AMENDMENT REPORT

Jindera Solar Farm

March 2020

Project Number: 17-323

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An approximately 120 Megawatt (MW) Alternating Current (AC) photovoltaic (PV) solar farm is proposed at Jindera, southern NSW (equivalent to up to 150 MW Direct Current; DC). The 521-hectare (ha) Subject Land (337 ha Development Footprint) is freehold rural land approximately 4 kilometres (km) north of the township of Jindera.

The Environmental Impact Statement (EIS) was prepared in accordance with Part 4 of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979* (EP&A Act) placed on public exhibition between 16 October and 13 November 2019. The Proposal is classified as State Significant Development (SSD).

Jindera Solar Farm (JSF) reviewed submissions from the public and government stakeholders in November 2019. The proponent's response to submissions has been prepared and is being lodged concurrent with this Amendment Report.

As part of the consideration of submissions, several areas where the proposed Jindera Solar Farm Project can be improved were identified. JSF have held meetings / conversations with a number of residents near the project site and with government agencies and other stakeholders. Additional specialist investigations were undertaken.

Changes to the design, layout and infrastructure have been proposed as a result of these community and agency submissions, additional consultation and investigation. Changes have also been made to strengthen the environment safeguards that form a commitment of the proposal. These changes have been made to improve community benefits, further reduce possible and perceived impacts and to clarify information contained in the EIS.

This Amendment Report has been prepared to set out the rationale for, and details of, the specific areas of change, in comparison to the proposal exhibited in the EIS. It includes;

- A summary of the investigations informing the changes presented in Section 1 and appendices.
- A summary of the proposed changes in comparison to the exhibited EIS in Section 2. This relates to both community benefits and infrastructure changes.
- The updated environment safeguards relevant to the proposed changes that form a commitment of the proposal are provided in Section 3.

1. KEY AREAS OF ADDITIONAL INVESTIGATION

Specific additional investigations were undertaken as in response to the feedback received from the public and government stakeholders, after the EIS public exhibition. The outcomes of these studies have been used to respond to specific issues raised and have assisted to inform the changes to the proposal, as detailed below. These investigations are provided in full in Appendix A in the Response to Submissions. The included:

- Detailed analysis of the potential impacts of the project on agriculture and agricultural land
- Ground validated assessment of soil capability in the proposal site.
- Updated Aboriginal heritage, biodiversity and noise assessments, reflecting the infrastructure changes and updating assumptions made in the EIS.

1.1. AGRICULTURAL IMPACT STATEMENT SUMMARY

A number of submissions were received from the public in relation to the use of agricultural land, as well as government agencies such as Greater Hume Shire Council and NSW Department of Primary Industries (DPI). DPI noted the following in their submission:

- *DPI does not support the complete loss of agricultural production on productive agricultural land, with access to key export markets. DPI recommends that further work should be undertaken to minimise the risks to agricultural production values both directly and in the region. This should include undertaking an Agricultural Impact Statement, which specifically considers agrovoltaics during the operation of the farm, as well as other means of multifunctional use of the land for agricultural purposes over the life of the development.*

An Agricultural Impact Assessment (AIS) was prepared by Principal Consultants of Riverina Agriconsultants and Progressive Agriculture, informed by a site inspection of the subject land (Appendix A.1 below). The purpose of the report was to address the requirement of DPI by independently assessing the economic impact on local agricultural production of the proposed Jindera Solar Farm.

Riverina Agri-Consultants undertook consultation with DPI on 19 and 20 December 2019 to ensure the content of the AIS would meet the Department's requirements. The AIS scope was confirmed by the Department on 20 December 2019.

The draft AIS was provided to DPI for their comment on 17 February 2020. DPI in their response (3 March 2020) notes that the AIS has made a good attempt at describing the impact on agriculture for the farm land immediately impacted by the proposal, and asked if consideration were given to cumulative impacts from numerous large scale solar farms creating a threshold where farm land being taken out of full production would affect the broader viability of support businesses. Riverina Agri-consultants replied stating it would not be reasonable to extrapolate the findings of one farm to another, and a land use assessment of each farm would be required. No further response was received.

The final AIS report, Appendix A.1, assesses and quantifies the economic impact of the proposed solar development on the agricultural output of the development area relative to:

- Current production systems; and
- Potentially higher value production systems.

The land capability of the site is a consideration in this assessment. Broadscale mapping shows the project site is Class 3. In relation to the extent of Class 3 Land Soil Capability (LSC) land as detailed within the *Land and Soil Capability Assessment Scheme 2012 (OEH 2012)*, the Author disagrees with the classification. This is due to the evidence of waterlogging over winter, making the site less suitable for routine cropping. The more productive land situated on areas mapped as Class 6 LSC, are

frequently cropped, and not considered low capability. Observations made during the site inspection correlated with Google Earth imagery confirm the assessment. The findings were also supported by the independent Soil Capability Study detailed below (Section 1.2).

However, it is noted that the broadscale landscape mapping does not serve as a basis when quantifying the agricultural impact on the site, with the AIS assessment based on actual agricultural production capabilities of the land before and after development.

Existing production analysis

The subject land is currently farmed by two families. 90% of the development site is currently used for grazing, with the remaining 10% routinely used for cropping. Based on data provided from the landowners, the value of agricultural production derived from the existing land use on the proposed solar farm area has been calculated using NSW DPI Gross Margins are:

- Gross livestock revenue of $250,000.00.
- Gross cropping revenue of $50,000.00.

The total value of production (farm gate) from the proposal is therefore estimated to be $300,000.00.

The related economic activity is calculated using an economic multiplier of 2.1788 as used by ABS 2012 is calculated to be approximately $650,000.00. This includes upstream and downstream activities, including contractors, farm input, service providers, distribution and processing.

Alternative land uses

The current agricultural practices of the Jindera area are reflected by the subject land's existing production system as described above. The Jindera district is predominately a mixture of broadacre livestock and winter cropping systems, with livestock most commonly sheep and cattle grazing. 40% of the value of agricultural commodities produced in the Greater Hume LGA was derived from livestock, and 57% from cropping and hay.

Alternative land use option explored in the AIS at the request of DPI include:

- Stewardship payments for undertaking environmental conservation and stewardship practices. This may be feasible on areas not subject to development within the subject land.
- Alterative animal-based options such as intensive livestock (pigs or poultry). This is not technically feasible given proximity to residences and absence of secure water source.
- Other high value small scale developments – such as native flower production or other cottage industry options – is feasible on residual areas of holdings.

When considering alternative land uses for the proposal, the scope of the alternatives is within the parameters of the current broadacre mixed livestock and cropping system. That is, altering the mix of livestock and cropping enterprises within the current system is the only realistic option. The opportunity to substantially increase the productive output of these farms by shifting from livestock to cropping is limited, as:

- Around 50% of land proposed for the solar development is unsuitable for cropping due to waterlogging issues; and
- The current enterprise mix options chosen by the landholders reflect appropriate seasonal risk management in a dryland farming situation.

Agrivoltaics

'Agrivoltaic systems' refers to systems that co-locate solar infrastructure and agricultural activities to maximise the economic productivity of the land. Integrating an agricultural production system into a solar development may include animal grazing between panels or cropping under the elevated arrays.

There has been limited international research in the field of agrivoltaics. The AIS explores two recent trials, which serve to provide background and information about the challenges and opportunities of this production system:

Oregon University Study

This study sought to measure the effects of a 6-acre agrivoltaic solar farm on microbiology, soil and pasture production on the Oregon State University Campus with fixed panels 1.1 m above the ground. The pasture below the panels and control areas were grazed by sheep, with observations made between full sun, partial sun and fully covered.

The study found:

- Soil moisture depleted more rapidly in the no shade areas between panels, than in the episodic and full shade areas. Moisture depletion occurred faster in the no shade areas.
- Starting will a full moisture profile, the soil moisture in the full shade zone was nearly twice than the full sun zone.
- The full shaded areas were three times more water efficient than the control for the grasses present.

The study concluded that solar panels could have a beneficial effect by reducing evapotranspiration in water limited areas, especially semi-arid pastures with wet winters, and that plants with less root density and a high net photosynthetic rate may be best suited.

While day length, seasonal conditions and grass types at Oregon may differ from the Jindera site, certain inferences can be made. In particular, it appears the findings of the study reflect observations made in discussion with Australian farm managers currently operating similar enterprises. The following key observations were made:

- Shading can improve soil moisture and maintain pasture growth for longer periods at certain times of the year, especially summer and autumn; and
- Shade and soil moisture variability needs to be factored into the choice of pasture species mix and paddock rotations.

Fraunhfer Institute Study

The study focused on determining yield effects across a range of crops on a small-scale (194 kW) agrivoltaic demonstration in southern Germany.

Panels were places 5 m above the ground to allow for crop operations beneath. Crops included wheat, potato, celeriac and clover grasses. The crop yield for clover grass under the PV array was less than 5.3% compared to the reference plot, and yields for wheat, potato and celeriac were between 1% and 18%.

Given the different solar configuration, climatic conditions and cropping options, no inference was drawn that would be relevant to the Jindera proposal.

There appear to be no formal trial data to agrivoltaic systems in Australian conditions. However, the lack of viable agricultural production alternatives to sheep grazing co-located with solar farms and practical experience from existing commercial systems provides a sound basis to assess impact (i.e. there is little else to compare it to).

Australian agrivoltaics to date involves incorporating pasture-based sheep grazing systems, in preference to other agricultural activities for the following reasons:

- Australia has an abundance of land that may be suitable for solar development (notwithstanding network capacity constraints), with solar development being undertaken at large scale.
- There are challenges to incorporating other systems:
    - Broadacre cropping is not feasible given lack of suitable machinery to work in the narrow spaces between solar arrays.
    - Other livestock options are limited, as they are more likely to damage infrastructure.
    - Incorporating smaller scale more intensive farming is unlikely due to economic reasons.
    - Horticulture options are feasible but it does not make sense to diminish the productivity capacity of high value horticultural crops by placing panels over them.

Current commercial operations studied for the AIS assessment include the following:

Neoen - Numurkah

Neoen recently commenced operation of a 128 MW solar farm at Numurkah in Victoria. 750 head of sheep, along with the land for the development, was sold to Neoen.

Downer Utilities Australia outlined the following observations about the operations at Numurkah:

- Sheep grazing was a successful means by which to control vegetation around the panels, as an alternative to mechanical options;
- Damage and other negative impacts on the solar infrastructure or operations were not observed;
- Prior to construction, it is important to establish clearly defined roles and responsibilities of those responsible for grazing their sheep within the facility;
- Proper planning in advance of construction to establish a seed bank of an agreed pasture mix is important;
- Sowing a clover species can reduce prevalence of invasive species and avoid high grasses (such as ryegrass) that pose fire risk; and
- Livestock fencing should be incorporated into design plans prior to construction.

Neoen - Dubbo

Neoen commenced commercial operations of a 55 ha solar farm in June 2018, which incorporates sheep grazing among the panels. The landowner observed the following:

- The productive capacity of pastures is around 80% of typical sheep grazing systems;
- Performance may potentially be better during drought due to shade and moisture retention protecting pastures;
- Dew run off from the panels creates irrigated green strips of pasture growth; and
- Merino wethers are best suited because of their temperament, using cell grazing rotation.

