

Pittsworth District Landcare Association

Submission in response to

Draft Environmental Impact Statement, Inland Rail project - Border to Gowrie

Part A Submitter contact details

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Part B Relevant Background

Pittsworth District Landcare Association Inc (Pittsworth Landcare)

Founded in 1989, Pittsworth Landcare has played an active leadership role in natural resources management issues on the Central Darling Downs for the past 32 years, particularly in the Pittsworth, Southbrook, Brookstead and Mount Tyson districts. The group currently has 75 financial members.

For the past eight years, one key focus of Pittsworth Landcare has been preservation of important koala habitat and revegetation projects to restore lost habitat. To this end, with the help of state and federal government, corporate and local funding support, we have mobilised thousands of volunteer hours and the involvement of more than 100 landholders in annual revegetation projects from 2013 to 2021.

Pittsworth Landcare has distributed 17,200 seedling trees across the district since 2013, free of charge, complete with tree guards, stakes, mulch mats and fertiliser. More than 90 per cent of these trees have been koala food and habitat species native to the Central Downs. Our last distribution in April 2021 resulted in 2880 trees being planted on 56 properties.

For several years, we also conducted koala surveys in Spring and made an app available for residents to record their sightings. In 2021, we have intensified our survey activities by training volunteers in scat recognition and engaging consultant ecologists Biolink and OWAD.

We know the landscape and wildlife between Brookstead and Athol very well and our members were astounded to read in the draft EIS that ARTC does not acknowledge the existence of a significant koala population in our district.

For example, Appendix J Terrestrial Ecology lists 13 sightings of koalas along the footprint of the 216 km Inland Rail section from the New South Wales Queensland border to Gowrie, based on information from the Queensland Government's WildNet database.

This is an under-estimation of a hundredfold magnitude.

Pittsworth Landcare has documented over 200 sightings of koalas and scats between Yarranlea and Athol. These sightings have been mapped as Fig 1 in this submission. This does not indicate hundreds of individual koalas but it does indicate a viable population - viable but vulnerable to any and all vectors of disturbance.

Part C Executive summary of Pittsworth Landcare submission to the draft EIS

Pittsworth Landcare members have grave concerns the Inland Rail project, Border to Gowrie, could contribute to the **local extinction of koalas on the Central Downs**. Numerous EIS sections relating to koalas appear based on grossly inaccurate data, invalid desk-top assumptions, flawed fauna records, inadequate on-ground surveys and ignorance of local knowledge.

Studies have shown that koala populations in south-east Queensland, east of the Great Dividing Range, have plummeted by up to 80 per cent between 1995 and 2015, and the rate of loss may still be increasing. **The Central Darling Downs has a viable koala population** that needs to be strongly protected from disturbance, not least because it may stand a better chance of survival than coastal koalas which are facing accelerating losses of habitat through rapid residential encroachment and other developments driven by human population growth and commercial profitability.

Pittsworth Landcare recommends the Office of the Co-ordinator General insist that ARTC undertake genuine koala surveys in the Pittsworth Southbrook district, including DNA analyses to investigate not only the status of the Central Downs population but also its links or otherwise with other populations which may reveal important genetic differentiations.

Part D Environmental hazards (not addressed in this submission)

The current Inland Rail proposal will have a deleterious impact on the koala population of the Pittsworth/Southbrook district. The koala (*Phascolarctos cinereus*) is listed as Vulnerable under both the Queensland Government's Nature Conservation (NC) Act and the Australian Government's Environmental Protection and Biodiversity Conservation (EPBC) Act.

There are numerous other major environmental threats posed by the proposed route across the Darling Downs, including increased risk of flooding, erosion and land degradation, loss of habitat, flora and fauna exterminations, and interference with water resources.

Social impacts include the loss of prime agricultural land, severing of viable properties into unviable parts, loss of homes and livelihoods, population decline and employment loss, road closures, visual and noise impacts, among others.

Pittsworth Landcare has an overriding concern with the Inland Rail proposal - namely, that the **24-hour time target** for the Melbourne to Brisbane trains has **precluded appropriate consideration** being given to the current proposal's **environmental and social** impacts.

Notwithstanding this wide spectrum of major negative potential impacts, Pittsworth Landcare's submission to the draft EIS for the Inland Rail's Border to Gowrie section has a single focus - **the threat to our district's koala population**.

Part E Failings of the EIS (in relation to koala population and habitat)

Pittsworth Landcare members advise the Office of the Co-ordinator General that in our considered collective opinion the draft EIS Inland Rail, Border to Gowrie, needs serious revisions because of -

- Flawed data and use of inappropriate mapping
- Inadequate survey work and lack of ground truthing
- Unsubstantiated assessments of potential impacts
- Glib reliance/hope that proposed future studies in the 'detail design process' will validate wide-ranging assumptions
- Inconsistencies between different sections

Surveys and mapping undertaken by Pittsworth Landcare show the draft EIS does not properly recognise, nor adequately deal with, the potentially devastating impact that the Inland Rail's construction and operation will have the Central Darling Downs koalas.

