

24 October 2025

Department of Planning, Housing and Infrastructure
Attention: Nestor Tsambos, Acting Director Energy Assessments
4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

Via the Major Projects Portal

Dear Mr Tsambos,

RE: WHITEHAVEN SOLAR FARM – RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION

1 INTRODUCTION

1.1 OVERVIEW OF THE PROPOSED WHITEHAVEN SOLAR FARM

Whitehaven Energy Pty Ltd (Whitehaven Energy), (a wholly owned subsidiary of Whitehaven Coal Limited [Whitehaven]) is proposing to develop a solar farm approximately 25 kilometres (km) south-east of Narrabri and approximately 60 km north-west of Gunnedah, within the Narrabri Shire Local Government Area (LGA), in the New England North West region of New South Wales (NSW).

The Whitehaven Solar Farm Project (the Project) would be located adjacent to the existing Narrabri Mine on Whitehaven managed land and would include approximately 26 megawatts (MW) direct current (DC) or 20 MW alternating current of solar electricity generation and the construction of a 10-Megawatt Hour DC Battery Energy Storage System (BESS). The Project would provide behind-the-meter electricity supply to the Narrabri Mine via the existing 66 kilovolt electricity transmission line.

Whitehaven Energy (2024) prepared the Environmental Impact Statement for the Project (the EIS) to support the assessment process under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

1.2 RESPONSE TO AGENCY COMMENTS

A Submissions Report was prepared in consideration of the *State Significant Development Guidelines* (NSW Department of Planning, Housing and Infrastructure [DPHI], 2024a), in particular *Appendix C – preparing a submissions report* (DPHI, 2024b) to respond to community, organisation and agency submissions received on the Project. The Submissions Report was submitted to DPHI in July 2025.

The following NSW Government agencies and local council provided feedback on the Submissions Report:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW), including:
 - Conservation Programs, Heritage and Regulation (CPHR);
 - Heritage NSW; and
 - DCCEEW – Water Group.
- NSW Resources (NSWR);
- Transport for NSW (TfNSW);
- Narrabri Shire Council (NSC);
- NSW State Emergency Services (SES);
- Subsidence Advisory NSW (SA NSW); and
- Department of Primary Industries and Regional Development (DPIRD) - Agriculture and Biosecurity.

In August 2025, DPHI requested responses to the CPHR, TfNSW, DCCEEW Water Group and Heritage NSW feedback on the Submissions Report.

Accordingly, Whitehaven Energy has not provided any further responses to the other agencies¹.

In addition, DPHI included further requests for information of its own.

2 RESPONSES TO ADDITIONAL INFORMATION REQUESTS

2.1 NSW DEPARTMENT OF PLANNING, HOUSING AND INFRASTRUCTURE

2.1.2 RFI Dated 13 August 2025

A request for additional information was received from DPHI on 13 August 2025. Responses to DPHI's information requests are provided below.

Comment/Recommendation

A Bushfire Assessment Report (BAR) which addresses the correspondence from the Rural Fire Service, which has been made available on the planning portal.

Response

Refer to Attachment 1 for the requested Bushfire Assessment Report. The Report determined that the proposed Class 5 buildings within the development area are exposed to bushfire attack level (BAL) 19 and made recommendations to enhance the bushfire protection measures for the proposed buildings and infrastructure, which will provide compliance to the objectives of *Planning for Bush Fire Protection 2019* (NSW RFS, 2019). Whitehaven Energy would incorporate the recommendations into the relevant management plans.

It is important to note that implementing the recommendations from the Bushfire Assessment Report will not result in any additional disturbance to what has been assessed in the EIS.

Comment/Recommendation

Agreed heads of terms for a Voluntary Planning Agreement with Narrabri Shire Council.

Response

Whitehaven Energy offered a Voluntary Planning Agreement (VPA) to NSC on 27 March 2025, which was subsequently declined by NSC. Further, in NSC's response to the Submissions Report dated 29 July 2025, NSC acknowledged that Whitehaven Energy has taken early steps to progress the VPA:

Council acknowledge Whitehaven has taken steps to commence early discussions related to a proposed planning agreement (PA) for the Project.

Whitehaven Energy will continue discussions with NSC in relation to a future VPA agreeable to both parties.

Comment/Recommendation

A responding to feedback provided by the Conservation Programs, Heritage and Regulation (CPHR) Group, Transport for NSW, NSW DCCEEW Water Group & Heritage NSW.

Response

Refer to Sections 2.2 to 2.6 below.

¹ It is noted that Whitehaven Energy has also provided responses to NSW SES recommendations that were noted within their response to the Submissions Report.

2.2 CONSERVATION PROGRAMS, HERITAGE AND REGULATION

In a letter dated 5 August 2025, CPHR made the following comments on the Submissions Report:

Comment/Recommendation

An updated BDAR has not been provided with the RTS.

Outcome: *This issue has not been resolved.*

Recommendation:

1. *DPHI request an updated BDAR from the accredited assessor which incorporates all outstanding recommendations.*

Response

Whitehaven Energy considered CPHR's recommendation to provide an updated/revised Biodiversity Development Assessment Report (BDAR) however does not accept that an updated BDAR is required as all of CPHR's comments have been addressed in the responses below. In addition, Whitehaven Energy notes that the *Biodiversity Assessment Method – Calculator* (BAM-C) has undergone changes since lodgement of the Submissions Report.

The responses to the “outstanding recommendations” have been provided below.

Comment/Recommendation

As stated in our EIS response, the partial loss proposal for this project has not been adequately described or justified, particularly for the comparatively small area that it is being applied to. The RTS does not provide additional information to address the requirements of section 4.1.2 of the Biodiversity Assessment Method Operational Manual - Stage 2. This requires that evidence-based justification be included in the BDAR for scoring of partial loss. Justification should refer to relevant published scientific literature or a comparable previous or current biodiversity monitoring program.

Additional information required to support the partial loss proposal includes:

- *Whether the proposed future vegetation integrity (VI) score is based on the VI immediately after clearing has occurred, or at a future stable state.*
- *A clear description of clearing methods to be used, and how these methods will ensure impacts to groundcover will be totally avoided.*
- *Commitments to ensure ongoing avoidance of impact to the groundcover layer throughout the life of the project, including a commitment that future management of this zone or any other activities in this zone will ensure retention of vegetation in line with the proposed future vegetation integrity (VI) scores (see our comments related to Recommendation 1.2 below).*
- *When post-clearing validation of the future VI score will occur and what method will be used.*

Outcome: *This issue has not been resolved.*

Recommendation

2. *Provide additional information in the BDAR to support the partial loss proposal, including the point-in-time of when the proposed future VI score has been calculated, evidence-based justification for the partial loss calculation, a description of vegetation clearing and maintenance methods, and confirmation of when the future VI score will be validated and the methods to be used.*

Response

The BDAR (Resource Strategies Pty Ltd [Resource Strategies], 2024), including partial loss calculations for areas requiring vegetation management for asset protection (bushfire control) and shade minimization of PV arrays, has been prepared in accordance with the *Biodiversity Assessment Method* (BAM) (NSW Department of Planning, Industry and Environment [DPIE], 2020). A reconciliation table of the BAM (DPIE, 2020) requirements for partial loss calculations has been provided as Table 1 below. The information provided in Table 1 (as outlined in the BDAR) supports the indication that the partial loss calculations are appropriate and justified.

Table 1
Reconciliation of the BDAR against the BAM Partial Loss Information Requirements

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR
<i>The future value of the attributes may be amended to reflect the impacts from partially clearing a vegetation zone, including areas such as asset protection zones and easements.</i>	The future value of the attributes was amended to reflect the impacts from partially clearing a vegetation zone, including areas such as asset protection zones (e.g. areas where construction/operations are not proposed however vegetation management needs to occur for asset protection and minimisation of shading of PV arrays). Section 1.2 of the BDAR states: <i>The Development Footprint is comprised of two management zones (Figure 3):</i> • <i>Management Zone 1 – Complete clearing for construction and operation.</i> • <i>Management Zone 2 – Partial clearing for asset protection/removal of shading issues. This would involve removal of trees/shrubs by chain-saw rather than heavy machinery, resulting in no ground disturbance.</i> <i>While a complete clearance footprint has been assumed for the solar panels (due to potential disturbance during construction), a ground cover would be established beneath the panels for sheep grazing. In addition, a complete clearance footprint has been assumed for the ETL as the precise location of the clearance pads for the poles are not known.</i>
<i>The assessor must map these areas of the vegetation zone as a separate management zone and refer to these areas in the BDAR or BCAR.</i>	Figure 3 of the BDAR displays the management zones within the Development Footprint (Management Zone 1 and Management Zone 2).

Table 1 (Continued)
Reconciliation of the BDAR against the BAM Partial Loss Information Requirements

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR										
<i>The BDAR or BCAR must specify how the remaining attributes will be maintained.</i>	Table 16 of the BDAR provides detailed measures to mitigate and manage potential impacts on biodiversity from the Project. Relevant biodiversity measures from Table 16 of the BDAR are as follows: <table border="1"> <thead> <tr> <th>Mitigation Measure</th><th>Method/Technique</th></tr> </thead> <tbody> <tr> <td>Biodiversity Measure 2 – Clearing Limits</td><td>Staff and personnel involved in vegetation clearance works would be made aware of clearing (disturbance) limits in the relevant Project approval documentation and of restricted access areas to prevent inadvertent damage. Staff and personnel involved in vegetation clearance works would be made aware of the difference between complete clearing and partial clearing management zones (i.e. removal of trees/shrubs by chain-saw rather than heavy machinery in partial clearing management zones, no ground disturbance). Construction materials must not be stockpiled in partial clearing management zones.</td></tr> <tr> <td>Biodiversity Measure 3 – Temporary Fencing/Signage on Sensitive Areas</td><td>Clear delineation of the areas to be cleared on the ground prior to clearing activities (e.g. paint, flagging tape and posts) and restriction of clearing to within these areas (signposts to alert personnel not to enter vegetation outside of the disturbance areas). Focus on sensitive areas include riparian zones, native vegetation to be retained, TECs and species polygons for threatened flora species outside of the Development Footprint.</td></tr> <tr> <td>Biodiversity Measure 9 – Weed Control</td><td> All plants are regulated under the Biosecurity Act 2015 with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant has a duty to prevent, eliminate or minimise the risk, so far as is reasonably practicable. Qualified and experienced weed management personnel would map the locations of weeds requiring control, identifying species, cover and extent. Mechanical removal of identified weeds and/or the application of approved herbicides. Follow-up site inspections to determine the effectiveness of the eradication programmes. </td></tr> <tr> <td>Biodiversity Measure 10 – Grazing Management</td><td> The site may be operated as an agrisolar operation with continued sheep grazing under the solar panels. In this case, grazing would be managed such that ground cover is retained beneath panels (with best practice forage height), to resist erosion and weeds. This may involve rotational grazing management or adjusting stocking rate. There are existing fences, however, additional stock fence and gates would be installed to manage grazing sheep as necessary (e.g. to protect Tree Planting along the unnamed drainage line of Kurrajong Creek [Figure 3]). Plain wire instead of barbed used on top of the stock fencing, potentially with electrified fence. Existing dams would be used but water troughs would be provided where necessary. </td></tr> </tbody> </table>	Mitigation Measure	Method/Technique	Biodiversity Measure 2 – Clearing Limits	Staff and personnel involved in vegetation clearance works would be made aware of clearing (disturbance) limits in the relevant Project approval documentation and of restricted access areas to prevent inadvertent damage. Staff and personnel involved in vegetation clearance works would be made aware of the difference between complete clearing and partial clearing management zones (i.e. removal of trees/shrubs by chain-saw rather than heavy machinery in partial clearing management zones, no ground disturbance). Construction materials must not be stockpiled in partial clearing management zones.	Biodiversity Measure 3 – Temporary Fencing/Signage on Sensitive Areas	Clear delineation of the areas to be cleared on the ground prior to clearing activities (e.g. paint, flagging tape and posts) and restriction of clearing to within these areas (signposts to alert personnel not to enter vegetation outside of the disturbance areas). Focus on sensitive areas include riparian zones, native vegetation to be retained, TECs and species polygons for threatened flora species outside of the Development Footprint.	Biodiversity Measure 9 – Weed Control	All plants are regulated under the Biosecurity Act 2015 with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant has a duty to prevent, eliminate or minimise the risk, so far as is reasonably practicable. Qualified and experienced weed management personnel would map the locations of weeds requiring control, identifying species, cover and extent. Mechanical removal of identified weeds and/or the application of approved herbicides. Follow-up site inspections to determine the effectiveness of the eradication programmes.	Biodiversity Measure 10 – Grazing Management	The site may be operated as an agrisolar operation with continued sheep grazing under the solar panels. In this case, grazing would be managed such that ground cover is retained beneath panels (with best practice forage height), to resist erosion and weeds. This may involve rotational grazing management or adjusting stocking rate. There are existing fences, however, additional stock fence and gates would be installed to manage grazing sheep as necessary (e.g. to protect Tree Planting along the unnamed drainage line of Kurrajong Creek [Figure 3]). Plain wire instead of barbed used on top of the stock fencing, potentially with electrified fence. Existing dams would be used but water troughs would be provided where necessary.
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Biodiversity Measure 10 – Grazing Management	The site may be operated as an agrisolar operation with continued sheep grazing under the solar panels. In this case, grazing would be managed such that ground cover is retained beneath panels (with best practice forage height), to resist erosion and weeds. This may involve rotational grazing management or adjusting stocking rate. There are existing fences, however, additional stock fence and gates would be installed to manage grazing sheep as necessary (e.g. to protect Tree Planting along the unnamed drainage line of Kurrajong Creek [Figure 3]). Plain wire instead of barbed used on top of the stock fencing, potentially with electrified fence. Existing dams would be used but water troughs would be provided where necessary.										

Table 1 (Continued)

Reconciliation of the BDAR against the BAM Partial Loss Information Requirements

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR
<i>If it is likely they will continue to degrade, full loss should be assumed.</i>	It is not likely that the areas will continue to degrade for the following reasons: ■ Table 16 of the BDAR provides detailed mitigation and management measures pertaining to clearing limits, weed management and grazing management. ■ Most of Management Zone 2 is disturbed and has an extensive history of cropping (2.44 ha of derived grassland). The Executive Summary of the BDAR states: <i>The Project is across a number of paddocks that were cleared of native vegetation historically for farming, and presently used for a mix of livestock grazing and dry land cropping (oats, barley and/or wheat). The cultivated land meets the definition of Category 1 – Exempt Land as it lacks biodiversity values. Some paddocks contain secondary native grasslands that have regrown since the last crop.</i> ■ Plate 4 of the BDAR (reproduced as Plate 1 below) shows an example of the cleared grassland paddocks.  Plate 1 Example of Derived Grassland (Poor) (PCT 101) in the Paddocks (Resource Strategies, 2024) ■ There is a very minor area of 0.43 ha of woodland in Management Zone 2 (Figure 4), made up of scattered patches with and without trees/tall shrubs (see Plate 2). ■ Table 15 of the BDAR (replicated below) shows that the vegetation integrity (VI) scores for woodland after partial clearance are less than the VI scores of the derived native grassland version of the same PCT prior to the development (see replicated table below).

Table 1 (Continued)
Reconciliation of the BDAR against the BAM Partial Loss Information Requirements

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR
As above.	 Plate 2 Areas of Woodland within Management Zone 2

Table 1 (Continued)

Reconciliation of the BDAR against the BAM Partial Loss Information Requirements

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR													
As above.	Table 15 Impacts to Vegetation Integrity													
	#	Vegetation Zone	Management Zone	Area	Before Development				After Development				Change in VI Score	
					Composition	Structure	Function	VI score	Composition	Structure	Function	VI score		
	2a	Belah Woodland (Good) (PCT 55)	MZ1	0.66	77.6	56	66.3	66	0	0	0	0	-66	
	MZ2		0.13	50					19.6	1.3	10.8	-55.2		
	2b	Belah Woodland (Semi-Cleared) (PCT 55)	MZ1	0.69	74.3	64.7	43.4	59.3	0	0	0	0	-59.3	
	MZ2		0.15	50					42.2	12.7	29.9	-29.4		
	2c	Derived Grassland (Poor) (PCT 55)	MZ1	3.84	74.4	39.9	14.5	35.1	0	0	0	0	-35.1	
	MZ2		0.64	50					39.8	5.7	22.4	-12.7		
	3	Poplar Box - Belah Woodland (Good) (PCT 56)	MZ1	0.25	98.8	92.9	29.3	64.5	0	0	0	0	-64.5	
	MZ2		0.03	66.7					49.4	0.5	11.9	-52.6		
	4b	Pilliga Box - Buloke Woodland (Semi-Cleared) (PCT 88)	MZ1	0.08	91.2	66.5	30.2	56.8	0	0	0	0	-56.8	
	4c	Pilliga Box - Buloke Woodland (Revegetation) (PCT 88)	MZ1	0.03	79.9	41.2	22.1	41.7	0	0	0	0	-41.7	
	5b	Poplar Box Grassy Woodland (Semi-Cleared) (PCT 101)	MZ1	0.27	67.6	48.4	26	44	0	0	0	0	-44	
	MZ2		0.12	58					46.4	2.2	18	-26		
	5c	Derived Grassland (Poor) (PCT 101)	MZ1	13.7	49.2	59.3	17.2	36.9	0	0	0	0	-36.9	
	MZ2		1.8	44					52.7	4.5	21.9	-15		
	■ The BDAR has been conservative and as described above, Section 1.2 of the BDAR states: While a complete clearance footprint has been assumed for the solar panels (due to potential disturbance during construction), a ground cover would be established beneath the panels for sheep grazing. In addition, a complete clearance footprint has been assumed for the ETL as the precise location of the clearance pads for the poles are not known.													

Table 1 (Continued)**Reconciliation of the BDAR against the BAM Partial Loss Information Requirements**

Section 8.1.1 of the BAM (DPIE, 2020)	How it is Addressed in the BDAR
<i>The future value of an attribute must not be higher than the current observed value for that attribute.</i>	The future value of an attribute would not be higher than the current observed value for that attribute.

Further, as stated in the EIS, the Project area comprises land that has been predominantly cleared of native vegetation for agricultural use. As such, areas described as Management Zone 2 (partial clearing for asset protection/removal of PV panel shading issues) would be notably distinguishable from areas of complete clearing (i.e. no trees present) and therefore would not be difficult to effectively manage.

It is also noted that Section 6.3.1 of the EIS refers to Whitehaven Energy's consultation with CPHR (formerly referred to as the Biodiversity, Conservation and Science Directorate [BCS]) throughout the EIS process regarding the Management Zones approach:

Whitehaven Energy consulted with BCS throughout the EIS process. This included providing the approach and implementation of Management Zones within the Development Footprint (including partial clearance) during discussions on 20 June 2024. No concerns have been raised by BCS in relation to the Project to date.