The report concludes that the emerging sheep grazing approach to agrivoltaic systems in Australia is the most suitable and successfully practiced. This reflects the intent of the Jindera solar farm landowners.

Alternative production systems such as cropping or other livestock grazing would not be a better solution. Sheep grazing is already intrinsic to current land use on the properties proposed for development, and in the district generally. Therefore, shifting to agrivoltaics would not require major systems upheaval on the part of the landowners, and as they both intend to continue to focus on-farming as their primary source of revenue. This represents a practically feasible option across the life of the development.

In discussions with industry participants with experience of agrivoltaic systems, there was a strong view that co-locating a solar farm with sheep grazing had little or no deleterious effects on agricultural production.

Impact on value of production

The following observations about the proposed agrivoltaic system of the Jindera Solar Farm include:

- The paddock area available for stocking would be reduced by approximately 10%, at the most;
- Shading from the solar panels will likely reduce overall pasture growth in the winter and early spring, however it will assist to support extended pasture growth in summer and autumn;
- The unevenness of soil moisture retention and distribution will not greatly affect available soil moisture overall but will encourage altered patterns of pasture growth;
- A pasture species mix needs to be selected that will be best suited to meeting pasture height parameters, will best respond to periodic shading and will provide cover for avoiding invasive weed infestations and provide feed for stock;
- Planning and implementing ground preparation, timing and the pasture seed mix prior to construction will achieve the best outcome, as undertaking sowing post-construction will limit pasture establishment potential;
- Fertiliser applications will be able to be maintained, albeit using smaller scale equipment, potentially with a similar approach taken in a viticultural or orchard setting. Aerial applications may not be feasible;
- Stocking the area with Merino wethers or weaner ewes is preferable to other breed options due to their temperament and non-wool shedding nature;
- Manual weed control is still likely to be required, including the use of smaller and more labour intensive spray rigs capable of operating between panel arrays;
- Careful planning and design work will be required to ensure paddock size and layout is conducive to both the construction and management of solar infrastructure, and the rotational grazing, watering and mustering requirements of the sheep enterprise;
- The landholders' overall farming operation will need to ensure there is flexibility to vary stocking density within the solar paddocks, so as to avoid loss of ground cover and dust creation during dry periods and to avoid excessive pasture growth when wet; and
- A clear agreement between the solar company and grazier will be required in advance of construction planning being finalised, to ensure pasture sowing, paddock layout, vegetation management and other key issues are understood and implemented prior to construction, after which decisions to alter arrangements become more difficult.

An estimated 25% reduction in productive sheep carrying capacity is assumed based on current information available on agrivoltaic systems, insights from the Oregon Study and interviews with landowners and agronomists. Key assumptions include:

- 10% of the land will be removed from agricultural productivity due to the construction of physical infrastructure;
- A reduction in solar radiation across the site has the potential to limit pasture growth overall;
- The different patterns and timing of pasture growth compared with typical grazing paddocks may have some overall benefit to the farming operation; and
- There are risks that must be managed, including having contingency planning include:
    - The pasture species mix ultimately selected is not well suited to the agrivoltaics environment, or there is sub-optimal sowing practice and/or timing;
    - Fertiliser regimes are not conducted to the same extent as in other paddocks due to inconvenience and cost; and
    - An optimal rotational grazing layout cannot be negotiated and implemented, hindering efficient mustering, pasture management and stock watering.

Post development reduction in productivity based on a 25% reduction and a 50% production using an economic multiplier of 2.1788 of the farm gate is detailed below:

Reduction (%)	Gross Revenue (p.a.)		Post Development Impact	
	Pre-development	Post-development	Farm Gate	Related Economic Activity
25%	$300,000	$200,000	$100,000	$215,000
50%	$300,000	$135,000	$210,000	$360,000

Related economic activity from the existing landowners' enterprises includes upstream activities such as contractors, farm input and service providers. The key downstream activities include processing and distribution. Impacts of the proposed solar farm will include less reliance on contractors, input and service providers and less produce to be transported to off take locations. There are limited (if any) processing facilities within the Greater Hume LGA. Some but not all of the related economic activity impacts will be felt within the Greater Hume LGA, rather more likely across the broader region.

The above does not consider rental income derived from the proposed solar farm rent. Based on the range of solar farm rental income, the combined post development rental of between $337,000 and $674,000 per annum and grazing income will exceed the existing gross revenue derived from the subject land.

Socio-economic impacts

The two farming families that own and manage the proposed development site each employ two full time equivalent (FTE) employees, plus some casuals at peak times.

On one farm, the employees are multigenerational family members, and their arrangements are not expected to change. The other farm has one non-family employee, whose employment is not affected by the proposal. No direct loss of farm-based employment is expected.

As reported within the AIS, two to three FTE positions will be created from the proposal's ongoing management, six contractors over the life of the project on an as-needs basis, and up to 200 employees during the construction phase.

There are a range of upstream and downstream employment roles associated with agricultural production, which include agronomy services, input providers, machinery sales and mechanical support, grain and livestock transport, production marketing, shearing, fencing, harvesting and other contractors.

As indicated above, the likely reduced carrying capacity post-development is estimated to be 25% with a reduced annual gross revenue of approximately $100,000 per annum. Assuming a 2 year period of total disruption to agricultural outputs for preparation and construction, the first two years of the proposal will generate reduced agricultural revenue of $600,000. Over the 30 year life, the farm gate revenue could be reduced by $3,400,000. Applying an economic multiplier of 2.1788, the related economic activity reduction is $7,407,920

The post-development sheep enterprises will generate upstream and downstream benefits as is the case for the existing enterprise, albeit with a reduced level of productivity. All current and potential cropping activities will cease post-development. This is typical across the broader farming region, with cropping land being converted to livestock production and vice vera with seasons, market and other forces dictating ongoing transitions.

The landowners will also be receiving rental payments, and would typically, for solar farms, range from $1,000/ha to $2,000/ha. Although the rent will not attract the same agricultural service industry expenditure, a significant portion could be expected to be re-invested in supporting the productive capacity of the business' remaining enterprises.

In addition, transition from regular production to solar farming would see other industries benefit. For example, fencing contractors will see an increase, while agronomist services and spray and seeding contractors may only experience marginal downturn, if at all.

1.2. SOIL CAPABILITY MAPPING

Several submissions were received from members of the public regarding the use of quality agricultural land for the Proposal. DPI also note the following:

- *DPI requested this proposal be amended to avoid as much as possible the land classified as highly capable agricultural land (Class 3), as per the map provided.*

The LSC mapping shown in the EIS was based on the broadscale mapping developed by the Office of Environment and Heritage under the *Land and Soil Capability Assessment Scheme 2012*. This is informed by limited ground truthing, none of which occurred onsite.

DM McMahon Pty Ltd (McMahon), a certified soil expert agency, was commissioned to undertake an assessment and inspection of the area mapped as Class 3 under the LSC Assessment Scheme (2012) within the Jindera Development Site specifically, in response to the public concern and DPI requirements (Appendix A.2). According to the assessment, the Class 3 LSC mapping within the Development Site is based on Kindra SLAM Land Condition Summary for Murray at a 1:250,000 scale, with a very low confidence.

McMahon conducted a detailed soil survey across the Development Site (detailed in Section 7.1 of the EIS) in 2018, with 15 cores investigated to 1.5 m depth. The purpose of the detailed soil survey was to analyse the topsoil and subsoil pH, electrical conductivity (EC), dispersion, nutrients and cations. The soil survey provides an analysis and evaluation of landforms and soil types as identified on the subject land.

As part of the updated assessment provided with this Amendment Report, McMahon completed Decision Tables detailed in Section 5 of the LSC Assessment Scheme (2012 using data collected from the 2018 soil survey and additional site visit conducted in 2020. Based on the Decision Tables for individual hazards, the following was determined by the assessment:

a) Soil structural decline with a fragile silty topsoil as found in the A and bleached A2 horizons with a weak consistence and vulnerability to slaking. It is well established that bleached A2 horizons are an indication of periodic waterlogging.
b) Soil acidification with the red/yellow earths across the subject site with a soil pH below 6.5.
c) Water logging with the massively structured and mottled clayey subsoil with a very low Ksat and mottling. It is well established that mottling is indication of poor profile drainage in depositional environments.

The Hydrogeological Landscapes for the Eastern Murray Catchment report by Muller *et al* (2015) detailed within the Soil Capability Study also assessed the Walla Walla Hydrogeological Landscape which the Development Site is situated as Class 4 LSC. The findings of McMahon corelate with the key land degradation issues detailed within the report. Observations made within the AIS also correlate with the findings.

Based on the Decision Tables and associated hazards, previous studies and the findings of the McMahon soil survey, it was determined that the land classed as Class 3 LSC for the Jindera site better meets the Class 4 LSC classification.

As detailed in Section 2.5 of the EIS (Table 2-1), the NSW Large-scale Solar Energy Guidelines for State Significant Development (DPE 2018) detail the following site constraint:

*"**Agriculture -** Important agricultural lands, including Biophysical Strategic Agricultural Land (BSAL), irrigated cropping land, and land and soil capability classes 1, 2 and 3. Consideration should also be given to any significant fragmentation or displacement of existing agricultural industries and any cumulative impacts of multiple developments."*

- The assessment of site constraints concluded that the proposal was not located on Strategic Agricultural Land, including industry clusters and biophysical strategic agricultural land. The proposal was however identified at that time to be located on Land and Soil Capability Class 3 land., temporary loss of agricultural land.

As such, any solar infrastructure remaining on Class 3 Agricultural Land would have little to no impact for the reasons detailed above.

1.3. SUMMARY OF AGRICULTURAL FINDINGS

1.3.1. Existing practices on the subject site

The development site for the proposal is currently farmed by two families who have owned and operated land in the area since the late 1800s. Farming practices and land use over the years have changed due to climatic conditions and economic drivers. A shift from grain harvesting to grazing both sheep and cattle has occurred, primarily due to the waterlogged nature of the soils present in much of the development site but also reflecting changing climate and economic factors.

Both farming families want to maintain their farming traditions but also diversify their income streams to protect themselves and their next generations from the cyclical nature of agricultural income and against the uncertainties of climatic change. Farming will remain the primary activity of both family life and family business.

The proposed agrivoltaic approach of combining solar farming with sheep grazing fits this business model well. It provides a diversified income, from rent for the solar farm with ongoing agriculture within the solar farm footprint by grazing of sheep. This means that there is little loss of agricultural activity as a result of the solar farm and the existing local economy is not impacted. Indeed, the diversified part of the income means that there is a non-cyclical income which will benefit the local economy during down turns in farming income. No jobs will be lost, with additional land belonging to both families still suitable for mixed farming.

From the perspective of the landowners this is their way to continue to contribute to the local community while securing a sustainable future for themselves and their families.

It is also noted that in July 2019 NSW Farmers, at their annual conference passed a motion not to oppose large-scale solar development on classes 1, 2 and 3 of agricultural land in NSW. NSW Farmers have advised that: *'There was strong endorsement of property rights and individuals right to do with their land as they wish.'.*

he NSW Large-scale Solar Energy Guideline for State Significant Development (DPE 2018) detailes the requirement to consider development in Class 3 agricultural land. As presented in Section 2.5 of the EIS (Table 2-1), the assessment of site constraints concluded that the proposal was not located on Strategic Agricultural Land, including industry clusters and biophysical strategic agricultural land. The proposal was however identified at the time to be located on Land and Soil Capability Class 3[1] land. However:

[1] This observation was made prior to the update soil capability mapping.