Survey work funded by Pittsworth Landcare and conducted by professional ecologists, trained volunteers and landholders over the past eight years has resulted in 229 sightings and scats of koalas in the Pittsworth Southbrook district, as shown in Fig. 1. Relying on grossly under-reported WildNet records, the EIS Appendix J claims just 13 reports of koalas from Yelarbon to Gowrie.

The Fig 1 map was compiled from the GPS co-ordinates of koalas sightings reported* to Pittsworth Landcare between 2014 and 2021 and koala scat surveys conducted by Pittsworth Landcare members in 2020 and 2021. The insert area of Fig 2 highlights the presence of koalas inside the Project footprint or within close proximity.

*Sightings were recorded in a database beginning in September 2014 (when landholders reported sightings in a defined 48-hour period) and supplemented over the next seven years by ad hoc reports submitted via Pittsworth Landcare's koala sighting app and online form.

This local knowledge shows the fallacy of the EIS information which in Section 10.5.5 Wildlife and Koala Mapping states there is 7.44 hectares of koala habitat in the Project's 200km linear footprint between the NSW Queensland border and Gowrie. This statistic is wildly inaccurate. There are dozens, if not hundreds, of hectares of koala habitat in the 20km section between Yarranlea and Southbrook.

The whole issue of the impact of the proposed line on Central Downs koalas needs to be re-visited and re-assessed rigorously.

Fig. 1. Koala Sightings and Evidence of koalas through the presence of recent scats

