that it does not support an ecologically significant proportion of a population of migratory species, is not of critical importance at a particular life-cycle stage, is not at the limit of a species' range and is not within an area where the species is known to be declining.

Approximately 44.6 ha of higher value habitat will be retained on the property, which is connected to more extensive networks of habitat to the north. As stated in the existing development approval conditions, all areas of vegetation that are not cleared in accordance with the approval and all rehabilitation areas shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the *Land Title Act 1994*, and all Revegetated Earth Bunds identified on Vegetation Clearing Plan 41-22282-L007 prepared by GHD and dated 28 May 2010 shall be protected in perpetuity in the form of a statutory covenant placed on the land title in accordance with the *Land Title Act 1994*. The proposed revegetated earth bunds are shown on the Vegetation Clearing Plan (attached as Appendix C).

The proposed earth bunds and project development infrastructure will assist in creating a barrier to movement onto the Warrego Highway, therefore preventing mortalities.

No interruption of koala breeding cycles is predicted to occur as a result of the proposed works (both construction and operation). Clearing and earthworks will be scheduled outside the lead up to koala breeding season (i.e. avoid the period between July and September) when breeding males are generally more mobile. This will minimise movement of koalas into the construction/clearing footprint and minimise disruption to normal breeding activities and movements. Measures will be in place during clearing and construction works to either allow koalas to move from the area or to be safely relocated if necessary.

Assessment against the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 (DotE, 2013) significant impact criteria indicated that a significant residual impact on koala and grey-headed flying-fox as a result of the proposed works is not likely to occur. Assessment against the Matters of National Environmental Significance - Significant Impact Guidelines 1.1 (DotE, 2013) significant impact criteria for listed migratory species indicated that a significant residual impact on migratory bird species as a result of the proposed works is not likely to occur.

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.

Yes.

The Australian Clean Power Trust is an entity managed by Quinbrook Infrastructure Partners (Quinbrook) on behalf of its investors.

Quinbrook manages the two Cape Byron Power assets in Northern NSW and operates in accordance with ISO14001 certification. While these assets have been under Quinbrook's management there have been no major breaches of the relevant environmental authorities at either of the sites.

Quinbrook is a signatory to the Principles for Responsible Investment (https://www.unpri.org). As a signatory to these principles, Quinbrook integrates environmental, social and corporate governance considerations into its investment management processes and ownership practices. Quinbrook's ESG Policy (outlining environmental, social and corporate governance) is attached as Appendix J.

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.

The Australian Clean Power Trust has not been subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

6.3 Will the action be taken in accordance with the corporation's environmental policy and planning 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.

Quinbrook's ESG Policy is attached as Appendix J. Quinbrook will develop an environmental policy for the Lockyer Energy Project consistent with their overarching ESG policy and similar to the Cape Byron Environmental Policy, which is attached as Appendix K.

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?

No

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
Bussey, J. and Ellis, B. (2016). The koalas of Ipswich: Opportunities, threats and future viability. School of Agriculture and Food Sciences, University of Queensland.	High	Nil
Conics (Brisbane) Pty Ltd (2009) Detailed Ecological Assessment – Lot 191 CSH2361, Ford's Road, Gatton. Report prepared by Conics (Brisbane) Pty Ltd (Conics) for Westlink Pty Ltd, Brisbane	Field surveys undertaken within the study area in October 2008 and February 2009 by Conics (2009) recorded 97 species of plants (including 14 exotic species) and 68 species of animals including eight mammals, eight reptiles, four amphibians and 48 birds. The October 2008 field survey consisted of a one-day survey event that included: • Mapping and description of the vegetation communities present • Verification of DNRW RE mapping • Determination of the likelihood of presence of threatened species • Incidental fauna and flora observations including opportunistic reptile searches • Brief target searches for significant flora species and associated habitat that may occur in the site • A preliminary assessment of fauna habitat and other ecological values. The February 2009 field survey consisted of a three-day survey event that	Nil