- The proposal is not expected to adversely affect the biophysical nature of the land.
- The proposal would positively affect soils by providing many of the benefits of long-term fallow, including increasing soil moisture, building soil carbon levels, allowing structural recovery and improving soil biota.
- The proposal will not result in the permanent removal of agricultural land.
- The proposal would not result in rural fragmentation given it will not alter the existing or surrounding environment.
- Adjacent farming operations are compatible.
- Strategic sheep grazing may be used within the development site. Grazing would be used to reduce vegetation biomass and put grazing pressure on weeds adjacent to the solar panels.
- Continued agricultural activity will complement the solar farm and result in only a small temporary loss of agricultural land.

As such, any solar infrastructure remaining on Class 3 Agricultural Land post assessment would have little to no impact on agricultural production for the reasons detailed above.

1.3.2. Response to Submissions

A number of submissions were received from the public in relation to the use of agricultural land, as well as government agencies such as Council and DPI.

DPI requested that JSF complete an Agricultural Impact Assessment (AIS) which would specifically consider agrivoltaics during the operation of the farm, as well as other means of multifunctional use of the land for agricultural purposes over the life of the development. DPI also requested that as much of the land classified as Class 3 under the Land and Soil Capability (LSC) Assessment Scheme be avoided.

As a result, JSF commissioned the AIS (detailed above in Section 1.1) and a soil scientist to quantify the impacts to agricultural land (detailed above in Section 1.2).

The AIS (See Appendix A.1) was prepared by two Principal Consultants (One from Riverina Agriconsultants, and one from Progressive Agriculture), following a site inspection of the subject land. Its scope was determined in consultation with DPI, to best address their information requirements. The AIS report assesses and quantifies the economic impact of the proposed solar development on the agricultural output of the development area relative to:

- Current production systems; and
- Potentially higher value production systems.

The soil scientist, DM McMahon, completed a Soil Capability Mapping exercise, to ground validate the broadscale mapping of the LSC Assessment Scheme against soil samples and site observations (See Appendix A.2).

Key findings of these two specialist reports summarised above are as follows:

- Land capability
    - The AIS states that it is likely that the land shown as Class 3 LSC is of less quality than that proposed within the EIS and the LSC Assessment Scheme. This is due to periodic waterlogging, making the site less suitable for routine cropping, poor drainage and poor soil structure.
    - The Soil Capability Mapping confirms the above assessment. Findings of the assessment show that the areas previously mapped as Class 3 are more than likely of a lower quality, and agricultural practices and soil quality places this land as Class 4.
    - The AIS states broadscale landscape mapping does not serve as a basis when quantifying the agricultural impact on the site. A better suited system is detailed within

the AIS, using actual agricultural production capabilities before and after development.

- Exploration of alternative land uses and their impacts:
    - Current land use in the development site is 90% grazing and 10% cropping for commercial sale (not fodder for own stock). As requested by DPI, the AIS explores a number of alternative potential faming enterprises on the site. It was determined that the only feasible option was altering the mix of livestock and cropping, with any opportunity to increase productive outputs being limited. This is due to waterlogging and current practices reflecting the most appropriate seasonal risk management in a dryland farming situation.
    - Studied examples in Oregon and commercial operations in Australia suggest that the emerging sheep grazing approach to agrivoltaics is the most likely suitable approach for large parts of Australia where there is potential for solar farming and agriculture to exist. Alternative options for agrivoltaics, such as cattle and goat farming and intensive horticulture are not feasible due to a range of constraints.
    - There is a strong view that co-locating a solar farm with sheep grazing has little or no negative effects on agricultural production. Sheep grazing has proven to be a successful means to control vegetation among panels and is already intrinsic to current land use on the proposed properties (i.e. 90% grazed, 10% cropped).
    - Agronomist services, spray and seeding contractors may only experience marginal downturn, if at all, but other industries not normally associated with agriculture will benefit, such as fencing contractors.
- Onsite implications:
    - It is the current intent of the landowners to continue their sheep grazing practices, co-locating their stock with the solar farm. A shift to this agrivoltaic system would not require major system upheaval.
    - From a production perspective, the land available for stocking would be reduced by 10%. This 10% is made up of vegetative screening (5% or 17 ha), areas outside of the security fencing (1% or 3 ha), internal roads, hardstands, substation and buildings (4% or 13 ha). The area outside the landscaping area adjacent to Glenellen Road has conservatively been assumed as lost for grazing and thus included as part of the 10% of land lost to agriculture, but in practice it is anticipated it will be grazed or cropped for fodder.
    - Studies have shown that that the shading created by the tracking solar panels can improve soil moisture retention and maintain pasture growth for longer periods at different times of the year.
- Economic implications:
    - It has conservatively been assumed that a 25% reduction in agricultural activity / production will occur across the solar farm site land. This reduction in production results from land lost to agricultural production, land switched from crop production to sheep grazing and a general lowering of stock levels across the areas that are to be retained for sheep grazing.
    - The rental income from hosting the solar farm rent earned from the proposal will compensate and exceed the gross revenue lost to land holders as a result of reduced output from the land. Current direct employment from the proposal is not expected to be affected, with an additional three to five full time equivalent jobs created through the operational life of the proposal and up to 200 construction jobs.
    - Overall, the AIS indicates that the economic effect of the proposed solar farm is to reduce the farm gate output of the solar farm site by some $100,000 per year. This has a potential upstream and downstream effect of reducing post gate outputs by some $215,000 per year.

- Much of the post gate value measured is received outside the Greater Hume Shire Council Area. However, to give some context, the solar farm site area will continue to deliver $640,000 farm gate output from the co-location of solar farm and sheep grazing. To add further context, Greater Hume Shire produces an estimated annual output of about $371,000,000 (Greater Hume Shire Economic Profile) from agriculture, forestry and fishing, so the lost value of production from the solar farm site equates to about 0.085% of Shire wide output.

As such, the proposal is considered justifiable in its use of agricultural land and proposed continuation of specific agricultural activities by the host landowners during the project's operational phase.

1.4. ABORIGINAL CULTURAL HERITAGE ADDENDUM REPORT

The BCD noted in their submission that:

- *The Aboriginal Cultural Heritage assessment for works within the Jindera substation lot has not been completed. The results of the assessment including the proposed management of any ACH identified in accordance with the SEARs is to be provided to the BCD for comment.*

NGH completed an Addendum ACHA (Appendix A.3) report in January 2020. The addendum report documents the ACHA undertaken for the additional 22 hectares (ha) for the substation (Lot 1 DP588720) and two access point into the solar farm, to investigate the presence of any Aboriginal sites, assess impacts to cultural heritage values, and provide management strategies to mitigate any potential impacts within the Additional Area. This addendum report is intended to be read in conjunction with the original Jindera Solar Farm ACHA (NGH Environmental 2019) as the background analysis, predictive modelling and general discussion detailed therein continues to be relevant to the analysis undertaken.

Additional consultation with Aboriginal stakeholders was undertaken in accordance with clause 60 *of the National Parks and Wildlife Regulation 2019* following the consultation steps outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponent 2010 guide.

Survey transects were undertaken on foot which traversed the entire substation and two intersections. The substation lot contained low to moderate (10-60%) ground surface visibility, while the two road access points contained nil to low (0-10%) visibility. While the survey was impeded by poor visibility across the majority of the Additional Area a number of exposures were present that were inspected.

No additional Aboriginal cultural heritage sites or areas of archaeological sensitivity were identified across the Additional Area.

As no items of Aboriginal heritage were identified during the visual inspection and no undisturbed landforms of archaeological sensitivity were located, it is concluded that the proposed works within the Additional Area for the Jindera Solar Farm will not impact upon heritage items. The assessment of harm and impact to Aboriginal heritage values for the Additional Area is nil. Consequently, there are no changes to mitigation methods proposed for the Additional Area beyond those noted in the original ACHA.

1.5. UPDATED BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT (BDAR)

The BCD noted in their submission that:

- *The assessment for Section 6 of the BAM under-represents habitat suitability and the offset requirement. Specifically:*
    - *The disregarding of Zone 10 needs to be justified as either category 1 (exempt) regulated land, or that the finding of non-native vegetation and poor habitat suitability is based on a sampling effort greater than one plot, and that the scattered paddock trees associated with Zone 10 have been considered as part of a general assessment of prescribed impacts (connectivity and movement across the development site).*
    - *If the survey timing requirements for predicted threatened species in the BAM Credit Calculator do not coincide with the field survey period, the assessor must either provide an expert report or assume the species is present.*
    - *Not all zones in the development area, including PCT 360, have been entered into the BAM calculator. This under-represents the habitat suitability and credit obligations of habitat loss in subsequent parts of the BAM.*

  - *Section 6 of the BAM must take into account all zones and PCTs on the development site. The threatened species listings and wider assessment in the EIS should reflect the output of the updated Section 6.*
  - *Revise the BAM calculator and BDAR to ensure that the assessment of biodiversity impacts and offset obligation includes all zones on the development site, as per Section 6 of the BAM.*
- *Impact assessments do not provide sufficient evidence to support the findings related to the prescribed impacts, risk of SAII on the candidate TEC or EPBC matters:*
  - *The EIS and appendices describe construction and operation actions that either potentially impact or mitigate impacts to native vegetation or habitat. These have not adequately informed the assessment undertaken in the BDAR.*
  - *The BDAR assessment of direct and indirect impacts, prescribed impacts, Matters of National Environmental Significance and the risk of serious and irreversible impacts on the candidate threatened ecological community (Box-Gum Woodland) is generally not informed by the EIS*
- *Revise the BDAR to consider all the potential direct and indirect impacts of site management actions detailed in the EIS, including the range of assessments (SAII, direct and indirect impacts, prescribed impacts, and EPBC Matters).*
- *Because the BDAR does not fully address the Matters of National Environmental Significance, we recommend that the applicant refer the proposal to the Australian Government Department of Environment for its consideration*.

NGH completed an updated BDAR (Appendix A.4) report in February 2020. The updated report documents the assessment undertaken for the additional 22 hectares (ha) for the substation (Lot 1 DP588720) and two access point into the solar farm, as well as additional plots and survey to meet the requirements of the BCD as detailed above.

The findings of the additional survey within the TransGrid substation and intersection can be summarised as follows:

- The vegetation around the TransGrid substation is Box Gum Woodland and derived grassland. The Box Gum Woodland does not meet the EPBC Act criteria for Box Gum Woodland but has been assessed appropriately under the BAM and the credit requirements updated in the BAM credit calculator.
- The BDAR has been updated to include the vegetation impacts for both intersections. Walla Walla Jindera Road has exotic vegetation on the eastern road reserve and PCT 277 Box Gum Woodland on the western road reserve. Urana Road is PCT 277 Box Gum Woodland. Any areas that will be impacted have been incorporated into the BAM credit calculator and the credit included in the Credit Summary in the BDAR.

As part of the updated BDAR, NGH completed a Land Category Assessment which has been included as an Appendix of the updated BDAR. Based on aerial photographs and supplementary plot data, it was determined that Zone 10 (approximately 338 hectares of the development site) has been used for agricultural production since 1990. As such, it was determined that Zone 10 is Category 1 (exempt) Regulated Land. Scattered trees were appropriately assessed, and offsets calculated as per the BAM method.

