



JAMES GREENLAND

OBJECT

Submission ID: 200793

Organisation:	Key issues: <i>Land use compatibility, Traffic and transport, Visual, Other issues</i>
Location: <i>New South Wales</i>	
Attachment: <i>James Greenland - IPC Submission.pdf</i>	

Submission date: 26/09/2024 15:43

*Please refer to attached submission.*

My wife and I own “██████” at ████████████████████, Loomberah, in the Spring Creek Valley. We are designated Receptors R15 and R24.

This project is in the **WRONG PLACE**, and I make the following comments and objections:

**1. Legalities:**

- (a) The General Requirements of the Planning Secretary’s Environmental Assessment s.4.12 (8) EPA 1979 and Schedule 2 Regulations 2000 (page 1 line 13) refers to “Strategic Justification.” In relation to agricultural land the Government’s Large Scale Solar Energy Guidelines DPE 2022 referred to in the NGH Submission Report (p35) suggest an even higher onus of proof, namely “strong justification.”
- (b) It is not sufficient for the applicant to merely make assertions in its favour. It must PROVE them objectively and not just have them repeated by the Department in its Assessment Report.
- (c) This application should be refused on the basis that the requisite onus of proof has not been satisfied at any level other than a general desirability to create a renewable power supply. There are more suitable sites elsewhere which have not been investigated.
- (d) I have conversed in detail on previous occasions with the Applicants representatives and staff from the Department, and NONE of my concerns have been addressed.

**2. Amenity of the Lower Spring Creek Valley including proposed site.**

- (a) Despite requests of the applicant, significant details of the project remain undisclosed including the positioning and scale of the site office, 400 vehicle car park and water tank, which will have significant glint, glare and dust generation.
- (b) The meeting on 19 September, 2024 raised the issue of placing infrastructure behind the knoll:
  - (i) This was originally proposed by the applicant in relation to the Transgrid substation by placing it under the eastern powerline near the southern extremity of the site; namely in a small valley that would minimise visual impact.
  - (ii) The uncertainty concerning the location of the administrative buildings and carpark and the more recent proposal to concentrate 100 BESS containers near access point 2 makes it even more

imperative that the southern part of the property be utilised to minimise visual impact.

(c)The applicant at that meeting also claimed that the local community did not require road screening along Middlebrook Road or elsewhere. I suggest this “apathy” concerning screening was related to the fact that slow growing plantings could never hide the project from all observation points due to the exposed slopes. Screening such as that already existing near the “Belle Vue” home would still be desirable in the long term to screen security fencing and panels close to Middlebrook Road.

(d)The Departments assertion in paragraph 123 is not based on fact. No local farm has 100 shed equivalents of the BESS containers and inverters, 6 hectares of substation infrastructure up to 9m high, or a 400 vehicle capacity carpark. Approximately two thirds of the proposed panels are on highly visible slopes, and cover an area the equivalent of two local farms.

(e)The Applicant has made no proposals to minimise glint and glare from the 400 or more vehicles operating or parked on site. The Department similarly fails to address this glint and glare in paragraphs 125-127 (pp28 and 29).

(f) A few months ago my cousin visited our house at Receptor 25. She has lived in Vienna, Austria, for about 40 years, and in summers a lake house in the mountains nearby. She observed our view to the south west over the proposed site, and said words to the effect: “that is one of the best views I have ever seen.” She was unaware of this proposal at the time of her comment.

(g) This application should be rejected on visual and amenity grounds.

### **3. Agricultural Land**

- a. The Departments Assessment Report paragraph 2.1.3 p4, and the Applicant, have not established “strong justification” (p 35 Submission Report) required to use productive arable agricultural land. The Land and Soil capability Mapping for NSW (DEH 2017) Classification relied upon is flawed and is under review. The Applicant’s own soil testing established the site to have “good capability for agricultural use” (EIS p210). No other evidence has been provided to the contrary.
- b. The Department Assessment Report (pp i-ii) repeats the Applicant’s otherwise unsupported assertion that 90% of the site has “moderate to

severe limitations” as Class 4 land. However, the Department then notes that 0.02% of the site being a road reserve is of better Class 3 capacity. Land quality does abruptly change at a road or fence line.

- c. The 3 affected properties have been successfully intensively cropped, are mostly arable and grazed for over 170 years. I assert that they have similar capacity to my own land and therefore have provided protein and fibre for approximately 300 families each year. No peer-reviewed evidence has been provided to support the claim that successful grazing of sheep is desirable or possible under the panels to offset the production loss.
- d. Previously grassed areas will be reduced by 48km of gravel internal roadings (say 19ha), the Transgrid substation (6ha), BESS site (3ha) and an undisclosed area for office buildings, tanks, freight unloading areas and carparking.
- e. Dust generation will reduce photosynthesis and therefore carrying capacity on the site and neighbouring properties.
- f. The presence of 750,000 panels and associated infrastructure will make animal husbandry and in particular mustering very difficult and impractical.
- g. The removal of internal fences will prevent rotational grazing, further reducing sheep carrying capacity.
- h. The applicant’s Kiamal Solar Farm in Victoria has only recently incorporated sheep grazing (line 23, p.4 Transcript of Applicant Meeting 2 September 2024. Clearly no serious or timely attempt has been made to offset production losses at Kiamal.
- i. Every incremental loss of production leads to higher commodity prices & in a cost of living crisis is an unacceptable social outcome.
- j. In relation to sheep:
  - i. Sheep graze close to the ground and at times in adverse seasons below the surface. Therefore significant numbers will fatally ingest some of the vast amount of debris from the construction, maintenance and decommissioning. Debris includes “forever” materials such as copper wiring offcuts, metal shards, screws, bolts and other metals and plastics.
  - ii. Effectively the site will be permanently sterilised even after decommissioning. Rehabilitation would require total removal of all topsoil and gravel to a depth of say 75mm over the entire site.

- iii. No farmer would seriously consider the grazing option to be viable on animal welfare grounds due to unacceptable fatality rates.
  - iv. The project will preclude the historical flexibility of the site to graze cattle and/or crop when sheep are economically unviable.
  - v. No alternative use to make up for the lost production is proposed by the Applicant.
  - vi. The economic viability of sheep grazing fluctuates with markets and climatic conditions which preclude sheep grazing for years or even decades at a time.
  - vii. The Department's reliance (paragraph 64) on Council and DPI Agriculture does not establish the viability of "agri-solar" as neither body has the relevant expertise concerning ingestion of debris.
- k. Non rehabilitation below 500mm – this appears to be reference to DPI considerations. I submit that all underground cabling will need to be removed:
- (i) It appears in excess of 48 kilometres of cabling will be installed.
  - (ii) Post decommissioning it may be necessary to construct contour banks or lay pipes which will require deep ripping and soil disturbance below 500mm.
  - (iii) The site will require refencing for stock management purposes. Post hole digging is usually up to 1.2 metres deep.
- l. The Department (Assessment Report page iii) states "the project will not significantly reduce the overall agriculturally [sic] productivity of the region." At paragraph 63 (p 17) it notes a loss of 0.09% of land in the Tamworth LGA and 0.008% of the New England and North West. I submit these statistics are misleading. The appropriate focus should be on totally avoiding the loss of productive land of all types if lesser land is available. The population of Australia has increased by about 2 million people in recent years to 27 million. The world population is also increasing. Productive land generally, is being lost for housing and industrial use. Predicted climate change will increase desertification west of the Newell Highway and sea level rise will reduce coastal flood plain areas. The NSW Farmers Association estimates that already approximately 30% of NSW farm land has been taken out of production in recent years.
- m. To prove "strong justification" the Applicant must show that no suitable alternative sites of lesser agricultural value exist. To assert that this site is merely convenient is insufficient to satisfy the onus of proof.

**4. Traffic and Transport** (Assessment Report 5.4 p23, Recommendation Part B pp 7-9 and Appendix 5)

- a. The Applicant proposes all traffic will use Middlebrook Road west of access point 2 via the Goonoo Goonoo Creek bridge and the New England Highway.
- b. That bridge is dated 1966 by the Department of Main Roads, is single lane, and about 68 meters long, excluding narrow approaches.
- c. There is no mention of the bridge in the report or conditions, despite Tamworth Regional Council requiring a more recent satisfactory engineering assessment to carry the expected modern heavy transport proposed to be used by the Applicant and Transgrid.
- d. Due to the age of the bridge it should be a condition that an appropriately qualified engineering report be obtained immediately, followed by ongoing assessments made monthly during construction, heavy maintenance periods and decommissioning.
- e. The Department's Report (paragraph 10, page 24) cites 18 months of peak traffic flow of 285 vehicles per 2 hours morning and evening. This equates to 142 vehicles per hour, 2.37 vehicles per minute, namely 1 vehicle every 25 seconds. This implies near gridlock at the highway intersection and bridge.
- f. Assuming traffic crossing the one lane bridge is travelling at 10km per hour there will be at least 2 vehicles on the bridge at any one time, for two hour periods, twice a day.
- g. The bridge is only 400 meters from the New England Highway and traffic is very likely to bank up onto the highway itself during the 2 hour morning peak period.
- h. For this reason, and others, Traffic NSW has recommended an intersection upgrade from the Applicant's offered BAL to an auxiliary Left Turn Lane (AUL) treatment, namely the construction of a new left turn slip lane (TfNSW letter to the Department dated 21.6.24 reference WST24/00109/003|SF2024/058427)
- i. For public safety reasons the application should be refused unless the Applicant agrees to appropriately construct an AUL intersection upgrade.
- j. Alternatively, proposed Condition B1(a)(ii) can only be effective if it is enforced (namely only 76 left turns in the 6-7am peak hour despite the applicants own assumptions envisaging 100 light vehicles as well as additional heavy vehicles using the left turn).
- k. There is no requirement to monitor the vehicle numbers turning left and no incentive for workers to use the shuttle buses or car park.
- l. It is entirely implausible the applicant can or will be able to comply with Conditions B1(a)(ii) or B3. In particular the Applicant is unlikely to be able to control Transgrid vehicle movements which may account for 25% of traffic. Condition B3 should be amended to specifically include Transgrid-related vehicles as "vehicles associated with the development".
- m. Alternatively the various recommended conditions should be amended in accordance with a Traffic Submission annexed hereto. This submission has

been prepared by a public service traffic specialist who wishes not to be named for sensitivity of employment reasons. I note the suggestion to reduce the carpark to 150 spaces only. I suggest this itself is unlikely to be practical as the site covers hundred of hectares and would require a separate large parking area for work vehicles remaining on site such as earthmoving equipment, electrician's and other utes and the shuttle buses when not in use.

- n. In view of the likely gridlock at the bridge and/or highway intersection, Condition B3 (paragraph 2) should be amended to read:
  - i. "all vehicles associated with the Development, including Transgrid vehicles must avoid the use of Middlebrook Road east of Site Access point 2 (as identified in appendix 1) and Marsden Park Road, except for emergency purposes, unless the Planning Secretary agrees otherwise.
  - ii. The Applicant must keep accurate records of the number, size, and timing of all vehicles entering or leaving the site each day for the duration of the project and the direction of travel of each such vehicle."
- o. The Highway intersection approach from the south is also inadequate for safety reasons and requires a longer slip lane due to the following complexity:
  - i. A sweeping downhill curve in a 100km/hr zone
  - ii. The right side entrance to Goonoo Goonoo Station and its associated restaurant and function centre.
  - iii. The right side entrance to the Usher property.
  - iv. The left side entrance to Bartons Lane.
- p. In addition to traffic control for escorted heavy vehicles the Applicant should have peak times provision to escort as priority the school bus, local contra-traffic, and any emergency vehicles.
- q. The Applicant has declined to upgrade other access roads such as Middlebrook Road south to Lindsays Gap Road, and Marsden Park Road north to Duri-Dungowan Road. The Applicant proposes to prevent use of these poorly maintained gravel roads by its contractors but has not proposed any means of doing so.
- r. In particular Transgrid employees based at Calala near Tamworth, beyond the northern end of Marsden Park Road, have informed me they would prefer to use the shortest route down Marsden Park Road, rather than deviate to a much longer route of access to the New England Highway. I note the Lambruk Solar Farm proposal involves sealing a section of Marsden Park Road north of the Duri-Dungowan Road intersection and this will make its use even more attractive.
- s. The Goonoo Goonoo Creek bridge on the Duri-Dungowan Road is not flood free and local & Lambruk traffic will need to utilise Middlebrook Road to access the New England Highway.

- t. Local gridlock at peak times will divert considerable local traffic onto Marsden Park Road. This road has been poorly maintained by Tamworth Regional Council to date, and which has 4 bridges said by the applicant to be unsuitable for its heavy vehicle purposes. A collapsed bridge on Marsden Park Road across Spring Creek closed the southern end of the road for several years about 20 years ago and resulted in 10 tonne load limits being placed on the other bridges.
- u. No traffic survey has been conducted by the Applicant in relation to Marsden Park Road, or the balance of Middlebrook Road.
- v. No road condition report has been conducted by the Applicant in relation to the above roads.
- w. For reasons unclear to me the Applicant proposed to merely upgrade and seal Middlebrook Road for a distance of only 440 metres between access points 1 and 2, and only widen the balance and leave unsealed that balance of approximately 400 metres to the Transgrid and BESS area at access point 2.
- x. It is proposed this unsealed section of road will be used by the heaviest vehicles and will comprise about 25% of all traffic generated. This section of road MUST be sealed at the Applicant's expense for safety, maintenance and dust reasons.
- y. Construction will take place over 2 years and the Department's recommended consent B8 (p8) only proposed a dilapidation report and resultant repair at the completion of construction, upgrading or decommissioning. No mention is made of Middlebrook Road east of site 2, Middlebrook Road south or Marsden Park Road.
- z. As the Applicant will be highly unlikely to be able to prevent use and consequent damage to the above gravel roads, dilapidation surveys MUST be carried out on say a monthly basis, and repairs carried out within 2 months as recommended in B8(c) (p8).
- aa. If the Applicant genuinely considers it will be able to restrict its road use to the upgraded part of Middlebrook Road, such a condition should not be a detriment to it.
- bb. Due to vastly increased dust generation and damage likely to be caused to the alternative roads, it would be a better condition that these roads also be sealed. I note the existence of a Community Fund proposal which has no specific targets or method of administration. I suggest this fund be diverted to upgrade, seal & maintain Middlebrook Road east and Marsden Park Road and over time Middlebrook Road south to Lindsays Gap Road.
- cc. I note an estimate of \$321,550 (Appendix 4 p23) for sealing approximately 4km of Middlebrook Road, namely approximately \$80,400 per km, or say \$840,000 for the approximately 10km up to the Duri-Dungowan Road intersection.
- dd. In view of the paltry VPA proposed by the Applicant of \$3.47 million over 30 years compared to a Project value of \$850 million, the additional sealing of roads would be an inconsequential cost to the Applicant and may be cheaper



than the long term maintenance of adversely affected gravel roads. The maintenance burden should not fall on Tamworth Council rate payers and in particular, local residents whose cars will suffer increased wear and tear.

- ee. Should the Planning Secretary at any time permit use of these gravel roads (for example should the Goonoo Goonoo bridge be damaged) then a full upgrade by way of sealing, should occur within say 2 months otherwise the Project should cease operation.
- ff. Access Points 1 and 2 are specified to be upgraded to “Rural Property Access” (figures 3 and 4, pp27-28, appendix 5 p 24). This is unlikely to be satisfactory for the number and size of vehicles envisioned. I assume grids will be employed at all road boundary fence lines rather than gates and speed limits will be required to reduce grid noise from tyre hammer.
- gg. Access Point 2 should have a No Right Turn sign and both Access Points 1 and 2 will require Stop and/or Give Way signs to ensure priority for local traffic.

**5. Water** (Assessment Report pp31-32, Recommendations B24 p13)

- a. Groundwater, that is bores accessing underground water- the existing bore and any further bores, must not be used for other than currently permissible stock and domestic use. They must not be used by the Applicant for other purposes including road construction, maintenance, dust suppression or watering of screening plantings.
- b. Non-potable water for screening plantings, road and car park construction and dust suppression for 48km of internal roadings said to be available from the Council’s standpipe:
  - i. Assuming Council’s water is supplied free of charge, or at a nominal charge, then the Applicant is expecting Tamworth rate payers to subsidise its operation through use of Council infrastructure.
  - ii. The Project site is in a relatively infrequent rainfall area and dust suppression on the car park and internal roadings, and the unsealed portion of Middlebrook Road between Access Points 1 and 2 will be required on most days, except on days of a significant rain event. My observation of dust generation on Marsden Park Road suggest dust suppression would need to commence within 6 hours of cessation of rain events involving 10mm within 24 hours. Rain events of under 10mm are generally not sufficient to suppress dust. Presumably the Projects internal roadings and car park will use the same type of gravel as currently on Marsden Park and Middlebrook Roads.
  - iii. Our farm rainfall records for the past 4 years suggest only about 40 such wet days per year and for the 2019 drought year, only 7 such days.
  - iv. Therefore dust suppression will be required on over 300 days each year. Probably more so, between Access Points 1 and 2 due to the drying effect of the estimated 71 vehicles per day each way.

- v. The Applicants suggest 100 million litres of non-potable water would be required during construction only, over approximately 3 years, say 33.3 million litres per year, or 2775 tanker loads (12000 litres per tanker) per year over say 250 working days per year, equates to 11 tankers per day.
- vi. The Applicant and the Department provide no estimate of dust suppression water requirements during operation, maintenance and decommissioning. I suggest the 33.3 million litres per year will be required over the length of the project, if all of the internal roadings are to be continually dust suppressed in anticipation of maintenance use, wind or other adverse weather events.
- c. Potable water- mainly for panel washing- 10 million litres per year, for 750 000 panels, or 13.3 litres per panel per year- the Applicant asserts that the panels will generally be cleaned by rainfall, and only 2 washes per year will be required. The site is inherently dusty and bird droppings are an additional problem which cannot be removed by even heavy rainfall. I suggest the estimated water requirement has been grossly underestimated.
- d. Tamworth's water supply is limited, and no new dams or upgrades are proposed. The population is planned to double over the next 25 years.
- e. Council suspended gravel road maintenance during the last drought, citing lack of water.
- f. Tamworth's water supply almost failed during the last drought when Chaffey and Dungowan Dams fell to 5% capacity.
- g. Publications by Professor Anthony Kiem et al from the University of Newcastle have focused on historical climate and hydrology in south east Australia, and in particular relate to Antarctic ice core studies covering the last 2000 years (<https://doi.org/10.1038/s43247-022-00359-z>). These studies suggest that the last 250 years of warming climate have delivered relatively benign and wet weather compared to the previous 1750 years. Further, these studies suggest the El Nino/ La Nina oscillation delivered far more drier periods than wet ones over the 2000 year period.
- h. There are 2 other large scale solar farms proposed in the Tamworth Council Area at Marsden Park Road Loomberah, and Bendemeer, and could be assumed to also require similar quantities of water from Council standpipes.
- i. Lack of short and long term water supply will be an issue for the Applicant, and I request that recommended Condition B24 (p 13) be amended to require the Applicant to:
  - (1) cease using Council water once Chaffey Dam and/or Dungowan Dam fall below 95% capacity or such higher amounts as the Council may determine;
  - (2) not use any water otherwise derived from surface or underground supplies west of the Great Dividing Range.
- j. As dust suppression on roadings is the major proposed use of water, the Applicant should be required to seal and maintain all roadings and car parks it

uses on and off site. This has the added advantage of reducing the risk of gravel washing into Spring Creek during storms.

- k. The Applicant be prohibited from using oil or other chemical-based dust suppression methods due to the risk of soil & water contamination.
- l. Storage of 20,000 litres of water reserved for fire fighting in Condition B 31 (b)(v) is more appropriate for a residential project and this condition is totally inadequate for the scale of this Development. I suggest it be increased to 2 million litres, together with a condition to have a large dedicated and operational fire tanker on site at all times.

## **6. Notifications**

Recommended Condition C8 (p18)

- a. I request an additional condition to the effect that all designated receivers/stakeholders be similarly notified by post and submissions sought in response and accommodated by the Planning Secretary.
- b. Due to the nature of the local community members, it is not sufficient to assume stakeholders can or will monitor the Project website or the Department's website without prompting.

**James (Cam) Greenland**

**"[REDACTED]" Loomberah**

## **TRAFFIC ANNEXURE**

### **(A) Submissions**

The Recommended Conditions of Consent are insufficient to appropriately manage traffic during the construction phase of the project.

In particular, Condition B1(a)(ii) requires the Applicant to ensure that the development does not generate more than 76 left-turns by all vehicles from the New England Highway on to Middlebrook Road during the 6-7am peak hour.

*[Context: This Condition was recommended by TfNSW as an alternative to implementing an AUL treatment (which involves construction of a new left-turn slip lane) at the intersection – which would have ordinarily been required given the expected volume of traffic to the site – because the applicant sought to implement only a BAL treatment (which does not involve a new slip-lane).]*

Condition B1(a)(ii) will only be effective if it is enforced. It is entirely implausible that the applicant will comply with Condition B1(a)(ii) because:

- using the applicant's own assumptions in its Traffic Impact Assessment, there will be over 100 light vehicle left-turns during the 6-7am peak hour (as well as additional heavy vehicle left-turns);
- there is no requirement for the applicant to monitor the number of left-turns; and
- there is no limit on on-site car parking, so there is no incentive for workers to use the applicant's shuttle buses and/or carpool.

#### ***Amendments to the Recommended Conditions of Consent***

1. Appendix 5 of the Recommended Conditions of Consent should be amended to require the applicant to construct an Auxiliary Left-Turn (AUL) treatment, rather than a Basic Auxiliary Left-Turn (BAL) treatment at the New England Highway – Middlebrook Road Intersection (NEH-MR Intersection).

A BAL treatment is only appropriate if the applicant can ensure that it complies with Condition B1(a)(ii), which limits daily vehicle left turns at the NEH-MR Intersection to 76 during 6-7am peak hours. Compliance with Condition B1(a)(ii) is not plausible given the number of workers (>400) that are expected to travel to the development site. As a vehicle will be turning left approximately every 25-35 seconds (depending on vehicle occupancy assumptions) during this period, southbound traffic on the New England Highway will be significantly impeded unless an AUL treatment is implemented.

2. A new condition should be included, or Condition B9(b) should be amended, to limit the number of parking spaces available for light vehicles at the site to 150.<sup>1</sup>

In the absence of a condition limiting car parking, the applicant's assumptions regarding vehicle movements (including its ability to comply with Condition B1(a)(ii)) and carpool

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<sup>1</sup> Section 3.2.1.1 (Table 6) of the TIA sets out that 150 light vehicles per day will be required during the construction period.

incentive structures are not realistic. A clear and express condition limiting the car park size is required to incentivise workers to use shuttle buses and/or carpool.

3. Condition B2 should be amended to require the Applicant to keep accurate records of the number of **all** vehicles entering or leaving the site each day for the duration of the project, not just heavy vehicles.

In the absence of extending the applicant's record-keeping requirement to all vehicles, the applicant's compliance with Condition B1(a)(ii) is unenforceable.

4. Condition B1(a)(ii) should be amended to clarify that the restriction on vehicles turning at the NEH-MR Intersection in the evening applies to "right-hand turns" and the requirement to stagger departures in the evening should be over a greater period of time.

Condition B1(a)(ii) contains an obvious error in that it only applies to left-hand turns. However, in the evening, workers returning to Tamworth will make a right-hand turn at the NEH-MR Intersections. This should be corrected in the final conditions of consent.

Further, given it is a right-hand turn, there will be a substantial build-up of vehicles on Middlebrook Road in the evening. This creates a significant incentive for workers to travel east from the site and travel north along Marsden Park Road, which is in clear breach of Condition B3 (which requires all vehicles associated with the development to avoid the use of Middlebrook Road to the east of the site). Condition B1(a)(ii) should be amended to require the applicant to stagger vehicle departures over a greater period of time to mitigate traffic build-ups on Middlebrook Road and minimise incentives for workers not to comply with Condition B3.

## **(B) Detailed Commentary**

### ***AUL treatment should be implemented***

5. In its letter to the Department dated 21 June 2024 (TfNSW reference: WST24/00109/003| SF2024/058427),<sup>2</sup> Transport for NSW (**TfNSW**):
  - a. notes that "*TfNSW has conducted a turn warrant assessment for the project peak hours, network peak hours and cumulative traffic volumes which has resulted in requiring a higher order left turn treatment, AUL(s). The project only proposed to provide a Rural Basic Left Turn treatment (BAL) and not the required AUL(s)*";
  - b. notes that "*peak project AM hours provided in the turn warrant assessment is only 40% of the total light vehicle movements for the day (52 out of the 127 light vehicle movements). The TIA states clearly all light vehicle movements are to*

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<sup>2</sup> Available at <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=PAE-72058456%2120240621T025430.937%20GMT>.

*transport staff to and from the site (Table 5) and that there is only one shift proposed a day (page 14)”; and*

- c. in light of the applicant’s proposal to provide only a BAL treatment, proposes the inclusion of Condition B1(a)(ii) which requires the Applicant to ensure that the development does not generate more than:
  - i. 76 left turns during project peak hours (6-7am and 5-6pm); and
  - ii. 38 left turns during network peak hours (7.45-8.45am and 4-5pm).
- 6. Condition B1(a)(ii) has been included as a condition in the Department’s Recommended Conditions of Consent.
- 7. It is clear from TfNSW’s letter that it considers that the project requires an AUL treatment based on traffic volumes. However, given the applicant has only proposed a lesser BAL treatment, TfNSW has instead recommended the inclusion of a condition which limits the applicant vehicle usage to a level at which a BAL treatment is appropriate. This recommendation is made, in part, on the assumption implicit in section 3.2.1.1 of the applicant’s Traffic Impact Assessment (TIA) that only approximately 40% of the workforce will arrive during the 6-7am peak hour.<sup>3</sup>
- 8. The assumption that 40% of the applicant’s workforce will arrive during 6-7am is inconsistent with other sections of the TIA, notably section 3.3, which states that *“The majority of the workforce typically arrive on-site between 6:00am and 7:00am”*. Using the data and (generous) assumptions in the TIA:
  - d. During peak construction, over 400 workers will access the site daily.<sup>4</sup>
  - e. 90% of the workforce would be located in Tamworth and would travel to/from the north.<sup>5</sup>
  - f. The applicant will run two 12-seater shuttle buses and one 40-seater shuttle bus.<sup>6</sup>
  - g. Assuming:
    - i. the majority of workers arriving on-site during 6-7am peak hour is only 60%;
    - ii. all three shuttle buses run in this peak hour and are completely full; and
    - iii. vehicle occupancy for remaining vehicles is 1.5,<sup>7</sup>

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<sup>3</sup> 40% AM peak hour rate derived from the figures in Table 6 and Section 3.2.1.1 of Appendix F (Updated Traffic Impact Assessment) to the Amendment Report – Middlebrook Solar Farm dated March 2024.

<sup>4</sup> Section 3.2.1.1 of the TIA.

<sup>5</sup> Section 3.2.1.1 of the TIA.

<sup>6</sup> Section 3.2.1.1 of the TIA.

<sup>7</sup> Section 3.2.1.1 of the TIA. Note that assuming a vehicle occupancy of 1.5 is unrealistic (and certainly not “conservative”) given vehicle occupancy for work trips in NSW is approximately 1.1 – see e.g.

then:

- iv.  $400 \text{ workers} \times 90\% \text{ from the North}^8 \times 60\% \text{ arriving between 6-7am} = \underline{216 \text{ workers arriving from the North between 6-7am;}}$
  - v.  $216 \text{ workers} - 40 \text{ (on 1 shuttle bus)} - 2 \times 12 \text{ (on 2 shuttle buses)} = \underline{152 \text{ workers not on a bus;}}$
  - vi.  $152 / 1.5 \text{ (vehicle occupancy)} = \underline{101 \text{ light vehicles will be making a left-hand turn at the NEH-MR Intersection during peak hour each morning.}}^9$
9. Even using the applicant's own assumptions in the TIA, noting that at least 101 light vehicles will make a left-hand turn at the NEH-MR Intersection during the 6-7am peak hour, it is entirely implausible that the applicant will be able to keep all vehicle movements (including heavy vehicles) within the limits required by Condition B1(a)(ii).
10. In light of this, a BAL treatment at the NEH-MR Intersection is not appropriate and the applicant should be required to implement an AUL treatment.

***A condition limiting on-site carparking is required***

11. Condition B9(b) requires the applicant to ensure that there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site.
12. However, no condition expressly limits the number of carparks that the applicant may provide on-site. In the absence of a condition limiting car parking, the applicant's assumptions in regarding vehicle movements and carpool incentive structures are not realistic. A clear and express condition limiting the car park size is required to incentivise workers to use shuttle buses and/or carpool. Further, limiting car parking will assist to ensure the Applicant's compliance with Condition B1(a)(ii).
13. An appropriate light vehicle car park limit is 150. This is based on the applicant's assumption in section 3.2.1.1 of the TIA that 150 light vehicle movements will occur during construction.
14. Condition B9(b) should be amended to limit the on-site car parking to 150 light vehicles. Alternatively, a new condition to the same effect should be included.

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<https://www.transport.nsw.gov.au/sites/default/files/media/documents/2017/HTS%20Report%20Sydney%20012-13.pdf>.

<sup>8</sup> Condition B3 provides that all vehicles associated with the development must avoid the use of Middlebrook Road east of Site Access Point 2 (as identified in Appendix 1) – i.e. they must not use Marsden Park Road. Accordingly, all southbound traffic travelling from Tamworth will turn left at the NEH-MR Intersection.

<sup>9</sup> Alternatively, using a more realistic vehicle occupancy of 1.1:  $152 / 1.1 = 138$  light vehicles (i.e. one vehicle every 26 seconds).

***Condition B2 should cover all vehicles***

15. Condition B2 requires the applicant to keep accurate records of the number of heavy vehicles requiring escort and heavy vehicles entering or leaving the site each day for the duration of the project.
16. Notably, Condition B2 only applies to heavy vehicles. There is no requirement for the applicant to monitor or record light vehicles entering or leaving the site. In the absence of recording light vehicles entering and exiting the site, the applicant's compliance with Condition B1(a)(ii) will be unrealistic to enforce.
17. Condition B2 should be amended to require the Applicant to keep accurate records of the number of all vehicles entering or leaving the site each day for the duration of the project, not just heavy vehicles.