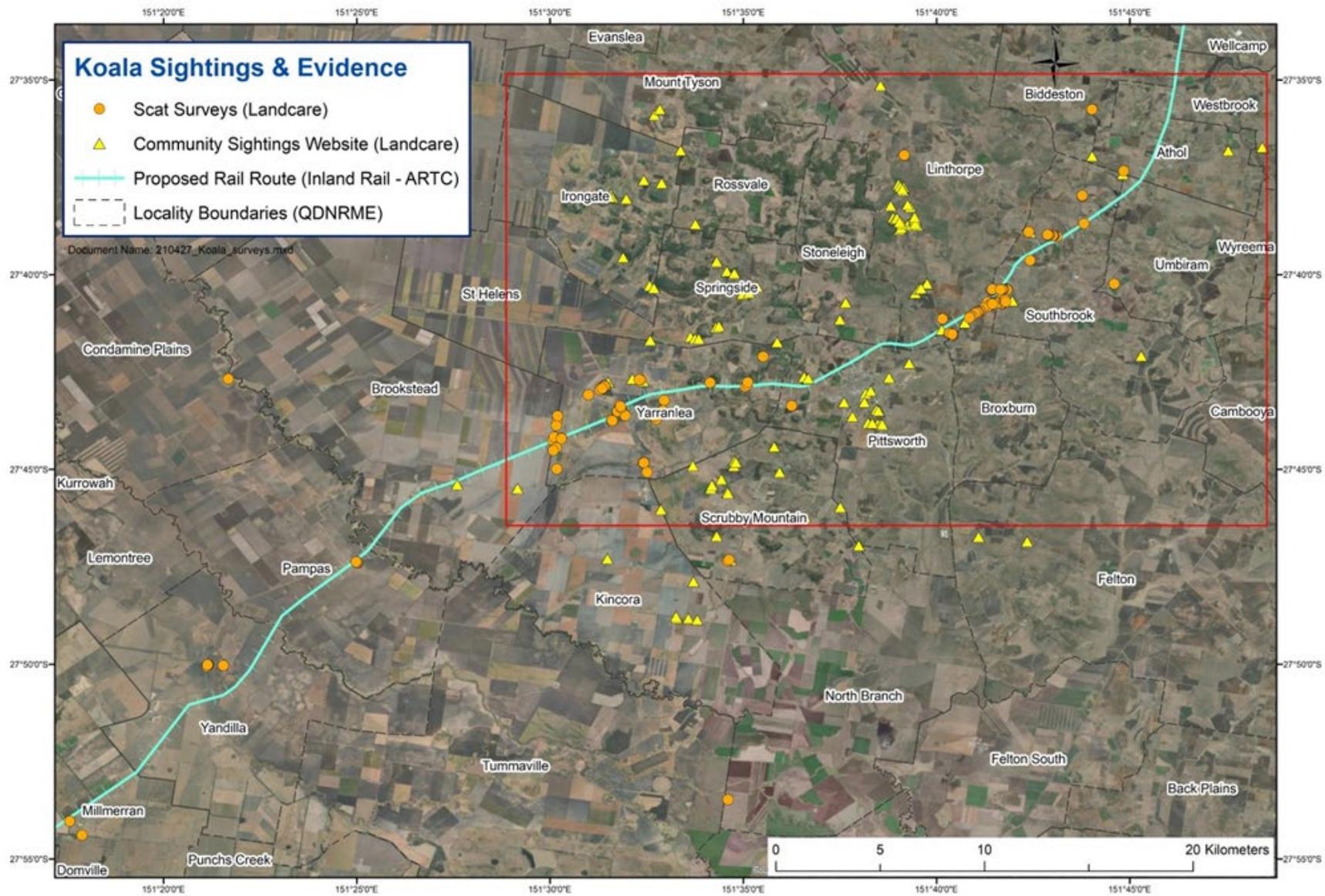
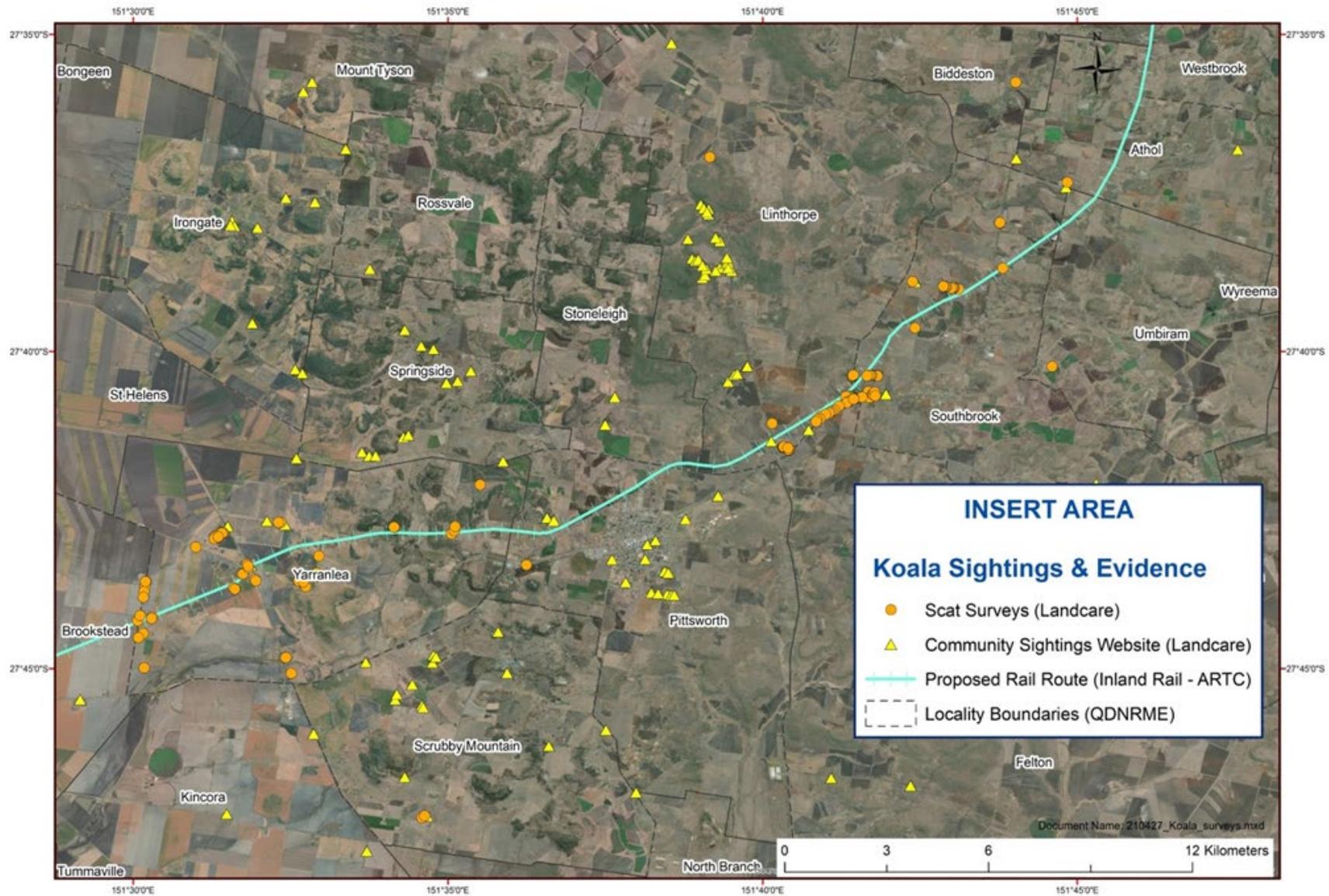


Fig. 2 Insert Area showing Koala Presence in closer relation to the Project footprint



Part F Terms of reference not adhered to in the draft EIS

Whilst the draft EIS has been compiled through thousands of hours of effort and addresses hundreds of issues, Pittsworth Landcare believes **the document fails to meet the requirements of several Terms of Reference** in relation to koalas and other wildlife. We have particular concerns with the following Terms of Reference for the reasons stated below.