The additional survey areas for the TransGrid substation and intersection upgrades as detailed above and the areas with zero impact (including PCT 360) were included in the BAM Credit Calculator as part of the updated BDAR. Subsequent recalculation provided the following additional species:

- Sloane's Froglet.
- Southern Bell Frog.
- Floating Swamp Wallaby Grass.
- Claypan Daisy.

Floating Swamp Wallaby Grass and Claypan Daisy were surveyed in January 2020 (within the appropriate survey period), and no plants were found. Sloane's Froglet was surveyed in 2018 during the appropriate survey period, and not found. Southern Bell Frog could not be surveyed for as it was outside of the survey period. As such, it was assumed present. However, as no wetland areas were impacted the Calculator did not generate any credits.

As per the BAM methodology and precautionary principle, any species that could not be surveyed for within the correct survey period, or otherwise ruled out by lack of habitat, were assumed present in the BAM Credit Calculator.

An updated credit and impact summary is provided within Sections 7 to 11 of the updated BDAR. The changes resulting to the credit requirements are as follows:

Table 1-1 Credit summary from the BDAR

Ecosystem credits	Previous offset requirements	Updated offset requirements
PCT 277	201	255
PCT 277 paddock trees	26	26
PCT 9	26	33
TOTAL	**253**	**314**
Species credits	**Previous offset requirements**	**Updated offset requirements**
Squirrel glider	105	125
Southern Bell Frog	0	0
Eastern Pygmy Possum	63	59
Small Scurf Pea	93	96
Silky Swainson-pea	53	49
Small Purple-pea	53	49
Southern Myotis	7	0
TOTAL	**374**	**378**

Extra survey and assessment undertaken in January are documented within the updated BDAR, Appendix A.4. Details of this report are also reflected in the updated BDAR. It was found that the vegetation community surrounding the substation meets the scientific determination criteria for White Box – Yellow Box – Blakely's Red Gum Grassy Woodland under the *NSW Biodiversity Conservation Act* (BC Act), however it does not qualify as the EPBC Box Gum Woodland.

No referral is considered warranted to the Department of Environment and Energy.

1.6. UPDATED NOISE ASSESSMENT

The EIS predicted minor exceedances for a number of nearby receivers under specific conditions; operational noise levels during Operational Scenario 1 (as detailed within Section 6.6 of the EIS) is detailed within Table 6-2 below. It shows 4 sensitive receivers located within 200 m of the solar farm development site could experience a minor noise exceedance of up to 6 dB (A) above the evening Noise Management Level (NML) during late summer evenings, when daylight savings time is in effect (6 pm to sunset) during normal operations (no maintenance).

To minimise amenity impacts of the proposal for the local community, infrastructure and development changes as detailed below in Section 2 are now committed to in order to achieve zero noise

exceedances for all residences under normal operation. A summary of the proposed changes includes:

- Larger buffer distance from operation infrastructure such as PV panels to receivers on Glenellen Road.
- Strategic placement of trackers and technology selection.
- Relocation of inverter/ transformer stations, and revision of component selection.
- Relocation and orientation of internal substation.

NGH conducted an Updated Noise Assessment (detailed as Section 1.6 of this report) to determine the NML during Operational Scenario 1 (normal operations) post proposed changes detailed above. This scenario is deemed to have the highest noise impact, that is all of the plant listed in table 1-2 below would be operating simultaneously (which is considered highly unlikely). The activities provide a worst-case scenario for noise generated from the site.

The operational noise predictions are based on noise attenuation with distance from source. They do not take into account any obstacles between the source or weather conditions which can influence the level of noise perceived.

During operations, the internal substation and inverter/ transformer stations would generate continuous noise. The tracking motors rotating the panels would generate intermittent noise during the day, operating every 15 minutes for about 0.5 minutes. As detailed above, the below scenario (Table 1-1) considers the continuous operation of the internal substation, inverter stations and tracking motors, and predicts the typical noise levels that may be experienced during the operation of the solar farm infrastructure only (no maintenance activities occurring).

The internal substation would contain 1 or 2 transformers to transform 33 kV from the solar farm to 132 kV for transmission to the external substation. Australian Standard AS 60076 Part 10 2009 “Power Transformers – Determination of Sound Power Levels” specifies applicable sound power limits for all transformers based on the transformer rating (in MVA). Whilst the MVA rating of the internal substation is not yet available, a conservative assumption is provided below based on two 150 MVA facilities. The specification for the 150 MVA transformers indicates that the sound power output from 2 transformers would be about 97dB (A).

Note, the upgrade on the existing TransGrid substation does not involve the addition of any infrastructure that would increase the existing noise level of the substation. No further assessment of this component of the proposal has therefore been conducted.

During operation, there would be 32 inverter stations distributed across the development site (refer to Figure 2-1 of this report). Any one receiver may be impacted by one or up to three inverter stations, depending on their location. Accordingly, a varying number of inverter stations has been used in the noise model below. The modelling scenario takes this into account.

Table 1-2 Operational equipment for Scenario 1.

Equipment	Quantity	Sound power level (dB (A)) per item
Internal substation - transformers	2	97
Tracking motor	10	85
Inverter station	1-3	84

NML is calculated based on the minimum applicable Rural Background Level (RBL) and NSW Interim Construction Noise Guideline (ICNG) and is detailed in Table 1-3. Any noise equal to or less than the NML is not perceivable or “not noticeable”.

Table 1-3 Noise Management Levels

Location	Time of day	RBL dB (A) L_{A90}	NML dB (A) $L_{A90\ (15min)}$
All Residences	Day	35	45 (RBL + 10dB (A))
	Evening	30	35 (RBL + 5dB (A))
	Night	30	35 (RBL + 5dB (A))

After the proposed changes (as detailed above), no sensitive receivers are predicted to experience any noise exceedance above the intrusive NML for Scenario 1 (normal operations – no maintenance works), at all times of the day. Refer to Table 1-3 4 below for predicted noise levels for receivers ***prior*** to any amendments to infrastructure and development, and Table 1-5 for predicted noise levels for receivers ***post*** amendments to infrastructure and development.

Predicted noise levels overall are expected to be reduced, which will result in a net benefit for local amenity values.

Table 1-4 Predicted noise levels for receivers during scenario 1 before amendments to layout (as shown in Section 6.6 of the EIS)

Receiver	Distance (m) from nearest tracking motors	Distance (m) from inverter station(s)	Distance (m) from internal substations	Predicted Noise Level dB(A) Green = No exceedance Yellow = Minor exceedance Orange = Substantial exceedance Red = highly noise affected	Description Clearly audible = < 10 dB (A) above NML Moderately intrusive = >10 dB (A) above NML Highly intrusive = > 75 dB (A)
R21 (uninvolved)	121	446	1489	41	Clearly Audible
R10 (unoccupied)	220	598	219	39	Clearly Audible
R20 (uninvolved)	156	484	1261	38	Clearly Audible
R17 (uninvolved)	179	542	888	36	Clearly Audible
R18 (uninvolved)	190	515	1002	35	Not Noticeable
R16 (uninvolved)	232	516	824	33	Not Noticeable
R9 (uninvolved)	423	725	339	33	Not Noticeable
R19 (unoccupied)	244	569	1065	32	Not Noticeable
R15 (uninvolved)	273	615	867	31	Not Noticeable
R11 (unoccupied)	274	669	778	31	Not Noticeable

Table 1-5 Predicted noise levels for receivers during scenario 1 after amendments to layout

Receiver	Distance (m) from nearest tracking motors	Distance (m) from inverter station(s)	Distance (m) from internal substations	Predicted Noise Level dB(A) Green = No exceedance Yellow = Minor exceedance Orange = Substantial exceedance Red = highly noise affected	Description Clearly audible = < 10 dB (A) above NML Moderately intrusive = >10 dB (A) above NML Highly intrusive = > 75 dB (A)
R21 (uninvolved)	195	446	1391	35	Not Noticeable
R10 (unoccupied)	240	598	345	35	Not Noticeable
R20 (uninvolved)	196	484	1166	35	Not Noticeable
R17 (uninvolved)	217	542	817	34	Not Noticeable
R18 (uninvolved)	229	515	920	33	Not Noticeable
R16 (uninvolved)	262	516	766	31	Not Noticeable
R9 (uninvolved)	453	725	346	33	Not Noticeable
R19 (unoccupied)	283	569	983	30	Not Noticeable
R15 (uninvolved)	303	615	854	29	Not Noticeable
R11 (unoccupied)	289	669	804	30	Not Noticeable

1.7. LOCAL ECONOMY AND COMMUNITY BENEFITS ASSESSMENT

Broad and local benefits of the project are described in Section 2.3 of the RTS, and Section 2.2 of the EIS.

Local economic and community benefits have been further reviewed and improved post-exhibition of the EIS following consideration of specific submissions received from the public and from the Greater Hume Shire Council.

Additional local and community benefits would now result, in comparison to the benefits documented in the EIS and these are detailed below.

Local Economic and Community Benefit

JSF is committed to being a good neighbour and will explore and implement initiatives to ensure its presence results in the maximum benefit to the local community.

The proposed solar farm can create benefit to the local community in several ways including the procurement of materials and services from local suppliers, direct local employment, rates, and planning contributions to the council and community funding.

The Jindera solar farm will continue to deliver rate revenue to the council.

Voluntary Planning Agreement and Community Fund

Since the exhibition of the EIS, JSF has achieved an in principle agreement with Greater Hume Shire Council on a Voluntary Planning Agreement (VPA) that will deliver a package of capital payments to the council and will create a Community Fund that will provide a long-term funding source for community related projects and organisations.

It has been proposed to pay $450,000 to Council on completion of construction and a further $500,000 in staged payments of the next 6 years to give a total capital sum of $950,000. About half of the capital is paid to the council on completion of the solar farm, delivering early benefits to the Council.

JSF is not being prescriptive in how the capital sum is to be spent, it will be left to Council to use the money as it requires.

In addition to the capital payments, JSF has also proposed a Community Fund. The fund will run for a period of 30 years coincident with operation of the solar farm.

The fund will provide a pool of $25,000 (index linked) each year. Any community organisation can apply to the fund.

The Community Fund will be administered by the Council, which will work with JSF to prepare the constitution and operating methodology of the Community Fund. Key terms are as follows:

- Annual Payment to fund by Proponent $25,000 (index linked).
- Maximum single annual award to a single fund applicant, $10,000 (index linked).
- Awards made subject to successful application by applicant.
- Application process to be run once per year with clear closing date for applications to be received.
- Applicants must be made by eligible parties that are located in and represent members of the community of Greater Hume Shire.
- Preference will be given to applications received from eligible applicants located within 5 km of the Project thus ensuring as much of the funding as possible is concentrated into the Jindera and Glenellen areas.
- Application vetted and administered by Fund Board.

In total the Community Fund will deliver $750,000 for the Greater Hume Shire communities and organisations. This is money that would not come from other sources and would not arise if the solar farm is not built.

At the time of preparation of this report, the Council are drafting the formal VPA, incorporating the Community Fund, for approval and signing by JSF and the Council. The VPA will only come into force if the project receives a planning permit. An additional mitigation measure **SE5** is provided in Section 5 to commit to the delivery of the Voluntary Planning Agreement and Community Fund.

The recent Ordinary Council Meeting held on 19 February 2020 recommended approval of the VPA Heads of Terms. The VPA is now being prepared for finalisation post-approval.