Comment/Recommendation

Following from our commentary above, the RTS does not provide additional information detailing the intended long-term management of management zone 2. Only Biodiversity Measure 2 – clearing limits refers to partial clearing management zones.

The mitigation measures presented in the BDAR are not specific to managing retained vegetation in management zone 2 to ensure maintenance of the proposed VI score. CPHR expects clear commitments in the BDAR which are carried across to a BMP or similar management plan.

Outcome: *This issue has not been resolved.*

Recommendations

Include details of how retained vegetation in management zone 2 will be managed to ensure the VI score will be maintained or improved over the life of the project, and confirm how these commitments will be captured in relevant management plans.

Response

As was described in the Submissions Report, Table 16 of the BDAR (Resource Strategies, 2024) includes details of the proposed ongoing management of the retained vegetation in Management Zone 2. This includes (but is not limited to):

- Staff and personnel involved in vegetation clearance works would be made aware of clearing (disturbance) limits in the relevant Project approval documentation and of restricted access areas to prevent inadvertent damage, and would be made aware of the difference between complete clearing and partial clearing management zones.
- Temporary fencing and signage (e.g. paint, flagging tape and posts) at sensitive areas associated with clearance works.
- Pre-clearance fauna surveys would be undertaken by a suitably trained and qualified ecologist or wildlife handler to identify trees with suspected active nests and tree hollows. Options to minimise harm to fauna by modifying the clearance method would be evaluated by the ecologist or wildlife handler.
- Proposed agrisolar operation with continued sheep grazing under solar panels. Groundcover species would include local endemic native flora species suitable for fodder.

Comment/Recommendation

The RTS has not reconsidered the practicality of applying partial loss in certain parts of management zone 2 that are highly constrained between existing and proposed infrastructure, as described in our EIS response.

Outcome: *This issue has not been resolved.*

Recommendation:

Review the allocation of management zones 1 and 2. Where it is impractical to manage for partial loss, full loss should be calculated in accordance with the Biodiversity Assessment Method.

Response

It is noted that the BDAR (Resource Strategies, 2024) has been prepared in accordance with the BAM (DPIE, 2020).

Whitehaven Energy acknowledges that CPHR's suggestion to clear the area of Management Zone 2 (i.e. consider the area as full loss rather than partial loss) is not supported by the BAM, as the BAM does not outline any minimum area requirements to avoid impacts on biodiversity values.

Whitehaven Energy notes that they have extensive experience with clearing limits and maintains the position that the proposed clearing limits are practical. The landscape is currently extensively cleared for grazing/agriculture and simple controls such as clear delineation (on the ground) of disturbance limits have proven to be effective controls. Therefore, no change is proposed for the Management Zone 2 area.

Table 16 of the BDAR (Resource Strategies, 2024) provides detailed management measures to apply clearing limits. The relevant measures have been included in Table 2 below (this was also provided as Table 4 of the Submissions Report).

Table 2
Measures to Mitigate and Manage Potential Impacts – Clearing Limits

Mitigation Measure	Method/Technique
Biodiversity Measure 2 – Clearing Limits	<i>Staff and personnel involved in vegetation clearance works would be made aware of clearing (disturbance) limits in the relevant Project approval documentation and of restricted access areas to prevent inadvertent damage. Staff and personnel involved in vegetation clearance works would be made aware of the difference between complete clearing and partial clearing management zones (i.e. removal of trees/shrubs by chain-saw rather than heavy machinery in partial clearing management zones, no ground disturbance). Construction materials must not be stockpiled in partial clearing management zones.</i>
Biodiversity Measure 3 – Temporary Fencing/Signage on Sensitive Areas	<i>Clear delineation of the areas to be cleared on the ground prior to clearing activities (e.g. paint, flagging tape and posts) and restriction of clearing to within these areas (signposts to alert personnel not to enter vegetation outside of the disturbance areas). Focus on sensitive areas include riparian zones, native vegetation to be retained, TECs and species polygons for threatened flora species outside of the Development Footprint.</i>

Further, as stated in the EIS, the Project area comprises land that has been predominantly cleared of native vegetation for agricultural use. As such, areas described as Management Zone 2 (partial clearing for asset protection/removal of PV panel shading issues) would be notably distinguishable from areas of complete clearing (i.e. no trees present) and therefore would not be difficult to effectively manage.

It is also noted that Section 6.3.1 of the EIS refers to Whitehaven Energy's consultation with CPHR (formerly referred to as BCS) throughout the EIS process regarding the Management Zones approach:

Whitehaven Energy consulted with BCS throughout the EIS process. This included providing the approach and implementation of Management Zones within the Development Footprint (including partial clearance) during discussions on 20 June 2024. No concerns have been raised by BCS in relation to the Project to date.

It is also noted that the BAM-C has been updated since lodgement of the Submissions Report. As such, the BDAR was prepared in accordance with the BAM-C at the time of lodgement.

Comment/Recommendation

No additional information is provided with the RTS.

Table 3-1 of Attachment B of the BDAR provides some justification of PCT selection, but this lacks specific detail.

For example, PCT 55 was identified as the most suitable PCT from seven possibilities (i.e. 27, 55, 56, 228, 244, 378, 1291) due to suitable species in the upper stratum, mid stratum and ground stratum species lists.

The reasons for rejecting the other 6 PCTs have not been detailed.

Outcome: *This issue has not been resolved.*

Recommendation

5. *Provide more detail of diagnostic species and exclusion of potential PCTs to justify selection of plant community types.*

Response

It is noted that the BDAR (Resource Strategies, 2024) has been prepared in accordance with the BAM (DPIE, 2020).

The reasons for rejection of the other six species was justified in Table 4 of the BDAR (Resource Strategies, 2024), which detailed that PCT 55 was the most suitable due to suitable species in the upper stratum, mid stratum and ground stratum species lists.

The *Whitehaven Solar Farm – Flora and Fauna Baseline Report* (Ausecology Pty Ltd [Ausecology], 2024) is provided as Attachment B of the BDAR, and provides detail of diagnostic species and exclusion of potential PCTs to justify the selection of PCTs. Table 3-1 of the *Whitehaven Solar Farm – Flora and Fauna Baseline Report* (Ausecology, 2024) was replicated as Table 5 within the Submissions Report for reference.

Whitehaven Energy notes that CPHR has not raised a specific issue with the assignment of any PCTs.

2.3 DCCEEW – WATER GROUP

On a letter dated 4 August 2025, Department of Climate Change Energy the Environment and Water - Water Group provided the following comments on the Submissions Report.

Comment/Recommendation

1.0 Water supply, take and licensing

1.1 Recommendation – pre-determination

The Department of Planning, Housing and Infrastructure requests the proponent to provide clarification on the ability to obtain necessary water volumes to meet site water demands during construction, operation and decommissioning phases of the project.

Explanation

Insufficient information was provided in the Response to Submissions (RTS) to confirm the feasibility of the water supply options proposed. The RTS refers to obtaining water captured in the projects water management system or sourcing it from the Narrabri Mine. To understand the feasibility of these options, further information is requested on the likely water availability in the projects management system and that the volumes sourced from Narrabri mine will not require changes to existing water licences.

Response

The EIS included a comprehensive Water Resources Impact Assessment (Appendix G of the EIS) (WRM Water & Environment Pty Ltd [WRM], 2024). Section 4.3 of the Water Resources Impact Assessment describes the water supply sources for the Project (WRM, 2024):

The majority of water required to meet Project water demands would be imported and would most likely be sourced through an arrangement with local suppliers, including Whitehaven Coal's Narrabri Coal Mine. Raw water would be utilised for construction, and potable supplies would be sourced for site offices and amenities. Water for construction and operational phase non-potable water demands would be supplied from one or a combination of the following sources:

- *commercial suppliers in the nearby region (e.g. Narrabri Mine) via water truck;*
- *harvested runoff from farm dams under agreement with host or local landholders;*
- *harvested runoff from disturbed areas captured in excavations or sediment basins/traps constructed to prevent sediment transport off-site; and*
- *recycling and reusing water.*

Based on the total Project Area of 109 ha, the Maximum Harvestable Right Dam Capacity (MHRDC), from which water can be used for any purpose, is 7.15 ML based on a Project Area of 1.1 km² at - 30.530097, 149.907335. This value was calculated using WaterNSW's MHR calculator.

The largest water demands, such as for dust suppression, soil conditioning, and concrete batching, are all nonrecoverable water uses. Where possible, water uses, such as for concrete facilities and vehicle washdown, would be recycled and reused as far as practical.

During construction, there may also be opportunities to utilise water collected in sediment retention ponds, or locally sourced from farm dams or private bores. Local water supply from private dams and bores would need to be with harvestable water rights and water access licencing conditions.

Any water supplied to the Project from existing groundwater bores or farm dams would be sourced under agreement with relevant landholders while ensuring that any WALs, works approvals, and water use approvals required under the WM Act (2000) are obtained.

Water sources would be determined prior to the commencement of construction in consultation with suppliers and landholders. Town water supplies would generally be avoided for use in construction but may be used where appropriate and available.

...

Potable water demands for the Project would be supplied via water tanker and stored in on-site water tanks. Potable water storages would be routinely tested to ensure water quality meets the requirements of the Australian Drinking Water Guidelines (ADWG) (National Health and Medical Research Council, 2011) and an appropriate maintenance regime would be implemented to ensure water quality ADWG water quality standards are maintained.

Table 4.3 of the Water Resources Impact Assessment (WRM, 2024) provided a detailed site water balance for the Project. This has been replicated as Table 3 below.

Table 3
Detailed Site Water Balance (WRM, 2024)

	Construction Phase (kL)	Operation (annual) (kL)
Water Demands		
Dust suppression (nett. Evaporation)	7000	Neg.
Construction – stabilised road /hardstands	2554	n/a
Construction – concrete	70	n/a
Washdown	1100	3207
Fire fighting	refer Section 4.4	As required
Potable	950	100
Water Supply		
External potable water	950 (Purchased)	100 (Purchased)
Harvested project water	7150 (max.)	1600
Neighbouring Narrabri Coal Mine	Balance acquired	1607 + firefighting

kL = kilolitre.

Further, Table 6-18 of the EIS included proposed management and mitigation measures relating to water resources, which included the below water supply measure (proposed to be implemented prior to construction):

A water sourcing and monitoring strategy to manage potential availability impacts on downstream water users and ensure compliance with legislation relating to water extraction.

NCOPL has extensive water supply infrastructure and has agreed to provide water for all stages of the Project and can easily accommodate the Project's relatively modest water demand.

2.4 HERITAGE NSW

Within a letter dated 13 August 2025, Heritage NSW provided the following comments on the Submissions Report.

Comment/Recommendation

- *Appendix 2 of the ACHA must be updated to include all correspondence demonstrating consultation on the project in accordance with the Aboriginal cultural heritage consultation requirements for proponents (Consultation Requirements). This includes:*
 - a. *Responses from relevant statutory bodies identified in Section 4.1.2 of the Consultation Requirements.*
 - b. *Responses from Aboriginal stakeholders registering an interest in the project.*

Until these issues are resolved, Heritage NSW cannot provide further advice on the adequacy of the assessment.

Response

The correspondence requested was provided to Heritage NSW separately on 20 October 2025.

2.5 NSW STATE EMERGENCY SERVICES

In a letter dated 6 August 2025 in response to the Submissions Report, the NSW SES noted the following recommendations.

Comment/Recommendation

The NSW SES recommends that consideration of flooding issues is undertaken in accordance with the requirements of NSW Government's Flood Prone Land Policy as set out in the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines, including the Support for Emergency Management Planning and relevant planning directions under the Environmental Planning and Assessment Act, 1979.

Response

Noted. As stated in Section 2.4.1 of the EIS, the Project location is suitable as it is not located within the Namoi River floodplain. Further, the Water Resources Impact Assessment (WRM, 2024) assessed the Project area as having a low flood risk with minimal risk to changes in internal or external waterway flows.

Comment/Recommendation

Recommend pursuing site design and stormwater management that reduces the impact of creek flooding and minimises any risk to the site users and community. Any improvements that can be made to reduce flood risk will benefit the community. We support the design to avoid Kurrajong Creek and its tributaries within the project footprint area for drainage and any flooding risks.

Response

As noted in the Water Resources Impact Assessment (WRM, 2024), the Project area has been assessed as having a low flood risk with minimal risk to changes in internal or external waterway flows. The Water Resources Impact Assessment (WRM, 2024) was informed by the following guidelines related to stormwater management:

- *Managing Urban Stormwater: Soils and Construction Volume 1* (Landcom, 2004); and
- *Managing Urban Stormwater: Soils and Construction – Volume 2A Installation of services* (Department of Energy and Climate Change, 2008).

Table 6-18 of the EIS details how stormwater management measures would be incorporated into the design, construction and operation phases of the Project:

The best practice principles for stormwater and sediment control outlined in Managing Urban Stormwater: Soils and

Construction Volume 1 (Landcom, 2004) and Volume 2A (DESS, 2008b) would be incorporated into the design, construction and operation phases as part of a CSWMP and ESCP.

Comment/Recommendation

Support the proposed Mitigation Measures and recommend these are incorporated into any existing emergency plans for the site. See Attachment A Principle 1 for additional information on the development of emergency response measures in relation to flooding, noting NSW SES does not have authority to endorse or approve such plans.

Response

Whitehaven Energy would include the proposed mitigation measures in any relevant management plans and implemented for the Project.

Comment/Recommendation

Recommend that consideration should be given to the safety of access/egress to the site. We note that while the site itself appears to be located above the Probable Maximum Flood (PMF) extent there may be risk of becoming isolated from flooding along major access roads. NSW SES advise against driving through floodwater.

Response

Noted. Table 6-18 of the Submissions Report includes proposed management and mitigation measures relevant to flooding risks, including:

- Operations staff would have access to facilities for early severe weather warnings including the BoM's 'MetEye' and 'Really Simple Syndication (RSS) Feeds'. Radio and BoM information would be reviewed frequently for potential major facility members, and visitors are able to be notified of potential flooding, road and facility closure.
- Evacuation routes would be designed during the detailed design phase and would take into account zones of flood hazard.
- Foundations for the photovoltaic (PV) solar arrays and transmission lines would be located away from areas that exceed both flood depths of 0.3 metres (m) and flow velocities greater than 1.5 metres per second (m/s). Detailed design of the Project would consider the results of the flood models, in particular the 1 percent (%) Annual Exceedance Probability (AEP) scenario.

Comment/Recommendation

Recommend during the construction phase, consideration is given to closing the worksite and securing all materials and equipment prior to the start of the working day, on receipt of advice from the Bureau of Meteorology (BoM), or when other evidence leads to an expectation significant rainfall which may lead to flooding to prevent materials and other contaminants washing into waterways.

Response

Noted. As described above, Table 6-18 of the Submissions Report includes proposed management and mitigation measures relevant to flooding risks.

2.6 TRANSPORT FOR NEW SOUTH WALES

In a letter dated 7 August 2025, TfNSW requested additional information in response to several matters. This included items that TfNSW noted as outstanding. These items have been responded to below.

Comment/Recommendation

Swept path analysis is to be provided for the largest high-risk OSOM and the design heavy vehicle, demonstrating that both vehicle classes can turn within the existing pavement of the intersection.

Response

Please refer to Attachment 2 for the swept path analysis of the design vehicle (prepared by The Transport Planning Partnership). The analysis shows that the design vehicle can turn on the existing pavement at the relevant intersections.

In relation to the swept path analysis for OSOM vehicles, this would be done at that time by the relevant contractor as it would be specific to the transport vehicle and load being transported.

Comment/Recommendation

High-risk route analysis is required to address the requested additional information in T2 (a) and (b).

Alternatively, it is noted in the TIA that the high-risk OSOM-laden load will have comparable dimensions and weight to those of previous deliveries to the Whitehaven Coal Mine. TfNSW requests the route analysis or transport management plan that has previously been prepared for the high-risk OSOM deliveries or movements to the Whitehaven Coal Mine from the Port to the site. The high-risk OSOM-laden loads (dimensions and weights) swept path analysis of key pinch points, NHVR ID, and bridge assessments must be provided to demonstrate that the high-risk OSOM-laden loads are comparable and that the impacts to state road network infrastructure will be mitigated, without requiring further road upgrades.

Response

Refer to Attachment 3 for the requested Transport Management Plan for previous OSOM movements to the Narrabri Mine. Specifically, Attachment 3 provides the Transport Management Plan for the transport of an electrical substation from Old Maitland Road, Hexham to Narrabri Mine (developed by GBP Heavy Haulage) (i.e. the same route expected for Project oversize overmass vehicle movements).

Comment/Recommendation

While the shuttle bus protocol in Attachment 3 of the Submissions Report outlines mitigation measures surrounding coal train movement impacts, it does not outline how shift changes from Narrabri Mine will be mitigated. Refer to points 1-3 within the next section for further information that is required to address and manage the Whitehaven Solar Farm contribution to ensure that this project does not further exacerbate the queuing impacts.

It is confirmed in the Submissions Report that no light vehicle movements relating to Whitehaven Solar Farm will be generated.

Response

Noted. Response to “points 1-3” (i.e. the following TfNSW comment/recommendation) have been responded to below.

Comment/Recommendation

While the Road Transport Assessment and Submissions Report states that there is no queueing while the level crossing is open, mitigations to address queueing while the crossing is activated are required.

Table 3.6 of Attachment 2 of the Submissions Report indicates that there has been queueing for almost 10 minutes while the intersection is closed for coal train movements. The timing of this (17:59 – 18:09) is close to the proposed PM peak movements for Whitehaven Solar Farm (17:45 – 18:00). This highlights that there is a risk of queueing at the intersection that may be exacerbated by traffic movements relating

to Whitehaven Solar Farm.

If the proponent can provide updated data regarding coal train movements demonstrating that no coal train has traversed the crossing during peak hours in recent history, this would provide reassurance that traffic generated by Whitehaven Solar Farm will not pose safety issues regarding queues at this intersection.

Alternatively, if the daily construction time is offset to a later start and end time (for example, from 7:30am to 6:30pm, rather than 7:00am to 6:00pm), the impact on queueing from Whitehaven Solar Farm's traffic movement would not exceed the capacity of the existing storage lengths of the intersection treatments, while a train is operational.

It is noted that the upgrade of the Kamilaroi Highway / Kurrajong Creek Road intersection has been raised in the Conditions of Consent for the Narrabri Underground Mine Stage 3 Extension Project.

Response

Whitehaven Energy is agreeable to the recommended later starting time of 7:30 am, noting the finish time would remain at 6:00 pm.

Whitehaven Energy notes that the Detailed Design Report for the Kamilaroi Highway/Kurrajong Creek Road intersection upgrade, as detailed within Condition B67 of the Narrabri Underground Mine Stage 3 Extension Project Development Consent (SSD-10269), was provided to TfNSW on 10 September 2025.