Reference Source	Reliability	Uncertainties
	included: • Spotlight searches for arboreal mammals (16 person hours) • Anabat bat echolocation call detection (4 hours) • Bird searches at dawn and dusk (16 person hours) • Frog and reptile active searches (12 person hours) • Bat trapping with harp traps (4 trap-nights) • Flora inventory searches (20 person-hours) • Concentration of efforts on detection of significant species.	
Department of the Environment (2013) Significant impact guidelines 1.1 – Matters of national environmental significance. Department of Environment and Energy (DEE), Canberra	High	Nil
Department of the Environment (2014) EPBC Act referral guidelines for the vulnerable koala. Department of Environment and Energy (DEE), Canberra	High	Nil
Department of the Environment and Energy (2017) Species Profiles and Threats Database. Available from: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl. Viewed 25 April 2017, Department of Environment and Energy (DEE), Canberra	High	Nil
Department of the Environment and Energy (2017b). Draft recovery plan for the grey-headed flying-fox (Pteropus poliocephalus). Department of Environment and Energy (DEE), Canberra	High	Nil
Department of Environment and Heritage Protection (2016) Flying fox camp locations: South east region. Available	High, however locations of flying fox camps known to change therefore indicative locations only	Nil

Reference Source	Reliability	Uncertainties
from: https://www.ehp.qld.gov.au/wildlife/livingwith/flyingfoxes/pdf/seq-roosts.pdf. Department of Environment and Heritage Protection (DEHP), Brisbane		
Eyre, T. J. (2002). Habitat preferences and management of large gliding possums in southern Queensland. Ph.D. thesis, Southern Cross University, Lismore.	High	Nil
Higgins, P.J. (ed) 1999. Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbird. Oxford University Press, Melbourne.	High	Nil
Higgins, P.J. & S.J.J.F. Davies (eds) 1996. Handbook of Australian, New Zealand and Antarctic Birds. Volume 3: Snipe to Pigeons. Oxford University Press, Melbourne.	High	Nil
Higgins, P.J., J.M. Peter & S.J. Cowling (eds) 2006. Handbook of Australian, New Zealand and Antarctic Birds. Volume 7: Boatbill to Starlings. Oxford University Press, Melbourne	High	Nil
Ipswich Koala Protection Society (2014) Newsletters. Available from: http://www.ikps.com.au/news.htm. Viewed 18 May 2017.	High, however locations of sightings and mortalities are anecdotal and given as approximate locations therefore indicative only	Nil
Marchant, S. and Higgins, P.J. (Eds.) (1990). Handbook of Australian, New Zealand and Antarctic Birds. Volume One - Ratites to Ducks. Melbourne, Victoria: Oxford University Press.	High	Nil
Phillips, S. (1997) Some issues associated with the relocation of koalas (Phascolarctos cinereus), in Challenging the boundaries: proceedings of the	High	Nil

Reference Source	Reliability	Uncertainties
1997 annual conference of the Australian Association of Veterinary Conservation Biologists (pp. 187-193), A. Tribe (Ed.), Australian Veterinary Association, Brisbane, Queensland.		
Phillips, S. and Callaghan, J. (2011) The Spot Assessment Technique: a tool for determining localised levels of habitat use by Koalas Phascolarctos cinereus. Australian Koala Foundation, Brisbane.	High	Nil
Reed, P., & Lunney, D. (1990) Habitat loss: the key problem for the long-term survival of koalas in New South Wales, in Koala Summit: Managing koalas in New South Wales (pp. 9-28), D. Lunney, C. Urqhart & P. Reed (Ed.), Pub: NSW National Parks and Wildlife Service, Sydney.	High	Nil
Webb, N. and C. Tidemann (1995). Hybridisation between black (Pteropus alecto) and grey-headed (P.poliocephalus) flying-foxes (Megachiroptera: Pteropodidae). Australian Mammalogy. 18:19-26.	High	Nil
GHD Pty Ltd (2017) Flora and Fauna Survey Report: Lockyer Energy Project. Report prepared by GHD for Quinbrook Infrastructure Partners Pty Ltd, Brisbane	The current ecological survey was undertaken on a single day in May 2017, coinciding with the late wet/early dry season. Conditions on the day of survey were fine and mild with a maximum temperature of 24.6° C and overnight minimum of 9.6° C. A total of 12.8 mm of rainfall was recorded in the month prior to survey. No rainfall was recorded in the week prior to survey. Weather data was taken from the	The prominence and subsequent detectability of many fauna and flora species is influenced by seasonal factors that affect activity levels, calling behaviour and flowering status. The detectability of many reptile and amphibian species was likely to be low at the time of survey due to cooler temperatures. Many seasonal migrant birds are also unlikely to have been detected and would utilise the study area at