ToR 5.3. The detail at which the EIS deals with matters relevant to the project should be proportional to the scale of the impacts on environmental values.

Concern 1 Details provided in the EIS are manifestly **not proportional** to the project's potentially dire impact on the Central Downs koala population. Far more survey work needs to be done before the draft EIS could be considered to have fulfilled its terms of reference.

ToR 6.4 In general, the preferred hierarchy for managing likely impacts is to: (a) avoid; (b) minimise/mitigate; and (c) offset once (a) and (b) have been applied.

Concern 2 Pittsworth Landcare contends that in relation to flora and fauna ToR 6.4 has been systematically ignored, at worst, and not properly explained, at best. The proponent has not shown in the draft EIS how and where likely impacts have been avoided in the planning process. We fear the real hierarchy used by the proponent has been to place the speed factor of transport above all other considerations, including the avoidance of negative impacts.

ToR 6.5 Impact minimisation measures should include ongoing monitoring and proposals for an adaptive management approach, based on monitoring. The proposed measures should give confidence the impacts can be effectively minimised over the long-term.

Concern 3 The fact that the proponent mentions 'adaptive management' just twice - without any detail - in EIS Chapter 10's 196 pages does not give Pittsworth Landcare any confidence that impacts can be effectively minimised over any time-frame, short or long term. The OCG should insist the proponent fully detail its ongoing monitoring measures including appropriate funding commitments.

ToR 6.7. Present and assess feasible alternatives (including conceptual, technological and locality alternatives) to the proposed project, including individual elements that may improve environmental, social and economic outcomes.

Concern 4 As above, Pittsworth Landcare is concerned that the 24-hour time target for the Melbourne to Brisbane trains has trumped all other considerations, including the current proposal's environmental impacts. The railway alignment has been decided before fundamental assessments of potential impacts have been undertaken, let alone been completed and peer reviewed. The draft EIS neither presents nor assesses any of the feasible locality alternatives that would avoid impacting the Central Downs koala habitat.

ToR 11.96 Describe any proposed measures to avoid, minimise or mitigate potential impacts on natural values, and enhance these values. ... In particular, address measures to protect or preserve any threatened or near-threatened species.

Concern 5 The draft EIS fails to address measures that would ‘protect or preserve’ in a meaningful way because it fails to recognise that koalas are living in and dependent on key habitat areas within the project’s footprint. A commitment to actually enhance natural values, rather than merely minimise or mitigate impacts, would strengthen the draft EIS markedly.

Part G Lack of detailed surveys

The Draft EIS has come to conclusions and made decisions about potential impacts, mitigation measures and locality options **without the proponent undertaking sufficient on-ground surveys of flora and fauna**. Figures 3.2d and 3.3d in Appendix J Terrestrial Ecology show a distinct paucity of terrestrial surveys between Yarranlea and Athol.

Also in Appendix J, Section 3.5.5 Survey Work states: “With regard to survey effort, a total area of approximately 427 ha was assessed by FFJV as part of the EIS investigations (i.e. 138 ha associated with targeted surveys and 289 ha associated with opportunistic investigations*). This represents approximately 13.33 per cent of the Disturbance footprint.”

Taken at face value ... can scientific conclusions be reached from considering just 13 per cent (one-eighth) of available evidence?

* A simple but closer examination of the statistics is even more disturbing. The opportunistic flora and fauna surveys of 289ha were conducted by FFJV personnel doing geotechnical investigations, presumably not flora and fauna specialists. This means that targeted surveys (138ha out of 427ha) were conducted on on just 3.12 per cent of the Disturbance footprint.

Can scientific conclusions be reached from considering just 3 per cent of available evidence?

Also in Appendix J, Section 3.3 Field Assessments acknowledges ‘that detailed surveys for threatened fauna have not been undertaken in full accordance with the relevant Commonwealth survey guidelines’. Section 3.3.1.1 Relevance of Surveys notes ‘that the Project footprint has changed somewhat since the surveys carried out by Eco Logical Australia in 2016’ - survey work that ‘was used to inform the final advice statement for the EIS process’.

This lack of credible survey effort is in breach of ToR 5.3 which requires ‘the detail at which the EIS deals with matters relevant to the project should be proportional to the scale of the impacts on environmental values’.