Comment/Recommendation

Attachment 3 of the Submissions Report includes a draft shuttle bus protocol, outlining the mitigation measures of procedures to follow when coal trains impact the Kurrajong Creek Road intersection, and communication of coal train movements. Refer to points 1-3 above under the Kamilaroi Highway/Kurrajong Creek Road intersection requirements, as further information is needed to ensure that the project impacts and contribution to the existing queue length issues at the Kurrajong Creek Road/Kamilaroi Highway intersection are effectively managed.

Response

Noted. Response to "points 1-3" (i.e. the previous TfNSW comment/recommendation) have been responded to above.

If you have any questions in regard to the above responses please contact me via the enclosed details. We look forward to DPHI finalising their assessment.

Yours sincerely,

WHITEHAVEN COAL LIMITED



Scott Mitchell

Manager – Approvals

smitchell@whitehavencoal.com.au

0407 223 813

REFERENCES

Ausecology Pty Ltd (2024) *Whitehaven Solar Farm – Flora and Fauna Baseline Report*.

Department of Environment and Climate Change (2008) *Managing Urban Stormwater: Soils and Construction – Volume 2A Installation of services*.

Landcom (2004) *Managing Urban Stormwater: Soils and Construction Volume 1*.

NSW Department of Planning, Housing and Infrastructure (2024a) *State Significant Development Guidelines*.

NSW Department of Planning, Housing and Infrastructure (2024b) *Appendix C - preparing a submissions report*.

NSW Department of Planning, Industry and Environment (2020) *Biodiversity Assessment Method*.

Resource Strategies Pty Ltd (2024) *Whitehaven Solar Farm Project – Biodiversity Development Assessment Report*.

Whitehaven Energy Pty Ltd (2024) *Whitehaven Solar Farm Project – Environmental Impact Statement*.

WRM Water & Environment Pty Ltd (2024) *Whitehaven Solar Farm – Water Resources Impact Assessment*.

ATTACHMENT 1 – BUSHFIRE ASSESSMENT REPORT

Building Construction in Bush Fire Prone Areas

Bushfire Hazard Assessment Report

REF No. 25.09.326

Whitehaven Solar Farm Project

For Whitehaven Energy Pty Ltd

The site was inspected on 28th August 2025

Report Preparation

Craig Burley

Grad Dip Design for Bushfire Prone Areas
FPAA Certified BPAD – Level 3 Practitioner

Bushfire Risk Assessment Certificate

As required by legislation for State Significant Development in accordance with the
*Environmental Planning and
 Assessment Act 1979*

Property Address:	Lot 9 DP 757104, Lot 151 DP 816020 Lot 152 DP 816020 117 Kurrajong Creek Road Baan Baa NSW 2390
Description of Proposal	Solar Farm for supply of electricity to Narrabri Coal Mine
Plan Reference: [Relied upon in report preparation]	This assessment is based the Environmental Impact Statement 08.10.2024 prepared by Whitehaven Energy Pty Ltd
Bushfire Hazard Assessment Report Ref. No.	25.09.326
Report Date:	23.10.2025
Does the proposal comply with the requirements of <i>Planning for Bush Fire Protection 2019</i> ?	YES
Does the proposal require referral to the NSW Rural Fire Service?	YES
Does the proposal rely on Alternate Solutions?	NO



I Craig Burley of Control Line Consulting have carried out a bushfire risk assessment on the above-mentioned proposal.

A detailed Bushfire Hazard Assessment Report has been prepared in accordance to the submission requirements as set out in *Appendix 1 of Planning for Bush Fire Protection 2019* together with recommendations as to how the relevant specifications and requirements are to be achieved.

I hereby certify, in accordance with the *Environmental Planning and Assessment Act 1979* No 203:

1. That I am a person recognised by the *NSW Rural Fire Service* as a qualified consultant in bushfire risk assessment; and
2. That subject to the recommendations contained in the attached Bushfire Hazard Assessment Report the proposed development conforms to the relevant specifications and requirements.

I am aware that the Bushfire Hazard Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by New South Wales Rural Fire Service as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with *Planning for Bushfire Protection 2019*.

Yours faithfully



Craig Burley
Grad Dip Design in Bushfire Prone Areas
FPA Australia BPAD – Level 3 Certified Practitioner



Executive Summary

We have been engaged by Whitehaven Energy Pty Ltd to prepare a Bushfire Hazard Assessment Report to be a supplement for inclusion in a development application, for the proposed works being the construction of a Solar Farm which in broad terms is to supply electricity to the Narrabri Coal Mine that is located directly adjacent to the proposed development.

The site has been identified as being bushfire prone land and therefore the legislative requirements for the proposed development are applicable.

In terms of the Solar Farm reference has been given to Section 8.3.5 Wind and Solar Farms of *Planning for Bush Fire Protection 2019* (PBP). Compliance with the matters raised in this section of the guideline document are demonstrated within this report.

PBP 2019 also states that the general aims and objectives of PBP 2019 do apply with respect to other matters such as access, water and services, emergency planning and landscape/vegetation management.

Specifically the objectives of PBP 2019 are to;

- (i) afford buildings and their occupants protection from exposure to a bushfire;
- (ii) provide for a defensible space to be located around buildings;
- (iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- (iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
- (v) provide for ongoing management and maintenance of bush fire protection measures; and
- (vi) ensure that utility services are adequate to meet the needs of firefighters

This report contains various recommendations to enhance the bushfire protection measures for the proposed development which will provide compliance with the objectives of PBP 2019.

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1.0 Introduction

We have been engaged by Whitehaven Energy Pty Ltd to prepare a Bushfire Hazard Assessment Report for the proposed works being the construction of a Solar Farm which in broad terms is to supply electricity to the Narrabri Coal Mine that is located directly adjacent to the proposed development.

The development area has been identified as being bushfire prone land and therefore the legislative requirements for the proposed development are applicable.

The proposed development is an *other development* as defined within *Planning for Bush Fire Protection* 2019 (PBP) and this report has been prepared in accordance with the requirements of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979*.

1.1 Purpose of Report

- To determine the vegetation type, the expected fire behaviour and the threat to the proposal; and
- To assess the proposal with reference to PBP 2019; and
- To assess the proposed construction with reference to the National Construction Code Volume 1; and
- To determine the level of construction with reference to Australian Standard (AS) 3959-2018 *Construction of buildings in bushfire prone areas*; and
- To identify any other such mitigation measures as to improve the chances of building survival and personnel during a bushfire event; and
- To assist the NSW Rural Fire Service and other parties in the determination of the development application subject to this proposal.

1.2 Scope of Report

The scope of this report is limited to the Bushfire Hazard Assessment for the proposed development and only contains recommendations for the development site. Where reference is made to adjacent or adjoining lands, this report does not purport to assess those lands; rather it may discuss bushfire progression on and through those lands with the possible bushfire impact to the subject property and the proposed development.

1.3 Regulatory Controls

The preparation of this report has given consideration to the various legislative and regulatory requirements including the EP&A Act 1979, the National Construction Code 2022, *Planning for Bush Fire Protection* 2019 and Australian Standard (AS) 3959-2018.

1.4 Methodology

A site inspection for the purpose of assessing bushfire related matters affecting this site was conducted on the 28th August 2025 and a review of the Whitehaven Solar Farm Project Environmental Impact Statement (EIS) as prepared by Whitehaven Energy Pty Ltd has taken place.

An assessment of slope was conducted out to a distance of 100 metres and assessment of vegetation to a distance of 140 metres from the proposed Class 5 office/administration buildings area.

The findings were related and assessed with reference to *Planning for Bush Fire Protection* 2019 and AS 3959-2018 *Construction of buildings in bushfire prone areas* for the formulation of the Bushfire Hazard Assessment.

1.5 The Proposal

The proposed development is for the construction and establishment of a 26 megawatts (MW) Solar Farm and a 10 MW hour direct current Battery Energy Storage System (BESS) to supply electricity to the Narrabri Coal Mine which is located directly adjacent to the proposed scope of works.

The proposed scope of works is as follows:

- construction and operation of approximately 50,000 solar photovoltaic (PV) panels to provide electricity supply for the Narrabri Coal Mine;
- construction of a substation that facilitates connection to the existing 66 kV overhead Electricity Transmission Line (ETL);
- construction of an overhead ETL to connect the proposed substation to the existing 66 kV overhead ETL, north of Kurrajong Creek Rd;
- construction and operation of ancillary infrastructure including access roads, inverter stations, temporary staging areas, perimeter fencing, asset protection zones (APZ) and operations and maintenance buildings;
- construction and operation of a BESS;
- ongoing maintenance activities; and
- decommissioning and rehabilitation of the site.

The EIS also shows Figure 1.2 Indicative Project General Arrangement replicated as (Figure 1).

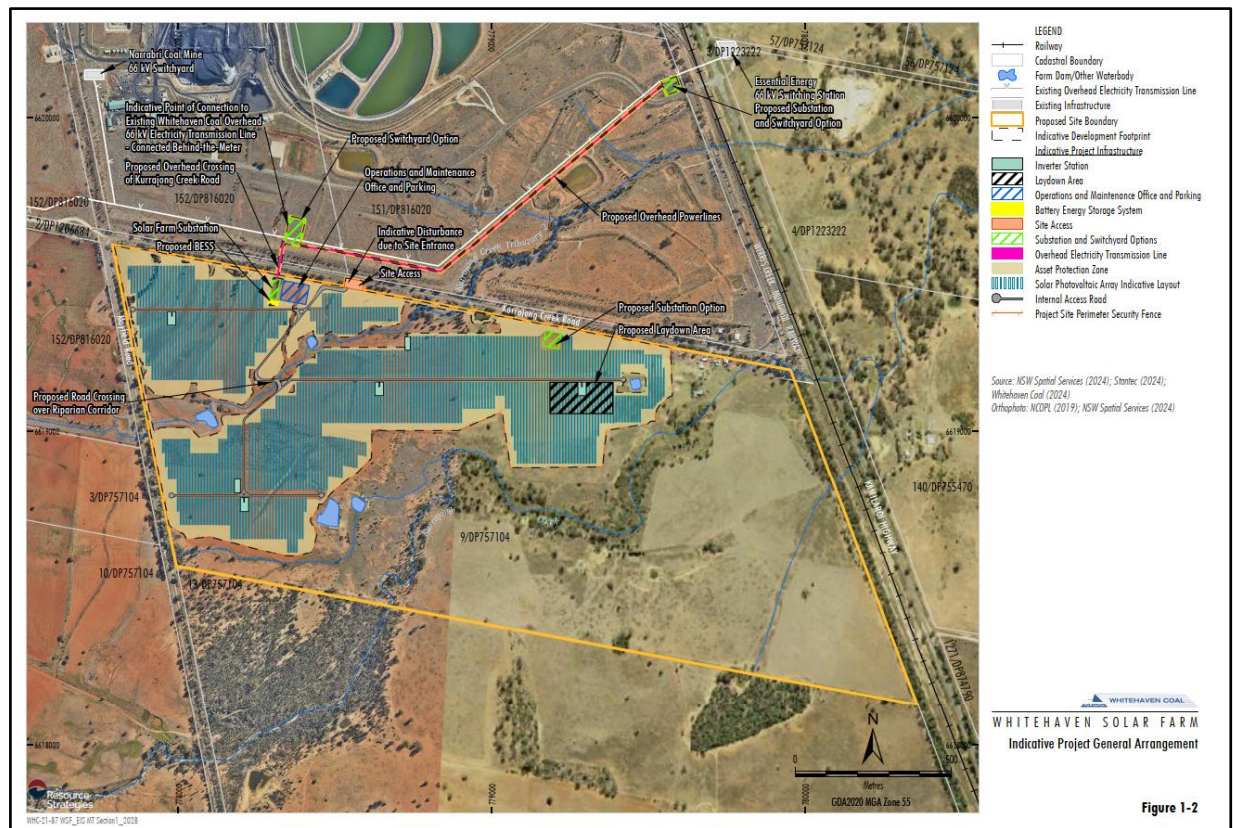


Figure 1; Extract ex EIS Figure 1.2 Indicative Project General Arrangement (Whitehaven Energy Pty Ltd 2024)

2.0 Site and Adjacent Developments

The following seeks to describe the site, the adjoining lands and land uses effective upon the development proposal.

2.1 Site Description

The site is identified as: Lot 9 DP 757104, Lot 151 DP 816020 & Lot 152 DP 816020
Kurrajong Creek Road
Baan Baa NSW 2390
LGA Narrabri Shire Council

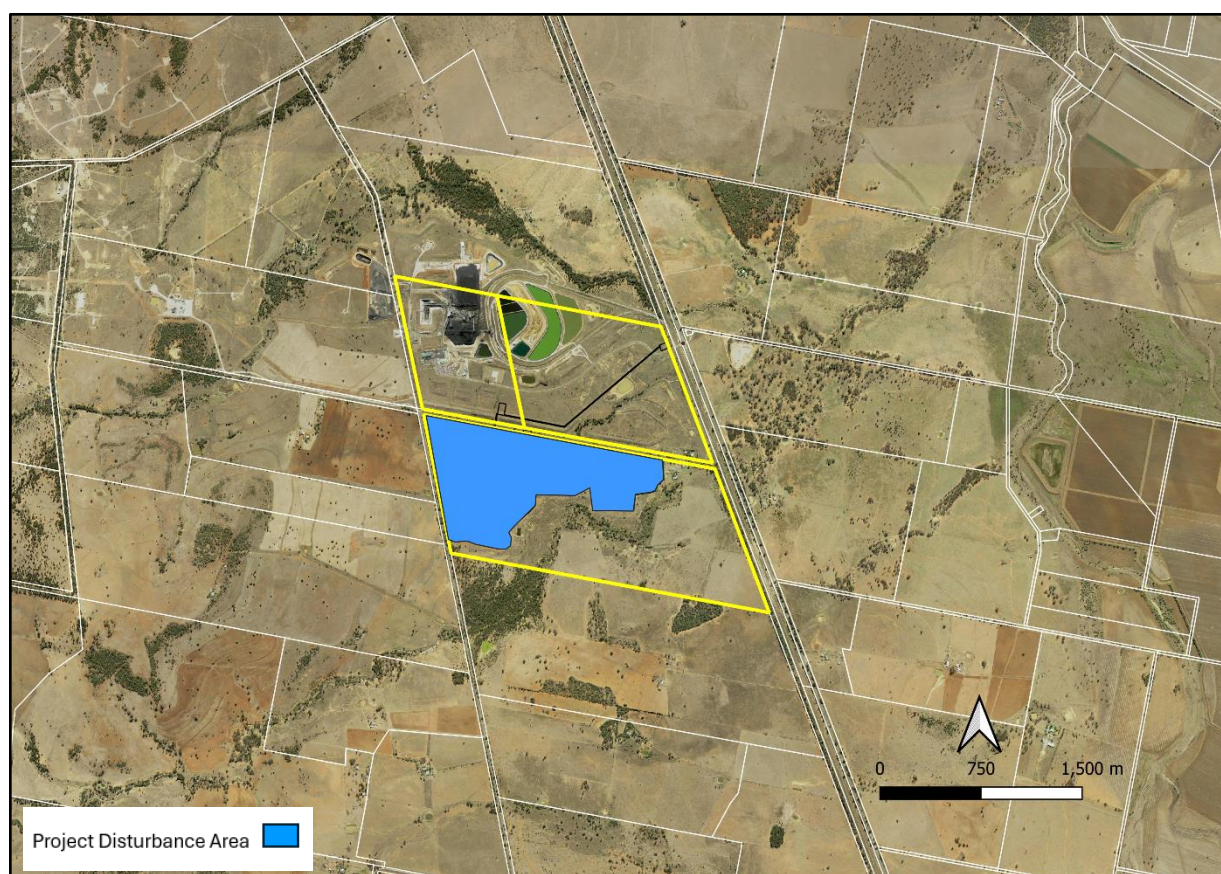


Figure 2; Subject Allotments ex NSW Planning Portal

The subject allotments are located approximately 25 kilometres to the southeast of the township of Narrabri and approximately 7.0 kilometres to the east of the Jacks Creek State Forest area.

The bulk of the project is located within 117 Kurrajong Creek Road Baan Baa (Lot 9 DP 757104) which is currently best described as being open Grassland with limited sections of Woodland vegetation.

However, there are sections of infrastructure to be located within the lands to the north of Kurrajong Creek Road being overhead transmission lines and Substation in similar terrain and vegetation.

The area of the proposed development to the south of Kurrajong Creek Road is affected by two naturally occurring topographical drainage features identified in the EIS as being Kurrajong Creek and Kurrajong Creek Tributary 2 which in broad terms pass through main development area parcel from southwest to northeast.

The subject allotments for the proposed development are located within an area that should be considered as having a direct interface to areas of bushfire hazardous vegetation.

In terms of vegetation the allotments contain a combination of vegetation formations which includes Grassland, Woodland and Forest vegetation.

The development site is shown upon the Narrabri Bushfire Prone Land Map (Figure 2) to be almost entirely within a category 3 vegetation (shown dark orange). The site inspection and interpretation of aerial photography for the site confirms that the subject development site is reasonably depicted upon this image.