Reference Source	Reliability	Uncertainties
	nearest Bureau of Meteorology weather station (University of Queensland Gatton 040082).	other times of the year. In assessing the likelihood of occurrence of species listed under the EPBC Act, this study has utilised the existing data previously collected in other seasons (Conics, 2009), historical data collected in government databases and relied on an assessment of the value and condition of potentially suitable habitats observed in the field.
Protected Matters Search Tool (DEE)	The Department of the Environment and Energy (DEE) Protected Matters Search Tool (PMST) was used to identify nationally listed species and communities that are predicted to occur in or adjacent to the study area, based on bioclimatic modelling, knowledge of species' distributions and habitat preferences. The search was undertaken within a 2 km radius of the approximate centre of the study area (-27.5345, 152.2746).	Any information provided through this facility is indicative only, and local knowledge and information should also be sought where possible. Not all species listed under the EPBC Act have been mapped and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to seek and consider other information sources.
Wildlife Online database (DSITI)	The Queensland Department of Science, Information Technology and Innovation (DSITI) Wildlife Online database was searched to retrieve historical records of flora and fauna species previously recorded in the vicinity of the study area. The search was undertaken for a 2 km radius of the approximate centre of the study area (-27.5345, 152.2746).	As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used. The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through

Reference Source	Reliability	Uncertainties
		independent means as to the accuracy and completeness of this information. No statements, representations or warranties are made about the accuracy or completeness of this information.
Regulated vegetation mapping (DNRM)	The Queensland Department of Natural Resources and Mines (DNRM) Vegetation Management Regional Ecosystem and Remnant Map spatial layer (version 8.0) was viewed to determine the extent and type of Regional Ecosystems (REs) mapped within the study area.	Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/-100 m.
Essential habitat mapping (DNRM)	The DNRM Essential Habitat Map spatial layer (version 4.41) was viewed to determine if vegetation within the study area has been identified as essential habitat for an endangered, vulnerable or near threatened (EVNT) species of wildlife listed under provisions of the Queensland Nature Conservation Act 1992.	Essential habitat was compiled from two primary sources: 1. Recognised species habitat models These are habitat models such as cassowary, ground parrot, etc that have been developed by experts. Some of the models have been developed from recent recovery planning activity and some come from application of the Biodiversity Assessment and Mapping Methodology (BAMM). 2. Endangered and Vulnerable species habitat based on buffered species records. This concept comes from Criteria A of the BAMM. This criterion classifies areas according to their significance based on the presence of Endangered or Vulnerable taxa.
Protected plants flora survey trigger mapping (DEHP)	The Queensland Department of Environment and Heritage Protection (DEHP) Protected Plants Flora Survey Trigger Map spatial layer was viewed to determine if the vegetation within the study area is in	As the flora survey trigger map and the supporting data do not identify the individual species present, the department cannot provide external information identifying what species of protected plants have caused a

Reference Source	Reliability	Uncertainties
	proximity to a record of an EVNT flora species. This dataset is derived from an updated extract of species records obtained from the databases: Herbrecs; Corveg; WildNet. Additional records were obtained from experts from past Biodiversity Planning Assessment flora workshops and also Local governments (Ipswich City Council, Gold Coast City Council). This dataset incorporates NCA species status changes that were regulated on 11/05/2017. All species records are buffered by 2km radius which identifies the "High Risk" areas.	particular area to be mapped as high risk as the flora survey trigger map and the supporting data do not identify the individual species present.
Koala habitat areas map (DEHP)	The DEHP State Planning Policy (SPP) koala habitat mapping was reviewed to identify any areas of koala habitat.	The Koala Habitat Values mapping was initially derived from a comprehensive koala habitat assessment and mapping project commissioned by the Queensland Government and has been recently updated through extensive public consultation following the release of SEQKPA Version 1.1 (including the application of a 'generally not present' layer following DERM assessment).
Atlas of Living Australia database (Australia's Virtual Herbarium)	Review of database for locations and details of records of potentially occurring species of conservation significance. Based on Australia's Virtual Herbarium, Queensland Museum, Queensland Herbarium records and more.	Accuracy of individual records differs and are taken to be indicative only. Some records are historical and should be verified by other means.
WildNet Species Profile Search (DEHP)	The DEHP Species Profile Search was undertaken to obtain spatial data records for EVNT flora and fauna species.	Spatial inaccuracies frequently occur in historical records. Locations are taken to be indicative only and reference must be made to the

Reference Source	Reliability	Uncertainties
		description of the locations within the record details. Only includes data approved for public release.

