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Chief Executive Officer
Douglas Shire Council

Via email: enquiries@douglas.qld.gov.au

RE: Development Application Combined Application (MCUI, ROL 1 Lot into 2 Lots & OP Works) - CA 2023_5496 – 174 Buchanan Creek Road COW BAY- Material Change of Use & Reconfiguring of a Lot, Lot 5 BK157130, 174 Buchanan Creek Road, Operational works

Dear Sir/ Madam

Douglas Shire Sustainability Group Inc. (DSSG) is an incorporated association active in the Douglas Shire since 2005, in support of sustainability in this region.

DSSG is a community-based environmental advocacy organisation whose objects are:

- To promote and encourage the adoption of the principals of ecologically sustainable development to all sectors of the community throughout the Douglas Shire;
- To the protection and conservation of the unique environment in the Douglas Shire and its surrounds, including the Great Barrier Reef, the Wet Tropics and World Heritage areas;
- To promote social, economic and environmental balance;
- To promote and support environmentally sustainable practices, education and great environmental awareness amongst visitors to and residents of the Douglas Shire;
- To recognise and promote the sustainable practices of the traditional owners of the Douglas Shire; and
- To promote and encourage the adoption of the principals of ecologically sustainable development to all sectors of the community throughout the Douglas Shire.

The Daintree rainforest is one of the world's rarest and most irreplaceable ecosystems, often described as 'the jewel in the crown' of the Wet Tropics World Heritage Area of Far North Queensland. An international study has rated the Daintree the second most critical and irreplaceable of all World Heritage Areas. The exceptional biological and scientific values of the Daintree Coast mean the conservation, presentation and transmission of those values to future generations must take priority. All development which occurs within this area has the potential to degrade and threaten these ecological values and in recognition of this, Douglas Shire Council has developed a number of planning frameworks and documents to manage and direct development (Conservation Zone/ Cape Tribulation and Daintree Coast local plan code and various overlays). At every level within DSC planning guidelines (Planning Scheme, Strategic Framework/ Overlays/ Codes/ Local plans) the potential for development to threaten the ecological values, biodiversity and unique

tourism potential of the Daintree (and the Conservation zone) is recognised. It is also recognised that any single development which encourages a further development footprint or intensity has a significant potential to threaten the underlying biodiversity and ecological values of the area.

The grounds on which a Material Change of Use can gain approval are therefore extremely limited and require the applicant to demonstrate that it meets the entire requirements of the DSC Planning Scheme including all relevant plans, codes and overlays.

DSSG members do not support the combined application **CA 2023_5496 (MCUI, ROL 1 Lot into 2 lots and operational works 2021_4231/1)**, and do not believe the Development Application (DA) demonstrates compliance with the Douglas Shire Planning Scheme. In many instances insufficient or questionable data is used to support assertions, and the developer is asking Council to exercise discretion in its favour in circumstances where only full compliance to the highest standards should apply.

As this is a technically complex proposal, DSSG submits that Council must seek specialised assessment assistance. It is far from clear that Council staff have the requisite knowledge or experience to make this assessment. Aside from the absence of specific surveys and reports on many topics, the assessor is being asked to rely on assertions of the developer as to matters such as drainage, environmental survey, impact of light and noise etc.

In the event that the DA is approved, DSSG members request that it be approved subject to stringent conditions as to sufficient proof of viability and sustainability, protection of Biodiversity, Visual amenity and environmental values including waterways and fauna, mitigation of nuisance from noise, dust and emissions, mitigation of risk from fire and hazardous chemicals, and proper management of drainage, biosecurity hazards and social disturbance.

The Development Application

The applicant proposes to establish a renewable energy facility (being a combined hydrogen/solar renewable energy plant) on lot 5 BK157130. Operational works within the solar farm include earthworks for drainage and internal access.

The application is a Combined Application comprising:

- A. Material Change of Use- Renewable Energy Facility and Battery Storage Facility (8MW electrical generation solar station and battery storage facility) and;
- B. Material Change of Use- Utility Installation (hydrogen production, hydrogen power generation conversion and utility installation to distribute generated power).
- C. Reconfiguring a Lot- creating two lots by lease agreement for a period of more than ten (10) years-Lease Area B and Lease Area C.
- D. Operational Work- Excavation and Fill over 25m³; and;
- E. Operational Work- Work within an unconstructed local government road between Lease Area B and Lease Area C (installation of underground cables and construction of road access driveway and drainage).

Notably, the DA does not include consideration of the impact of electrical distribution via underground cabling in conduits with approximately 68.9km of cables within 56km of road reserve (there will be doubling up of cables in some trenches/conduits) with 27 transformer kiosks and junction boxes/switchgear to be installed. Distribution will extend to all 32 road reserves between and including Cow Bay to Cape Tribulation.

DSSG has significant concerns about this aspect of the Daintree Microgrid Project (the project) and these are articulated at attachment A. Of primary concern is the lack of public scrutiny of the planning for this aspect of the project.

The project

How we got here

Supply of grid power to the Daintree Coast has been a very fraught issue for over the past 30 plus years. It has caused major social controversy and serious conflict. Several surveys of alternatives for provision of power have been undertaken, the most recent and comprehensive study (KPMG Daintree Electricity Supply 2019: conclusions: section 11) concluded SPSs (with the government providing residents with new batteries and other components) were the preferred model. Microgrids were not preferred.

We are advised that most of the approximately 600 property owners are fairly satisfied with their stand-alone power systems (mostly solar). However a very vocal pro-power group has formed (including most major businesses), who purport to be concerned about the emissions from their own high diesel fuel usage for generators. Ironically, this group formed the Daintree Renewable Energy Group (DREG) to lobby for provision of grid- equivalent power.