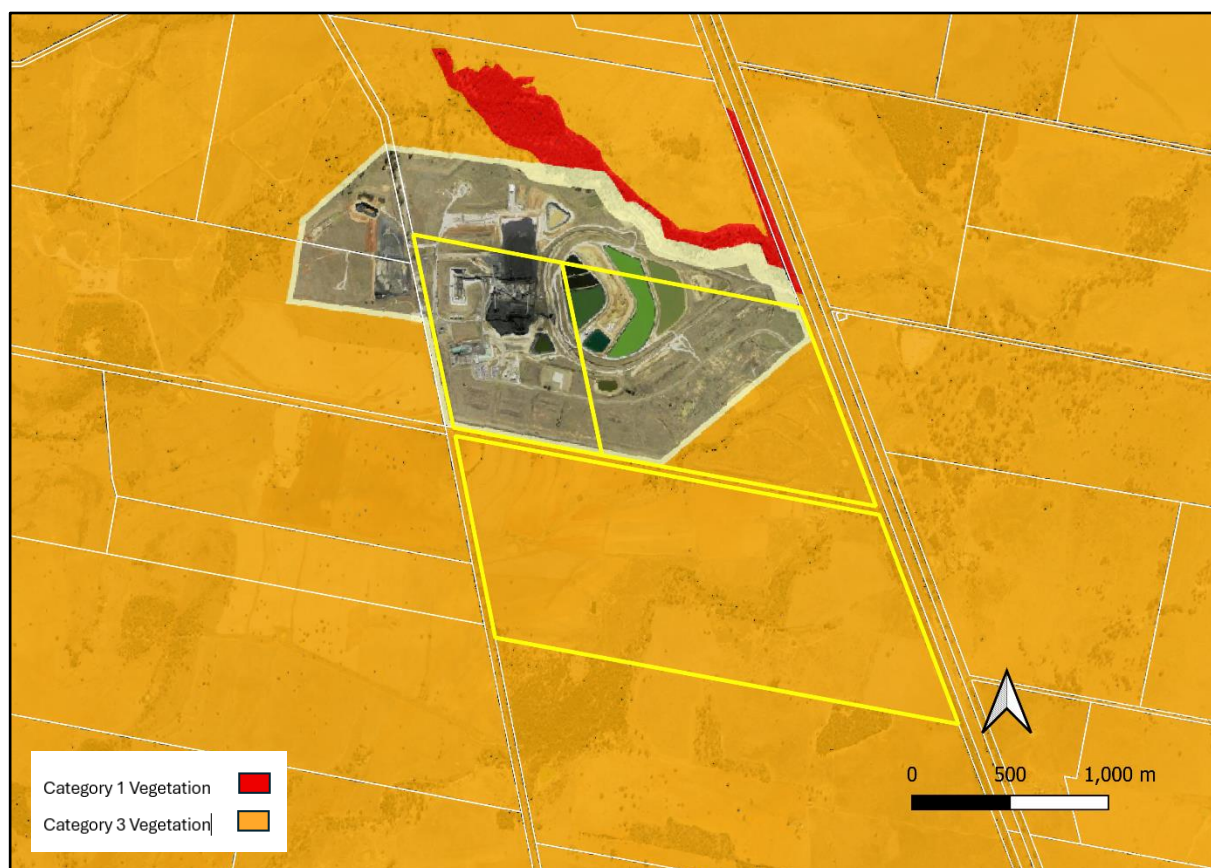


Figure 3; Section Narrabri Shire Council LGA Bushfire Prone Land Map

2.2 Description of Adjoining Lands

To the northwest and north of the proposed development is the existing Narrabri Coal Mine. This facility is an underground extraction mine with above ground storage stockpiles, rail transport and loading infrastructure, water storage dams and management/administration buildings.

To the east of the proposed development is the Kamilaroi Highway and beyond this are open Grasslands and fragmented sections of Woodlands predominately used for stock grazing purposes.

To the south of the proposed new development is a combination Forest, fragmented sections of open Grasslands and Woodlands used for grazing purposes.

To the west of subject allotment is the carriageway of Mayfield Road and beyond this is open Grasslands also used for grazing purposes. Slightly further to the west is a large and expansive area of Forest vegetation within the Jacks Creek State Forest.

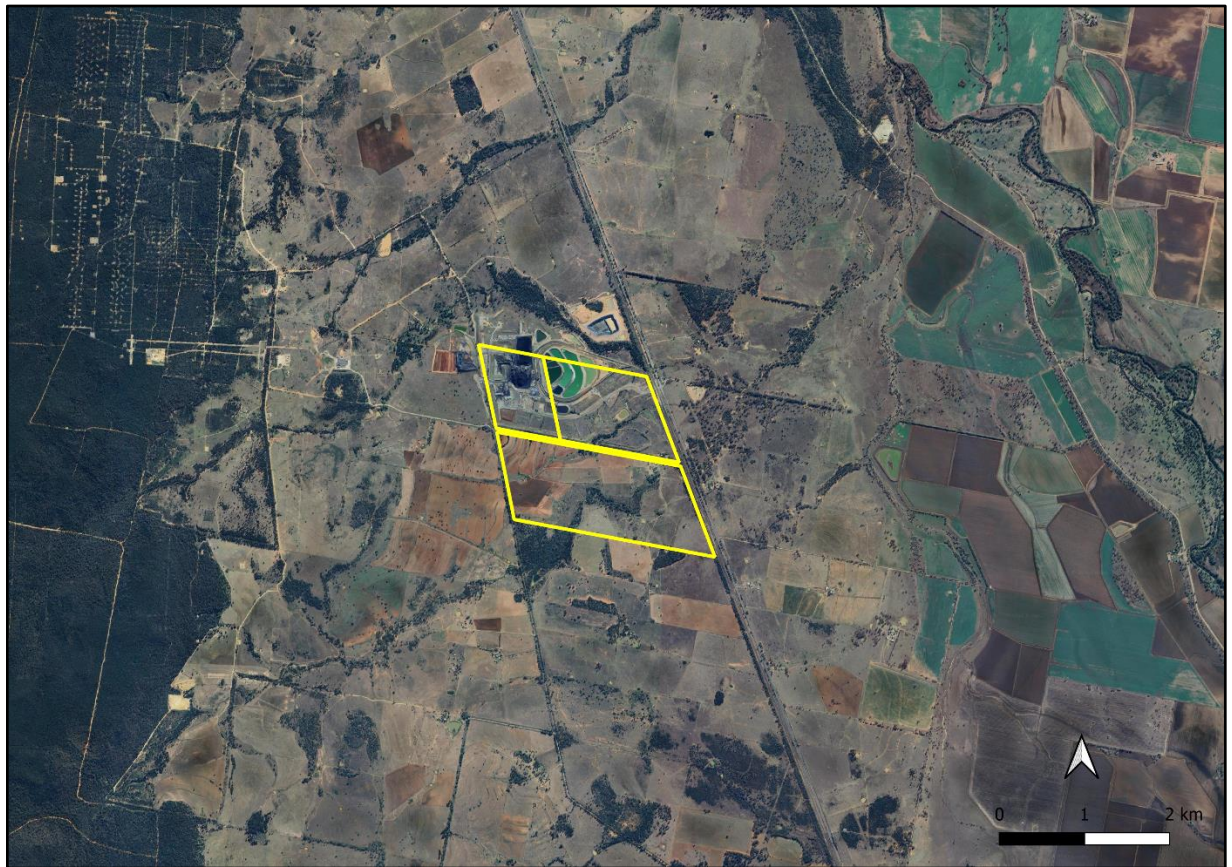


Figure 4: Aerial photo depicting development site and adjoining allotments ex Google Satellite

3.0 Environmental Considerations

The scope of this report has not been to provide an environmental survey.

The proposed scope of works for the Solar Farm does necessitate the removal of sections of vegetation being predominantly Grassland for the associated infrastructure and the asset protection zones recommended by this report.

However, the EIS clearly identifies various sections of watercourses, threatened flora and heritage sites which are in some cases adjacent to but not to be directly impacted by the areas of asset protection zones.

It is also our opinion that the bushfire protection measures as recommended within this report will have no adverse environmental effects.

4.0 Bushfire Hazard Assessment

The bushfire hazard assessment was conducted for the proposed development, using the procedures as outlined in *Planning for Bush Fire Protection 2019, AS 3959-2018 Construction of buildings in bushfire prone areas* procedure to determine the Bushfire Attack Level (BAL) likely upon the development.

The assessment was conducted on the assumption of the footprints for the proposed development being positioned as depicted in Figure 1 (and as Figure 1-2 of the supplied EIS prepared by Whitehaven Energy Pty Ltd).

4.1 Classification of Vegetation from Overall Proposed Development

The vegetation was assessed for a distance of 140 metres from the proposed Solar Array, Battery Energy Storage System (BESS), optional Substations and the Operations and Maintenance Office buildings within the development area.

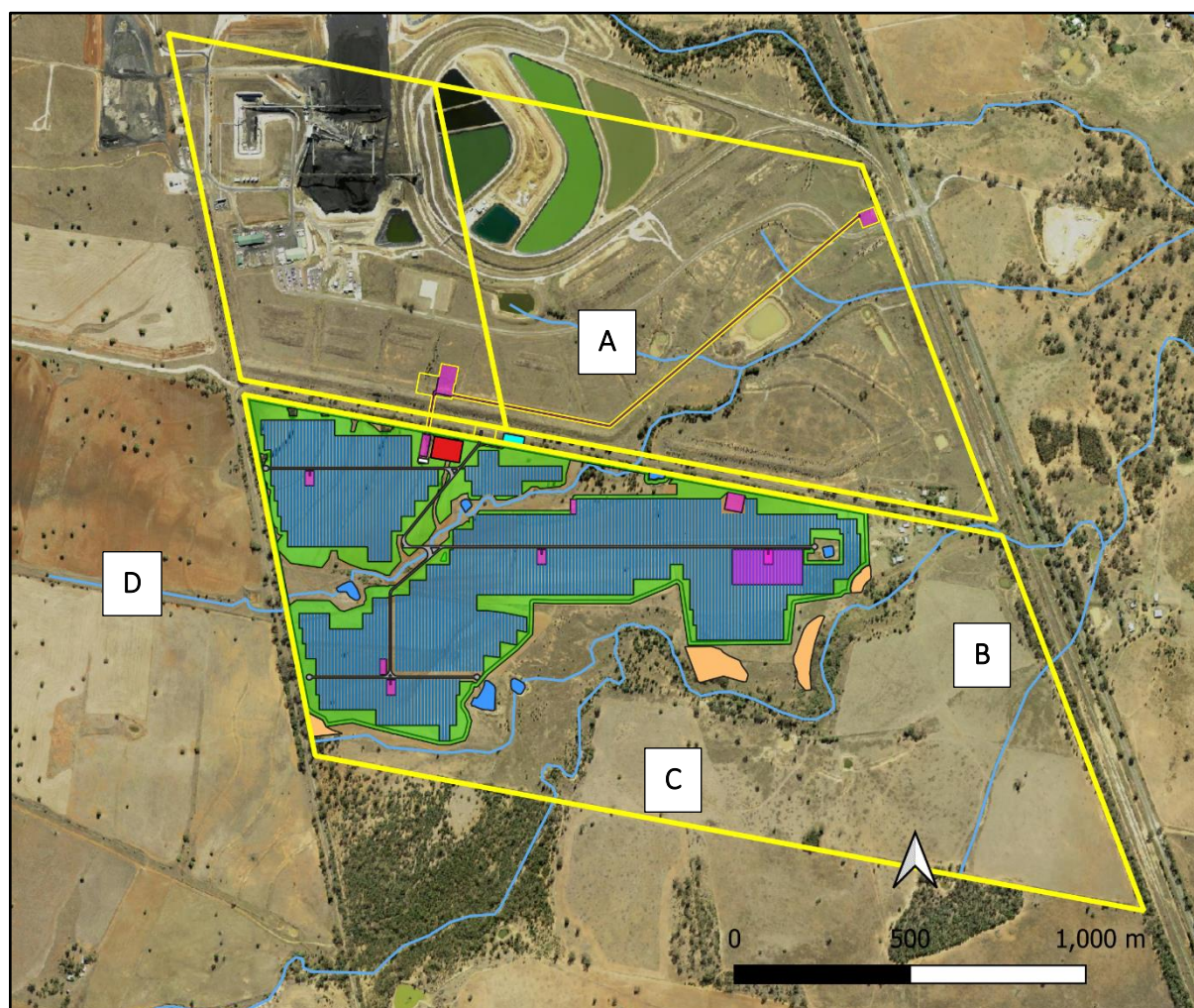


Figure 5: Vegetation Study Area - Aerial Image ex NSW Six Maps

Within the northern section of the Vegetation Study Area (Area A) is an area of effective bushfire hazardous vegetation and this area should be classified as being a vegetation formation of Grassland.

Within the eastern section of the Vegetation Study Area (Area B) is an area of effective bushfire hazardous vegetation and this area should be classified as being predominantly a vegetation formation of Grassland with fragmented sections of Woodland vegetation.

Within the southern section of the Vegetation Study Area (Area C) is an area of effective bushfire hazardous vegetation and this area should be classified as being a combination of vegetation formations of Grassland and Forest.

Within the western section of the Vegetation Study Area (Area D) is an area of effective bushfire hazardous vegetation and this area should be classified as being predominantly a vegetation formation of Grassland with fragmented sections of Woodland vegetation.

4.2 Classification of Vegetation & Slope Assessment for Operations and Maintenance Office Building

The slope was assessed for a distance of 100 meters within the bushfire hazardous vegetation and reference to slope classifications has been undertaken considering the procedure specified within *Planning for Bush Fire Protection 2019*

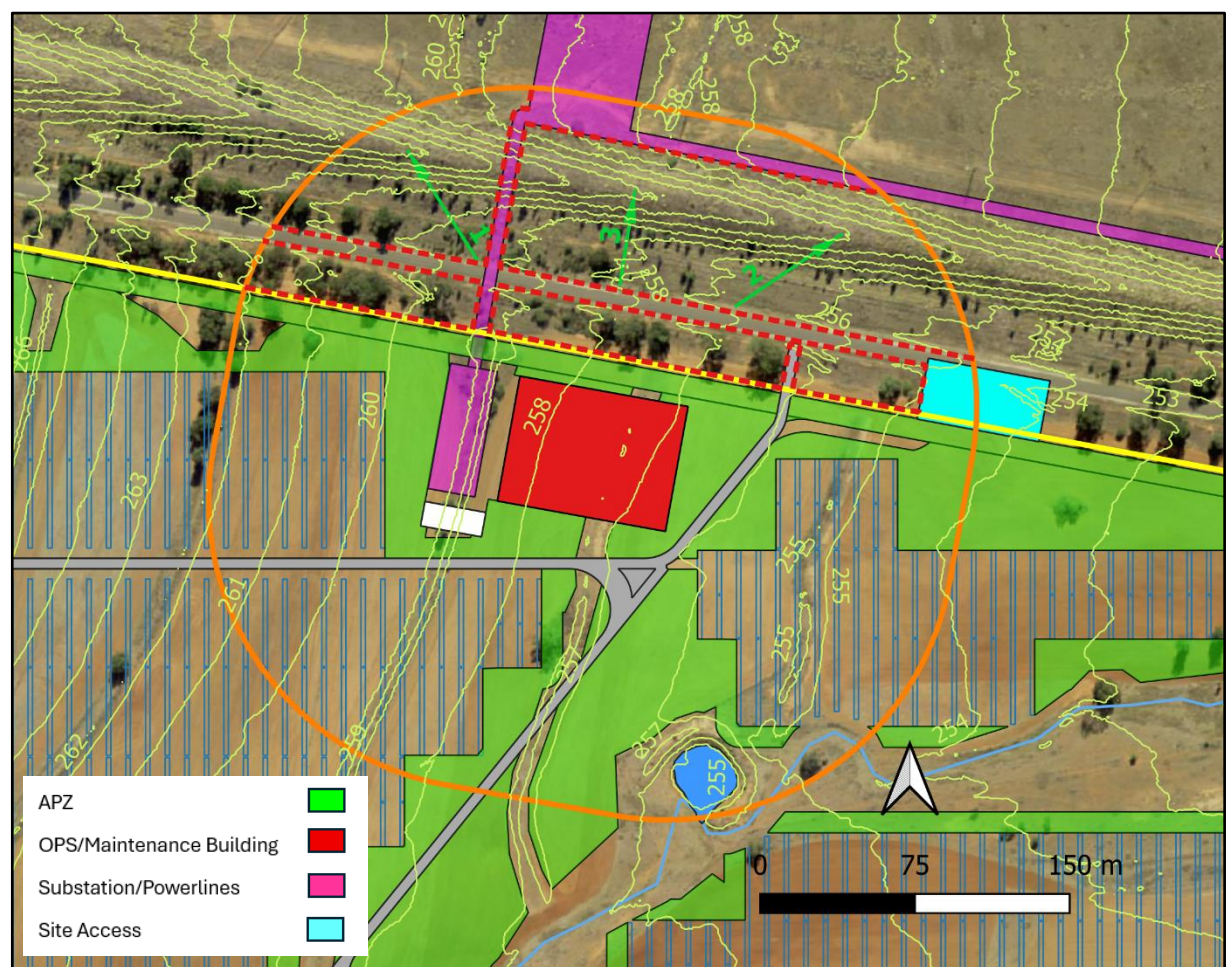


Figure 6; Slope assessment study area contour data ex Geoscience Australia

The **effective slope** of the land, out to a distance of 100 metres from the proposed scope of works (that is, the slope of the land most likely to influence bushfire behaviour for the purposes of calculating the Category of Bushfire Attack and Asset Protection Zones, has been assessed (using a clinometer) and desktop analysis as being;

- Transect 1 – Woodland – Upslope degrees (assumed) (elevation 5.59 met / dist. 62.06 met = 5.25 degrees)
- Transect 2 – Woodland – Upslope degrees (assumed) (elevation 3.59 met / dist. 61.39 met = 3.55 degrees)
- Transect 3 – Woodland – Upslope degrees (assumed) (elevation 4.31 met / dist. 45.39 met = 5.42 degrees)

4.3 Category of Bushfire Attack Operations and Maintenance Office Building

Planning for Bush Fire Protection 2019 section 8.3.1 Buildings of Class 5 to 8 under the National Construction Code (NCC) does not generally require for any bush fire specific construction requirements and that the NCC provisions are taken as acceptable solutions although consideration should be given on a case by case basis.

In this instance due to the remote location of the proposed footprint for the Site Office being a Class 5 building bushfire resistant construction has been considered by this report to be a suitable inclusion for the development and the Bushfire Attack Level (BAL) has been determined as noted below.

This BAL was determined by using the information gathered with respect to the classification of the vegetation, the effective slope and provision of asset protection zones report with reference given to *Planning for Bush Fire Protection* 2019.

It is the determination of the site inspection, the assessment procedure with incorporation of the recommendations in this report that the proposed area that shall contain the Operations and Maintenance building(s) and carpark could experience a Bushfire Attack Level (BAL) 19. The proposed development is most likely to be subject to the greatest bushfire attack from any area to the north, northwest and northeast from the proposed development location.

Table 1; Bushfire Attack Summary – Footprint for the Class 5 office/administration buildings including carpark area

Vegetation Formation	Woodland (Transect 1) - Northwest	Woodland (Transect 3) - North	Woodland (Transect 2) - Northeast
Vegetation Slope	Upslope degrees (5.15°)	Upslope degrees (5.42°)	Upslope degrees (3.35°)
Separation Distance (m)	17.5	17.5	17.5
Separation Slope	Upslope degrees (0.84°)	Upslope degrees (0.60°)	Downslope > 0 to 5 degrees (0.40°)
Fire Danger Index	80	80	80
Bushfire Attack Level	BAL 19	BAL 19	BAL 19

5.0 Assessment of the extent to which the development conforms or deviates from *Planning for Bush Fire Protection 2019*

5.1 Asset Protection Zones

The provision of asset protection zones for the proposed development can be fully provided for onsite to satisfy the requirements of *Planning for Bush Fire Protection 2019* by way of utilising the proposed asset protection zones, vehicle roads, access area and carpark areas.

The maintenance of the majority of area upon the subject allotments where the development is to occur currently would not currently satisfy the requirements of an inner protection area of an asset protection zone as contained in *Planning for Bush Fire Protection 2019*.

This report will recommend that an area of Asset Protection Zone (APZ) for a distance of not less than 10 metres from all built structures, beneath the Solar Array within Lot 9 DP 757104 and surrounding Substations and Switchyards to the north of Kurrajong Creek Road is to be maintained to the requirements of an inner protection area of an APZ and managed to these provisions for the lifetime of the development.

