This is in response to the EIS that also encapsulates information from the SEARs including the following items in association with Land, Soil and Agriculture:

- **Land** – including:
  - an assessment of the potential impacts of the development on existing land uses on the site and adjacent land, including:
    - a consideration of agricultural land (including Biophysical Strategic Agricultural Land), flood prone land, Crown lands;
    - a soil survey to determine the soil characteristics and consider the potential for erosion to occur; and
    - a cumulative impact assessment of nearby developments;
  - an assessment of the compatibility of the development with existing land uses, during construction, operation and after decommissioning, including:
    - consideration of the zoning provisions applying to the land, including subdivision, and;
    - completion of a Land Use Conflict Risk Assessment in accordance with the Department of Industry's *Land Use Conflict Risk Assessment Guide;*

1. The Agriculture Impact Assessment in the EIS as required in item 1 above and in the Large Scale Solar Energy Guideline (NSW DPE 2022). (Attached) is well below standard with very little detail on financial impacts from modified land use during construction and operation phases. **A detailed Agricultural Impact Assessment should be undertaken**, given it is highly likely the disturbance area is located on LSC Class 3 land and/or BSAL, however neither of these assessments has been undertaken to confirm site verification.
2. The Proponent states that *"The solar farm would be constructed on agricultural land, currently used for cropping and grazing."* (Soil Survey - Executive Summary second paragraph). This factor alone should have triggered a detailed Agricultural Impact Assessment to be undertaken. **NSW DPE should not support this project until such time as an appropriate Agricultural Impact Assessment is undertaken**.
3. A Biophysical Strategic Agricultural Land (BSAL) assessment has not been undertaken as required in item 1 above. The proponent has only considered the trigger mapped BSAL and has not assessed any land within the Duri Soil Landscape, which has been verified BSAL in other parts of the Tamworth region and has a long history of being cropped in the area. **The SEARs requires the proponent to consider BSAL, and only regionally mapped BSAL has been considered. No verification program for the rest of the site has been undertaken, which is obviously high value agricultural land**, given the history of cropping and high quality grazing.
4. The Sear's requires a soil survey to be undertaken. The Soil Survey in the EIS has several major flaws:
    1. A rotating drill rig style auger has been used to undertake the field assessment and sampling. This is completely unacceptable for a soil survey. Only either a push tube corer or backhoe pits are acceptable for soil survey and soil characterisation. As per

standard soil survey practice in NSW. There are so many problems with the rotating corkscrew-style disturbed auger method that any soil scientist will tell you it is unacceptable as a field assessment or sampling method.

2. The sampling depths selected fail to meet the basic NSW soil survey and sampling criteria. Most sampled sites have 0-10, 50-60, 100-110 and/or 140-150. For soil classification soil sampling depths should not span more than 25cm. furthermore, to accurately classify soil orders, sub orders and great groups, sampling of the upper 20cm of the B horizon is required. **There is no evidence of appropriate soil survey sampling and the entire soil survey should be re-done**.
3. There is no evidence provided that a qualified Soil Scientist undertook or even oversaw this soil survey. All NSW soil related guidelines for BSAL, LSSE, LSC etc require a Certified Professional Soil Scientist (CPSS) to either undertake the assessment or sign off on the soil survey.
4. The sampling and testing program appears to 'cherry pick' samples at different sites without fully sampling any sites. This technique is not acceptable for soil survey laboratory data, as it gives no clear details at any one site. It is unclear why some sites only had topsoil tested, while other sites only had deep subsoil tested. The sampling program needs to be consistent with NSW guidelines or at the very least commonly accepted soil survey standards.

5. There is very little assessment of erosion potential in the EIS. The Emmerson Aggregate Test (EAT) was only performed on 4 out of 32 samples. Exchangeable Sodium Percentage was calculated for subsoil samples but typically at greater depths than will potentially be disturbed. The erosion assessment has to be more rigorous than what has been presented, given the likelihood of channalised flow from surface disturbances and small scale topsoil clearing or disturbance.
6. The EIS indicates that the only disturbance to the land is for tracks, substation and operational buildings, at less than 5% of the project area (see below first dot point). The construction and implementation of solar panel poles and coverage of the land with panels is also considered 'disturbance'. The 5% is misleading and plays down the role of construction disturbance, especially topsoil impacts.
7. The second dot point below appears to claim that there is no impact to agriculture from the construction of this solar farm because pasture will be maintained. This is not an Agricultural Impact Assessment. There should be an assessment of Land and Soil Capability (LSC) there should be a full presentation of the Agriculture industry in the immediate vicinity, there should be a financial assessment of the impact of sterilising this land or at least restricting its use to restricted grazing of sheep only, and the flow on effects to the local rural businesses. These requirements are clearly outlined in the Large Scale Solar Energy Guideline (NSW DPE 2022). Whilst, it is appreciated that the SEAR's were issued prior to the LSSE Guidelines, the EIS was submitted almost a year after the release of these guidelines and NSW DPE will be accountable for not holding the proponent to this standard of 'Agricultural Consideration' based on the first dot point above regarding Agricultural assessment.
8. The exert from Section 7.5 of the EIS 'Local Agricultural Impacts' acknowledges BSAL and LSC 3 land should be avoided. It also states that the soil assessment has verified the extent of BSAL and LSC Class 3. **This is not true. The soil assessment has used regional mapping to define the boundary of BSAL and LSC 3 land. There is no evidence of any BSAL Assessment having been undertaken, in accordance with the Interim Protocol for site verification of BSAL (OEH 2013), and no evidence of the project area being assessed for Land and Soil Capability under the Land and Soil Capability assessment scheme –**

second approximation (OEH 2012). At the very least the LSC site based assessment scheme should be applied over the project area to determine the extent of LSC Class 3.

9. The LUCRA presented in the EIS is extremely rudimentary and not up the standards currently accepted by NSW DPE. The LUCRA should be much more comprehensive and detailed given the obvious land use conflicts that have been raised and the importance of this project's approval or rejection, to the local community.

8.3. Scale and nature of impacts

Considering all stages of development, construction, operation and decommissioning, solar farm development can be undertaken with limited impacts on the soils and pastures they rest on.

- The majority of soil disturbance required will be for establishing access tracks as well as excavating footings for the substation and operational buildings, as well as inverters and battery units located throughout the solar array. This represents a very small percentage of the Development footprint; less than 5%.
- The remaining areas will retain pasture. It will be shaded beneath the solar panels. This will result in some microclimate effects, most noticeable in extreme conditions when pasture growth and stock may benefit from the shelter they provide.

Local agriculture impacts

The loss of high-quality agricultural land is identified as a concern by the local community. The cumulative impact of similar renewable energy projects, particularly where BSAL is involved, can be considerable given mapped but unverified BSAL occurs on private land where most renewable energy projects are proposed. Small losses of BSAL may be insignificant at a local level but may accumulate over time to cause a significant reduction in the extent of BSAL available for agricultural use.

As detailed within Section 6.4 of this report, the Project will avoid all BSAL and Class 3 Land (as defined under the Land and Soil Capability Assessment Scheme (OEH, 2012) and verified using soil surveys obtained from the site).

Approximately 530 ha of cropping and grazing land would be converted into solar farm development for the operational life of the Project. Section 7.2 considers the soils more specifically; for the vast majority of the Development footprint, soil disturbance would be limited:

- Existing ground cover beneath the array areas would be retained as piles or discrete footings are installed to support the solar panels modules (piles would be driven or screwed into the ground to a depth of 1.5–2.5 m).
- Small area linear impacts that would be stabilised and rehabilitated progressively include:
    - Cable trenches up to 5 m wide and 1,500 mm deep.
    - Construction of perimeter security fencing, 16.23 linear kilometres.