Part H Detailed critique of flawed EIS sections

Topic #	EIS section	Information contained in draft EIS	Pittsworth Landcare response / recommendation
1	10.5.5.1 Wildlife & Koala Mapping Table 10.13 Extent of Koala Mapping within the Impact Assessment Area	Extent of koala habitat areas in project footprint = 7.44ha <i>(It is important to note that this refers to the whole 216 km from the NSW Qld border through to Gowrie.)</i>	This statistic is wildly inaccurate. There are dozens, if not hundreds, of hectares of koala habitat just in the 20km footprint section between Yarranlea and Southbrook. * Refer to Fig 1 above showing hundreds of koala records in the Pittsworth/ Southbrook district, including dozens in the proposed project footprint. The draft EIS itself is inconsistent. In Section 10.5.8, Fig 10.13d <i>Location of Fauna Habitat</i> shows areas of significant mature eucalypt open forest & woodland between Southbrook and Yarranlea vastly exceeding 7.44ha. These areas are prime koala habitat . Recommendation: The whole issue of the impact of the proposed line on Central Downs koalas needs to be re-visited and re-assessed rigorously.
2	10.5.5.2 Nature (Koala) Conservation Plan 2017 Mapping Fig 10.10 Matters of State Environmental Significance	MSES Wildlife Habitat and Essential Habitat Mapping This map shows (MSES) essential habitat north-east of Pittsworth and north-west of Southbrook. Similarly, in Appendix J Terrestrial Ecology, in the section Matters of State Environmental Significance, Table 2 (Summary of MSES present with in the AOI) lists the Koala Habitat Areas locally refined (SEQ) as 0.0ha.	This map fails to show Essential Habitat which exists west of Pittsworth (similar to the Essential Habitat shown) and any Wildlife Habitat at all, which is completely erroneous. To use existing Nature (Koala) Conservation Plan 2017 mapping for the draft B2G EIS is inappropriate and unsatisfactory - and irrelevant for the Pittsworth and Southbrook koala populations. So far maps have only been produced for those parts east of Toowoomba. N(K)CP 2017 mapping does not relate to koalas on the Central Downs, or further west. Using maps that only cover from the Dividing Range heading east will of course give NIL results for areas west of the Divide. Recommendation: The EIS should incorporate ground-truthed mapping and/or include the next version of the koala habitat map, due for release in April 2021.

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3	10.5.5.2 Nature (Koala) Conservation Plan 2017 Mapping Fig 10.12d State and Regional Ecological Corridors	Fig 10.12d shows a major terrestrial corridor of regional significance around Southbrook, from Athol to Broxburn, <u>and</u> numerous patches of Regional Biodiversity Significance from Yarranlea to Kingsthorpe. <i>It fails to show significant patches of remnant vegetation between Yarranlea and Southbrook, including but not confined to Geitz Road, Linthorpe Road, Linthorpe Valley Road, Gore Highway, French Road, Tip Road, Murlaggan Road, Kahler Road, Longhurst Road, Watson Road and the vicinity of Yarranlea Solar facility.</i>	This significant corridor is shown but the EIS does not adequately address the consequent impacts of the project will have on wildlife. Recommendations: The draft EIS should acknowledge the environmental importance of patches of remnant vegetation and measures undertaken to preserve them. The EIS needs to address in detail how this important corridor near Southbrook will be maintained.
4	Section 10.5.7 Predicted Habitat for Conservation Significant Species Table 10.20	Predicted habitat within the impact assessment area (ha) - Table 10.20 shows that koalas have the largest area of predicted habitat of all fauna species, except two vagrant dispersive birds, the grey falcon and white-throated needletail, <i>neither of which live in the region.</i> The total koala habitat is listed as 8091ha, of which 98 per cent is listed 'habitat critical to the survival of the species'.	This 8091ha statistic is a hundredfold contradiction of the statistic in Table 10.13 (Section 10.5.5) which lists only 81.73ha as 'Koala Habitat Areas'. The draft EIS is inconsistent. The error in Table 10.13 lies in the draft EIS reliance on the state government's Nature (Koala) Conservation Plan 2017 mapping, which is incomplete, as previously noted. Quixotically, the category of 'Important habitat' in Table 10.20 is shown as N/A. Relevant sources of ecological data have not been accessed.
5	Section 10.8 Project Activities	Table 10.26 rates the Restoration of Disturbed areas, including revegetation, as causing short-term Duration of Disturbance, which it classifies as six to 12 months.	In the variable low rainfall climate of the Darling Downs, revegetation of disturbed areas is not short-term. Environmental disturbance can take decades to repair and need constant surveillance and maintenance. Recommendation: The EIS should specify which party will be responsible in terms of monitoring and costs to ensure successful restoration of disturbed areas.