It is noted that within the supplied EIS Figure 1-2 Indicative Project General Arrangement (Figure 1) an asset protection zone has been shown although to comply with the recommendations of this report some minor adjustments to this plan will be required.

The following is a summary of the requirements for an asset protection zone inner protection area as described within the documents *Planning for Bush Fire Protection 2019* and *NSW RFS Standards for Asset Protection Zones*.

The IPA is the area closest to the building and creates a fuel management area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defensible space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building consisting of a mown lawn and well-maintained gardens.

When establishing and maintaining in IPA the following requirements apply;

Trees

- tree canopy cover should be listed 15% at maturity;
- trees at maturity should not touch or overhang the buildings;
- lower limbs should be removed to a height of two metres above the ground;
- preference should be given to smooth bark and Evergreen trees

Shrubs

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards the buildings;
- shrubs should not be located under trees;

- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by distance of at least twice the height of the vegetation.

Grass

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves vegetation debris should be removed

5.2 Position and Design of Proposed Development

The design and siting of the proposed buildings must take into consideration the actual bushfire risk and this report contains recommendations to assist in mitigating the mechanisms of bushfire attack.

5.3 Construction Level

The National Construction Code (NCC) for the proposed buildings does not strictly provide for any bushfire specific performance requirements and as such AS3959 – 2018 *Construction of buildings in bushfire prone areas* does not apply as a set of deemed to satisfy provisions.

Planning for Bush Fire Protection 2019 also states that the general fire safety construction provisions of the NCC are taken as acceptable solutions however construction requirements for bush fire protection will need to be considered on a case-by-case basis.

Therefore, on the basis that the proposed Class 5 buildings within the development could experience a Bushfire Attack Level (BAL) 19 from vegetative fuels to the northwest, north and northeast, the proposed Class 5 buildings should be designed and constructed to the requirements of section 3 Construction General and section 6 BAL 19 of AS 3959-2018 *Construction of buildings in bushfire prone areas* or NASH Standard – *Steel Framed Construction in Bushfire Areas* (2014) apart from as varied to comply with section 7.5.2 Additional Construction Requirements of *Planning for Bushfire Protection* 2019.

5.4 Access / Egress

5.4.1 To the Proposed Development

The access to the development site is from Kurrajong Creek Road which joins the Kamilaroi Highway to the northeast of the site and under normal conditions should provide adequate access and egress for staff, visitors and emergency service vehicles.

Kurrajong Creek Road is tar sealed and is two lanes wide in a well maintained condition capable of carrying a fully laden fire tanker.

The above noted roads are exposed to areas of Woodland and Grassland vegetation, and the carriageways may suddenly become unsafe to negotiate due to the mechanisms of bushfire attack particularly flame impingement or heavy smoke.

Procedures should be developed within a Bush Fire Emergency Management and Evacuation Plan to ensure that all staff, contractors and visitors are aware of the relevant actions to be taken during a bushfire event.

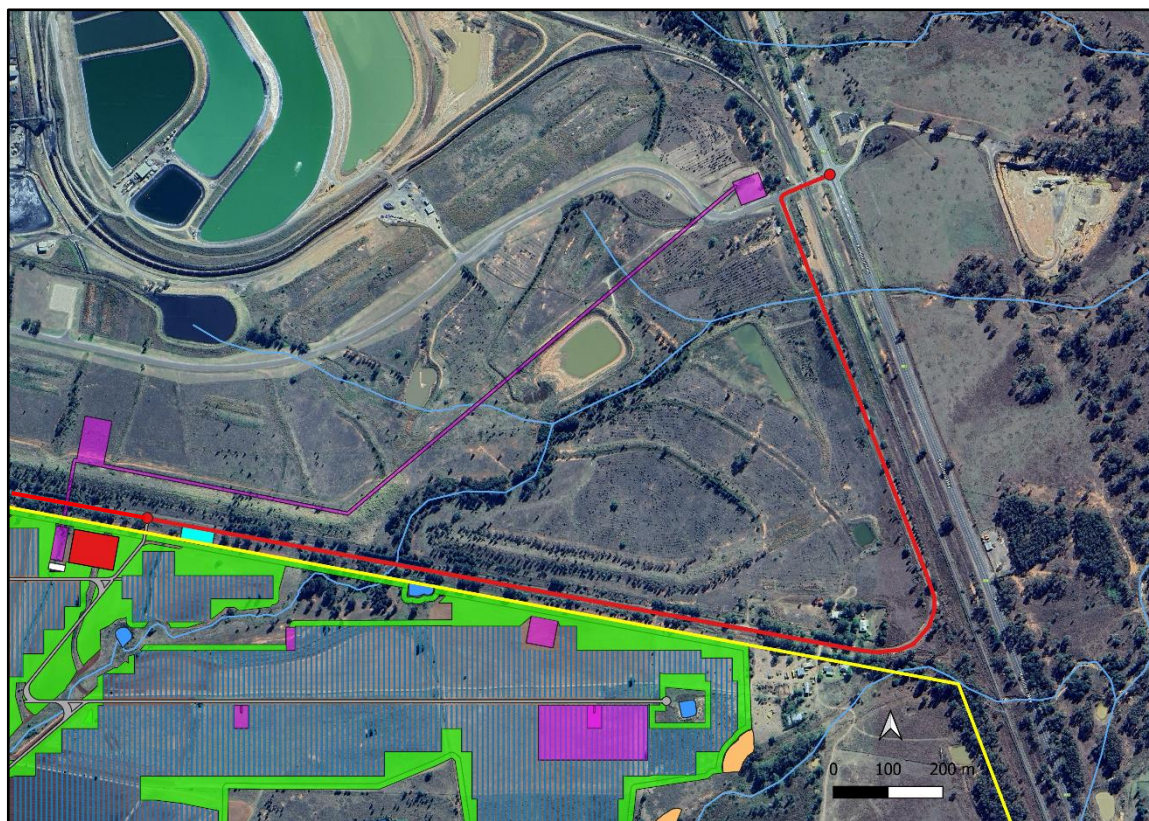


Figure 7; Access Road to the New Development Area

Tar Sealed



5.4.2 Within the Site

Access for fire fighting appliances to each perimeter of the proposed development site is required in order to provide for suitable operational movements during suppression or protection measures that may be needed during a bushfire event.

It is recognised that access is currently provided to the northern and western perimeters of the site by the existing system of public roads. Access for fire fighting appliances is also to be provided along the southern and eastern interfaces within the site via access from the western edge, internal access roads and from Whitehaven owned property on the eastern side.

5.5 Utility Supplies

5.5.1 Water

It is noted within the supplied EIS that water supplies for use during a bushfire event would be available from the adjoining Narrabri Coal Mine for fire fighting purposes.

Availability of water for use during a bushfire event is a significant component of bushfire protection. Therefore, the proposed development must be able to integrate suitable measures that ensure an independent, reliable water supply for use during a

bushfire event by the occupants or a firefighting authority tanker, and should have the following key objectives:

- To enable a suitably prepared, able bodied person or persons to undertake first aid fire suppression of small ignitions near or on the external elevations of the Operations and Maintenance Office buildings that may occur before and after the passing of a bushfire front.
- To be able to replenish bushfire tankers that may be in attendance during a bushfire event.
- To be able to operate independently of the mains power supply so as to be able to fully function if an electrical mains power failure occurred.
- To be able to supply an adequate amount of water at the required pressure to firefighting hose or hoses.

To satisfy the requirements of *Planning for Bush Fire Protection 2019* it is a recommendation of this report that a reserve Static Water Supply (SWS) of not less than 20,000 litres be permanently maintained on the subject allotment within a non-combustible tank located within the inner protection area of the asset protection zone for the Operations and Maintenance Office buildings.

The reserve SWS should be permanently plumbed to a petrol or diesel firefighting water pump of not less than 5 hp. The pump must be shielded from the direct effects of a bushfire event.

The site restrictions may not allow for a bushfire tanker to have direct and clear access to the reserve SWS and as such the proposed development should provide a delivery line of not less than 50mm diameter from the firefighting water pump to an outlet point located within 4.0 metres of the proposed new car parking area associated with the Operations and Maintenance Office buildings. This outlet point should be fitted with a ball or gate valve and a 65 to 38mm Storz reducer fitting.

The water pump should also be connected to and supply water to kink resistant hose or hoses with a minimum diameter of not less than 19mm and firefighting nozzle capable of reaching all of the Operations and Maintenance Office building elevations.

All plumbing and fittings associated with reserve water supply, the first aid fire hoses, the tanker refill outlet point and firefighting pump that is above the ground or below the ground for less than 300mm shall be metal.

The installation and ongoing maintenance of the plumbing and water pump must be undertaken to the manufacturer specifications. Fire hose reels are to be constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.

The site shall provide NSW RFS SWS approved signage fitted in the approved locations to enable fire fighters clear indication of the location of the reserve water and the outlet point.

The NSW RFS district office can assist with the procurement of these signs and the guidelines for suitable installation.

5.5.2 Electricity

The methodology for electrical connection had not been finalised at the time of formulating this report although it is envisaged that supply to the Operations and Maintenance Office will be from this proposed development. This report recommends that wherever practicable any new cabling is located below ground level to reduce both ignition potential and to minimize potential infrastructure damage.

5.5.3 Gas

It is not proposed to incorporate a gas connection to the new development.

5.6 Landscaping

It is not envisaged that any decorative landscaping or planting of vegetation will be undertaken within the area of the development buildings.

Recommendations are made with respect to the maintenance of the area on the site.

5.7 Bushfire Management and Emergency Procedures

Within the supplied EIS Table 6-19 Preliminary Consideration of Project Hazards and Controls includes that a Bushfire Emergency Management Plan will be developed for the Solar Farm and associated structures.

Preparation for any emergency event is fundamental to ensuring that personal safety and mitigation of potential impacts on buildings and associated infrastructure is maximised in what can be an extremely dynamic and rapidly changing environment.

This is usual during particularly a bushfire event where forward progression of a fire front could escalate and be in an uncontrolled condition within a very short period of time especially during adverse fire weather conditions.

This report supports the need to prepare a Bushfire Management Plan and a Bushfire Emergency Management and Evacuation Plan in order to assist in mitigating the bushfire risk for the new development.

The purpose of the Bushfire Management Plan is to examine the ongoing management of matters such as vegetation fuels maintenance, preparedness of staff training for incident response and preparedness of fire fighting support vehicles amongst other matters.

Whereas the Bushfire Emergency Management and Evacuation Plan is to delineate and identify what actions will be taken during a bushfire event. This report recommends that bushfire evacuation procedures for the proposed new buildings and associated development should be prepared in accordance with the NSW RFS requirements.

6.0 Bushfire Hazard Assessment Recommendations

1. This report will recommend that as noted within the supplied EIS an area of Asset Protection Zone (APZ) for a distance of not less than 10 metres from all built structures and beneath the Solar Array within Lot 9 DP 757104 and adjacent to any Substations or Switchyards to the north of Kurrajong Creek Road is to be maintained to the requirements of an inner protection area of an asset protection zone and managed to these provisions for the lifetime of the development.
2. That the proposed Class 5 buildings being the Operations and Maintenance Buildings shall be constructed to section 3 Construction General and section 6 BAL 19 of AS3959-2018 Construction of buildings in bushfire prone areas or NASH Standard - Steel Framed Construction in Bushfire Areas (2021) with the exception that the construction requirements shall be varied to comply with section 7.5.2 Additional Construction Requirements of Planning for Bush Fire Protection 2019.
3. That access for fire fighting appliances is also provided along the southern and eastern interfaces of the development and adjacent vegetation that would link to the existing public roads of Kurrajong Creek Road and Mayfield Road.
4. That the perimeter access road shall be constructed to comply with the requirements of *Planning for Bush Fire Protection 2019* which include:
 - a) The surface shall be a material capable of carrying a fully laden fire tanker (15 tonnes) in all weather conditions.
 - b) The width shall be a minimum of not less than 4.0 metres and a vertical clearance of not less than 4.0 metres
 - c) Provide for a turning area in accordance with the Appendix 3 of *Planning for Bush Fire Protection 2019*
 - d) Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress
 - e) The minimum distance between inner and outer curves is 6m
 - f) The crossfall is not more than 10 degrees
 - g) Maximum grade for sealed roads does not exceed 15 degrees or not more than 10 degrees for unsealed roads
 - h) That passing bays are provided at not less than 250 metre intervals. The passing bay must be 6 metres in width and 20 metres in length
5. That the new Operations and Maintenance Buildings shall maintain a reserve SWS for use during a bushfire event of not less than 20,000 litres stored in a non combustible tank within the area of recommended asset protection zone.
6. The reserve SWS shall be permanently plumbed to a petrol or diesel fire fighting water pump with a minimum of 5hp. The pump shall be regularly maintained as per the manufacturer specifications. The pump must be

located in such a position to be shielded from the direct mechanisms of bushfire attack.

7. That a water delivery line of not less than 50 mm diameter be plumbed from the fire fighting water pump plumbed to the reserve Static Water Supply tank, to an outlet point located within 4.0 metres of the car parking area associated with the Operations and Maintenance buildings to enable fire fighting tankers to refill. The outlet of this line shall be fitted with a ball or gate valve and a 65 to 38mm reducer Storz fitting.
8. That the development must provide and have readily available kink resistant hose or hoses with a diameter of not less than 19mm and a fire fighting nozzle, capable of reaching all elevations of the new Operations and Maintenance Buildings, and fittings suitable for connection to the fire fighting water pump.
9. Fire hose reels are constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.
10. That all plumbing associated with the reserve water supply above the ground or for a depth of not less than 300mm below the ground shall be metal.
11. That approved NSW RFS; SWS signage is installed at approved locations for the proposed development.
12. That the supply of electricity and telephone to the development shall be under ground where at all possible.
13. That the proposed new buildings and associated development should be included within a Bushfire Management Plan and a Bushfire Emergency Management and Evacuation Plan for the Solar Farm.

These recommendations are the opinions of the author of this report and are compiled to assist the consent authority and the NSW Rural Fire Service in the assessment of this proposed development and that the final conditions as imposed by the consent authority must be adhered to at all stages and where required for the lifetime of the development.

7.0 Conclusion

The objectives and performance requirements for the proposed development as required by the National Construction Code Volume 1 and the document *Planning for Bush Fire Protection* 2019, and bushfire protection measures will be enhanced by the incorporation of the 14 recommendations contained within this report.

The recommendations contained within this report will assist in providing a reasonable level of bushfire protection and improve but not guarantee the chances of building survival, or provision for the occupants with a safe refuge during the passage of a bushfire front and or the provision of a defensible space for fire fighters.



Craig Burley
Grad.Dip. Building in Bushfire Prone Areas (UWS)
FPA Australia Certified BPAD – Level 3 Practitioner



Caveat

Quote from *Planning for Bush Fire Protection* 2006, '*notwithstanding the precautions adopted, it should always be remembered that bushfire burn under a wide range of conditions and an element of risk, no matter how small always remains.*'

Quote from Standards Australia, '*Although the standard is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building will withstand bushfire attack on every occasion.*'

References

Planning for Bush Fire Protection 2019 Planning NSW in conjunction with NSW Rural Fire Service

National Construction Code 2022 Australian Building Codes Board

AS 3959 –2018 Construction of buildings in bushfire prone areas Standards Australia & Australian Building Codes Board

Landscape and building Design for Bushfire Areas Ramsay C. & Rudolph L. CSIRO 2003

Bushfires in Australia Luke R.H. & McArthur CSIRO 1978

Performance of Building Elements in Bushfire Prone Areas Poon S.L. & England J.P. Warrington Fire Research Australia

Address Validation Search Department of Lands www.maps.nsw.gov.au

Standards for Asset Protection Zones NSW Rural Fire Service 2005

Ocean Shores to Dessert Dunes Keith D. Department of Environment and Conservation Sydney 2004

Appendix 1 - Extract of Appendix 3 *Planning for Bush Fire Protection 2019* Vehicle Turning Head Requirements.

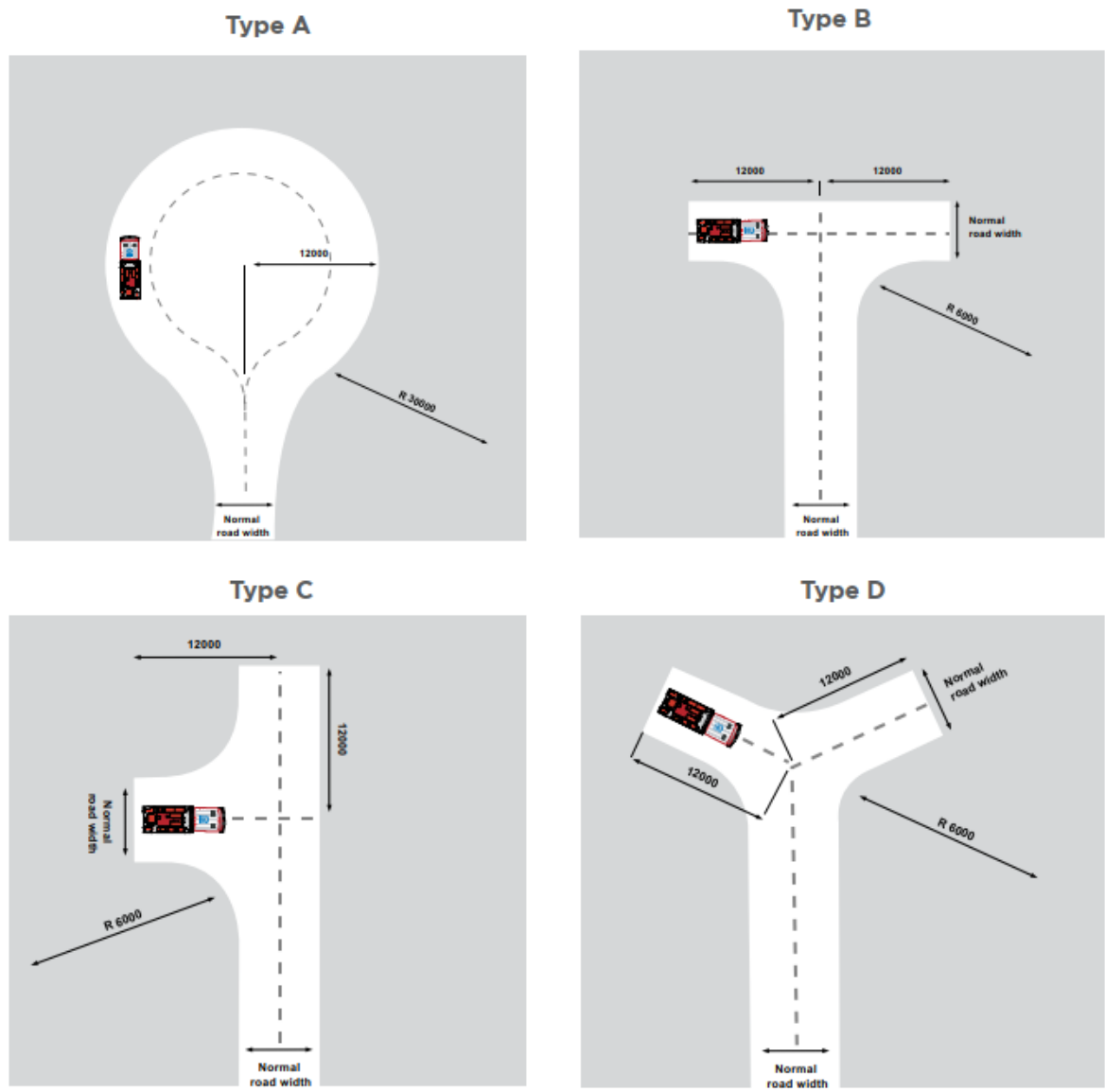
A3.3 Vehicle turning head requirements

Dead ends that are longer than 200m must be provided with a turning head area that avoids multipoint turns. "No parking" signs are to be erected within the turning head.