With the support of the member for Leichhardt, they were successful in achieving grant money from the Federal Government. The Federal Government initially provided \$980,000 to DREG in Nov 2019 to develop a plan for the provision of renewable, hydrogen backed, reticulated power for the Daintree Coast.

On Tuesday 20 April 2020, newly elected Mayor Michael Kerr successfully moved a motion by way of Mayoral Minute expressing Council's support for the "Federal Government's Daintree Microgrid project"¹. We assume this 'support' will not influence planning decisions.

In June 2021 a further \$19 million was provided over three years (in Forward Estimates) for providing reticulated power on the Daintree Coast, presumably based on the plan devised as a result of the 2019 grant. That money was provided in full to Volt Advisory Group (the advisers to DREG) by way of an appropriation immediately prior to the last Federal election.

There has been no survey of demand for the reticulated power, and no consultation with the broader resident community. The known demand (and vocal support for the project) is commercial/ business interests and these interests will be the main beneficiaries.

The DA references the 2016 Compass Report (Daintree Cape Tribulation Electricity Survey) as a justification for the project model. This survey comprising telephone calls with 100 people, used inadequate and flawed data sets AND misrepresented survey outcomes in terms of likely residential uptake of a microgrid electricity supply. The DA utilised outcomes from the 2018 Sunverge "Powering Daintree" Report which was selectively based on non-representative consumers (just 4 businesses and only ONE residential dwelling and used known Pro-power advocates and founding members of a small residents group lobbying for a microgrid as the single 'representative' residential dwelling and itself utilised the flawed data from the 2016 Compass survey re likely customer take up and preferred models of supply.

Sustainability

This project had no social licence, being developed without consultation and largely 'in secret'; and demand is unknown. It is our view that many residents of the area will reject the 'opportunity' as they have systems that work well now, and connection costs are unknown and likely to involve significant upgrade to household wiring standards and external cabling. The land lease is only ten years and there is no 'end of life' plan to dismantle and correctly dispose of the materials.

The Queensland Planning Act 2016 and the Douglas Shire Council Strategic Framework highlight that in relation to decision making processes for development, there is a need to consider the broader sustainability of a proposal, including both short and long-term environmental effects, matters of equity between present and future generations, and to promote sustainable use of renewable and non-renewable natural resources.

¹ [20200428-Ordinary-Meeting-Confirmed-Minutes.pdf \(douglas.qld.gov.au\)](https://www.douglas.qld.gov.au/20200428-Ordinary-Meeting-Confirmed-Minutes.pdf)

The Micro-grid model proposed in DA is likely to be rapidly superseded by currently evolving changes in technology which include solar panel efficiency and cost, domestic battery storage efficiency and cost, smart metering and energy-efficient appliances. While the rest of the country is moving towards a 'Distributed Electricity' model where consumers produce their own energy through rooftop solar and feed in to the grid using the grid as a Virtual Battery (ref SA Virtual Battery) gaining credits to cross-subsidise or negate night-time energy consumption, this project proposes to effectively replace individual stand-alone energy systems and replace them with a centralised production and distribution network. Additionally, while other grids around the country enable users to feed-in (as above), this proposal has no mechanism or capacity for this and the lack of reference to this deficiency (in a 400+ page DA) is notable!

There is no detail in DA which addresses the long-term sustainability of the microgrid model either financial or in terms of longevity of the various components (e.g. hydrogen storage tanks and other infrastructure) over the 25-year period inferred for the development. Interestingly, the initial lease is only for a 10 year period which would not come close to providing a sufficient return on investment for the development.

The Micro-grid system poses a high risk as a business model due to the above, potential low take-up by residents (and insufficient survey data has been gathered to estimate this), the minimal capitalisation of the proponent developer and the potential for failure (lack of reliability leading to alternate arrangements by consumer businesses and residents) of the production and distribution systems.

While the applicant contends that this project is essential for the sustainable development of the area, it is imperative to highlight that residents have already been successfully utilising small-scale renewable energy systems in the Conservation Zone for 20+ years and most residents now have fit for purpose SPS. These existing systems have proven effective in promoting sustainability without the necessity for such a large-scale development. Therefore, the argument for the indispensability of this proposal in promoting sustainable development is unsustainable, especially considering the risk to the local ecology and the adverse visual and other impacts it imposes on the community.

A key element of the rationale for this DA is that the proposed development will save approximately 10 million /L of diesel fuel used each year to run generators and offset 8-10,000 metric tonnes (MT) of CO₂e annually.

It is unclear how the litres of diesel usage is sourced. Ideally this will be sourced from invoices for fuel purchased by users² and not from 'guesstimates' of proponents³. The resultant savings of emissions seems to rely on direct replacement of diesel for solar and battery/ hydrogen based power. What take up does this assumption require? As previously mentioned, demand from all residents appears to be low and there has been no formal demand survey undertaken.

DSSG submits it is not clear how much emissions will be reduced by this action. These figures have been extrapolated from extremely limited and flawed survey data⁴ (as above) and no substantial or accurate metered data has been sought or gained even from businesses who have reliable fuel consumption figures let alone from household residences who do not. It is essential to challenge these fuel use and CO₂e emission projections/ extrapolations if the ideal electricity provision model is to be determined. This proposed development has not adequately demonstrated it is sustainable or fit for purpose and has a high chance of business failure.