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?

Not applicable.

The Lockyer Energy Project (formerly named Westlink) site was chosen due to the close proximity of the Roma to Brisbane Gas Pipeline and the Energex 110 kV transmission line which intersect at this locality. The Lockyer site is one of the few locations in Queensland where a gas compressor station is co-located with a substation; this means that there is no need for additional linear infrastructure (such as a new transmission line or gas pipeline thus avoiding the impacts (such as clearing and the impact on landowners) associated with linear infrastructure.

An options assessment was previously conducted and sites further west of the Lockyer site were not preferred due to additional transmission losses on the power system; this means that the amount usable energy delivered to the Southeast Queensland load centre is greater and less gas is required to be consumed (thus reducing overall carbon footprint when compared to a new project located further away from Brisbane). This saving is partially offset by fuel consumed in gas transmission; however, these losses will be less due to the amount of spare capacity in the Roma to Brisbane Gas Pipeline and the high levels of power flow between the Surat basin generators (Milmerran, Kogan Creek, Braemar, Darling Downs, Condamine) and Southeast Queensland.

The project footprint within the lot is located in the previously cleared area as much as is practicable. A small amount of clearing will be necessary to keep the gas turbine pad high enough to meet flooding, visual amenity and air quality requirements. Locating the pad further down the slope (avoiding some of the vegetation clearing requirements) is limited by potential flood impacts and the location of existing infrastructure and Ford's Road.

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

Managing Director

9.2.2 First Name

Rob

9.2.3 Last Name

Kerr

9.2.4 E-mail

rk@quinbrook.com

9.2.5 Postal Address

15 Alexander Street
Tamarama NSW 2026
Australia

9.2.6 ABN/ACN

ACN

152374895 - CAPITAL PARTNERS AUSTRALIA PTY LIMITED

9.2.7 Organisation Telephone

07 5592 6669

9.2.8 Organisation E-mail

rk@quinbrook.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, Rob Kerr, 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: 26/07/2017

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

Signature:..... Date: 26/07/2017

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Managing Director

9.5.2 First Name

Rob

9.5.3 Last Name

Kerr

9.5.4 E-mail

rk@quinbrook.com

9.5.5 Postal Address

15 Alexander Street
Tamarama NSW 2026
Australia

9.5.6 ABN/ACN

ACN

152374895 - CAPITAL PARTNERS AUSTRALIA PTY LIMITED

9.5.7 Organisation Telephone

07 5592 6669

9.5.8 Organisation E-mail

rk@quinbrook.com

Proposed designated proponent - Declaration

I, Rob Kerr, 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: .....

26/07/2017

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Principal Environmental Planner

9.8.2 First Name

Philip

9.8.3 Last Name

Bradley

9.8.4 E-mail

philip.bradley@ghd.com

9.8.5 Postal Address

GPO Box 668
Brisbane QLD 4001
Australia

9.8.6 ABN/ACN

ABN

39008488373 - GHD PTY LTD

9.8.7 Organisation Telephone

07 3316 3333

9.8.8 Organisation E-mail

philip.bradley@ghd.com

Referring Party - Declaration

I, Philip Bradley, 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: ...21./.07./2017.....

Appendix A - Attachments

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

1. appendix_a_fig_1_locality_plan.pdf
2. appendix_b_concept_plan.pdf
3. appendix_c_vegetation_clearing_plan.pdf
4. appendix_d_court_development_approval.pdf
5. appendix_e_wpp_community_stakeholder_consultation_-_summary_31.05.13.pdf
6. appendix_f_species_likelihood_and_significant_impact_assessment.pdf
7. appendix_g_flora_and_fauna_report_part_a.pdf
8. appendix_g_flora_and_fauna_report_part_b.pdf
9. appendix_h_fig_3_habitat_for_threatened_fauna_species.pdf
10. appendix_i_fig_2_habitat_values_map.pdf
11. appendix_j_quinbrook_esg_policy.pdf
12. appendix_k_example_environmental_policy.pdf
13. proposed_area_ghd_20170531.zip