Procurement of materials and services from local suppliers

JSF are motivated to maximise the benefits to local suppliers and service providers. There are a number of services and materials supplies that can be purchased locally, producing local economic benefits. JSF have reviewed and developed policy that will seek to optimise opportunities for Jindera township and then the wider Greater Hume Shire Council Area. The local sourcing opportunities can be divided into two main phases:

- Plant Construction.
- Plant Operation.

The value of construction works will exceed $160 million. There will be many opportunities to focus elements of this spend into specific businesses in the Greater Hume LGA, more specifically the Jindera area and into the community more generally.

The expenditure associated with the operational phase will account for around $40 million over the 30-year duration of the solar farm. As is set out below, a high proportion of the expenditure, the goods, services and employment it represents can be sourced from the Greater Hume LGA.

Plant Construction Phase

Construction staff will be sourced locally where such skills are available. For example, there will be a high demand for qualified electricians and thus opportunities for locally available skilled electricians. This is an example of direct sourcing of labour. Other opportunities exist in such areas as:

- Semi-skilled labour.
- Electricians.
- Steel erectors.
- Machine drivers.
- Surveying / engineering.
- Catering.
- Cleaning.
- Admin and Business services.

In addition, construction activity will produce opportunity for supply of goods / materials and services. Examples of such opportunities that we expect can be sourced within a local context include:

- Earthworks / on site road construction.
- Seed stock for groundcover and pasture maintenance.
- Screening planting supply and installation and maintenance / watering etc.
- Fence building.
- Civil engineering e.g. construction of concrete bases, excavation of cable trenches, drainage etc.
- Machine / Plant hire.
- Catering.
- Office supplies.

For many of these services there is a positive preference to purchase locally as the local knowledge of such suppliers is a value add to the construction effort. Sourcing from these businesses will also produce local employment benefit and security.

During construction some further off-site ancillary supplies are needed and again can be sourced locally:

- Vehicle servicing / repair.
- Accommodation for construction staff.
- Catering.
- Food.
- Medical.

There are some opportunities to house construction staff in the local area, although these are limited. Jindera has a small number of rooms for accommodation, but it is noted that Holbrook offers substantially more rooms for accommodation. Some senior construction staff may source locally available rental properties for accommodation which then results in knock-on economic effects from their domestic shopping etc.

Finally, the construction phase also gives rise to opportunities for straight supply of materials, for example:

- Road construction stone.
- Fence posts and fencing materials.

As is shown in the EIS, Section 2.2.4, it is anticipated that approximately 200 FTE will exist due to the construction activity. These are known as direct jobs. We can apply industry standard multipliers to the direct jobs to reflect indirect jobs that are generated in ancillary suppliers and more generally across the economy.

The relevant multiplier for the construction industry is 1.6 (ABS, Type B multipliers). Using this multiplier indicates that the solar farm construction could create a further 320 FTE's in the supply chain and wider economy.

Indirect jobs for construction projects include jobs created in the local economy but also in the wider area. Such jobs can include occupations in industries such as trade supplies, accommodation, fuel supply, catering, transportation, food and drink and medical / pharmacy etc.

A review of ABS Business Count data for the last available year, 2018 indicates that Greater Hume Shire has 145 construction related companies, 78 transport (transport, postal and warehousing) and 704 agriculture (agriculture, forestry and fishing). These companies, along with companies in other sectors form a potentially significant supply chain for the project.

Plant Operation Phase

The plant operation phase brings two distinct areas of opportunity:

- Direct employment.
- Supply of materials and services.

There will be 3 – 5 full time employees needed to undertake maintenance operations, largely focussed on the mechanical and electrical aspects of the solar farm. It is intended that these staff will be recruited from the local area. Given the location of the work, the hours of operation and the skills required it is desirable to employ staff who live within the local area. Thus 3 to 5 full time jobs can be created locally with the resultant spend. As well as being skilled jobs, they are long-term with operational staff required for the full 30-year operational term.

The EIS (Section 2.2) and the AIS mentioned 2 – 3 full time employees in operation of the proposed plant. However, after reviewing it is possible to use internal staff to undertake more of the maintenance activities and thus the opportunity to create more direct employment.

The full-time staff will be supplemented by a number of specialist suppliers and materials suppliers including:

- Civil engineering for road maintenance.
- Fencing.
- Fertilizer spreading.
- Grass / fodder seeding.
- Solar panel cleaning.
- Vegetation weed control.
- Management of screen planting.

- Additional electrician support.
- Mechanical plant support and part fabrication.
- Office supplies.
- Catering.
- Cleaning.

As with the construction phase a number of these services are best procured locally so as to tap into knowledge of local conditions.

As with the construction phase we can also estimate the indirect job effect on the wider economy. The FTE working at the solar farm will be skilled and it is therefore appropriate to apply the multiplier for the electricity industry, 2.9 (ABS, Type B multiplier). Indirect effect is around 8 – 15 FTE.

It should be noted that the jobs created for the operational phase are both long-term and skilled occupations. The jobs help to maintain stability in the community given that it is expected the workers and their families will live in the community and the majority of their domestic budget will be spent locally.

JSF is also looking to introduce an apprenticeship scheme that will run during the currency of the operational phase. The scheme would create apprentices in either electrical or mechanical trades creating further employment opportunities for the apprentices involved and indirect community benefit.

Key to procuring construction and operation services and materials locally will be to understand what services are available in the Greater Hume LGA, who suppliers are and also to work with these suppliers to help them to develop their existing service offering to meet the needs of a solar farm (if they want to).

Prior to commencement of construction and prior to the operational phase we will run a number of engagement activities to seek out suppliers and to open dialogue about our long-term needs and opportunities for new business and services.

Engagement activities will include:

- Dialogue with Council's business development staff.
- Engagement with local trade bodies and other associations representing local commerce.
- Hosting a number of "meet the buyer" events which create opportunities for prospective suppliers to facilitate business development meetings. Such events will be advertised in advance on the project website, local media and possibly with assistance from the Council.

JSF currently has and will keep up to date a database of potential contacts and contractors who have expressed interest in working with them.

If the other solar farms that are proposed for the Greater Hume LGA also commence operation there is an opportunity for local commerce to develop services that are required by all the operations thus delivering major growth potential for some suppliers e.g. solar panel cleaning. Building this knowledge base, experience and depth of services may allow such companies to export their skills outside the Greater Hume Shire thus creating regional growth. This will be detailed within the Local Sourcing Plan, as committed in Safeguard and Mitigation Measure **SE2** below.

2. INFRASTRUCTURE AND DEVELOPMENT CHANGES

Key changes to the proposal as a result of community and agency consultation include:

- Agreement of Voluntary Planning Agreement and Community Fund.
- Increase in separation buffer and vegetation screening on Glenellen Road.
- Additional vegetation screening site wide.
- Refined PV layout and inverter positioning.
    - Greater setback for PV Panels from neighbouring boundaries.

  - Refinement of inverters solution.
  - Quieter inverters.
  - Strategic placement of trackers.
  - Commitment to 30 m setback for panels to neighbouring property boundary.
- Commitment to remove cables and all underground infrastructure at decommissioning.
- Clarification of proposed works on Ortlipp Road.
- Additional investigation works within the TransGrid substation and proposed site access points.
- Further commitments to minimise impact on Squirrel Gliders.

Key changes are further described below and detailed within the Amendment Report and detailed within Figure 2-1.

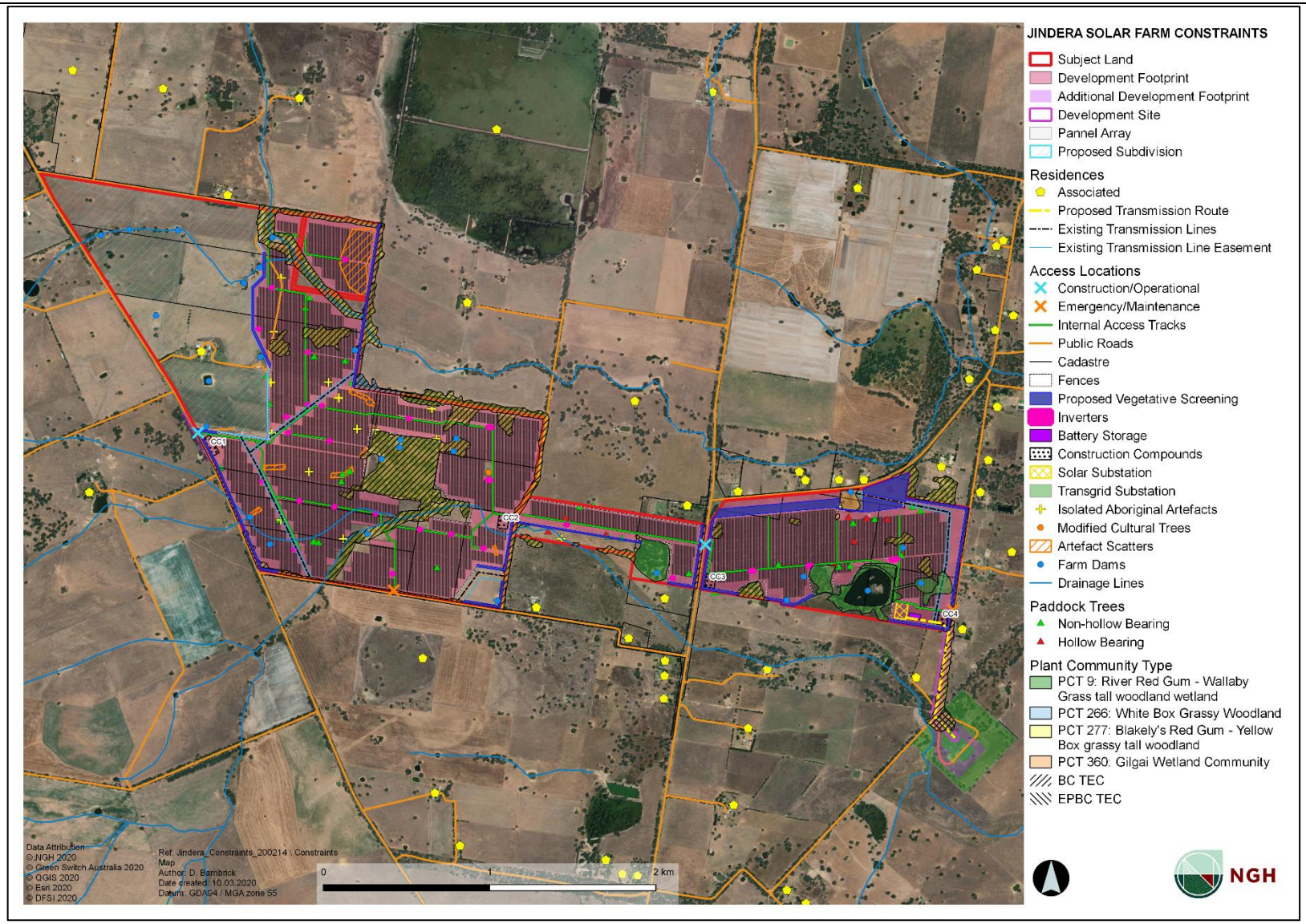

Figure 2-1 Updated constraints and layout map

2.1. AGREEMENT OF VOLUNTARY PLANNING AGREEMENT AND COMMUNITY FUND

JSF has come to a high level agreement with Greater Hume Shire Council on a Voluntary Planning Agreement (VPA) that will deliver a package of capital payments to the council and will create a Community Fund that will provide a long term funding source for community related projects and organisations.