It should also be noted that grid electricity reduces use constraints compared with SAS where users are necessarily careful with consumption. It almost certainly the case that grid electricity means people will use a lot more power. The proposed fossil fuel gas back-up may well have to work harder to meet demand at

² [Estimating emissions and energy from fuel combustion guideline \(cleanenergyregulator.gov.au\)](https://www.cleanenergyregulator.gov.au/Estimating-emissions-and-energy-from-fuel-combustion-guideline)

³ [Daintree Report - ARENA 20180316 FINAL](#) page 77

⁴ 2016 Compass Report (Daintree Cape Tribulation Electricity Survey) and 2018 Sunverge "Powering Daintree" Report

times of low solar radiation and result in similar if not more use of fossil fuel. It appears that weather patterns in the area are becoming cloudier, thus reducing available solar insolation, especially in summer when power demand becomes high.

Furthermore, given the Outstanding Universal Values of this region, biodiversity must be paramount consideration, not just diesel use.

The proposed lot reconfiguration associated with this development becomes problematic when project viability comes into question, as the Conservation Zone includes the 'outcome' that further lot reconfigurations do not occur, except for "essential community infrastructure" (and a small number of other exceptions irrelevant to this development). The proposed development has NOT adequately demonstrated it is for 'essential community infrastructure' and there is extensive evidence to support this (see KPMG Daintree Electricity Supply 2019 and other comments above).

Equity

An inequitable approach to electricity access for residents/consumers has been proposed in the DA whereby only existing holders of a DA (i.e. no new residents or developments) will have access to the electricity produced AND existing residents both commercial and residential will only be entitled to the amount they already produce and consume. No detail at all has been provided of estimates done to ascertain these volumes and it is inconceivable that this could be in any way realistically calculated or demonstrated.

It is certain, however, that IF the development were to gain approval and be constructed, demand would rapidly outstrip supply due to the development impetus provided, leading to

- System failure, brown outs and routine use of (noisier and more polluting) back-up generators (currently designated as for emergency use only) and
- Lobbying for an extension to the solar farm area
- Lobbying for an alternate additional solar farm probably at Cape Tribulation

It is an inflexible system that cannot be scaled up as needed NOTE: the land area of the proposed development site is limited and the proposed solar farm array sizing utilises almost all of the available lease area meaning the array sizing cannot easily be increased and also that there is not the required area of land remaining to provide the vegetation and landscaping which is a usual requirement of any such new development.

Major Hazards

The proposed infrastructure/ technology (both battery and hydrogen as well as LPG storage) poses an unacceptable risk in relation to fire and lightning strikes which are common in tropical areas. Also, no consideration appears to have been given to ongoing environmental changes due to Climate Change including increasing risk of bushfires and lightning strikes, increasing temperatures and humidity (affecting both generation and storage plant and equipment). This is a potentially dangerous development and to leave it unstaffed many hours of the day/night is extremely unsafe.

Insufficient risk assessment and mitigation measures have been undertaken by the applicant and there appears to be no fire safety or evacuation plan for any on-site staff or nearby residents. The HAZMAT Plan in the DA is insubstantial and inadequate given the nature and complexity of the proposed development

Significant risks is posed by limited road access and exit for workers and guests of nearby accommodation providers in the case of a gas explosion, fire, chemical spill or any other kind of emergency requiring evacuation

Further to this, the experimental technology proposed by hydrogen power generation poses a significant risk of fire and chemical hazard to the site area and its nearby surroundings.

Batteries

The batteries to be used are LFP, and while these are less volatile than lithium-ion batteries, they can still pose a fire risk if misused. They're still lithium-ion batteries, so they can be damaged by overcharging and catch fire if they're damaged. LFP batteries are not exempt from thermal runaway as they share the same structure as lithium-ion batteries. Anodes and cathodes are located on each side with separators in the middle, and both kinds of batteries are filled with a flammable electrolyte solution. In addition to thermal runaways, other external factors such as short circuits or mechanical shock may also lead to battery explosions. To reduce the likelihood of these occurrences happening it is essential that safe handling practices are observed at all times including careful transportation procedures designed specifically for protecting sensitive electronic components like lifepo4 batteries from vibration or impact damage.

"It is clear from the number and frequency of incidents that thermal runaway and battery fires are a serious risk that must be proactively managed by the owners, operators, and constructors of BESS systems. Global BESS fire events in Europe and North America that have highlighted that this failure mode is not unique to a particular manufacturer or design, but that the hazard is inherent in the technology. Batteries must be protected from day one of construction and there must be a zero tolerance approach to battery abuse. Battery management systems must be sophisticated, monitored, and responded to. Gas detection, explosion prevention, fire detection, and fire suppression as well as a robust emergency response plan are essential to mitigate the damage if a thermal runaway event does occur"⁵.

Solar panels

Photovoltaic panels may contain hazardous materials, and although they are sealed under normal operating conditions, there is the potential for environmental contamination if they were damaged or improperly disposed upon decommissioning. Concentrating solar power systems may employ materials such as oils or molten salts, hydraulic fluids, coolants, and lubricants, which may be hazardous and present spill risks. Proper planning and good maintenance practices can be used to minimize impacts from hazardous materials. There is no evidence the applicant has consider this issue.

Construction of solar facilities on large areas of land requires clearing and grading, and results in soil compaction, potential alteration of drainage channels, and increased runoff and erosion. Engineering methods can be used to mitigate these impacts. There is no evidence this has been considered.

The construction and operation of solar facilities generates particulate matter, which can be a significant pollutant particularly in areas such as national parks and wilderness areas. The developer claims little or no particulate matter is generated from this development.

Solar farms may create a heat-island affect, which could heat up the local micro-climate. Heat-island mitigation studies have found that temperatures decrease with every percentage increase in tree canopy cover. The developer has asserted he cannot install landscaping due to negative impact on power generation.

The developer claims that although individual panels or small groups of panels on a common alignment will produce glint and glare it is not sufficient in itself to have any overflight impacts for birds or aircraft/helicopters. There is no evidence provided to support this assertion.