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6	Section 10.8 Project Activities	<p>Table 10.26 rates the Duration of Disturbance caused by Cutting Construction during the construction phase as Medium Term (two to 10 years).</p> <p><i>No mention is made of the Disturbance factor of cuttings during the Operation phase.</i></p>	<p>Construction of a cutting is not a Medium Term Disturbance to koalas and other wildlife. It is permanent, as are embankments, bridges and re-alignments of roads.</p> <p>Vegetation clearing, fencing and the rail line barrier will destroy connectivity will be lost permanently.</p> <p>DNA investigation would be important to establish if there are substantive links between the Yarranlea, Pittsworth and Southbrook koalas and other populations south and west of Millmerran and towards the far Eastern Darling Downs. Any such links would be severely impacted by the Inland Rail with permanent and possibly irretrievable consequences.</p> <p>Recommendation: The EIS needs to apply realistic criteria to calculations of Disturbance impacts. The proponent should be required to conduct detailed survey work of Central Downs koalas, including DNA analysis. Pittsworth Landcare offers to work in partnership with the proponent in such survey work to impart critical local knowledge.</p>
8	Section 10.9 Potential Impacts	<p>10.9.2 Fauna Species Injury or Mortality claims that ‘larger species with defined territories and movement patterns (e.g. greater glider and koala) are less likely to be at risk to direct mortality where appropriate mitigation measures are applied’.</p> <p>The same paragraph claims this risk will be highest ‘during construction’.</p>	<p>The risk posed to koalas by the railway and associated fencing will be permanent and deadly. Koalas climb fences. They will be prone to being stuck on fences, injured by wire or trapped inside fences.</p> <p>Recommendation: The EIS needs to fully explain how this permanent threat to koalas will be addressed, and which party will be responsible for, and pay for, the treatment of injured and stranded koalas.</p>

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8	Section 10.9.7 Habitat Fragmentation	<p>This section states ‘the Project may not result in significant fragmentation of populations identified as relevant to the area, given the capacity of some species to disperse widely across the landscape (e.g. koala, <i>Phascolarctos cinereus</i>)’</p> <p>This statement contradicts other parts of the same paragraph which reads - ‘Habitat fragmentation has been identified as an important threatening process to sensitive environmental receptors such as spotted-tail quoll and koala. This is due to the importance of connectivity, dispersal opportunities and habitat quality for species at a local scale and the cumulative impacts at a regional scale.’</p> <p>Later in the same section, it states more accurately - ‘The unmitigated potential impacts of habitat fragmentation resulting from the Project are considered to be long term and irreversible.’</p>	<p>The koala does not have capacity to disperse widely across the landscape of the Darling Downs.</p> <p>Current populations are confined to areas of remnant vegetation. Destruction of these areas and the rail line’s barrier to koala movements between these areas have the grave potential to contribute to the local extinction of this species.</p> <p>Recommendation: The EIS needs to provide consistent and realistic assessment of the impact of further habitat fragmentation.</p> <p>Recommendation: The EIS needs to demonstrate how the proponent’s mitigation proposals in the Pittsworth and Southbrook districts will counter acknowledged long-term and irreversible impacts.</p>
8	Section 10.10 Mitigation Measures	<p>Section 10.10.1 states - ‘Opportunities for the provision of fauna fencing have been identified. These include fencing strategies to guide species such as koala to safe movement opportunities. These opportunities will be refined through the detail design process and incorporated where appropriate.’</p>	<p>Who oversees these unknown unspecified changes to be refined and incorporated? When and how are they to be assessed as being appropriate, and by whom?</p> <p>Recommendation: These ‘opportunities’ should be spelled out in the EIS document, not at some later date without proper scrutiny.</p>
9	Section 10.10.2 Proposed Mitigation Measures	<p>Table 10.30 Proposed Mitigation measures Specific to Matters of National Environmental Significance includes -</p> <p>‘Establish and maintain a fauna management and incident register to record sightings and/or incidents involving fauna species during the undertaking of Project activities’</p>	<p>Recommendation: Pittsworth Landcare requests that this register be publicly available, updated within 48 hours, and that a quarterly report be generated from the information. As the district’s lead organisation in local wildlife and environmental matters, Pittsworth Landcare further requests that its nominee be notified as soon as practicable of all sightings and incidents.</p>