It has been proposed to pay $450,000 to Council on completion of construction and a further $500,000 in staged payments of the next 6 years to give a total capital sum of $950,000.

In addition to and as a commitment under the VPA, JSF will also create a lasting Community Fund. The fund will run for a period of 30 years coincident with operation of the solar farm.

The fund will provide a pool of $25,000 (index linked) each year, providing (real) $750,000 of funding for the community over the operational life of the facility. This equates to an overall benefit to the community from the VPA, of $1,700,000 over the operational life of the proposal. Community Fund payments will be indexed linked, so as to maintain the real value of the fund over time.

Any community organisation can apply to the fund. The Community Fund will be administered by the Council, who will work with the Proponent to prepare the constitution and operating methodology of the Community Fund.

The recent Ordinary Council Meeting held on 19 February 2020 recommended approval of the VPA Heads of Terms. The VPA is now being prepared for finalisation by Greater Hume Shire Council.

An additional mitigation measure **SE5** is provided in Section 5 of the RTS to commit to this action.

2.2. INCREASE IN SEPARATION BUFFER AND VEGETATION SCREENING ON GLENELLEN ROAD

The Greater Hume Shire Council (Section 4.2.4 of the RTS) and a number of public submissions (Section 4.1.3 of the RTS) raised objection to the proposal due to the following:

- Loss of visual impact.
- Decreased visual and rural amenity.

This was also apparent through the community consultation process, both before and after submission of the EIS. As such, the Proponent has considered all consultation and submissions to refine the proposed vegetative screening requirements. In particular, along Glenellen Road where the majority of sensitive receivers are located.

The original design for the project included a vegetative buffer which was located parallel with the Glenellen Road. The buffer ensured that there was a minimum distance from the boundary of Glenellen Road to any solar farm infrastructure of at least 50 m.

It was decided by the Proponent that they would reconfigure the tracker and PV layout to achieve better outcomes in respect of land adjacent to Glenellen Road. The distance of buffer has been more than doubled. It is now proposed to create a buffer that will ensure the minimum distance from the southern boundary fence of Glenellen Road to the nearest solar farm infrastructure (solar panels) will be 120 m. The previously proposed, approximately 50 m wide landscaping screen will be retained and incorporated into the buffer. The original proposal and the revised proposed buffer are shown in Figure 2-2, Figure 2-3 and Figure 2-4 below which shows the layout on Glenellen Road pre and post the proposed development amendments (as detailed within this report).

Species selection and layout has been best informed by a qualified Landscape Architect, who has local knowledge of species availability from nurseries and growth requirements to ensure best outcomes. This includes the selection of fast growing, fast dispersing mid-stratum species, which are expected to reach a

suitable height and form an effective screen before the upper-stratum eucalypt species (pioneer species). A plan of succession for species will be included in the proposed Landscape Plan. In addition to improvements in the Glenellen Road buffer other landscaping improvements are proposed and set out in the section below along with clarified commitments in terms of ensuring the establishment and long-term success of the screening.

Safeguard and Mitigation Measure **VA1** in Section 5 of the RTS has been updated to include these additional requirements.

Figure 2-2 Location of cross sections from Receivers 17 (ACross-section C), 18 (Cross-section B) and 20 (C).Cross-section A) The screening shown is from the previous layout as shown in the EIS, not the updated proposed layout shown in Figure 2-5 below

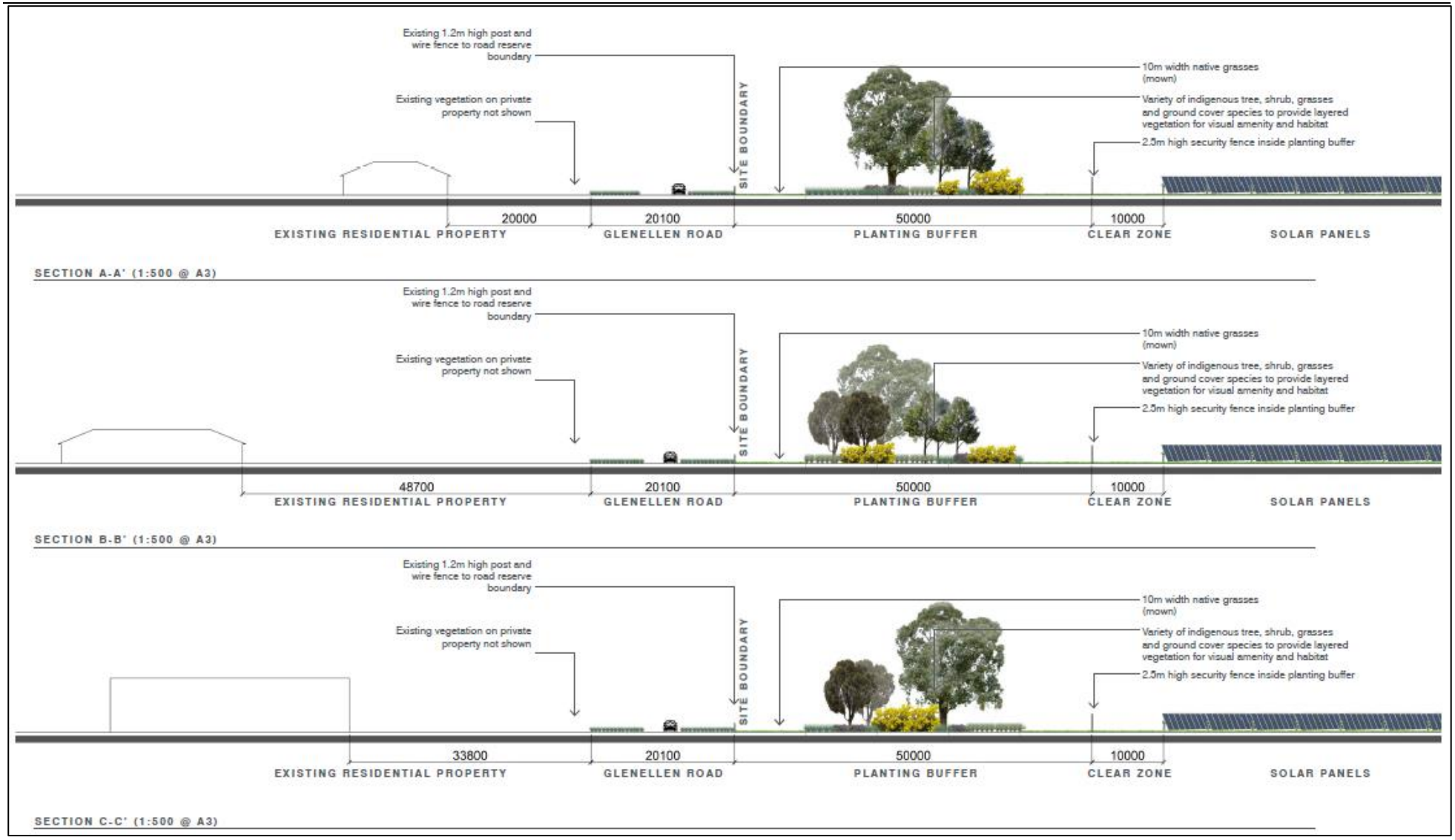

Figure 2-3 Cross sections as shown in the EIS ***prior*** to proposed development amendments.

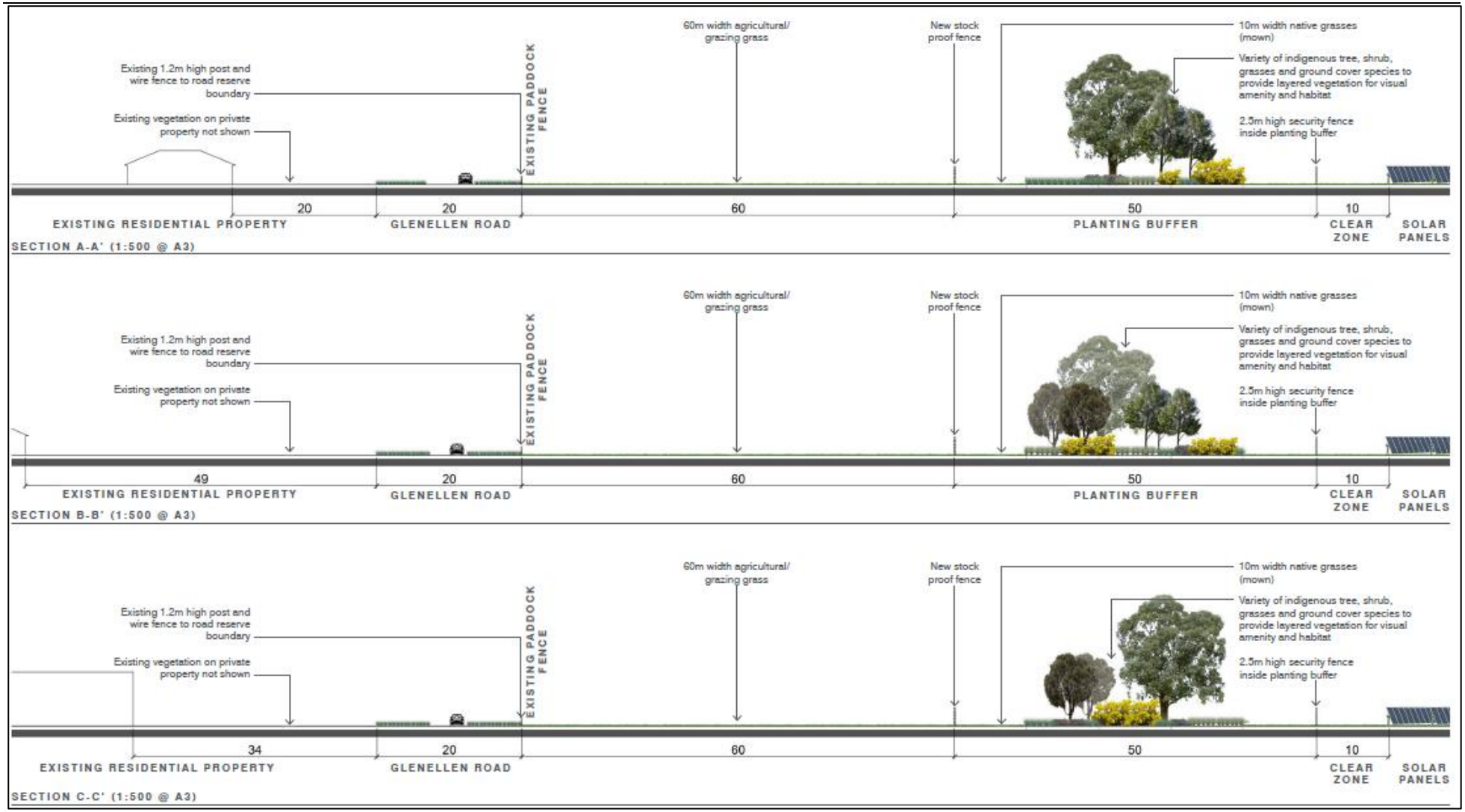

Figure 2-4 Cross sections as proposed ***post*** development amendments.