Environmental values

The DSC Strategic Framework, Conservation Zone and the Cape Tribulation and Daintree Coast local plan code all give a high level of importance to ensuring the protection of biological diversity and ecological functioning. The following demonstrate the project has a negative impact on environmental values

⁵ [Battery Energy Storage Systems and the rising risk of thermal runaway \(marsh.com\)](https://www.marsh.com)

- The increased development in the conservation Zone likely to result from the proposed intervention will undermine the intent of the Conservation Zone, creating a precedent for further unsustainable developments
- The proposed micro-grid will provide a stimulus for energy demand in the Conservation Zone and become a catalyst for further expansion to the solar production infrastructure increasing the threat to inherent conservation and ecological values
- The increased development in the Conservation Zone resulting from the proposed development will further alienate existing habitat, transport corridors and highly localised flora and fauna undermining the region's ecological values and biodiversity
- Fencing of the proposed project site will prevent movement of fauna from the adjacent National Park to other areas of the park and to adjacent roadside verges and transport corridors
- Endemic local fauna such as tree kangaroos, dingoes, reptiles, ground birds and cassowary that are regularly sighted on Silkwood Rd will be impacted by the development activity
- Impacts on Buchanan creek (and associated impacts on broader ecological functioning and water catchment quality)

The developer has identified potential impacts from the proposal.

“There is the potential of indirect impacts on the integrity of adjacent vegetation habitats along Buchanan Creek through; • accidental release of fuels, oils, lubricants and other hazardous materials from machinery during construction at the solar farm generation site. • Potential for construction and general vehicle movements/ machinery to act as dispersal vectors for invasive species. • sediments may be mobilised into adjoining vegetation/wetlands in periods of unexpected rainfall.”

In our view, the proposed mitigations are either unable to be tested or are clearly insufficient.

Visual amenity

The proposed renewable energy facility, battery storage and associated works would pose significant visual impact on the surrounding area, particularly on the properties located on Silkwood Road. The applicant has put forward to utilise and ‘thicken’ existing roadside vegetation – this is unacceptable. Vegetation cannot be relied upon in the first instance nor in perpetuity to maintain a visual break (the nature of vegetation being that it takes years to establish and achieve the screening effect the applicant is relying on and that it is subject to disease, damage and decay). Furthermore, it is particularly concerning that screening is proposed only on the nature strip, over which there is no means to enforce the applicant to maintain the health, number or visual effect of the trees. There is no effort to account for screening on the subject land, vegetation or otherwise.

The applicant, in assessing the visual impact of the proposal to the properties along Silkwood Road, refers primarily to the glint and glare from the panels. While this IS concerning, particularly with regard to “vegetation screening” aforementioned, there are a number of issues also not addressed and which must be considered:

The view of an ‘industrial-scale’ development (even if partially screened) to residents of Silkwood rd. and visitors to the two accommodation houses on the road, will severely impact the ‘Daintree Experience’ for all.

Furthermore, access gates and driveways will create a huge break in any vegetation buffer and, given the commercial nature of the development, represent a much larger visual impact incongruent with the current farmland use of the lease area

The 1.8 - 2 metre high security fencing is also proposed to the perimeter of the project, presumably with associated signage. This is unacceptable in the context of the residential properties opposite who will have views of this, whether through thin vegetation, or access ways.

The above issues present an unreasonable detrimental impact, which cannot be appropriately managed with the project design. To achieve appropriate visual amenity, the project size (given the constraints of this site) would have to be substantially smaller, meeting setbacks of other development in the area, which are well in excess of 60m.

The site plan at a 1:1000 scale shows solar panels set back as little as 5m from the Lease boundary at Silkwood Road. If these are accurate this represents a significant visual impact and should not be approved given the normal 20m setback for infrastructure.

The proposal notes that there is no native vegetation removal proposed. Aerial imagery show several scattered trees throughout the site, and the plans indicate solar panels in these locations indicating they will require removal. There is no detail on the type of trees these are – whether they are native or not.

While the DA contains reference to a biological audit of the site being prepared, it is not attached so assessing the biological, ecological, and avian significance of this site audit is not possible.

Buchanan Creek

Buchanan Creek is a significant adjacent waterway and it is not clear from the project documentation that there is adequate protection from polluted or contaminated water, erosion from project-created flooding and drainage surcharge routes or other significant polluting events.

It is not clear from this plan or from a site survey how drainage can ultimately be directed away from Buchanan Ck:

- the entirety of the proposed lease areas B and C have fall and drain into Buchanan Creek.
- a significant amount of water traverses the proposed project site as an overland flow line from the National Park above the site AND from Lots 19 - 22 opposite the site (via a culvert under Silkwood Road and a roadside drain on the western side of Silkwood road). The amount of water during regular flood events in this area (3+ times/year) is such that DSC is required to repair this section of Silkwood Road from washout after each such event (please consult your engineering and maintenance sections).
- the DA for this project has specified there are no significant drainage patterns on the proposed site. This is incorrect. A comprehensive drainage survey for the site during flood events needs to be undertaken to ensure any engineering works take appropriate account of this drainage line.
- it is also not clear from the DA how rainwater will be collected from the solar array and directed to the 110,000L water storage tank. Detailed engineering documentation has not been provided to demonstrate these will also not create erosion through overflow during flood and high rainfall events and that contaminated or sediment rich water will not enter Buchanan Creek due to this intervention.
- an erosion and vegetation management plan specific to this flow line and the entire site needs to be provided to ensure Buchanan Creek is not compromised by this development on its immediate eastern boundary.

Water

It is not clear how much water is required for the hydrogen aspects of this project. This detail must be included as part of the assessment so as to ensure sufficient water is captured for the process to be self-sufficient. It is unclear how the water is captured from the solar array to the on-site water storage.

Clearly expert assessment is required.

Assessment

The proposed DA is not aligned with and contradicts the stated purpose of the Queensland Planning Act 2016, the DSC Planning Scheme, Conservation Zone code 6.2.3, the CT & DC Planning code (Precinct 5) and a

number of relevant overlays. It would inevitably lead to increased and potentially unsustainable development threatening the natural biodiversity.

Douglas Shire Council Strategic Framework

The strategic framework has as its base significant concepts, including:

- *The unique environmental character of the Shire comprising internationally renowned landscapes, ecologically significant rainforest systems, sensitive coastal systems and areas of unsurpassed natural beauty, are maintained in association with sustainable development practices, which seek to minimise the effects of development on the natural environment.*

The strategic framework sets out that *equitable access should be provided to a complete range of services.* This development proposal does not represent any step towards equitable access to services (i.e. electricity) as:

- It is limited in terms of the number of customers able to connect to the system, with potential to increase social inequality
- It is proposed to offset the consumption of diesel generator use in the Daintree - primarily used by large businesses, i.e. the project does NOT primarily service the needs of the local community or lead to greater social equity, it is a benefit primarily to large business operators
- Does not anticipate being able to cater to 'new customers' i.e. future generations
- Does not have scope to further expand the project, without greater incursion into land in the Conservation Zone, including all associated detrimental impacts on visual amenity, environment and sustainability

Conservation Zone

The proposed DA is not aligned with the stated purpose of the Conservation Zone code (6.2.3):

1. *The purpose of the Conservation zone code is to provide for the protection, restoration and management of areas identified as supporting significant biological diversity and ecological integrity.*
2. *The local government purpose of the code is to:*
 - (a) *implement the policy direction set in the Strategic Framework*
 - (b) *conserve and maintain the integrity of biodiversity values, wildlife, habitats and other significant ecological assets and processes over time, across public and private lands.*

The Proposed DA is likely to significantly impact biological diversity and ecological integrity (wildlife, habitats, and other significant ecological assets) of the zone by

- Facilitating and encouraging further residential development and current development intensity
- Facilitating and encouraging further SME and commercial development and current development intensity
- Facilitating and encouraging increased visitor numbers (both day-trippers and overnight stays)

The proposed DA

- makes minimal and insufficient provision to protect scenic amenity
- threatens the biological diversity and ecological integrity of immediate surrounds and the zone as a whole
- affects the environmental, habitat, conservation and scenic values of both the proposed lease site land surrounding area
- is not for a low intensity facility
- has not sufficiently demonstrated a need and or provided sufficient evidence that it will have a minimal impact on the environmental and scenic amenity values of the site or surrounding area
- has not provided evidence that the DMG is essential community infrastructure as required for lot reconfigurations - 'essential community infrastructure'.
- does not demonstrate that it is self-contained through the use of appropriate on-site or nearby rainwater collection and storage, sewerage treatment and electricity generation

In addition, the DA specifically contravenes many Performance Outcomes identified in Table 6.2.3.3.a - Conservation zone – assessable development. The proposal does not meet the performance outcomes, as described below:

At least PO3, PO6, PO7, PO11 and PO12 are not met. The applicant has no intention of meeting these performance outcomes.

PO6 -The 'alternatives' proposed for PO6 do not meet the acceptable outcome. Solar panels are reflective and are not provided in colours that blend in easily. The development cannot be said to be subservient to the surrounding environment.

PO7 - The 'alternatives' proposed for PO7 do not meet the acceptable outcome as the balance of the site will not be vegetated, and the proposal for screening the view from Silkwood Rd is not sufficient. There will be no rehabilitation of natural processes on this disturbed site and the environmental integrity of the area will not be improved by this development.

PO12 - Constant nocturnal light and full boundary security fencing at up to 2 m high will serve to impede the free movement of native fauna including dingo, cassowary and reptiles all of which are currently common and regularly seen in and adjacent to the proposed project area.

PO3 - It appears from the scale drawings of the site plan that solar arrays which can be considered to be 'structures' will be installed less than 20m from the lease boundary along Silkwood Road and likely within 5m or 8m. No variation to the 20m setback requirement should be allowable.

PO4 - Whilst the values of the site may not be adversely effected, the values of surrounding areas certainly are adversely effected. The scenic values of Silkwood Rd are negatively impacted by not only the structures but also the 2 m high security fence surrounding it. The fencing itself will have an adverse impact on conservation values in that native fauna will be excluded from traversing the site, including to access Buchanan Creek. It is not correct to describe the structures on the site as subservient to the natural environment – they couldn't be more alien. Constant nocturnal lighting will negatively impact native fauna.

PO5.- There is no evidence that the project overall will deliver a reduced carbon footprint for the region (see discussion above) It is the distribution cables that are said to deliver this advantage, however this DA is about the solar farm aspects only. In addition see PO4 re impact on native fauna and scenic amenity of surrounding areas.

PO6 -The 'alternatives' proposed for PO6 do not meet the acceptable outcome. Solar panels are reflective and are not provided in colours that blend in easily. The development cannot be said to be subservient to the surrounding environment.

PO7 - The 'alternatives' proposed for PO7 do not meet the acceptable outcome as the balance of the site will not be vegetated, and the proposal for screening the view from Silkwood Rd is not sufficient. There will be no rehabilitation of natural processes on this disturbed site and the environmental integrity of the area will not be improved by this development.

PO8 - It is not correct to say that the development is complementary or harmonises with the surrounding environment. The development requires significant earthworks to site buildings, drainage lines and roadways.

PO 9 - the development does not maintain the scenic values of the surrounding land and does not minimise visibility from external sites i.e. Silkwood Rd. It does not protect the ecological values of either the site or especially the surrounding land.

An erosion and sediment control plan has not been provided, making it impossible to assess this PO.

PO10 - Buchanan Creek carries a huge amount of water during flooding events - several times in a normal wet season. The development poses a pollution threat due to site run-off. There has been no hydrological studies undertaken. Buchanan Creek is a significant adjacent waterway and it is not clear from the project documentation that there is adequate protection from polluted or contaminated water, erosion from project-created flooding and drainage surcharge routes or other significant polluting events. It has not been demonstrated that appropriate setbacks to Buchanan Creek have been provided (see also comments regarding impacts to Buchanan Creek)

While the application documents note that site excavation is 'minimised', there is still great concern with regard to potential impacts from excavation, particularly on drainage patterns and impacts to Buchanan Creek and appropriate buffers to Buchanan Creek has not been provided.

An erosion and sediment control plan has not been provided, making it impossible to assess this PO.

PO11 -Site area will be disturbed as part of the construction of development. No rehabilitation has been proposed. This would be essential in maintaining (and improving) the environmental integrity of the area. This is of particular importance due to the proximity to Buchanan Creek, and potential for contamination, erosion and other environmental impacts from drainage, construction and ongoing management processes.

Local Plan - Cape Tribulation and Daintree Coast

The intent of this local plan is to minimise the impact of development, and ensure that development allowed within established residential areas maintain a low environmental impact. The need for the local plan was established from recognition that development associated with 'rural residential style' lots in the Daintree posed a risk of significant detrimental impacts on the ecology and landscape character of the area (see 7.2.1.2 of the local plan code which covers the context of the plan in detail). Section 7.2.1.2 also acknowledges the compounding nature of further development spurring increased services and infrastructure, which in turn leads to more development pressure and associated detrimental impacts. It highlights the need for preserving the natural environment, landscape character and low-key nature of development and intrinsic attractiveness of the area.

The purpose of the Cape Tribulation and Daintree Coast local plan code clearly sets out how this intent is to be achieved.

(1) The purpose of the Daintree River - Bloomfield River local plan is to retain the attraction of the area as a very low-key, largely undeveloped nature-based recreation environment, based on Douglas Shire Planning Scheme 2018 Version 1.0 Part 7: Local plans Part 7: Page 4 the exploration and appreciation of the natural environment and to ensure that any development that does occur is appropriate and does not place additional pressures on the values of area.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) areas within the local plan are appropriately managed to protect biological diversity, water catchment quality, ecological functioning, beach protection and coastal management, scenic amenity, and historical and cultural values;

(b) the natural character of the locality is protected, and where degraded, restored or enhanced;

(c) new development does not occur, with the exception of development located within, and consistent with the respective precinct intents for:

(i) Precinct 1 – Conservation precinct

(ii) Precinct 2 – Low impact residential precinct;

(iii) Precinct 3 – Low impact commercial precinct;

(iv) Precinct 4 – Low impact community purpose precinct;

(v) Precinct 5 – Low impact rural production and tourism enterprise precinct;

(vi) Precinct 6 – Low impact tourism accommodation precinct;

(d) where development occurs it is:

(i) very low scale and remains within the limits imposed by the vehicular capacity of the Daintree River ferry crossing, the Alexandra Range road crossing and the local road network;

- (ii) sensitive and sympathetic to its remote location in an area of unique biodiversity, ecological, conservation and scenic amenity value;*
- (iii) self-contained through the use of appropriate on-site or nearby rain water collection and storage, sewerage treatment and electricity generation;*
- (e) adequate services and facilities for settlement areas and an appropriate level of economic opportunity for local residents are provided*

This purpose will be achieved through:

- Appropriately managing areas to protect biological diversity, water catchment quality, ecological functioning and scenic amenity
- Where development occurs, ensuring it is:
 - Very low scale
 - Sensitive and sympathetic to its remote location [...] ecological, conservation and scenic amenity value
 - Self-contained through the use of appropriate on-site or nearby rainwater collection and storage, sewerage treatment and electricity generation

This purpose is not served by this DA as the development

- Is NOT low-key and will inevitably lead to increased development and resident population (see KPMG 2019/ Sunverge 2018) as well as enabling higher energy consumption as a result of increased availability of off-site energy supply. Clearly this is considered to be contrary to the preferred outcomes of this plan.
- Is not sensitive and sympathetic to its remote location in terms of biodiversity, ecological function, conservation and scenic amenity (see further detail regarding impacts on environmental/ecological function, Buchanan Creek, scenic amenity below)
- Will affect the natural character of the locality
- Does not attempt to restore or enhance degraded local character (where the broader local character is low-land tropical rainforest, this historically cleared site can be considered 'degraded', and any development should include restoration and enhancement of natural environment)
- Will place additional strain on the capacity of the Daintree River ferry and Silkwood Road during construction
- Is a new development and inconsistent with the respective precinct intents for Precinct 5

With specific regard to the assessment criteria of the Cape Tribulation & Daintree Coast local plan, the proposal fails to demonstrate an acceptable outcome as follows:

PO1 - See discussion above re development.

PO2 - The developer has not properly answered this PO (which applies to all development in the Local Plan area). No comment re fire -fighting services

PO3 -The developer does not address or make provision for sanitary services post construction and does not address wastewater or effluent processes

We have seen no data about water usage and waste from the production of hydrogen. ,

PO5- The DA does not adequately detail strategies for the protection of natural water resources (Buchanan Creek) or remnant vegetation along the creek/lease boundary from wastewater, sedimentary inundation, chemical spills, excessive flooding or other contamination during construction or due to the ongoing site activity.

Engineering plans for cross-water flow (specifically from the eastern side of Silkwood Rd via the under-road culvert and from drainage lines under solar arrays) do not demonstrate sufficient research or understanding of rainfall intensity, water flow or flood events in the specific lease area and surrounds.

An erosion and sediment control plan has not been provided, making it impossible to assess this PO.

PO6 – AO6.1 - The 'alternative' is Solar panels and they are reflective. This PO is not met.

AO6.2 - There is no report or independent assessment of noise – merely assertions or undertakings - It must be a condition of any approval that noise measurements are undertaken and reported.

PO9 – AO9.3 This is not met as the developer intends to remove existing trees.

AO9.4 - The on-site impacts on natural flow regimes and erosion and sedimentation are inadequately assessed or addressed and appear to be insufficient to avoid flooding and erosion of the site and subsequent discharge of sediment and potentially contaminated water into Buchanan Creek (as in PO4/PO5).

There is no proposed revegetation of exposed areas shown on the plans, essential in protecting the environmental qualities of the site and Buchanan Creek.

An erosion and sediment control plan has not been provided, making it impossible to assess this PO.

Precinct 5 - Low Impact Rural Production and Tourism Enterprise

PO26 -This PO is not met as the developer will only revegetate where there is no shading impact on solar panels and has no intention to landscape.

PO27 - Sufficient information to ensure the protection of environmental and scenic values has not been provided.

- Strategies to minimise dust, noise, social disruption, vibration and traffic management are inadequate and will not alleviate impact on Silkwood Road residents and guests of local accommodation businesses
- Strategies to address erosion and sedimentation, fire management, land contamination, flora and fauna, rehabilitation, water quality, weed and pest management are not sufficiently identified to ensure no impact on the lease area and surrounds ecological and heritage values.

In addition there is no Site rehabilitation plan.

Overlay Codes

Bushfire Hazard Overlay Code

The site is not identified as within a bushfire risk sub category, however, the development fits within the description of a 'vulnerable activity' and bushfire risk must be present and would have catastrophic effect. Have the overlay maps been updated for potential climate change impacts? [World heritage Queensland rainforest burned for 10 days – and almost no one noticed | Bushfires | The Guardian](#)

Landscape values overlay code

PO1 –

AO1.3 -The applicant has put forward to utilise and 'thicken' existing roadside vegetation – this is unacceptable. Vegetation cannot be relied upon in the first instance nor in perpetuity to maintain a visual break (the nature of vegetation being that it takes years to establish and achieve the screening effect the applicant is relying on and that it is subject to disease, damage and decay). Furthermore, it is particularly concerning that screening is proposed only on the nature strip, over which I believe there is no means to enforce the applicant to maintain the health, number or visual effect of the trees. There is no effort to account for screening on the subject land, vegetation or otherwise. Furthermore, access gates and driveways will create a huge break in any vegetation buffer and, given the commercial nature of the development, represent a much larger visual impact incongruent with the current farmland use of the lease area. It should be a condition of any approval to provide appropriate screening.

AO1.5 - 90% of the proposed site includes reflective surfaces, contradicting the standard – does not comply

Natural areas overlay code

PO1 -The developer has not provided any reports by a qualified person as to mitigation of impacts. The Appendix D Technical descriptions document does not satisfy the description of requisite report in AO2 or AO3, relevant reports should be attached, rather than summaries of alleged surveys and reports. In the absence of these reports the Council should secure independent reports. Insufficient information to assess.

PO2 - AO2

Insufficient information to address hydrology and drainage and the site will be surrounded by a 2 m fence – this does not allow for safe movement of fauna. – Not met

PO6 -There is insufficient information provided in the DA to assess – there is no ecological survey provided, merely assertions by the developer.

Use Codes

Industry activities code

PO4 - The developer does not propose to landscape within the development site. Clearly the PO requires landscaping.

Environmental performance code

PO1 - Technical parameters, design, installation, operation and maintenance of outdoor lighting must comply with the requirements of Australian standard AS4282-1997 Control of the obtrusive effects of outdoor lighting. This should be a condition of any approval

PO2 – Developer has not provided proof of compliance – should provide a noise assessment by an appropriately qualified person as a condition of approval

PO3 - The EMP is insufficient. Does not provide for emissions from weed and pest management or potentially from solar panels.

PO7- The EMP is insufficient in dealing with these matters. The design does not demonstrate adequate consideration of a comprehensive drainage survey for the site during flood events needs to be undertaken to ensure any engineering works take appropriate account of this drainage line.

Engineering plans for cross-water flow (specifically from the eastern side of Silkwood Rd via the under-road culvert and from drainage lines under solar arrays) do not demonstrate sufficient research or understanding of rainfall intensity, water flow or flood events in the specific lease area and surrounds.

PO8 – there has been no declaration from an appropriately qualified person.

Filling and excavation code

PO3 and PO4 -

Filling and excavation does not result in a reduction of the water quality of receiving waters.

It is not clear that the engineering plans have adequately assessed the impact on Buchanan Creek. An engineering study is required

Infrastructure works code

PO3 - The response of the developer does not comply with the PO.

PO9 - The developer does not intend to screen from view by landscaping – but has suggested planting on road reserve outside the project area. – PO not met.

Deficiencies and conditions

Crucial deficiencies exist in the DA regarding environmental impact assessment and community consultation to justify the basis for the proposed development. As part of this objection, I request the following actions to be taken by the applicant in order to adequately address the specific needs of the Daintree Coastal community:

- Social research to justify the intervention proposed by the DA on Daintree residents and small businesses
- Evidence that recent documented, qualitative community consultations undertaken with a range of households in the Daintree area align with the proposed model and anticipated outcomes of the project
- Evidence of more substantial impact assessments according to applicable area overlays including:
 - Vegetation
 - Fauna
 - Drainage/irrigation
 - Chemical use in site maintenance
 - Parking and transport
 - Earthworks as part of construction
- An Environmental Management Plan which addresses not only the construction phase of the proposed development but also the ongoing operations of the solar farm/ energy utility and the potential short-term, mid-term and long-term impacts on the ecology of the Conservation Zone AND adjacent landholders and businesses.
- Evidence that the project proposal is the best choice of options evaluated in the most recent study into electricity provision for the Conservation zone of the DSC Planning Scheme (i.e. the 2019 KPMG Daintree Electricity Supply Study prepared for the Queensland Department of Natural Resources, Mines and Energy).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Didge McDonald', with a long horizontal flourish extending to the right.

Didge McDonald
President

*Attachment A

DISTRIBUTION CABLING

This project includes electrical distribution will be via underground cabling in conduits with approximately 68.9km of cables within 56km of road reserve (there will be doubling up of cables in some trenches/conduits) with 27 transformer kiosks and junction boxes/switchgear to be installed. Distribution will extend to all 32 road reserves between and including Cow Bay to Cape Tribulation.

DSSG understands that the operational works within the local government road network (Zone C of the Wet Tropics World Heritage Area) are not part of this Development Application, and will be addressed through a Prescribed Activities Permit application with Douglas Shire Council.

Does this permit arrangement allow for public input? This is a controversial project which will cause significant disruption to residents and visitors to the Daintree Coast – public input to any permit and planning seems to be necessary.

DSSG is concerned about the level of supervision of compliance with the proposed work in the road reserves and particularly with waterway crossings and work in sensitive areas.

We note the SARA referral response says

“Based on the revised pre-lodgement material provided, the proposed development of the electricity distribution network will require referral to SARA under the following provision of the Planning Regulation 2017 (Planning Regulation):

Schedule 10, Part 17, Division 3, Table 1 – Operational work that is tidal works and work in a coastal management district. This will require a fee of \$3,516 (fee item 8(e)).

SARA would be a referral agency and Douglas Shire Council the assessment manager for prescribed tidal works’

Expressing concern at impact on marine plants, the SARA report says”

“However, if it is not possible to locate the cable under the traffic lanes near the Cooper Creek estuary and the cable is located in the outer road reserve, marine plants are likely to be impacted as a result of the works. As identified in the pre-lodgement advice issued on 12 September 2022, the works may be undertaken in accordance with work types 2.15 and 2.24 of the ADR provided the maximum disturbance footprint is 25m² or if the works cannot comply with the ADR, a Development Application will be required.

DSSG is concerned to understand whether the distribution project will be referred as a Development Application and when this will be known, allowing public input.

We are advised that optic fibre cables may be installed at the same time – presumably by arrangement with Telstra – is this the case and was this aspect advised to the Queensland Government via SARA referral?

Costs to Douglas Shire Council

There has been significant support provided to this developer by DSC, and more resource will be required if the project proceeds. As ratepayers, members of DSSG are concerned that these costs are captured and reported specifically for public scrutiny.

We would like to understand the precise terms of the usage of the road reserve and other land for this installation. Who ‘owns’ the reserve and the land on which transformers and kiosks will be installed, and is a lease arrangement in place? How much will the developer pay to use this land?

Kiosks and Transformer boxes

We understand that kiosks and transformers will be set back from the road reserve. On whose land will they be placed? We believe the placement of these structures will impede slashing of the road sides, requiring more Council resources to undertake maintenance.

Most network companies have a published set of standards for placement of kiosks and transformers – see below.

Site Requirements 2.1 General 2.1.1 Kiosk substations shall be located in areas that are well drained (no ponding) and are clear of underground or overhead obstructions as required by Clause 2.2 and Section 5. 2.1.2 To minimise soil erosion effects and long-term movement of the kiosk assembly, the kiosk site area (refer to Annexure A) shall be level, or made level using suitable retaining structures. 2.1.3 Kiosk substation sites shall comply with the environmental and fire segregation requirements specified in Sections 9 and 11. 2.1.4 All kiosk substation sites shall comply with the Standards Australia Handbook SAA HB 100 (CJC 4) Co-ordination of Power and Telecommunications. 2.2 Site limitations 2.2.1 Kiosk substations shall not be installed in the following areas, unless Ausgrid determines that there is no reasonable alternative: • areas prone to stormwater run-off or ponding; • areas subject to declared 1 in 100 year floods; • areas less than one metre above the mean high water mark; • ocean-front areas where storm wave erosion could affect the site, or where storm wave conditions could cause access difficulties; • exposed ocean-front locations subject to salt laden winds or coastal environments which demonstrate accelerated corrosion to existing infrastructure; • locations defined as coastal vulnerability areas; • unstable areas; and • roadway restriction areas including kerb blisters or similar traffic control narrowing. shall not obstruct a road user's view of traffic at crests, curves, roundabouts or other locations, where a traffic accident could reasonably be attributed to loss of view caused by the kiosk; • shall not obstruct a road user's view of traffic when the road user is about to enter the carriageway of a road from a driveway; • shall not be vulnerable to damage by reasonably expected traffic movements;

[Site Selection and Preparation for Kiosk Substations \(ausgrid.com.au\)](http://ausgrid.com.au)

What standards will apply for this project?

Premises Lead in

We note that the 9.4.5 Infrastructure works code at AO8.2 requires “The premises is connected to the electricity distribution network in accordance with the Design Guidelines set out in Section D8 of the Planning scheme policy SC5 – FNQROC Regional Development Manual. Note - Areas north of the Daintree River have a different standard.”

Can you advise what standard will apply and confirm it is at least equal in safety and preservation of environment as applies elsewhere?