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10	Section 10.10.2.1 Flora and Fauna Management and Monitoring	ARTC is committed to implementing ongoing monitoring of the effectiveness of the measures with contingency (under an adaptive management framework) to change/improve management strategies where deleterious impacts to the identified environmental values are observed, or are not minimised, as per the objectives of the proposed measures.	How is the monitoring to be conducted, how frequently and by whom? Who arbitrates the effectiveness of measures? What does an 'adaptive management framework' actually mean? Recommendation: The EIS should specify the 'adaptive management framework' and the monitoring schedules to be used.
11	Section 10.10.2.1 Flora and Fauna Management and Monitoring	For measuring the effectiveness of wildlife crossing structures, the draft EIS states: 'It is also recommended that goals should be set for individual projects that are specific to species, location and the nature of the conflict; e.g. a specific goal might be to ensure more than 90 per cent of individuals that approach a crossing structure successfully cross it, or to maintain the risk of extinction of a population to less than 5% over the next 100 years.' Appendix J Fig 5.1d Location Proposed Fauna Crossings seems to show no fauna crossing in the Pittsworth district, none at all for the 50km between chainages 148 and 198.	EIS terms of reference 11.27 proscribes that the EIS 'should describe any mitigation measures proposed to reduce the impact on the listed threatened species'. To say 'a specific goal <u>might</u> be' is not a measurable condition. Surely the intent is that EIS goals should be specific and measurable, not simply recommended to be so later on. Recommendation: The EIS needs to include specific goals to measure the effectiveness of wildlife crossing structures <u>and</u> consequences that would follow. Recommendation: Fauna crossings must be provided at regular intervals in the Pittsworth Southbrook area.
12	Section 10.10.2.1 Flora & Fauna Management and Monitoring	The second last paragraph of Section 10.10.2.1 states - 'During detail design, ARTC will also finalise the location and design of fauna movement structures across Project alignment, targeting key locations'.	This is far too vague and unquantified. Where are these locations? How far apart are they? Recommendation: The EIS must specify the location and design of fauna movement structures.
13	Section 10.10.2.1 Flora & Fauna Management and Monitoring	The last paragraph of Section 10.10.2.1 states - 'An Environmental Offset Delivery Plan and Offset Area Management Plans will be developed and implemented by ARTC prior to construction, subject to approval under the EPBC Act. The Environmental Offset Delivery Plan will quantify the significant residual impacts of the Project and detail offsets to address these significant residual impacts.'	Similarly, the EIS provision for offsets is so vague as to be non-existent. It is insufficient for an EIS to merely promise a plan sometime in the future. Pardon the pun, but it leaves a gap in the functionality of the EIS that you could drive a train through. Recommendation: The EIS needs to include a credible Environmental Offset Delivery Plan and Offset Area Management Plans.

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14	<p>Section 10.11 Impact Assessment</p> <p>Section 10.11.1 Quantified Magnitude of Potential Impacts</p>	<p>Table 10.32 Estimation of Potential Magnitude of Disturbance to Threatened Flora, Fauna Species rates the degree of disturbance to koalas, using an unspecified mix of 'predictive habitat modelling, ... field validation and government GIS datasets'. From this unexplained methodology, Table 10.32 estimates there would be a 6.08% disturbance to 'predicted' koala habitat between Border and Gowrie.</p>	<p>This table seriously underestimates the degree of disturbance to koalas, particularly in areas where they are locally common but vulnerable. This statistic vastly under-represents the risk to the known habitat of koalas in the Pittsworth and Southbrook districts.</p> <p>Using our own local knowledge, and a methodology as robust as that in the draft EIS, Pittsworth Landcare estimates the magnitude of disturbance to koalas on the Central Downs as High (up to 50%), not Moderate (less than 13%) as stated in Table 10.32.</p> <p>Further studies being undertaken by Pittsworth Landcare, including DNA analysis, could even show a Major magnitude of disturbance as more accurate.</p> <p>Central Downs koalas already have limited functional corridors connecting fragmented habitat areas. A massive new barrier across their entire ecosystem could be disastrous, by eliminating gene flow and condemning current populations to all the dead-end consequences of in-breeding.</p>
15	<p>Section 10.11.1 Quantified Magnitude of Potential Impacts</p>	<p>Table 10.35 Estimation of Potential Magnitude of Disturbance for Sensitive Environmental Receptors rates the percentage disturbance to koalas as 9.1%, or Moderate (i.e. less than 13%).</p>	<p>This table mis-represents the disturbance risk to Central Downs koalas, for reasons already outlined. The NC Act maps do not include important koala habitat west of Athol, including around Southbrook, Linthorpe and Pittsworth. References in Table 10.35 to KPAs, KHRA's, Locally Refined KHAs are a furphy, since the NC Act mapping has not yet been done west of the Great Diving Range.</p> <p>Recommendation: The OCG should request the proponent conduct detailed baseline DNA testing before construction and schedule ongoing DNA testing for 10 years after construction to determine whether gene flow was happening and whether fauna crossings were working or not.</p>

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16	Section 10.11.2 Initial Significance Assessment	<p>Table 10.37 Initial Assessment of Significance of Potential Impacts of the Project on Sensitive Environmental Receptors (EPBC Act controlling provisions) rates the project's residual impact on koalas during its Operation phase as 'Negligible' in magnitude and 'Low' in significance, in terms of residual impacts, including -</p> <ul style="list-style-type: none"> (a) Reduction in the connectivity of biodiversity corridors (b) Habitat fragmentation (c) Barrier effects (d) Light impacts 	<p>Nothing could be further from the truth.</p> <p>The Inland Rail line will indisputably have Major residual impact on Pittsworth and Southbrook koalas, in terms of preventing connectivity, fragmenting habitat, and producing noise and light disturbance.</p> <p>All of these factors place the local koala population at greater risk of extinction.</p> <p>This assessment contradicts Section 10.9.5 which states 'fragmentation of such corridors have been identified as important threatening processes to MNES such as spotted-tail quoll and koala' and 'the unmitigated potential impacts to biodiversity corridors resulting from the Project are likely to be long term and irreversible'.</p> <p>Recommendation: The draft EIS be revised in order to present consistent, credible management plans.</p>
17	Section 10.11.2 Initial Significance Assessment	<p>Table 10.38 (Initial Assessment of Significance of Impacts of the Project on Identified Sensitive Environmental Receptors) rates the project's residual impact on koalas during its Operation phase as 'Negligible' in magnitude and 'Low' in significance.</p> <p>Appendix J Terrestrial Ecology states - "The biodiversity State interest requires development to be located in areas to avoid significant impacts to MNES, avoid and minimise impacts to MSES and matters of local environmental significance (MLES), maintaining or enhancing ecological processes and connectivity by avoiding fragmentation and conserve and enhance koala habitat extent and condition."</p>	<p>That assessment is also wrong, for the reasons outlined in response to Table 10.37. (see #16)</p> <p>Local, state and federal regulatory frameworks stipulate that new developments must minimise ecological impacts by using the 'avoid, minimise, offset' hierarchy.</p> <p>Minimising or mitigating options are secondary options to be employed after all avenues of avoidance have been exhausted.</p> <p>Recommendation: The EIS should proscribe who is responsible to 'make good' or compensate if mitigation processes prove unsuccessful?</p>

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18	Section 10.12 Significant Residual Impact Assessment	Table 10.39 (Summary of significant impact assessment of EPBC Act controlling provisions of the Project) states the project will have ' Likely significant residual impact ' on koalas.	This assessment is accurate. Given the Vulnerable status of koalas, the EIS needs to be much stronger. Recommendation: The EIS needs to be more detailed and more prescriptive of responsibilities to explain how significant residual impacts will be mitigated.
19	Section 10.13 Biodiversity Offsets	10.13.1 Matters of national environmental significance After listing koalas as suffering significant residual impacts, this section states - 'Detailed ecological surveys of the Project footprint will be undertaken in parallel to the development of the detail design. Data obtained from these detailed surveys will be used to refine the quantification of ecological impacts, revise the analysis of significant residual impacts and re-calculate offset requirements.'	This is another example where the proponent promises, promises but does not show how or what will be delivered. Given the inadequacies of the koala surveys that have informed the EIS, Pittsworth Landcare requests that its members be consulted during any further 'detailed ecological surveys'. Recommendation: The EIS should require the proponent to undertake further koala surveys, prior to any approvals, inviting the participation of Pittsworth Landcare members and other local residents. The survey results should be publicly available and a consultation period for public comment enacted.
20	Section 10.13.2 Matters of State environmental significance	Table 10.43 Quantification of anticipated significant residual impacts to Matters of State Environmental Significance (MSES) identifies only 81.73ha of Koala Habitat Areas (using Nature Conservation (Koala) Conservation Plan 2017 mapping) as copping significant residual impact.	As shown earlier, this area represents a significant under-estimation . It is also at odds with the previous Table 10.42 which quantifies 481.05ha as copping 'significant residual impact assessment for Matters of National Environmental Significance (MNES)'. Recommendation: The EIS should require the proponent to undertake further koala surveys, prior to any approvals, inviting the participation of Pittsworth Landcare members and other local residents. The survey results should be publicly available and a consultation period for public comment enacted.
21	Section 10.13.3 Provision of Offsets	This section states 'it is expected that environmental offsets will be required for the Project ... An Environmental Offsets Delivery Plan will be developed and implemented by ARTC prior to construction.'	Surely, an Offset Plan should be an integral part of the EIS, not a promise to do something in the future. Pittsworth Landcare requests that its members be consulted during the development of an offset plan and that the plan be publicly available and a consultation period for public comment be enacted.