2.3. ADDITIONAL VEGETATION SCREENING

In addition to the above proposed screening on Glenellen Road, additional vegetation screening has been proposed along the subject land boundary to address comments raised in submissions and also in some locations to specifically satisfy the requirements of the RMS submission (Section 4.2.8 of the RTS).

"A landscaped buffer (at least 5 metres in width planted with a variety of species endemic to the area and growing to a mature height ranging from 2 metres to at least 5 metres) shall be established and maintained within the subject property along the frontages of the site to any road to a standard to minimise distraction of the travelling public."

Additionally, some of the existing proposed screening is to be thickened / widened to deliver increased effect. The additional vegetation screening delivers greater visual amenity and impact mitigations.

All of the areas of screening that are proposed are of at least 15 m depth, consisting of 3 rows of planting and thus exceeding the requirements of RMS

In the EIS, shade cloth on fencing was proposed as a temporary screening measure whilst vegetation screening reached full maturity. Throughout community consultation some individuals expressed that shade cloth was not a preferred screening measure. For this reason, shade cloth will be used as a temporary screening measure only to residences who request it. JSF is in ongoing consultation with individual landowners regarding preferred temporary screening measures.

Refer to Figure 2-5 for further details of the locations of proposed screening.

Safeguard and Mitigation Measure **VA1** in Section 5 of the RTS has been updated to include these additional requirements.

2.4. REFINED PV LAYOUT AND INVERTER / TRANSFORMER STATION POSITIONING

As described in Section 1.5 above, several residences along Glenellen Road had the potential to experience minor noise events under specific operating conditions. Specifically, this was when the solar farm was operating in the period after 6pm to sunset during long summer days (daylight savings).

As described above in Section 2.2, the buffer distance parallel with Glenellen Road has been significantly increased. This change in layout has also allowed slight changes to inverter / transformer station positioning. See Figure 2-1 to see the final layout and location of inverter / transformer stations.

The revised concept layout has reduced the total number of inverters from 49 in the original EIS (as detailed in Section 3.5.2 of the EIS) to approximately 32. This is based on an increased individual inverter capacity of ~5MVA. With an estimated 32 inverter/ transformer stations, the aggregate capacity is ~160MVA. Final design and details will be subject to TransGrid / AEMO connection requirements.

As a result of increasing buffer widths, the PV panel layout has been slightly reconfigured for optimisation within the original project footprint. The location of trackers has also been placed in a strategic way to reduce overall impacts to all receivers.

JSF has also redesigned, to ensure a minimum 30 m setback from all PV panels to the boundary of adjacent private property to accord with the recommendations of the Victorian Planning Panel Report (as detailed in Section 7.4.2 of the EIS). See Figure 2-1 for the final layout and constraints. The final infrastructure layout has been incorporated into the existing Development Footprint so to not increase any impacts within or outside of the Development Site.

The location and orientation of the proposed substation has also been swapped with the Battery Energy Storage System (BESS), to reduce any noise impacts to receivers on Ortlipp Road.

As a result of the relocation of infrastructure, the Noise Impact Assessment was updated for all potentially affected receivers. The results can be seen in Section 1.6 above, with the final outcome being that no operational exceedances will be experienced under normal operating conditions. This does not take into consideration maintenance works within the development site.

Safeguard and Mitigation Measure **AQ7** in Section 5 of the RTS has been included to include these additional requirements.

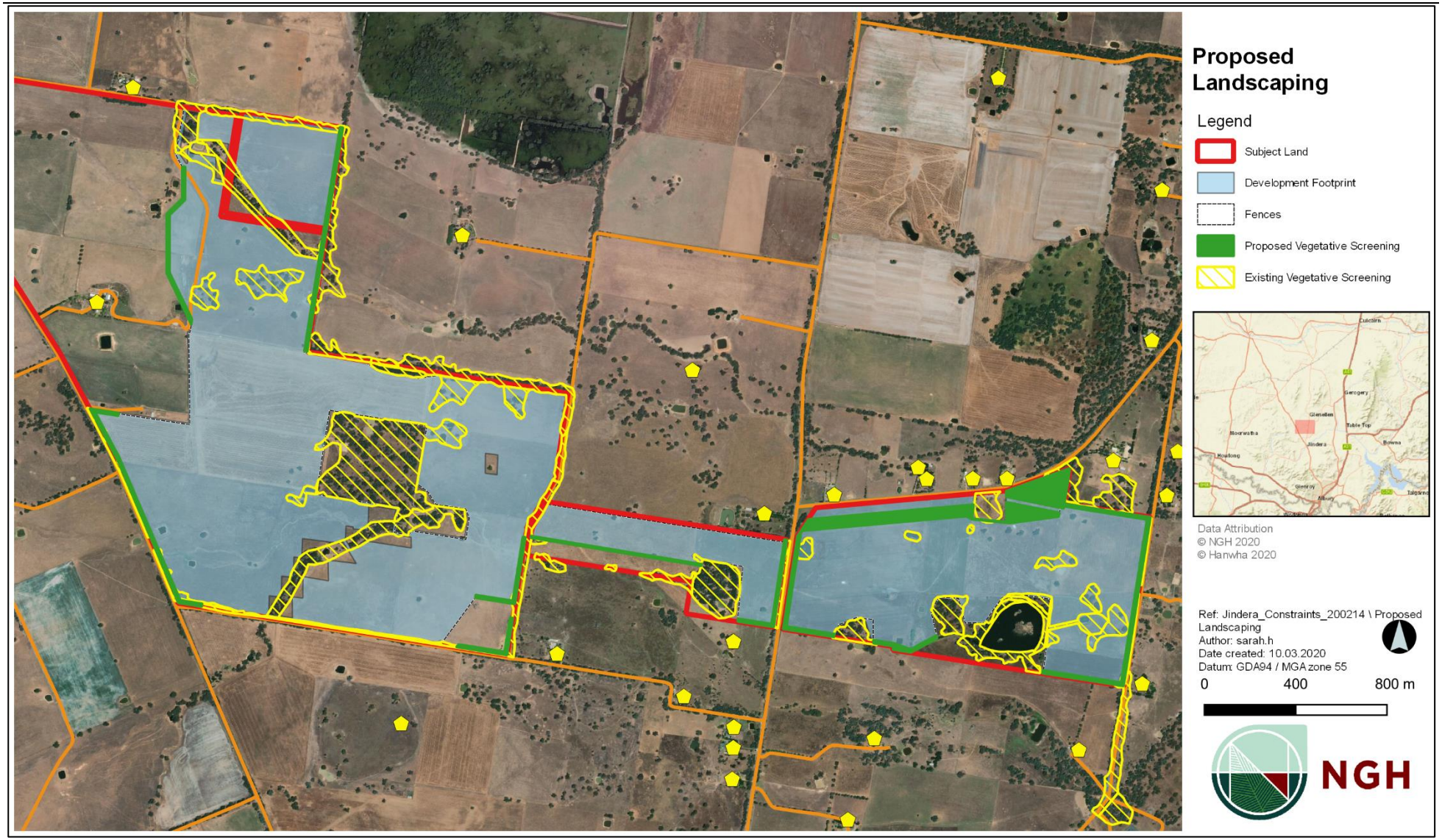

Figure 2-5 Proposed landscape planting

2.5. COMMITMENT TO REMOVAL OF CABLES AND UNDERGROUND INFRASTRUCTURE

While not a proposed infrastructure change, there has been some confusion over the commitment to remove cables and underground infrastructure from the Development Footprint during the decommissioning period.

As detailed in Section 3.8 of the EIS, at the end of its operational life the solar farm will be decommissioned in terms of a dedicated Rehabilitation and Decommissioning Management Plan. All above and below ground infrastructure would be removed in agreement with the Landowners, and specifically:

- The solar arrays would be removed, including the foundation posts.
- Posts and cabling would be removed and recycled.
- Fencing would be removed including small concrete footings.

An oversite was noted within the Safeguards and Mitigation Measures, namely **LU3** and **LU7** (Section 5 of the RTS). **LU3** has since been updated to remove the words “above ground”, committing JSF to removal of all infrastructure (as originally intended), and **LU7** has been removed.

2.6. CLARIFICATION OF WORKS ON ORTLIPP ROAD

While not a proposal change, there has also been confusion over the use and proposed works on Ortlipp Road. The EIS (Section 3.5.6 of the EIS) set out that a cable will be installed down Ortlipp road to the TransGrid substation. The foregoing is to clarify.

There is no intention during the construction period to use Ortlipp Road as a means to deliver materials to or provide access to the solar farm site. However, in order to construct the transmission line that will connect to the existing TransGrid substation, works will be required on Ortlipp Road.

The construction works required along this route will be the construction of an overhead cable linking the solar farm to the Substation, and will include:

- Removal of some vegetation including branches from trees along the proposed cable route.
- Installation of timber, concrete or metal lattice poles / posts to support the cables (electricity poles)
- Installation will be drilling of hole or creation is small concrete pad for fixing – depends on type of pole used (not known yet)
- Stringing – the process of fixing the electricity cables to the posts / poles
- Energisation / commissioning i.e. putting power into the cables and checking everything is behaving as anticipated.

There will be some minor disruption to road users during the construction period. Construction of the transmission line will be managed through appropriate traffic management controls. The duration for the works is expected to be 2-4 weeks

Works will be subject to a separate Construction Environment Management Plan (CEMP), as the issues covered are more specific to works in the road and less about the large scale works of a solar farm. The CMP will be written in consultation with the relevant road authority, TransGrid and all affected residences on Ortlipp Road. An additional mitigation measure **TT12** is provided in Section 5 of the RTS to commit to this action.

2.7. ADDITIONAL INVESTIGATION WORKS WITHIN THE TRANSGRID SUBSTATION

At the time of writing the EIS, the final design of the Development Footprint within the TransGrid substation was not known and the soil disturbance / clearing requirement of possible works was formed on a worst-case scenario basis, without accessing the TransGrid site or doing a specific site survey.

Since the finalisation of the EIS and as the result of further consultation with TransGrid, it was determined that this impact was overstated. To assess more accurately the impact of the possible Development Footprint, access to the TransGrid site was granted for surveying in January 2020. Finalisation of the transmission line route and Development Footprint within the TransGrid yard will not be available until mid-2020, so all possibly impacted land was included in the survey.

As such, the precautionary principle was implemented in determining the proposed route for the solar farm transmission connection. The proposed development footprint within the Jindera Substation assumes a worst-case scenario, detailing two potential routes for connection infrastructure. While this is an overestimation of the final impact, the Proponent has accepted that the indicated impact will be the final Development Footprint presented within the updated reports, with all risk and impact assumed and offset for.

Figure 2-6 below details the proposed Development Footprint within the Jindera TransGrid substation. As per the requirements of the BCD (Section 4.2.1 of the RTS), the area within the substation was surveyed by both an archaeologist and associated Registered Aboriginal Parties, and two ecologists. Both the ACHA and the BDAR were updated to reflect the final survey and Biodiversity Assessment Methodology credit requirements. The final findings of the reports on the additional survey areas are:

- No items of Aboriginal heritage were identified during the visual inspection and no undisturbed landforms of archaeological sensitivity were located. As such, no changes to the mitigation measures previously proposed are required. An Addendum ACHAR for works was completed, as detailed in Section 1.4 above.
- The vegetation around the substation while being Box Gum Woodland does not meet the EPBC Act criteria, as previously assumed. Field plot data have been included to accurately assess the NSW BAM credit requirements and these have been included in the updated BDAR, as detailed in Section 1.5 above.