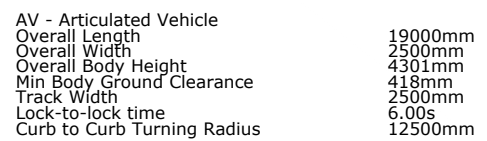
The minimum turning radius shall be in accordance with Table A3.2. Where multipoint turning is proposed the NSW RFS will consider the following options:

Figure A3.3

Multipoint turning options.



ATTACHMENT 2 – ‘DESIGN VEHICLE’ SWEPT PATH ANALYSIS

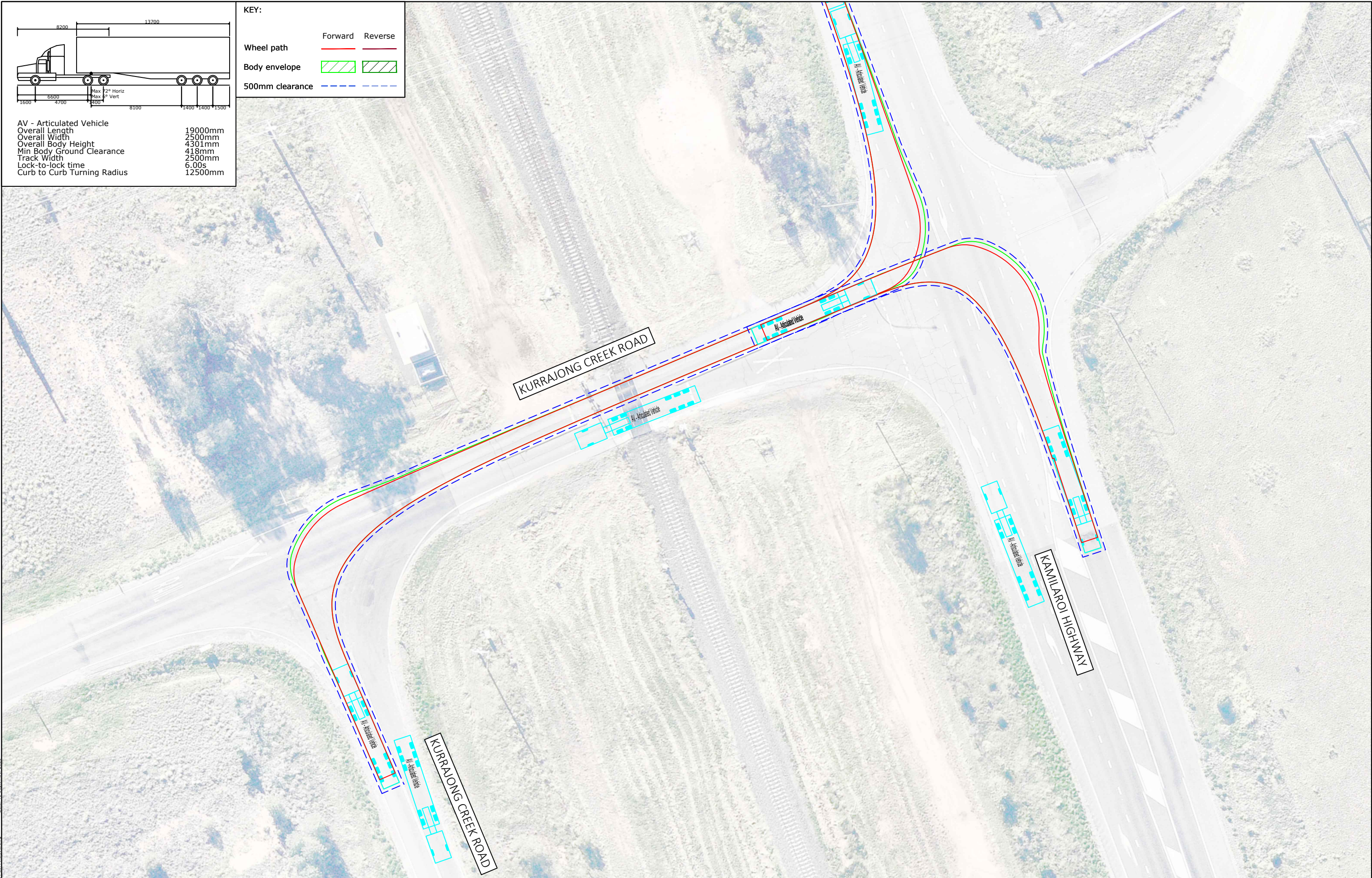


	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		



SWEPT PATH ASSESSMENT - ARTICULATED VEHICLE

PROJECT No. 22302	SCALE 1:500 @A3	REV. A
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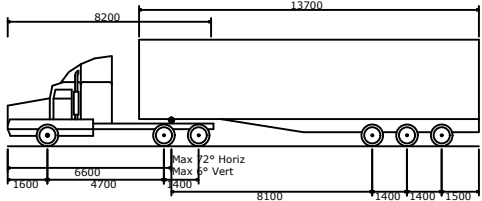
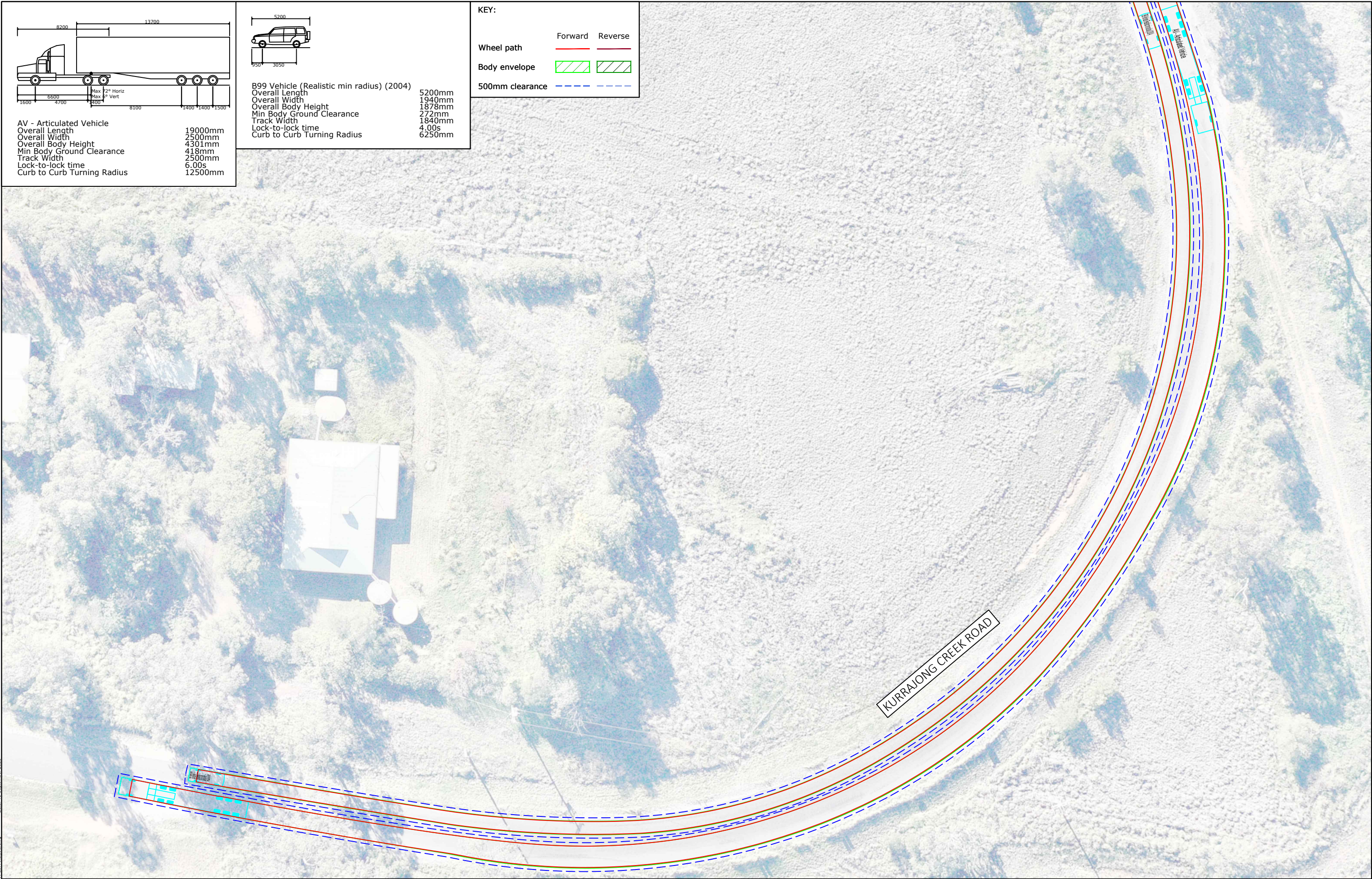
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	AL	PD	PD	16/09/25



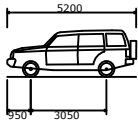
PROJECT	WHITEHAVEN SOLAR FARM		
TITLE	SWEPT PATH ASSESSMENT - ARTICULATED VEHICLE		

DWG No. 22302CAD002		
FIGURE 2		
DATE STAMP 16 September 2025		
PROJECT No. 22302	SCALE 1:500 @A3	REV. A

Filename: 22302CAD002-250916 Swept Path Analysis.dwg Date: 16 September 2025



AV - Articulated Vehicle	
Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4301mm
Min Body Ground Clearance	418mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm



B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

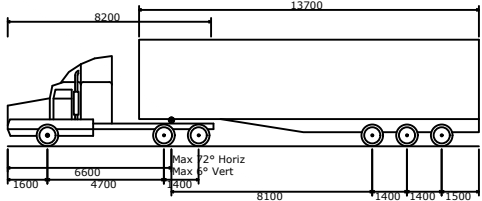
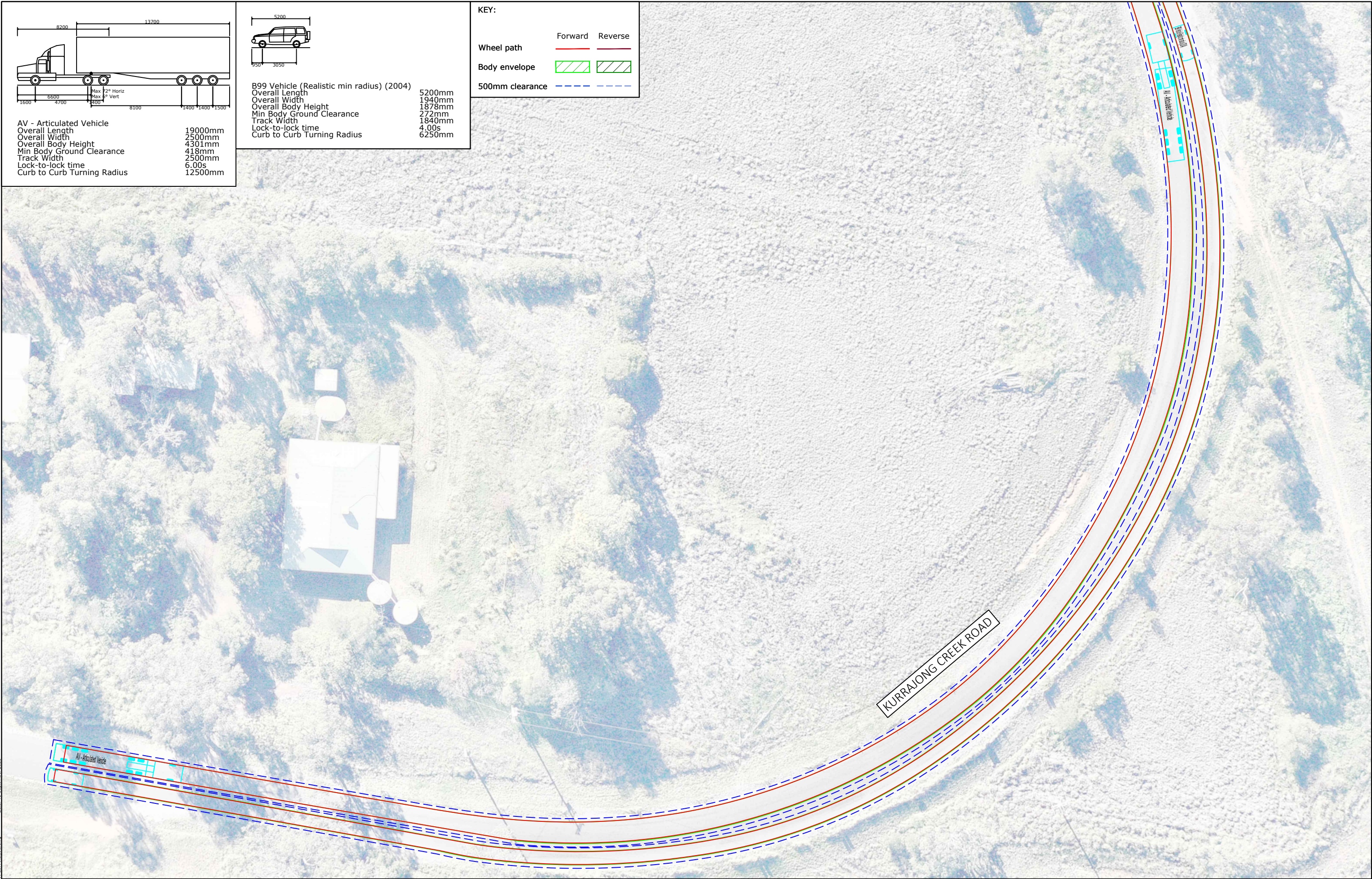
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A	ISSUE FOR DISCUSSION	AL	PD	PD	16/09/25



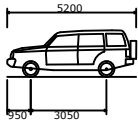
PROJECT	WHITEHAVEN SOLAR FARM
TITLE	SWEPT PATH ASSESSMENT - ARTICULATED VEHICLE & B99 VEHICLE

DWG No.		22302CAD002	
		FIGURE 3	
DATE STAMP			
16 September 2025			
PROJECT No.	SCALE		REV.
22302	1:500 @A3		A

Filename: 22302CAD002-250916 Swept Path Analysis.dwg Date: 16 September 2025



AV - Articulated Vehicle	
Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4301mm
Min Body Ground Clearance	418mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm



B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

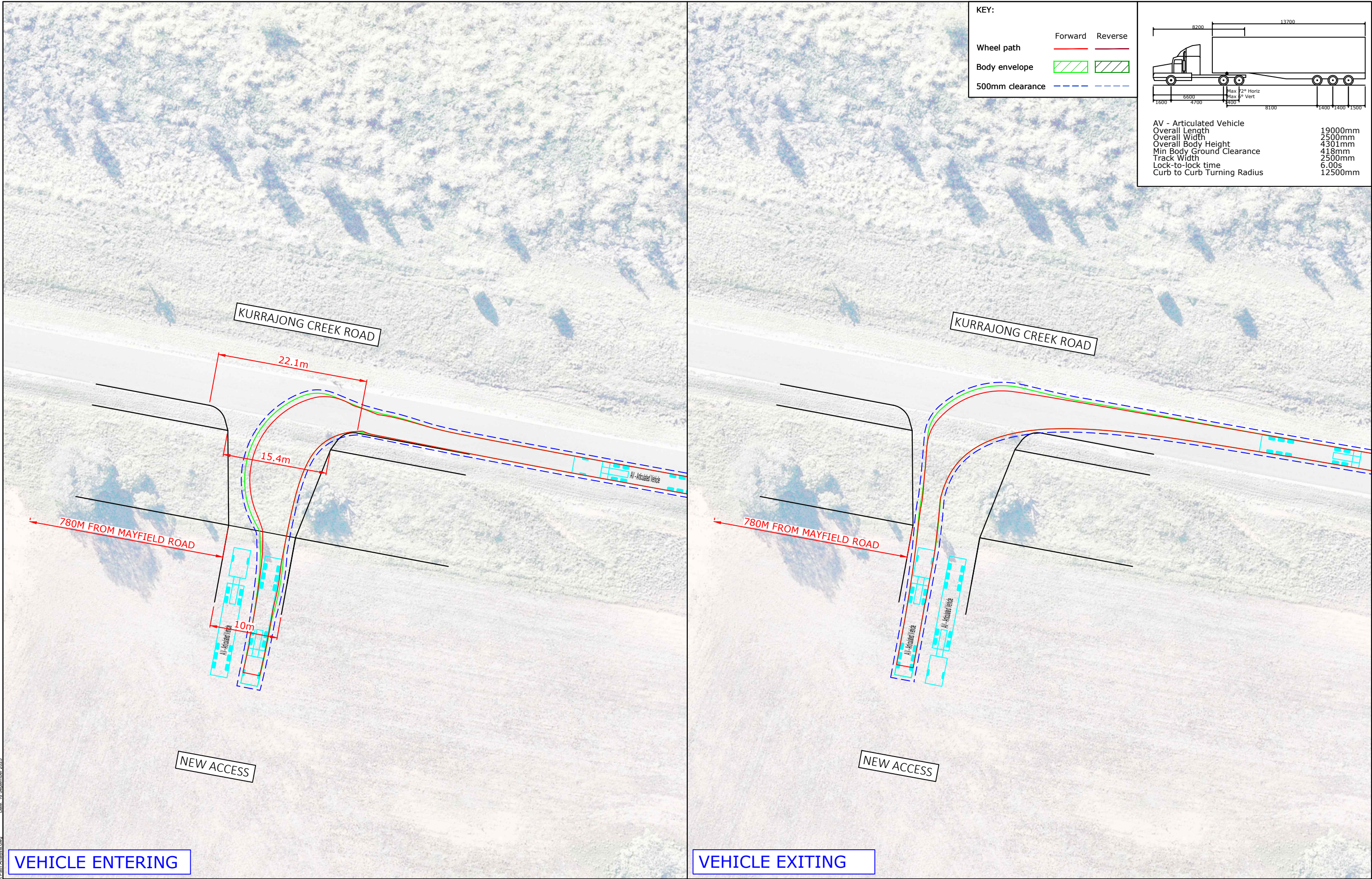
Filename: 22302CAD002-260916 Swept Path Analysis.dwg Date: 16 September 2025

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	AL	PD	PD	16/09/25



PROJECT	WHITEHAVEN SOLAR FARM
TITLE	SWEPT PATH ASSESSMENT - ARTICULATED VEHICLE & B99 VEHICLE

DWG No.		22302CAD002	
FIGURE 4			
DATE STAMP			
16 September 2025			
PROJECT No.		SCALE	REV.
22302		1:500 @A3	A



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	AL	PD	PD	16/09/25



PROJECT	WHITEHAVEN SOLAR FARM		
TITLE	SWEPT PATH ASSESSMENT - DRIVEWAY ACCESS ARTICULATED VEHICLE		

DWG No.	22302CAD002	
	FIGURE 5	
DATE STAMP	16 September 2025	
PROJECT No.	SCALE	REV.
22302	1:500 @A3	A

Filename: 22302CAD002-250916_Swept Path Analysis.dwg Date: 16 September 2025

ATTACHMENT 3 – TMP FOR PREVIOUS OSOM MOVEMENT TO NARRABRI MINE



Transport Management Plan

Transport of Electrical Substation

Old Maitland Rd Hexham – Narrabri Coal

1.0 Applicant Details

Operator	GBP Heavy Haulage
Address	27-45 Borthistle Rd, Gunnedah, NSW 2380
Contact	Fiona Eyre
Phone	02 6742 0500 (24hrs)
Mobile	0438 026 623
Email	fiona@gbpcranes.com.au

1.1 Vehicle Details

Prime mover registration	Various
VIN/Chassis Number	Various
Dolly registration Number	Various
Trailing Unit Registration	Various

1.2 Load Type & Dimension's

Load Type	Indivisible Load
Laden Length	31m
Laden Width	5.9m
Laden Height	5.5m
Mass of load	103.5t
Steer Axle	6t
Drive Axles	18.5t
Trailer Axles	9x8 144t
Trailer Axle Width	4.2m
Total mass	168.5t

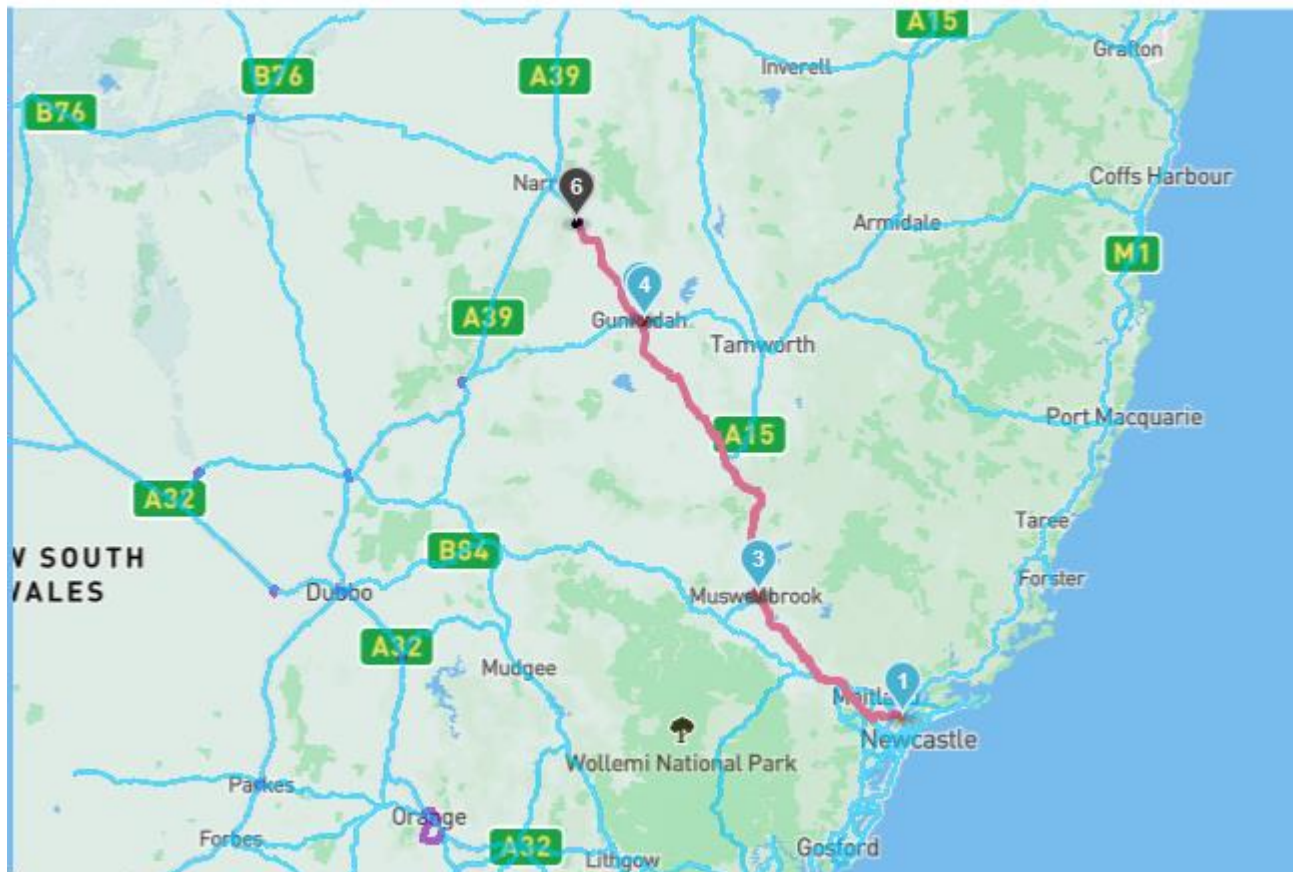
1.2 Escort & Pilots Cars to travel with load

Pilot Car	Escort x 3
Police Escort	1 x night & wrong sided travel up to Bayswater Bridge
Energy Escort	NA
Council Representative	NA
Mechanic	NA
Spotter	Not required – escorts utilised as spotters where required

2.0 Scope

Transport electrical substation Old Maitland Rd Hexham to Narrabri Coal

on Route Planner



2.1 Proposed Route

Start: 10 Old Maitland Rd, Hexham NSW 2322
Old Maitland Road, Hexham
Maitland Road, Hexham
New England Highway, [Tarro - Beresfield]
John Renshaw Drive, [Beresfield - Buchanan]
Hunter Expressway Onramp, Buchanan
Hunter Expressway, [Buchanan - Lower Belford]
New England Highway, [Lower Belford - Singleton]
Maitland Road, Singleton
George Street, Singleton
New England Highway, [Singleton - Muswellbrook]
Maitland Street, Muswellbrook
Bell Street, Muswellbrook
Victoria Street, Muswellbrook
Market Street, Muswellbrook
Unknown, Muswellbrook
Bridge Street, Muswellbrook
New England Highway, Muswellbrook
Aberdeen Street, Muswellbrook
New England Highway, [Muswellbrook - Aberdeen]
Macqueen Street, Aberdeen
New England Highway, [Aberdeen - Parkville]

Main Street, Parkville
 New England Highway, [Parkville - Blandford]
 Salisbury Street, Blandford
 New England Highway, [Blandford - Murrurundi]
 Mayne Street, Murrurundi
 New England Highway, [Murrurundi - Willow Tree]
 Kamilaroi Highway, [Willow Tree - Quirindi]
 Loder Street, Quirindi
 Lennox Street, Quirindi
 Kamilaroi Highway, [Quirindi - Gunnedah]
 Unknown, Gunnedah
 Oxley Highway, Gunnedah
 Bloomfield Street, Gunnedah
 Warrabungle Street, Gunnedah
 Unknown, Gunnedah
 Conadilly Street, Gunnedah
 Kamilaroi Highway, [Gunnedah - Boggabri]
 Grantham Street, Boggabri
 Wee Waa Street, Boggabri
 Kamilaroi Highway, [Boggabri - Baan Baa]
 Bibil Street, Baan Baa
 Kamilaroi Highway, Baan Baa
 Kurrajong Creek Road, Baan Baa
 Unknown, Baan Baa - Private road
 End: Narrabri Coal Mine, Baan Baa NSW

2.2 Proposed Commencement Date & Times

Commencing April 2024 date dependant on permit approval

2.3 Estimated timings for load movements

Hexham to Muswellbrook - 0300hrs – 0530hrs Load to be past Singleton due to peak hour restrictions
 Travel from Muswellbrook to Narrabri – 0600hrs – 1100hrs **BUT NOT BEFORE SUNRISE**

3.0 Pullover protocols

Procedure used to determine when pull over is required ie time duration/number of queued vehicles

“The rear pilot is to monitor the queue of traffic behind the combination and the combination MUST pull over or slow at every safe opportunity to allow any backed-up vehicles to pass that has been following even for a short distance and regardless of the number of vehicles in the queue.”

3.1 Protocol Pre-Start, Communication and Traffic Control

Communication between police, pilot and truck driver will predominately be by two-way radio (UHF Ch 40) with mobile telephones as a back up option.

Police & pilots will also communicate with other road users (particularly semi trailers and B-Doubles) using UHF and advise them of slow moving wide load restrictions. Pilot vehicle will monitor traffic flow and liaise with police to make minimal disruption to free flowing traffic, if need we will wait at a pull over point to allow free flowing traffic to resume.

Rear pilot and Truck driver will liaise together on the status of rear traffic volume and speed and advise the other pilots and police of any additional pull over points requirements

In addition to these 'off road' areas there are numerous locations suitable for police/pilots to allow queued traffic to pass by temporary pull over of the load while still on the actual road. Examples are:
 Turning lanes to/from side roads.

Painted centre medians

Passing lanes where wide shoulders are also present.

All of these facilities will be utilised by the police and pilots in conjunction with the driver to ensure traffic (especially behind the load(s)) is permitted to clear as often as possible.

3.2 Protocol for managing oncoming traffic

When navigating through pinch points/obstacles how will oncoming/queued traffic be managed and allowed to pass

Opposing road users on the Two-way radios will be advised to pull over in safe locations to allow the load to pass them and those travelling behind the load will be informed of the delays on two-way radio pending locations where safe passing of traffic from behind the load can occur (to be determined by police, pilots and driver allowing road, traffic & weather conditions)

3.3 Bridge crossing procedure

3.4 Emergency Contacts & Plans

Emergency Services Police/Fire/Ambulance: 000

Transport Management Centre (TMC) : 1800 679 782.

GBP representative: Fiona Eyre 0438 026 623

Towing contacts: ONeils Towing 0407 672 999

Towing contacts: Dunns Recovery Services 0427 603 409

TMC to be contacted at start and finish of each day on PH: 1800 679 782.

on call CNC West contact number in case of an emergency or break down - 1300 092 427.

on call CNC North contact number in case of an emergency or break down - 1300 762 376.

CNC North to be contacted a minimum of 5 business days prior to travel via CNC.North@transport.nsw.gov.au

CNC West to be contacted a minimum of 5 business days prior to travel via CNC.West@transport.nsw.gov.au

In the event of an emergency situation / Unplanned Incident the truck will be moved to the left lane and shoulder to ensure minimal traffic impacts, police are to direct and manage traffic as appropriate. Pilots accompanying the movement must follow directions of police at all times. In such instances TMC will be promptly advised so that the necessary warnings can be made.

Where a tow is required, the trailer will be unhooked from the prime mover and a standby truck will be called. TMC will be notified in such an event. Police are to direct and manage traffic as appropriate.

If police decide that the movement should be suspended as a result of time or potential traffic impacts the trailer with the load will be moved to a safe parking location and the TMC will be notified.

In the event of bad weather such as heavy rain a decision will be made by the company by the afternoon of the movement date. All relevant parties will be notified at this time and a suitable alternative date for the movement will be set if required. This will require further consultation with relevant parties.

Where bad weather is encountered along the way the movement is to proceed to the nearest and safest area suitable that can accommodate the load. A decision will be made by the police and the company as to whether the movement is to proceed any further. In the event of any delay encountered the TMC will be contacted.

3.5 Roadworks

Where notifications are sent out with contact details they will be rang prior to leaving job site so plans can be made once the load get to road works site

Live traffic will be checked daily once load is in transit

Where no contact details are available on Live Traffic load will approach road works with caution and find suitable safe parking of load and pilot will drive to road works and work out a suitable time and safe way through road works

4. Letter of no Objection from relevant council's where travel on council roads is required

Council	Approval Conditions
Port Stephens Council	Within NHVR Permit Application
Muswellbrook Council	Within NHVR Permit Application
Gunnedah Council	Within NHVR Permit Application

5. Electricity Clearance documentation

Electricity	Approval Conditions
Ausgrid Essential Energy	Emailed

6.0 Scheduled Road Works

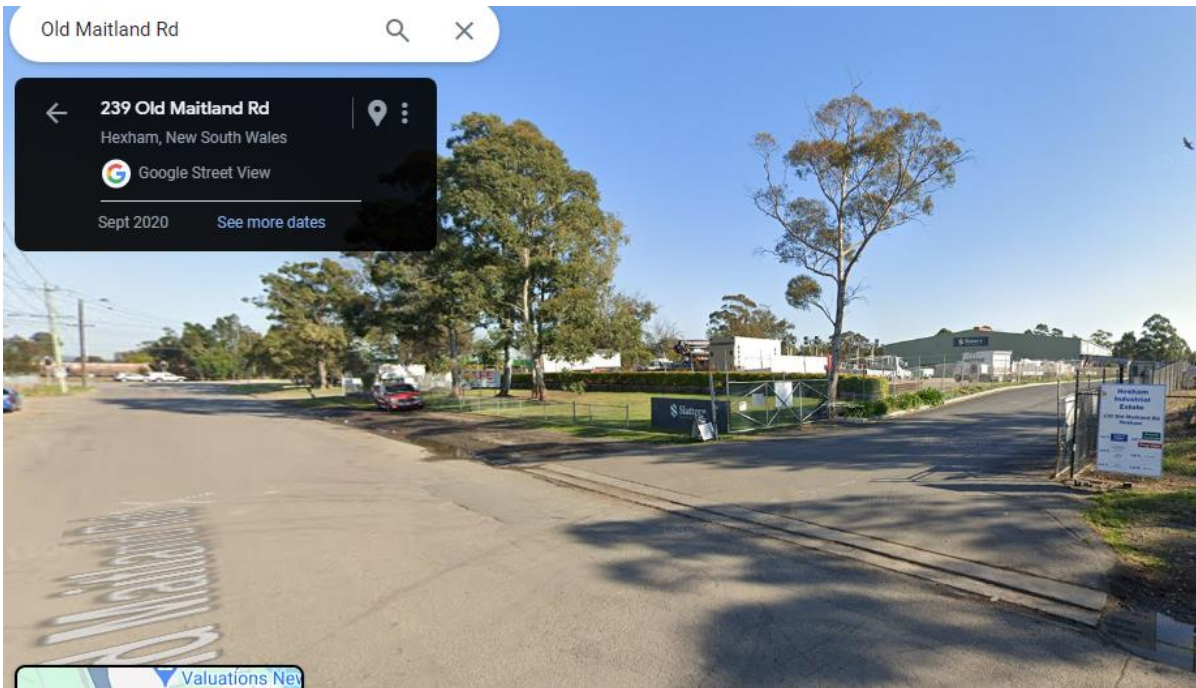
Location	Notes
Multiple on New England Hwy	Traffic to be informed of intention to travel Site based protocol to follow ie call up UHF channel and wait in park bays for escort

7.0 Letter of No Objection from relevant Railways where travel across rail lines or bridge structures is required

Railways	Notes
UGL	emailed

ROUTE SURVEY DESCRIPTION + CRITICAL POINTS ALONG THE ROUTE

Part 1 Night Travel



No problems to safely travel – effective communication between all parties involved – escorts to monitor clearance in gateway and relay to driver.

Procedure for wrong side travel

All to be done with positive communications

Find a safe spot for the truck to stop without impeding traffic.

Check load is still secure & adjust deck height (if required).

Police escort + Woods escort to travel ahead to get into position.

Once escorts are in position, Eastbound traffic will be stopped & existing traffic dispersed.

When safe to do so, truck will turn onto Maitland Rd in a Westbound direction on the wrong side of the road with 2 x escorts @ the rear blocking traffic to allow safe passage to travel.

Once the truck has progressed past the bridge, the truck will cross back onto the correct side of the road continuing its journey.

1ST WRONG SIDE PASS WITH POLICE ESCORT (HEXHAM BRIDGE)



Police escort required to close Eastbound lanes for truck & load to wrong side travel on Maitland Rd to allow truck and load safe passage under the Hexham bridge. Truck will cross back over to the correct side of the road @ the 2nd set of lights (as pictured) & continue on its journey.



Gowrie Gates - New England Hwy, Singleton just before Masion Dieu Rd intersection

Procedure for reduced height travel

All to be done with positive communications

Find a safe spot for the truck to stop without impeding traffic. Just after Simpson Tce intersection

Lower deck height on platform trailer to maximum overall height **less than 5.3m**

Police escort + GBP escort to travel ahead to get into position.

Once escorts are in position, Eastbound traffic will be stopped & existing traffic dispersed.

When safe to do so, truck will return to New England Hwy with 2 x escorts @ the rear blocking traffic to allow safe passage under rail bridge

Once the truck has progressed past the bridge, the truck will pull up at Masion Dieu Rd to raise trailer deck height back to travel height & continuing its journey.

2nd WRONG SIDE PASS WITH POLICE ESCORT (LIDDEL INTERCHANGE BRIDGE)



Park up area before Bayswater wrong side travel (after HVO mine entrance on the New England Hwy)

Procedure for wrong side travel

All to be done with positive communications

Find a safe spot for the truck to stop without impeding traffic.

Check load is still secure & adjust deck height (if required).

Police escort + GBP escort to travel ahead to get into position.

Once escorts are in position, Eastbound traffic will be stopped & existing traffic dispersed.

When safe to do so, truck will return onto New England Hwy in a Westbound direction on the wrong side of the road with 2 x escorts @ the rear blocking traffic to allow safe passage to travel.

Once the truck has progressed past the bridge, the truck will remain on the wrong side of the road for approx. 700m and cross back onto the correct side of the road after grass medium strip has finished. Truck will continue to park up area just before Thomas Mitchell Dr intersection & wait for curfew to end.

Procedure for Bridge Crossing

As this combination must centreline all the bridges on the route with no other vehicles on the bridge at a speed not exceeding 10k/h, the following procedure is to be implemented:

- Police to travel forward and stop all oncoming traffic on undivided carriageway. If Police are not required, front pilot to monitor for and advise combination when no oncoming traffic is approaching.
- Front pilot vehicle to move across bridge to assist to warn oncoming traffic and provide information to combination.
- Once informed the road is clear of oncoming vehicles, combination is to travel across the bridge at permitted speed.
- Rear pilot to warn following vehicles not to overtake. This will also be required on dual carriageway bridges.
- Front pilot to confirm when the combination has cleared the bridge.
- Police to release any stopped traffic once combination has travelled across the bridge (if Police are accompanying)

combination).

- Following traffic to be monitored and, if significantly built-up combination to move into next available rest stop or pull over location.



Narrow bridge approaching Power Station exit on New England Hwy



Start of divided road approaching Power Stations



Extra escort vehicle required for Eastbound Power Station exit on New England Hwy



End of contraflow, truck to return to the correct side of the road after getting under flyover @ Power Stations



Park up area just before Thomas Mitchell Dr intersection, Muswellbrook. Truck will wait for sunrise before continuing journey to Narrabri Coal

PART 2 DAYLIGHT JOURNEY

Recommence journey after curfew has ended using Muswellbrook OSOM/High Load Detour



Bell St Bridge, Muswellbrook as per permit conditions **MAX SPEED IS 10KM/H** in transit over bridge



Rail Bridge - Bell St Muswellbrook part of OSOM High Load Detour



Truck to turn left onto Victoria St continuing on Muswellbrook OSOM High Load Detour



Market St, Muswellbrook. Last part of Muswellbrook OSOM/High Load Detour. Truck and load will rejoin onto Bridge St, Muswellbrook & continue their journey to Narrabri Coal

Route Survey Bridges

All bridges on this route can be traversed with no risk to infrastructure.

Railings on both sides of all bridges pose no obstructions– beware of narrow shoulders when approaching all bridges and pinch points – police to stop oncoming traffic with plenty of notice at all bridges and pinch points. Truck to travel down centerline of bridge with exclusion of all other traffic, – rear pilots to communicate with truck amount of clearance each side of all bridges and pinch points.

Truck not to exceed 10 kh while on Bridges and no sudden or harsh braking while on the brigdes.

Load will be loaded to clear side rails on all bridge narrower than 6.4m float has 400mm vertical lift as well.

Load widest width is 8.9m which is 5.8m off the ground will clear all signs and structures on all bridges.

Load at base width is 8.9m wide at 1.8m off the ground.

Pedestrians on Bridges.

Pilots and police to advise and warn all pedestrians not to be on the Footpath section of the bridge whilst the load is travelling on the bridge. Front Pilots and Police will advise the Driver of any pedestrians and the rear pilot will advise when it is safe for them to continue across the bridge .Load will not proceed until all pedestrians are in a clear safe area away from the Bridge.

Damage to Council infrastructure.

Any damage to council property will be reported by the Driver to GBP Heavy Haulage managers or 000 as soon as Practical. The operator, Police and Escorts will not leave the site if it is deemed unsafe. All damages incurred will

be assessed by council and the process of repairs will be commenced, a manageable timeline will be configured by all parties concerned.

Swept Path analysis.

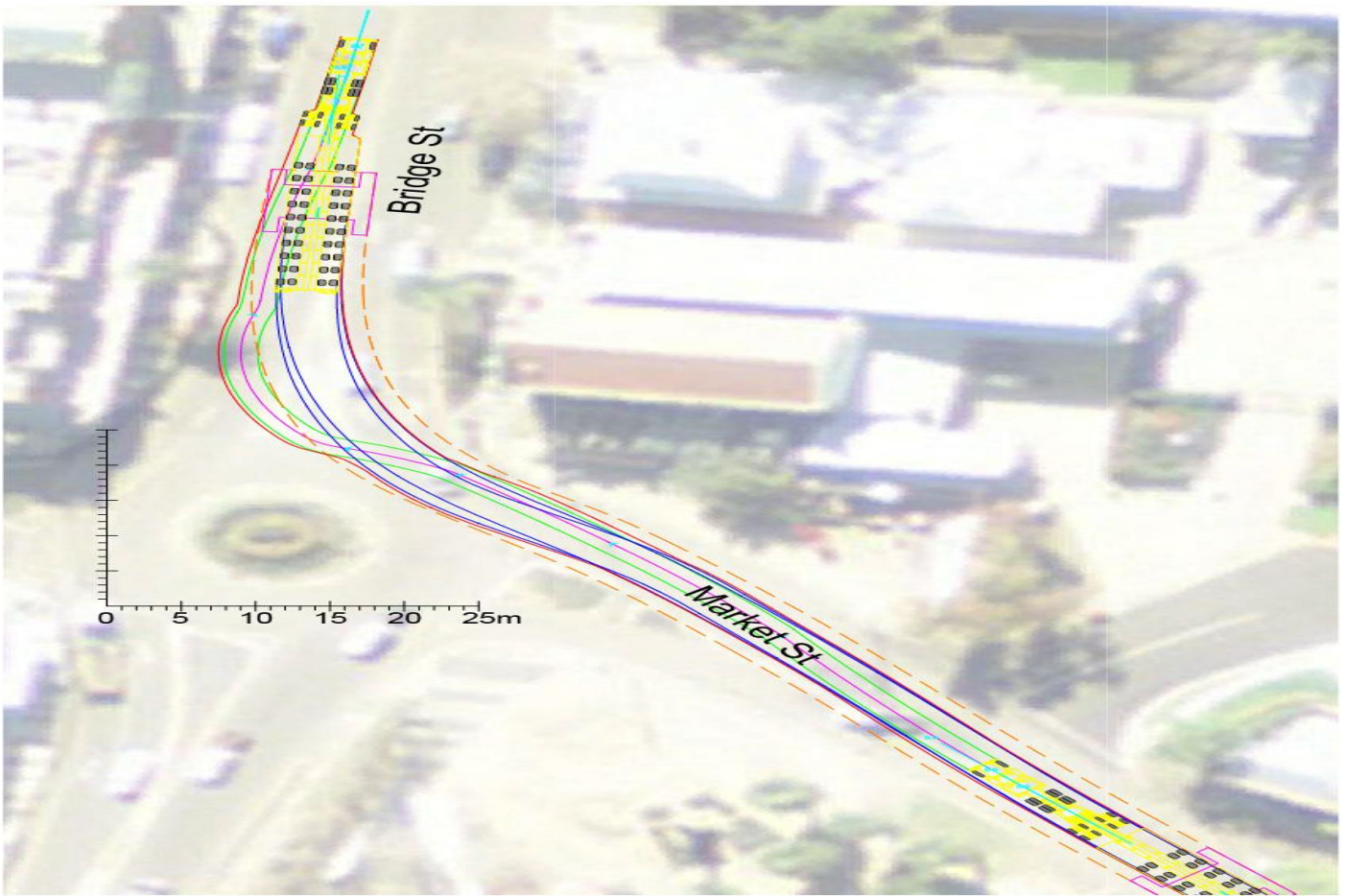
Maitland Street, Bell Street intersection.



Bell Street Bridge.



Market Street, Bridge Street intersection.



56. Sandy creek bridge width 9.3m rail height 1.25m



Sandy Creek Bridge, No obstruction

57. Aberdeen Bridge, load will safely clear all the structure

Good communication between all parties involved.

Truck to travel down centerline of bridge with exclusion of all other traffic. – rear pilots to communicate with the truck the amount of clearance each side of all bridges and pinch points.

Width 9.5m,

Handrail height 1.25m.



	Aberdeen Bridge, load will safely clear all Of the structure
58. New England Hwy, Scone bypass. No issues of obstructions with new road.	 Scone Bypass
61. Safe park up area at Wingen, load can pull Completely off the road	 Safe park up at Wingen

62. Bridge at Burning mountain poses no Problems	 Burning Mountain Bridge
63. Safe park up area at Burning Mountain, Load can pull completely off the Hwy.	 Safe park up, Burning Mountain
64. Blandford bridge, this bridge will be Negotiated slowly with no affect on the on Coming traffic. The load will safely clear the Bridge and the road furniture. Width 7.9m Height 1.25m	 Blandford bridge, load will clear all objects

65. Bridge on New England Hwy south of Murrurundi poses no problems 12.2m wide	 Bridge south of Murrurundi
66. Safe park up area at Murrurundi Shell, The load can park safely off the Hwy to clear Traffic.	 Safe park up, Murrurundi Shell
67. Pages River bridge in Murrurundi poses no Problems, width 11m, height 1.6m	 Pages River bridge Murrurundi

68. Safe park up area at the top of the Murrurundi range, the load can park safely Off the Hwy to clear traffic.	 Safe park up, top of Murrurundi range
69. Chilcott's Creek bridge, pose no problems and The load will safely clear. Width 9.9m, height 1.2m	 Chilcotts Creek Bridge
70. Safe park up area in Willow tree. The load Can pull safely off the Hwy to clear Traffic.	 Safe park up, Willow Tree

71. left turn at the intersection of the New England Hwy, and the Kamilaroi Hwy, This is a large intersection with no obstacles that The load will have to content with and can be Taken on the correct side of the Hwy.	 Intersection of New England Hwy and Kamilaroi Hwy
72. Colly Creek bridge Kamilaroi Hwy, poses no Problems 8.3m between signs rail height 0.9m	 Colly Creek bridge
73. Safe Park up area, the load can safely pull Off the Hwy to clear traffic. Location between Willow Tree and Quirindi	 Safe park up

74. Rail Bridge on Kamilaroi Hwy, load will safely Fit between signs and railings as well as being Able to clear bridge railing. Width 7.7m Height 1.2m	 Rail Bridge on Kamilaroi Hwy
75. Left turn at Quirindi pose no problems with No obstacles to contend with. Traffic can also Be cleared after the intersection.	 Kamilaroi Hwy Intersection Quirindi
76. Safe park up area, on north side of Quirindi The load can safely pull off the road to clear Traffic. This parking bay is on the right hand side Off the Hwy so traffic will be stopped if required For the load to enter and exit the parking bay.	 Safe Park up area north of Quirindi

77. Dary bridge, poses no problems The load is Wider than the bridge and will also Clear the railings if required. Width 7.8m Height 1.25m.	 Dary bridge
78. Lower Quipolly bridge, poses no problems The load is Wider than the bridge and will also Clear the railings if required. Width 8.2m Height 1.25m.	 Lower Quipolly bridge
79. Safe pull over bay, to clear traffic	 Safe pullover bay

80. Rail crossing on the Kamilaroi Hwy poses no Problem's width 12.8m	 Rail crossing on Kamilaroi Hwy
81. Safe Park Up area, load can safely park off the Hwy, Square bush parking area 6km east of Breeza	 Safe Park up
82. Mooki Creek bridge, poses no problems. The Load is Wider and higher than the bridge. Width 8.8m, height 1.2m	 Mooki Creek bridge

83. Safe park up area, the load can safely pull Off the Hwy to clear traffic. Location 12km west of Breeza	 Safe park up
84. Safe pull over area near Nea silos. Load can Pull safely off the Hwy to clear traffic.	 Safe pull over near Nea silos
85. Rail crossing at Curlewis poses no problems Width 12.8m	 Curlewis rail crossing

86. Safe park up area at the Curlewis silos. The load can safely pull off the Hwy to clear Traffic.	 Safe park up, Curlewis silos
87. Peach tree gully bridge, poses no problems. The load is Wider and higher than the bridge. Width 7.8m height 1.25m	 Peach tree gull bridge
88. Safe park up area, the load can pull safely Off the Hwy to clear traffic. This park up area is On the RHS of the Hwy so traffic will be stopped If required for the load to enter and exit. Location 10km east of Gunnedah	 Safe park up area

89. Round about on south side of Gunnedah Poses no problems and will be taken on the Correct side of the Hwy.	 Round about on the south side of Gunnedah
90. Inetrsection of Kamilaroi Hwy and Bloomfield Street is a RH turn with no obstructions.	 Kamilaroi Hwy and Bloomfield Street
91. Left turn to continue Bloomfield Street, No obstructions.	 Bloomfield street

92. Left turn at roundabout from Bloomfield Street to Kamilaroi Hwy has no obstructions. Truck to travel down center of road with exclusion of all other traffic. – rear pilots to communicate with the truck the amount of clearance each side of all pinch points.	 Bloomfield Street and Kamilaroi Hwy
93. Bridge on Kamilaroi Hwy Gunnedah poses No problems width 8.9m height 1.35m	 Bridge on Kamilaroi Hwy
94. Safe park up area on the north side of Gunnedah at the RMS inspection/ parking area. The load can safely pull off the Hwy. traffic will Be stoped if required as the park up area is on The RHS of the Hwy	 Safe Park up area north of Gunnedah

95. Safe park up area, the load can pull safely off The Hwy to clear traffic. Location 20km west of Gunnedah	 Safe park up area 203.5km
96. Deadman's Creek bridge, poses no problems. The load is narrower and higher than the bridge. Width 8.1m, Height 0.9m	 Deadmans Creek bridge 230.5km
97. Boggabri bridge, poses no problems. The load is narrower and higher than the bridge. Width 8.4m, height 1.1m	 Boggabri bridge, Coxs Creek 233.5km

98. Safe park up area in Boggabri. The load can Safely pull over and clear the Hwy to let traffic Pass.	 Safe Park up in Boggabri 234km
99. Right turn in Boggabri, poses no problems And will be taken from the correct side of the Hwy.	 Kamilaroi Hwy intersection Boggabri 234km
Safe park up area. The load will safely pull of Hwy to let traffic pass. Location 5km west of Boggabri	 Safe park up area 243km

Current roadworks – Baan Baa to Narrabri

All vehicles over 5m wide must contact traffic control on UHF 28 on approach to the site, use wide load bays provided and follow advice on signage. Maximum axle width of 6.5m in place from Monday to Saturday.



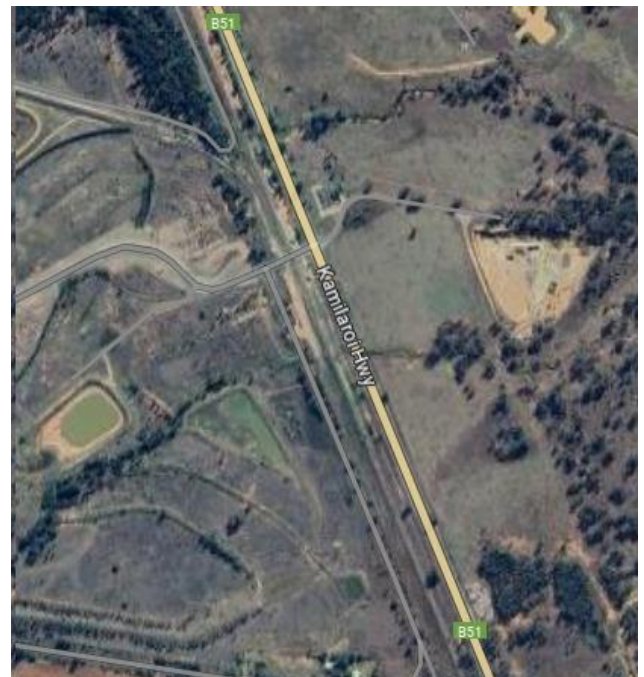
Overhead Bridges – no issue – plenty of clearance height and width 6.5m height

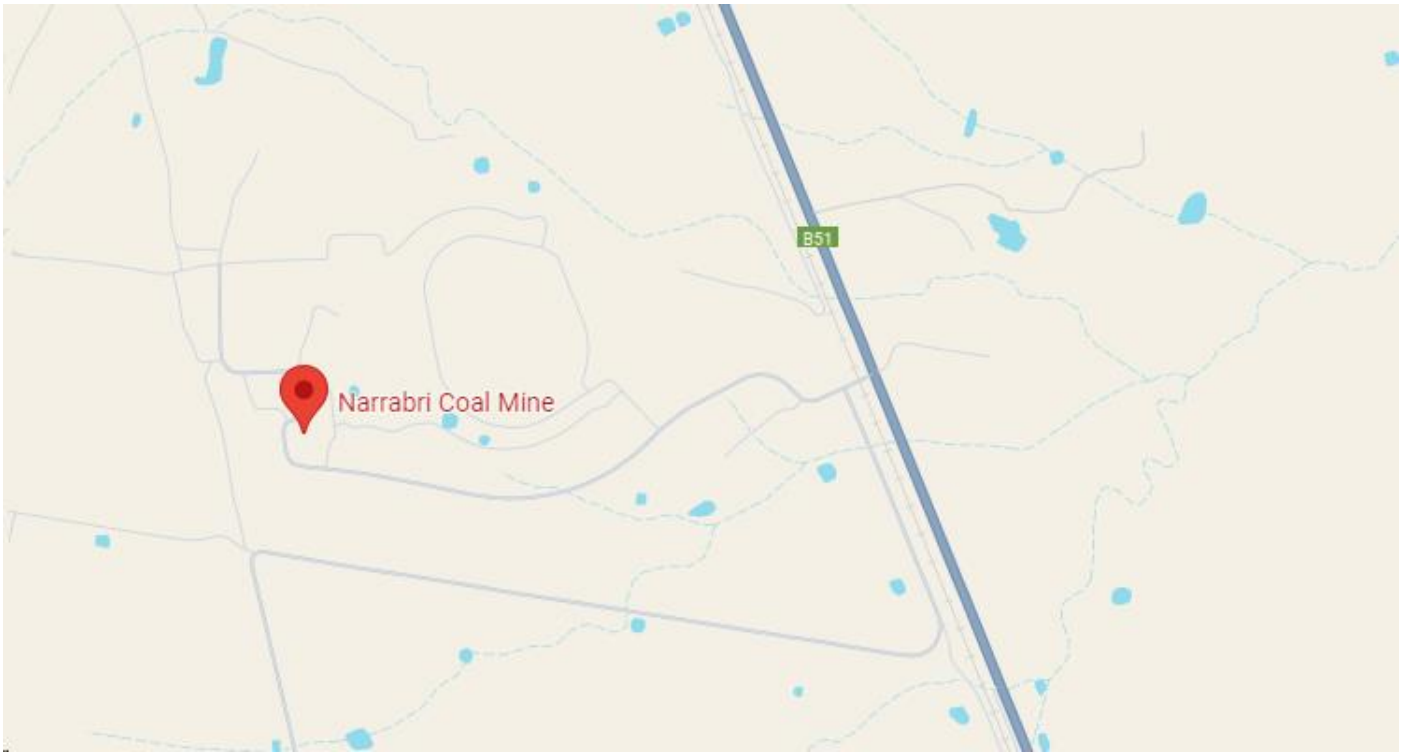


Safe pull over area at Narrabri coal entry,
The load can pull safely off the road to let traffic pass



Narrabri Coal entry – escorts to ensure no traffic affected by
turning vehicle





Entry to Narrabri Coal Mine