Figure 2-6 Location of proposed Development Footprint (shown in purple) within the TransGrid substation

2.8. ADDITIONAL INVESTIGATION WORKS FOR INTERSECTION UPGRADES

As part of the EIS, a Traffic Impact Assessment (TIA) was undertaken by a traffic consultancy agency called Stantec. Based on current and proposed traffic volumes for the area, it was proposed that a Basic Right Turn treatment would be required for the construction access off Urana Road, and that the existing arrangements on Walla Walla Jindera Road were sufficient to accommodate turning heavy vehicles given appropriate traffic management.

However, as per the requirement of the Roads and Maritime Services (RMS) (Section 4.2.8 of the RTS), the following intersection treatment were requested and have now adopted:

- A Channelised Right Turn -Short (CHR(s))/Basic Left Turn (BAL) for the intersection of the driveway to the development site with the Urana Road (MR125); and
- A Basic Right Turn (BAR)/Basic Left Turn (BAL) for the intersections of each of the 2 driveways to the development site with the Walla Walla – Jindera Road (MR547).

These intersection upgrades now form a Statement of Commitment, detailed in Section 5 of the RTS as Safeguard and Mitigation Measure **TT4**, with the proposed Development Footprint shown in Figure 2-1 and within the updated BDAR.

Due to the requirements of the RMS being greater than that proposed in the EIS and the TIA, the development footprint and overall impact to roads was underestimated in both the ACHA and the BDAR. Again, without a final design or footprint, the precautionary principle was implemented in determined the final development footprint for both intersection treatments. The proposed intersection footprint assumes worst-case and is an overestimation of the final impact. JSF has accepted that the indicated impact will be the final Development Footprint presented within the updated reports, with all risk and impact assumed and offset for.

Both intersections were surveyed by both an archaeologist and associated Registered Aboriginal Parties, and two ecologists. Both the ACHA and the BDAR were updated to reflect the final survey and Biodiversity Assessment Methodology credit requirements. The final findings of the reports on the additional survey areas are:

- No items of Aboriginal heritage were identified during the visual inspection and no undisturbed landforms of archaeological sensitivity were located. As such, no changes to the mitigation measures previously proposed are required. An Addendum ACHAR for works was completed, as detailed in Section 1.4 above.
- The BDAR has been updated to include the vegetation impacts for both intersections. Walla Walla Jindera Road is exotic vegetation on the eastern road reserve and PCT 277 Box Gum Woodland on the western road reserve. Urana Road is PCT 277 Box Gum Woodland. Any areas that will be impacted have been incorporated into the BAM credit calculator and the credit included in the Credit Summary in the BDAR, as detailed in Section 1.5 above. The vegetation at the intersections also does not meet the EPBC Act criteria.

2.9. FURTHER PROTECTION FOR SQUIRREL GLIDERS

It is known that Squirrel Gliders use the woodland area in the central part of the western side of the proposed solar farm. Measures are proposed to maintain and enhance connectivity from this area to the boundaries of the site and beyond. Glider poles and rope crossings will be used to provide routes of connectivity. Where internal fending is deployed within the solar farm, such as for forming sheep grazing paddocks, the fencing will not include barber wire so as to remove a potential hazard to squirrel gliders. Where the proposed connectivity routes bisect the external site fencing, additional protection will be provided over the two top strands of barbered wire in the external fence to protect squirrel gliders. Such protection could include use of PVC pipe to wrap the barbed wire or other forms of protection.

To enable squirrel gliders to move through areas and over the boundary fencing, glider poles and rope crossings will be strategically placed to assist gliders connecting to other areas outside of the development site.

JSF will continue to engage with the Squirrel Glider Advisory Group to further develop the protection measures during the design and construction phase of the proposal. This will ensure the best possible outcomes for Squirrel Gliders within the area, with best practice mitigation measure implemented on-site.

New and updated commitments within the Safeguards and Mitigation Measures (Section 5 of the RTS) are now made:

- (**BD12**) Barbed wire would not be used on internal fences surrounding retained native vegetation. The boundary fence will have three strands of barbed wire for security purposes and where glider poles and ropeways are installed, the top two wires will be covered with appropriate protection (such as PVC piping). The retained native vegetation would be considered as an offset site.
- (**BD15**) Completion of a Squirrel Glider Management Plan to determine the location/s where the gliders cross connecting corridors to adjacent vegetation. At these locations, glider poles, ropeways and protection on the top two wires of the boundary fence will be strategically installed.
- (**BD16**) Hollows removed during clearing would be salvaged where possible and remounted to allow continued use by hollow dependant fauna within or adjacent to the project site. A one to one (hollows removed to hollows or nest boxes mounted) would be achieved.

3. UPDATED SAFEGUARDS AND MITIGATION MEASURES

Table 3-1 below details all the updated mitigation measures as presented within Section 5 of the RTS, related to the key areas of additional investigation (Section 1) and the infrastructure and development changes (Section 2).

Table 3-1 Updated mitigation measures

No.	Safeguard and mitigation measures	Location in Amendment Report
BD12	Barbed wire would not be used on internal fences surrounding retained native vegetation. The boundary fence will have three strands of barbed wire for security purposes and where glider poles and ropeways are installed, the top two wires will be covered with appropriate protection (such as PVC piping). The retained native vegetation would be considered as an offset site.	Section 2.9
BD15	Completion of a Squirrel Glider Management Plan to determine the location/s where the gliders cross connecting corridors to adjacent vegetation. At these locations, glider poles, ropeways and protection on the top two wires of the boundary fence will be strategically installed	Section 2.9
BD16	Hollows removed during clearing would be salvaged where possible and remounted to allow continued use by hollow dependent fauna within or adjacent to the project site. A one to one (hollows removed to hollows or nest boxes mounted) would be achieved.	Section 2.9
VA1	Screening would be required on-site, generally in accordance with the draft Landscape Plan provided in the VIA: • Plantings would be more than one row deep and where practical, planted on the outside of the perimeter fence, to break up views of infrastructure including the fencing. The majority of proposed visual	Section 2.2 and Section 2.3

	screening is 15 m wide, with a 110 m buffer incorporating vegetative screening on the boundary of the proposal and Glenellen Road. • The plant species to be used in the screen are recommended to be native, derived from the naturally occurring vegetation community in the area. They should be fast growing with mixed canopy height. Species selection could be undertaken in consultation with affected near neighbours and a botanist, horticulturist or landscape architect. Suitable species are listed within the VIA. • The timing is recommended to be chosen to ensure the best chance of survival and can commence during the construction of the proposal if timing suits. • The screen would be maintained for the operational life of the solar farm. Dead plants would be replaced. Pruning and weeding would be undertaken as required to maintain the screen's visual amenity and effectiveness in breaking up views. • Proposed screening will be effective within three years of completion of construction. • All landscaping within the site shall comply with the principles of *Planning for Bush Fire Protection 2019.*	
LU3	A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW Department of Primary Industries and the landowner prior to decommissioning. The Rehabilitation and Decommissioning Management Plan is to include: • Removal of all infrastructure. • Removal of gravel from internal access tracks where required, in consultation with landowner. • Reverse any compaction by mechanical ripping. • Indicators and standards to indicate successful rehabilitation of disturbed areas. These indicators and standards should be applied to rehabilitation activities once the solar farm is decommissioned.	Section 2.5
NS16	No operational noise exceedances will be observed for any residence (normal operating conditions – no maintenance or upgrade works).	Section 1.6 and Section 2.4
TT12	A Construction Management Plan will be development and implemented for the proposed transmission line route on Ortlipp Road in consultation and to the satisfaction of the relevant road authority, TransGrid, and affected landowners along Ortlipp Road.	Section 2.6
AQ7	A minimum 30 m setback from all PV panels to the boundary of adjacent properties is ensured.	Section 2.4
SE2	A Local Sourcing Plan will be developed and implemented prior to construction. The Plan will include (but not be limited to): • Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities and materials. • Liaison with Council. • Liaise with local accommodation and real estate to maximise stay within the area.	Section 1.7
SE5	A Voluntary Planning Agreement and Community Fund will be finalised and implemented in consultation with Greater Hume Shire Council.	Section 1.7

4. JUSTIFICATION AND EVALUATION OF MERIT

As detailed within the Amendment Report, a suite of infrastructure and development changes have been proposed, as well as a number of additional assessments undertaken.

Key changes to the proposal which reduce overall impact and risk include:

- The AIS and Soil Capability Mapping Assessment show that the proposal is likely to be located on land classified as Class 4 under the LCS Assessment Scheme, not Class 3.
- The Voluntary Planning Agreement and Community Fund has been drafted and approved by Council. The Head of Terms is currently being developed by Council.
- Additional commitments to keep as much expenditure and employment in the Greater Hume Shire, through a Local Sourcing Plan and apprenticeship schemes.
- Increasing buffer distances on Glenellen Road, from 15 m to 120 m.
- Additional vegetation screening along all main roads.
- Assuring a 30 m setback from PV infrastructure to neighbouring boundaries.
- Relocation of PV layout and inverter / transformer stations.
- Relocation of the internal substation.
- Quiet inverter / transformer infrastructure.
- Intersection upgrades as per the RMS requirements.
- Additional mitigation measures for the relocation and retention of habitat features.
- Additional mitigation measures for the protection of Squirrel Gliders.

These key changes will have the following benefits to the community and Greater Hume Shire:

- Ver little impact to agricultural production is expected. Farming practices will continue onsite, co-locating sheep with the solar infrastructure. The proposed agrivoltaic system of sheep grazing is highly achievable, and the best solution given the context of the landscape.
- The VPA and Community Fund will be achieved through the payment of $950,000 over six years to Council, and $25,000 per year over 30 years to the community. This is a benefit that would otherwise not be delivered to the community if the proposal were to not go ahead.
- The Greater Hume Shire, in particular the Jindera Area, will benefit from the additional economic boost through employment, contracting, retail, rental etc.
- Additional screening will reduce overall visual impacts for both residents and motorists (specifically for residences R17 to R21), as well as fulfill the requirements of RMS.
- Vegetation screening will also have the additional benefit of helping to help alleviate any concerns of the perceived heat island effect.
- A 30 m setback will also achieve the recommendations of the Victorian Planning Panel Report to reduce impact for the perceived heat island effect.
- Relocating and refining the PV layout and inverter / transformer station positioning and relocating the internal substation has the benefit of reducing overall noise impacts across the site. By relocating and strategically placing infrastructure components across the site, JSF has been able to achieve zero noise exceedances during normal operations of the proposal.
- Greater success and protection of wildlife onsite, in particular the Squirrel Glider.

The changes presented above show an overall net benefit to the community and the Greater Hume Shire.

On balance, given the changes to the proposal, additional management measures and commitments, and consultation undertaken by JSF, the amended project is one that is more able to be supported by the local community. Impacts are considered justifiable and acceptable in the context of the proposal's benefits.

APPENDIX A SPECIALIST ASSESSMENTS

A.1 AGRICULTURAL IMPACT STATEMENT

A.2 SOILS CAPABILITY ASSESSMENT

A.3 ABORIGINAL CULTURAL HERITAGE ASSESSMENT ADDENDUM

A.4 UPDATED BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT