

Tandegin Wind Farm

Transport Impact Statement

Collgar Renewables

Reference: 529171

Revision: 1

2026-08-24



Document control record

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Document control		aurecon				
Report title		Transport Impact Statement				
Document code			Project number		529171	
File path		https://aurecongroup.sharepoint.com/sites/529171/5_WorkingFiles/01. E&P Tandegin Wind Farm/01. E&P Deliverables/02. Tandegin Studies/07. Transport Impact Statement/Report/529171_Tandegin_Transport Impact Statement_Rev1.docx				
Client		Collgar Renewables				
Client contact		François Giraud	Client reference			
Rev	Date	Revision details/status	Author	Reviewer	Verifier (if required)	Approver
0	2026-08-07	Draft for review	P. Macias	B. Green	S. Jones	O. Belenda
1	2026-08-24	Issue for DA	P. Macias	B. Green	S. Jones	M. Anstee-Brook
Current revision		1				

Approval			
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Executive summary

Aurecon has prepared this Transport Impact Statement (TIS) on behalf of Collgar Renewables in support of the Development Application for the proposed Tandegin Wind Farm, located within the Shire of Merredin, Western Australia. The assessment has been undertaken in accordance with the WA Planning Commission's Transport Assessment Guidelines (Volume 4, Individual Developments).

The Project involves the development of up to 50 wind turbine generators together with a Battery Energy Storage System, connecting to the existing Collgar terminal. While the operational phase of the wind farm is expected to generate minimal ongoing traffic, the construction and commissioning phase represents the worst case scenario for the surrounding road network and forms the primary focus of this study.

The Great Eastern Highway provides the main regional connection to the site, with Merredin–Narembeen Road serving as the principal access corridor. Brissenden Road, Tandegin West Road and Old Muntadgin Road provide secondary access to portions of the site. A review of existing traffic volumes and road characteristics found the surrounding network to be lightly trafficked, though carrying a relatively high proportion of heavy vehicles associated with agricultural activity.

Construction traffic generation is based on conservative assumptions around workforce numbers, deliveries and plant mobilisation. From this, the TIS confirms that the development falls within a Moderate Impact category as defined by the WAPC Transport Assessment Guidelines (Volume 4 – Individual Developments).

A key consideration for the Project is the transport of oversize and overmass (OSOM) wind turbine components. Route assessments were undertaken for both the Bunbury and Geraldton port options, with the Bunbury route identified as shorter and more direct. Both options are considered achievable, subject to targeted upgrades to key intersections and local access roads, including widening, hardstand construction and vegetation management. A swept path assessment of the site access and internal road network confirmed that the road network can generally accommodate the governing turbine transport vehicles, with localised improvements required at several locations.

Overall, the report concludes that the surrounding road network is capable of supporting the proposed development, provided the recommended road upgrades, intersection improvements and traffic management measures are implemented. Detailed design and a Transport Management Plan will be required at later project stages to confirm and finalise these arrangements, in consultation with Main Roads WA and the Shire of Merredin.

1 Introduction

1.1 Background

Tandegin Wind Farm Pty Ltd (the Proponent) is proposing to develop the Tandegin Wind Farm project ('the Project'), within the Shire of Merredin ('the Shire'), Western Australia. Aurecon has been engaged by the Proponent to conduct a transport assessment as part of the Development Application (DA) submission, in accordance with the WA Planning Commission's (WAPC) Transport Assessment Guidelines (Volume 4 – Individual Developments).

The development will consist of up to 50 wind turbines installed across approximately 12,894 hectares, with an expected capacity of up to 310 megawatts and operating life of 25+ years. The project site will be located 29 km southeast of the town of Merredin. The location of the project site is shown in Figure 1-1.



Figure 1-1 Tandegin Wind Farm site location (Source: Aurecon geospatial portal)

1.2 Purpose

The purpose of this report is to assess the impact of the Project on the operation of the surrounding road network. The transport assessment will be prepared in accordance with the WAPC Transport Assessment Guidelines (Volume 4 – Individual Developments). The Guidelines promote a three-level assessment process, where the required level of assessment is dependent on the likely level of impact (see Figure 1-2), as follows:

- Low impact – less than 10 peak hour trips, no assessment required
- Moderate impact – between 10 and 100 peak hour trips, Transport Impact Statement (TIS) required

- High impact – more than 100 peak hour trips, detailed Transport Impact Assessment (TIA) required.

Traffic and transport impacts associated with this form of development proposal are not standard or typical of urban-based development. Given this development, once opened, does not generate quantities of trips like that of a typical urban-based development (i.e. trips associated with residents or workers), the peak hour demand (i.e. period of highest traffic demand across a typical day) is not likely to have a high impact (i.e. generate trips greater than 100 trips per hour in the peak hour), or potentially even moderate impact. It is rather the impacts on the network from construction and initial commissioning that would represent the worst-case scenario, and so are considered as part of this study.

The construction and commissioning phase will likely be spread out over ~2-3 years with periods of increased activity. Initial program indicates that construction activities will commence in late 2027 and conclude in mid-2030. Given the extended construction timeframes, the expected construction trips generated are also typically less than the quantities of trips of a typical urban-based development with a high impact (i.e. generate trips greater than 100 trips per hour in the peak hour development). Therefore, a moderate impact is most likely associated with this type of development during construction.

While ultimately (during the operational stage) the development will likely have a low traffic impact, the development is expected to have a moderate traffic impact during the initial construction phase. Hence, a Traffic Impact Statement has been prepared (this study).

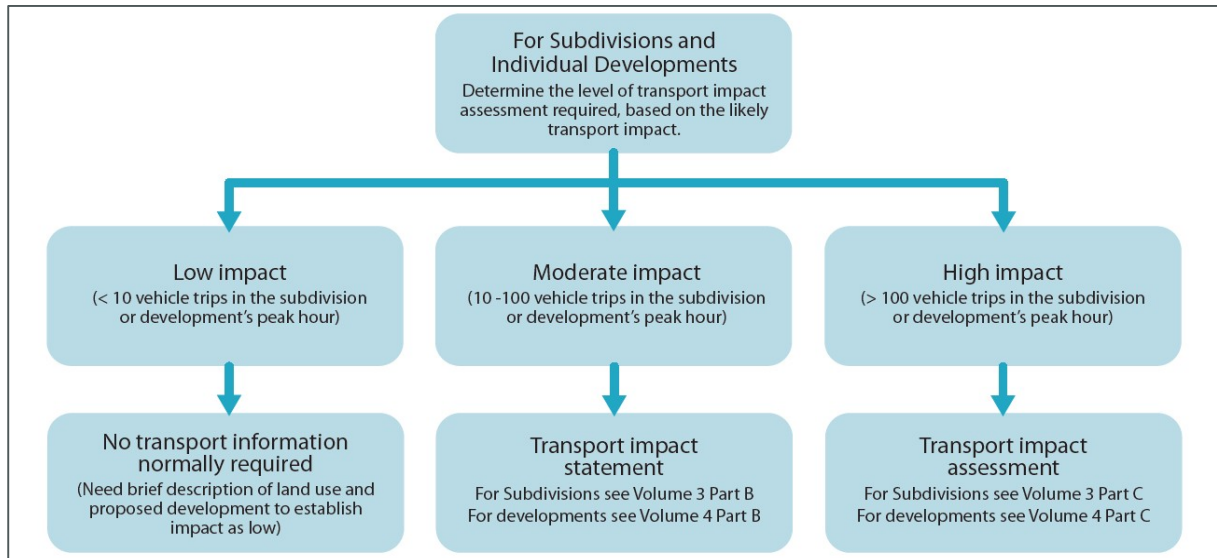


Figure 1-2 WAPC transport assessment requirements for individual developments

1.3 Disclaimer

- This report has been prepared with due care and is subject to assumptions, outlined throughout the report in the relevant sections, based upon information available at the time of writing.
- The review and assessment are based on information provided to Aurecon by other parties. Aurecon has not independently verified this information and does not accept responsibility or liability for any inaccuracies or shortcomings in this information.
- The review and assessment are provided strictly on the basis that the information provided is accurate.
- Should these information sources be modified by third parties, Aurecon assumes no responsibility for any resulting inaccuracies in its information.
- The transport assessment provides guidance to stakeholders involved in the development that can potentially impact on the safety, efficiency, or infrastructure condition of the state-controlled road network. It outlines the principles and the framework for undertaking a traffic impact statement and provides advice on mitigation strategies to address traffic impacts. This study is developed to the extent required for purposes of a traffic impact statement but does not cover all aspects which could be required for a traffic impact assessment.

2 Existing site

2.1 Land use

The land within the project site is predominantly identified as 'agriculture' with some areas identified as 'Special use' under the current Shire of Merredin Scheme No. 6. The Special Use areas comprise Special Use 8 (Wind Farm) and relate to the existing Collgar Wind Farm located immediately north of the project site. Surrounding land is predominantly zoned Agriculture and Rural, with smaller areas zoned Parks and Recreation and Public Utility.

The land use within and surrounding the project site is depicted in Figure 2-1.

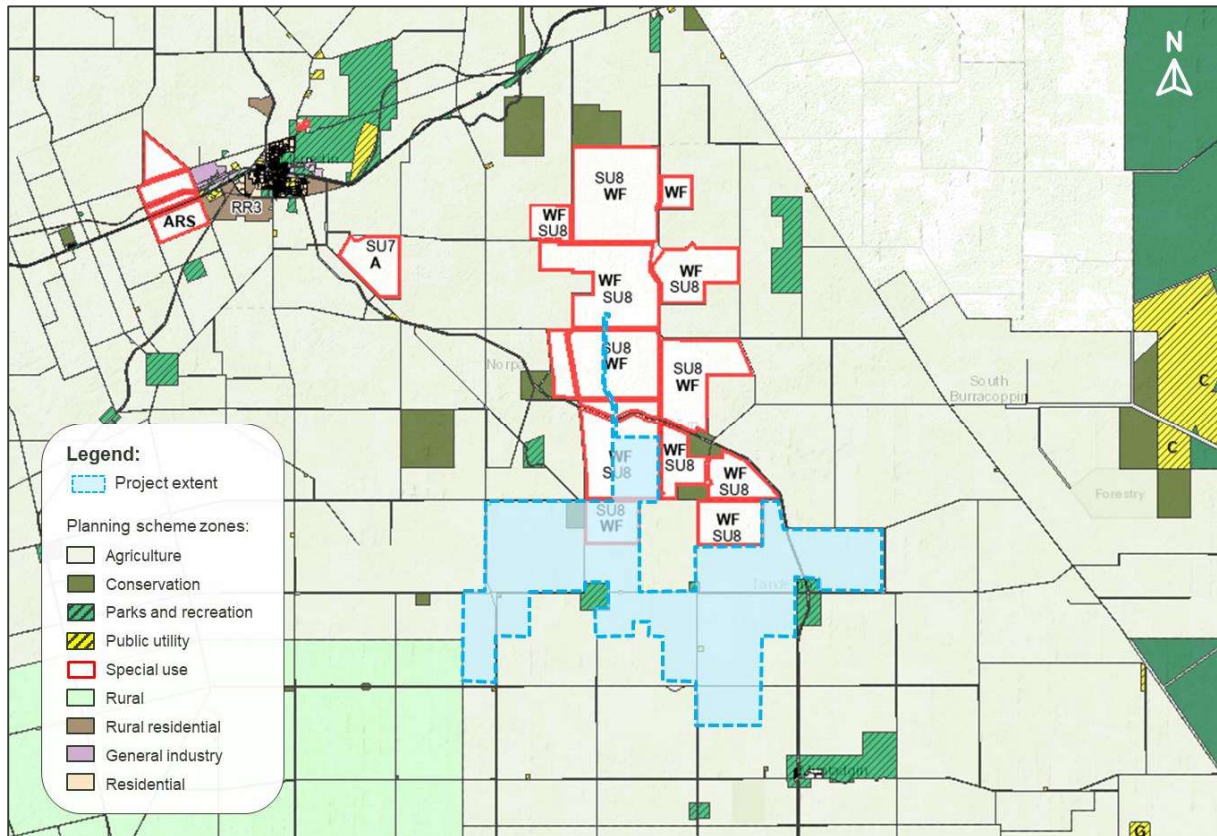


Figure 2-1 Existing Project Site land use zoning (PlanWA, 2025)

2.2 Road network

The project site, existing surrounding road network and their road hierarchy as defined by Main Roads mapping information system, are shown in Figure 2-2. The nearest major road is Great Eastern Highway (a primary distributor) that runs on the northern side of the site in a west-east direction. Great Eastern Highway is a state-owned road, managed by Main Roads Wheatbelt Region.

Various other lower hierarchy order roads operate within or directly adjacent to the project site, which are managed by the Shire. Of these, Merredin-Naremben Road is of the highest order, shown as a regional distributor, followed by Brissenden Road and Bulls Head which is a local distributor. All other roads are classified as local access roads, including:

- Briant Road
- Old Muntadgin Road
- Depot Dam Road

- Tandegin West Road
- Belka East Road

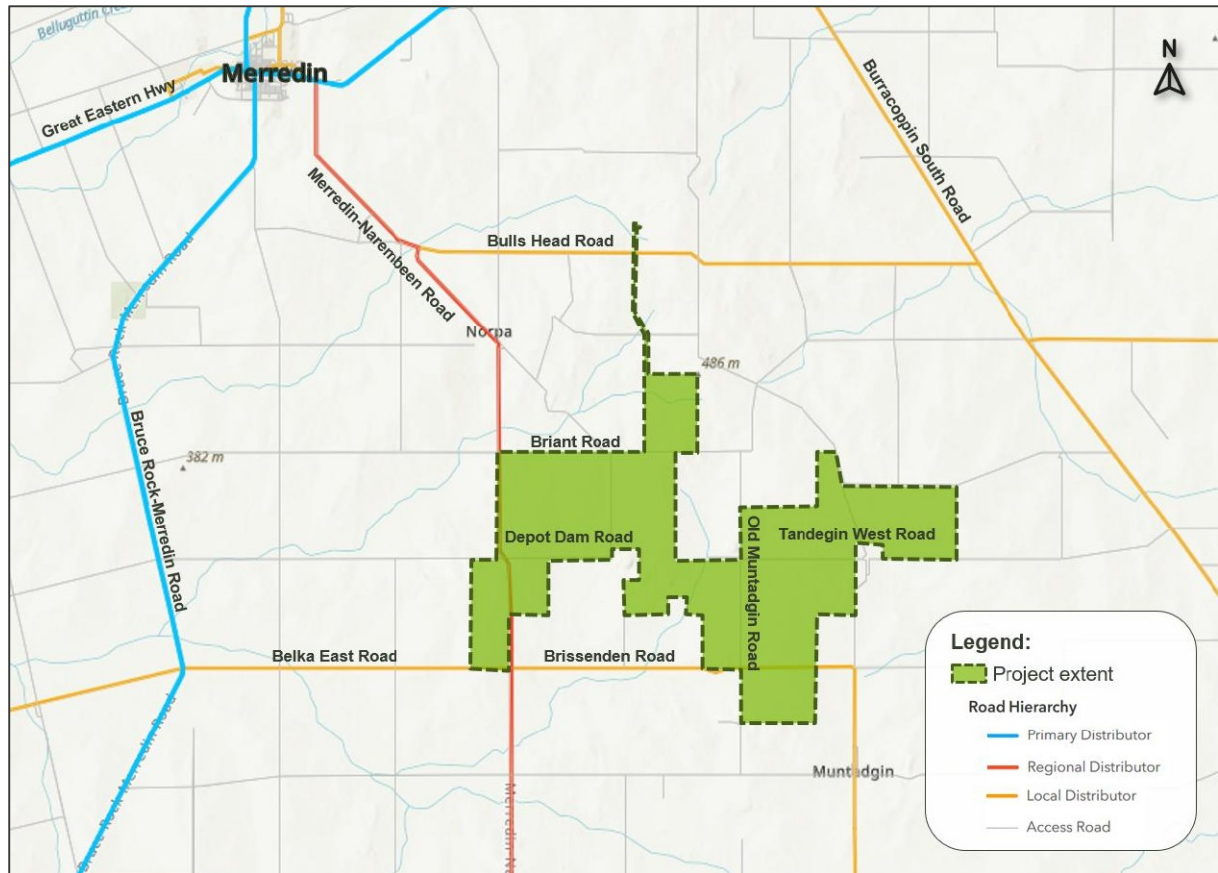


Figure 2-2 External road network - road hierarchy

Figure 2-3 shows the existing road network at the project site, including the Shire roads proposed to provide access to the project's internal access road network and the proposed wind turbine locations. A primary site access has been identified on Merredin–Narembeen Road, via an existing private access road located between Briant Road and Depot Dam Road. A secondary site access is also proposed from Merredin–Narembeen Road and Brissenden Road at the southern extent of the project site to provide access to the southern turbine cluster.

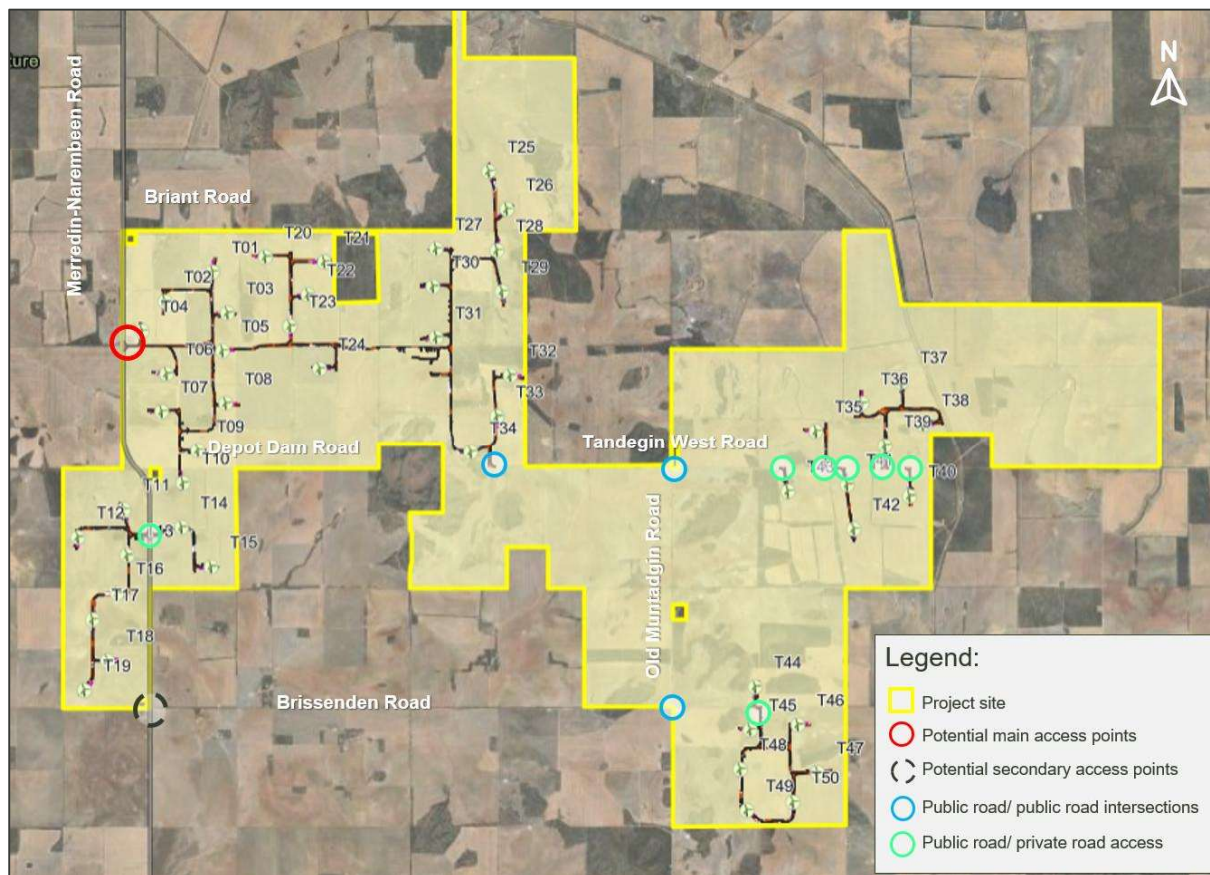


Figure 2-3 Existing road network and key intersections

A desktop review of the surrounding road network was undertaken to identify the key roads providing access to the project site and document their functional classification and characteristics. Table 2-1 summarises the road hierarchy, cross section and approximate dimensions of the roads within the study area.

Table 2-1 Road summaries

Road	Hierarchy	Road Characteristics	Road Reserve Width	Trafficable width
Great Eastern Highway	Primary Distributor	Sealed two lane / two way	~60m	9.4m seal, 3.6m traffic lanes and 1.1m shoulders
Merredin-Narembene Road	Regional Distributor	Sealed undivided / two way	~20m	~7m seal
Brissenden Road	Local Distributor	Sealed undivided / two way	~20m	~7m seal
Briant Road	Access Road	Unsealed undivided / two way	~20m	~9m
Allsop Road	Access Road	Unsealed undivided / two way	~20m	~11m
Old Muntadgin Road	Access Road	Unsealed undivided / two way	~20m	~9m
Depot Dam Road	Access Road	Unsealed undivided / two way	~20m	~8m
Tandegin West Road	Access Road	Unsealed undivided / two way	~20m	~8m



Figure 2-4 Great Eastern Highway looking west (Google Street View, 2025)



Figure 2-5 Merredin-Narembeen Road looking south (Google Street View, 2025)



Figure 2-6 Brissenden Road looking west (Google Street View, 2025)

Based on the preliminary review, Tandegin West Road and sections of Old Muntadgin Road may require upgrading if they are to form part of the project access network for construction traffic. Potential works include widening the existing unformed road formation to provide a minimum trafficable width of approximately 5.5 m, together with localised improvements to vertical curves and road geometry where required to accommodate the proposed construction vehicles. The extent of any upgrades will be confirmed at subsequent stages of the Project in consultation with the relevant road authority.

2.3 Traffic volumes

Traffic volume data was available for key roads in the study area, including Great Eastern Highway and Merredin–Narembeen Road, sourced from the Main Roads Western Australia Traffic Map. Where traffic count data was not available for several local government (Shire) roads, conservative estimates were developed based on the relative magnitude of traffic volumes on the adjacent roads, road classification and cross section, and the number of properties (i.e. magnitude of likely demand). It is also noted that traffic volumes on the surrounding road network are likely to vary seasonally due to agricultural activities, including harvesting and associated heavy vehicle movements.

Along Merredin-Narembeen Road, the data shows there is an increase in 2022/2023 traffic volume travelling northbound, from 293 vehicles per day (vpd) to 426vpd (see Figure 2-7).

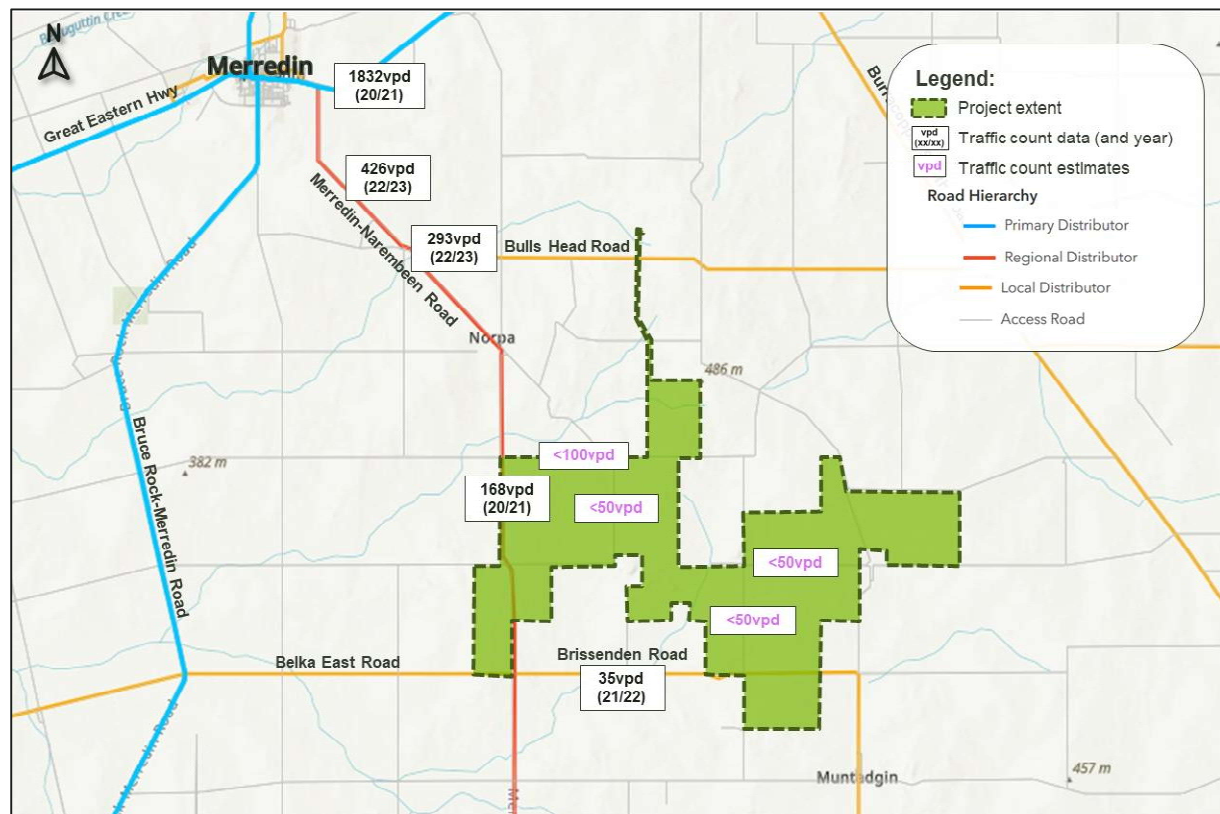


Figure 2-7 Base traffic buildup (Shire of Merredin and Main Roads WA traffic map, 2026)

The existing traffic data (see Table 2-2) suggests that heavy vehicles equate to a high proportion of traffic volume on the roads in this area. Whilst considered high, a heavy vehicle percentage (HV%) of 30% is assumed for the roads which do not have data available (as to generally align with roads which have traffic data). Note the roads which lack data are lower order roads, typically used to provide local access and so may not see HV% of this magnitude, however for the purposes of this exercise is considered appropriate due to its conservativeness.

In addition to the above, the future 2028 traffic volume is estimated based on the base year available traffic volume, which is when project construction peak is expected. The 2028 traffic volume was calculated using a conservative growth rate of 2% per annum (compounding). For those roads with an estimated traffic volume, growth rate is applied from 2022 (i.e. 6 years of growth to get to 2028).

The base year and the estimated traffic volumes for the future base case are shown in Table 2-2.

Table 2-2 Background traffic

Road segment description	Base year traffic volume			Base case (2028)		
	Two-way traffic volume (vpd)	Heavy vehicle (HV)%	Traffic volume year	Two-way traffic volume (vpd)	LV (vpd)	HV (vpd)
Great Eastern Hwy East of Merredin Narambeen Rd	1832	533 (29.1%)	2020/2021	2146	1522	625
Merredin Narembeen Rd – North of Hicks Rd	426	198 (46.5%)	2022/2023	480	257	223
Merredin Narembeen Rd – South of Collgar South Rd	293	144 (49.1%)	2022/2023	330	168	162
Merredin Narembeen Rd – South of Briant Rd	168	40 (23.8%)	2020/2021	197	150	47
Brissenden Road	35	20 (57.5%)	2021/2022	39	17	22
Briant Road*	70	21 (30%)	N/A	70	49	21
Allsop Road*	40	12 (30%)	N/A	40	28	12
Tandegin West Road*	40	12 (30%)	N/A	40	28	12
Old Muntadgin Road*	20	6 (30%)	N/A	20	14	6

* No traffic data available so estimate only (conservative)

2.4 Active and public transport

Based on available information from the Department of Transport and Major Infrastructure and the Shire of Merredin no existing or planned cycling or walking infrastructure is located at or immediately adjacent to the project site.

The Merredin Train Station is located north-west of the project area and is serviced by two Transwa rail services: the MerredinLink, which operates between Perth and Merredin, and the Prospector service, which operates between Perth and Kalgoorlie. As shown in Figure 2-8, several school bus routes also operate in the vicinity of the project site, with these routes indicated in purple on the map.

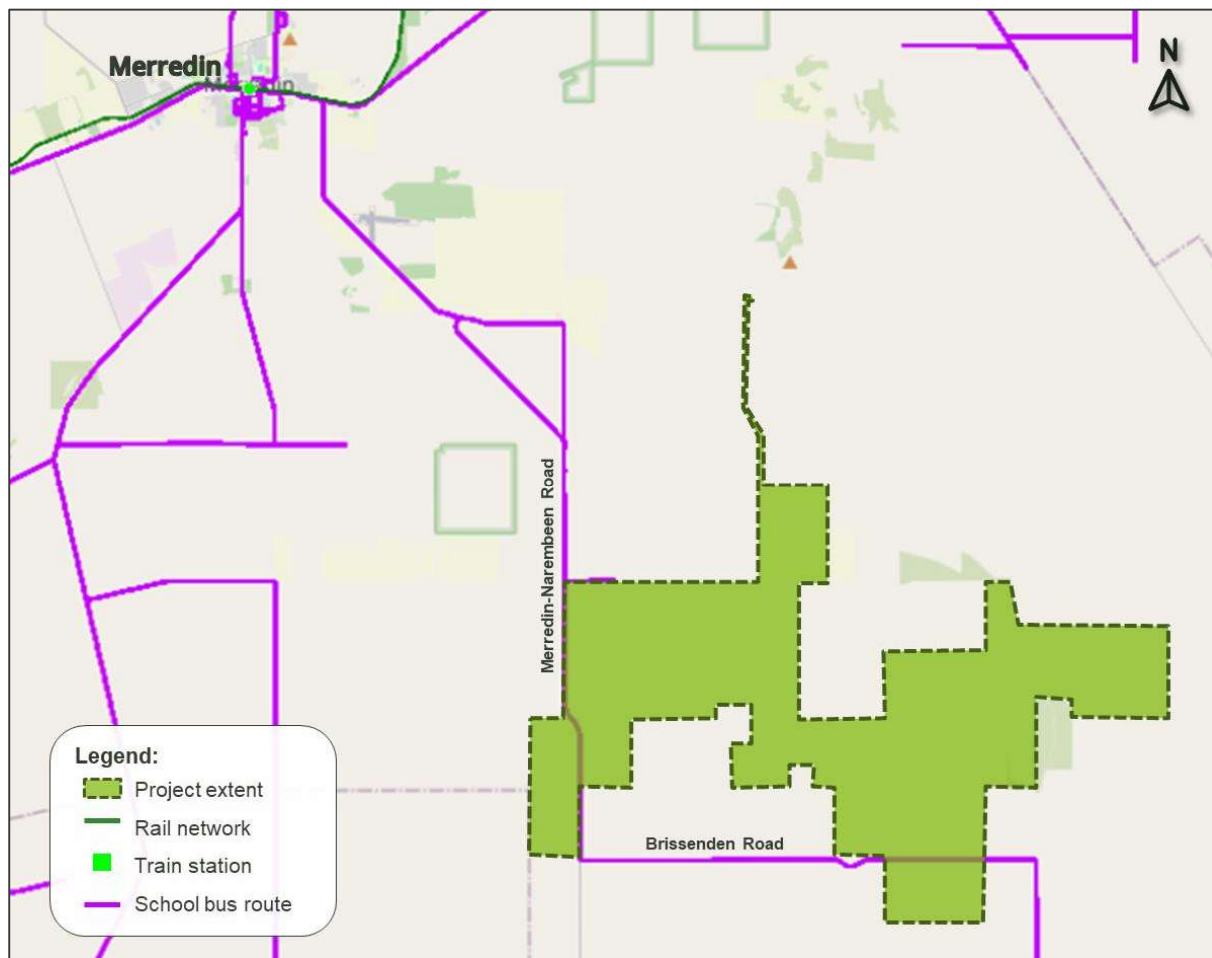


Figure 2-8 Public transport and school bus routes map (Data WA, 2026)

2.5 Freight network

The approved restricted access vehicle (RAV) routes of the relevant road links surrounding the project site have been summarised in Table 2-3 utilising Main Roads Western Australia's heavy vehicle service (HVS) mapping website. The highest order roads that service the Project are Great Eastern highway, which is classified as N7 and TD4 and Merredin Narembeen Rd, which is N7 and TD4.

Table 2-3 MRWA RAV networks

Road Section	MRWA RAV Networks									
	Tandem Drive Network						Tri Drive Network			
	N2	N3	N4	N5	N6	N7	TD1	TD2	TD3	TD4
Great Eastern Highway	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Merredin-Narembeen Road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brissenden Road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Briant Road	✓*	✓*	✓*	✗	✗	✗	✓	✗	✗	✗
Allsop Road	✓*	✓*	✓*	✗	✗	✗	✓	✗	✗	✗

Road Section	MRWA RAV Networks									
	Tandem Drive Network						Tri Drive Network			
	N2	N3	N4	N5	N6	N7	TD1	TD2	TD3	TD4
Old Muntadgin Road	✓*	✓*	✓*	✗	✗	✗	✓	✗	✗	✗
Depot Dam Road	✓*	✓*	✓*	✗	✗	✗	✓	✗	✗	✗
Tandegin West Road	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

*With conditions

2.6 Crash history

A crash history analysis of the area was obtained from the Main Roads Crash database. The review of the data was narrowed to the road network directly adjacent to or within the project site from 1 January 2019 to 31 December 2023 (five-year period).

The dataset contains information on crashes reported to the police which resulted from the movement of at least one road vehicle on a road related area and includes records of fatalities, hospitalisation, medical treatment and minor injuries.

A total of seven crashes have been recorded on the road network surrounding the project site. Of these, three were classified as hit-object crashes, two involved collisions with animals, one was a rear-end crash, and one was a sideswipe.

The highest number of crashes occurred on Brissenden Road, where three incidents were reported, including two that resulted in hospitalisation and one that caused property damage only. Two intersection crashes were also recorded, one at Bulls Head Road/Booran South Road and Barnes Road, and another at Tandegin Road/Hendrick Road. No fatal crashes were reported. Figure 2-9 presents the locations of these crashes and their severity.

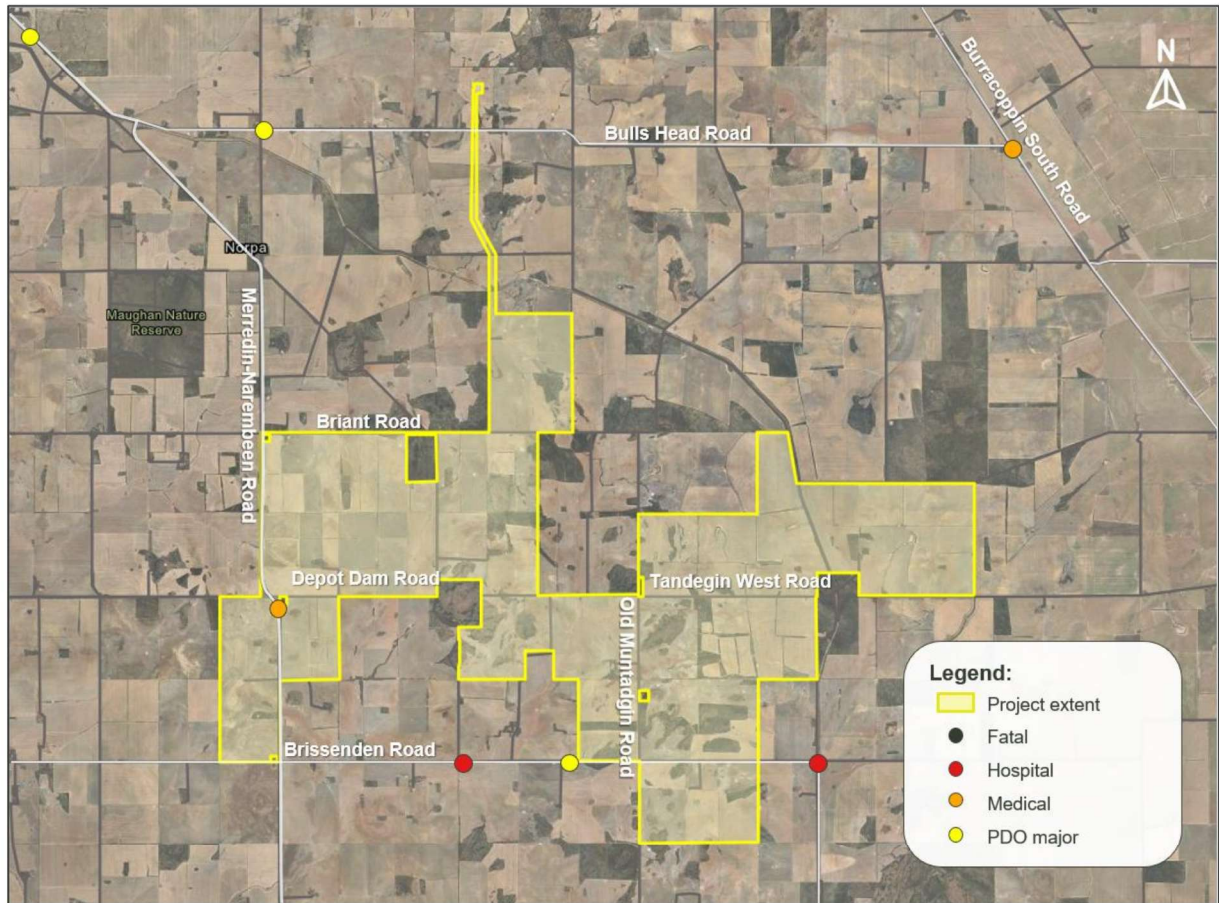


Figure 2-9 Crash map by severity (2019-2023)

A summary of crashes by year is shown in Figure 2-10. The highest number of crashes were recorded in 2019 and 2020, with three crashes in each year. No crashes were recorded in 2022 or 2023. The data also indicates the number of crashes has been generally decreasing since 2020.

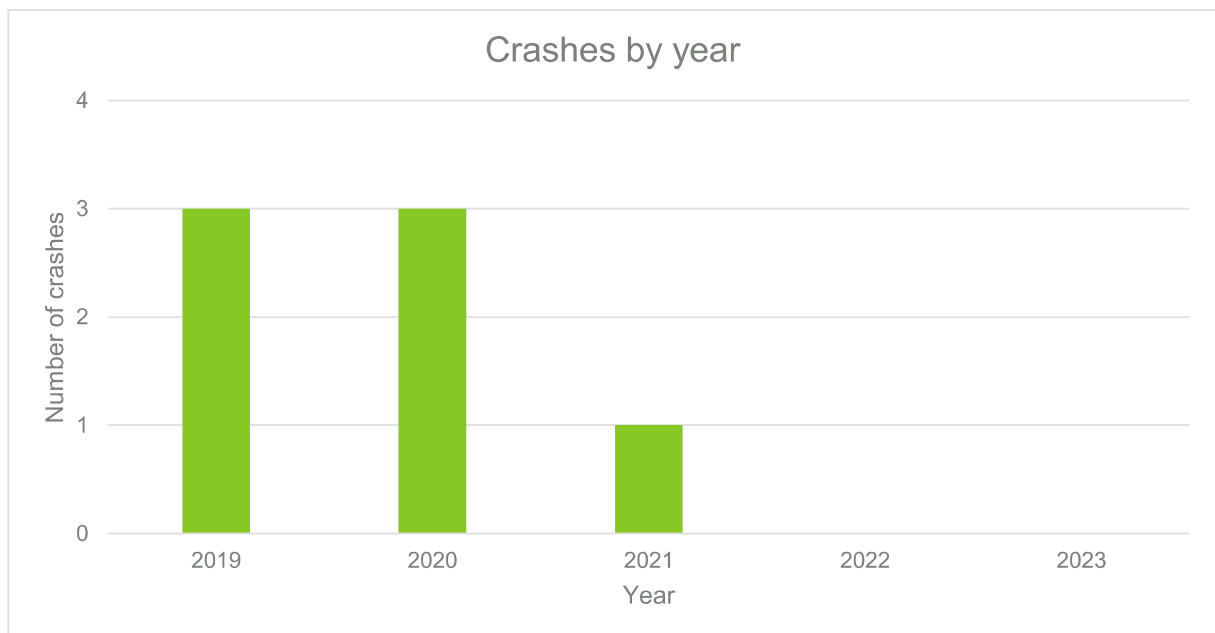


Figure 2-10 Crashes by year

3 Proposed development

3.1 Development site

The project site will be located approximately 29 km south-east of the township of Merredin, within the Shire of Merredin in Western Australia. The Shire forms part of the Wheatbelt Region, situated roughly 260 km north-east of Perth. The proposed layout of the site is shown in Figure 3-1, with various use-specific sites proposed across the area.

The project will deliver up to 50 wind turbine generators, each with a maximum height of 252 m above ground level and a combined installed capacity of approximately 300 MW, generating an estimated 1,300,000–1,400,000 MWh per year. In addition to the wind turbines, the Project includes a Battery Energy Storage System (BESS) with a capacity of 300 MW, which will connect to the existing Collgar terminal (substation) via a 220 kV transmission line.

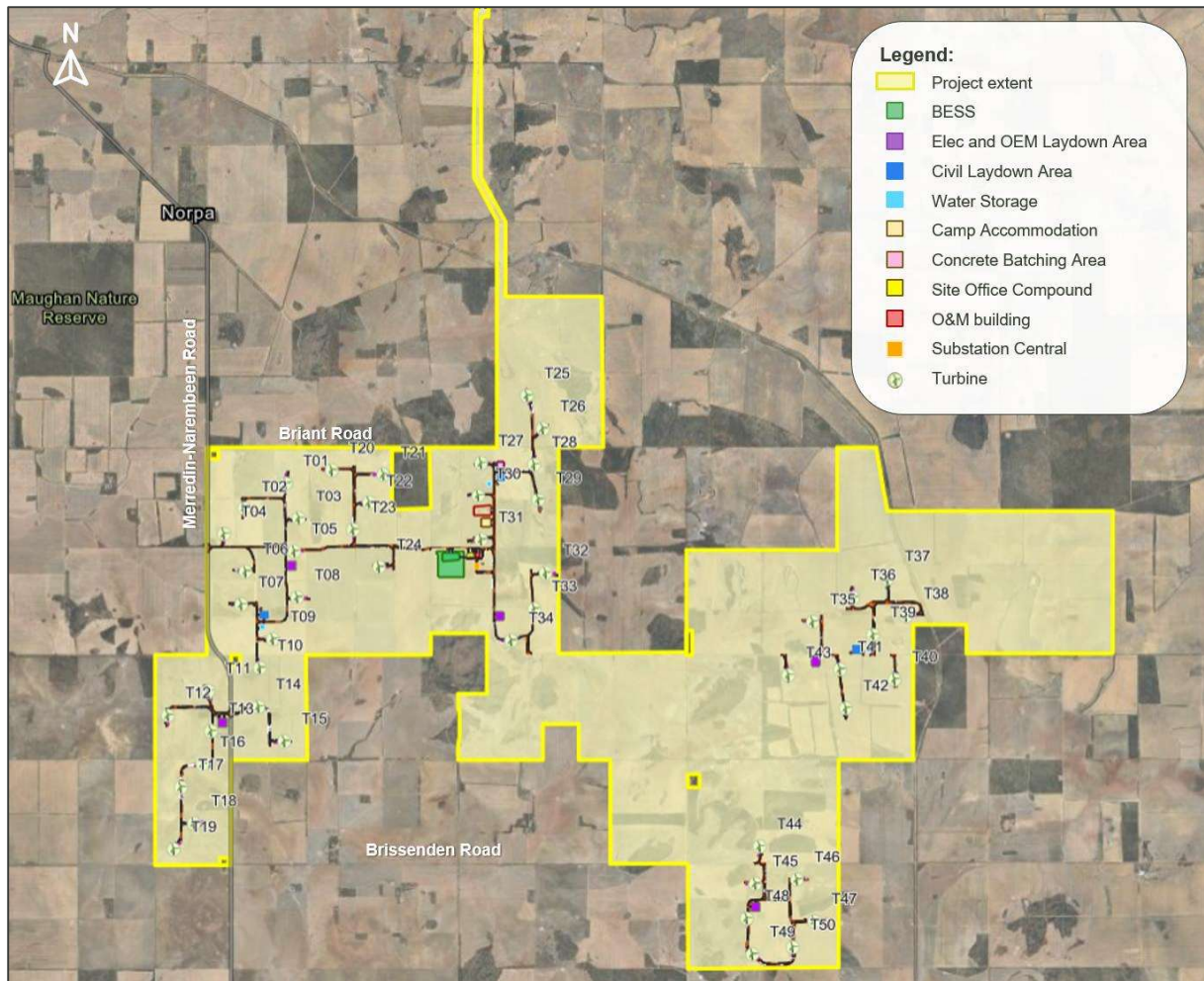


Figure 3-1 Proposed site layout

3.1.1 Site access

The proposed site access strategy is illustrated in Figure 3-2. A primary site access is proposed from Merredin–Narembeen Road, via an existing private access road located between Briant Road and Depot Dam Road, providing access to the northern and central areas of the project site. This also provides broader access to the west through the internal road network, which is a combination of private roads and public roads. Access directly off Merredin-Narembeen Road is also proposed to access the turbine cluster to the south, via the private access roads (approximately 1.3km south of Depot Dam Road).

In addition to the above, a secondary site access is proposed at the southern extent of the project site via Merredin–Narembreen Road and Brissenden Road, providing access to the south eastern turbine cluster. The proposed access strategy has been developed to provide efficient access across the site while minimising travel distances and impacts on native vegetation.

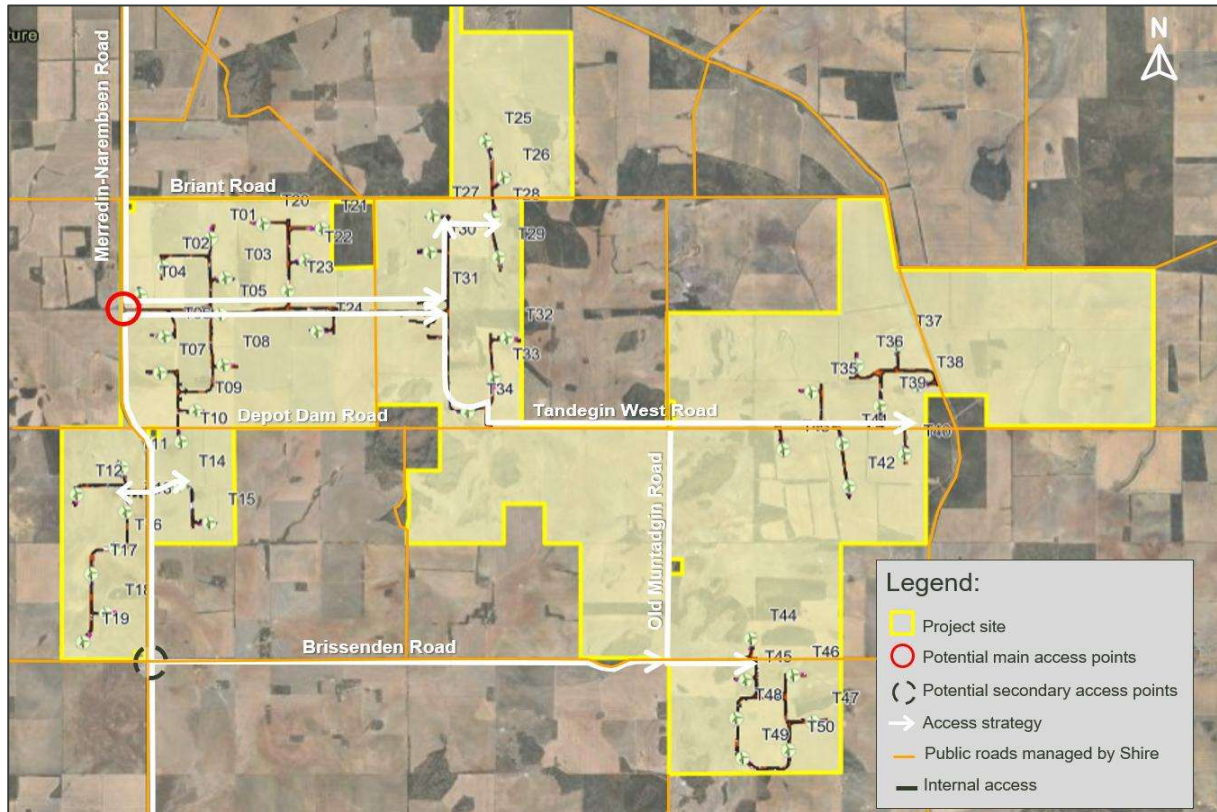


Figure 3-2 Proposed site access strategy

Based on a preliminary desktop review, the proposed access locations are generally situated on straight sections of the road network and are expected to provide adequate sight distance. Further assessment of the proposed site access points and associated intersections will be undertaken at subsequent stages of the Project to confirm any upgrades or mitigation measures required to safely accommodate construction traffic, including Oversize Overmass (OSOM) vehicle movements.

As shown in Figure 3-1, access to each turbine will be provided from the closest local access road available. Each site access is to be designed and developed based on Shire requirements (refer to Section 5.1 for further details).

3.1.2 Parking and storage

The project site covers a total area of 12,894 hectares. Only a small percentage of the project site will be required to accommodate wind turbine and other infrastructure. It is anticipated that proximate laydown areas and parking will be able to be provided across the project site clear of any public roads as construction progresses. This is applicable to both construction and operational stages (albeit at a lower capacity for operational stage).

3.1.3 BESS component

The 300 MW BESS is expected to take 18 months to constructed with an assumed peak month period of three months. Early works such as excavation and back filling is assumed to occur during the same time as the wind turbines with peak months include installation of the batteries, invertors, substation etc. The construction of the BESS site will operate 10 hour days from 6 am to 6 pm, Monday to Saturday. An OSOM vehicle will be required to delivery of the transformer to the site but this is expected to only occur once.

4 Traffic assessment

4.1 Traffic generation assumptions

Traffic generation estimates for the construction phase were developed based on preliminary project information, benchmark data from comparable wind farm developments, engineering judgement and assumptions provided by the project team. These assumptions represent a conservative assessment of the anticipated peak construction traffic and will be refined as the project design and construction methodology progresses.

The key assumptions adopted for this assessment are summarised below:

- Construction is assumed to occur over a period of approximately 30 months, with peak construction activity expected in 2028.
- Construction activities are assumed to occur 10 hours per day, six days per week.
- The wind farm comprises 50 wind turbines.
- Peak construction workforce is assumed to comprise 250 personnel.
- It has been assumed that 20% of the workforce travels by private vehicle, with an average vehicle occupancy of 1.5 persons per vehicle, while the remaining workforce is transported by buses.
- Construction traffic estimates include personnel movements, earthworks, material deliveries, general service vehicles, crane mobilisation, concrete and reinforcement deliveries, wind turbine component deliveries, electrical infrastructure deliveries and BESS construction traffic.
- Internal construction traffic within the project site has not been included, with the assessment focusing on traffic entering and exiting the public road network.
- Where detailed construction information was not available, assumptions were informed by comparable renewable energy projects and refined using engineering judgement.

4.2 Traffic generation

Construction traffic generation has been estimated for the peak construction period based on preliminary project information, benchmark data from comparable wind farm and renewable energy projects, and conservative assumptions agreed for this assessment. The adopted peak hour traffic generation for each component is summarised below.

4.2.1 Staff

Staff traffic has been estimated based on a peak construction workforce of 250 personnel. It has been assumed that 20% of staff would travel by private vehicle, with an average occupancy of 1.5 persons per vehicle, resulting in approximately 34 light vehicle movements during the peak hour. The remaining workforce has been assumed to travel by 25 seat buses, resulting in up to nine bus movements during the peak hour.

4.2.2 Camp mobilisation and demobilisation

Camp mobilisation and demobilisation traffic has been estimated based on the delivery and removal of temporary accommodation and associated facilities. For assessment purposes, this has been assumed to generate up to two heavy vehicle movements during the peak hour.

4.2.3 Earthworks

Earthworks traffic includes the mobilisation of plant and haulage associated with access tracks, hardstands, laydown areas and other civil works. Plant mobilisation and demobilisation has been assumed to generate up to two heavy vehicle movements during the peak hour. Earthworks haulage has been estimated separately based on indicative material quantities and benchmark haulage rates, resulting in up to 10 heavy vehicle movements during the peak hour.

4.2.4 General services

General service traffic includes routine construction support activities such as fuel deliveries, waste collection, consumables and maintenance vehicles. These movements are expected to be relatively minor and have been assumed to generate up to two heavy vehicle movements during the peak hour.

4.2.5 Cranage

Cranage traffic comprises the mobilisation and demobilisation of heavy lifting equipment required for turbine installation. Based on indicative crane mobilisation requirements and a short delivery window, this activity has been assumed to generate up to four heavy vehicle movements during the peak hour.

4.2.6 Concrete

Concrete traffic has been estimated based on the anticipated concrete requirements for turbine foundations and associated infrastructure. An onsite batching plant is expected to reduce the number of external concrete truck movements. On this basis, external concrete related traffic has been assumed to generate up to two heavy vehicle movements during the peak hour.

4.2.7 Steel reinforcement

Steel reinforcement traffic has been estimated based on the indicative quantity of reinforcing steel required and typical truck payloads. Deliveries are expected to be spread across the construction program, resulting in up to one heavy vehicle movement during the peak hour.

4.2.8 Wind farm components and parts

Wind farm component traffic includes OSOM deliveries associated with turbine blades, tower sections, nacelles, hubs and related components. Based on the assumed number of turbines and benchmark delivery rates, these movements have been assumed to generate up to one heavy vehicle movement during the peak hour.

4.2.9 Electrical components

Electrical component traffic includes deliveries associated with cabling, substations, transformers and other electrical infrastructure. Based on benchmark delivery rates for similar renewable energy projects, these movements have been assumed to generate up to two heavy vehicle movements during the peak hour.

4.2.10 BESS components

BESS component traffic includes deliveries associated with battery containers and related electrical equipment. Based on the indicative BESS requirements and benchmark delivery rates, these movements have been assumed to generate up to one heavy vehicle movement during the peak hour.

4.2.11 Summary of total demand

A summary of the expected traffic demand of the Project is presented below in Table 4-1. It is noted that for the purpose of the study, the below summary considers the highest number of the estimated ranges for conservativeness.

The vehicles per hour (Peak) estimate considers the worst-case scenario assuming all movements may overlap at a given time, considering this as the greatest impact to the network for the purpose of this assessment and verification against the WAPC transport assessment guideline.

The traffic during the AM peak is expected to have an estimated 90% inbound movements and during the PM peak 100% expected to be outbound movements for light vehicles. Regarding heavy vehicles, an estimated 20% are expected to occur during the AM peak hour and 10% during the PM peak hour

Table 4-1 Summary of construction vehicles demand

Vehicle description	Vehicles per hour (peak)	Vehicles per day (return trips i.e. enter and exit)
Light vehicles:		
Light vehicles	34	68
Total light vehicles	34	68
Heavy vehicles:		
Camp mobilisation and demobilisation	2	6
Earthworks (mobilisation and demobilisation only)*	2	8
Earthworks (haulage)	10	93
General services (Consumables, waste, etc)	2	4
Cranage (mobilisation and demob only)	4	29
Concrete mixers	2	21
Steel Reinforcement	1	2
Staff buses	9	18
WF components and parts (OSOM)	1	5
Electrical components	2	5
BESS components	1	3
Total heavy vehicles	36	194
Grand total	70	262

**Schedule of earthworks and cranage movements are yet to be confirmed, as such, the total indicates only the worst-case scenario. These movements may occur several times as project progresses.*

Based on the analysis, it is expected there will be 34 light vehicles and 36 heavy vehicles during both the AM and PM peak hours. Majority of these movements are expected to be one direction trips during the AM peak and the return trip during the PM peak.

This level of traffic is within the threshold of a Moderate Impact (10-100 Vehicles per Hour) as defined by the WAPC Transport Assessment Guidelines (Volume 4 – Individual Developments).

Refer to Site Access Review (Section 5) for swept path assessments at main intersections and key turns.

4.3 OSOM movements

The construction of the Tandegin Wind Farm will require the transport of oversize overmass (OSOM) turbine blades, tower sections, nacelles and other components associated with Wind Turbine Generators (WTG) and supporting network infrastructure. These components exceed standard freight dimensions and require specialised transport equipment, including extendable blade trailers and multi-axle platform or beam trailers. Indicative transport envelopes include vehicle combinations up to approximately 105 m in length, loads exceeding 150–320 tonnes, and loaded heights generally between 5.2 m and 6.8 m

Two OSOM route assessment options were prepared by Rex J Andrews Pty Ltd for Collgar Renewables, considering the Port of Bunbury (OSOM Route Assessment – Port of Bunbury to Tandegin Wind Farm,

Revision 00, 18 June 2026) and the Port of Geraldton (OSOM Route Assessment – Port of Geraldton to Tandegin Wind Farm, Revision 00, 4 June 2026).

For the Bunbury option, a single primary route of approximately 439 km has been identified that can accommodate all components, connecting to the site via a 9.6 km local access route from Merredin–Narembeen Road. The Geraldton option comprises two routes, with a blade route of approximately 688 km and a tower route of approximately 686 km, both connecting to the same local access network near the site. Overall, the Bunbury route is shorter and more direct, while the Geraldton option introduces greater routing complexity and longer haulage distances.

OSOM access to the site is considered feasible for both port options, however, a number of constraints and upgrades are required. The primary considerations identified in the route assessments include the following:

- **Horizontal geometry:** Multiple intersections, roundabouts and bends require modification to accommodate large vehicle swept paths. Works typically include vegetation clearing, relocation of signs and light poles, and installation of hardstands.
- **Vertical clearance and overhead constraints:** Required transport heights are typically up to 6.8 m. The Bunbury route does not currently present major overhead structure constraints, subject to further validation. The Geraldton routes include several bridge constraints.
- **Rail crossings and interfaces:** Rail infrastructure is encountered along all routes and requires coordination and approvals.
- **Pavement and structural capacity:** While most of the route network is of highway standard, formal bridge assessments will be required to confirm suitability for the proposed loads.
- **Local access to site:** The final 9.6 km of access roads will require upgrading to accommodate OSOM movements, including widening, intersection hardstands and ongoing maintenance.

The delivery of OSOM components will require a coordinated approvals and management framework. This will involve engagement with Main Roads WA, WA Police, local governments, utility providers and rail authorities. A Transport Management Plan (TMP) must be prepared to define movement scheduling, traffic management measures and stakeholder coordination, with early consultation recommended to minimise potential conflicts with roadworks or other network activities.

OSOM transport to the Tandegin Wind Farm site is achievable from both Bunbury and Geraldton ports, subject to targeted upgrades, approvals and detailed planning. The Bunbury route represents a more efficient option due to its shorter length and single-route arrangement, while the Geraldton option provides an alternative pathway but with increased complexity and a greater number of constraints. Full details of the route assessments are provided in Appendix A.

4.4 Operation and maintenance phase

It is anticipated that the Project will have minimal traffic demand during the operational phase, generating only a few movements per day as the site will require reduced staff to operate, and occasional heavy vehicles for maintenance.

The site will only require routine checks, occasional deliveries, and maintenance checks. In the rare occurrence, a maintenance or emergency vehicle will be required. Specific operational plans and Traffic Management Plans will be developed for deliveries, maintenance and emergency events. Thereby, the increased traffic due to operation of the Project is expected to be negligible and easily accommodated by the transport network. Access for this reduced traffic will continue to be provided via the surrounding local roads through the Merredin-Narembeen Road connection to the Great Eastern Highway.

4.5 Decommissioning phase

Once operational, the site is expected to remain in use for over 30 years. The decommissioning phase is expected to take approximately 12-18 months from commencement. The traffic impact during the decommissioning phase is anticipated to be lower than during construction, however, a separate traffic assessment will be conducted at the time of decommissioning.

5 Site access review

A review of the site access and internal roads was undertaken, as part of the Route Assessment and Site Access Review. A summary of the general quantum of WTGs and other facilities that are connected by each road is shown in Table 5-1. It is noted that the port of entry is not yet confirmed, and this will impact what direction OSOM movements will access the project site from. For completeness, access from both directions (north for Geraldton Port and south for Bunbury Port) are considered below. Therefore, this would need to be revisited at subsequent stages of the Project. Additionally, use of either or both Brissenden Road and Old Muntadgin Road may result based on the port of entry, and so both are included for the purposes of the site access review below.

A swept path analysis with the largest heavy vehicle combination was undertaken for the Site Access Review to identify the impacts on the road network that require further consideration (i.e. may require upgrades to accommodate vehicle swept paths). This consists of a swept path analysis of a 90.38m turbine blade length and truck combination length of 105m, and a 5.5m base tower height and a truck combination height of 6.8m. Note swept path analyses of general heavy vehicles (for construction and operational phases) will be required at subsequent stages of Project to inform intersection upgrade requirements.

Table 5-1 Roads and site connections

Road	WTGs no. (approximate)	Other facilities (approximate)
Merredin-Narembreen Road	34	■ Batch plant ■ Laydowns ■ Water storage ■ Camp accommodation ■ BESS ■ Site office compound ■ O&M building ■ Substation central
Brissenden Road (or Old Muntadgin Road)	7	■ Laydowns
Tandegin West Road	9	■ Laydowns ■ Water storage

5.1 Key intersections and access roads

As stated previously, it is anticipated that the primary intersection for access to the project site area will be via Merredin-Narembreen Road (see Figure 5-1).

A desktop geometric review of each intersection has been undertaken in relation to its design and layout to accommodate construction vehicles (worst case only) and is summarised in the following sections.

Swept path assessments are included in the Route Assessment and Site Access Review provided in Appendices A and B respectively. For the Site Access Review (Appendix B), a number of access configuration options were tested at each intersection. The preferred option presented in this report represents the arrangement that achieves the required vehicle manoeuvrability while minimising impacts to surrounding native vegetation, roadside infrastructure, and temporary works requirements.

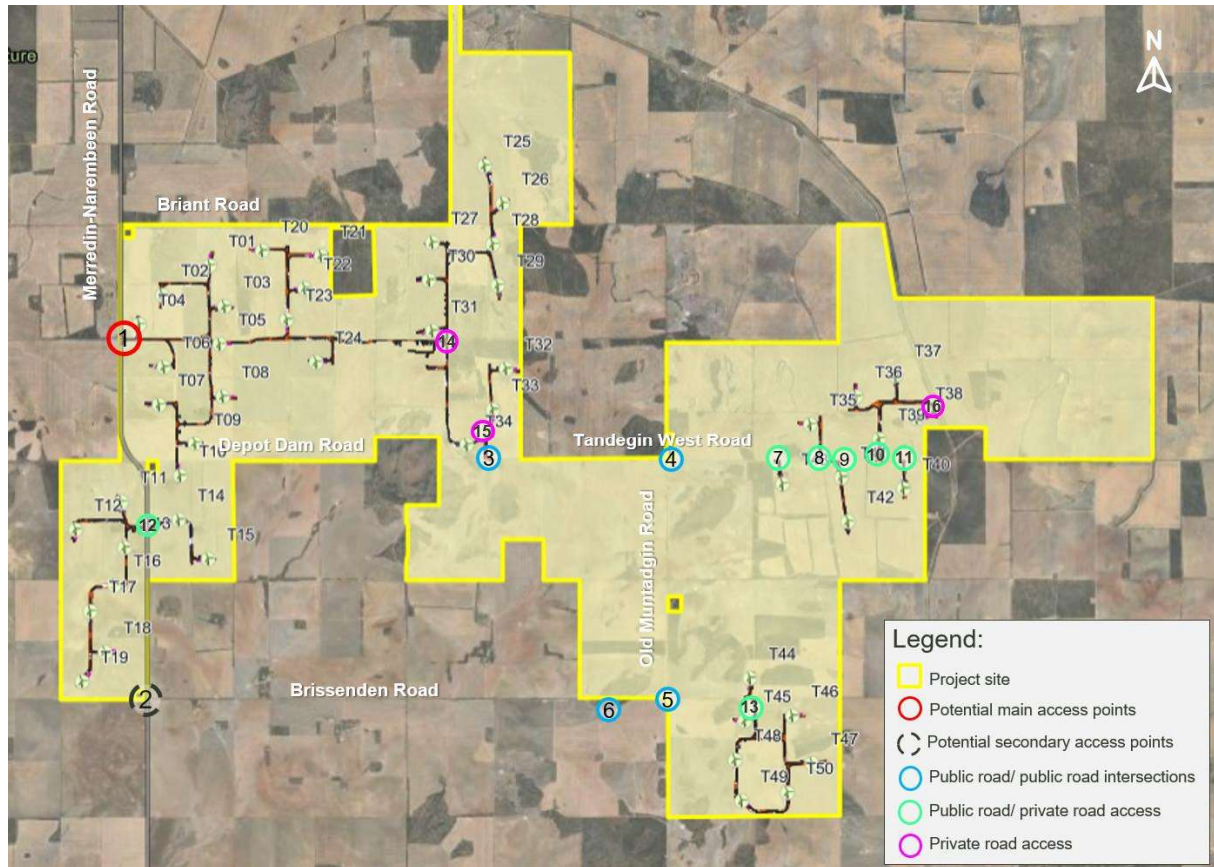


Figure 5-1 Site access and key intersections

5.1.1 Merredin-Narembeen Road

Merredin-Narembeen Road is expected to provide the primary access to the project site and therefore represents the highest priority location for geometric assessment. Existing route assessments identified several access locations along this corridor requiring localised widening through temporary hardstand to accommodate blade and tower transport vehicles.

Depending on the specific access location, additional works may include minor fence modifications, relocation of roadside signs or bollards, and selective vegetation clearing where the vehicle envelope extends beyond the existing road reserve. Temporary traffic management, including lane occupation and traffic controllers, is expected to be required during OSOM movements.

Figure 5-2 and Figure 5-3 show the turn paths for the blade transport vehicle at the main access point (Site 1 as shown in Figure 5-1). As the blade transport vehicle has the largest operational footprint, it represents the worst-case scenario in terms of potential vegetation impacts and temporary hardstand requirements. These turn paths were developed by Rex J Andrews as part of the OSOM Route Assessment dated 18 June 2026. The full route assessments are provided in Appendix A.

Figure 5-4 to Figure 5-7 illustrate the turn paths from Merredin-Narembeen Road to private access roads to access the southwest turbine locations (Site 12). Figure 5-8 to Figure 5-9 illustrate the turn paths from Merredin-Narembeen Road to Brissenden Road (Site 2) to access the southeast turbine locations. Figure 5-10 to Figure 5-12 illustrate the turn paths from Tandegin West Road (Site 4) to access the east turbine locations

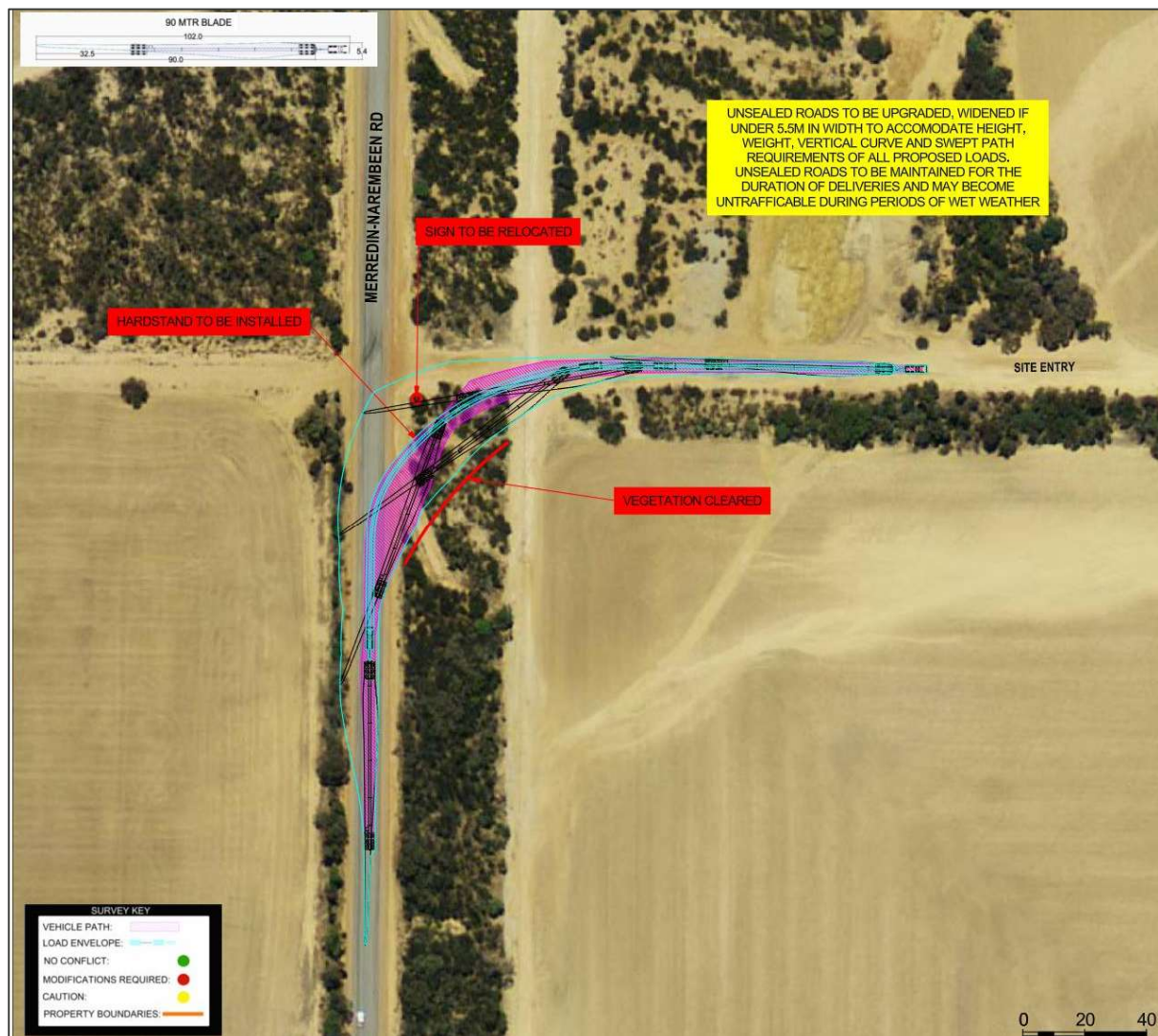


Figure 5-2 Site 1: Bunbury route blade turn path Merredin-Narembene Rd and Site entry road, RJA OSOM route assessment Jun 2026

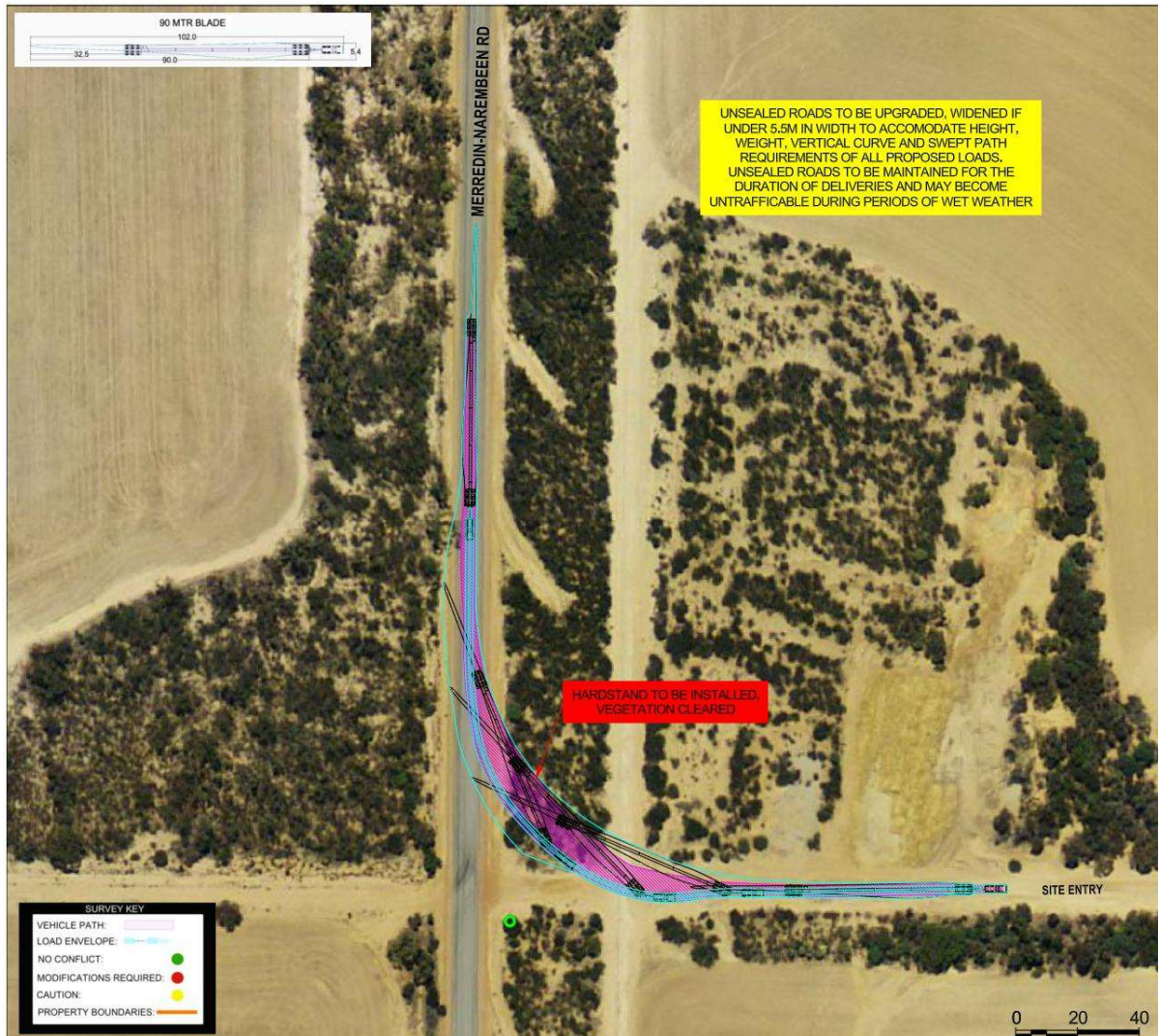


Figure 5-3 Site 1: Geraldton route blade turn path Merredin-Narembeen Rd and Site entry road, RJA OSOM route assessment Jun 2026

12

Merredin-Narembeen Road Site Access - Preferred option

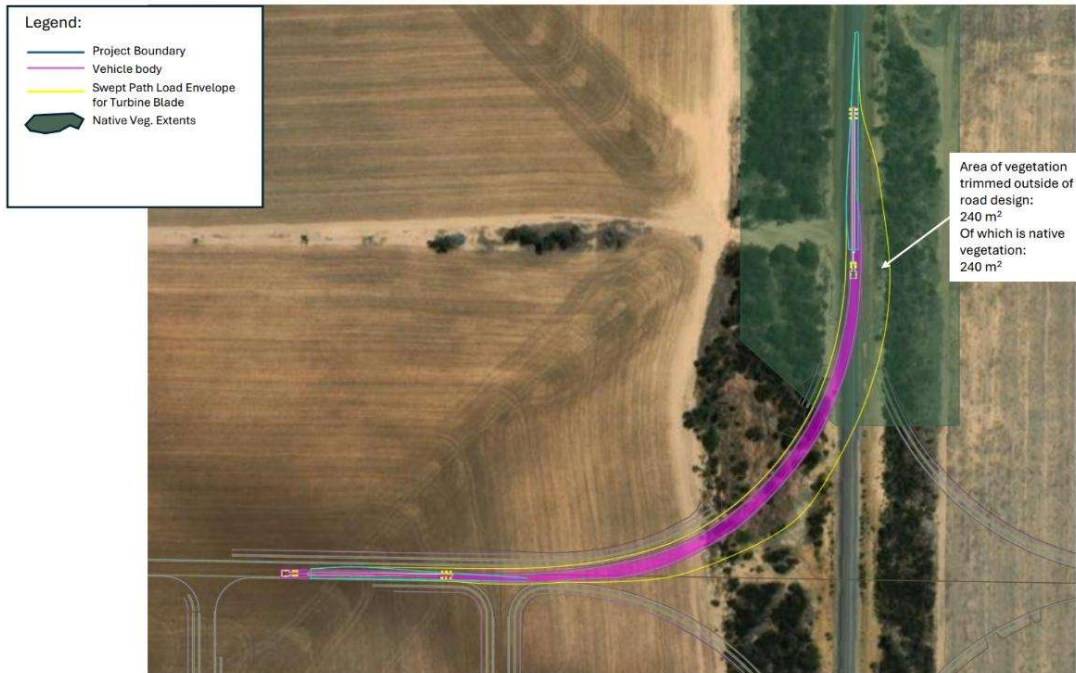


Figure 5-4 Site 12: Geraldton route blade right turn path Merredin-Narembeen Rd and private access road

12

Merredin-Narembeen Road Site Access - Preferred option

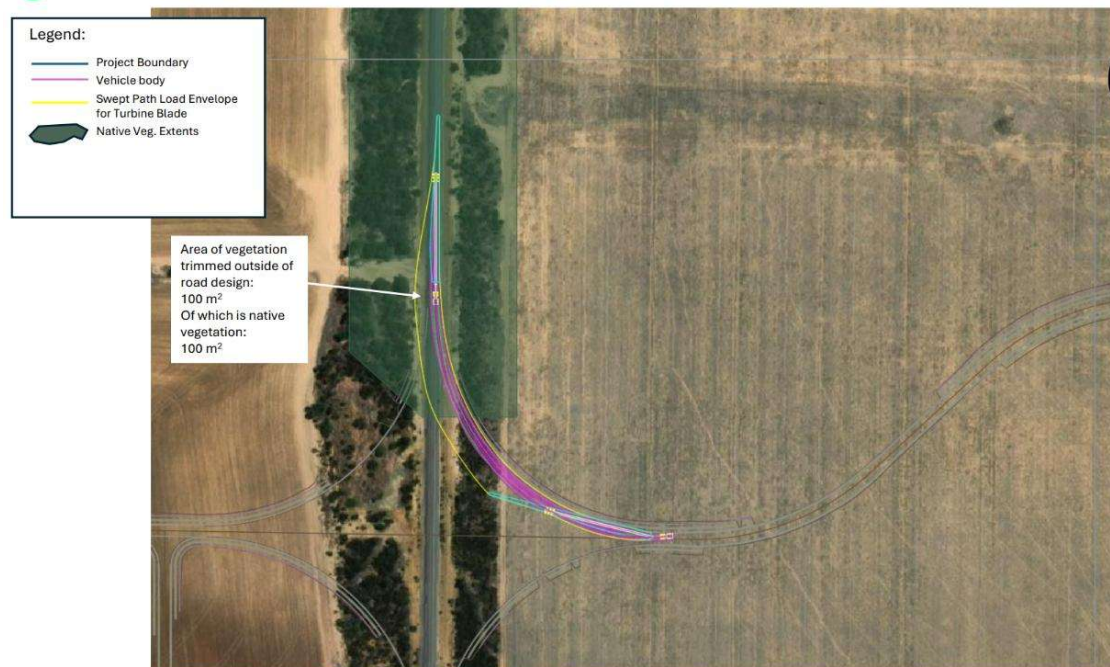


Figure 5-5 Site 12: Geraldton route blade left turn path Merredin-Narembeen Rd and private access road

12

Merredin-Narembreen Road Site Access - Preferred option



Figure 5-6 Site 12: Bunbury route blade left turn path Merredin-Narembreen Rd and private access road

12

Merredin-Narembreen Road Site Access - Preferred option

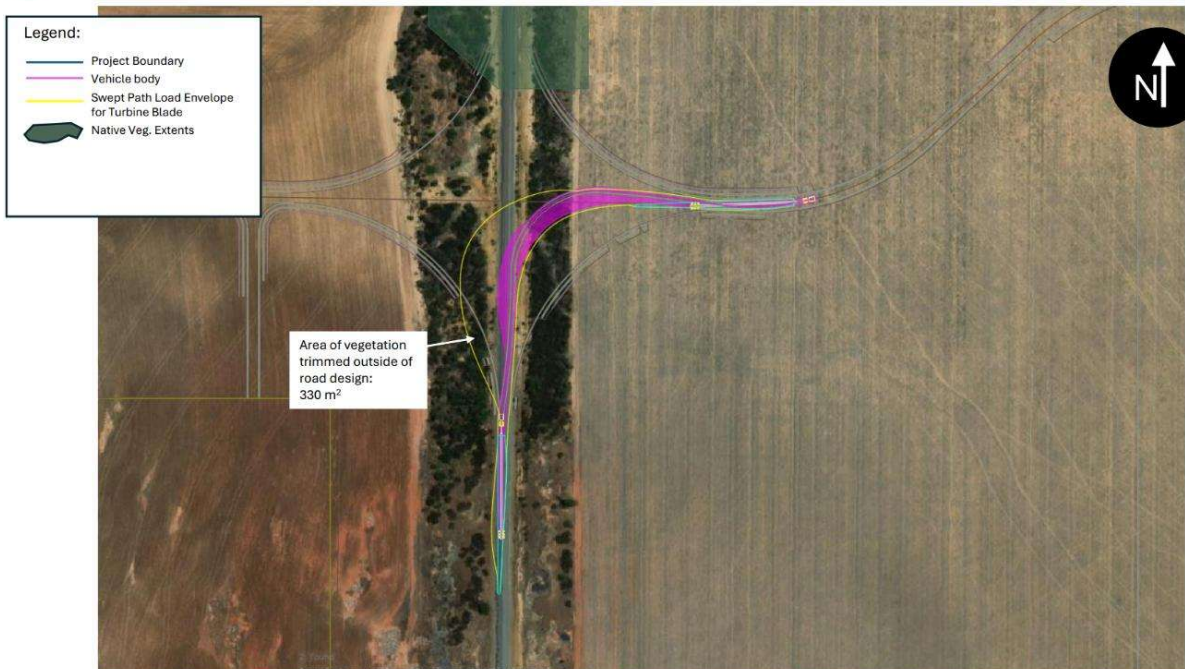


Figure 5-7 Site 12: Bunbury route blade right turn path Merredin-Narembreen Rd and private access road

5.1.2 Brissenden Road

The intersection of Merredin-Narembreen Road and Brissenden Road was reviewed as part of the existing route assessment. Preliminary swept path analysis indicates that OSOM vehicles can complete the required turning movements subject to construction of temporary hardstand on the inside of the turn and minor roadside modifications. Existing fencing adjacent to the intersection may require temporary modification or relocation during construction. No significant geometric constraints were identified, however, the extent of

temporary works will be confirmed following detailed swept path modelling using the final vehicle configurations.

Figure 5-8 and Figure 5-9 show the turn paths for the blade transport vehicle at the intersection of Merredin-Naremben Road and Brissenden Road, proposed as secondary access point. These turn paths were developed by Rex J Andrews as part of the OSOM Route Assessment dated 18 June 2026. The full route assessments are provided in Appendix A.

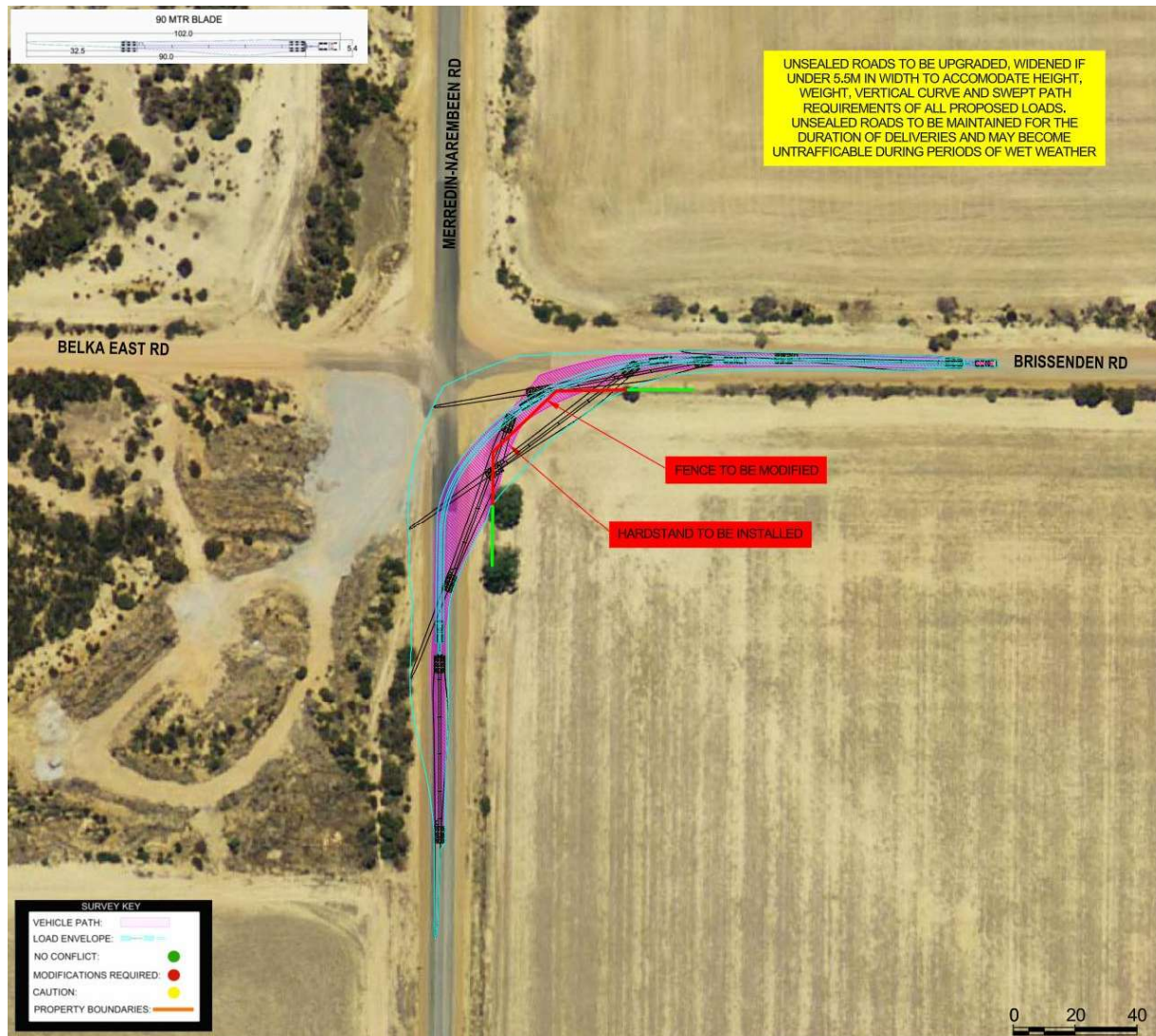


Figure 5-8 Site 2: Bunbury route blade turn path Merredin-Naremben Rd and Brissenden Rd, RJA OSOM route assessment Jun 2026

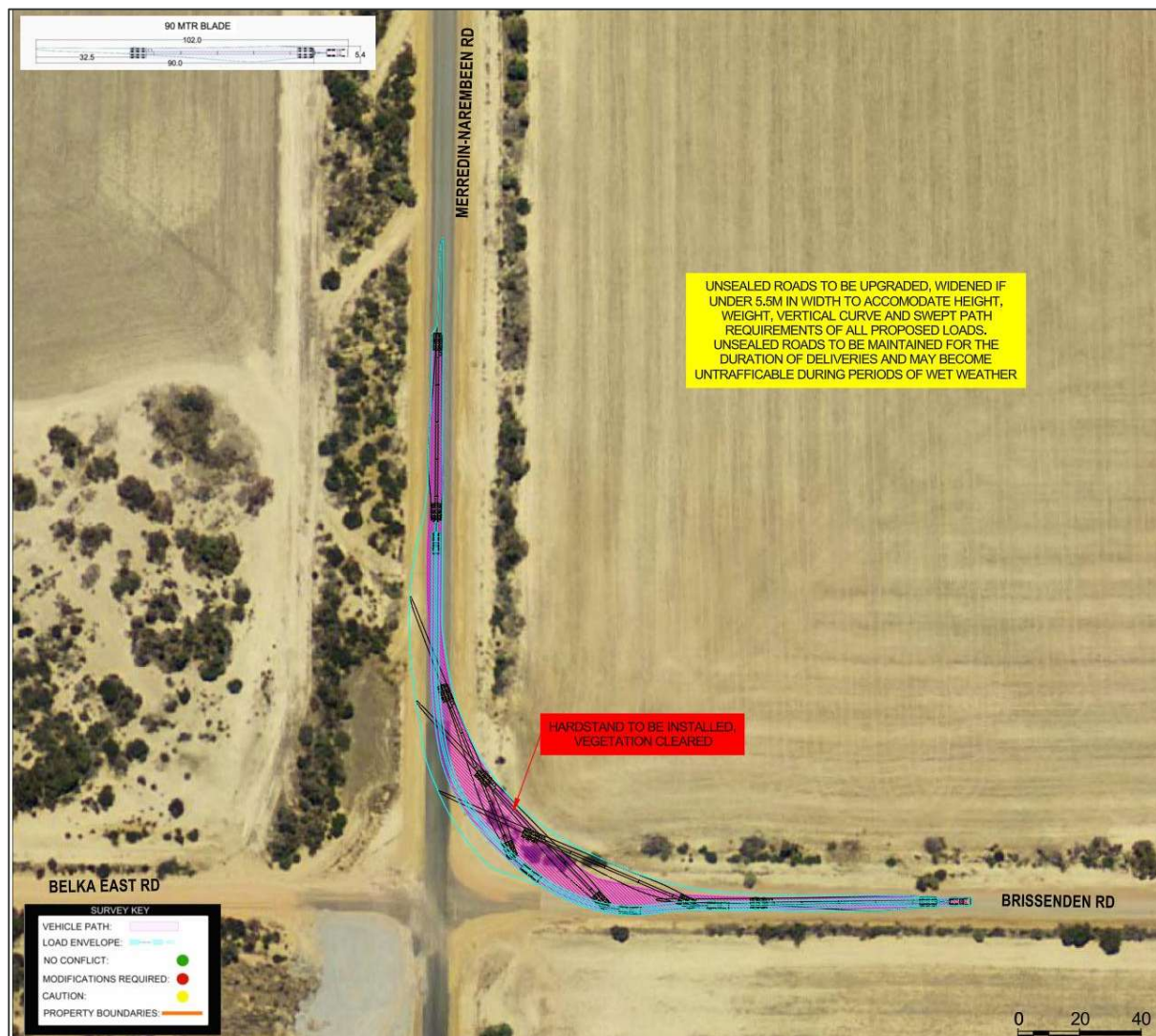


Figure 5-9 Site 2: Geraldton route blade turn path Merredin-Narembreen Rd and Brissenden Rd, RJA OSOM route assessment Jun 2026

5.1.3 Tandegin West Road

A swept path assessment was undertaken for the intersection of Tandegin West Road and the proposed site access using the governing blade and tower transport vehicle combinations. The assessment identified that the proposed turning movements can be accommodated within the existing intersection geometry.

The assessment identified that temporary hardstand and vegetation management may be required to facilitate OSOM vehicle movements. At several locations, alternative swept path arrangements were investigated to minimise impacts to native vegetation while maintaining suitable vehicle tracking. The preferred treatment at each location are to be confirmed during future stages, taking into consideration constructability, environmental constraints and operational requirements.

Overall, the accesses along Tandegin West Road are considered suitable for the proposed construction traffic. Temporary traffic management will be required during OSOM movements and the extent of the required upgrades will be confirmed during detailed design.

Figure 5-10 and Figure 5-11 show the turn paths required at Tandegin West Road and Old Muntadgin Road intersection to access the eastern and southeastern turbine locations based on the proposed access strategy.

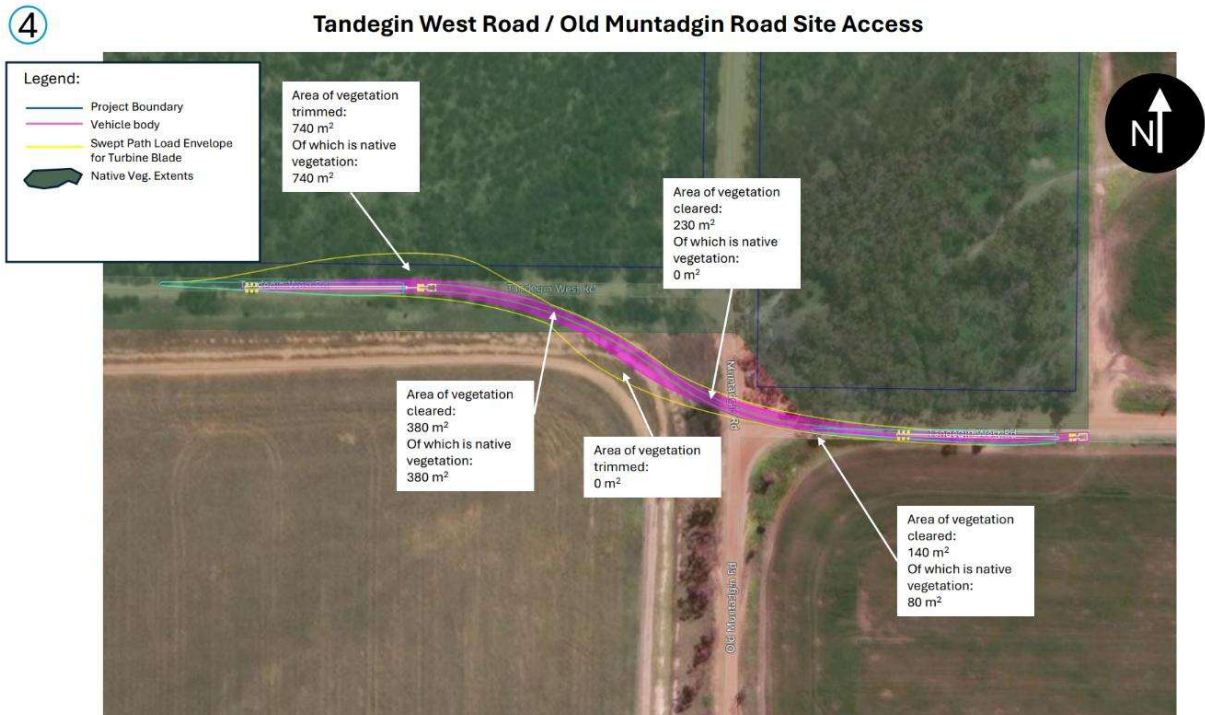


Figure 5-10 Site 4: Eastbound blade path at Tandegin West Rd and Old Muntadgin Rd

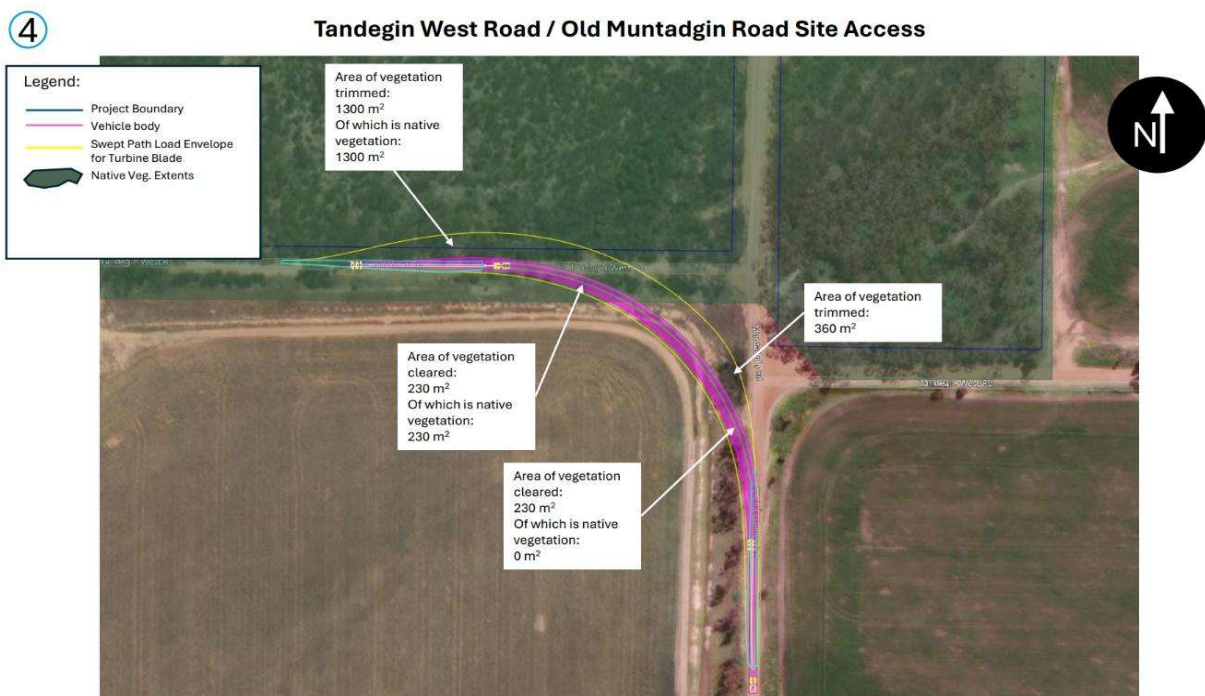


Figure 5-11 Site 4: Southbound blade path at Tandegin West Rd and Old Muntadgin Rd

In addition to the intersection upgrades identified along Tandegin West Road, a review of the proposed turbine access routes (refer to Figure 3-2) and available native vegetation mapping indicates that localised vegetation clearing may be required within sections of the existing road reserve to accommodate the required vehicle swept paths and achieve a minimum trafficable road width.

The assessment identified two sections of Tandegin West Road in the vicinity of the Tandegin West Road and Old Muntadgin Road intersection where mapped native vegetation extends into, or immediately adjacent to, the existing road formation. These sections comprise approximately 850 m west of the intersection and approximately 140 m east of the intersection. Subject to confirmation of existing road widths and conditions,

these locations may require vegetation removal and/or minor road widening to facilitate access by OSOM vehicles.

Figure 5-12 presents the indicative road sections where vegetation clearance and associated road formation works may be required. The final extent of clearing and any associated hardstand or widening requirements will be confirmed during future project stages.

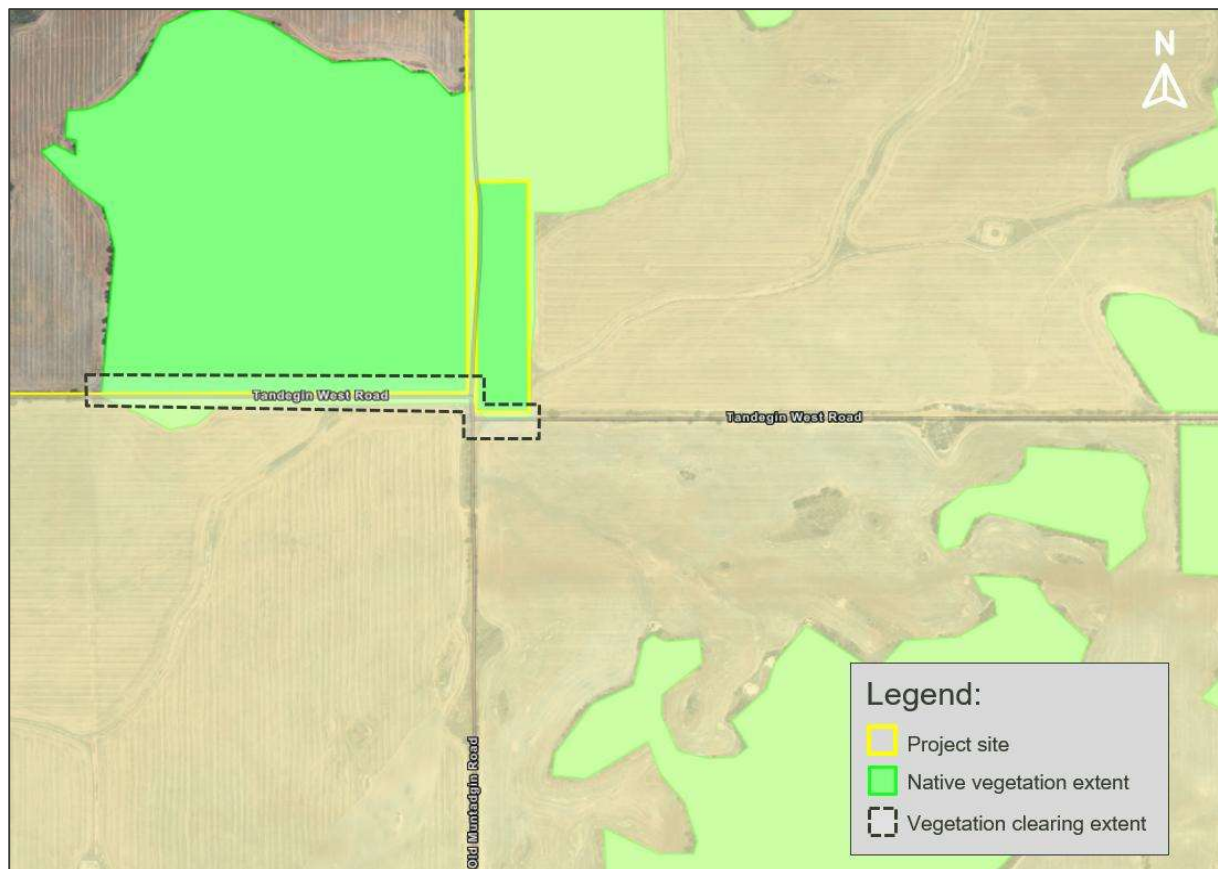


Figure 5-12 Site 4: Indicative vegetation clearing extent required along Tandegin West Road

5.1.4 Internal roads

A swept path assessment was undertaken for the proposed internal road network to identify potential geometric constraints associated with transporting wind turbine components from the public road network to the turbine locations. The assessment considered both the public road to project access intersections and selected private access roads where interactions with significant vegetation or other site constraints were identified.

The assessment confirmed that the proposed internal road network is capable of accommodating the governing blade transport vehicle. Several access locations require localised geometric improvements, including temporary hardstand and/or vegetation management, to facilitate the required turning movements. In a number of locations, multiple swept path options were assessed to minimise impacts to native vegetation, with the preferred treatment to be determined during detailed design following further environmental and constructability assessment.

In addition, Tandegin West Road and sections of Old Muntadgin Road currently comprise narrow unformed road sections that may require upgrading where they form part of the proposed internal access road network. Potential works include widening the existing road formation and undertaking localised geometric improvements to accommodate the proposed construction vehicles.

The detailed swept path assessments for all internal turn paths are included in the Route Assessment and Site Access Review provided in Appendices A and B respectively, including the indicative footprint. These assessments identify the potential conflicts and opportunities at each access location and will inform the final design of the internal road network.

6 Conclusions

Collgar Renewables is proposing to develop the Tandegin Wind Farm within the Shire of Merredin. Aurecon was engaged to prepare this Transport Impact Statement in support of the Development Application, in accordance with the WAPC Transport Assessment Guidelines (Volume 4 – Individual Developments).

The Project comprises up to 50 wind turbine generators with an installed generation capacity of approximately 300 MW, together with associated infrastructure including a Battery Energy Storage System (BESS), substation, internal access roads, laydown areas and ancillary facilities.

This assessment has identified the following key traffic and transport considerations:

- Great Eastern Highway provides the primary regional connection to the project site, with Merredin–Narembeen Road providing the principal access corridor into the site. Brissenden Road, Tandegin West Road and Old Muntadgin Road are proposed to provide secondary access to portions of the project site and associated infrastructure.
- Existing traffic volumes on the surrounding road network are generally low, with Merredin–Narembeen Road carrying between approximately 200 and 500 vehicles per day. Although heavy vehicles represent a relatively high proportion of existing traffic, the available road capacity is considered sufficient to accommodate the anticipated increase in construction traffic, subject to appropriate management measures.
- Based on the adopted construction assumptions, the Project is expected to generate up to 34 light vehicle and 36 heavy vehicle movements during the peak construction hour (total of 70 vehicles), equivalent to approximately 262 daily return vehicle movements during the busiest construction period. This level of traffic falls within the Moderate Impact category under the WAPC Transport Assessment Guidelines and therefore supports the preparation of a Transport Impact Statement.
- Traffic associated with the operational phase is expected to be minimal and limited to routine inspections, maintenance activities and occasional deliveries. Consequently, no adverse operational traffic impacts are anticipated. Similarly, the traffic impacts associated with decommissioning are expected to be lower than those during construction and should be confirmed through a separate assessment closer to the end of the project's operational life.
- Transportation of wind turbine components will require OSOM vehicles, including blade transport combinations of up to approximately 105 m in overall length and tower transport combinations requiring up to 6.8 m of vertical clearance. Route assessments undertaken for both the Bunbury and Geraldton port options have demonstrated that access to the project site is achievable, subject to localised upgrades and approvals.
- Preliminary swept path assessments indicate that the principal site access intersections can accommodate the governing OSOM vehicles subject to localised modifications. These generally comprise temporary hardstand construction, selective vegetation clearing, minor roadside infrastructure modifications and temporary traffic management during OSOM movements. Additional refinement of the swept path assessment will be undertaken during detailed design to confirm the extent of these works.
- Preliminary assessment of the internal road network identified several access locations where temporary hardstand and localised vegetation clearing may be required to accommodate the governing blade transport vehicle. These requirements are considered localised and will be refined during detailed design following confirmation of the final site layout and turbine locations.
- Delivery of OSOM components will require ongoing consultation with Main Roads Western Australia, the Shire of Merredin, utility providers and other relevant stakeholders. Detailed Traffic Management Plans and OSOM permit applications will be required prior to construction to manage vehicle movements safely and minimise impacts on the surrounding road network.

Overall, the assessment concludes that the surrounding transport network is capable of accommodating the proposed development, provided the recommended road upgrades, intersection improvements and traffic management measures identified in this report are implemented. The Project is therefore considered acceptable from a traffic and transport perspective to support the Development Application, with the detailed design to confirm the final access arrangements and mitigation measures.

Appendix A – OSOM Route assessments



OSOM ROUTE ASSESSMENT

JUNE 18, 2026

CLIENT: COLLGAR RENEWABLES

PORT OF IMPORT: GERALDTON

REVISION: REV00

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1.0 Version

Rev	Date	Responsible	Description of Changes	Approved
00	04/06/26	B Walker	Review Compiled	✓
00	04/06/26	W Andrews	Review Completed	✓

2.0 Introduction

Rex J Andrews Pty Ltd has been requested to assess possible access routes from the nominated port (Port of Geraldton) through to the proposed Tandegin Wind Farm development for Collgar Renewables. The project is situated approximately 35 km south-east of Merredin, WA, within the Shire of Merredin. The assessment will review the proposed routes to the wind farm site and identify preliminary transport constraints for the nominated components. The review will consider operational factors and equipment capabilities to inform planning of the wind farm layout. The assessment is based on the transport of the major wind farm components, including wind turbine generators and associated infrastructure.

The study does not consider external factors such as regulatory, landholder, environmental, cultural, or other matters beyond the knowledge or control of Rex J Andrews Engineered Transportation.

The study utilises the knowledge, experience, and intellectual property of Rex J Andrews Engineered Transportation on purpose-built equipment and is not intended for use by other parties.

3.0 Project Data

Date of review: 04/06/2026

Review undertaken by. (Rex J Andrews P/L)

Client: Collgar Renewables

Project name. Tandegin Windfarm

Project Location. Tandegin (WA)

Equipment to be moved: 90 Metre wind turbines, Cranes and Power equipment.

Port of Import: Port of Geraldton, Berth #6

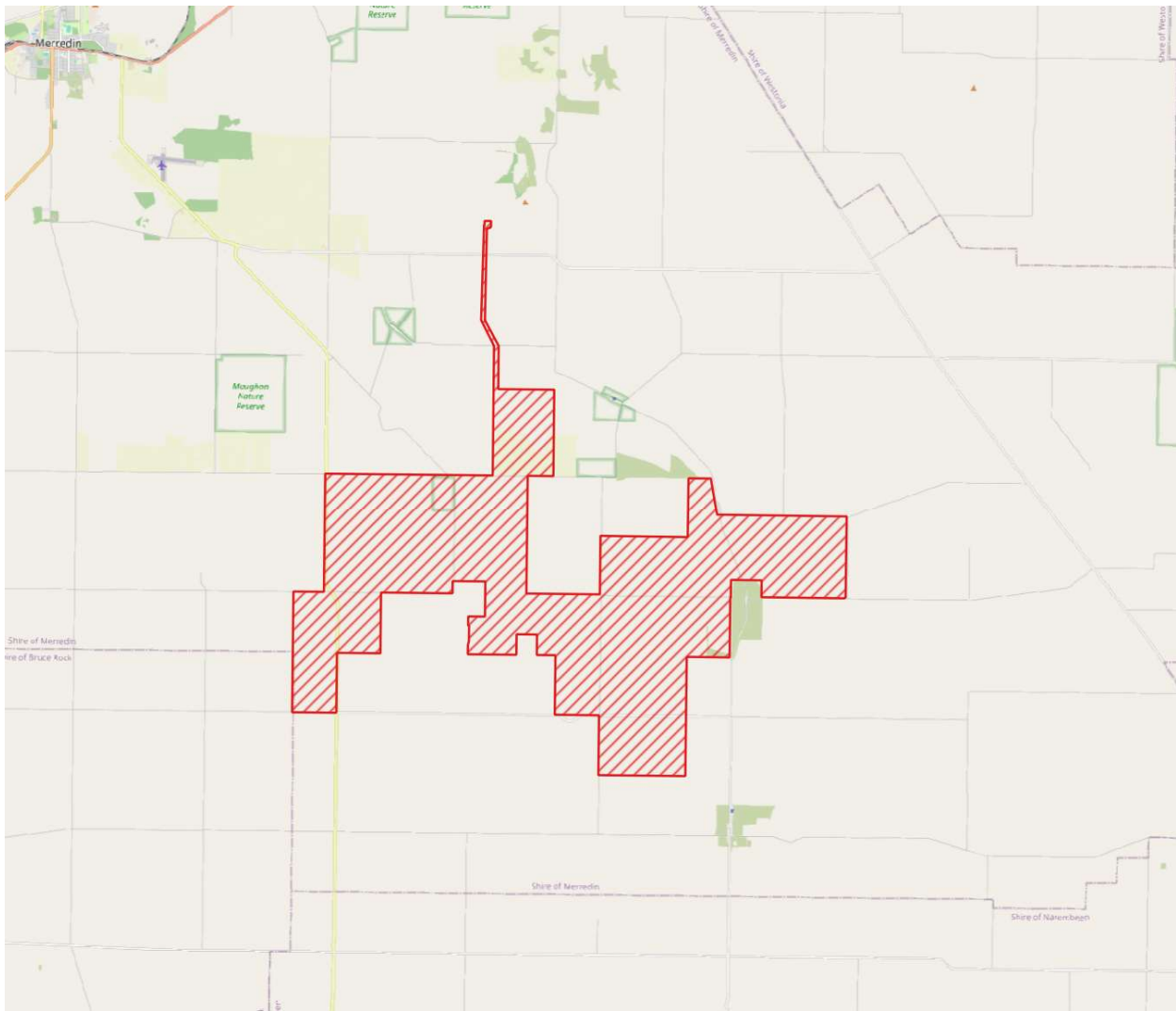


Figure 1 Project site map

4.0 Transport combinations

The following are possible equipment sizes and transport combinations for this project.

90 METRE WIND TURBINE GENERATOR

Blades (90.38l x 4.95w x 3.58h x 29.2T)

Possible transport. Prime mover with 2x4-3x8 Extending blade trailer.

Overall Dimension: 105.0l x 5.1w x 5.5h x 96.5T.

Nacelle (10.75l x 4.97w x 4.2h x 47.8T)

Possible transport configuration. Prime mover with 5x8 Low loader.

Overall Dimension: 25.0l x 5.0w x 5.3h x 89.5T.

Hub (5.5l x 4.51w x 4.25h x 61.8T)

Possible transport configuration. Prime mover with 5x8 Low loader.

Overall Dimension: 25.0l x 4.6w x 5.3h x 93.5T.

Drivetrain 7.93l x 3.3w x 3.9h x 112.7T)

Possible transport configuration. Prime mover with 8x8 platform trailer.

Overall Dimension: 32.0l x 4.2w x 5.0h x 177.5T.

166 METRE WIND TURBINE TOWER

Base Towers (9.3l x 5.9 x 5.5 x 90T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.9w x 6.8h x 149.5T (+ Push truck)

Section 2 Towers (13.8l x 5.5 x 5.5 x 90T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 149.5T (+ Push truck)

Section 3 Towers (15.4l x 5.5 x 5.5 x 87T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 146.5T (+ Push truck)

Section 4 Towers (16.8l x 5.5 x 5.0 x 86T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 145.5T (+ Push truck)

Section 5 Towers (21.0l x 5.0 x 5.0 x 92T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 39.0l x 5.0w x 6.2h x 151.5T (+ Push truck)

Section 6 Towers (27.2l x 5.0 x 5.0 x 85T)

Configuration. Prime mover with 5x8-5x8 Extending platform.

Overall dimension: 40.0l x 5.0w x 6.1h x 155.5T (+ Push truck)

Section 7 Towers (29.9l x 5.0 x 4.25 x 77T)

Configuration. Prime mover with 3x8 dolly - 4x8 low Jinker.

Overall dimension: 37.0l x 5.0w x 6.2h x 123.5T

Top Towers (30.0l x 4.25w x 4.1h x 65T)

Configuration. Prime mover with 4x4 dolly 3x8 low Jinker.

Overall dimension: 38.0l x 4.5w x 5.5h x 105.0T

ERECTION CRANES:

LG1750 carrier (19.2l x 3.0 x 4.0 x 96T)

Route: Route 1

Configuration. Prime mover with 10x8 Platform trailer + Backup truck

Overall dimensions: 36.0l x 4.2w x 5.2h x 174.5T + Backup truck

LTM1500 carrier (21.0l x 3.0 x 4.0 x 96T)

Route: Route 1

Configuration. Prime mover with 10x8 Platform trailer + Backup truck

Overall dimensions: 36.0l x 5.0w x 5.2h x 174.5T + Backup truck

POWER TRANSFORMER:

Possible Transformer size (9.2l x 4.0 x 4.35 x 175T)

Route: Route 1

Configuration. Prime mover with 10x8-10x8 Beamset + 4 x Backup trucks

Overall dimensions: 120.0l x 6.5w x 5.2h x 324.5T + 4 x Backup trucks

Possible Transformer size (9.2l x 4.0 x 4.35 x 130T)

Route: Route 2

Configuration. Prime mover with 12x8 Platform trailer + 1 x Backup trucks

Overall dimensions: 45.0l x 4.3w x 5.4h x 222.5T

SWITCHROOM:

Switch room dimensions: 30.0l x 5.5w x 4.2h x 90.0T

Configuration. Prime mover with 4x8-4x8 Extending platform trailer

Overall dimensions: 44.9l x 5.5w x 5.3h x 174.5T

5.0 Port of Import

The wind turbine equipment will be imported from various countries and will arrive on ships at the Port of Geraldton. The ideal berth for these shipments is Break Bulk Berth #6. This facility has a storage area of approximately 30,000 sq meters adjacent to the berth.

Rex J Andrews has a further 120,000 S/Q meters of external storage within 9 Kilometres of the port.

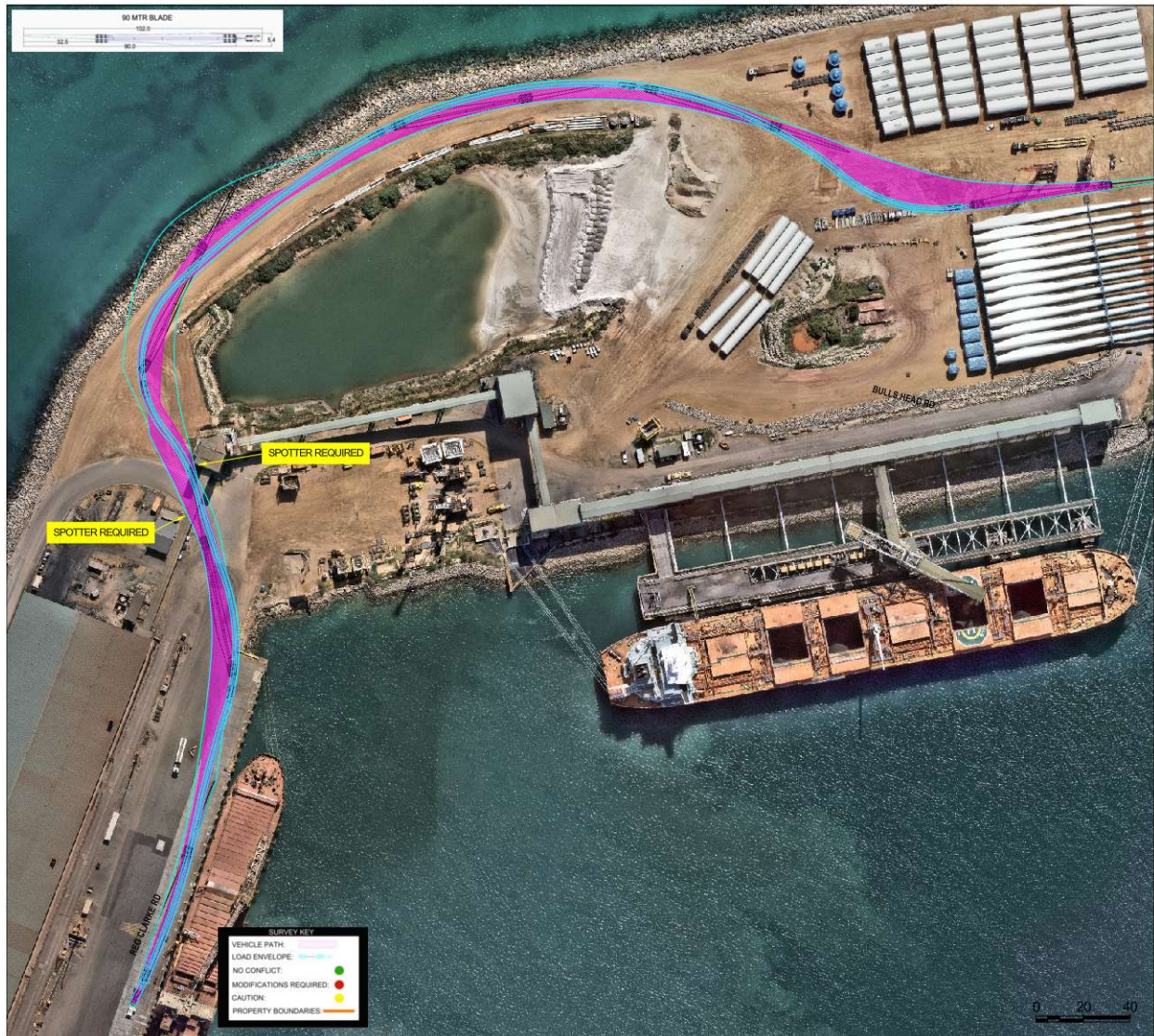


Figure 2 Geraldton site layout

6.0 Transport Summary

This project review assessed potential transport routes from the Port of Geraldton to multiple site entry points between Briant Road and Brissenden Road. Following an evaluation of all viable options, one primary route from the Port of Bunbury to the Tandegin Wind Farm site has been identified as suitable for delivering all components and designated as **Route 1**.

From the Tandegin development area, five entry points have been identified to access the project site, collectively designated as **Local Route A**.

Following a thorough assessment of all viable alternatives, Route 1 and Local Route A are considered the optimal transport solutions for this project.

ROUTE 1: Geraldton to Tandegin

COMPONENTS: Blades

DISTANCE: 688.0 kilometres

GPS LINK: <https://maps.app.goo.gl/kcg6VdfKXhsAfRdX6>

VIA: Reg Clarke Road, Ian Bogle Road, John Willcock link, Northwest Coastal Highway, Geraldton Mount Magnet Road, Goulds Road, Rudds Gully Road, Brand Highway, Tonkin Highway, Reid Highway, Great Eastern Highway and Merredin-Naremben Road.

ROUTE 2: Geraldton to Tandegin Windfarm

COMPONENTS: Towers

DISTANCE: 686 kilometres

GPS LINK: <https://maps.app.goo.gl/9W6gJVciU5TwTbZj8>

VIA: Reg Clarke Road, Ian Bogle Road, John Wilcock Link, Geraldton Mount Magnet Road, Maitland Road, Wubin-Mullewa Road, Morawa-Yagloo Road, Great Northern Highway, Acacia Way, Dalwallinu-Kalannie Road, Roche Street, Dowerin Kalannie Road, Cadoux-Koorda Road, Railway Street, Haig Street, Marriott Street, Koorda-Bullfinch Road, Welbungin Road, Warralakin Road, Great Eastern Highway, Merredin-Naremben Road

LOCAL ROUTE A: Tandegin to site entry

COMPONENTS: All components

DISTANCE: 9.6 kilometres

GPS LINK: <https://maps.app.goo.gl/vLuQbo5gZmYPHUFs7>

VIA: Merredin-Naremben Road and Briant Road.

7.0 Route 1 Transport Assessment

ROUTE 1: Geraldton to Tandegin

COMPONENTS: Blades

DISTANCE: 688.0 kilometres

GPS LINK: <https://maps.app.goo.gl/kcg6VdfKXhsAfRdX6>

VIA: Reg Clarke Road, Ian Bogle Road, John Willcock Link, Northwest Coastal Highway, Geraldton Mount Magnet Road, Goulds Road, Rudds Gully Road, Brand Highway, Tonkin Highway, Reid Highway, Great Eastern Highway and Merredin-Narembreen Road.

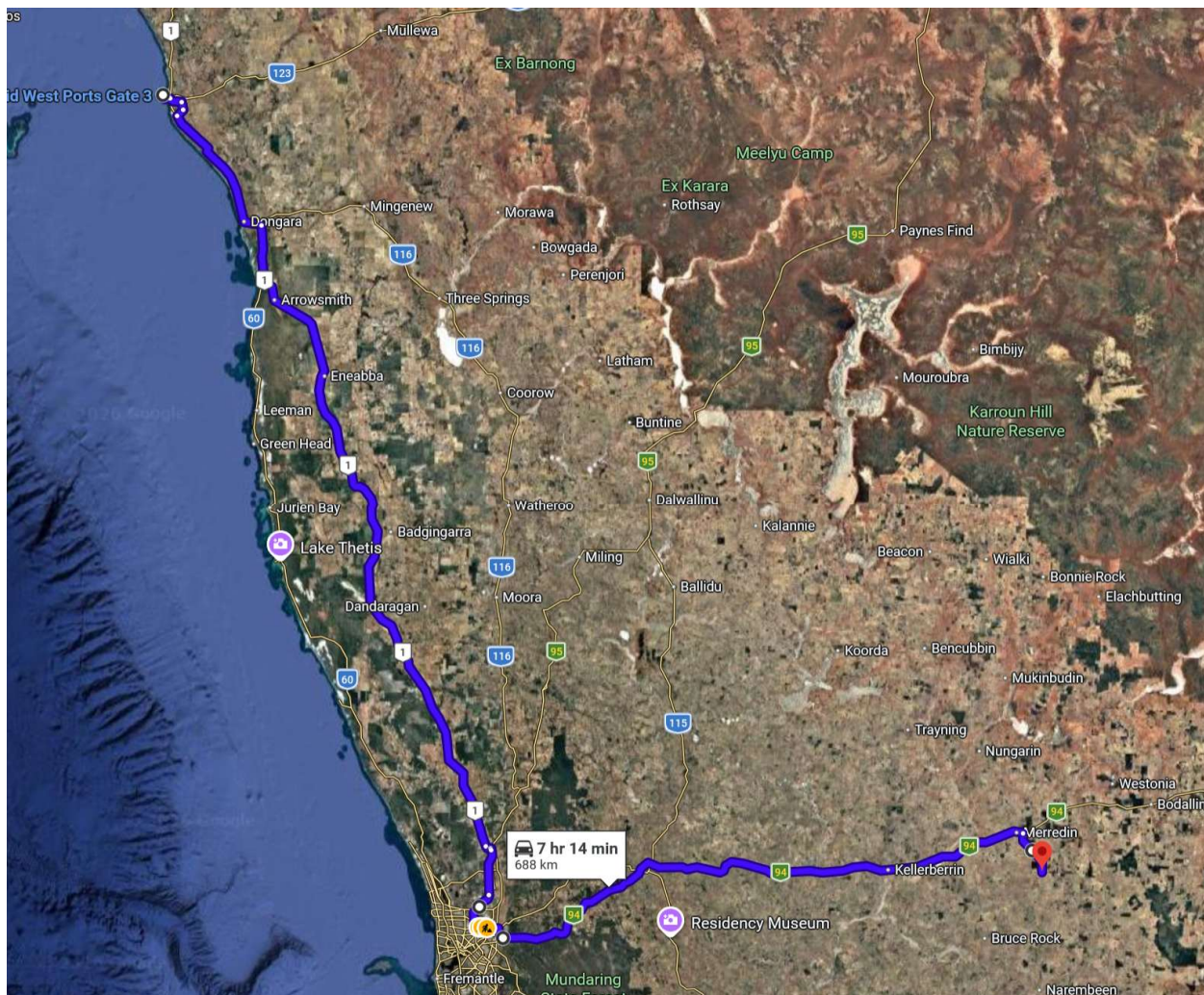


Figure 3 Route Map –Route 1

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KEY	
MODIFICATIONS REQUIRED	
PINCH POINT	
EMERGENCY PARKING	

KM index	Location	Section of road	Existing Measurement	Procedure	Notes
Exiting the port	Port of Geraldton	Geraldton Port north gate onto Reg Clarke Road GPS Link: https://goo.gl/maps/KVrKmfCoo7AFmEV7	Length: 40 Metres Width: 6.0 Metres	Dogleg turn through the security gate	Security gate to be relocated, road verge to be made trafficable.
0.3	Port of Geraldton	Reg Clarke Road https://maps.app.goo.gl/FoSSGWVTV9Gan1F6	Length: 70 Metres Width: 6.5 Metres	Left-hand turn	Spotter to help guide blades through this section of road.
0.4	West End	Reg Clarke Road onto Ian Bogle Road GPS Link: https://goo.gl/maps/B21Dvs1kqgXVlCXV8	Length: 70 Metres Width: 6.5 Metres	Right-hand turn	Fence to be modified, vegetation to be removed, two light poles to be relocated, and road verges to be made trafficable Signs to be removed and replaced for each blade movement. Spotter to help guide blades through this pinch point.
0.7	West End	Ian Bogle Road onto John Willcock Link GPS Link: https://goo.gl/maps/PpHV5xzmkp4q6Xv6	Length: 85.0 Metres Width: 6.5 Metres	Sweeping left hand bend	Spotter to help guide blades through this section of road.
4.7	Geraldton	John Willcock Link under Brand Highway overpass GPS Link: https://goo.gl/maps/7RGrWY9RkgumAr2z8	Height: Left: 6.64 metres high Centre: 6.80 metres high Right: 6.73 metres high	Travel directly ahead	Loads over 6.4 metres in height will need to travel on the off-ramp, then over the Brand Highway and down onto the on-ramp and back onto John Wilcock Link Road.
4.8	Geraldton	John Willcock Link onto NW Coastal Highway GPS Link: https://goo.gl/maps/8DwadPWWwSKqGwfA7	Width: 10.5 Metres	Travel directly ahead	No problems with this section of road.
5.3	Mount Tarcoola	John Willcock Link under Durlacher Street overpass GPS Link: https://goo.gl/maps/dkuh3PsyX9keis9s7	Height: Left: 7.40 metres high Centre: 7.39 metres high Right: 7.37 metres high	Travel directly ahead	No problems with this section of road.
5.5	Mount Tarcoola	N W Coastal Highway onto Geraldton-Mount Magnet Road GPS Link: https://goo.gl/maps/BnHnUv7xqtFDQpse5	Length: 70 Metres Width: 6.5 Metres	Right-hand turn	Sign to be relocated, vegetation to be trimmed under 2.5m
6.5	Rangeway	Geraldton-Mt Magnet Road under Highbury Street overpass GPS Link: https://goo.gl/maps/x5D8FV5VrLHS2t7AA	Height: Left lane: 7.10 metres Centre lane: 6.97 metres Right lane: 6.75 metres	Travel directly ahead	Loads over 6.5 metres in height are to travel under this structure in the left-hand lane and lower the trailers to 6.7 metres to travel under this structure.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Existing Measurement	Procedure	Notes
7.8	Karlool	Geraldton-Mt Magnet Road under Abraham Street overpass GPS Link: https://goo.gl/maps/bcvv8sDerbTGtCro8	Height: Left: 6.91 metres Centre: 6.92 metres Right: 7.00 metres	Travel directly ahead	Loads over 6.5 metres in height are to travel under this structure in the centre of the road and lower the trailers to 6.6 metres to travel under this structure. If loads exceed 6.6 metres in height, they are to travel under this structure on the opposite side of the road and under the bridge on the gravel section.
9.7	Narngulu	Geraldton-Mount Magnet Road GPS Link: https://maps.app.goo.gl/zBry8DP1mZ6PjwmB9	Length: 250 Metres Width: 9.5 Metres	Merge to the left	Large parking bay suitable for 2 blades in convoy
10.6	Narngulu	Geraldton-Mount Magnet Road onto Goulds Road GPS Link: Goulds Rd	70.0 Metres clearance	Right-hand turn	Sign to be removed and replaced for each blade movement. Two Light poles to be relocated
11.0	Narngulu	Gould Road over rail crossing GPS Link: Rail Xing Goulds Rd	10.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
12.8	Narngulu	Gould Road over rail crossing GPS Link: https://maps.app.goo.gl/W4ksqD7JoyJ5vh2x9	10.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
14.1	Narngulu	Gould Road onto Rudds Gully Road GPS Link: Rudds Gully Rd	70.0 Metres clearance	Right-hand turn	Vegetation to be trimmed for over-sail; landholder permission required. Road verge to be made trafficable.
17.6	Cape Burney	Rudds Gully Road onto Brand Highway GPS Link: Rudds Gully-Brand Hwy	80.0 Metres clearance	Left-hand turn	Island to be made trafficable, and signs are to be made removable or relocated
78.7	Yandarino	Brand Highway onto Brand Highway GPS Link: Brand Highway	75.0 Metres clearance	Right-hand turn	Vegetation to be cleared; hardstand to be installed at the inside corner and road verge. Signs to be relocated or made removable. Three light poles to be removed
95.0	Mt Adams	Brand Highway GPS Link: Parking 2	80.0 Metres clearance	Merge to the left	Large parking bay
122.0	Arrowsmith	Brand Highway GPS Link: Parking 3	80.0 Metres clearance	Merge to the left	Large parking bay
155.0	Eneabba	Brand Highway over rail crossing GPS Link: https://maps.app.goo.gl/6Jpkp1TLnSmj5P119	7.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
157.0	Eneabba	Brand Highway GPS Link: Parking 4	60.0 Metres clearance	Merge to the left	Medium parking bay
174.0	Eneabba	Brand Highway GPS Link: Parking 5	60.0 Metres clearance	Merge to the left	Medium parking bay
177.3	Warradarge	Brand Highway GPS Link: https://maps.app.goo.gl/7J74yfXSBXrjhU44A	150.0 Metres long 6.0 Metres wide	Merge onto left side of road	Medium parking bay

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Existing Measurement	Procedure	Notes
184.1	Warradarge	Brand Highway GPS Link: https://maps.app.goo.gl/t9i8FqYxUteFjYJ8	166.0 Metres long 5.2 Metres long	Merge onto left side of road	Parking bay
205.1	Boothendarra	Brand Highway GPS Link: https://maps.app.goo.gl/xRG9WcaxoD77sDaC9	113.0 Metres long 6.1 Metres wide	Merge onto left side of road	Parking bay
237	Badgingarra	Brand Highway GPS Link: https://maps.app.goo.gl/DDmFfnwJL2T9MVu5	81.4 Metres long 8.5 Metres wide	Merge onto left side of road	Parking bay
254.37	Cooljarloo	Brand Highway GPS Link: https://maps.app.goo.gl/sMdsCoK69EX1B3iJ7	69.8 Metres long 11.6 Metres wide	Merge left	Parking bay
266.3	Cataby	Brand Highway GPS Link: https://maps.app.goo.gl/caW5HJCqMmDGgoyHA	109.9 Metres long 12.9 Metres wide	Merge left	Parking bay
280.6	Yathroo	Brand Highway GPS Link: https://maps.app.goo.gl/ogFi1MSF9zclXyK8A	118.1 Metres long 12.3 Metres wide	Turn in left	Parking bay
301.4	Regans Ford	Brand Highway GPS Link: https://maps.app.goo.gl/JYtLwPxyMU7nSyA28	156.6 Metres long 7.5 Metres wide	Merge left	Parking bay
327.9	Beermullah	Brand Highway GPS Link: https://maps.app.goo.gl/2N8r53HweWu2ngmG6	214.4 Metres long 14.7 Metres wide	Merge left	Parking bay
372.0	Muchea	Brand Highway bridge over railway GPS Link: https://maps.app.goo.gl/Zvtphy7Q1Dea76Hy8	8.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
373.0	Muchea	Brand Highway to Tonkin Highway GPS Link: https://maps.app.goo.gl/qVBrA8RoreChpfm86	Length: 60 Metres Width: 8.0 Metres	Proceed onto roundabout, take third exit	Light pole to be relocated
384.8	Bullsbrook	Tonkin Highway continuing on Tonkin Highway GPS Link: https://maps.app.goo.gl/ookin2SFoZibtxsb6	468.4 Metres long	Continue straight	No issues with this section of road
407.4	Whiteman	Tonkin Highway continuing on Tonkin Highway GPS Link: https://maps.app.goo.gl/zBrG9vsZpNTikaRq6	1.3 km long	Continue straight	No issues with this section of road
410	Bennett Springs	Tonkin Highway onto Reid Highway GPS Link: https://maps.app.goo.gl/t25zSHkD5f2zkbSN8	1.5 km long	Turn left	No issues with this section of road

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Existing Measurement	Procedure	Notes
417.2	Middle Swan	Reid Highway onto Roe Highway GPS Link: https://maps.app.goo.gl/kLLrM7LaJ25qQzzX6		Continue straight at intersection	No issues with this section of road
423.0	Midvale	Roe Highway onto Great Eastern Highway GPS Link: https://maps.app.goo.gl/dy8r25oWDGwmyZ8	Length: 90 Metres Width: 8.0 Metres	Turn left	Vegetation to be cleared, light pole and sign to be relocated, and hardstand to be installed.
451.0	Chidlow	Great Eastern Highway GPS Link: https://maps.app.goo.gl/ORMzMSku5z5TMd46	162.0 Metres long 11.1 Metres long	Turn in right	Large BP roadhouse
476.0	Bakers Hill	Great Eastern Highway GPS Link: https://maps.app.goo.gl/eyZ4YZJaQAqBXxLL9	Length: 90 Metres Width: 8.0 Metres	Proceed Straight	Spotter to help guide blades through this section of road.
483.6	Mokine	Great Eastern Highway GPS Link: https://maps.app.goo.gl/XD7R3yvtP2QKKNzo7	111.9 Metres long 11.6 Metres wide	Merge in left	Parking bay
493.7	Northam	Great Eastern Highway GPS Link: https://maps.app.goo.gl/fdfy3udnewedSCaw9	148.7 Metres long 9.3 Metres wide	Turn in left	Parking bay
532.8	Meckering	Great Eastern Highway GPS Link: https://maps.app.goo.gl/TfdBm8rMMMqQ25sr9	112.8 Metres long 43.9 Metres wide	Turn in left	Large parking area at Ampol Roadhouse
577.0	South Tammin	Great Eastern Highway over rail crossing GPS Link: https://maps.app.goo.gl/V5QCCmhLghc5nk5w8	8.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
580.7	North Tammin	Great Eastern Highway GPS Link: https://maps.app.goo.gl/GrpH3tphjYuDC1ZK6	98.7 Metres long 100.1 Metres wide	Turn in left	Tammin Roadhouse parking
652.2	Nangeenan	Great Eastern Highway GPS Link: https://maps.app.goo.gl/ckmpVYRmBqgUyudB9	145.9 Metres long 9.8 Metres wide	Turn in right	Parking bay
662.0	Merredin	Great Eastern Highway over rail crossing GPS Link: https://maps.app.goo.gl/mpl81LSdXc7KnhUz6	8.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
666.0	Merredin	Great Eastern Highway over rail crossing GPS Link: https://maps.app.goo.gl/vGHXhwzeMDppquPaA	8.0 Metres width clearance	Travel directly ahead	Approval from the rail asset owner is required to cross this line.
668.0	Merredin	Great Eastern Highway onto Merredin-Naremben Road GPS Link: https://maps.app.goo.gl/8Ued3yyw3LFh6SH9	Length: 70 Metres Width: 7.0 Metres	Turn right	Hardstand to be installed on inside corner and sign to be relocated

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Existing Measurement	Procedure	Notes
677.0	Merredin	Merredin-Naremben Road onto Merredin-Naremben Road GPS Link: https://maps.app.goo.gl/7LFY250a2cW6Gclw4	Length: 60 Metres Width: 7.0 Metres	Turn right	Sign to be relocated, hardstand to be installed on inside corner
677.1	Merredin	Merredin-Naremben Road over railway crossing GPS Link: https://maps.app.goo.gl/vhe75bMVBzTzibok6	Width: 7.0 Metres	Travel directly ahead	Approval from the rail asset owner is required to cross this line.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.0 Km's

Geraldton Port
onto Reg Clarke Road

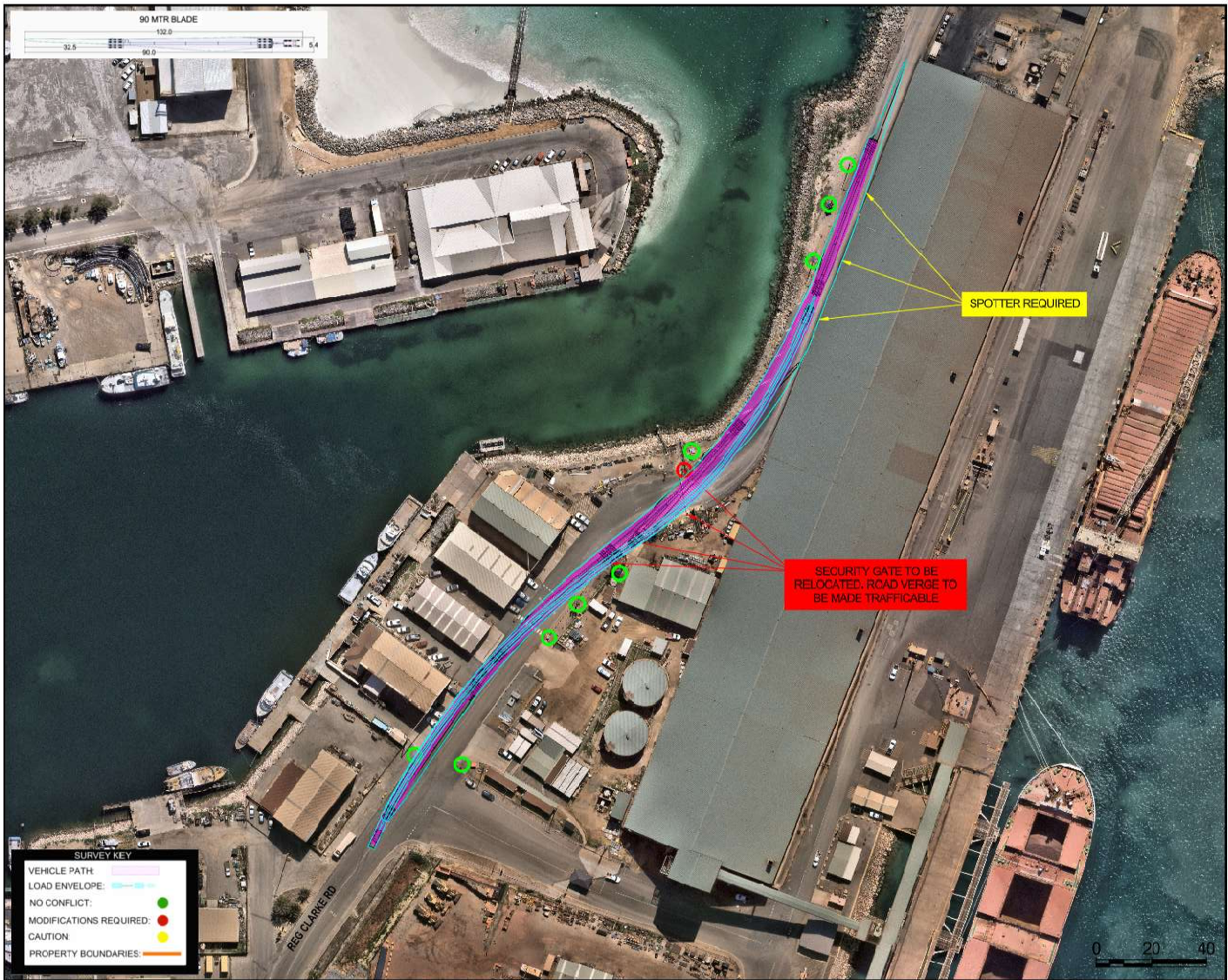
Port of Geraldton, WA

Component – Blade

PROCEDURE: Dogleg turn through the security gate

MODIFICATIONS REQUIRED: Security gate to be relocated, road verge to be made trafficable.

GPS: <https://maps.app.goo.gl/T18XntpWhPhRweqs5>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.3 Km's

Reg Clarke Road

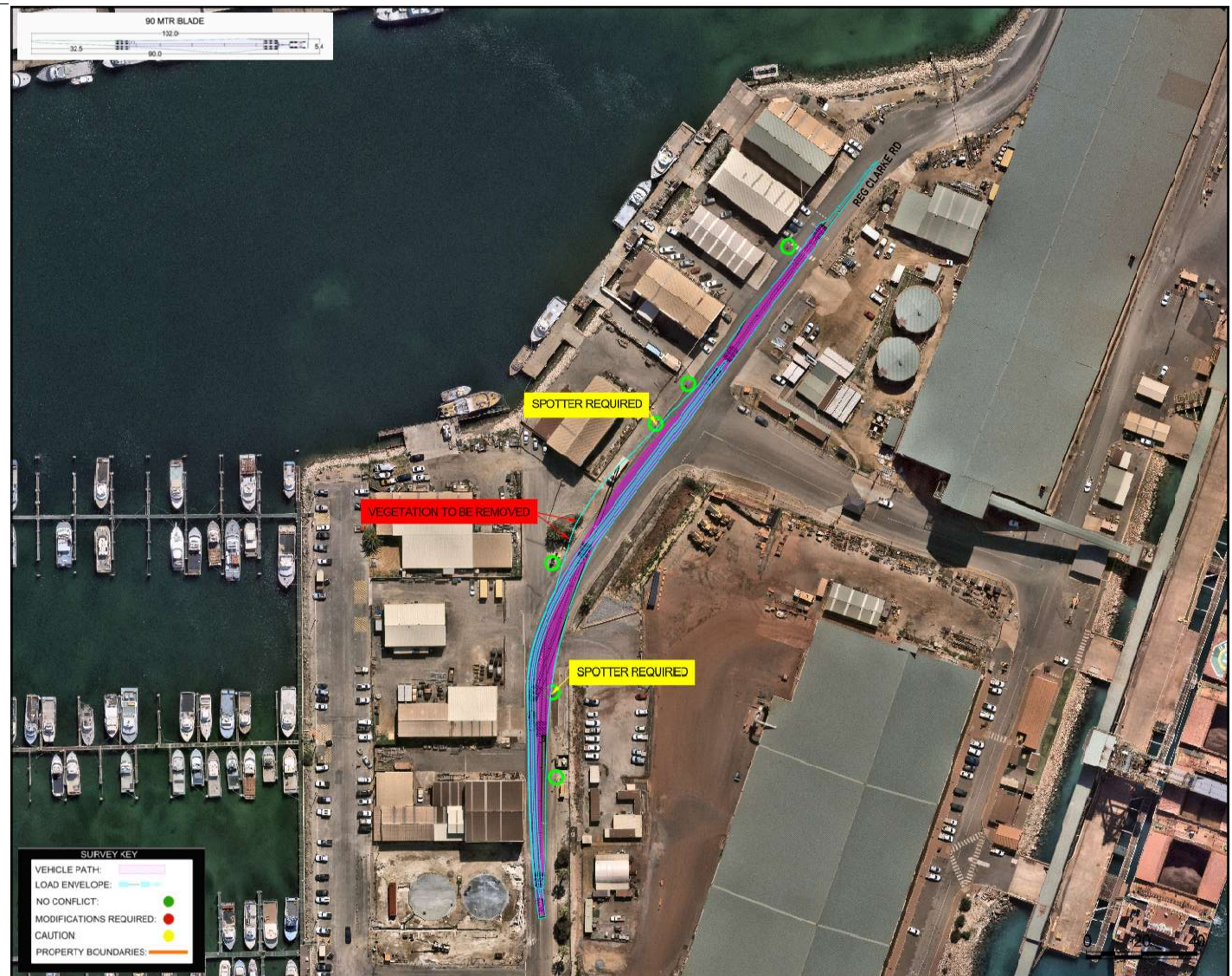
Port of Geraldton, WA

Component – Blade

PROCEDURE: left-hand turn

MODIFICATIONS REQUIRED: Nil

GPS: <https://maps.app.goo.gl/FoSSGWV9Gan1F6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.4 Km's

Reg Clarke Road
onto Ian Bogle Road

West End, WA

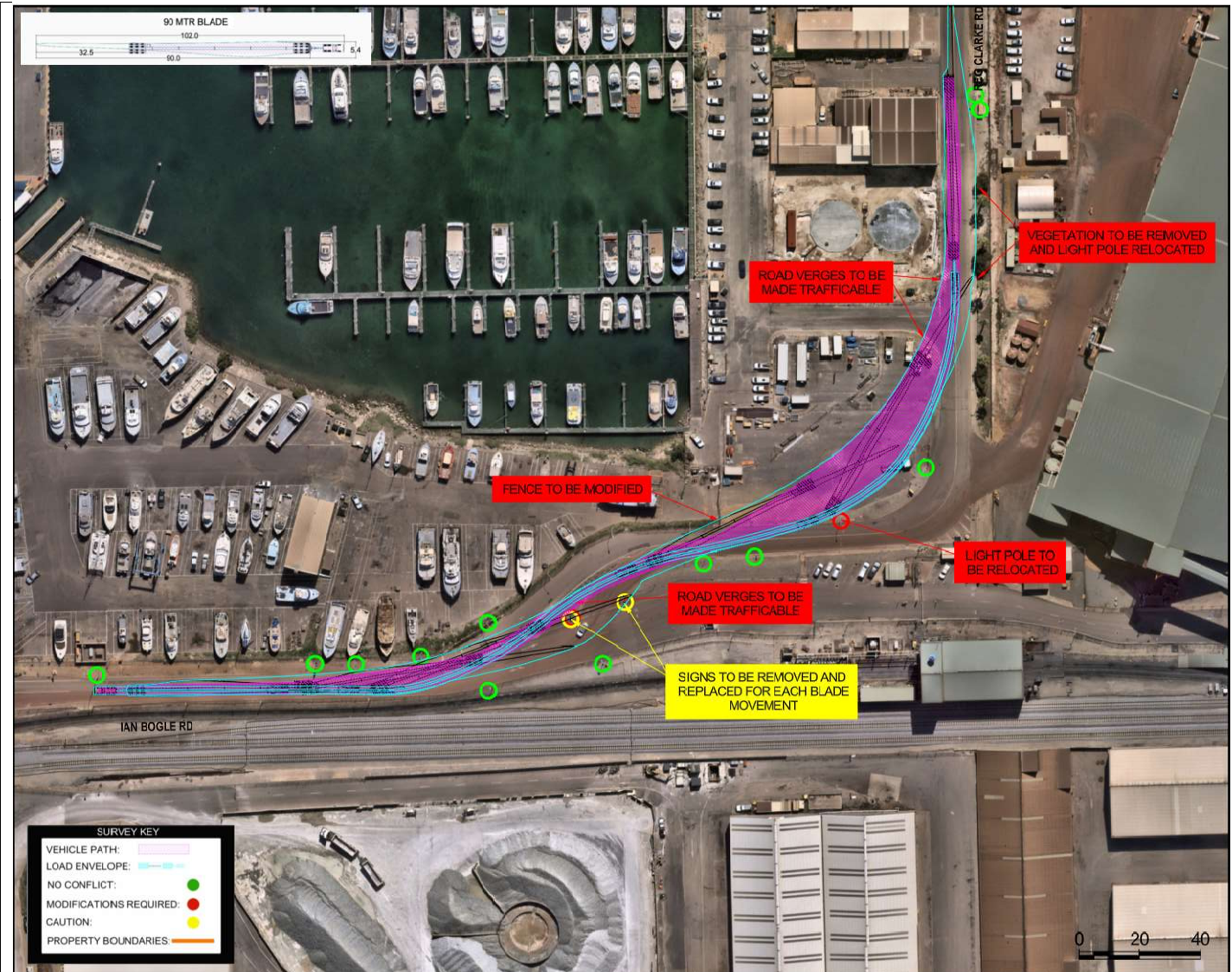
Component – Blade

PROCEDURE: Long right-hand bend

MODIFICATIONS REQUIRED: Fence to be modified, vegetation to be removed, and road verges to be made trafficable.

COMMENTS: Signs to be removed and replaced for each blade movement.

GPS: <https://maps.app.goo.gl/kdEXusBE7ZLzHzET8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

5.5 Km's

Northwest Coastal Highway
Onto Geraldton Mount Magnet
Road

Mount Tarcoola, WA

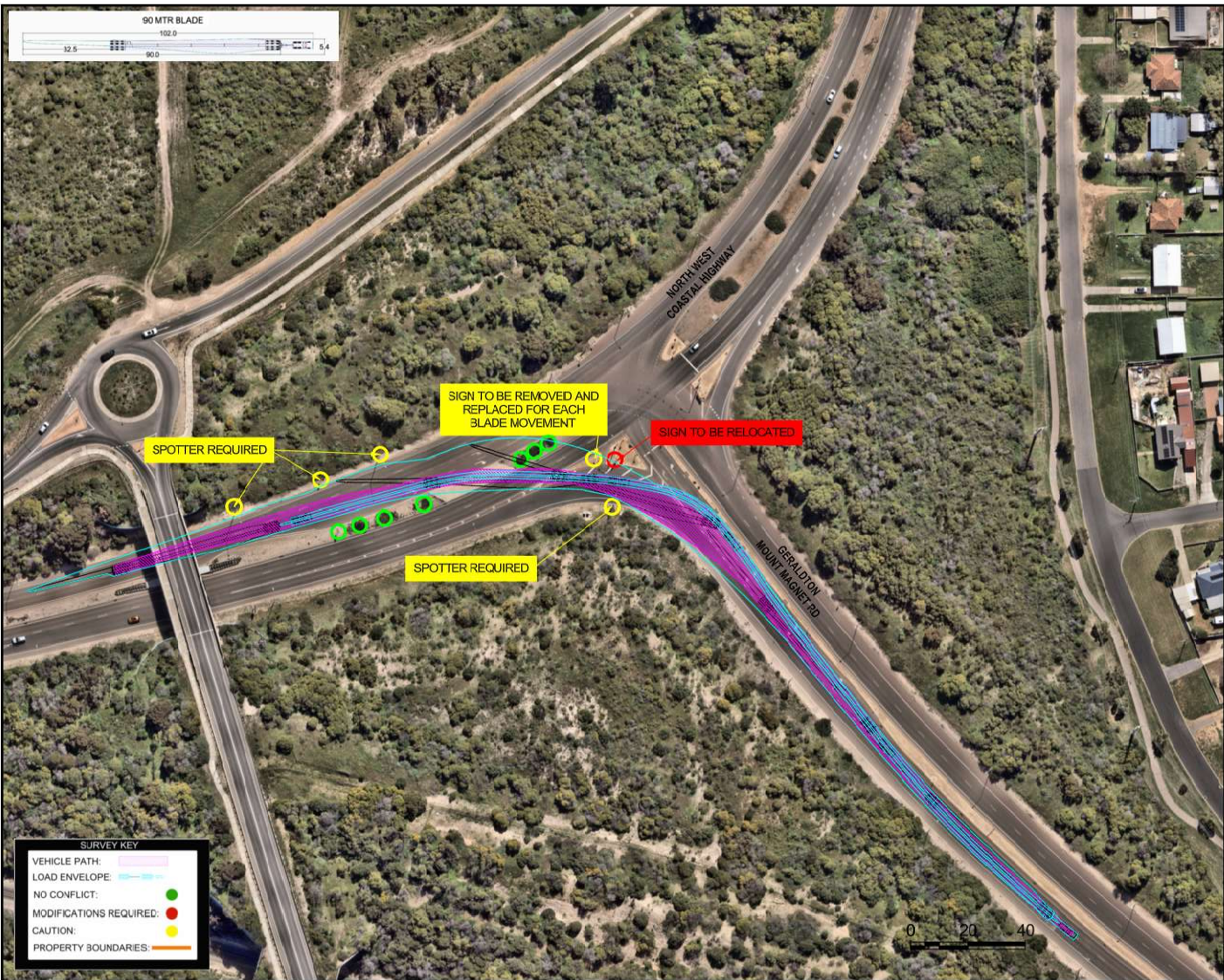
Component – Blade

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED: Sign to be relocated, vegetation to be trimmed under 2.5m

COMMENTS: Sign to be removed and replaced for each blade movement.

GPS: <https://maps.app.goo.gl/C6GT8k2AJ4vct4PH8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

10.6 Km's

Geraldton Mount Magnet Road
onto Goulds Road

Narngulu, WA

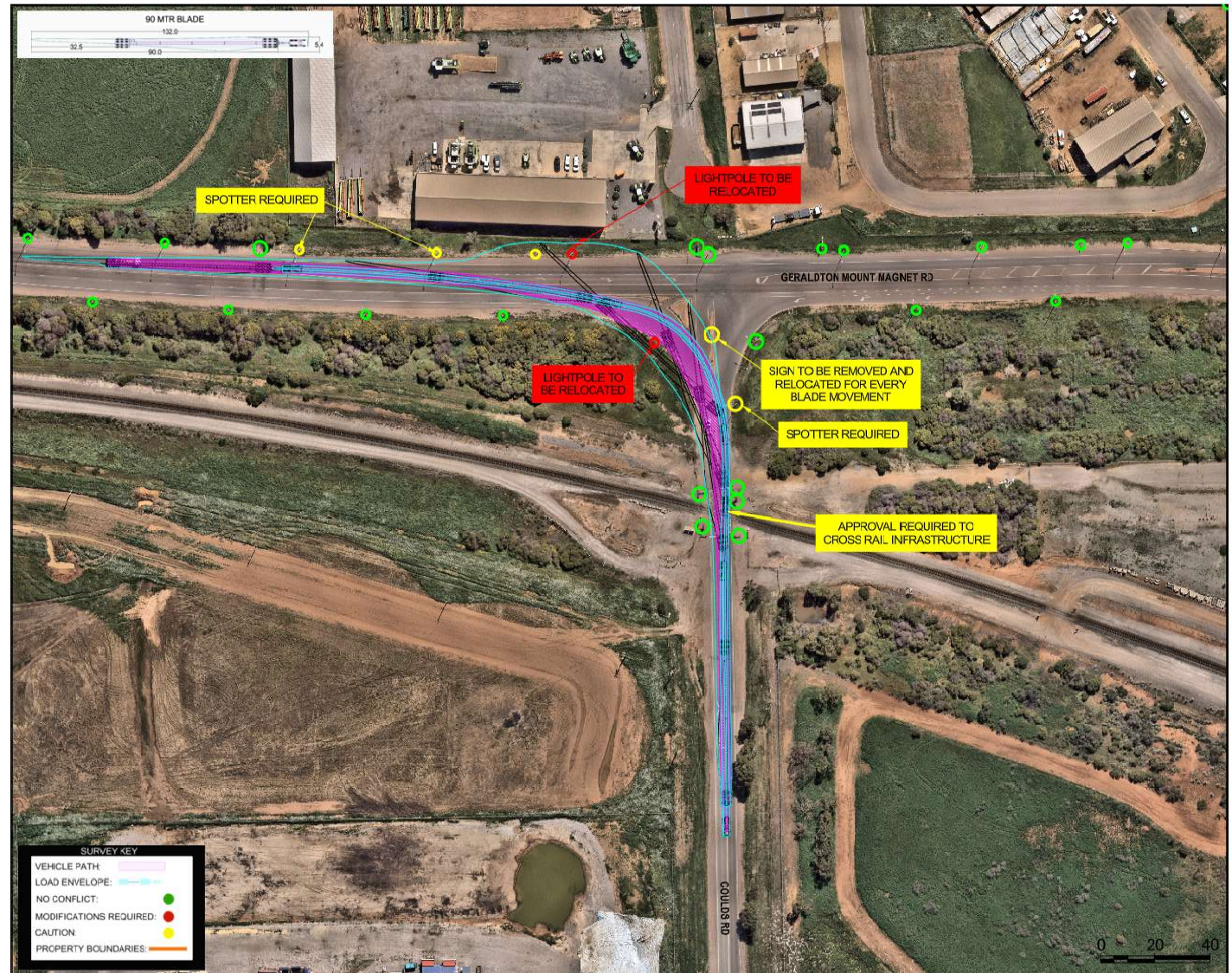
Component – Blade

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED: Two light poles to be relocated.

COMMENTS: Sign to be removed and replaced for each blade movement. Two Light poles to be relocated

GPS: <https://maps.app.goo.gl/ukDWiWpcgJk8EDyy9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

14.1 Km's

Could's Road
onto Rudds Gully Road

Narngulu, WA

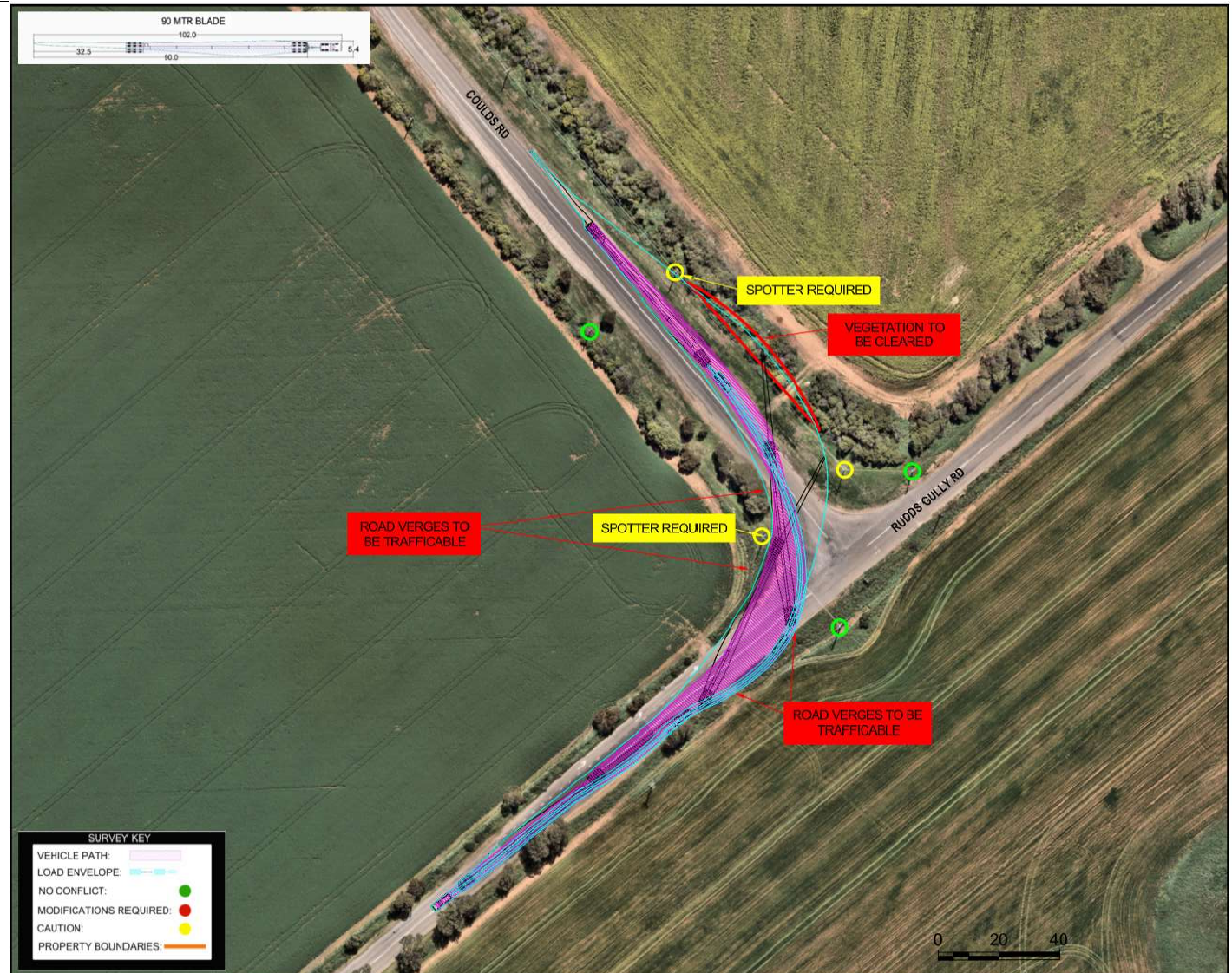
Component – Blade

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:

Vegetation to be trimmed for over-sail;
landholder permission required. Road
verge to be made trafficable.

GPS: <https://maps.app.goo.gl/xJThmr3rGe4inU8U7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

17.6 Km's

Raymond Road on Coalfields
Road Via Southwestern Highway.

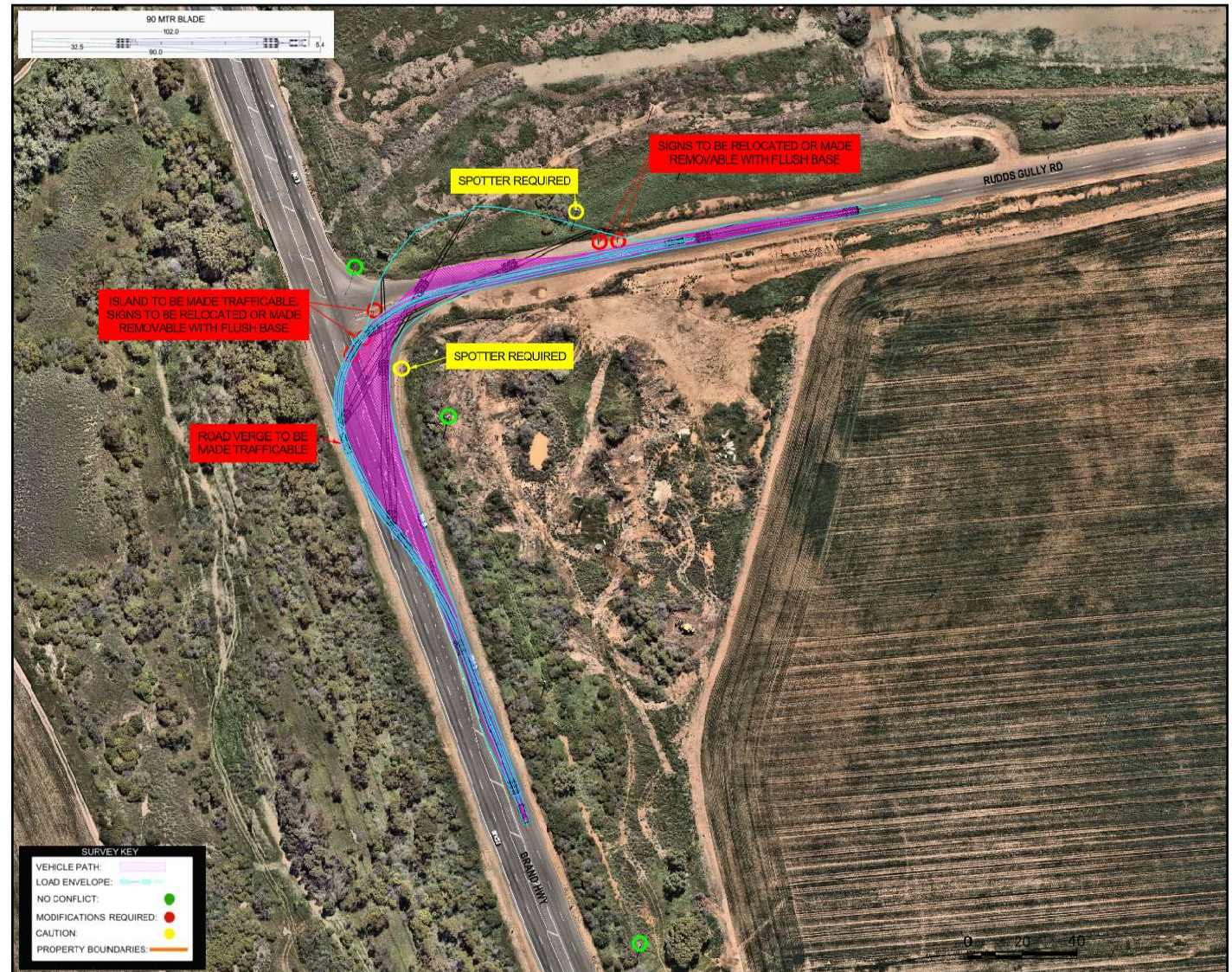
Cape Burney, WA

Component – Blade

PROCEDURE: Left-hand turn

MODIFICATIONS REQUIRED: Island to be made trafficable, and signs to be made removable or relocated

GPS: <https://maps.app.goo.gl/TnXUxxiln5iYnqgp8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

78.7 Km's

Brand Highway onto Brand Highway

Yandarino, WA

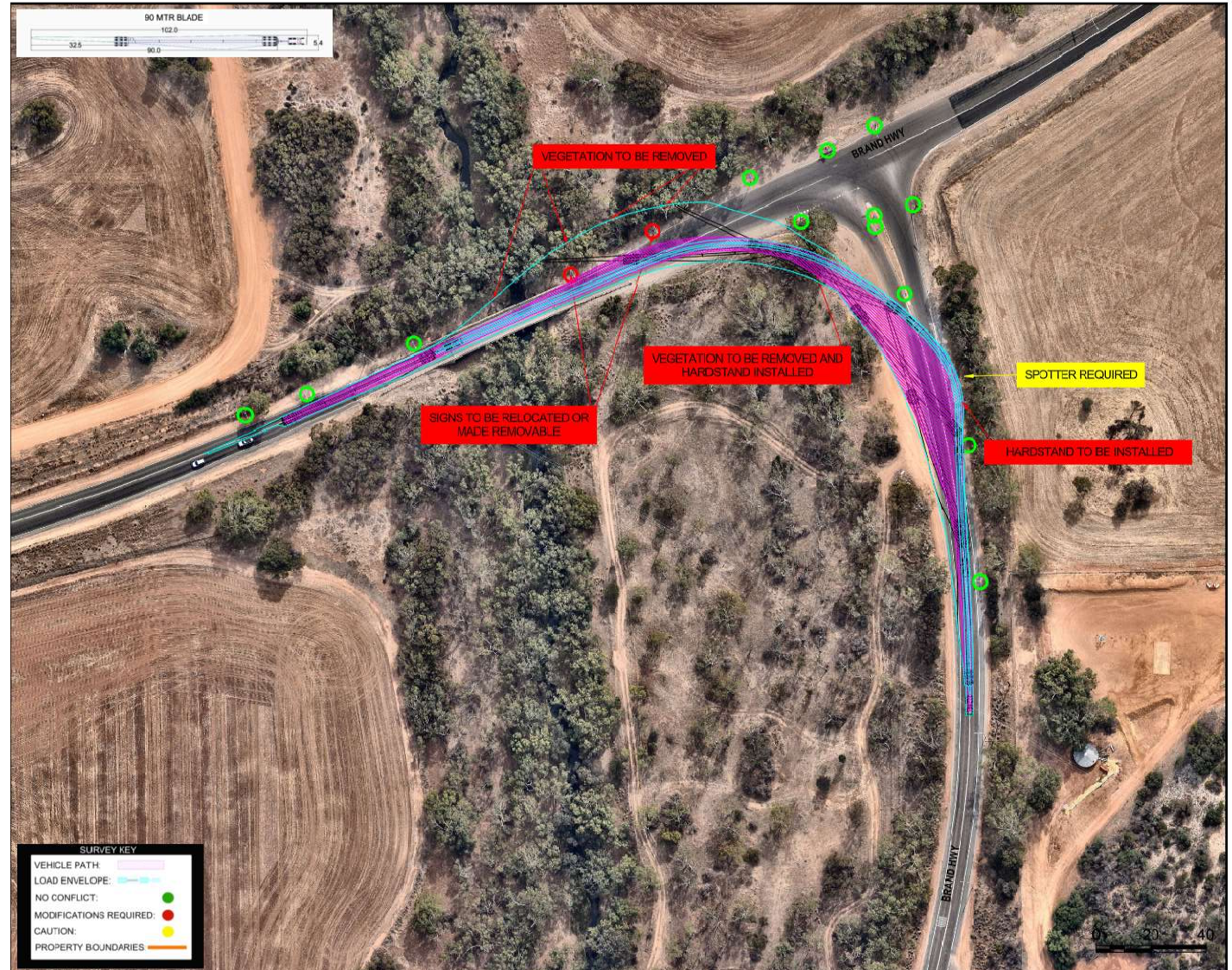
Component – Blade

PROCEDURE: Right hand bend

MODIFICATIONS REQUIRED:

Vegetation to be cleared, hardstand to be installed on inside corner and road verge.
Signs to be relocated or made removable.
Three light poles to be removed

GPS: <https://maps.app.goo.gl/uyccx3DneoJ9mQuFA>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

373.0 Km's

Brand Highway onto Tonkin
Highway

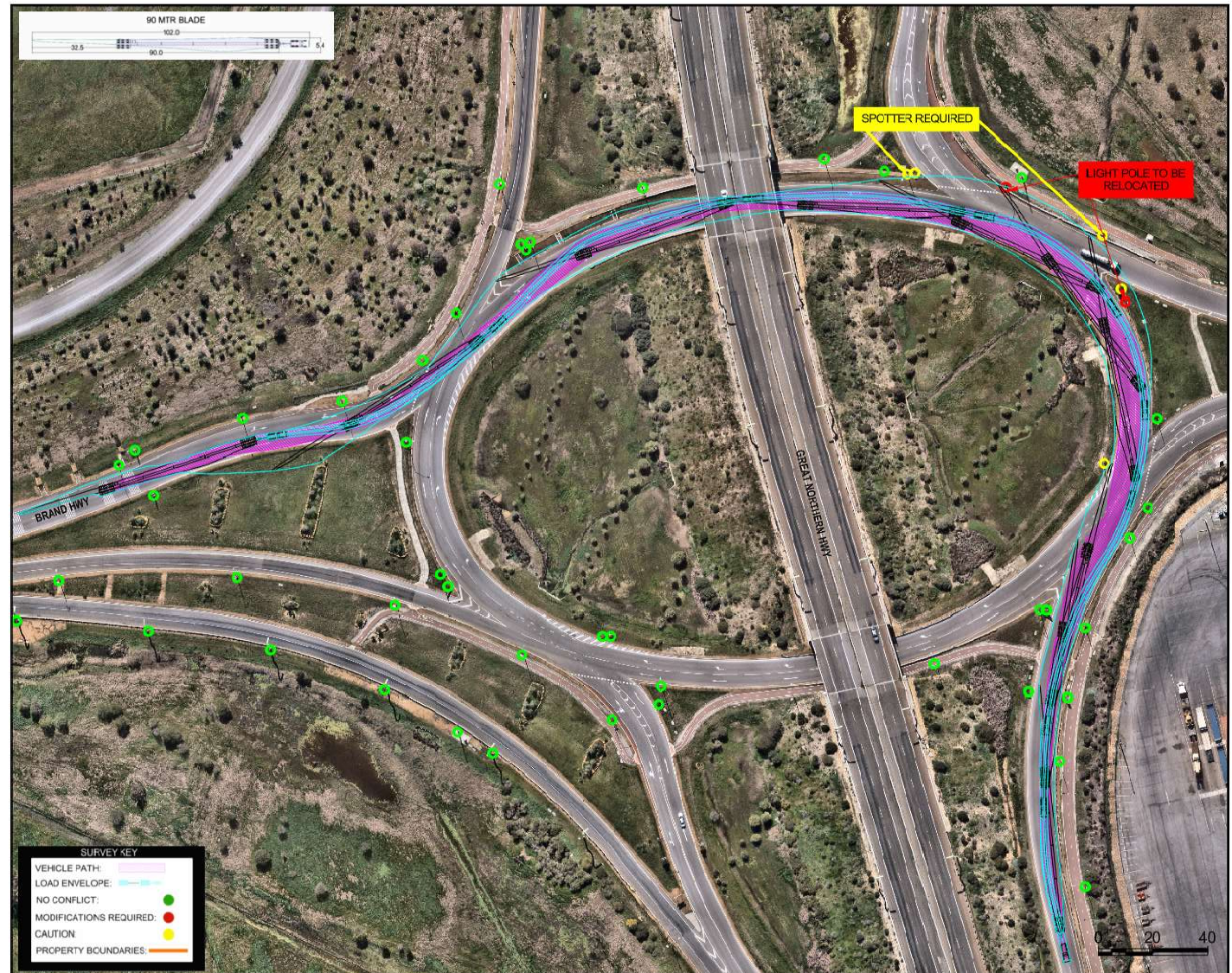
Muchea, WA

Component – Blade

PROCEDURE: Proceed onto roundabout,
take third exit

MODIFICATIONS REQUIRED: Light pole
to be relocated

GPS: <https://maps.app.goo.gl/SwyawVi9mGcNLxtN7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

410. Km's

Tonkin Highway onto Reid Highway

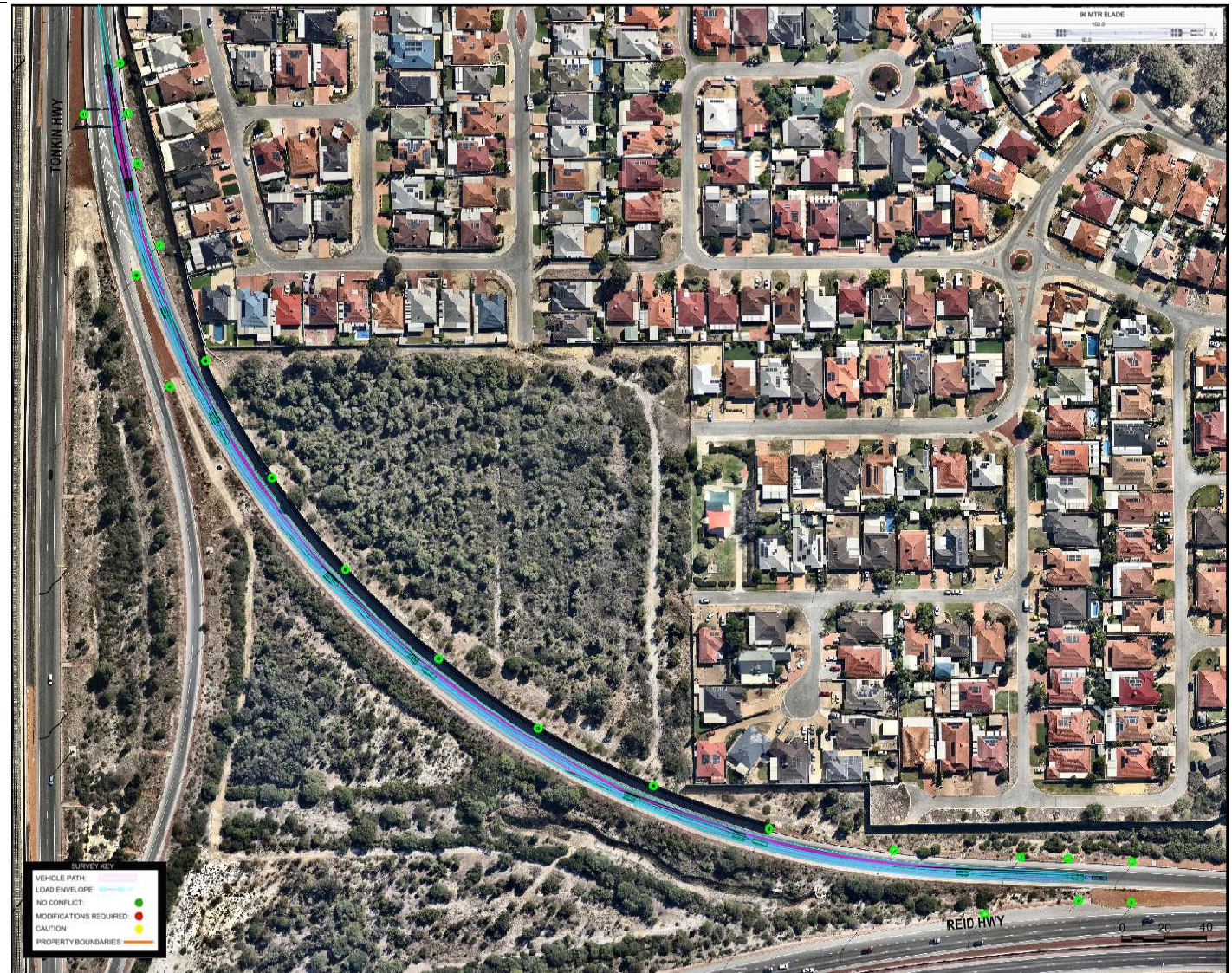
Bennet Springs, WA

Component – Blade

PROCEDURE: Left hand bend

MODIFICATIONS REQUIRED: Nil

GPS: <https://maps.app.goo.gl/t25zSHkD5f2zkbSN8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

423.0 Km's

Roe Highway
onto Great Eastern Highway

Midvale, WA

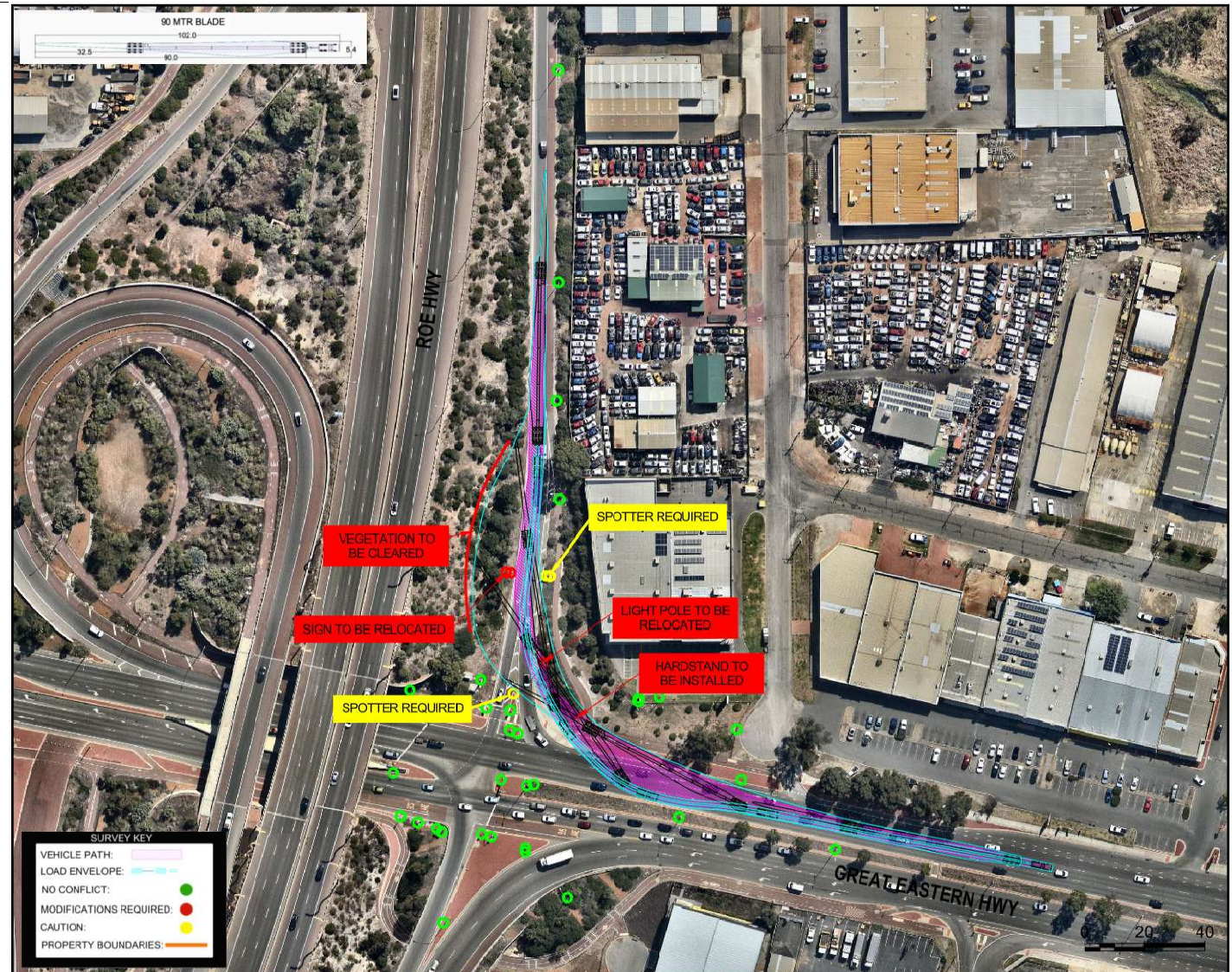
Component – Blade

PROCEDURE: Left-hand turn

MODIFICATIONS REQUIRED:

Vegetation to be cleared, light pole and sign to be relocated, and hardstand to be installed.

GPS: <https://maps.app.goo.gl/Mm35goTJg9N1fsar7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

476.0 Km's

Great Eastern Highway

Bakers Hill, WA

Component – Blade

PROCEDURE: Proceed straight

MODIFICATIONS REQUIRED: Nil

GPS: <https://maps.app.goo.gl/eyZ4YZJaQAqBXxLL9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

668.0 Km's

Great Eastern Highway onto
Merredin-Naremben Road

Merredin, WA

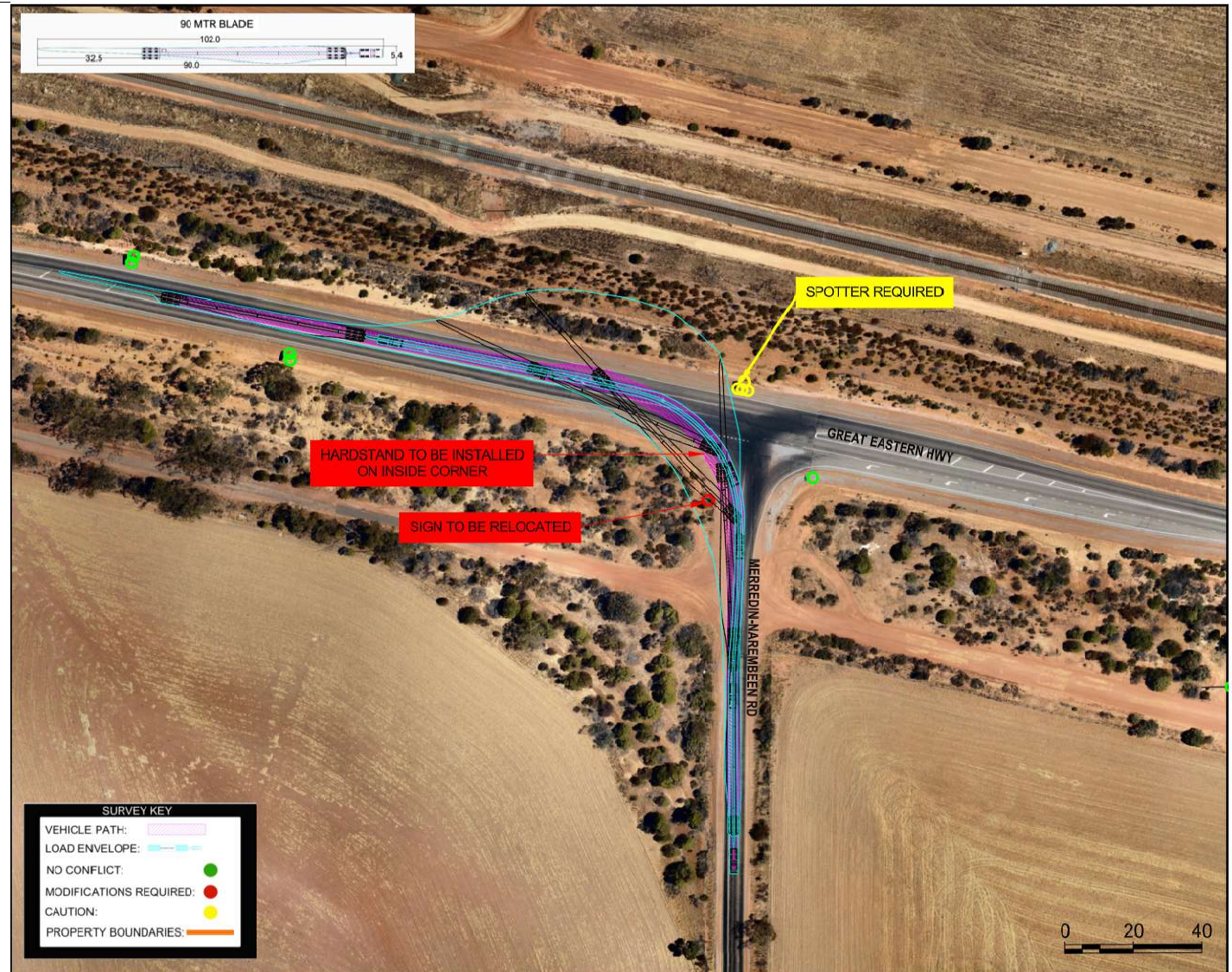
Component – Blade

PROCEDURE: Right hand bend

MODIFICATIONS REQUIRED:

Hardstand to be installed on inside corner and sign to be relocated

GPS: <https://maps.app.goo.gl/NmTmKdJLmBgYfRR9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

677.0 Km's

Merredin-Naremben Road onto
Merredin-Naremben Road

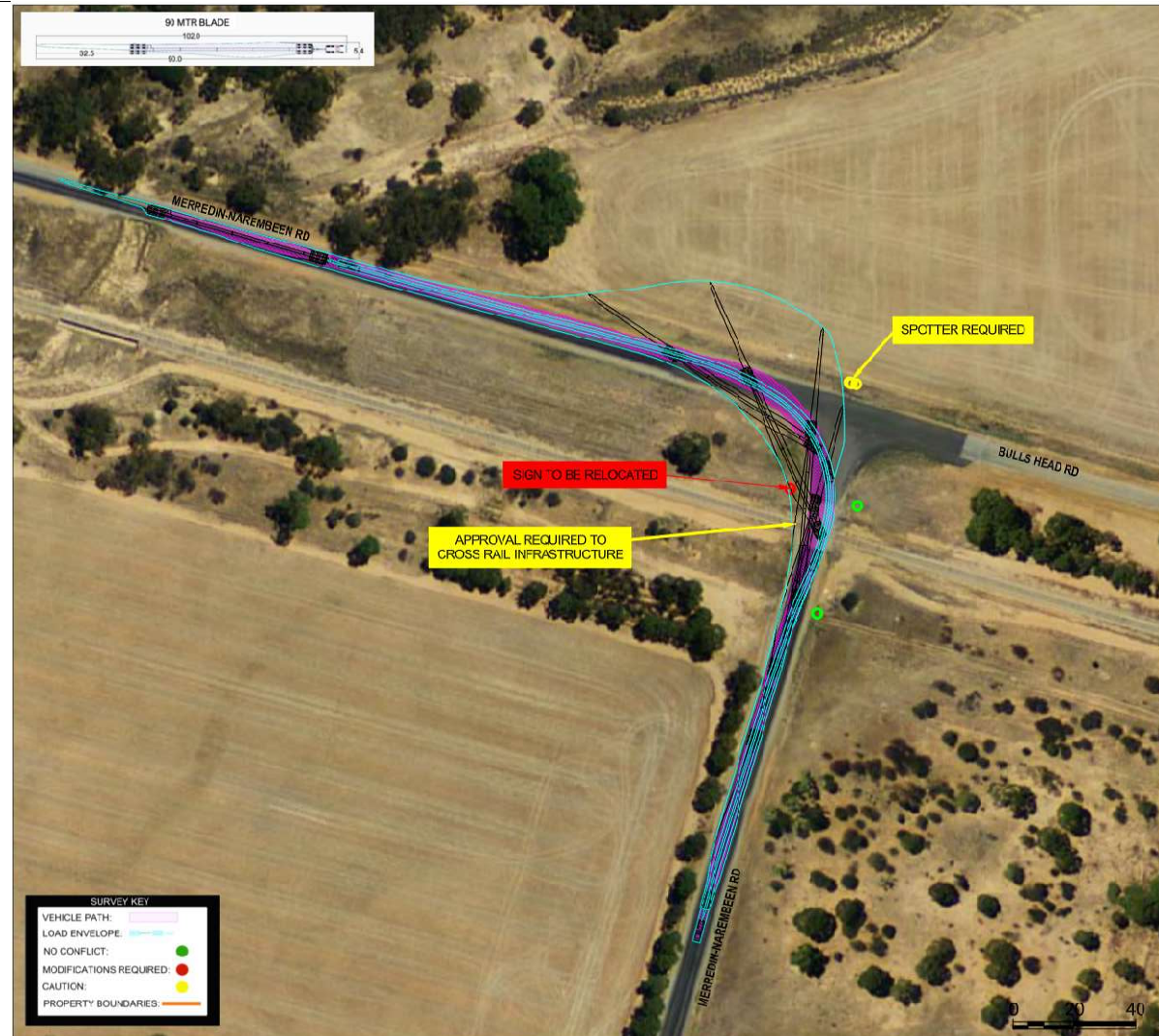
Merredin, WA

Component – Blade

PROCEDURE: Right hand bend

MODIFICATIONS REQUIRED: Sign to be
relocated, hardstand to be installed on
inside corner

GPS: <https://maps.app.goo.gl/hxWnTcKzLg8FRCE28>



8.0 Route 1 Review

After reviewing all options and conducting a route study, the route, in its current condition, will require moderate upgrades before it can be deemed suitable for transporting the proposed blades.

The following key points need to be considered if the project proceeds with this route.

SWEPT PATH:

- Moderate works are required at Geraldton Port before deliveries can commence.
- Five pinch points along the route will require a moderate level of work, including relocation of light poles, signs, and hardstand.
- The intersection at Midvale requires significant work before deliveries can commence.
- All locations identified in this report as requiring work should be investigated early in the planning stages to avoid delays or rejections.

VERTICAL CURVE

- No vertical curve issues were identified on Route 1.

OVERHEAD STRUCTURES *(5.2 Metres required height)*

- All loads listed in this report to use Route 1 have suitable clearance under structures along this route.

OVERHEAD UTILITIES

- The route is suitable for a loaded height of 5.2 metres. The transport company will need to obtain a Western Power permit.

BRIDGES

- A bridge assessment will be required to confirm the route is suitable for the weight of the loads listed in this report.

RAIL ASSETS

- There are eight locations along the route with rail crossings or bridges over rail that will require approval from the relevant authorities before loads can access the route.

VEGETATION

- A moderate amount of vegetation clearing is required at various locations as detailed in this report.

PAVEMENT

- Pavement along Route 1 is of highway standard.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

ROADWORKS:

- The project will need to start discussions with government authorities at least 18 months prior to turbine transport to understand if the project would conflict with any upcoming roadworks. Once a Transport Management Plan (TMP) has been approved for the transport of the turbines, the exact movement dates must be communicated to all relevant authorities to ensure all road stakeholders are aware of the scheduled movements for each day.
- The project will need to regularly check on any new upgrades not listed in the report. If upgrades have taken place on a section of the route after this report has been completed, a swept path study would need to be undertaken on that section to confirm it can still be used.

9.0 Route 2 Transport Assessment

ROUTE 2: Geraldton to Tandegin Windfarm

COMPONENTS: Towers

DISTANCE: 686 kilometres

GPS LINK: <https://maps.app.goo.gl/9W6gJVciU5TwTbZj8>

VIA: Reg Clarke Road, Ian Bogle Road, John Wilcock Link, Geraldton Mount Magnet Road, Maitland Road, Wubin-Mullewa Road, Morawa-Yagloo Road, Great Northern Highway, Acacia Way, Dalwallinu-Kalannie Road, Roche Street, Dowerin Kalannie Road, Cadoux-Koordaa Road, Railway Street, Haig Street, Marriott Street, Koorda-Bullfinch Road, Welbungin Road, Warralakin Road, Great Eastern Highway, Merredin-Narembeen Road

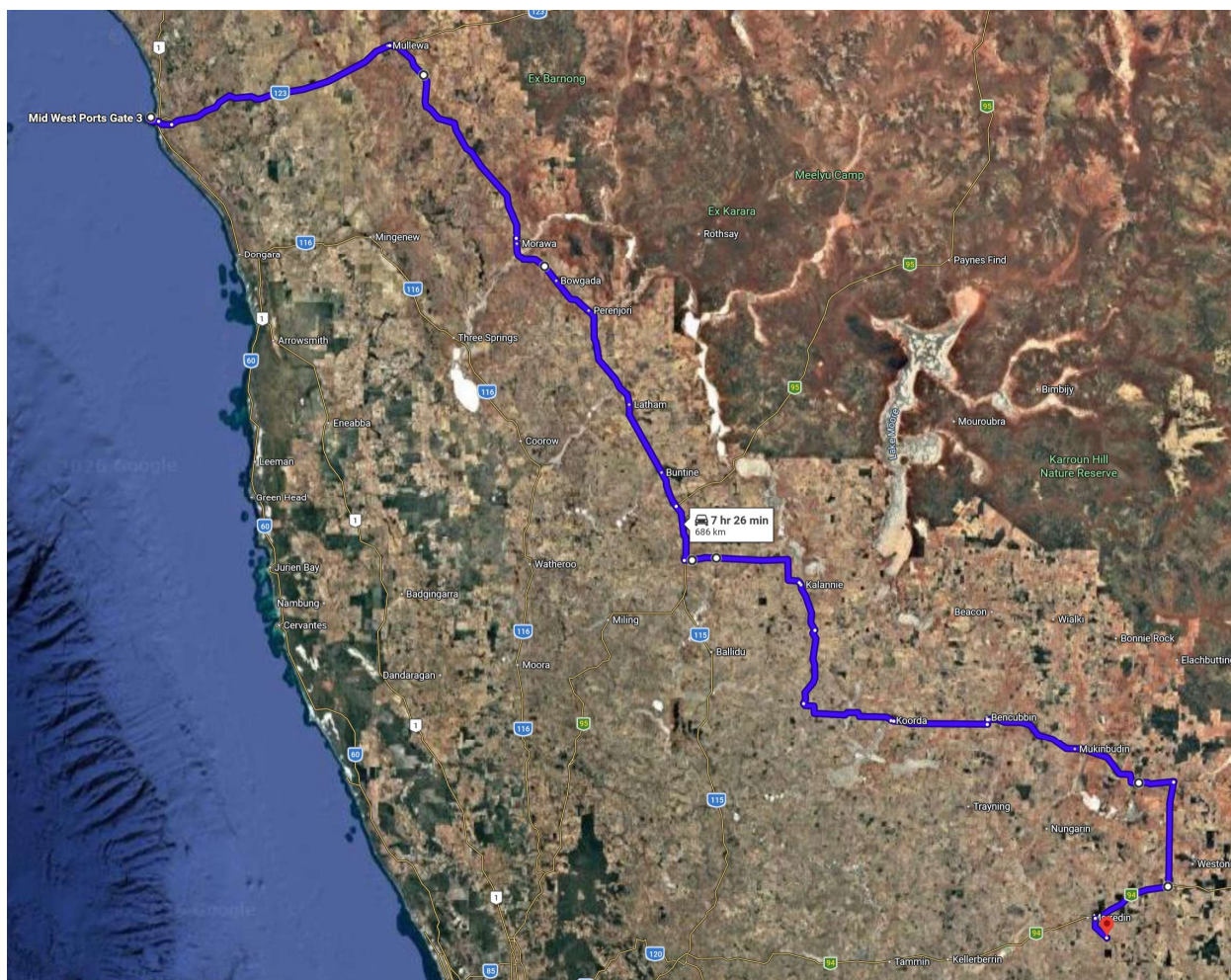


Figure 4 Route Map –Route 1

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KEY	
MODIFICATIONS REQUIRED	
PINCH POINT	
EMERGENCY PARKING	

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
0.0	Geraldton	Reg Clarke Rd https://maps.app.goo.gl/ZHr4g41dRnvrUQ98	Length: 70.0 Metres Width: 12.5 Metres	Travel directly ahead on Reg Clarke Rd	Gate to be opened on both sides. Spotter to assist with this procedure.
0.55	Geraldton	Reg Clarke Rd onto Ian Bogle Rd https://maps.app.goo.gl/mFg38aPCx3hvg48	Width: 7.5 Metres	Left-hand turn into right-hand turn	Signs to be relocated or made removable. Spotter to assist with this procedure.
4.6	Geraldton	John Willcock Link over Brand Highway overpass GPS Link: https://maps.app.goo.gl/imt8WDV4F6cn1wW3A	Height: Left: 6.64 metres Centre: 6.80 metres Right: 6.73 metres	All towers take the offramp prior to the Brand Highway underpass and return onto John Willcock Link Road via the onramp.	Loads are to travel on the offramp, then over the Brand Highway and down onto the onramp and back onto John Willcock Link Road.
5.3	Geraldton	John Willcock Link under Durlacher Street overpass GPS Link: https://goo.gl/maps/dkuh3PsyX9keis9s7	Height: Left: 7.40 metres Centre: 7.39 metres Right: 7.37 metres	Travel directly ahead	No problems with this section of road.
6.5	Geraldton	Geraldton-Mt Magnet Road under Highbury Street overpass GPS Link: https://goo.gl/maps/x5D8FV5VrLHS2t7AA	Height: Left: 7.10 metres Centre: 6.95 metres Right: 6.78 metres	Travel directly ahead	Loads are to travel under this structure at a height of no more than 6.7 metres. These trailers must stay on the left-hand shoulder while travelling under this structure. As per the image shown below.
7.8	Geraldton	Geraldton-Mt Magnet Road under Abraham Street overpass GPS Link: https://goo.gl/maps/bcvv8sDerbTGtCro8	Height on gravel side: Left: 6.86 metres Centre: 6.83 metres Right: 6.85 metres	Travel directly ahead	Loads that exceed 6.5 metres in overall height will need to pull over to the right-hand side and travel under the bridge on the gravel section, as per the TGS for this section of road. A height in the gravel section must not exceed 6.8 metres in overall height.
10.9	Narngulu	Geraldton Mount Magnet Rd through roundabout https://maps.app.goo.gl/EnbA8htCvQChxe4	Width: 6.0 Metres	Travel directly around roundabout and travel out of second exit	Island to be made trafficable and light pole to be relocated or removed. Spotter to assist with this procedure.
47.7	Wicherina	Geraldton Mount Magnet Rd https://maps.app.goo.gl/88XxZ4fd68T5445bA	Width: 7.0 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
71.6	Tenindewa	Geraldton Mount Magnet Rd https://maps.app.goo.gl/VaflzQvVYPT3ugst6	Width: 7.8 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
74.6	Tenindewa	Geraldton Mount Magnet Rd https://maps.app.goo.gl/eK88StyWp4nkCtFs6	Width: 7.6 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
98.6	Mullewa	Geraldton Mount Magnet Rd https://maps.app.goo.gl/TnWgZXESDNHqxeub6	Width: 8.3 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
101.0	Mullewa	Maitland Rd onto Wubin-Mullewa Rd https://maps.app.goo.gl/734tpd4p6jH8S2p	Width: 7.0 Metres	Right-hand turn, then left-hand turn	Approval required from WA Rail required to cross rail lane. Sign to be made removable or relocated. Spotter to assist with this procedure.
231.0	Perenjori	Wubin-Mullewa Rd https://maps.app.goo.gl/xANg7qX12iSYtuc7	Width: 8.0 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
342.0	Dalwallinu	Wubin-Mullewa Rd https://maps.app.goo.gl/uCFsWmW1Z1t2GJDx7	Width: 13.0 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
343.0	Dalwallinu	Wubin-Mullewa Rd https://maps.app.goo.gl/uCFsWmW1Z1t2GJDx7	Width: 6.1 Metres	Travel directly over rail crossing.	Approval is required from WA Rail to cross the rail line.
406.0	Burakin	Dowerin Kalannie Rd https://maps.app.goo.gl/HCTfzA5rNkyDsOps5	Width: 7.5 Metres	Travel directly over rail crossing	Approval required from WA Rail required to cross rail line.
414.0	Burakin	Dowerin Kalannie Rd https://maps.app.goo.gl/CkqvCNyHdyR6F47	Width: 7.6 Metres	Travel directly over rail crossing into the right-hand turn	Approval is required from WA Rail to cross the rail line. Hardstand to be installed.
444.0	Cadoux	Dowerin Kalannie Rd onto Cadoux-Koorda Rd https://maps.app.goo.gl/35Cid4d4vovj3l9	Width: 6.9 Metres	Left-hand turn	Ensure inside corner is clear and trafficable. Road verge may need to be made trafficable or hardstand to be installed.
483.0	Koorda	Cadoux-Koorda Rd onto Haig St via Railway St https://maps.app.goo.gl/Z5kxJxphbERxz57aA	Width: 14.0 Metres	Right-hand turn into left-hand turn	Approval is required from WA Rail to cross the rail line. Spotter to assist with this procedure.
520.0	Bencubbin	Koorda-Bullfinch Rd https://maps.app.goo.gl/4QCdK9LpDd4Tf47bA	Width: 7.5 Metres	Left-hand turn	Either the trailer is to lift over the bollards, or the bollards are to be relocated. Spotter to assist with this procedure.
526.0	Koorda	Koorda-Bullfinch Rd https://maps.app.goo.gl/rQybSt1ADbSkj6c69	Width: 6.8 Metres	Travel directly over rail crossing	Approval is required from WA Rail to cross the rail line.
555.0	Mukinbudin	Koorda-Bullfinch Rd https://maps.app.goo.gl/WPden81aN79zA4hf8	Width: 6.8 Metres	Travel directly over rail crossing	Approval is required from WA Rail to cross the rail line.
604.0	Warralakin	Koorda-Bullfinch onto Warralakin Rd https://maps.app.goo.gl/3DjkyVLA4P2AC1U2A	Width: 5.5 Metres	Right-hand turn	Hardstand to be installed. Spotter to assist with this procedure.
644.0	Walgoolan	Great Eastern Highway on Walgoolan Bridge https://maps.app.goo.gl/nQArgDZbKXBrduy6	Width: 11.5 Metres	Travel directly ahead over the bridge	Bridge slowdowns likely. Check permit conditions before travelling over this structure and any other structures with conditions on this route.
676.0	Merredin	Great Eastern Hwy onto Merredin-Narembeen Rd https://maps.app.goo.gl/T5gvFfcEMZuYVZXY6	Width: 7.6 Metres	Left-hand turn	Spotter to assist with this procedure
686.0	Merredin	Merredin-Narembeen Rd https://maps.app.goo.gl/CeZqmJvQFJ4ZiZ8Y7	Width: 6.0 Metres	Right-hand turn	Approval is required from WA Rail to cross the rail line.

Site entries, gravel roads and all site roads to be constructed to appropriate standards in order to accommodate the height, weight, swept path and vertical curves of all proposed loads. Unsealed roads to be maintained for the duration of deliveries and may become untrafficable during periods of wet weather.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.0 Km's

Reg Clarke Road

Geraldton, WA

Component – Tower

PROCEDURE: Leave the port via the gates, proceed straight on Reg Clarke Rd

COMMENTS: Both sides of gate to be opened. Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/ZHr4g41dRnvyrUQ98>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.5 Km's

Reg Clarke Road onto Ian Bogle Road

Geraldton, WA

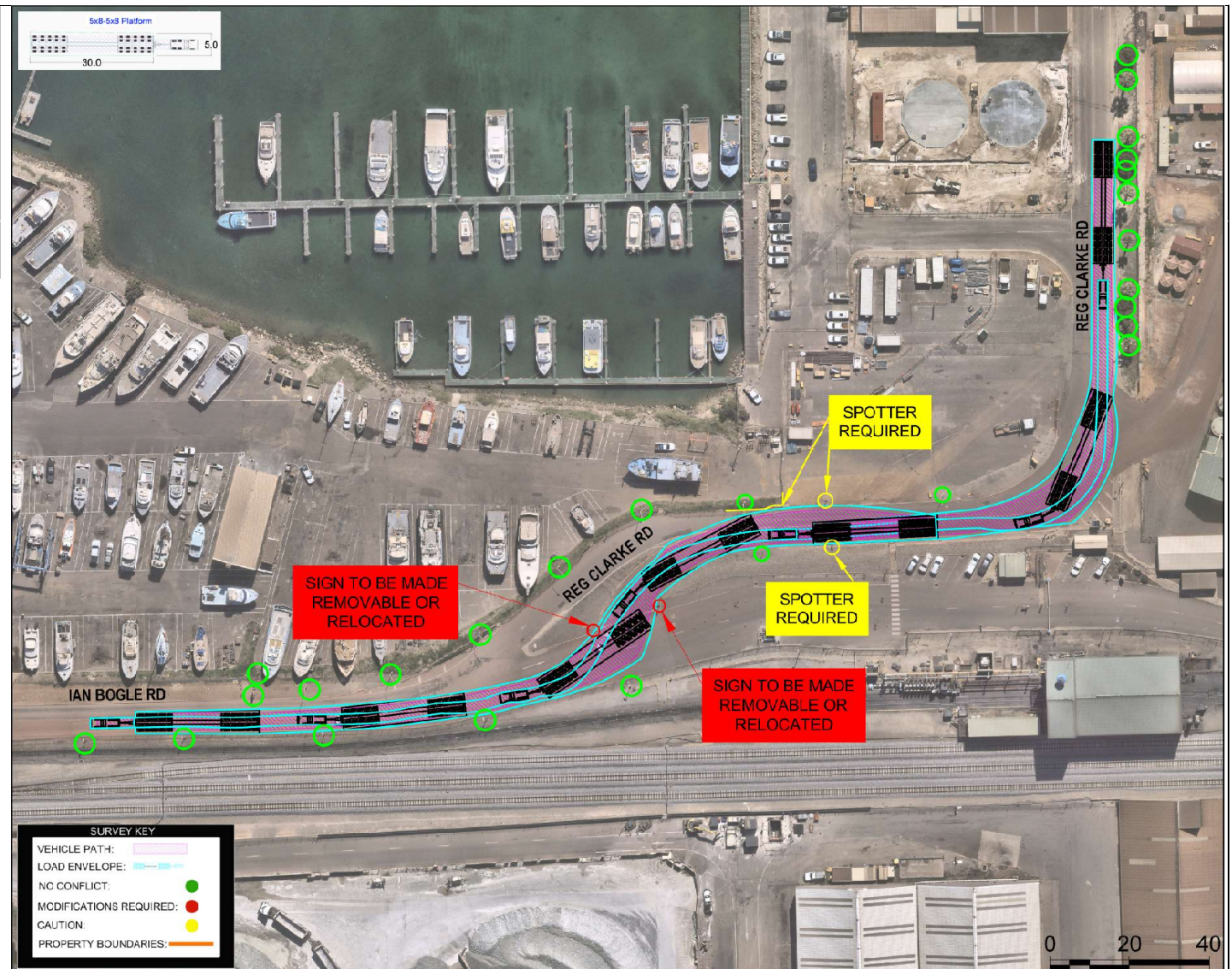
Component – Tower

PROCEDURE: The transporter crosses onto the wrong side of the road before making a left-hand turn, then turns back right onto Ian Bogle Rd.

MODIFICATIONS REQUIRED: Signs to be relocated or made removable.

COMMENTS: Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/mRgG8qrPCz3hvgJz8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

10.9 Km's

Geraldton Mount Magnet Road
through roundabout

Narngulu, WA

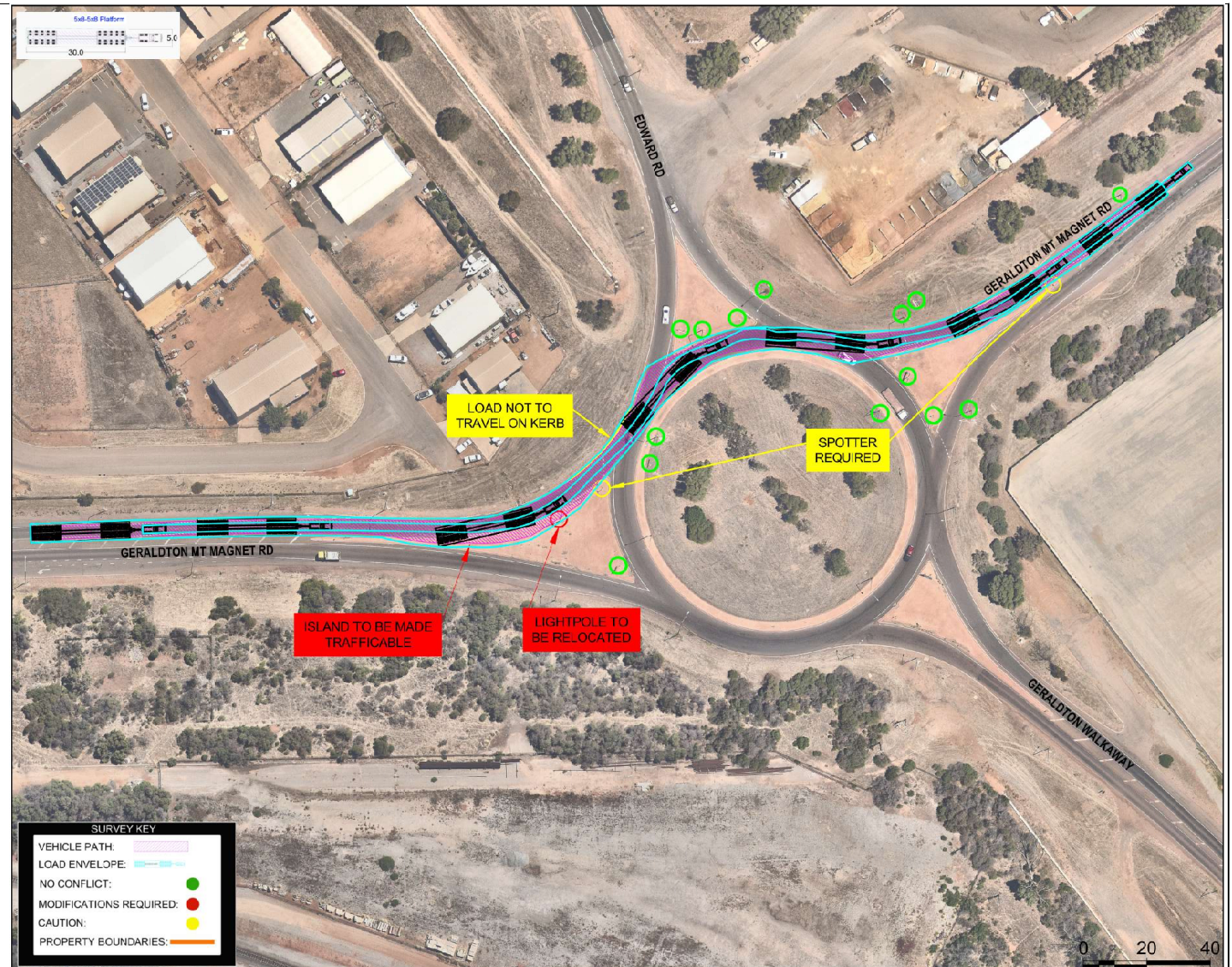
Component – Tower

PROCEDURE: Travel directly around roundabout and exit using the second exit.

MODIFICATIONS REQUIRED: Light pole to be relocated, and island to be made trafficable.

COMMENTS: Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/EuahA9hH7nQChrxw6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

101 Km's

Geraldton Mount Magnet Road
onto Wubin-Mullewa Road

Mullewa, WA

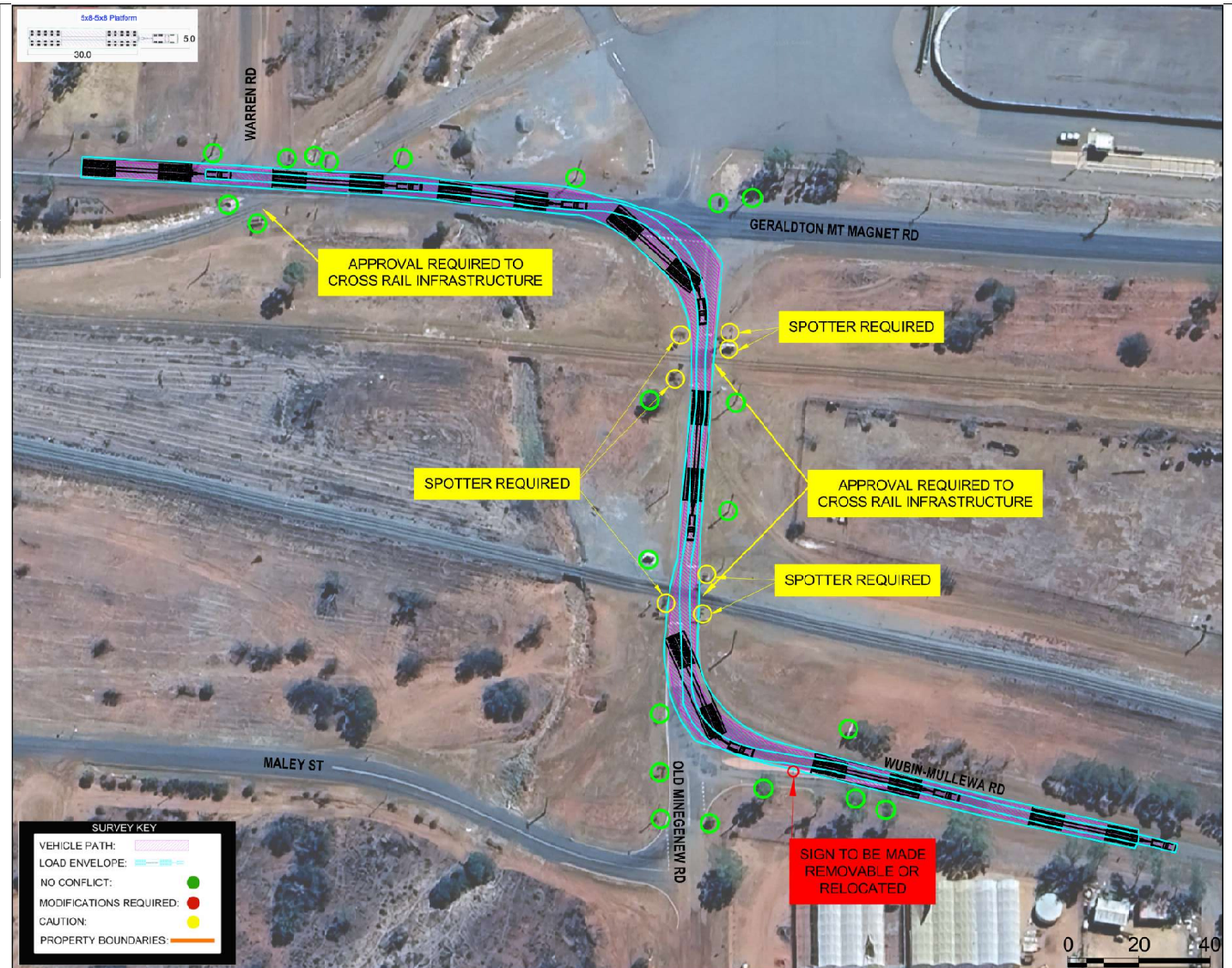
Component – Tower

PROCEDURE: Right-hand turn into left-hand turn.

MODIFICATIONS REQUIRED: Sign to be relocated or made removable.

COMMENTS: Approval required from WA Rail required to cross rail line. Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/f394mvhtjg9H8SZ6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

414 Km's

Dowerin Kalannie Road

Burakin, WA

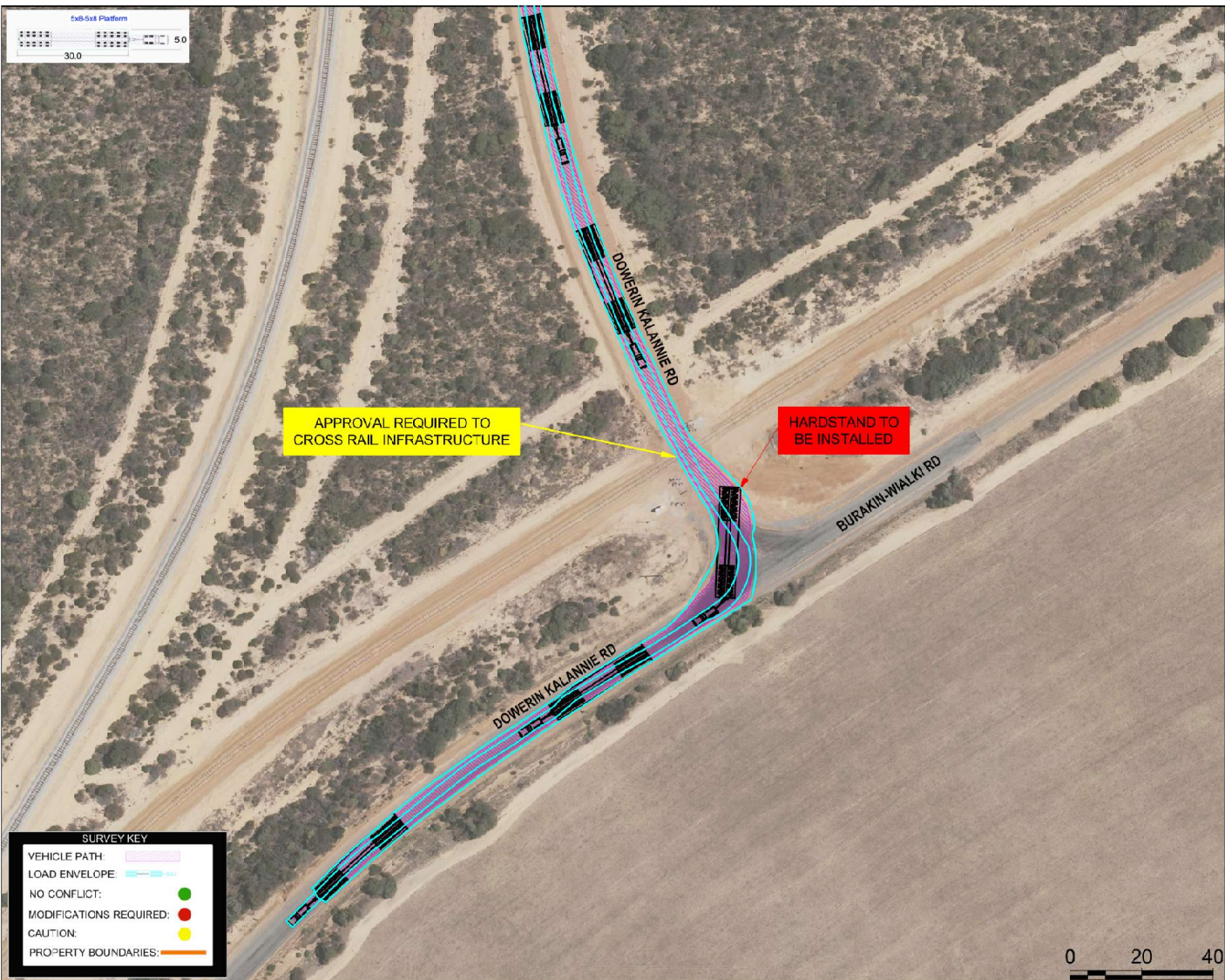
Component – Tower

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:
Hardstand to be installed.

COMMENTS: Approval required from WA
Rail required to cross rail line.

GPS: <https://maps.app.goo.gl/CXpviCNvHxfgBGF47>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

445 Km's

Dowerin Kalannie Road onto
Cadoux-Koorda Road

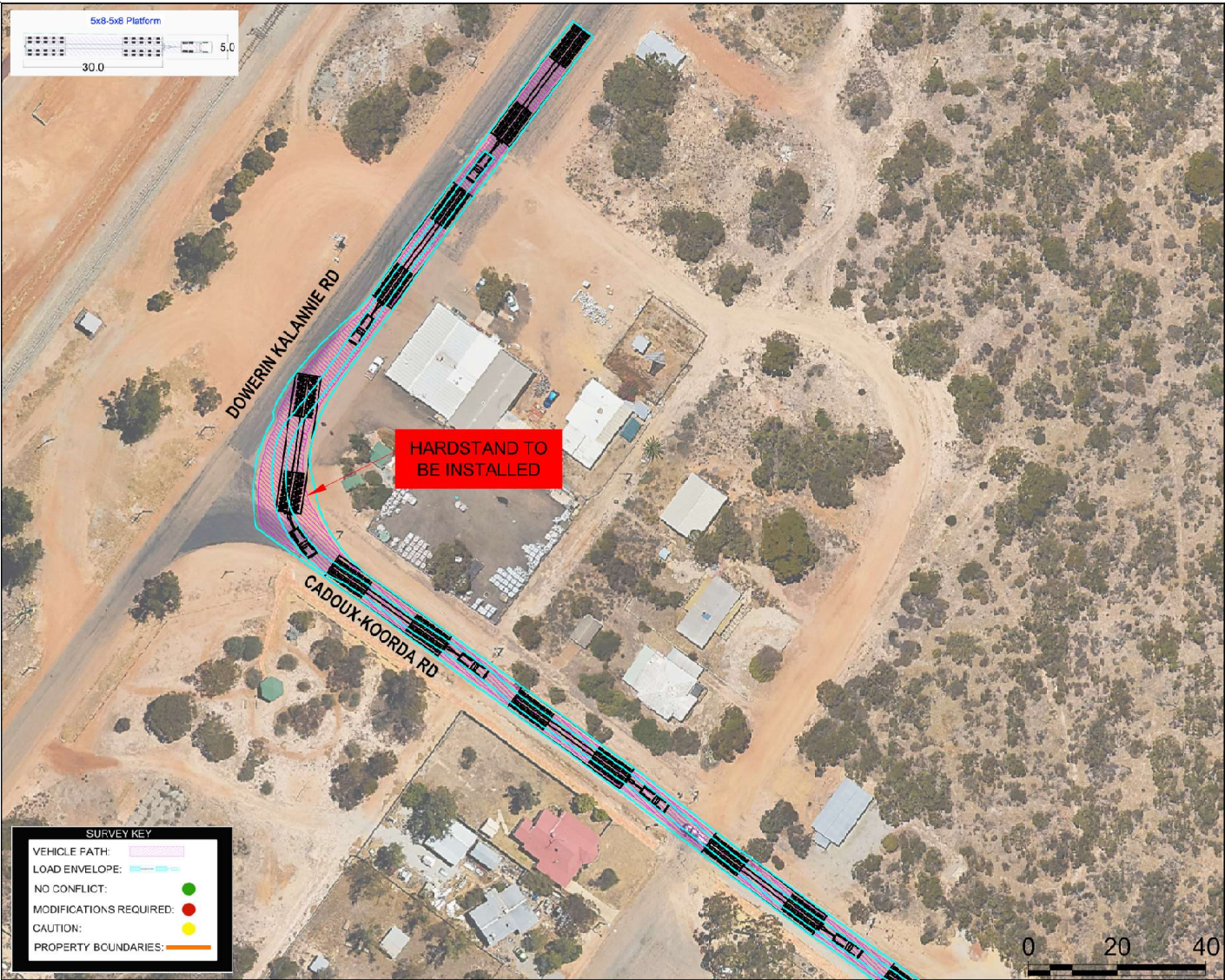
Cadoux, WA

Component – Tower

PROCEDURE: Left-hand turn.

MODIFICATIONS REQUIRED:
Hardstand to be installed.

GPS: <https://maps.app.goo.gl/k4SDkLp9zdzvvrSj9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

483 Km's

Cadoux-Koorda Road onto Haig Street via Railway Street

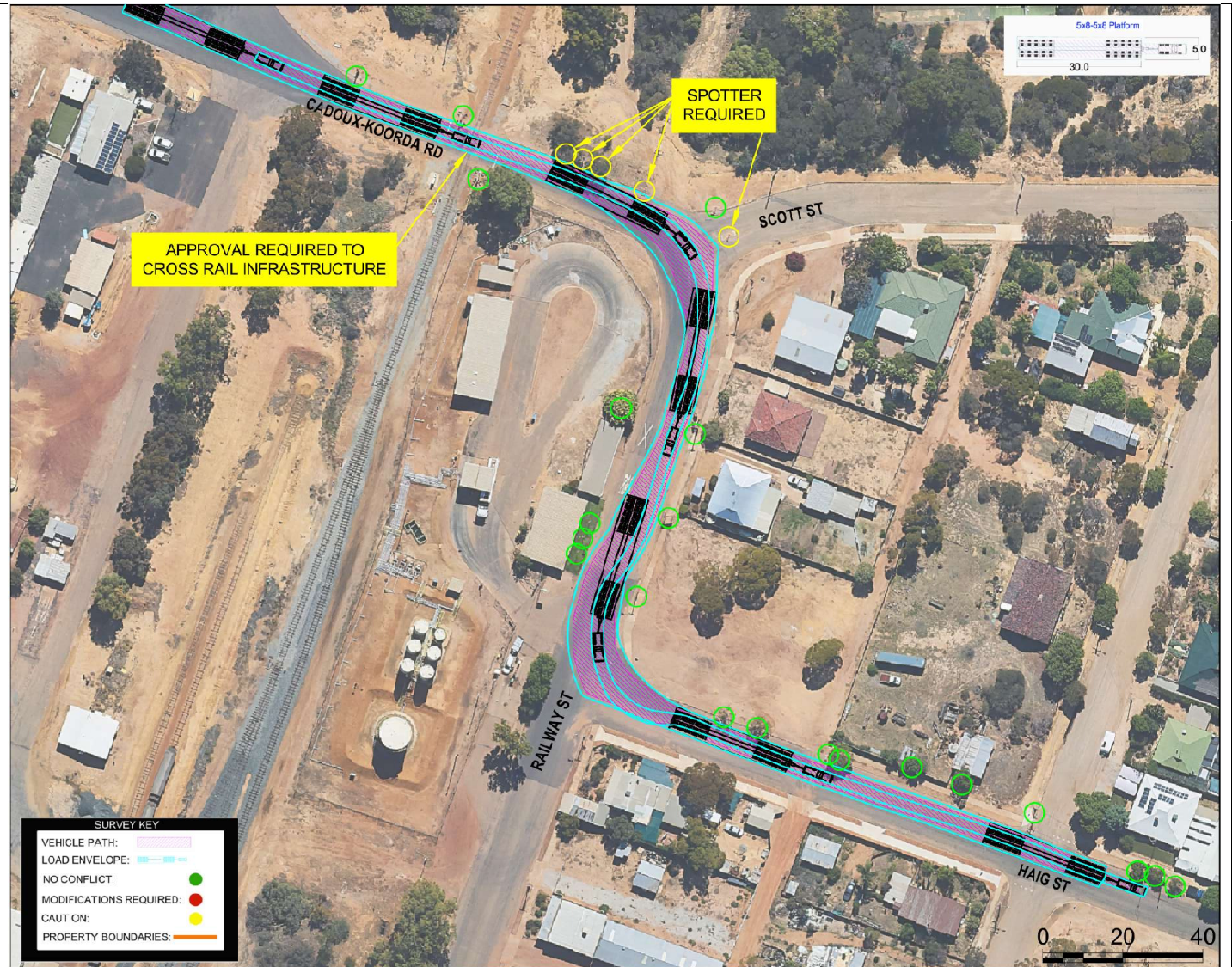
Koorda, WA

Component – Tower

PROCEDURE: Right-hand turn into left-hand turn

COMMENTS: Approval required from WA Rail required to cross rail line. Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/Z5kxJxphbERxz57aA>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

520 Km's

Dowerin Kalannie Road

Bencubbin, WA

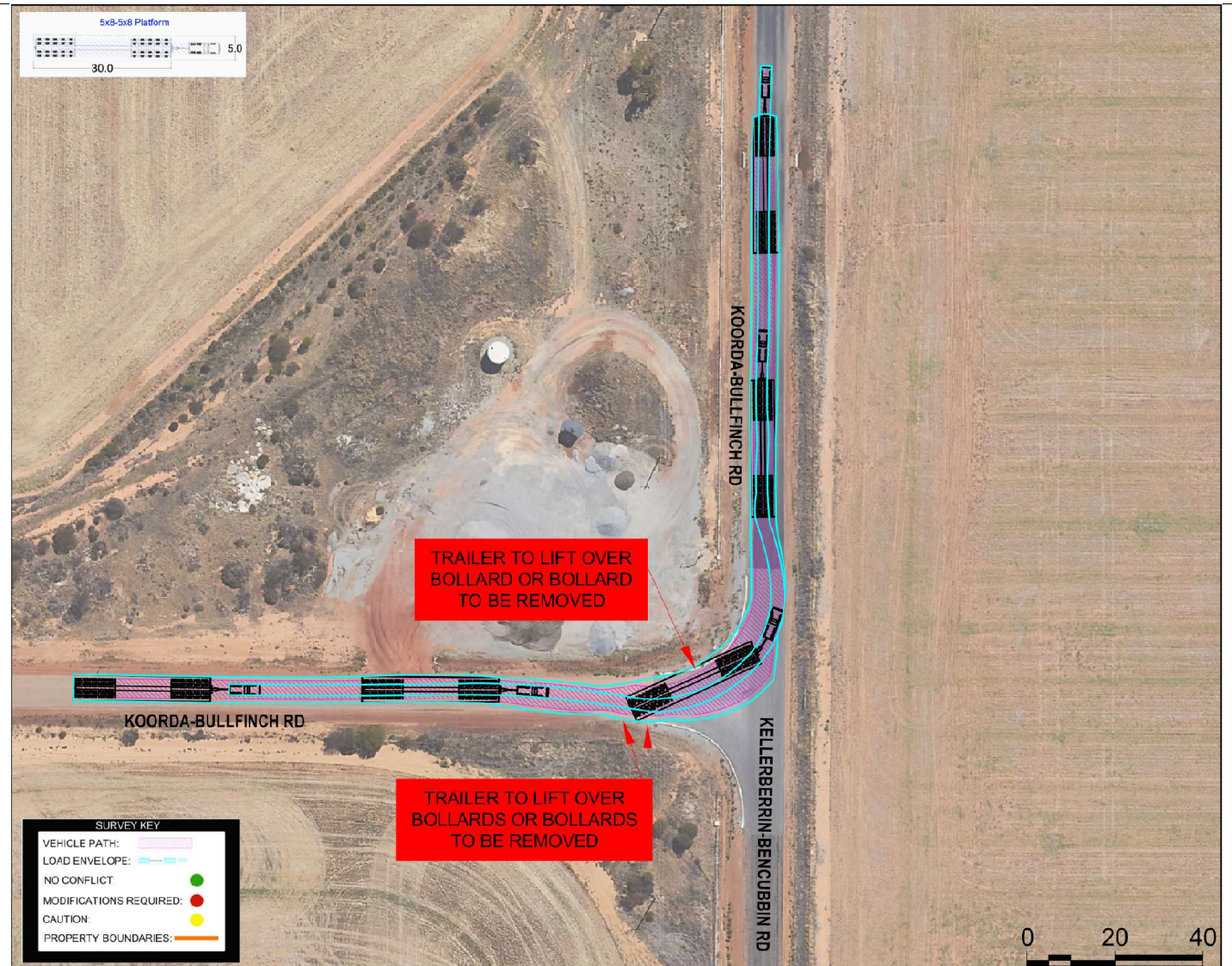
Component – Tower

PROCEDURE: Left-hand turn.

MODIFICATIONS REQUIRED: Bollards are to be removed and replaced if the trailer cannot lift over them

COMMENTS: Trailer to lift over bollards or bollards to be removed and replaced.

GPS: <https://maps.app.goo.gl/QDAKvLpiDsUT4J7bA>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

604 Km's

Koorda-Bullfinch Road onto
Warralakin Road

Warralakin, WA

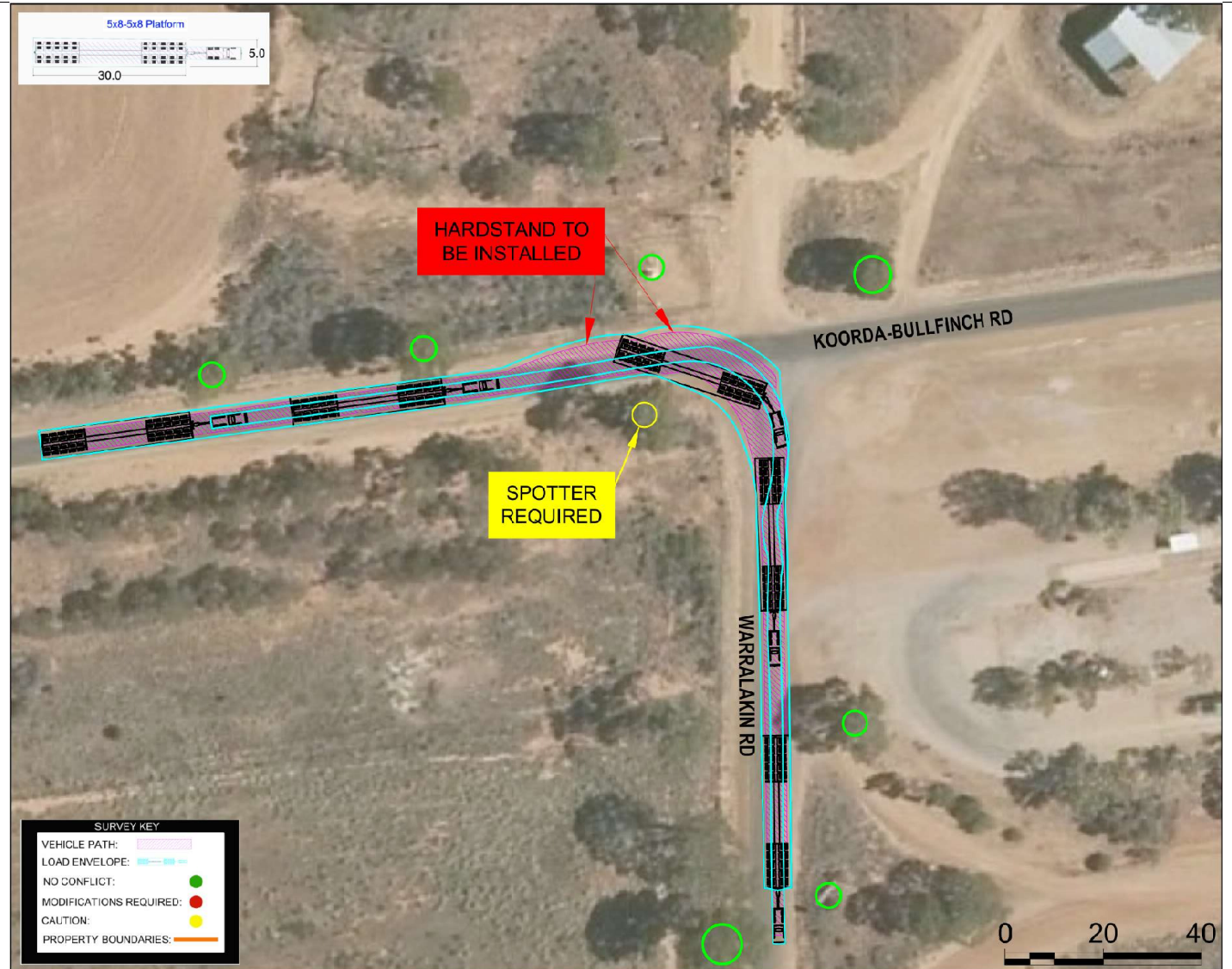
Component – Tower

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:
Hardstand to be installed.

COMMENTS: Spotter to assist with this procedure.

GPS: <https://maps.app.goo.gl/8DJwVE4rKXACi1U2A>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

676 Km's

Great Eastern Highway onto
Merredin-Naremben Road

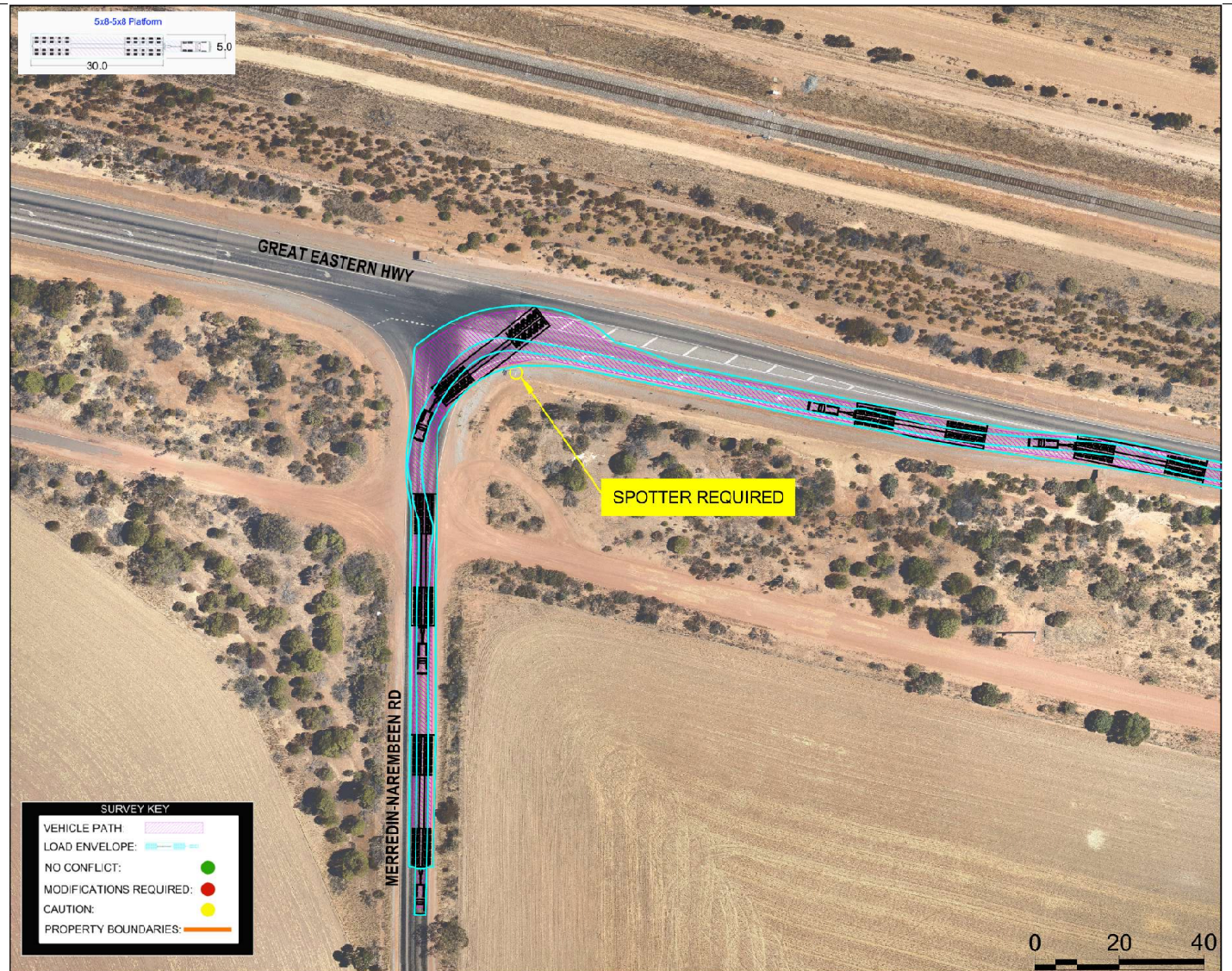
Merredin, WA

Component – Tower

PROCEDURE: Left-hand turn

COMMENTS: Spotter to assist with this
procedure.

GPS: <https://maps.app.goo.gl/T5gyfFcEMZuYVZY6>



10.0 Route 2 Review

After reviewing all options and conducting a route study, the route, in its current condition, will require moderate upgrades before it can be deemed suitable for transporting the proposed towers.

The following key points need to be considered if the project proceeds with this route.

SWEPT PATH:

- The first modification works that would be required to be undertaken for the project will be at the intersection of Reg Clarke Road and Ian Bogle Road at Geraldton.
- From the intersection of Reg Clarke Road and Ian Bogle Road at Geraldton through to the intersection of Koorda-Bullfinch Road and Warralakin Road at Warralakin, there are multiple locations that will require a minimal to moderate amount of work.
- The corners that have been identified in the report as requiring work should be investigated early in the planning stages to avoid delays or rejections.

VERTICAL CURVE:

- No vertical curve issues were found on **Route 2**.

OVERHEAD STRUCTURES: (6.7 Maximum loaded height)

- The lowest fixed structures that cannot be detoured are the Highbury Street Bridge. This structure has a maximum loaded height of 6.7 metres.
- All traffic signals on the path can be avoided.
- All loads listed in this report to travel on **Route 2** have suitable clearance under structures on this route.

OVERHEAD UTILITIES:

- This route will need to be checked by an authorised scoping company. It is likely that a 6.8-metre-high route is required for **Route 2**.

BRIDGES:

- A bridge assessment will be required for the project to confirm that the route is suitable for the weight of the loads listed in this report.

RAIL ASSETS:

- There are 12 locations on this route that have rail crossings or bridges over rail that will require approval from authorities before loads can access the route.

VEGETATION:

- The route requires a moderate amount of vegetation clearing at various locations as listed in the report.

PAVEMENT:

- Pavement on the route is of highway standard for Route 2

ROADWORKS:

- The project will need to start discussions with government authorities at least 18 months prior to turbine transport to understand if the project would conflict with any upcoming roadworks. Once a Transport Management Plan (TMP) has been approved for the transport of the turbines, the exact movement dates need to be communicated to all relevant authorities to make all road stakeholders aware of the scheduled movements for each day.
- The project will need to regularly check on any new upgrades not listed in the report. If upgrades have taken place on a section of the route after this report has been completed, a swept path study would need to be undertaken on that section to confirm it can still be used.

11.0 Local Route A: Transport Assessment

COMPONENTS: All components

DISTANCE: 9.6 kilometres

GPS LINK: <https://maps.app.goo.gl/c5ar2HR898jfCtDZ7>

VIA: Merredin-Narembeen Road and Brissenden Road.



Figure 5: Route A map

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

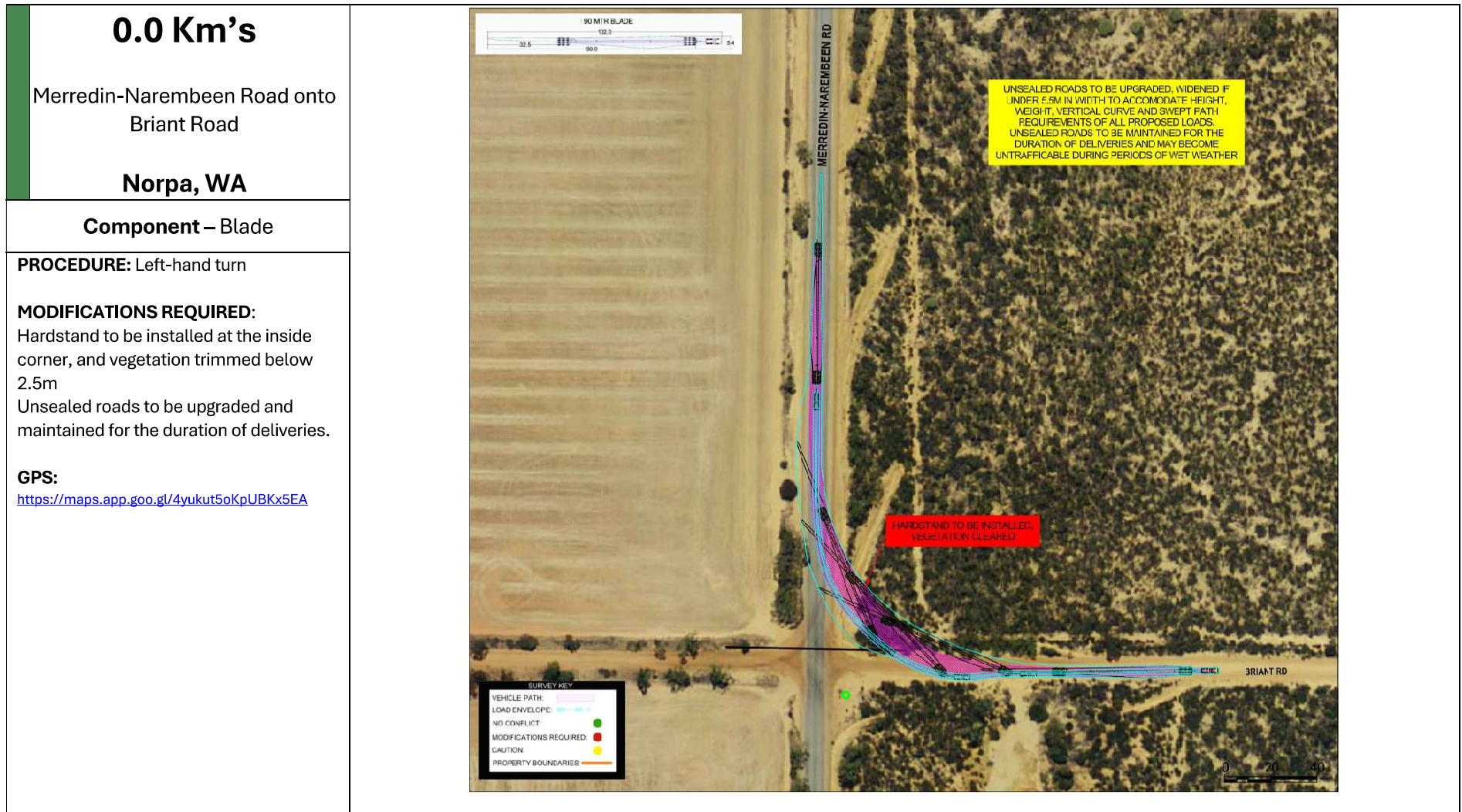


ROUTE INDEX	
ROAD MODIFICATION	
CAUTION	
EMERGENCY PARKING	

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
0.0	Norpa	Merredin-Narembeen Road onto Briant Road GPS link: https://maps.app.goo.gl/4xutut15ot6U9Kx5EA	Length: 60.0 metres Width: 6.5 metres	Left-hand turn	Hardstand to be installed at the inside corner, and vegetation trimmed below 2.5m Unsealed roads to be upgraded and maintained for the duration of deliveries.
2.3	Norpa	Merredin-Narembeen Road onto Site Entry (1) GPS link: https://maps.app.goo.gl/3HmNUxCKRjWY4gPQA Option 1	Length: 70.0 metres Width: 6.5 metres	Left-hand turn	Hardstand is to be installed at the inside corner, and vegetation is to be removed. Unsealed roads to be upgraded and maintained for the duration of deliveries.
		Option 2	Length: 70.0 metres Width: 6.5 metres	Left-hand turn	Hardstand is to be installed at the inside corner, and vegetation is to be removed. Unsealed roads to be upgraded and maintained for the duration of deliveries.
4.8	Tandegin	Merredin-Narembeen Road onto Depot Dam Road GPS link: https://maps.app.goo.gl/5pmC3FVzHe97fc2n8 Option 1	Length: 70.0 metres Width: 6.5 metres	Left-hand turn	Hardstand to be installed at the inside corner. Unsealed roads to be upgraded and maintained for the duration of deliveries.
		Option 2	Length: 70.0 metres Width: 6.5 metres	Right-hand turn	Hardstand to be installed at the inside corner, sign to be relocated. Unsealed roads to be upgraded and maintained for the duration of deliveries.
7.2	Muntadgin	Merredin-Narembeen Road onto Site Entry GPS link: https://maps.app.goo.gl/3Dpicy55mY8t43xX9	Length: 80.0 metres Width: 6.5 metres	Right-hand turn	Hardstand to be installed at the inside corner. Unsealed roads to be upgraded and maintained for the duration of deliveries.
9.6	Tandegin	Merredin-Narembeen Road onto Brissenden Road GPS link: https://maps.app.goo.gl/1HFc8nNBnNd729	Length: 80.0 metres Width: 6.5 metres	Left-hand turn	Hardstand to be installed at the inside corner, vegetation to be cleared. Unsealed roads to be upgraded and maintained for the duration of deliveries.

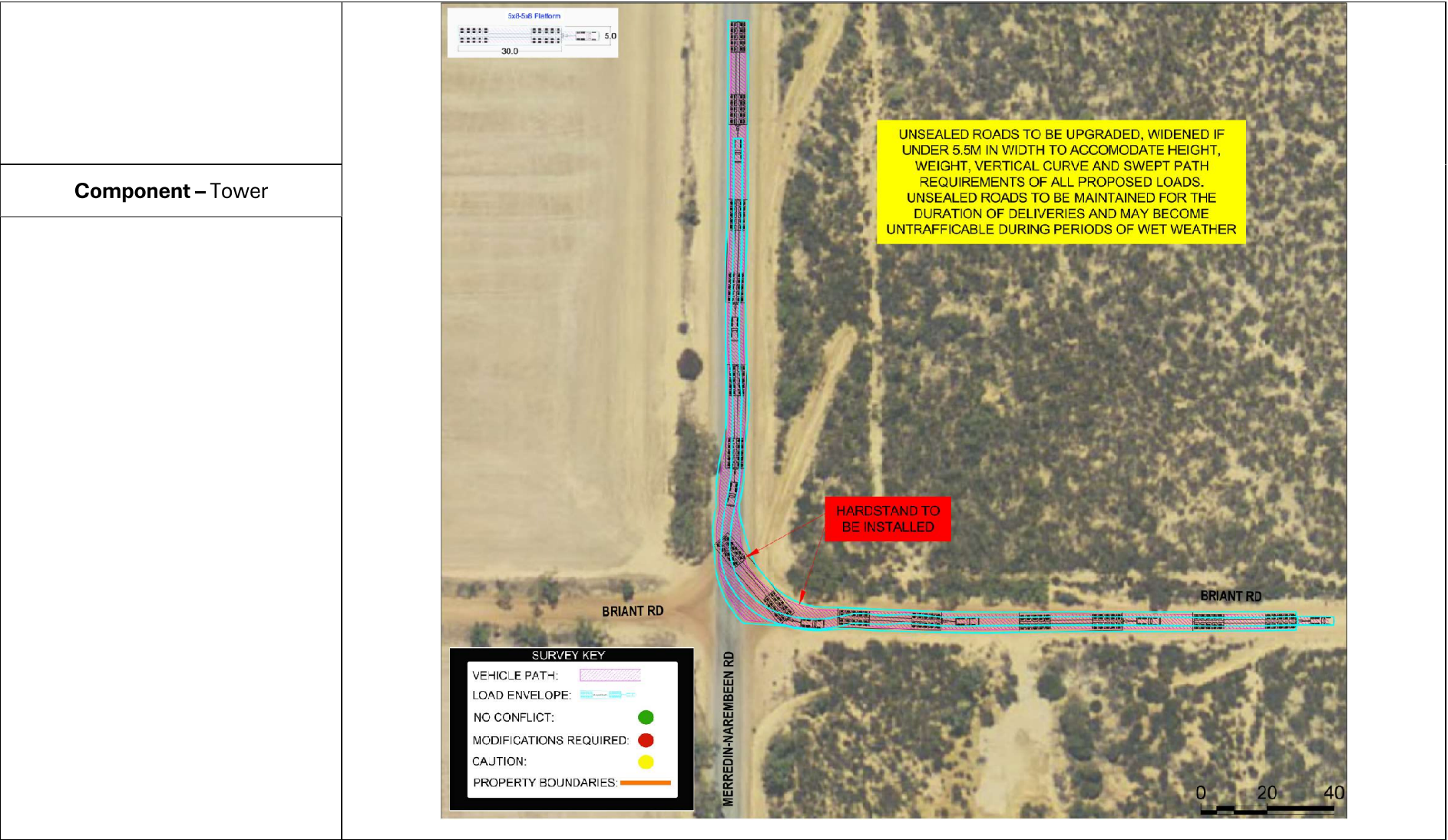
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



2.3 Km's

Merredin-Naremben Road onto
Site Entry (1)

Norpa, WA

Component – Blade
Option 1

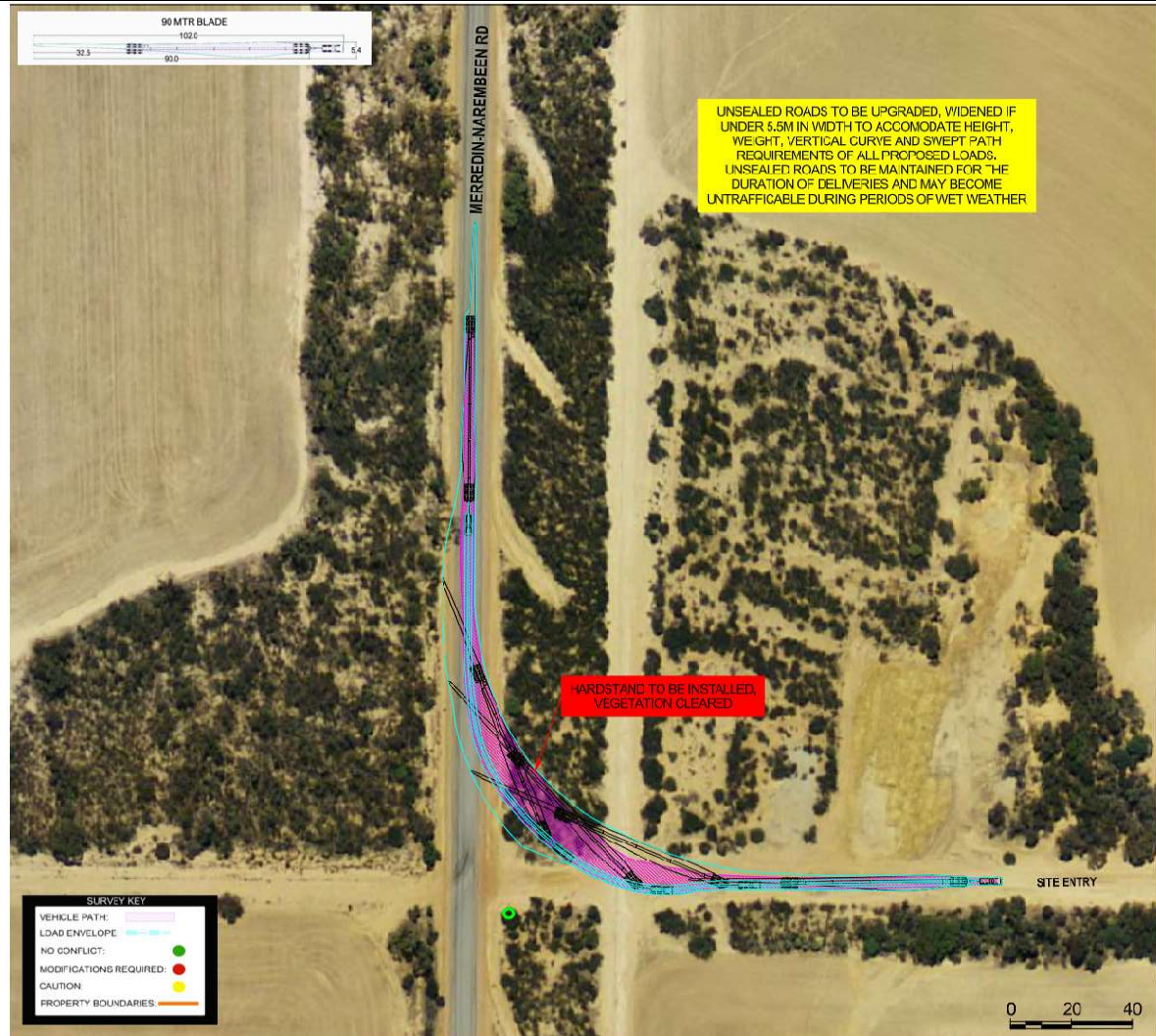
PROCEDURE: Left-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside
corner and vegetation to be removed.
Unsealed roads to be upgraded and
maintained for the duration of deliveries.

GPS:

<https://maps.app.goo.gl/yGtsDruQxvEg1F1u5>



OSOM ROUTE ASSESSMENT

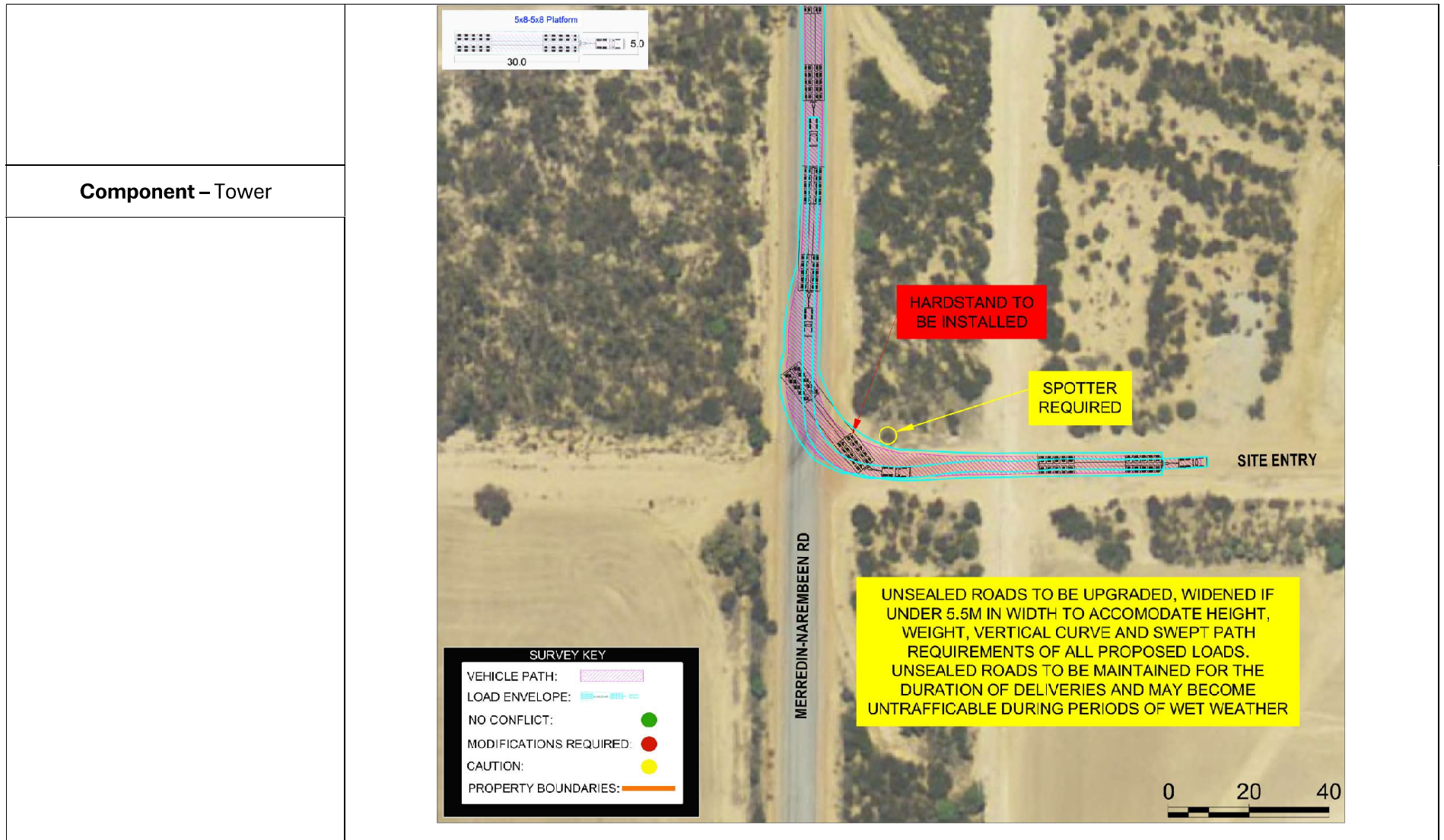
TANDEGIN WIND FARM



Component – Blade Option 2	
PROCEDURE: Left-hand bend MODIFICATIONS REQUIRED: Hardstand to be installed at the inside corner and vegetation to be removed. Unsealed roads to be upgraded and maintained for the duration of deliveries. GPS: https://maps.app.goo.gl/yGtsDruQxvEg1F1u5	V172 BLADE 28.0 85.0 97.0 4.6 UNSEALED ROADS TO BE UPGRADED, WIDENED IF UNDER 5.5M IN WIDTH TO ACCOMMODATE HEIGHT, WEIGHT, VERTICAL CURVE AND SWEEP PATH REQUIREMENTS OF ALL PROPOSED LOADS. UNSEALED ROADS TO BE MAINTAINED FOR THE DURATION OF DELIVERIES AND MAY BECOME UNTRAFFICABLE DURING PERIODS OF WET WEATHER HARDSTAND TO BE INSTALLED, VEGETATION CLEARED HARDSTAND TO BE INSTALLED, VEGETATION CLEARED MERREDIN-NAREBEEN RD SITE ENTRY SURVEY KEY VEHICLE PATH: ——— LOAD ENVELOPE: ——— NO CONFLICT: ● MODIFICATIONS REQUIRED: ● CAUTION: ● PROPERTY BOUNDARIES: ——— 0 20 40

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



4.8 Km's

Merredin-Naremben Road onto
Depot Dam Road

Tandegin, WA

Component – Blade
Option 1

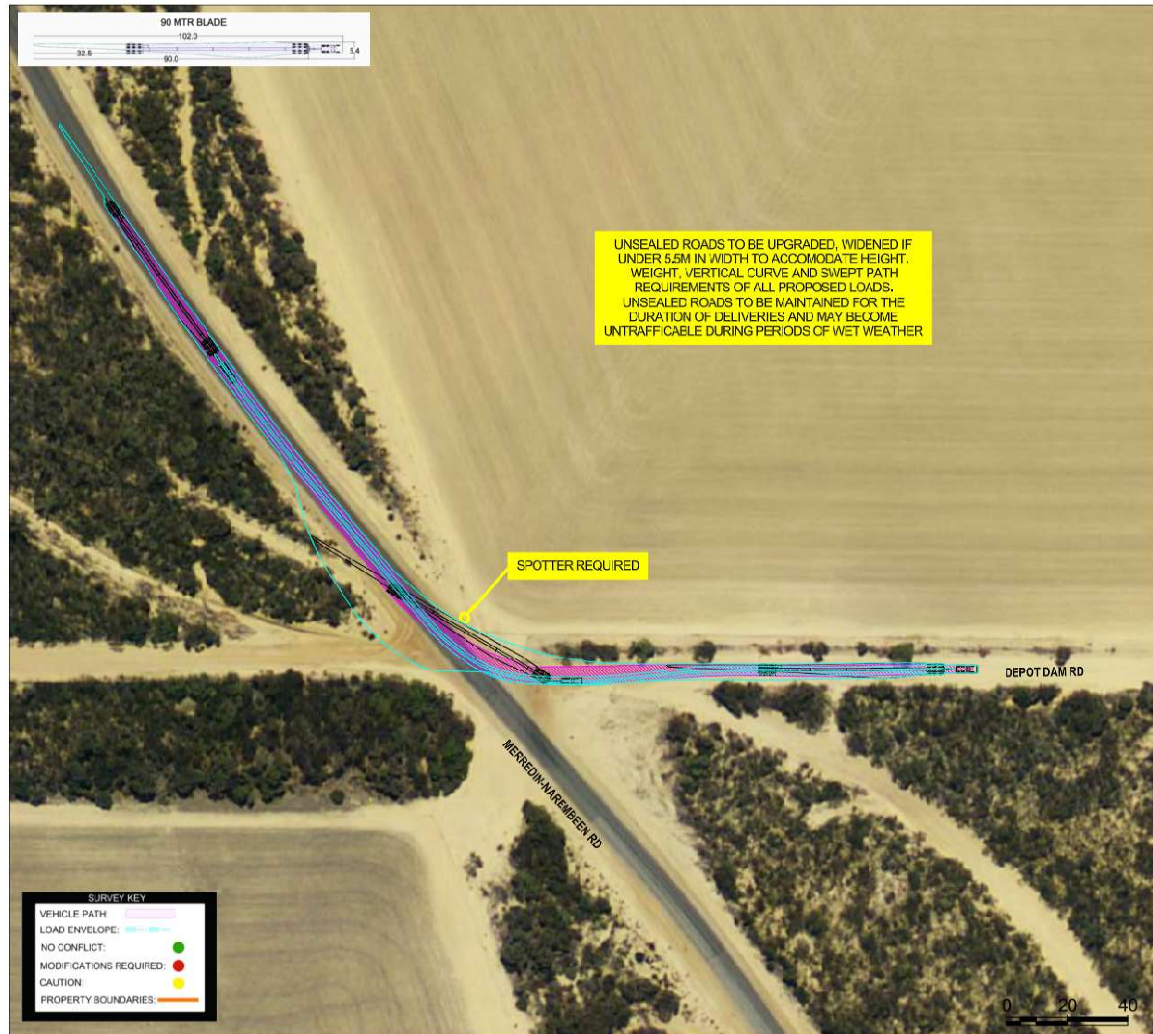
PROCEDURE: Left-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside corner.
Unsealed roads to be upgraded and maintained for the duration of deliveries.

GPS:

<https://maps.app.goo.gl/5pmG3FVzHe97fcZn8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



Component – Blade Option 2

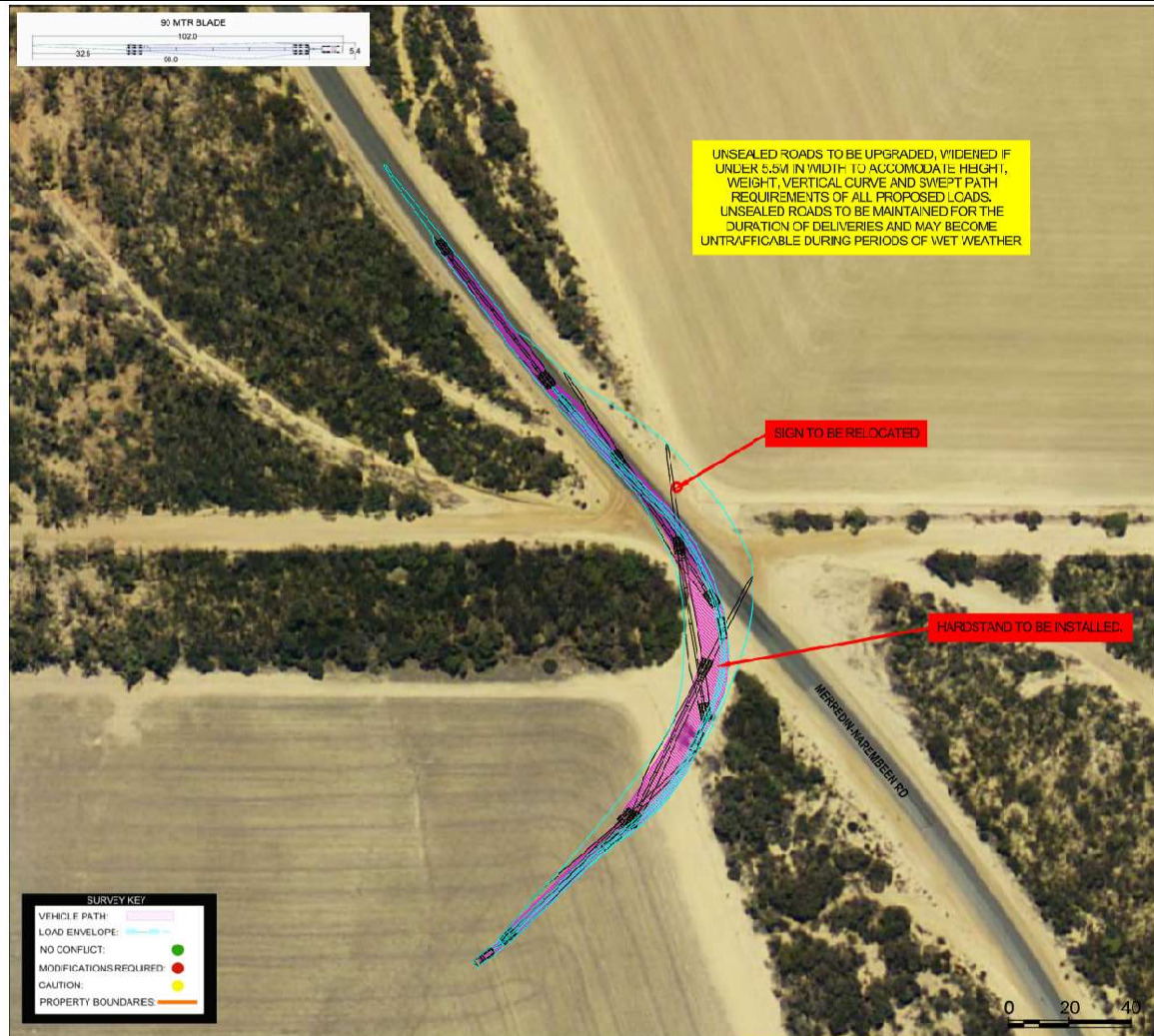
PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside corner, sign to be relocated.
Unsealed roads to be upgraded and maintained for the duration of deliveries.

GPS:

<https://maps.app.goo.gl/5pmG3FVzHe97fcZn8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



7.2 Km's

Merredin-Naremben Road onto
Site Entry (2)

Muntadgin, WA

Component – Blade

PROCEDURE: Right-hand turn

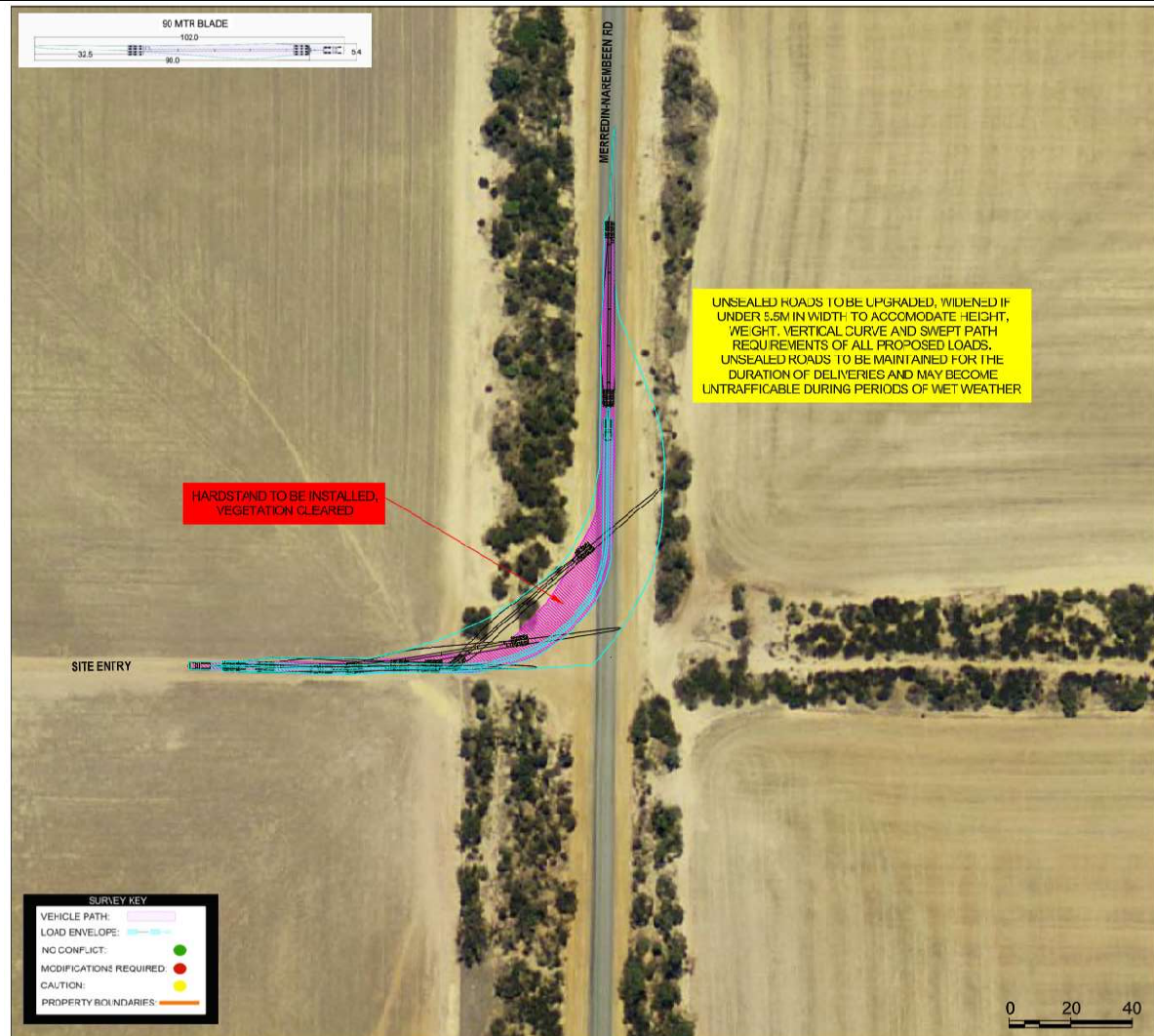
MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside
corner.

Unsealed roads to be upgraded and
maintained for the duration of deliveries.

GPS:

<https://maps.app.goo.gl/ygWjxCGGwKxHhzuV6>

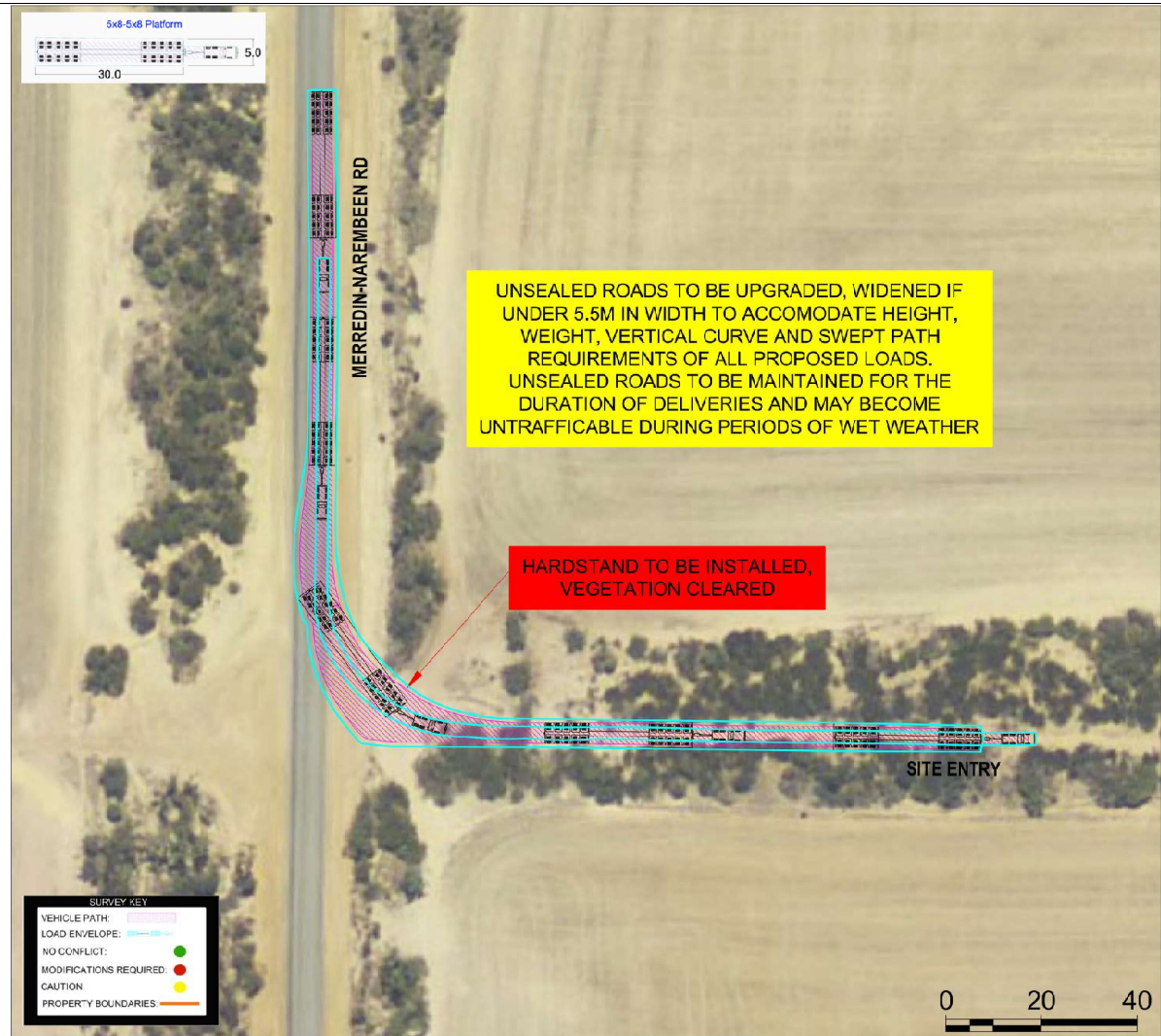


OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



9.6 Km's

Merredin-Naremben Road
onto Brissenden Road

Tandegin, WA

Component – Blade

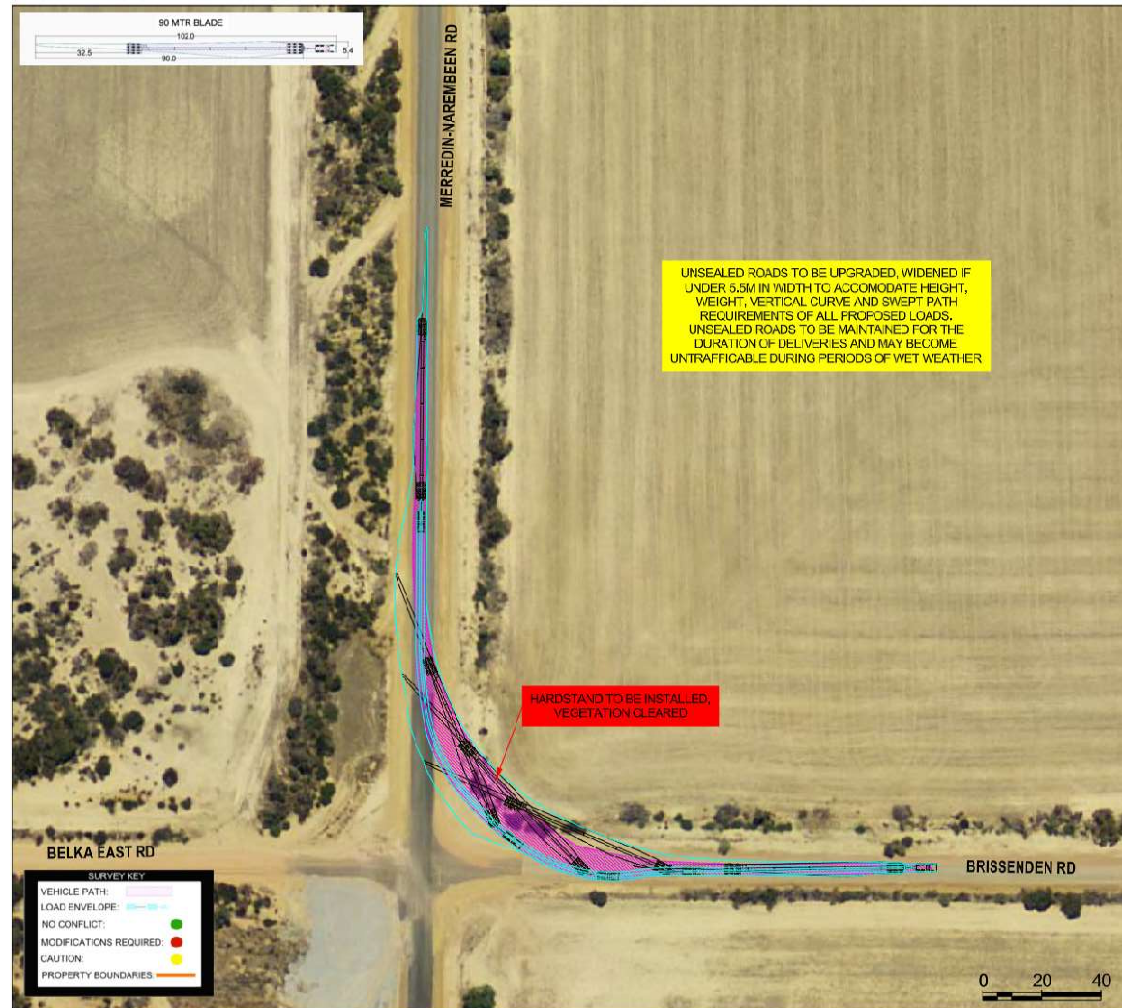
PROCEDURE: Left-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside corner, vegetation to be cleared.
Unsealed roads to be upgraded and maintained for the duration of deliveries.

GPS:

<https://maps.app.goo.gl/tTfFbiBnNBnJNd729>

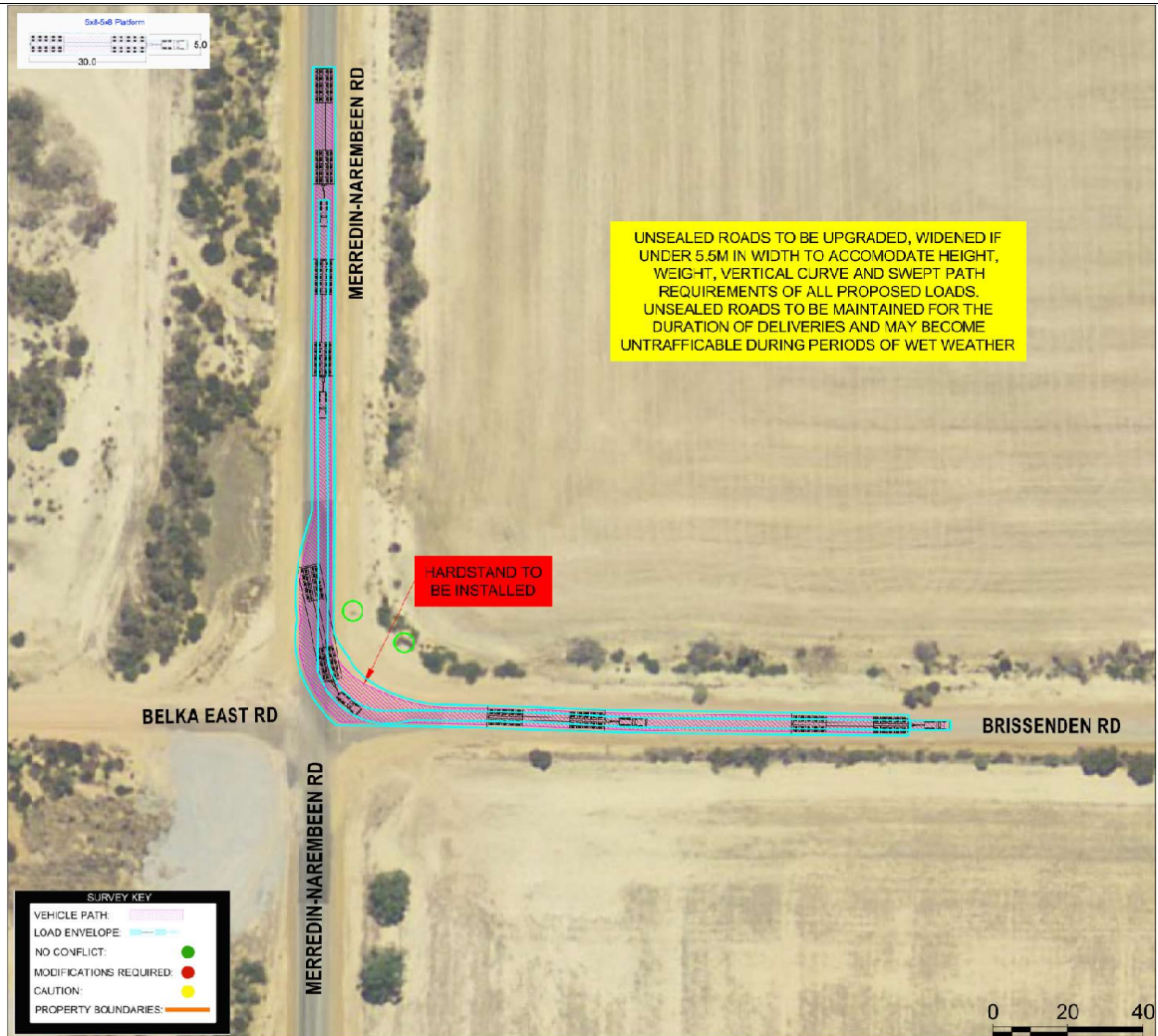


OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



Component – Tower



12.0 Local Route A Review

Following a comprehensive route study and evaluation of all available options, this report concludes that the route in its current condition will require significant upgrades before it can be considered fit for purpose for transporting the proposed components.

The following key considerations apply should the project proceed with this route.

SWEPT PATH

- Vegetation clearing is required at the Briant Road entry point and the 2.3 km site entry and must be managed on an ongoing basis throughout the project.
- Hardstand improvements are required at all five intersections. Unsealed roads accessing the site will also need to be upgraded, including widening to 5.5 m where necessary, to meet the height, weight, vertical alignment, and swept-path requirements of all proposed loads.
- Unsealed roads must be maintained for the full duration of deliveries and may become impassable during wet weather events.
- All intersections and corners identified in this report as requiring remediation should be investigated early in the planning phase to avoid delays or route rejections.

OVERHEAD STRUCTURES (

- No overhead structures

VEGETATION

- A moderate amount of vegetation clearing is required at various locations as detailed in this report.

VERTICAL ALIGNMENT

- A vertical curve assessment needs to be undertaken for all access roads from Merredin-Naremben Road. Through to each hardstand.

PAVEMENT

- Pavement types TBC.

13.0 Executive Statement

Upon completion of the review, it appears that travelling from Geraldton with a 90 Metre blade with a presumed tower diameter up to 5.9 metres could be possible.

The port is okay for the proposed turbine. There may be some minor work if more storage is required, but it would be minimal.

The route requires large amounts of upgrades but appears to be the best available option for transporting the proposed wind turbine components from this port.

Eighteen pinch points have been identified that require moderate to large works, including the relocation of light poles and signage and the addition of hardstand areas. Ten other pinch points require just minor work. None of the works appears to be showstoppers, but planning would be required early.

No overhead structures are currently present, though a formal review with Main Roads WA is recommended.

Early engagement with Western Power is strongly recommended, as a maximum loaded height of 6.8 metres is the best transport solution for the project.

A formal bridge assessment will be required, and authority approval will be needed at each of the 20 rail crossing locations before loads can proceed. A moderate amount of vegetation clearing is required at various locations as detailed in this report.

Summary: Routes 1 and 2 are the preferred options, requiring only moderate upgrades and representing the most viable path for transporting the proposed wind turbine components.

Key works include addressing nine pinch points, adding hardstands at one roundabout, relocating light poles, clearing vegetation, and conducting a formal bridge assessment.

Authority approvals will also be required at 20 rail crossing locations.

Early engagement with Main Roads WA and Western Power is recommended, given that a maximum loaded height of 6.3 metres is likely required.

14.0 Transport Approvals Required

Approvals will be required from the following stakeholders.

- NHVR
- Main roads WA
- WA Police
- Local councils
- Motorways and private infrastructure operators
- Energy & telecommunication infrastructure owners/managers
- Rail Managers/Owners

15.0 References

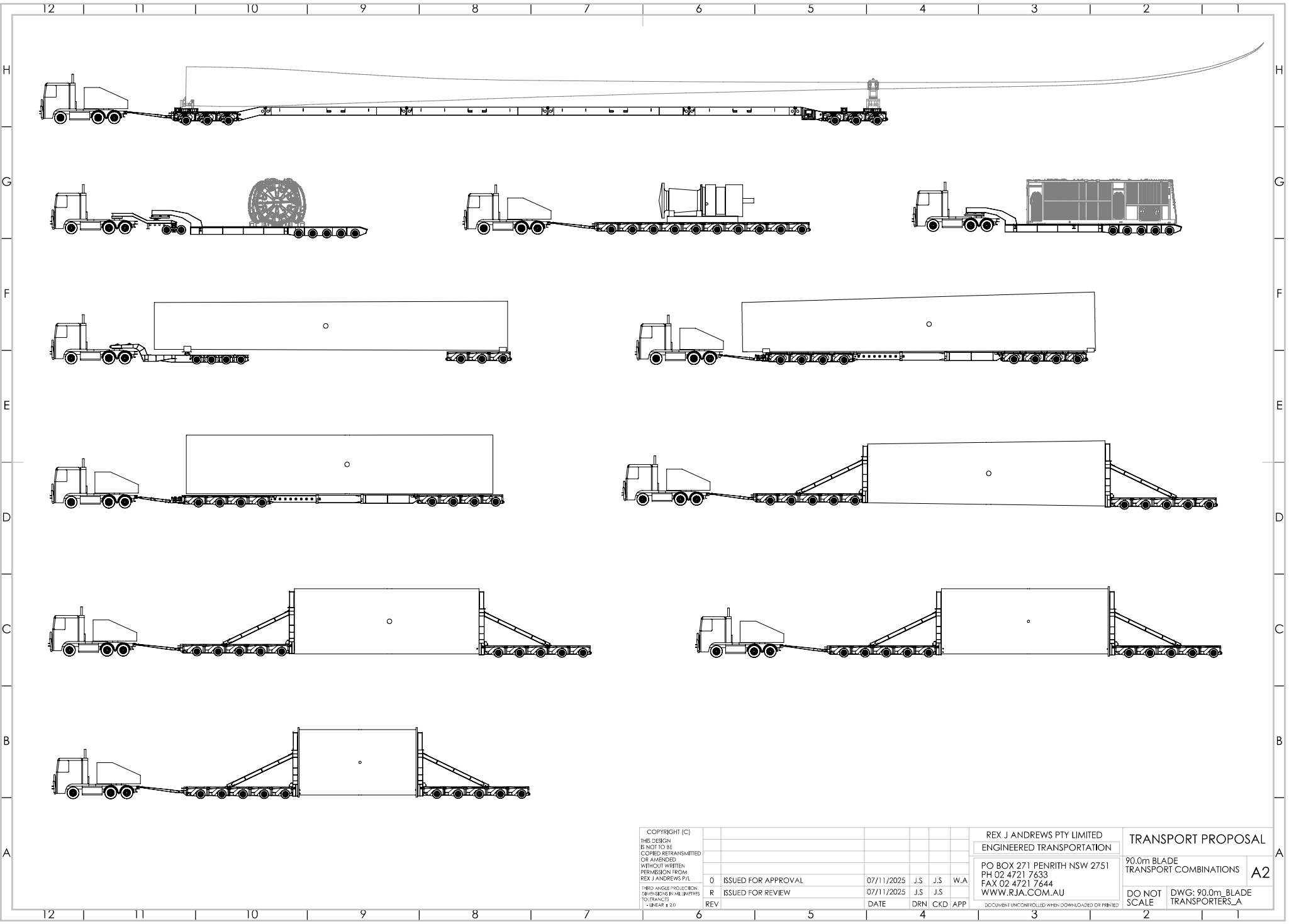
Rex J Andrews Route Survey # 565 REV01
Rex J Andrews P/L Drawings
AutoDesk Vehicle Tracking
Google Earth/Maps
Collgar Renewables
Nearmaps
QGIS
NHVR
NHVAS Maintenance Management (NHVAS21193)
NHVAS Basic Fatigue Management (NHVAS21193)
Main Roads Western Australia
WA Heavy Vehicle accreditation

Disclaimer: This route study is a guide only; government approvals would be required before these routes could be deemed suitable for transporting the components.

This study was undertaken using data supplied by Rex J Andrews P/L. Equipment and swept paths may vary when using a transport methodology other than the one supplied by Rex J Andrews.

16.0 Transport Drawings

\\SERVER\Volume_1\Projects\Blade Transporters\TRANSPORTERS_COMBINED_A_91_5m_BLADE



COPYRIGHT (C) THIS DESIGN IS NOT TO BE COPIED, REPRODUCED, OR AMENDED WITHOUT WRITTEN PERMISSION FROM REX J ANDREWS P/L				REX J ANDREWS PTY LIMITED ENGINEERED TRANSPORTATION				TRANSPORT PROPOSAL	
THIRD ANGLE PROJECTION ON FINDER PLATE, BATTENS TO FRANCHIS - LINEAR @ 2:0				PO BOX 271 PENRITH NSW 2751 PH 02 4721 7633 FAX 02 4721 7644 WWW.RJA.COM.AU				90.0m BLADE TRANSPORT COMBINATIONS	
0 ISSUED FOR APPROVAL				07/11/2025	J.S	J.S	W.A	A2	
R ISSUED FOR REVIEW				07/11/2025	J.S	J.S		DO NOT SCALE	
REV				DATE	DRN	CKD	APP	DWG: 90.0m BLADE TRANSPORTERS_A	
								DOCUMENT UNCONTROLLED WHEN DOWNLOADED OR PRINTED	



OSOM ROUTE ASSESSMENT

JUNE 18, 2026

CLIENT: COLLGAR RENEWABLES

PORT OF IMPORT: BUNBURY

REVISION: REV00

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1.0 Version

Rev	Date	Responsible	Description of Changes	Approved
00	02/06/26	B Walker	Review Compiled	✓
00	18/06/26	W Andrews	Review Completed	✓

2.0 Introduction

Rex J Andrews Pty Ltd has been requested to assess possible access routes from the nominated port (Port of Bunbury) through to the proposed Tandegin Wind Farm development for Collgar Renewables. The project is situated approximately 35 km south-east of Merredin, WA, within the Shire of Merredin. The assessment will review the proposed routes to the wind farm site and identify preliminary transport constraints for the nominated components. The review will consider operational factors and equipment capabilities to inform planning of the wind farm layout. The assessment is based on the transport of the major wind farm components, including wind turbine generators and associated infrastructure.

The study does not consider external factors such as regulatory, landholder, environmental, cultural, or other matters beyond the knowledge or control of Rex J Andrews Engineered Transportation.

The study utilises the knowledge, experience, and intellectual property of Rex J Andrews Engineered Transportation on purpose-built equipment and is not intended for use by other parties.

3.0 Project Data

Date of review: 02/06/2026

Review undertaken by. (Rex J Andrews P/L)

Client: Collgar Renewables

Project name. Tandegin Windfarm

Project Location. Tandegin (WA)

Equipment to be moved: 90 Metre wind turbines, Cranes and Power equipment.

Port of Import Port of Bunbury #5 Berth.

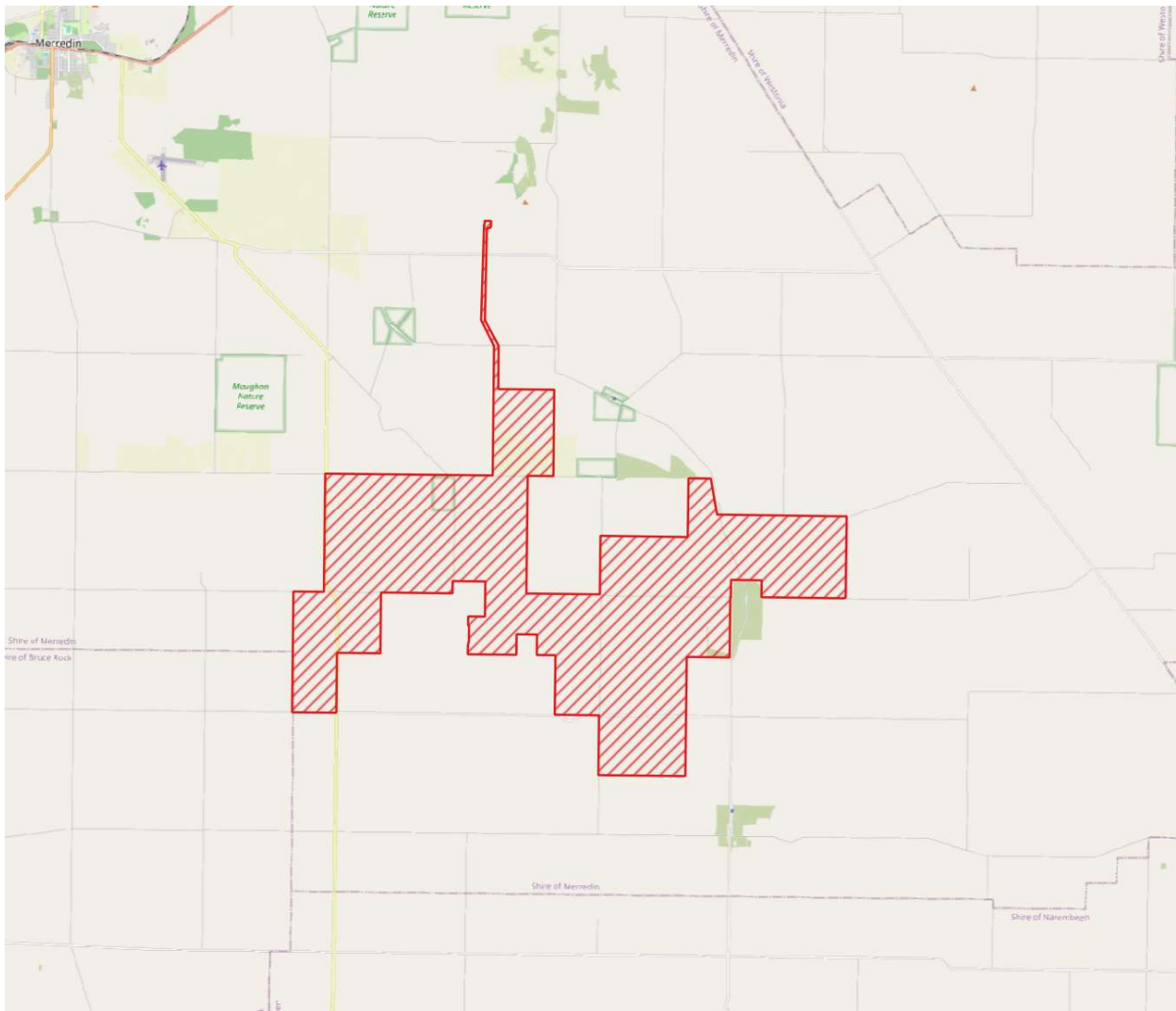


Figure 1 Project site map

4.0 Transport combinations

The following are possible equipment sizes and transport combinations for this project.

90 METRE WIND TURBINE GENERATOR

Blades (90.38l x 4.95w x 3.58h x 29.2T)

Possible transport. Prime mover with 2x4-3x8 Extending blade trailer.

Overall Dimension: 105.0l x 5.1w x 5.5h x 96.5T.

Nacelle (10.75l x 4.97w x 4.2h x 47.8T)

Possible transport configuration. Prime mover with 5x8 Low loader.

Overall Dimension: 25.0l x 5.0w x 5.3h x 89.5T.

Hub (5.5l x 4.51w x 4.25h x 61.8T)

Possible transport configuration. Prime mover with 5x8 Low loader.

Overall Dimension: 25.0l x 4.6w x 5.3h x 93.5T.

Drivetrain 7.93l x 3.3w x 3.9h x 112.7T)

Possible transport configuration. Prime mover with 8x8 platform trailer.

Overall Dimension: 32.0l x 4.2w x 5.0h x 177.5T.

166 METRE WIND TURBINE TOWER

Base Towers (9.3l x 5.9 x 5.5 x 90T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.9w x 6.8h x 149.5T (+ Push truck)

Section 2 Towers (13.8l x 5.5 x 5.5 x 90T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 149.5T (+ Push truck)

Section 3 Towers (15.4l x 5.5 x 5.5 x 87T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 146.5T (+ Push truck)

Section 4 Towers (16.8l x 5.5 x 5.0 x 86T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 35.0l x 5.5w x 6.6h x 145.5T (+ Push truck)

Section 5 Towers (21.0l x 5.0 x 5.0 x 92T)

Configuration. Prime mover with 10x8 Platform trailer.

Overall dimension: 39.0l x 5.0w x 6.2h x 151.5T (+ Push truck)

Section 6 Towers (27.2l x 5.0 x 5.0 x 85T)

Configuration. Prime mover with 5x8-5x8 Extending platform.

Overall dimension: 40.0l x 5.0w x 6.1h x 155.5T (+ Push truck)

Section 7 Towers (29.9l x 5.0 x 4.25 x 77T)

Configuration. Prime mover with 3x8 dolly - 4x8 low Jinker.

Overall dimension: 37.0l x 5.0w x 6.2h x 123.5T

Top Towers (30.0l x 4.25w x 4.1h x 65T)

Configuration. Prime mover with 4x4 dolly 3x8 low Jinker.

Overall dimension: 38.0l x 4.5w x 5.5h x 105.0T

ERECTION CRANES:

LG1750 carrier (19.2l x 3.0 x 4.0 x 96T)

Route: Route 1

Configuration. Prime mover with 10x8 Platform trailer + Backup truck

Overall dimensions: 36.0l x 4.2w x 5.2h x 174.5T + Backup truck

LTM1500 carrier (21.0l x 3.0 x 4.0 x 96T)

Route: Route 1

Configuration. Prime mover with 10x8 Platform trailer + Backup truck

Overall dimensions: 36.0l x 5.0w x 5.2h x 174.5T + Backup truck

POWER TRANSFORMER:

Possible Transformer size (9.2l x 4.0 x 4.35 x 175T)

Route: Route 1

Configuration. Prime mover with 10x8-10x8 Beamset + 4 x Backup trucks

Overall dimensions: 120.0l x 6.5w x 5.2h x 324.5T + 4 x Backup trucks

Possible Transformer size (9.2l x 4.0 x 4.35 x 130T)

Route: Route 2

Configuration. Prime mover with 12x8 Platform trailer + 1 x Backup trucks

Overall dimensions: 45.0l x 4.3w x 5.4h x 222.5T

SWITCHROOM:

Switch room dimensions: 30.0l x 5.5w x 4.2h x 90.0T

Configuration. Prime mover with 4x8-4x8 Extending platform trailer

Overall dimensions: 44.9l x 5.5w x 5.3h x 174.5T

5.0 Port of Import

The wind turbine equipment will be imported from various countries and will arrive on ships at the Port of Bunbury.

The ideal berth for these shipments is berth # 5. This facility has a hardstand storage area of approximately 40,000 sq. meters adjacent to the berth.

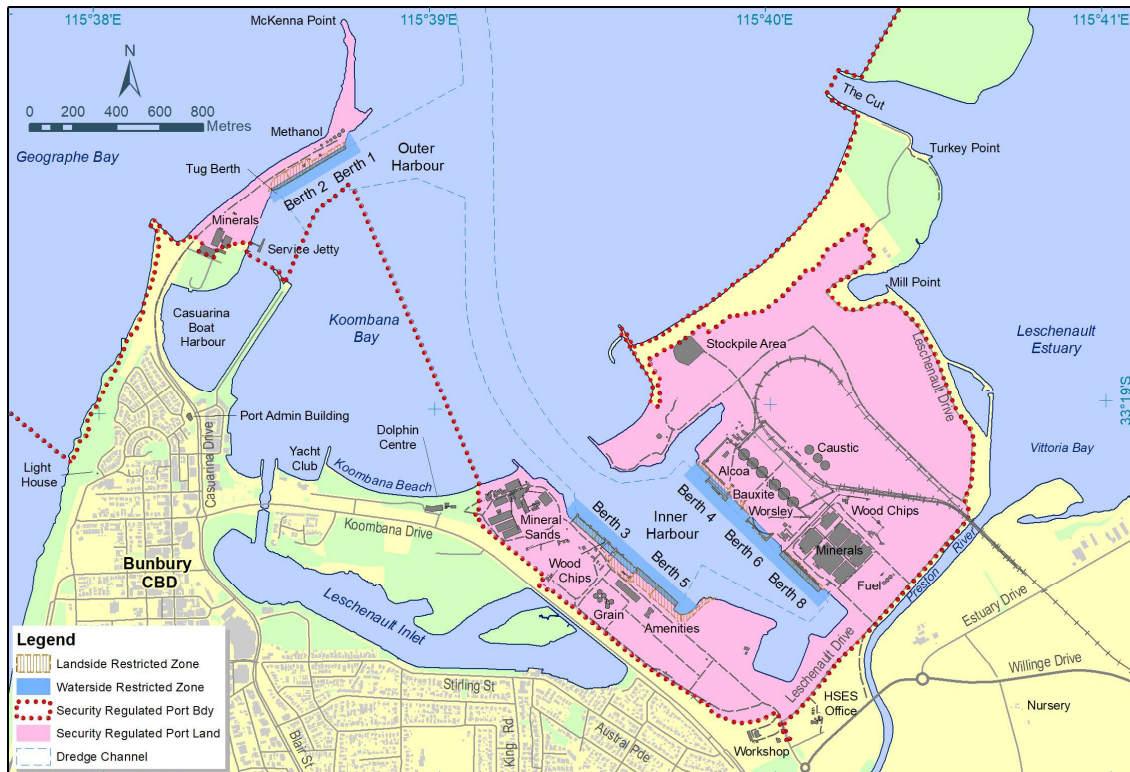


Figure 2 Bunbury site layout



Blades can either reverse or drive forward off the berth and into the storage area. The storage area could handle 10 complete V172-166HH Wind turbine generators in the Southwest laydown. There are several other laydown areas that could be used for storage of additional turbines.



Figure 4 Laydown area through to security gate

Once the components are ready for delivery to the site, there is direct, unrestricted access to the Port Access Road.

6.0 Transport Summary

This project review assessed potential transport routes from the Port of Bunbury to multiple site entry points between Briant Road and Brissenden Road. Following an evaluation of all viable options, one primary route from the Port of Bunbury to the Tandegin Wind Farm site has been identified as suitable for delivering all components and designated as **Route 1**.

From the Tandegin development area, five entry points have been identified to access the project site, collectively designated as **Local Route A**.

Following a thorough assessment of all viable alternatives, Route 1 and Local Route A are considered the optimal transport solutions for this project.

ROUTE 1: Bunbury to Tandegin (Main route)

COMPONENTS: All components

DISTANCE: 439.0 kilometres

GPS LINK: <https://maps.app.goo.gl/ZW9ijYG5cJ2ZR8EfA>

VIA: Leschenault Drive, Estuary Drive, Koombana Road, Eelup Rotary, Forrest Highway, Raymond Road, South Western Highway, Coalfields Road, Albany Highway, Arthur Road, Wagin-Dumbleyung Road, Absolon Street, Ebsary Street, Dumbleyung-Lake Gracie Road, Rabbit Proof Fence Road, Forrest Street, Dudinin Road, Rabbit Proof Fence Road, Narrogin-Kondinin Road, Kulin-Lake Gracie Road, Narrogin-Kondinin Road, Corrigin-Kondinin Road, Kondinin-Narembeen Road, Fricker Road and Merredin-Narembeen Road

LOCAL ROUTE A: Tandegin to site entry

COMPONENTS: All components

DISTANCE: 9.6 kilometres

GPS LINK: <https://maps.app.goo.gl/vLuQbo5gZmYPHUFs7>

VIA: Merredin-Narembeen Road and Briant Road.

7.0 Route 1 Transport Assessment

COMPONENTS: All components

DISTANCE: 439.0 kilometres

GPS LINK: <https://maps.app.goo.gl/ZW9ijYG5cJ2ZR8EfA>

VIA: Leschenault Drive, Estuary Drive, Koombana Road, Eelup Rotary, Forrest Highway, Raymond Road, South Western Highway, Coalfields Road, Albany Highway, Arthur Road, Wagin-Dumbleyung Road, Absolon Street, Ebsary Street, Dumbleyung-Lake Gracie Road, Rabbit Proof Fence Road, Forrest Street, Dudinin Road, Rabbit Proof Fence Road, Narrogin-Kondinin Road, Kulin-Lake Gracie Road, Narrogin-Kondinin Road, Corrigin-Kondinin Road, Kondinin-Narembeen Road, Fricker Road and Merredin-Narembeen Road

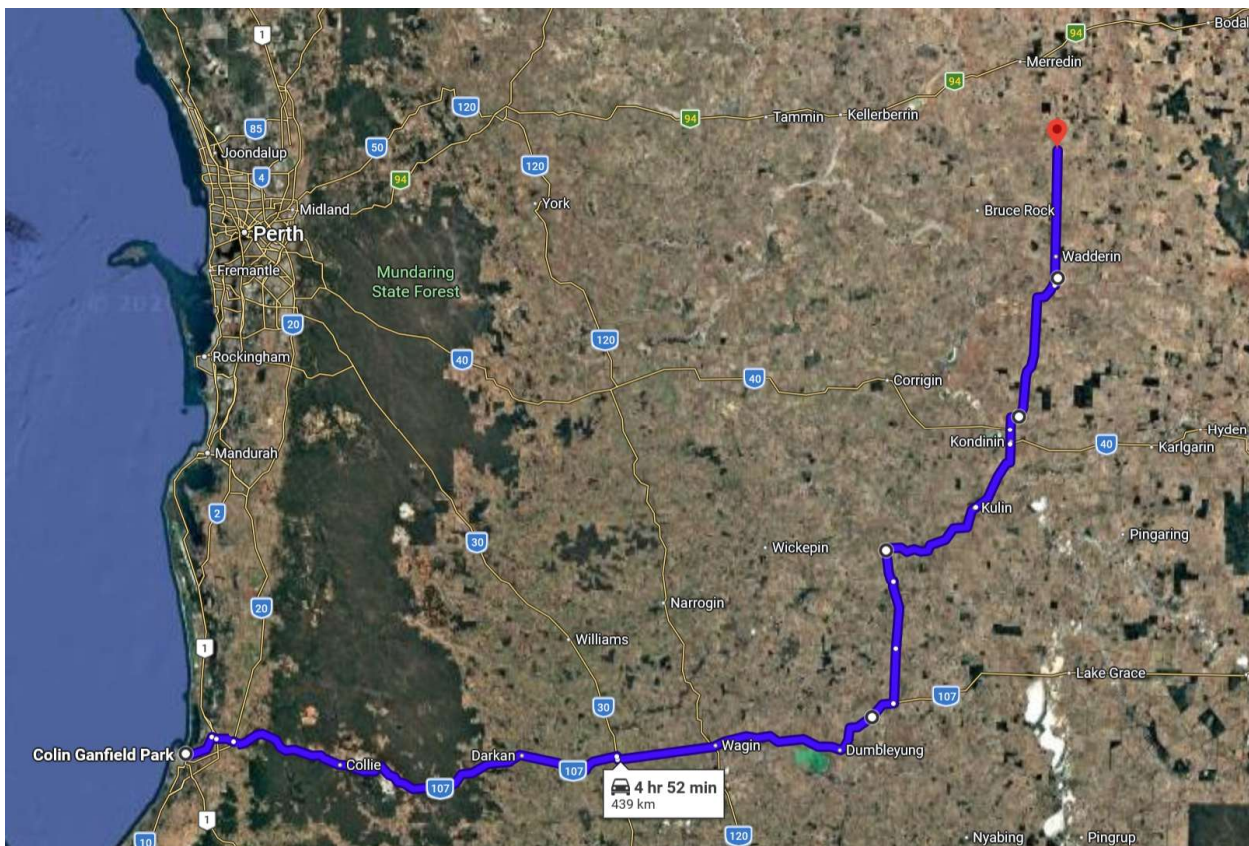


Figure 5 Route Map –Route 1

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KEY	
MODIFICATIONS REQUIRED	
PINCH POINT	
EMERGENCY PARKING	

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
0.0	Vittoria	Port access Road onto Leschenault Drive while traveling over rail crossing. https://goo.gl/maps/RE8iv5nKm8QKEJFGA	Length: 80 Metres Width: 8 Metres	Travel directly ahead from the Port Access Road onto Leschenault Drive.	Travel over the rail crossing and onto Leschenault Drive. Port Access Road is 8.0 Metres wide at the narrowest point.
0.2	Vittoria	Port Access Road over rail line https://goo.gl/maps/RE8iv5nKm8QKEJFGA	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
0.3	Vittoria	Leschenault Drive onto Estuary Drive https://goo.gl/maps/Y3dHn8HjUrT5Bq7A	Length: 90 Metres Width: 9 Metres	The transporter crosses onto the wrong side of the road before making a right-hand turn, then crosses back to the correct side.	Loads to cut through the inside of the roundabout. Spotter to watch the pole on the inside of the turn, and the blade overhang on the trees at the rear. No road modifications required.
0.6	East Bunbury	Estuary Drive onto Koombana Drive https://goo.gl/maps/3m3EPyTn880ex1Z	Length: 55 Metres Width: 8 Metres	Left hand turn. The transporter crosses onto the wrong side of the crosses back to the correct side.	Signs to be made removable, light pole to be relocated, and vegetation to be trimmed to under 4.0 metres in height.
0.85	Bunbury	Koombara Drive onto Forrest Highway via Eelup Rotary https://maps.app.goo.gl/dEK34sg2uWxWuEsV8	Length: 100 Metres Width: 10 Metres	Left-hand bend	Spotter to guide the load through the poles and signs. No road modifications required.
3.5	Vittoria	Forrest Highway https://maps.app.goo.gl/2ZpFt8eyaj5cgNhe6	Width: 8 Metres	Travel directly ahead	Rail overpass: Approval required to cross rail infrastructure.
11.8	Australind	Forrest Highway onto Raymond Road https://maps.app.goo.gl/9GnaVcSWFQWbdeW8	Length: 80 Metres Width: 8.0 Metres	Right-hand turn	Light pole to be relocated, signs to be relocated or made removable, and centre island to be made trafficable.
13.4	Roelands	Raymond Rd https://maps.app.goo.gl/dRJZHmOgSBkyGEw8	Length: 90 Metres Width: 9.0 Metres	Proceed straight through the roundabout.	Spotter to guide the load through the poles and signs. No road modifications required.
13.7	Roelands	Raymond Rd https://maps.app.goo.gl/4L0NTGms8CmMR8q7	Length: 90 Metres Width: 9.0 Metres	Proceed straight through the roundabout.	Edge of the roundabout will need to be made trafficable.
18.6	Roelands	Raymond Road on Coalfields Road Via Southwestern Highway. https://maps.app.goo.gl/9PacTy7CZhu7B3chv8	Length: 45 Metres Width: 7 Metres	Left, then right-hand turn.	Light poles to be removed or relocated; handstands to be installed; signs to be relocated or removed.
18.7	Roelands	Southwestern Highway over railway line https://maps.app.goo.gl/6FaXurKyRrqo6PSn8	Width: 7 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
48.0	Allanson	Coalfields Highway https://goo.gl/maps/exmY2eavRpMNKVq7	Length: 130 metres Width: 11 Metres	Merge to the left	Large parking bay, all loads.
48.1	Allanson	Coalfields Road at Alister Road https://maps.app.goo.gl/NAqC78ZnghY1PyKEZ	Length: 90 Metres Width: 9.0 Metres	Right hand bend	No road modifications required.
55.0	Collie	Coalfields Highway https://goo.gl/maps/yFgE2ew3rE6kWuWr5	Length: 100 metres Width: 6 Metres	Merge to the left	Large parking bay, all loads.
55.5	Collie	Coalfields Highway over rail line https://goo.gl/maps/X9T58io8SyCpRwAH8	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
61.0	Shotts	Coalfields Highway over rail line https://goo.gl/maps/XPyhuteAWiJs2EdA9	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
63.1	Shotts	Coalfields Highway over rail line https://maps.app.goo.gl/43ctfV9ucWpfpfX6	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
88.5	Bowelling	Coalfields Highway https://goo.gl/maps/k6jY3Ry4etiv7Rhm6	Length: 140 metres Width: 12 Metres	Merge to the left	Large parking bay, all loads.
147.0	Arthur River	Coalfields Highway onto Albany Highway https://goo.gl/maps/1dT7ApYv6e93bUyRA	Length: 90 Metres Width: 10 Metres	Right-hand turn from the correct side of the Coalfields Highway across to the incorrect side of the Albany Highway.	Spotter to guide the load through the poles and signs. No road modifications required.
147.1	Arthur River	Albany Highway https://goo.gl/maps/PGcex4a78c8qxntK7	Length: 120 metres Width: 8 Metres	Merge to the left	Large parking bay, all loads.
149.0	Arthur River	Albany Highway onto Arthur Road https://goo.gl/maps/nw6arx89tK5fhPF89	Length: 90 Metres Width: 10 Metres	Left hand bend	No road modifications required.
176.7	Wagin	Arthur Rd https://goo.gl/maps/oUvBPK9xdx83yGuf9	Length: 80 metres Width: 8 Metres	Merge to the left	parking bay, smaller loads.
177.0	Wagin	Arthur Street at Thornton Street https://maps.app.goo.gl/Y2Bef5ul6xShPxR9	Length: 80 metres Width: 7.0 Metres	Travel directly ahead	Spotter to guide the load through the poles and signs. No road modifications required.
178.0	Wagin	Arthur Street at Ventnor Street https://maps.app.goo.gl/7nDjXfVdPH8aummy6	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
208.9	Nippering	Wagin-Dumbleyung Rd over rail line https://goo.gl/maps/RuNjINkQyUy4mxv9x5	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
216.0	Dumbleyung	Wagin-Dumbleyung Road https://maps.app.goo.gl/ZQGbyYCwreCx3eaJA	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
217.0	Arthur River	Absolon Street onto Ebsary Road https://maps.app.goo.gl/XpZPUH6S7kJEPUHE6	Length: 70 metres Width: 7.0 Metres	Left hand bend	No road modifications required.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
225.0	Dumbleyung	Dumbleyung-Lake Gracie Road at Tincurrin Road https://maps.app.goo.gl/8h1KozFz87JbycYL9	Length: 90 metres Width: 7.0 Metres	Right-hand bend	Spotter to guide the load through the poles and signs. No road modifications required.
235.5	Moulyinning	Dumbleyung-Lake Grace Rd https://goo.gl/maps/FFFYpzyzGSbnBewt8	Length: 200 metres Width: 15 Metres	Merge to the left	Large parking bay, all loads.
240.0	North Moulyinning	Dumbleyung-Lake Gracie Road onto Rabbit Proof Fence Road https://maps.app.goo.gl/m4wMq67ndmVp278	Length: 70 metres Width: 7.0 Metres	Left-hand turn	Vegetation to be cleared, sign to be removed, and hardstand to be installed.
240.6	North Moulyinning	Rabbit Proof Fence Rd https://goo.gl/maps/ZkKafCeqEqu4TBRv8	Length: 100 metres Width: 8 Metres	Merge to the left	Large parking bay, all loads.
277.0	Dudinin	Rabbit Proof Fence Road https://goo.gl/maps/dZAL5cgtCA6CvY29	Length: 75 Metres Width: 8 Metres	Left hand bend	Vegetation will need to be removed.
277.2	Dudinin	Rabbit Proof Fence over rail line https://goo.gl/maps/9dmVmEJKYcmIPE48	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be cross with caution.
287.0	Wogolin	Rabbit Proof Fence Road at Williams-Kondinin Rd https://goo.gl/maps/5XpauQ6n5v7H3M15	Length: 100 Metres Width: 8 Metres	Right-hand turn	Hardstand is to be installed on the inside corner, and vegetation is to be removed.
300.0	Jitaming	Narrogin-Kondinin Road https://maps.app.goo.gl/QQvH7dKv2c2s18	Length: 90 Metres Width: 7.0 Metres	S bend	Vegetation to be cleared
300.1	Jitaming	Narrogin-Kondinin Road https://maps.app.goo.gl/w6rJqzkEzblG9mt87	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
320.0	Kulin	Narrogin-Kondinin Road https://maps.app.goo.gl/nVuY4Sawh8aWGNi66	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
322.0	Kulin	Johnston Street onto Narrogin-Kondinin Road via Kulin-Lake Grace Road https://maps.app.goo.gl/h86kfcZ1sYk3BZi39	Length: 80 metres Width: 7.0 Metres	Left- and right-hand turns	Vegetation to be cleared, hardstand to be installed, power pole and sign to be relocated
322.0	Kulin	Johnston Street onto Narrogin-Kondinin Road via Kulin-Lake Grace Road https://maps.app.goo.gl/h86kfcZ1sYk3BZi39	Width: 8 Metres	Travel directly ahead	Disused railway line
333.0	Kulin West	Narrogin-Kondinin Road https://maps.app.goo.gl/Pns4ibu5hCYra3aA8	Length: 120 metres Width: 7 Metres	Merge to the left	Large parking bay, all loads.
350.0	Kondinin	Corrigin-Kondinin Road onto Kondinin-Narembreen Road https://maps.app.goo.gl/VSPhew8E3FVWfco7	Length: 45 Metres Width: 7 Metres	Right-hand turn	Sign to be relocated
356.0	Kondinin	Kondinin-Narembreen Road https://maps.app.goo.gl/6txeSUYj2zRvc9rU7	Width: 8 Metres	Travel directly ahead	Disused railway line

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
374.0	South Kumminin	Kondinin-Narembeen Road https://maps.app.goo.gl/IR6hAEcDaMVyvjTH9	Width: 8 Metres	Travel directly ahead	Rail crossing is likely to be crossed with caution. Approval required to cross rail infrastructure.
401.0	Narembeen	Latham Road https://maps.app.goo.gl/9jg2BAKw5bVMEkzp9	Length: 200 metres Width: 10 Metres	Merge to the right	Large parking bay, all loads.
403.0	Wadderin	Frick Road onto Merredin-Narembeen Road https://maps.app.goo.gl/3MACPUMF3xhyvUz5	Length: 50 Metres Width: 7 Metres	Right-hand turn	Sign to be relocated
Site entries, gravel roads and all site roads to be constructed to appropriate standards in order to accommodate the height, weight, swept path and vertical curves of all proposed loads. Unsealed roads to be maintained for the duration of deliveries and may become untrafficable during periods of wet weather.					

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.0 Km's

Bunbury Port
onto Leschenault Drive.

Vittoria, WA

Component – Blade

PROCEDURE: Leave the port via the gates, proceed straight over the railway lines and onto the incorrect side of the road.

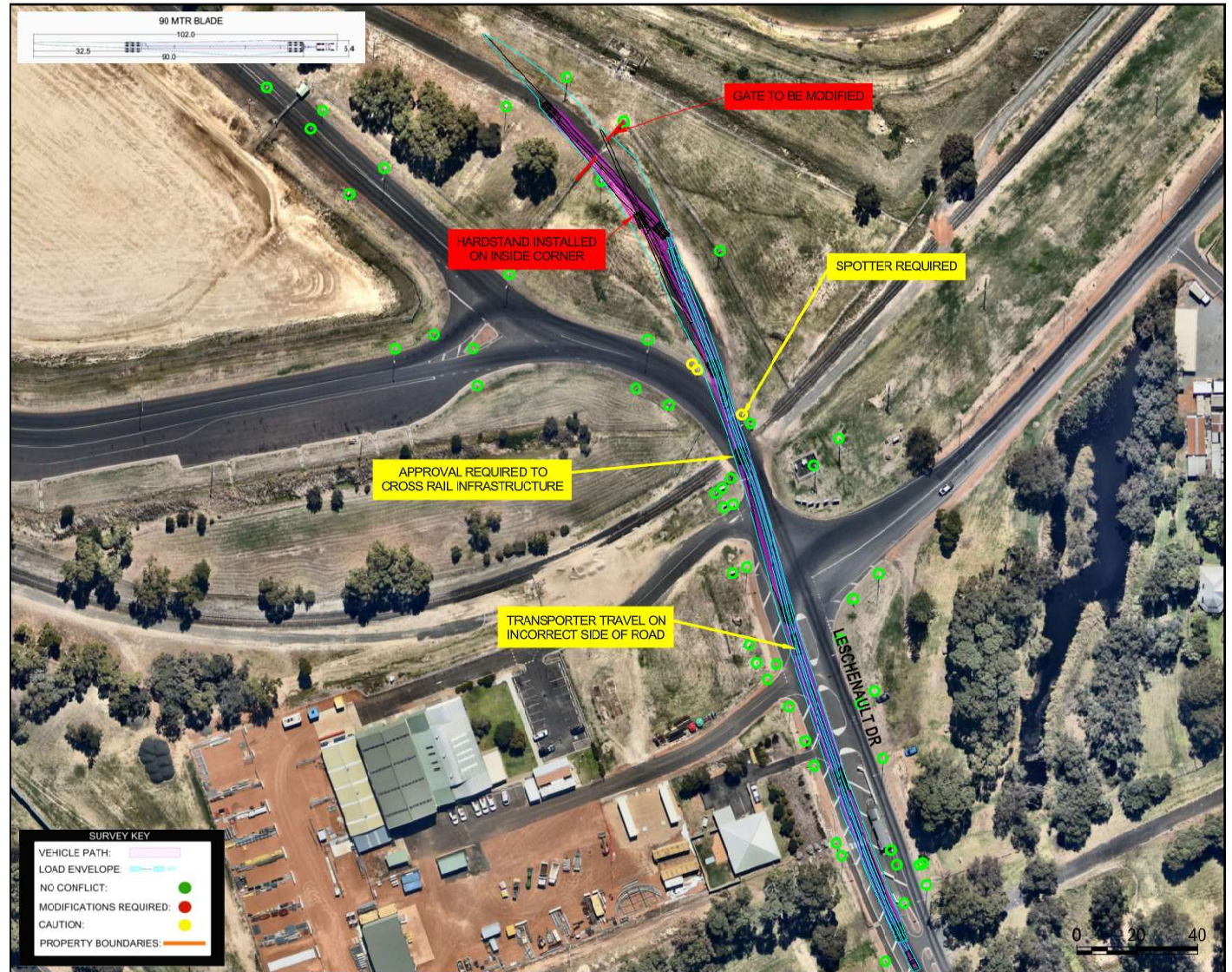
MODIFICATIONS REQUIRED: Gate to be modified.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

COMMENTS: Approval required to cross rail infrastructure.

GPS:

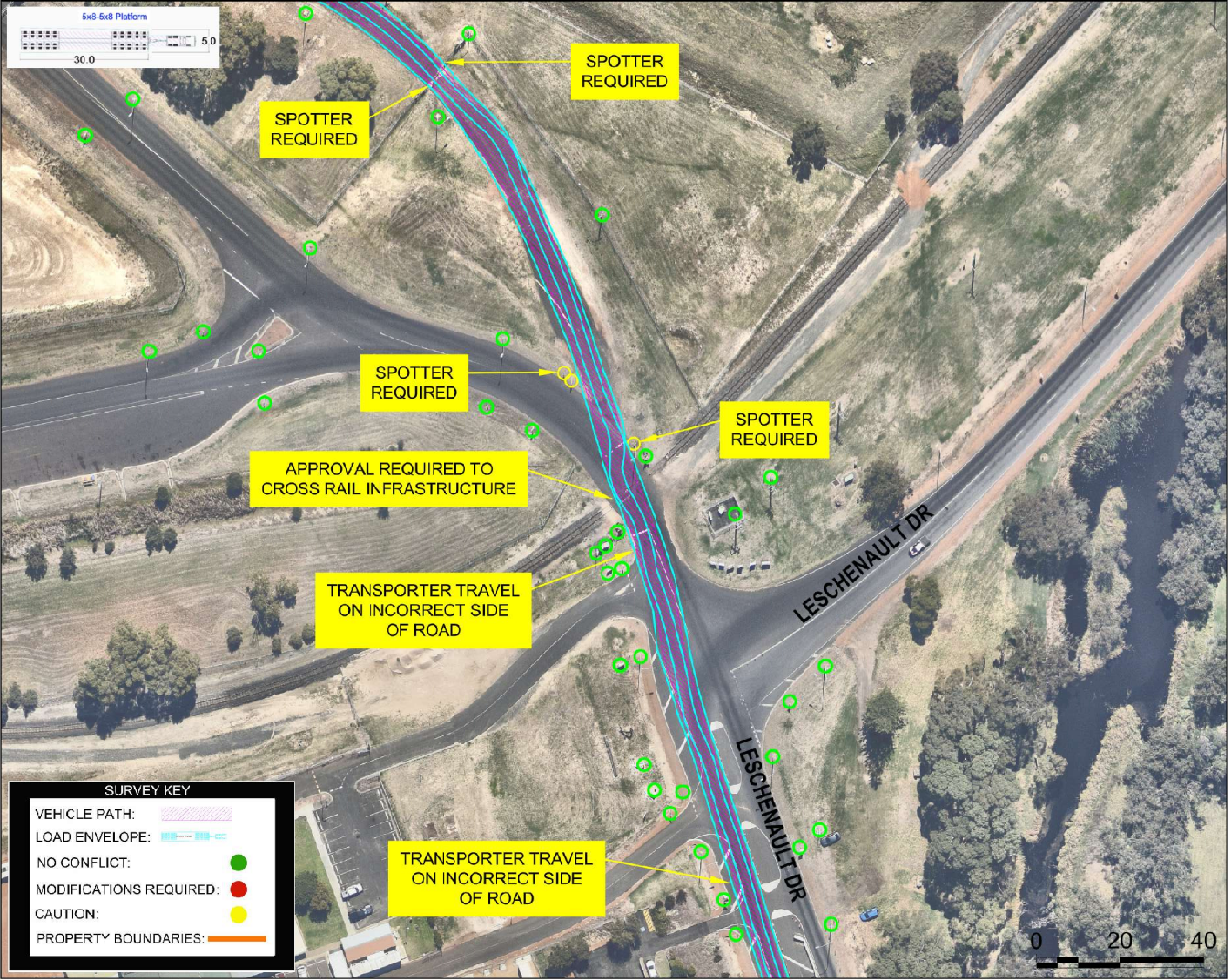
<https://maps.app.goo.gl/3x4yyi4L2GntNoVs7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.3 Km's

Leschenault Drive
onto Estuary Drive.

Vittoria, WA

Component – Blade

PROCEDURE: The transporter crosses onto the wrong side of the road before making a right-hand turn, then moves across to the correct side of the road.

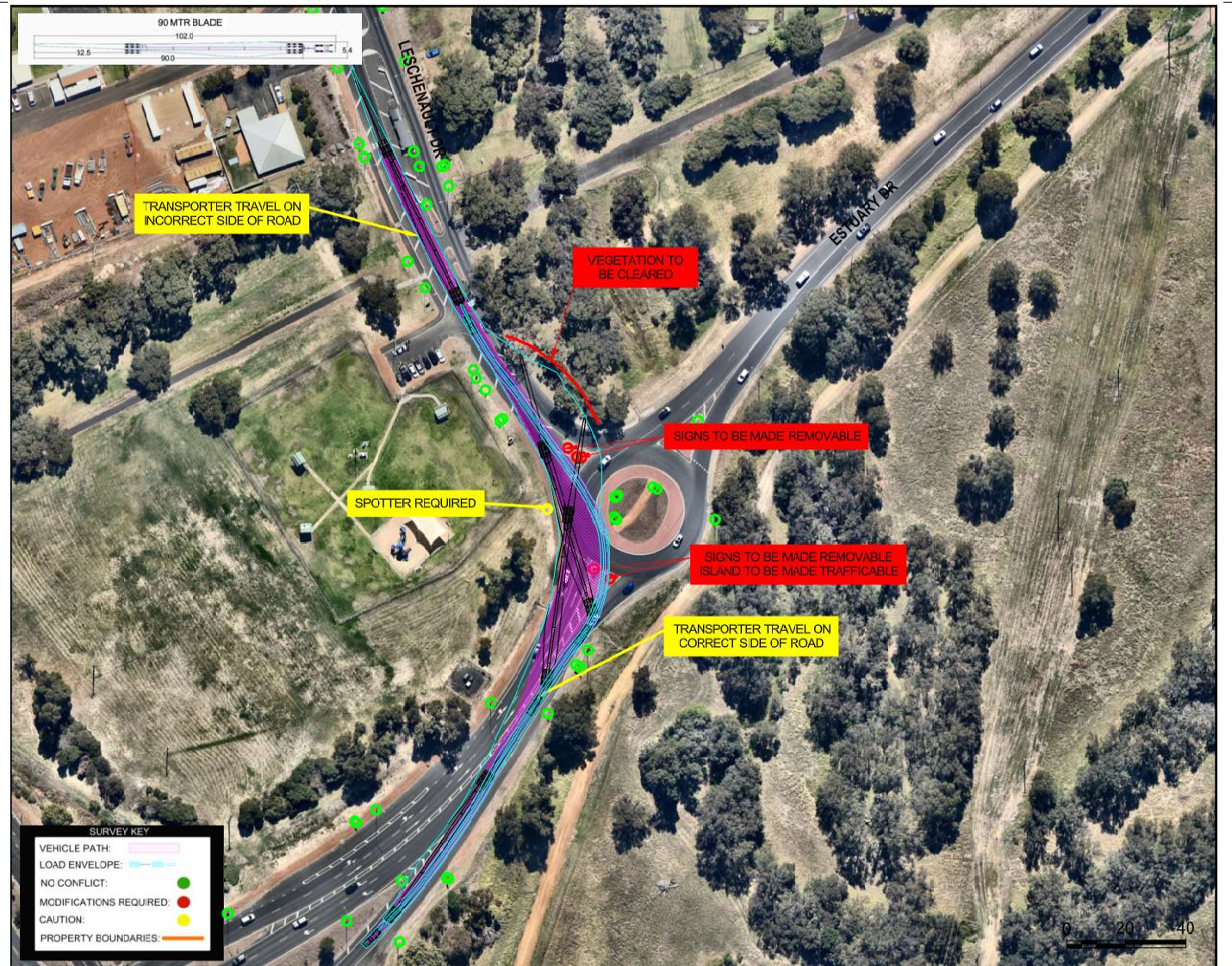
MODIFICATIONS REQUIRED:

Vegetation to be cleared, signs to be made removable.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

GPS:

<https://maps.app.goo.gl/vJ1Wei6fgxBF3s8w6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.6 Km's

Estuary Drive
onto Koombara Drive

East Bunbury, WA

Component – Blade

PROCEDURE: left-hand turn.

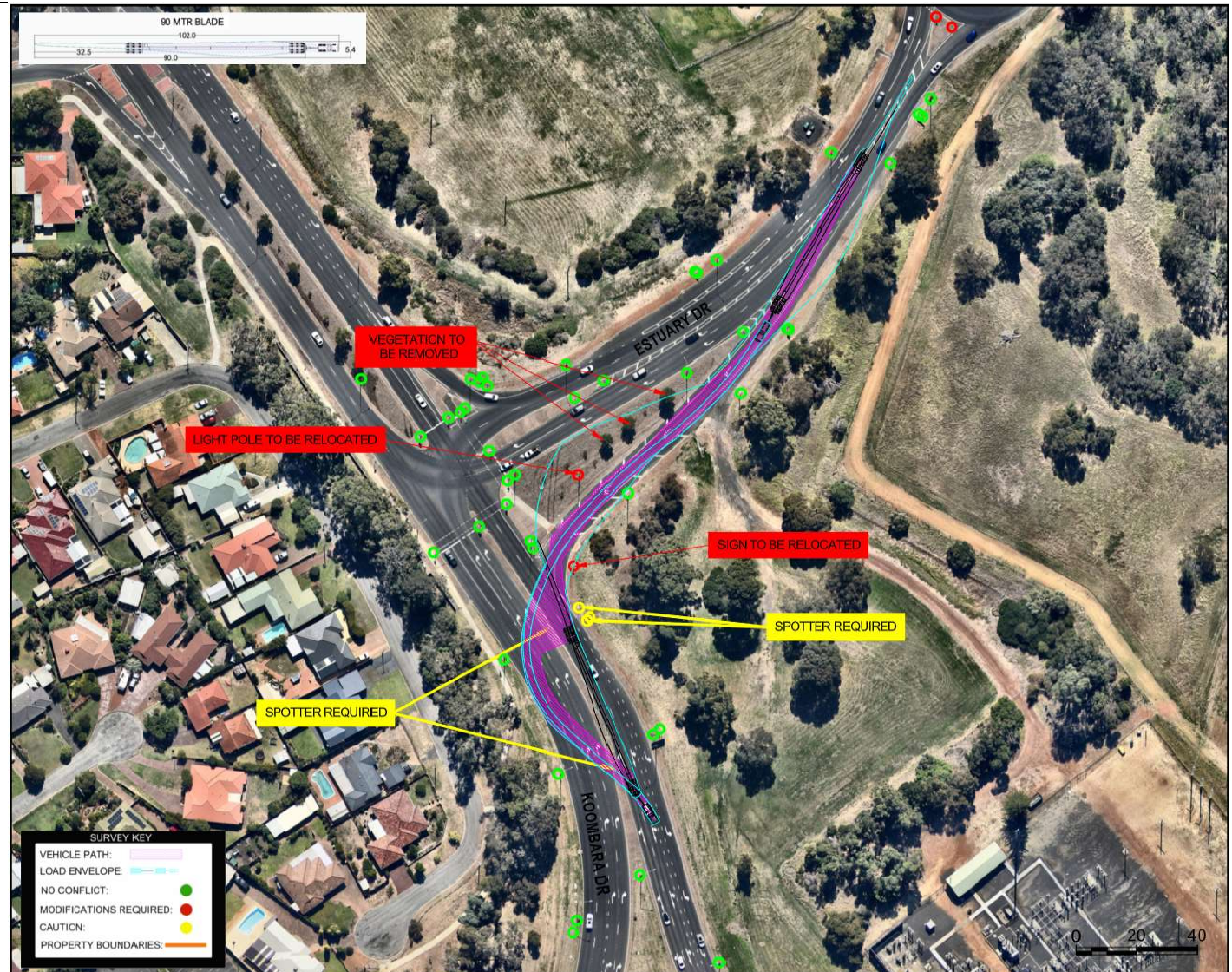
Transporter will need to travel onto the incorrect side of the road for around 50 metres. This will require the truck and front trailer to travel over the centre median strip.

MODIFICATIONS REQUIRED: Signs to be made removable, light pole to be relocated, vegetation to be removed, and island to be made trafficable.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

GPS:

<https://maps.app.goo.gl/bLu9i2dcxnpJWwPE7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.85 Km's

Koombara Drive onto Forrest Highway via Eelup Rotary

East Bunbury, WA

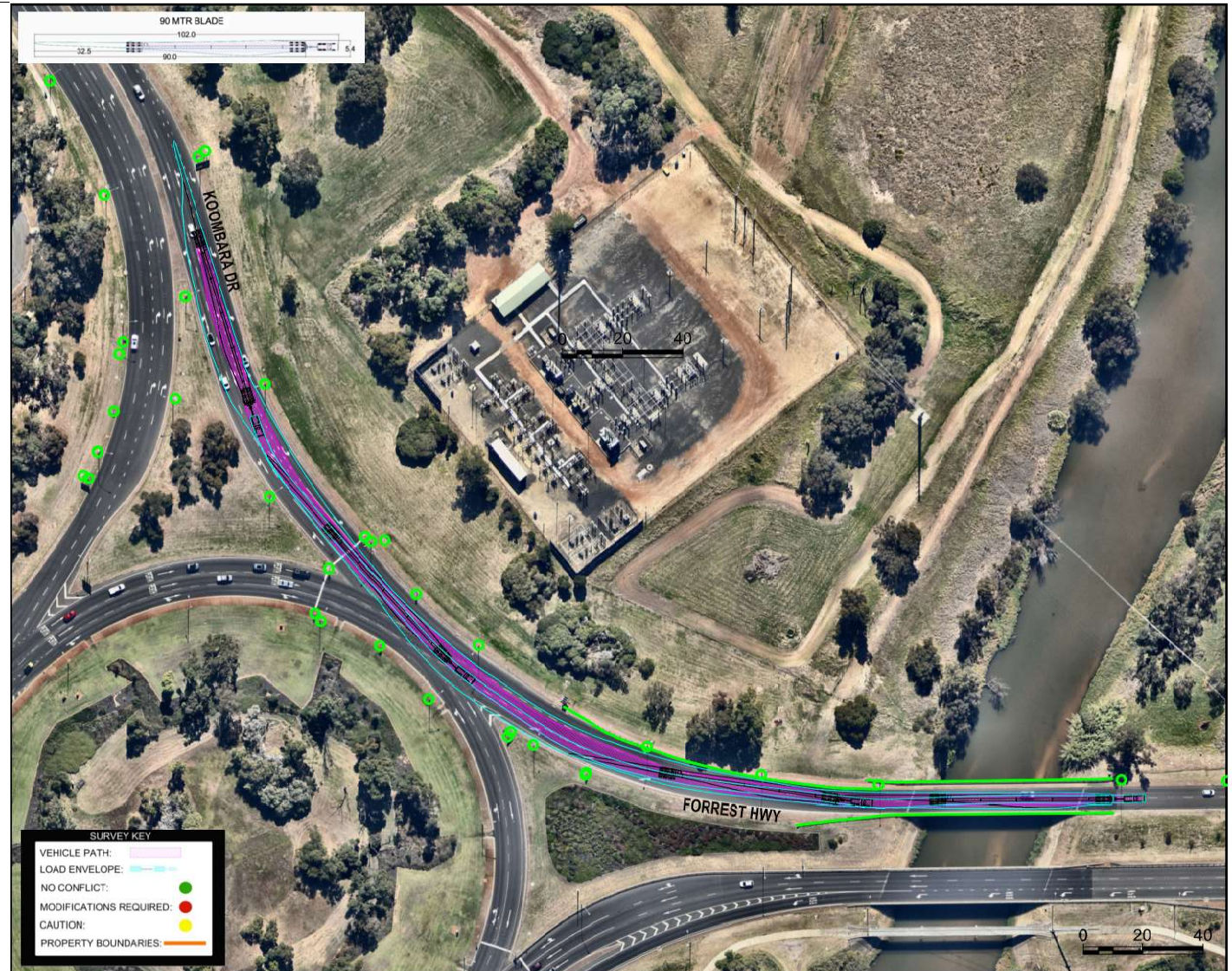
Component – Blade

PROCEDURE: Left-hand bend

MODIFICATIONS REQUIRED: Nil

GPS:

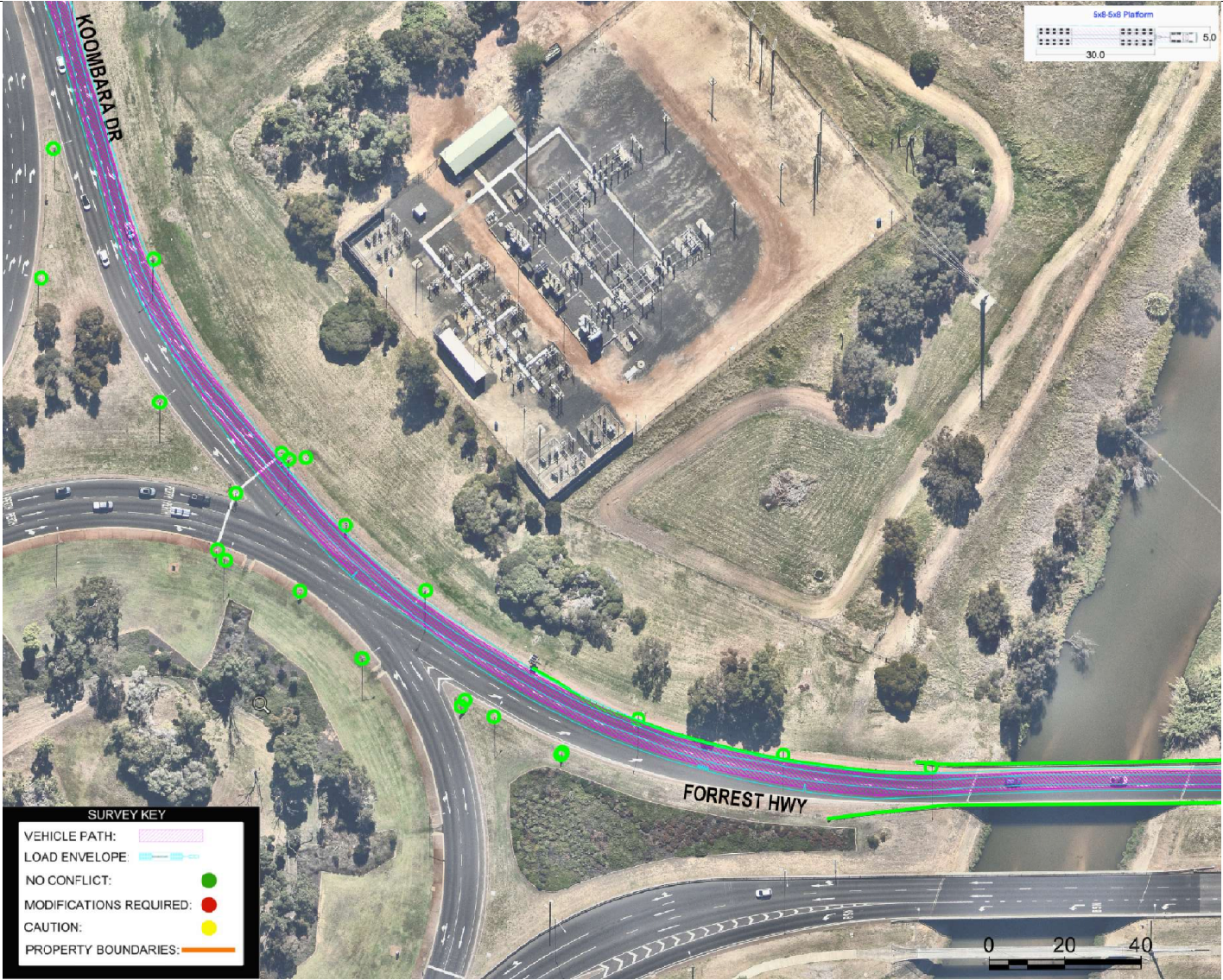
<https://maps.app.goo.gl/dEK34sg2uWxWuEsV8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

11.8 Km's

Forrest Highway
onto Raymond Road

Australind, WA

Component – Blade

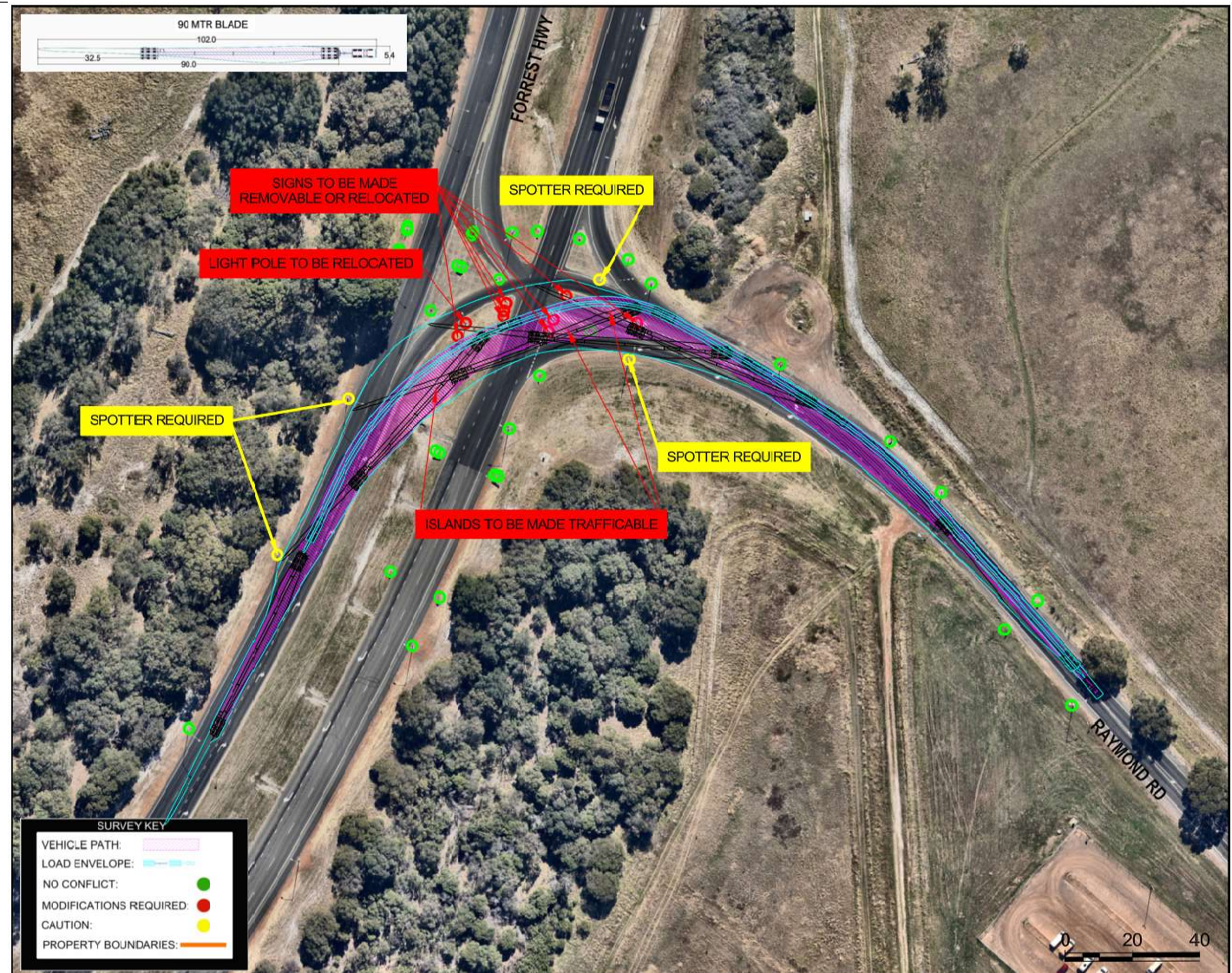
PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED: Light pole to be relocated, signs to be relocated or made removable, and islands to be made removable.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

GPS:

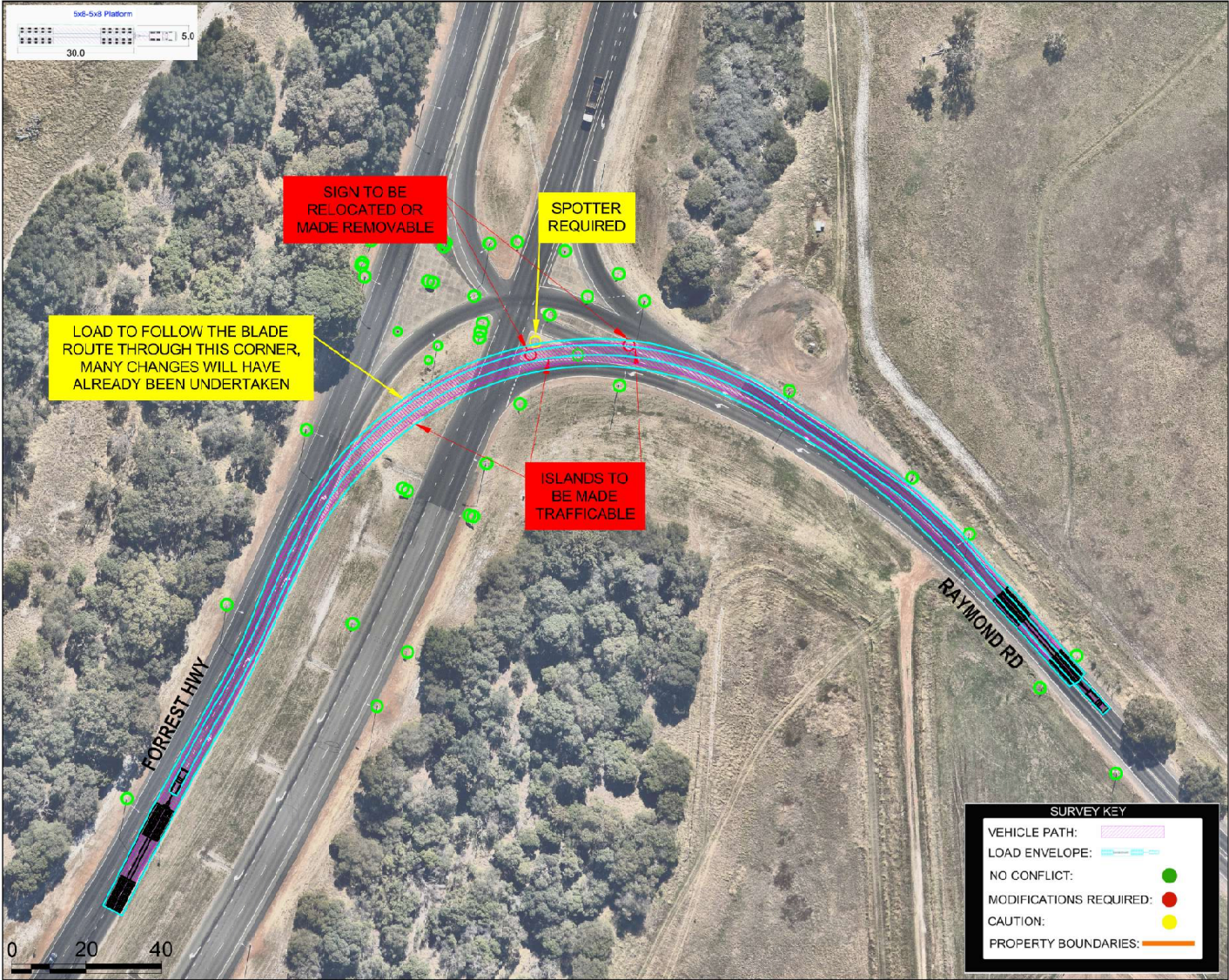
<https://maps.app.goo.gl/oGqaXHSWPQWUzEeW9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

13.4Km's

Raymond Rd

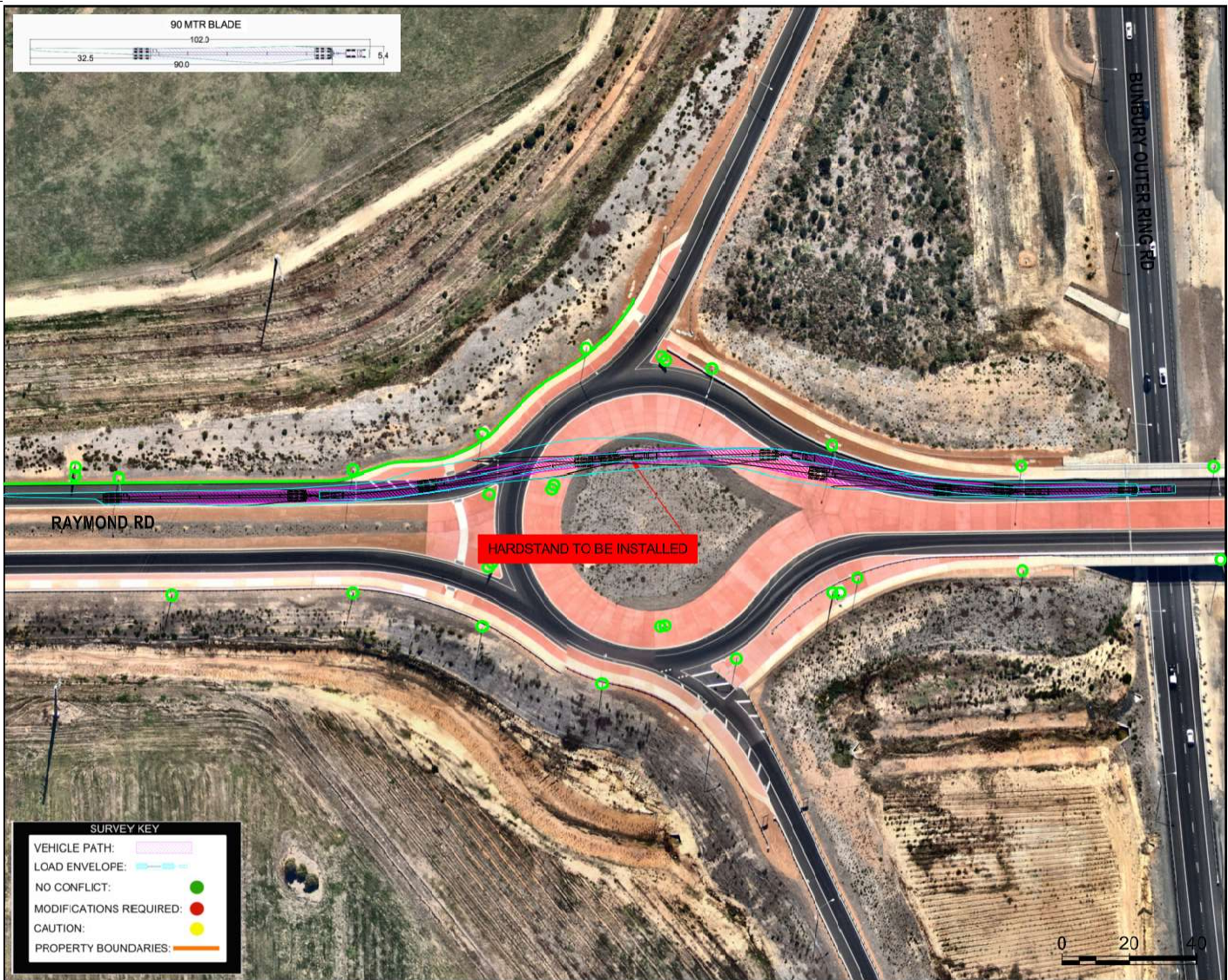
Roelands, WA

Component – Blade

PROCEDURE: Proceed straight ahead and travel over the apron of the roundabout.

MODIFICATIONS REQUIRED: Spotter to guide the load through the intersection.

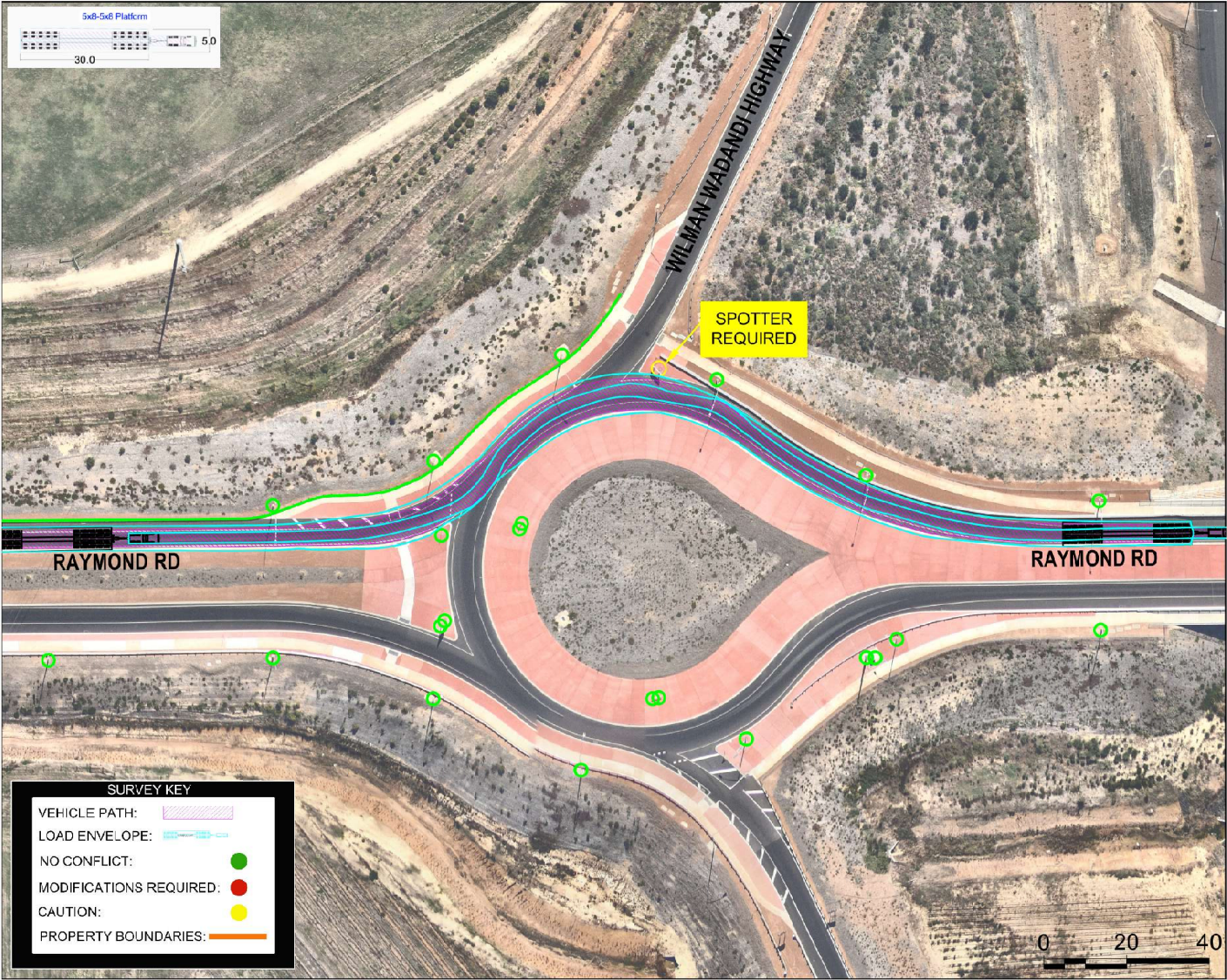
GPS:
<https://maps.app.goo.gl/dRJZHmQgSBkyGEwi8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

13.7 Km's

Raymond Road

Roelands, WA

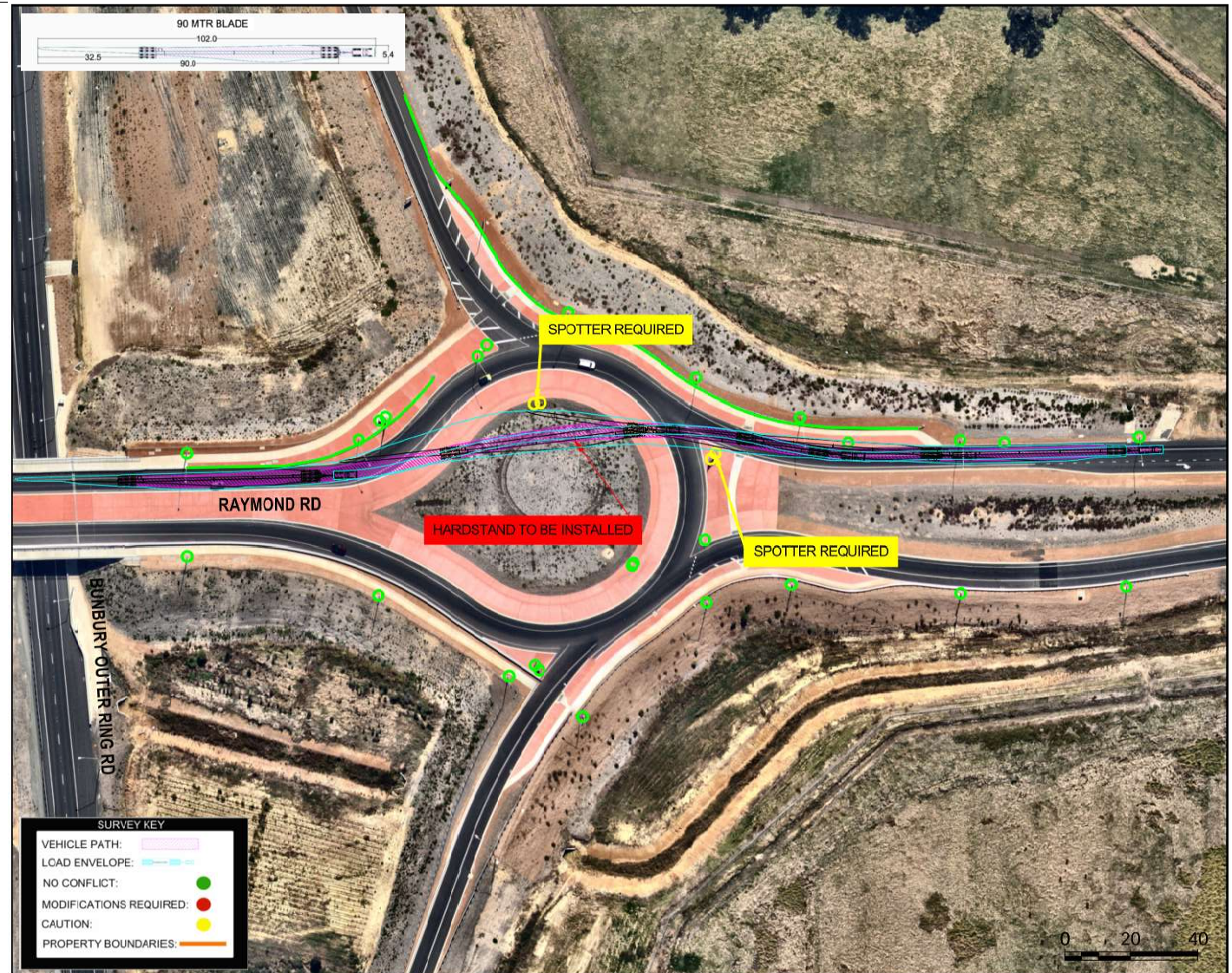
Component – Blade

PROCEDURE: Proceed straight ahead and travel of the apron on the roundabout.

MODIFICATIONS REQUIRED:
Hardstand to be installed on the inside of the roundabout.

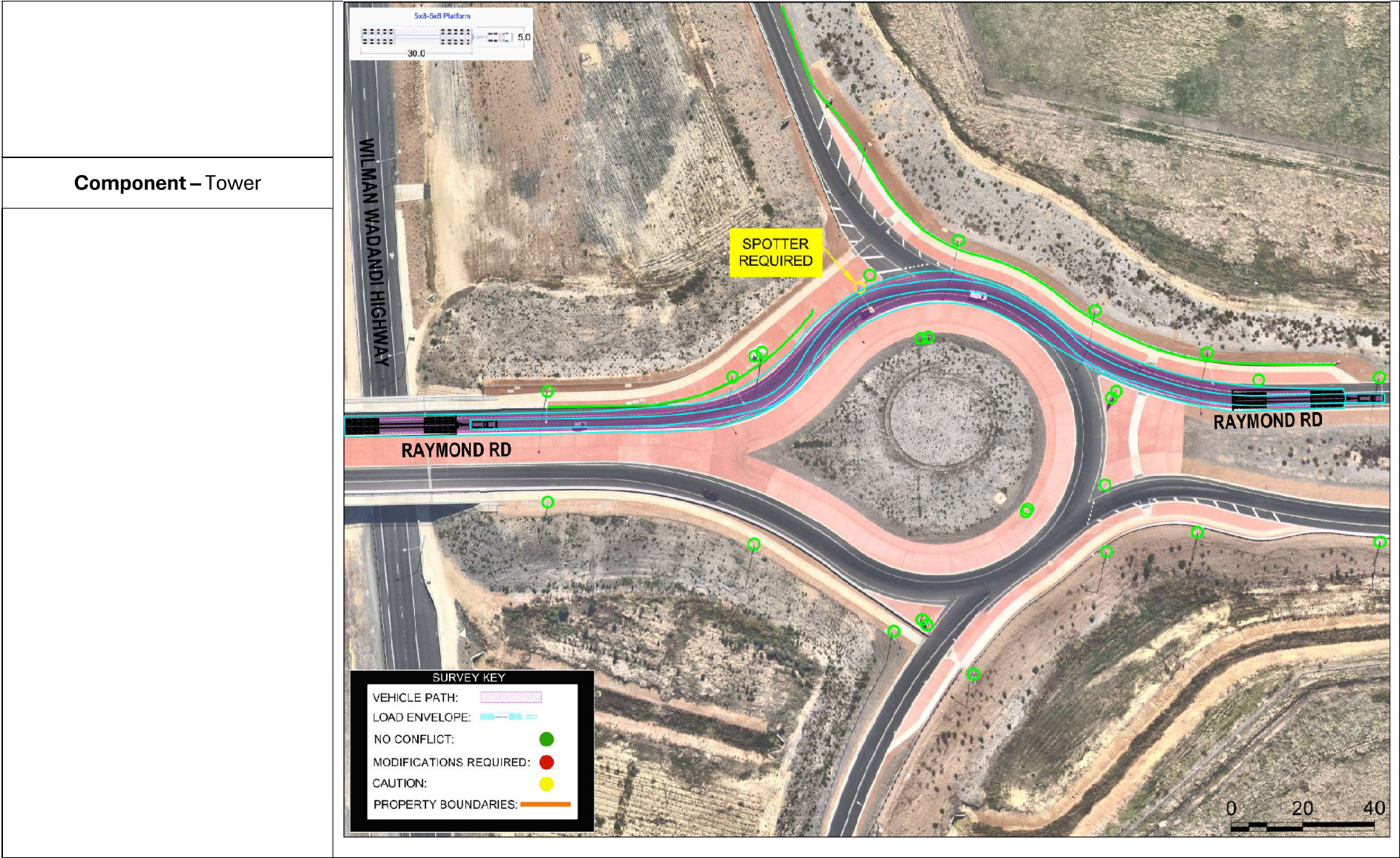
NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

GPS:
<https://maps.app.goo.gl/utL6MGmx8FmMRizp7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

18.6 Km's

Raymond Road on Coalfields
Road Via Southwestern Highway.

Roelands, WA

Component – Blade

PROCEDURE: Left, then right-hand turn.

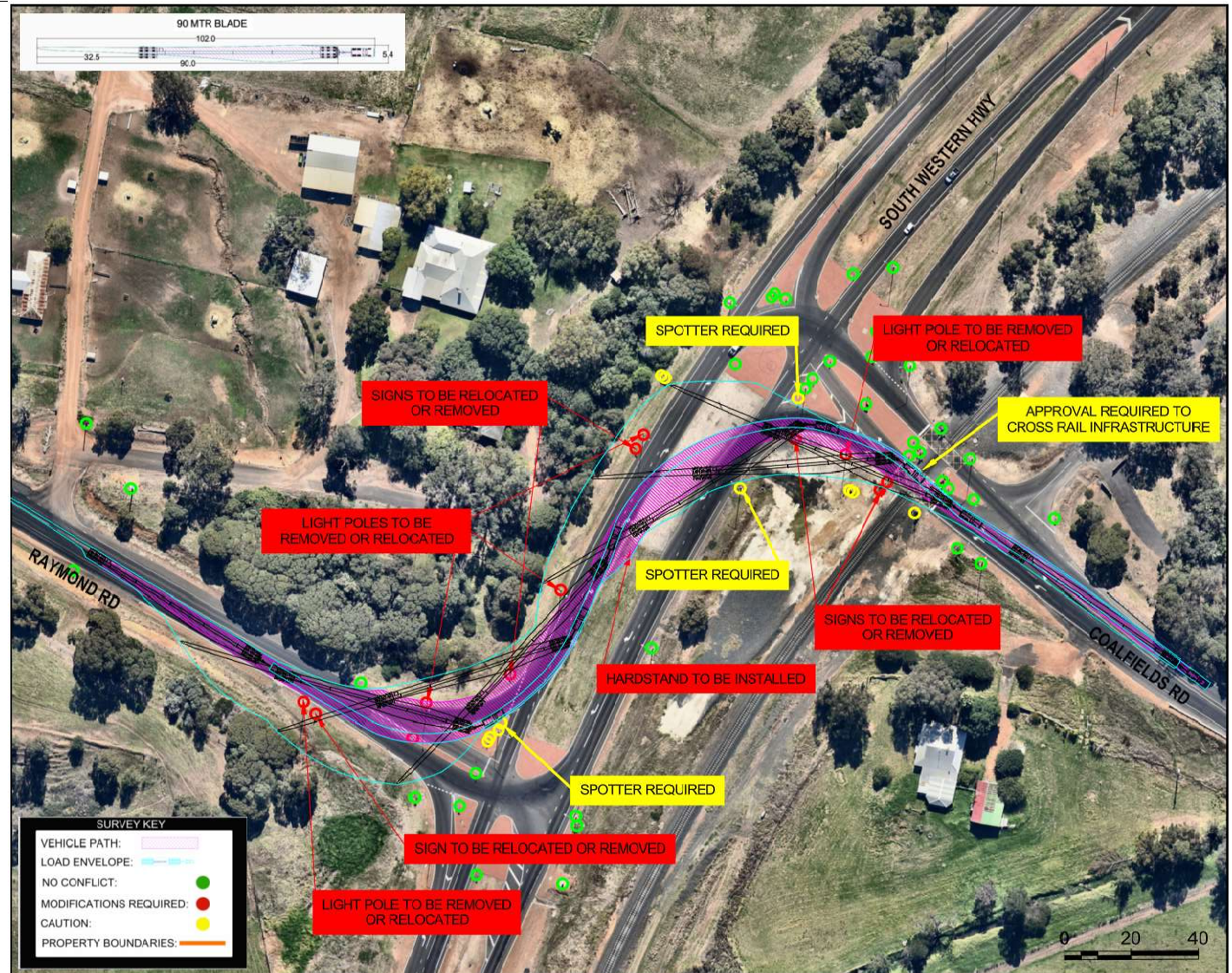
MODIFICATIONS REQUIRED: Light poles to be removed or relocated, handstand to be installed and signs to be relocated or removed.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

COMMENTS: Approval required to cross rail infrastructure.

GPS:

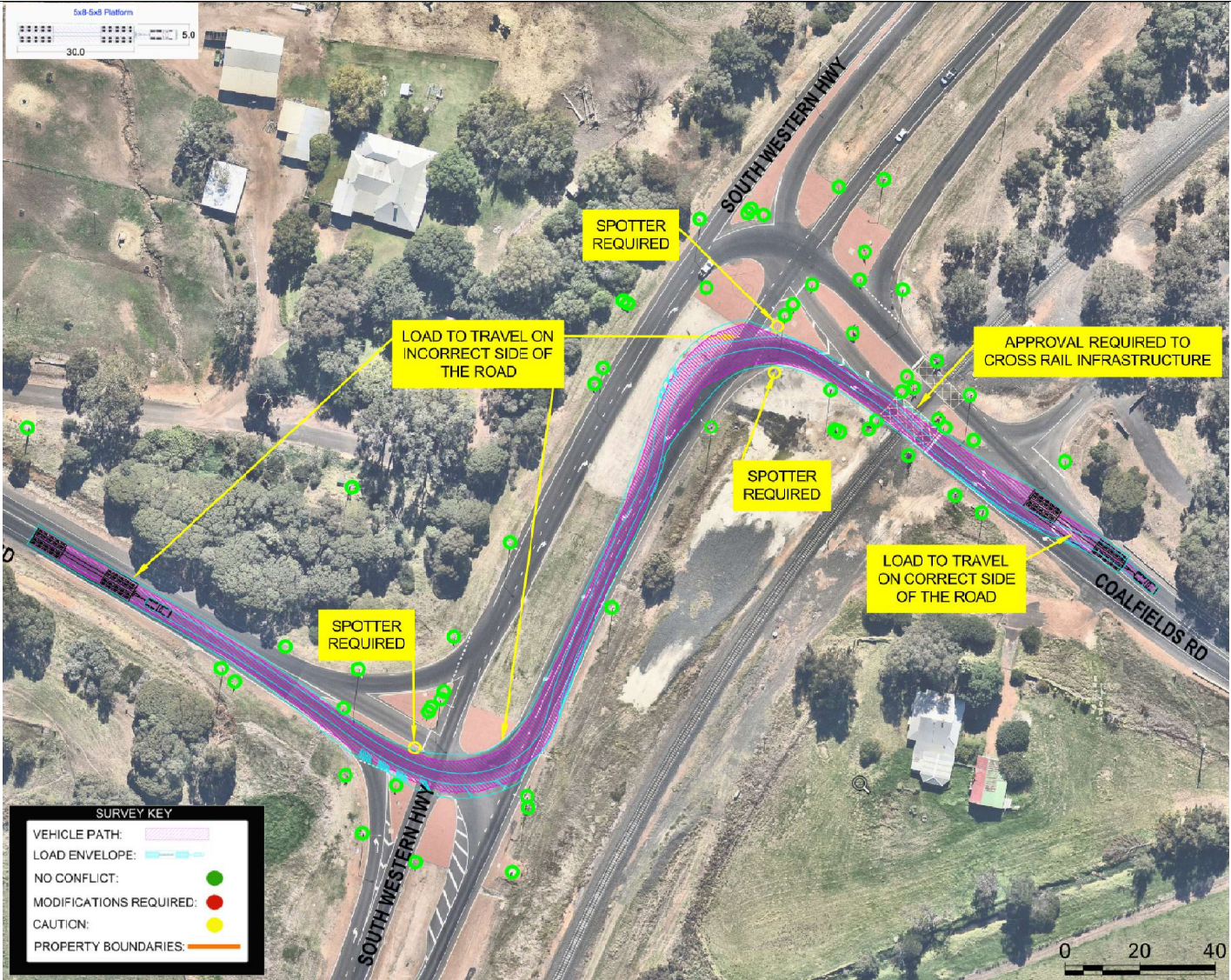
<https://maps.app.goo.gl/pPacTv7CWw7EK9oW8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

48.1 Km's

Coalfields Road at Alister Road

Allanson, WA

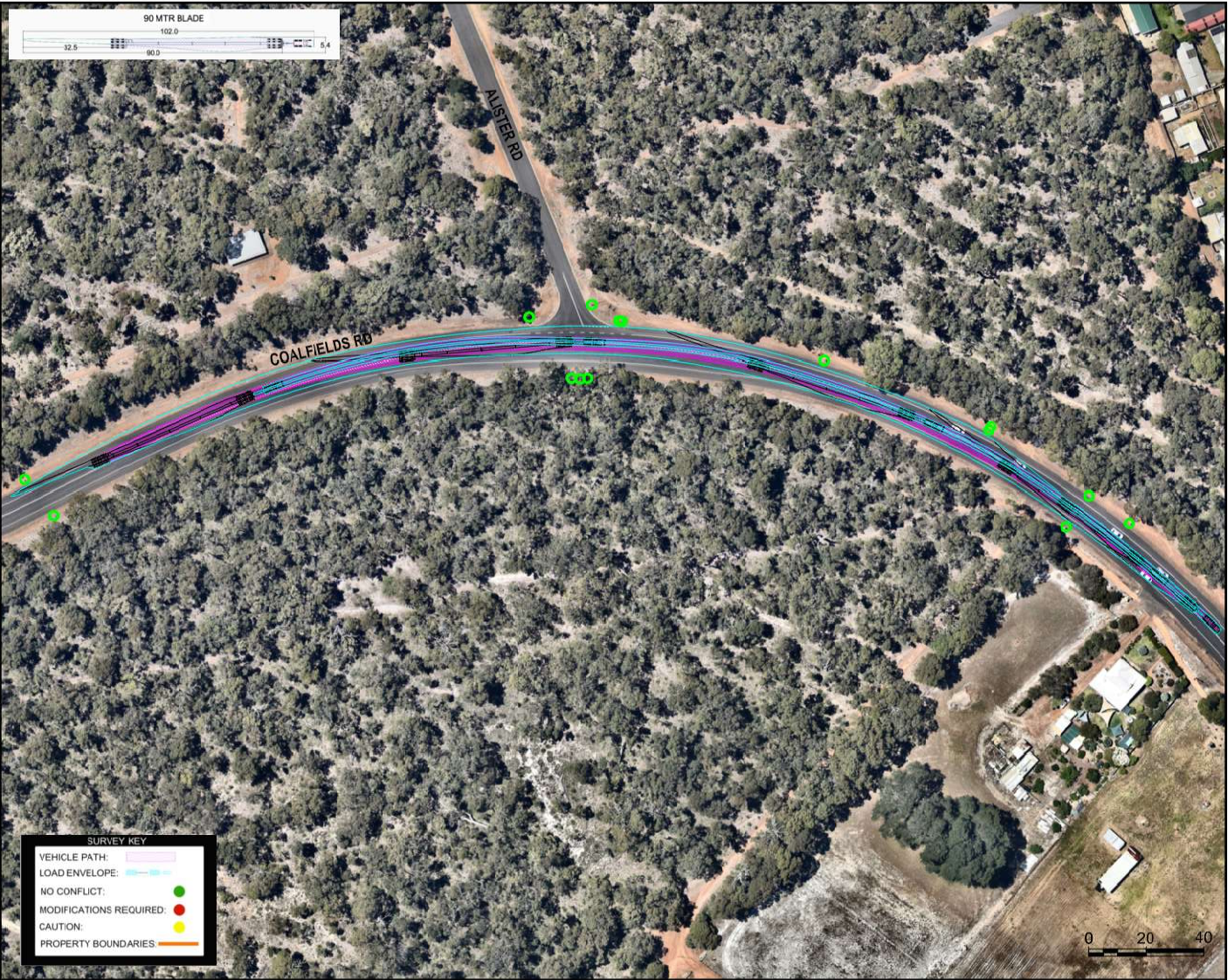
Component – Blade

PROCEDURE: Right hand bend

MODIFICATIONS REQUIRED: Nil

GPS:

<https://maps.app.goo.gl/NAqC78ZnghY1PvKEZ>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

147.0 Km's

Coalfields Road
onto Albany Highway

Arthur River, WA

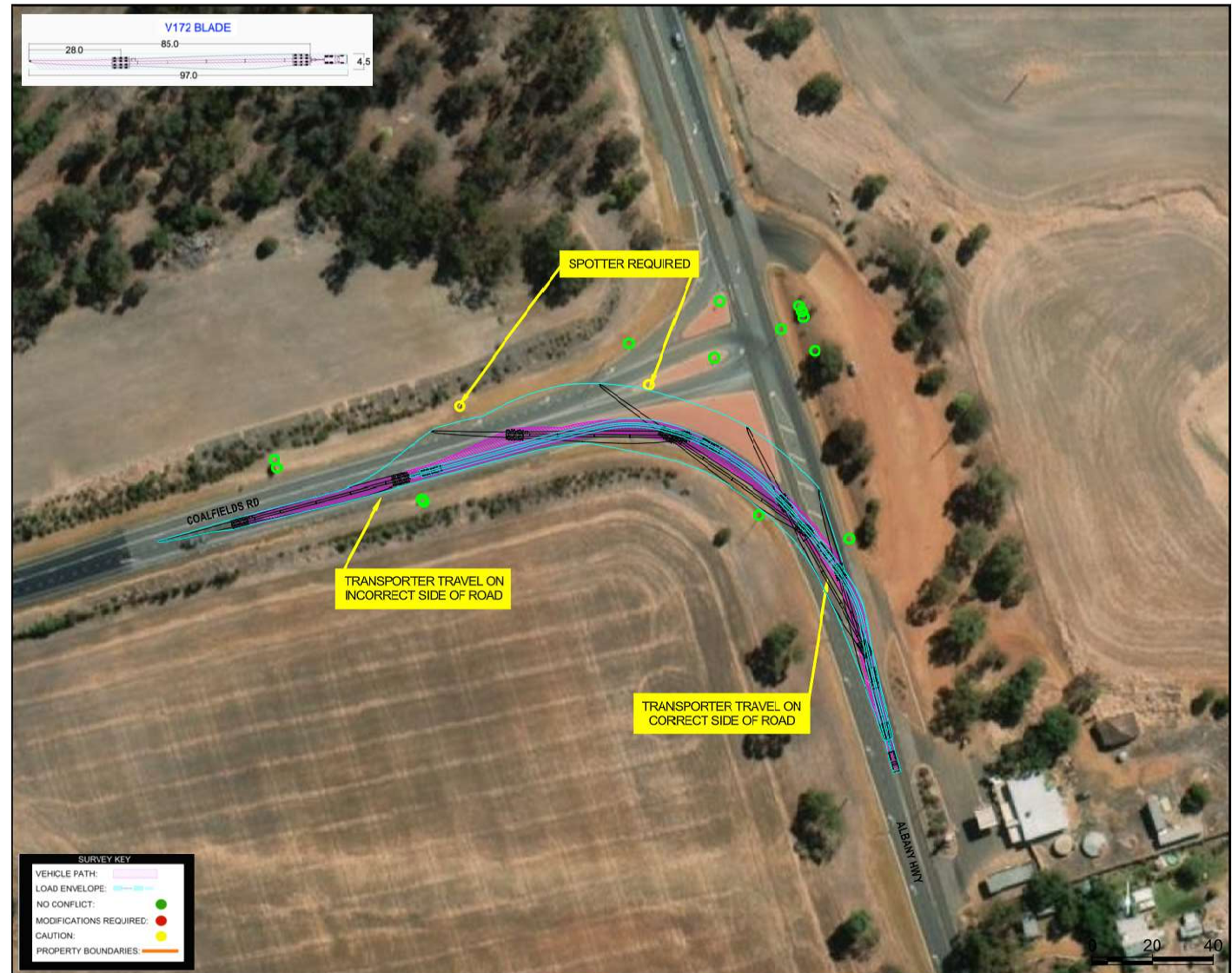
Component – Blade

PROCEDURE: Right-hand turn onto the incorrect side of the road before returning to the correct side once on Albany Highway.

MODIFICATIONS REQUIRED: Nil.

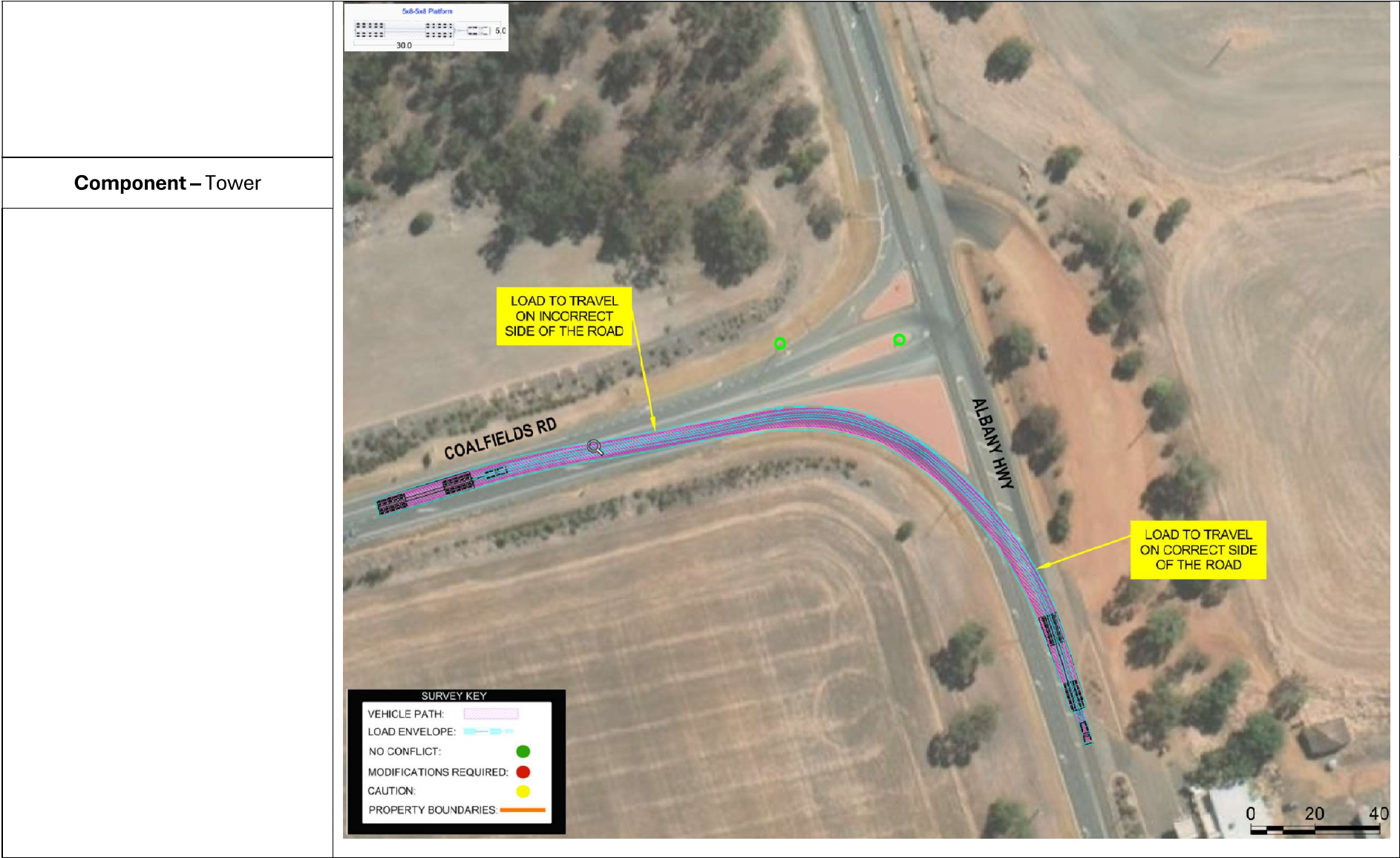
GPS:

<https://maps.app.goo.gl/CySM63iwkHoUkNfYA>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

149.0 Km's

Albany Highway
onto Arthur Street

Arthur River, WA

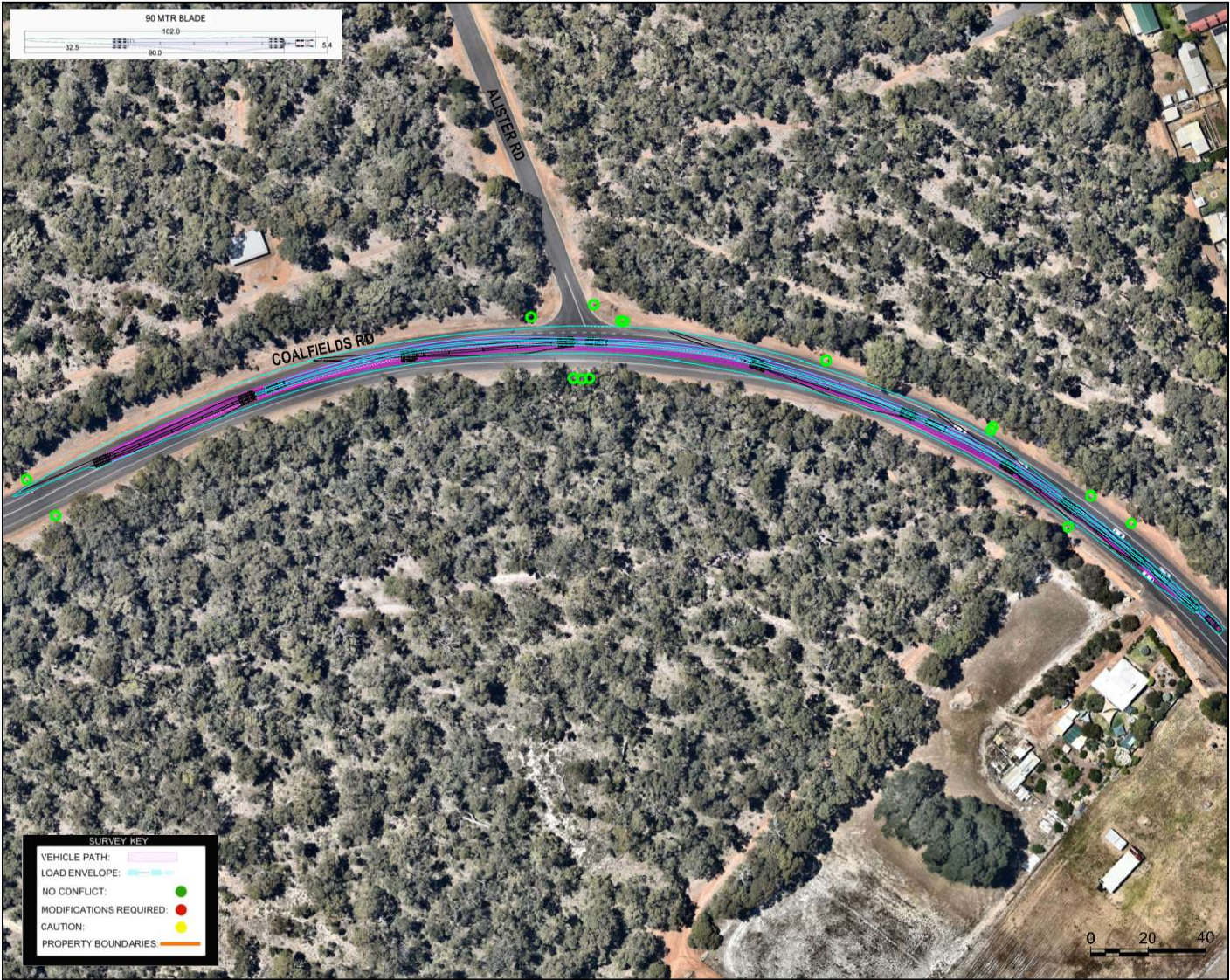
Component – Blade

PROCEDURE: Right-hand turn

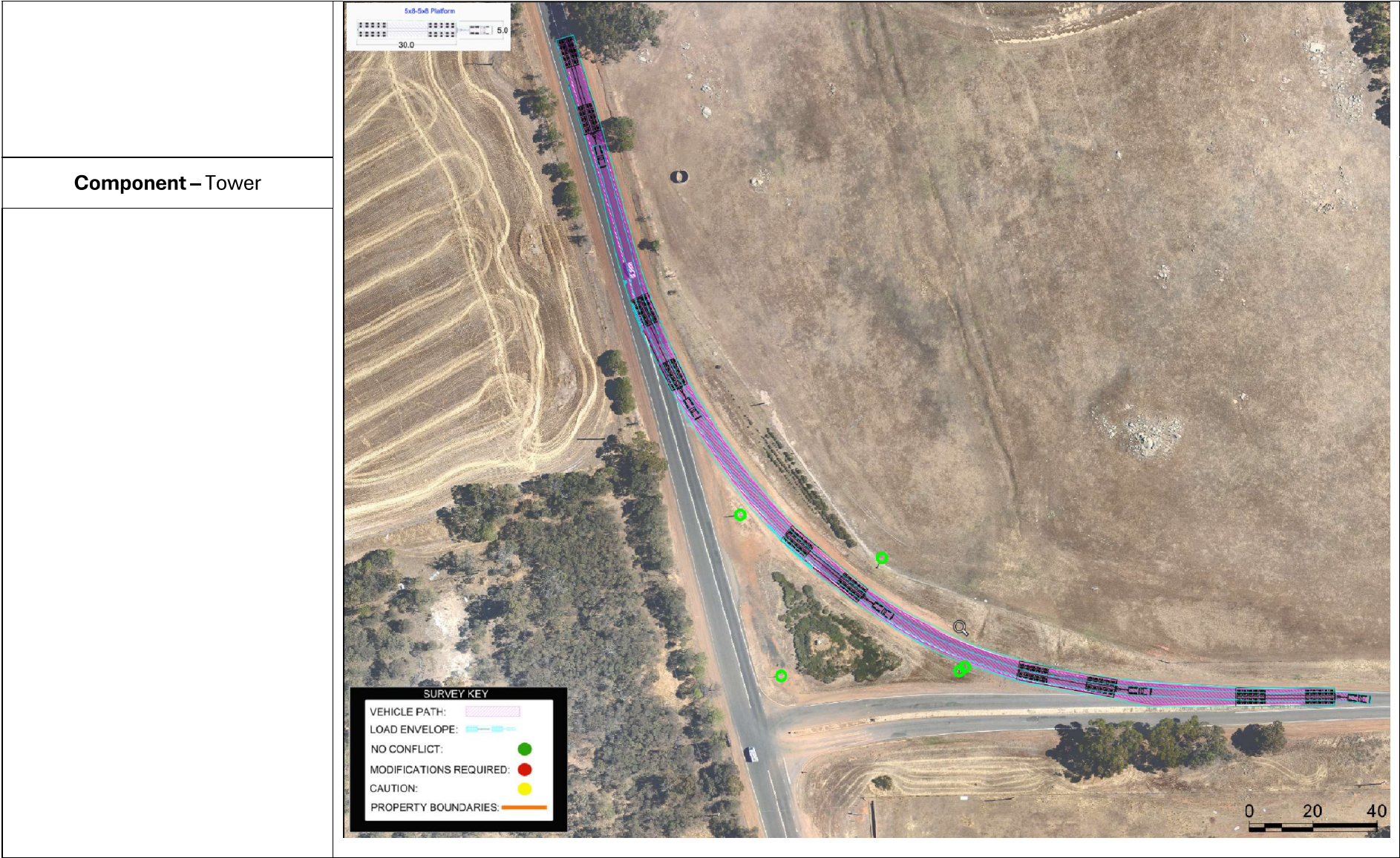
MODIFICATIONS REQUIRED: Nil

GPS:

<https://maps.app.goo.gl/Psb6K5eGoDthXu9o6>



OSOM ROUTE ASSESSMENT
TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

177.0 Km's

Arthur Street at Thornton Street

Wagin, WA

Component – Blade

PROCEDURE: Right-hand bend.
Transporter will need to travel on the incorrect side of the road.

MODIFICATIONS REQUIRED: Nil.

GPS:

<https://maps.app.goo.gl/YY2Bef5uL6xShPxR9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

178.0 Km's

Arthur Street at Ventnor Street

Wagin, WA

Component – Blade

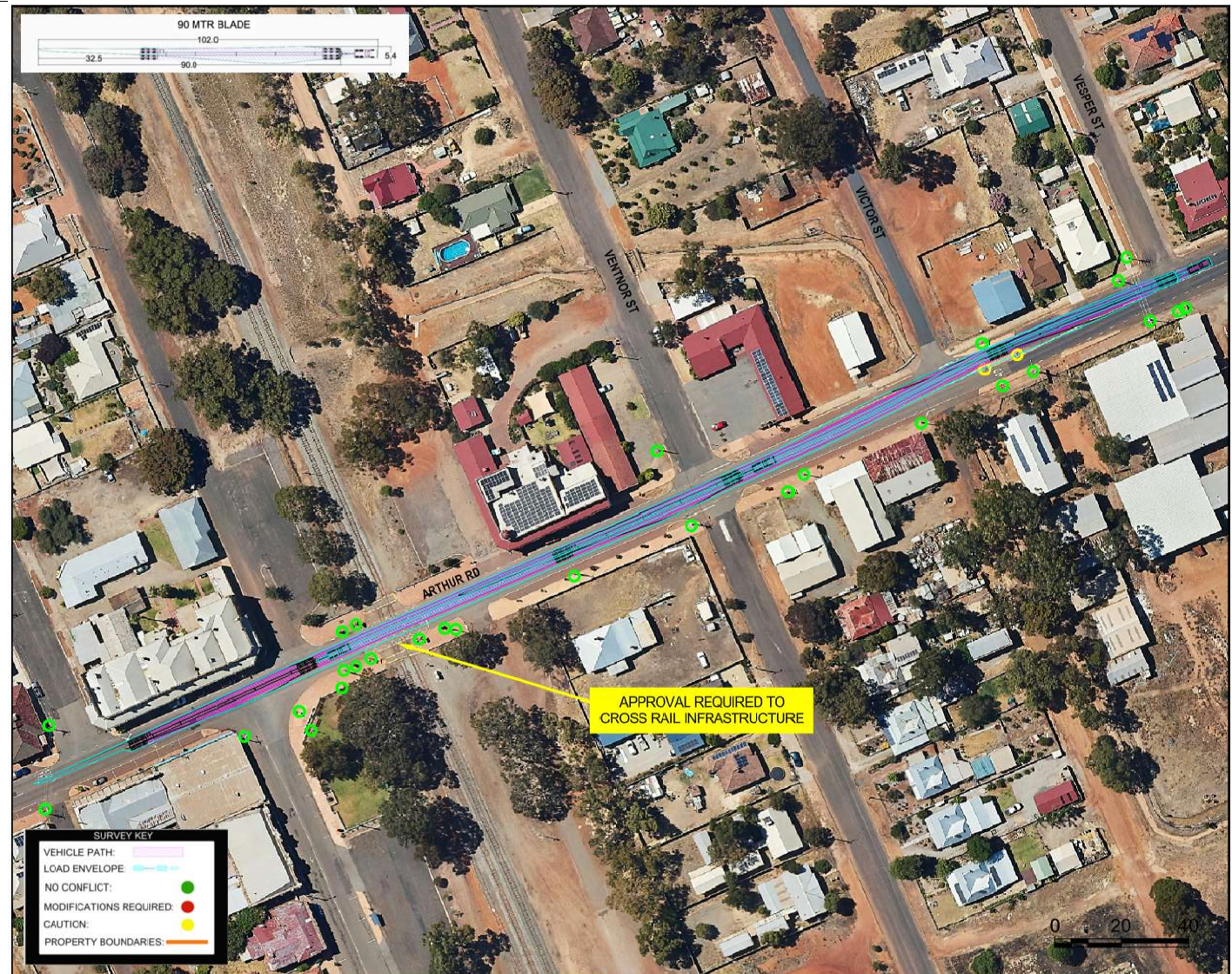
PROCEDURE: Proceed straight over the railway

MODIFICATIONS REQUIRED: Nil

COMMENTS: Approval required to cross rail infrastructure.

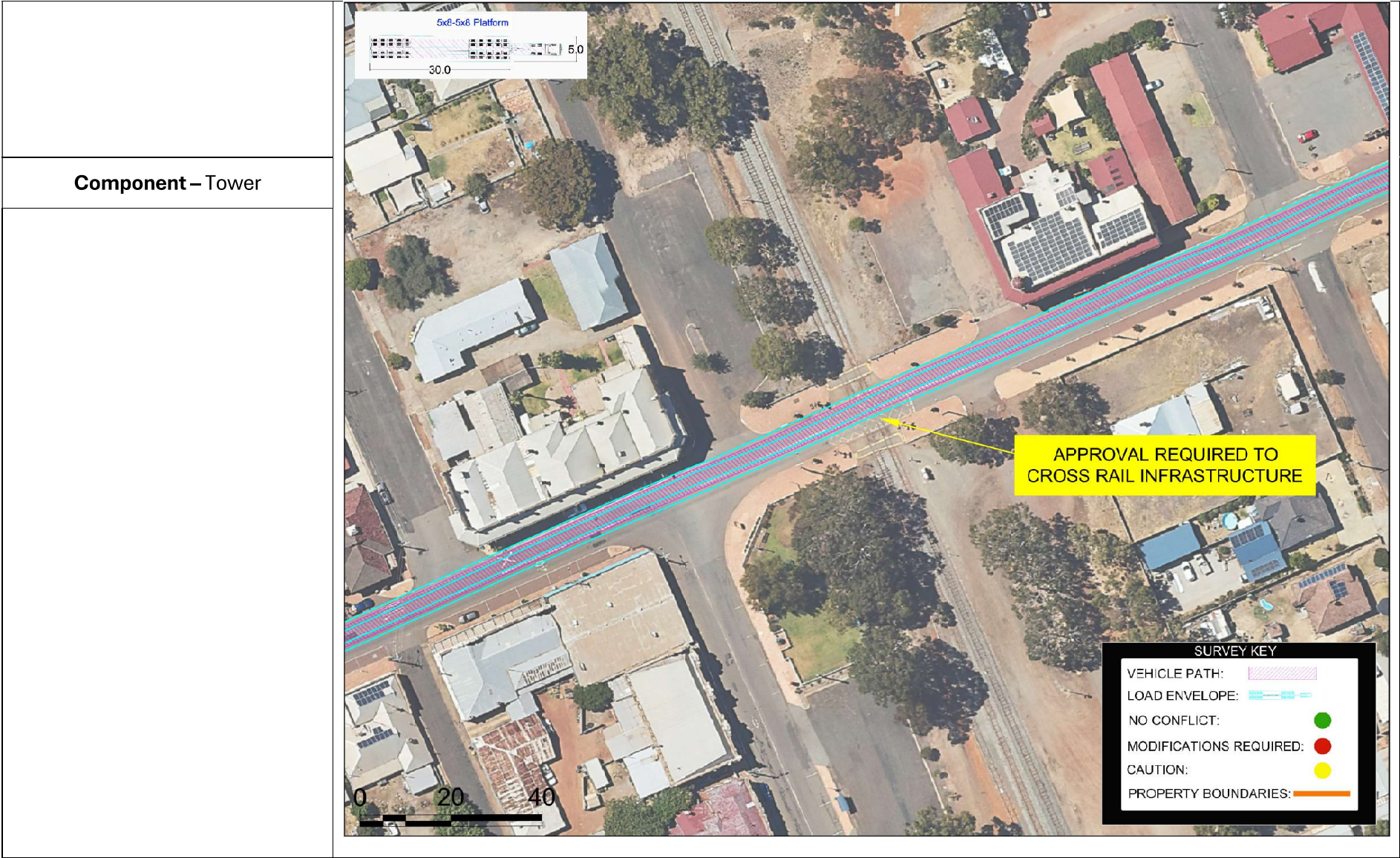
GPS:

<https://maps.app.goo.gl/7nDjXFWdPH8aummy6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

216.0 Km's

Wagin-Dumbleyung Road

Dumbleyung, WA

Component – Blade

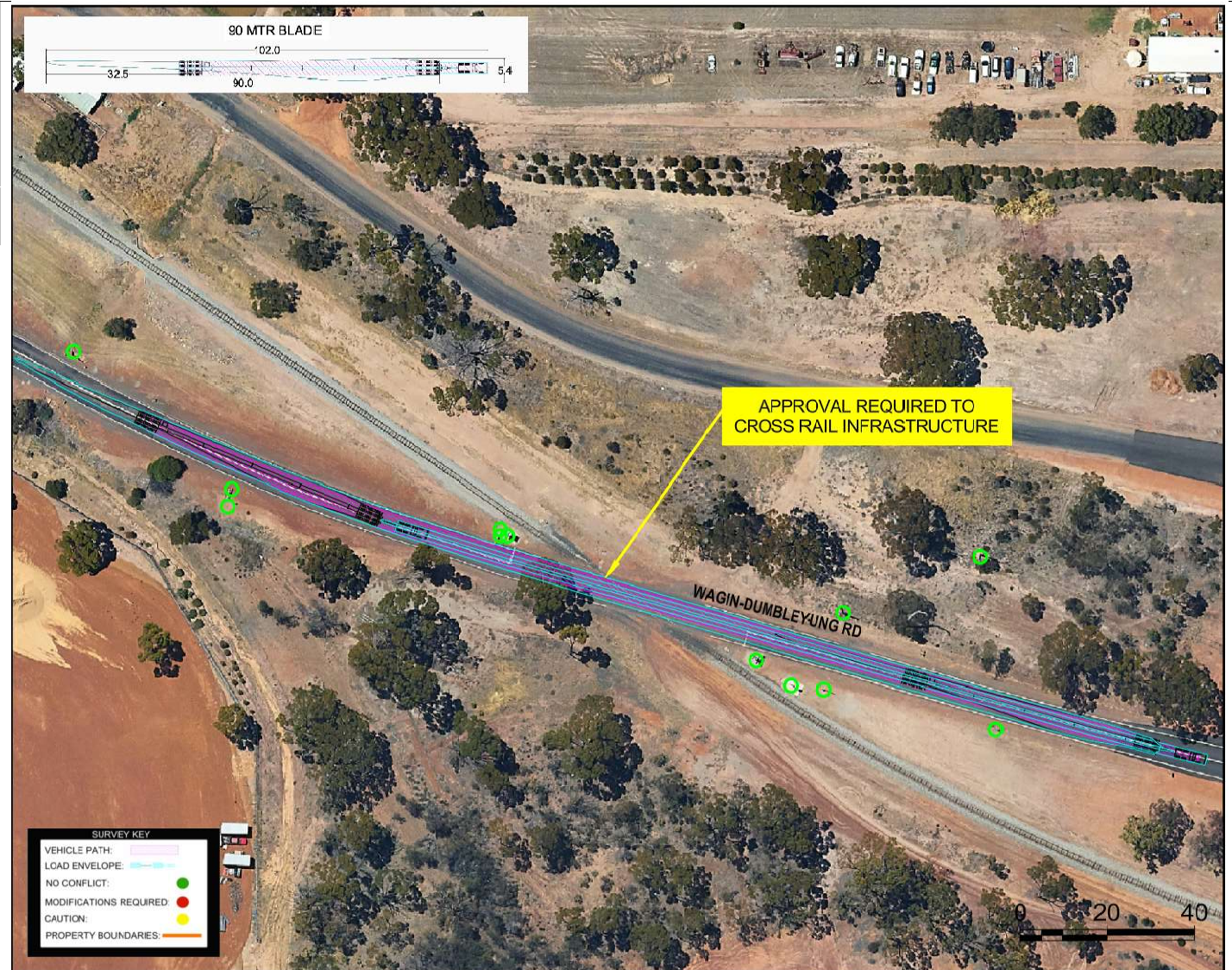
PROCEDURE: Proceed straight over the railway

MODIFICATIONS REQUIRED: Nil

COMMENTS: Approval required to cross rail infrastructure.

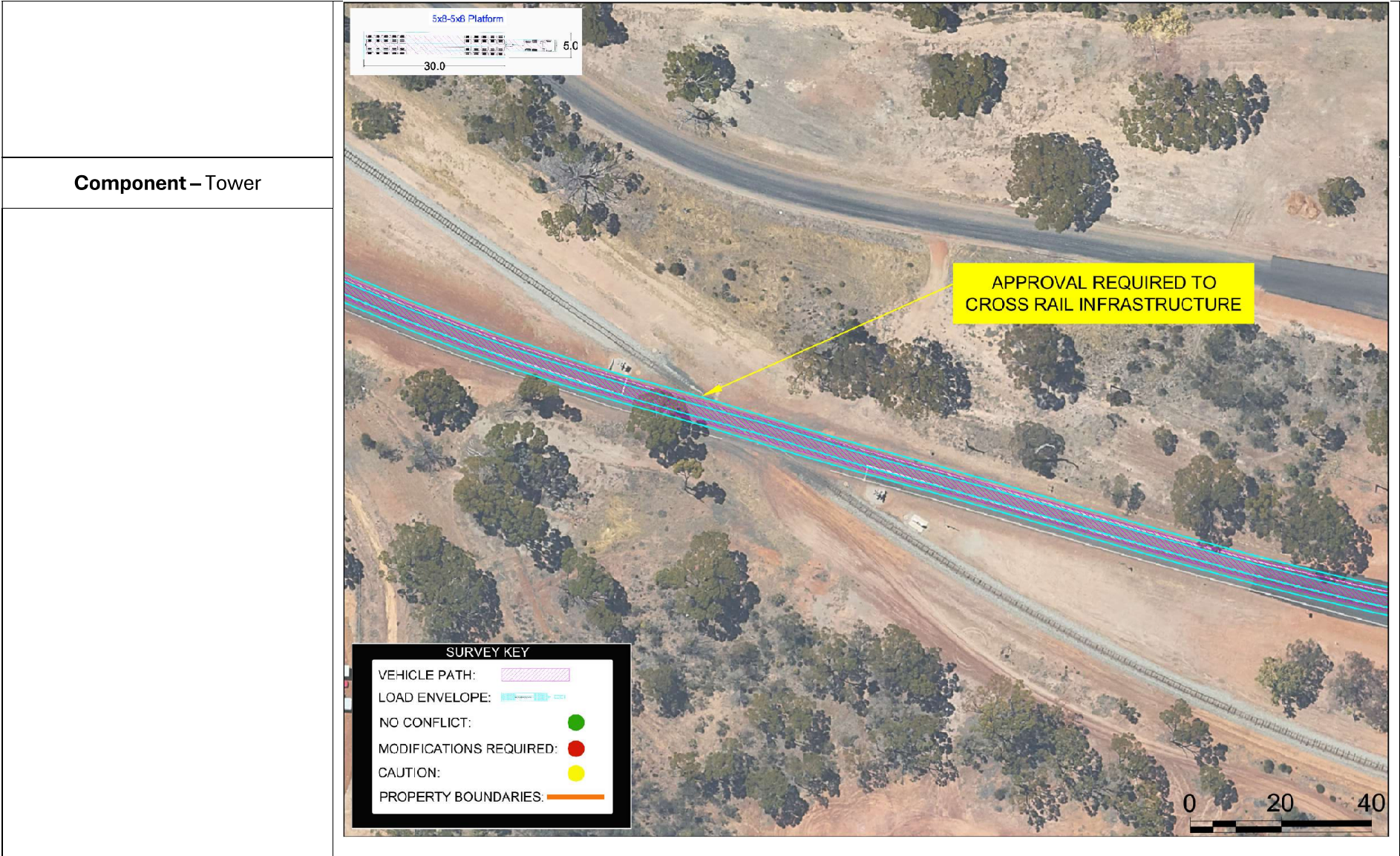
GPS:

<https://maps.app.goo.gl/ZQGbYCwreCx3eaJA>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

217.0 Km's

Absolon Street onto Ebsary Road

Arthur River, WA

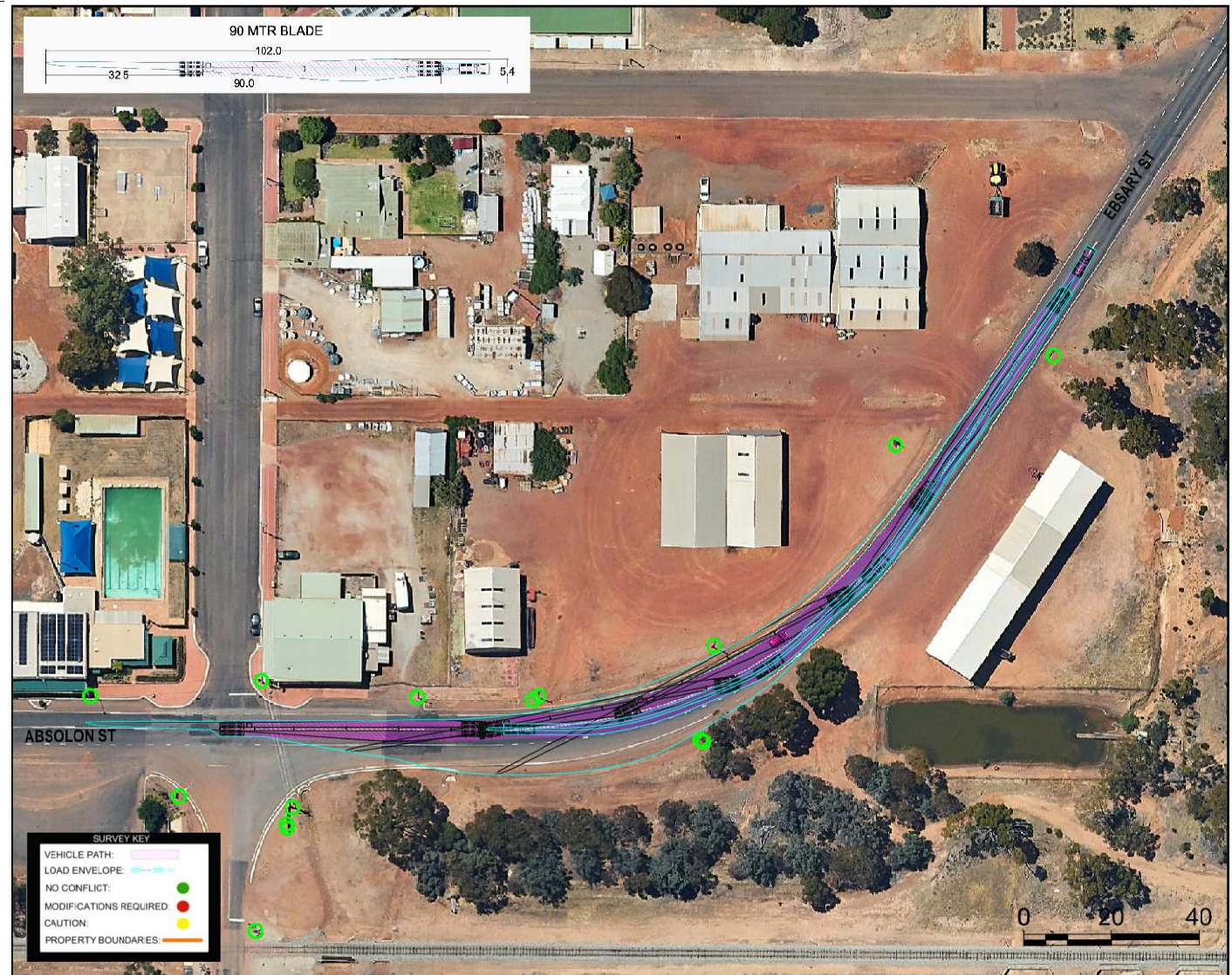
Component – Blade

PROCEDURE: Left hand bend

MODIFICATIONS REQUIRED: Nil

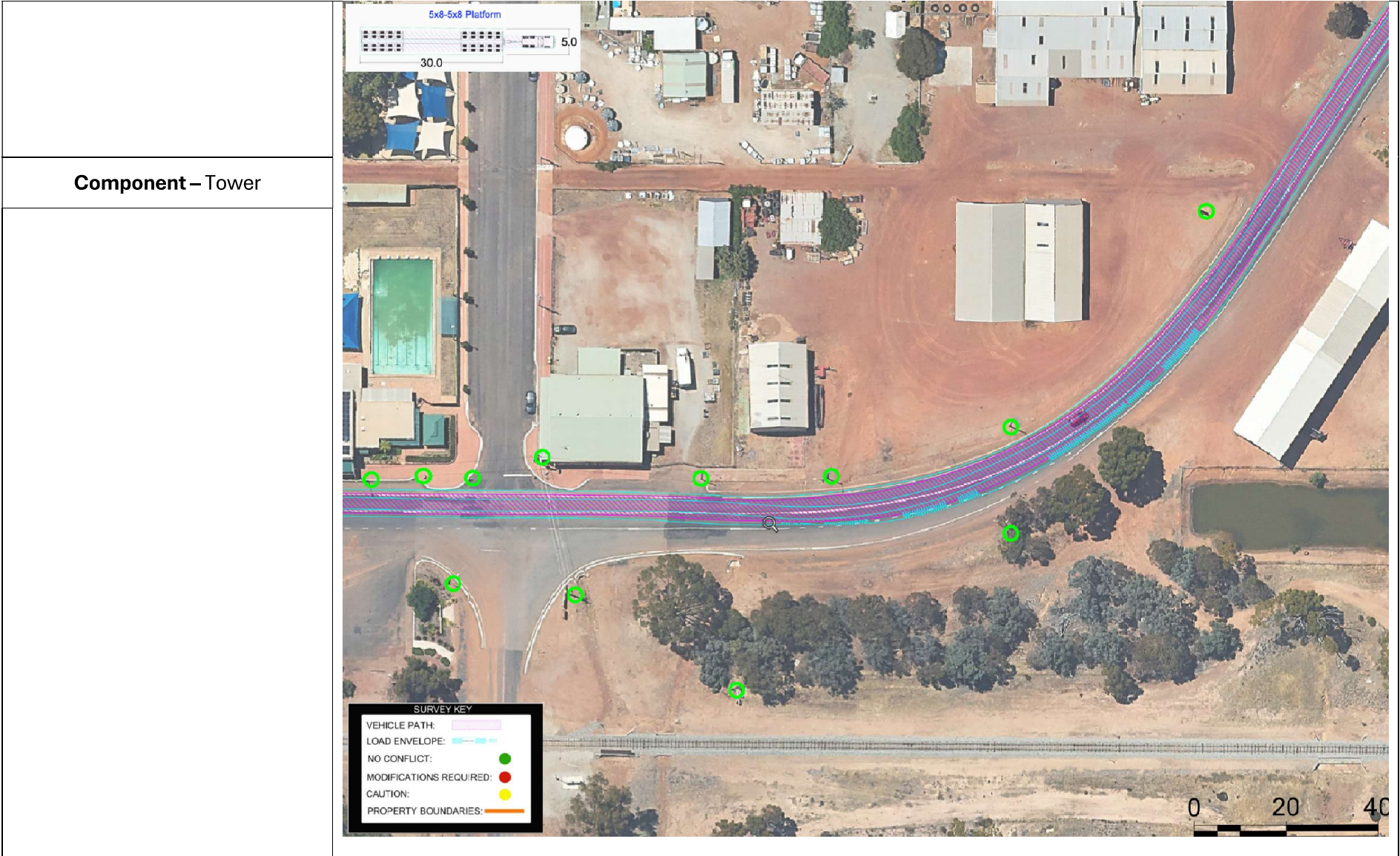
GPS:

<https://maps.app.goo.gl/XpZPUH6S7kJEPUHE6>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

225.0 Km's

Dumbleyung-Lake Gracie Road
at Tincurrin Road

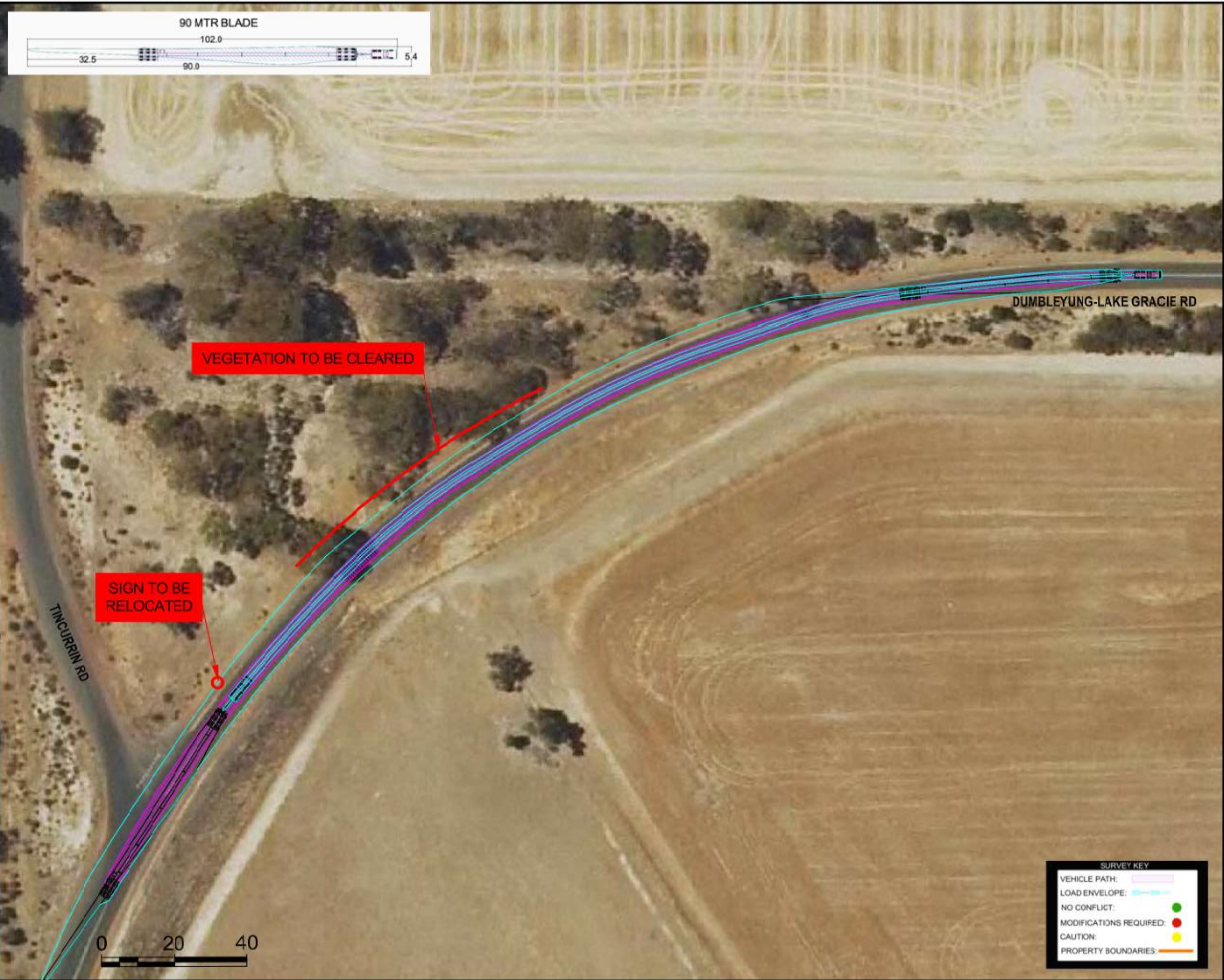
Dumbleyung, WA

Component – Blade

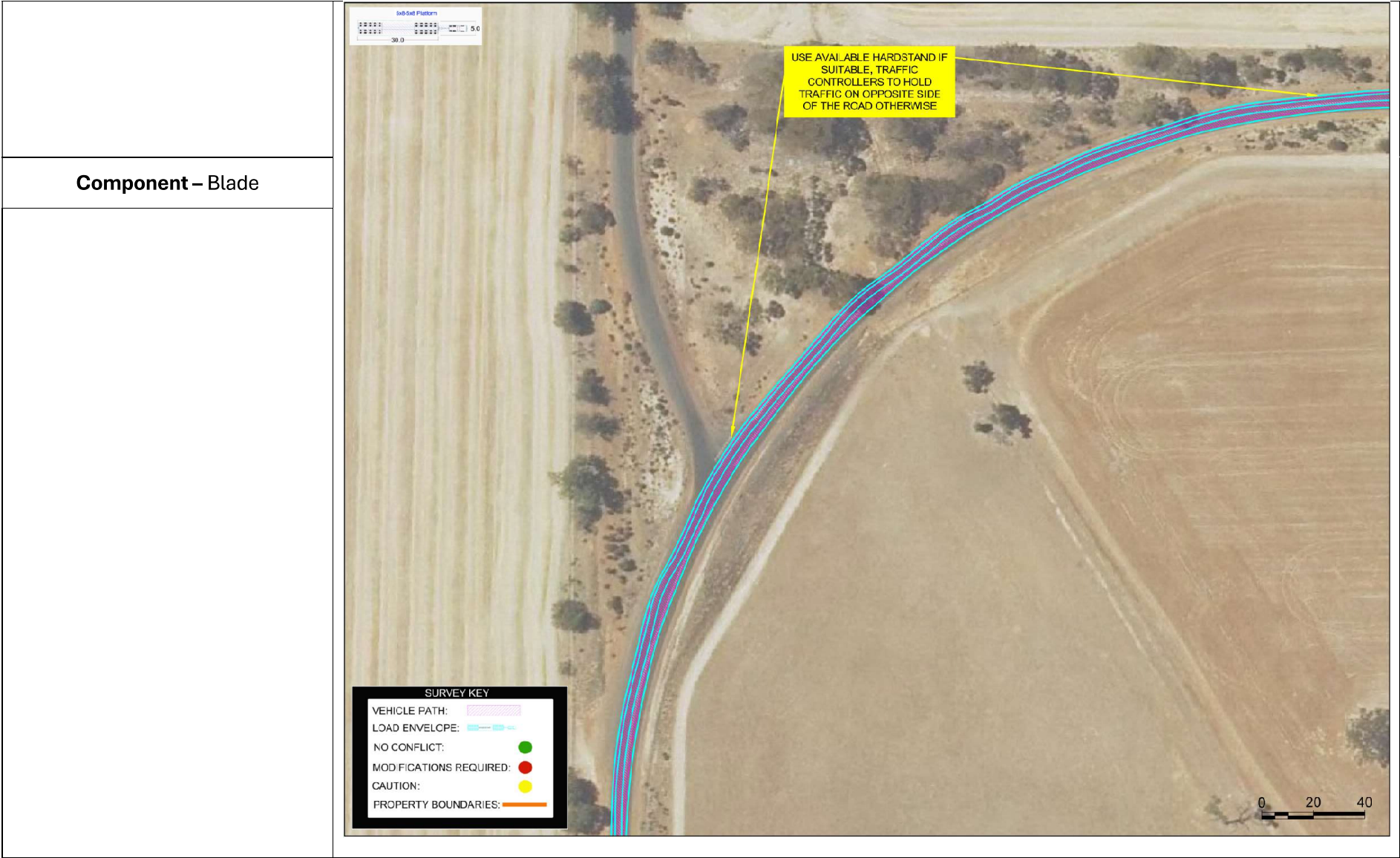
PROCEDURE: Right-hand bend

MODIFICATIONS REQUIRED:
Vegetation to be cleared

GPS:
<https://maps.app.goo.gl/8h1KozFz87JbycYL9>



OSOM ROUTE ASSESSMENT
TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

240.0 Km's

Dumbleyung-Lake Gracie Road
onto Rabbit Proof Fence Road

North Moulyinning, WA

Component – Blade

PROCEDURE: Left-hand turn

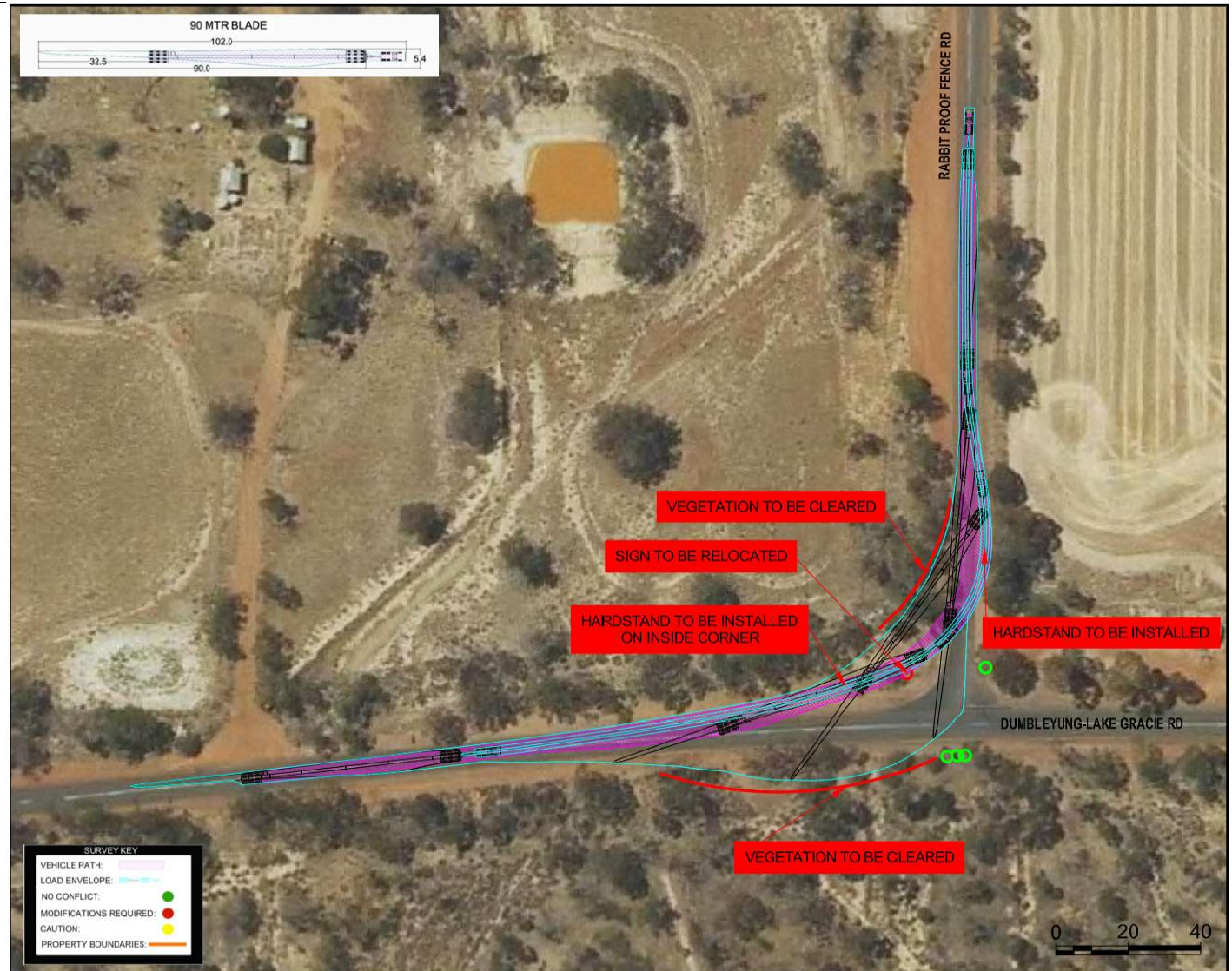
MODIFICATIONS REQUIRED:

Vegetation to be cleared, sign to be removed, and hardstand to be installed.

NOTE: Corner to be checked to confirm what works took place for King's rock windfarm 80 metre blade.

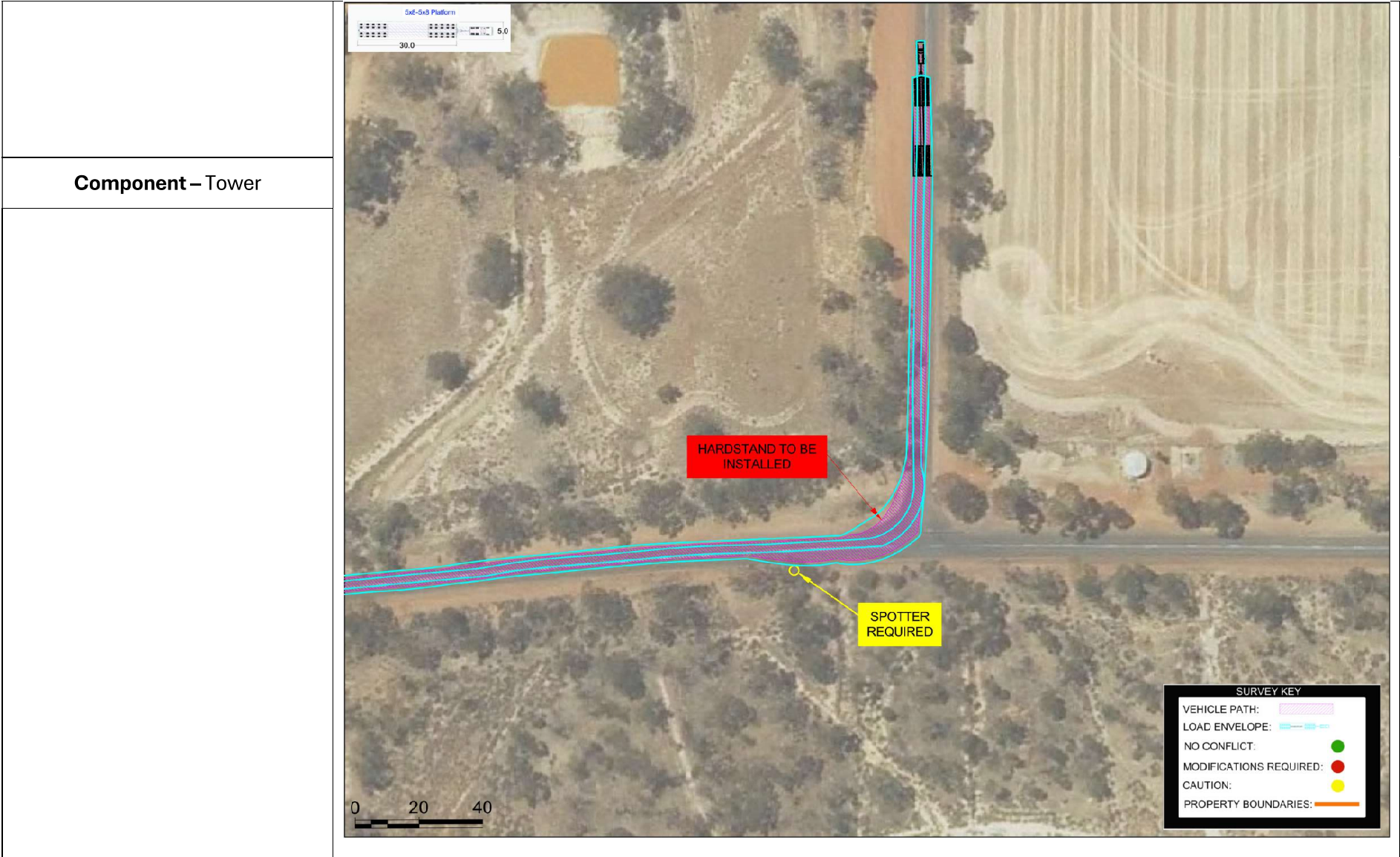
GPS:

<https://maps.app.goo.gl/m4wMgSTrxmjVg276>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

277.0 Km's

Forrest Street onto Dudinin Road

Dudinin, WA

Component – Blade

PROCEDURE: Left-hand turn

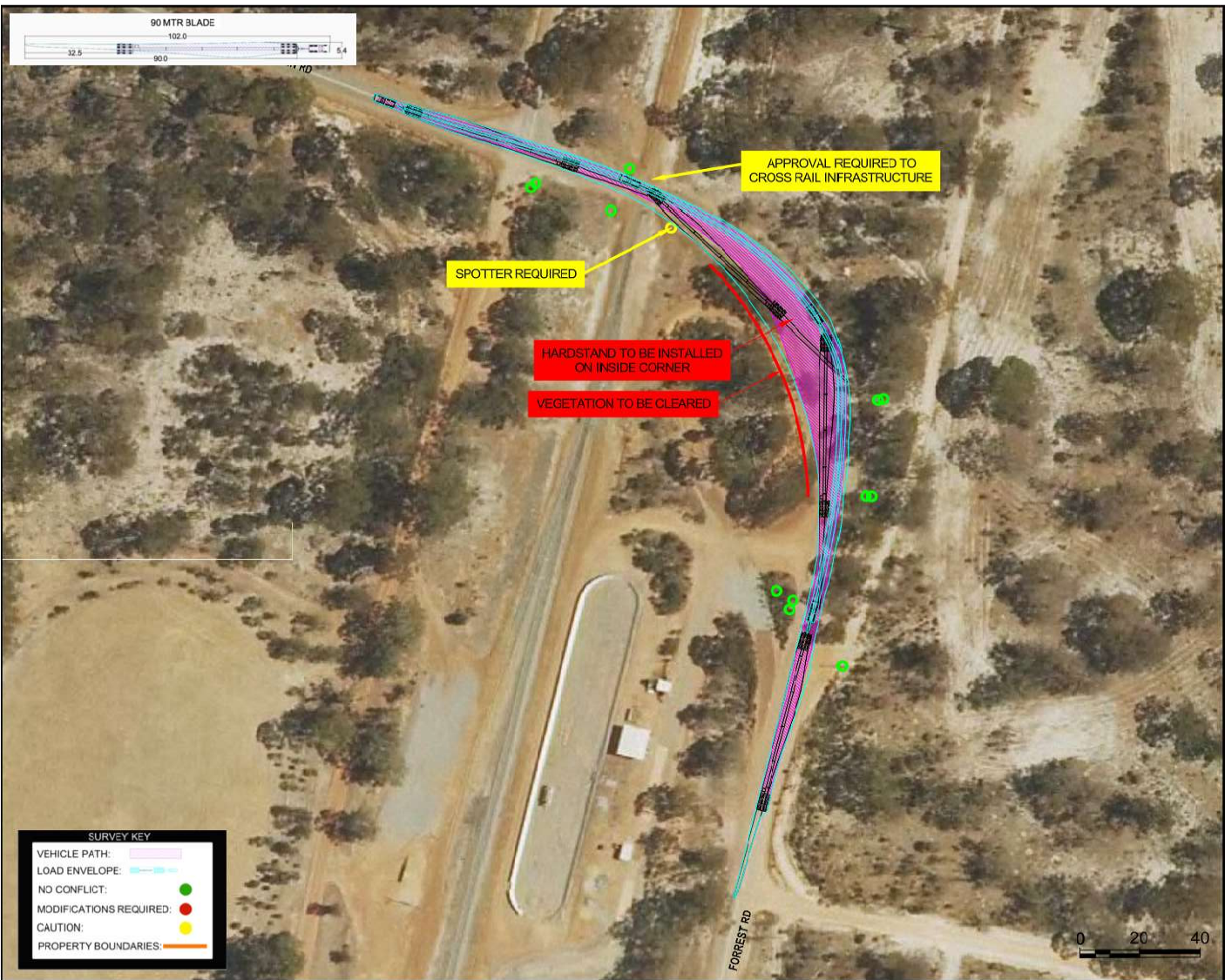
MODIFICATIONS REQUIRED:

Vegetation to be cleared.

COMMENTS: Approval required to cross rail infrastructure.

GPS:

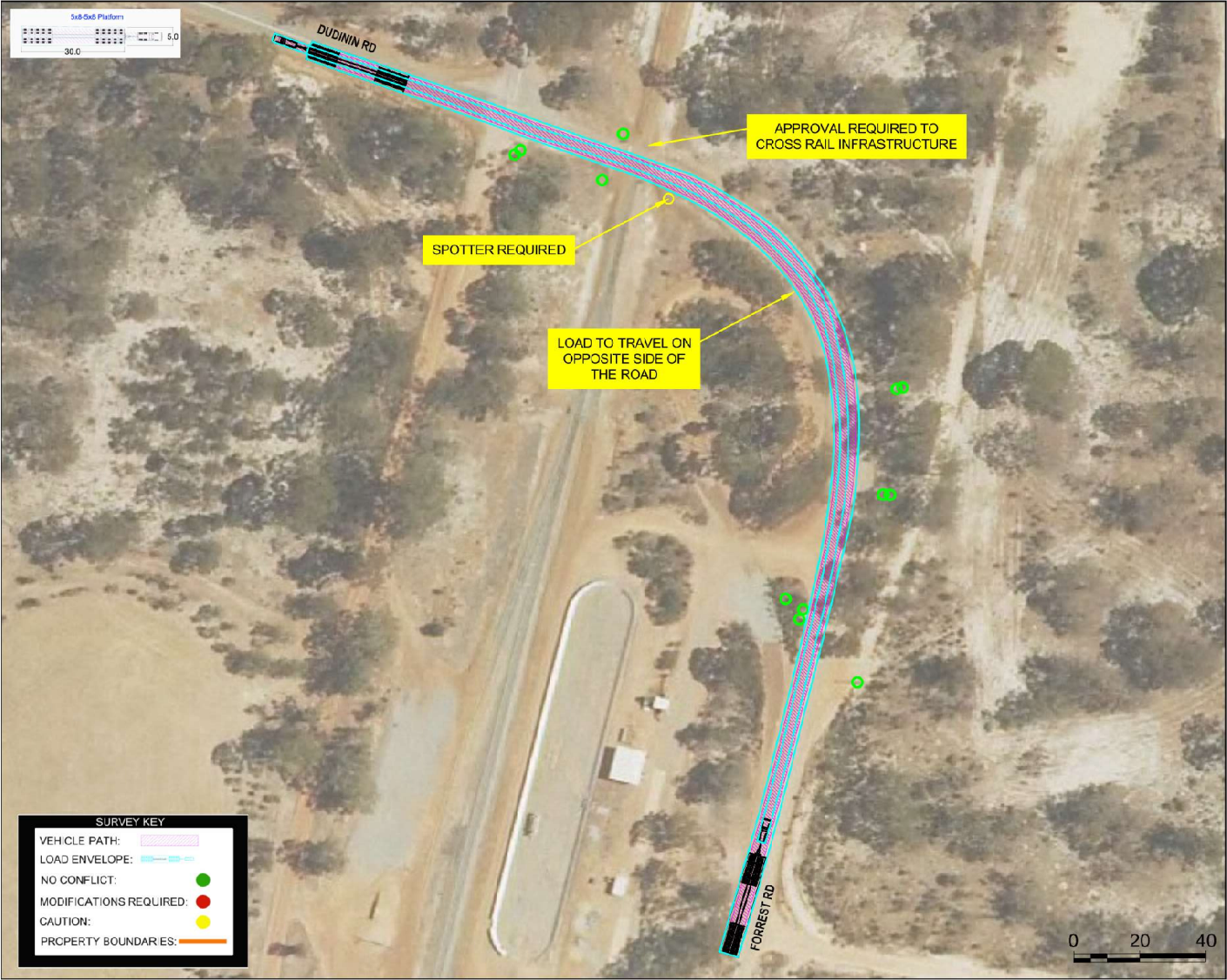
<https://maps.app.goo.gl/63oprTZpDJwt1BmW7>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

287.0 Km's

Rabbit Proof Fence Road onto
Narrogin-Kondinin Road

Wogolin, WA

Component – Blade

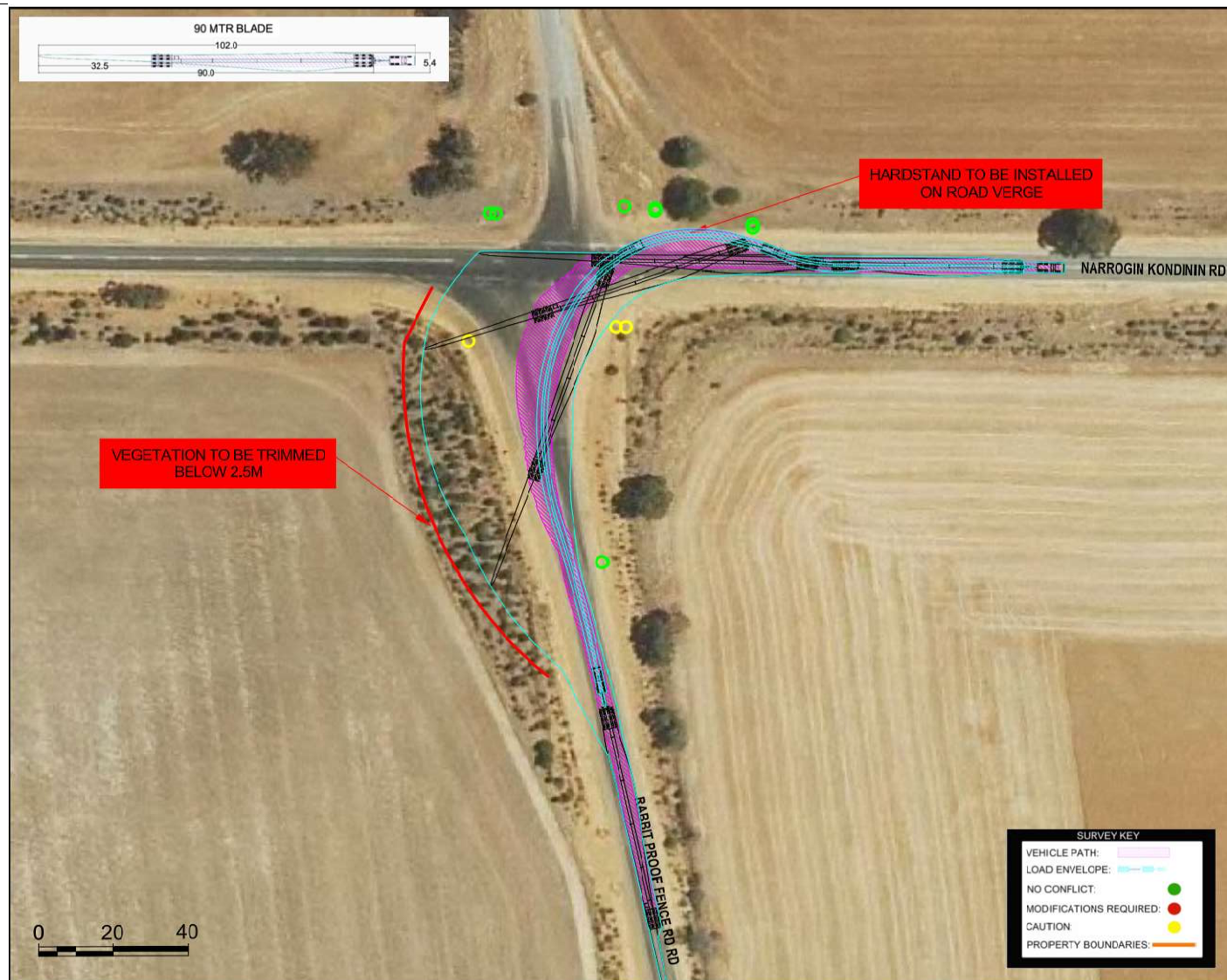
PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed on inside
corner and vegetation to be removed.

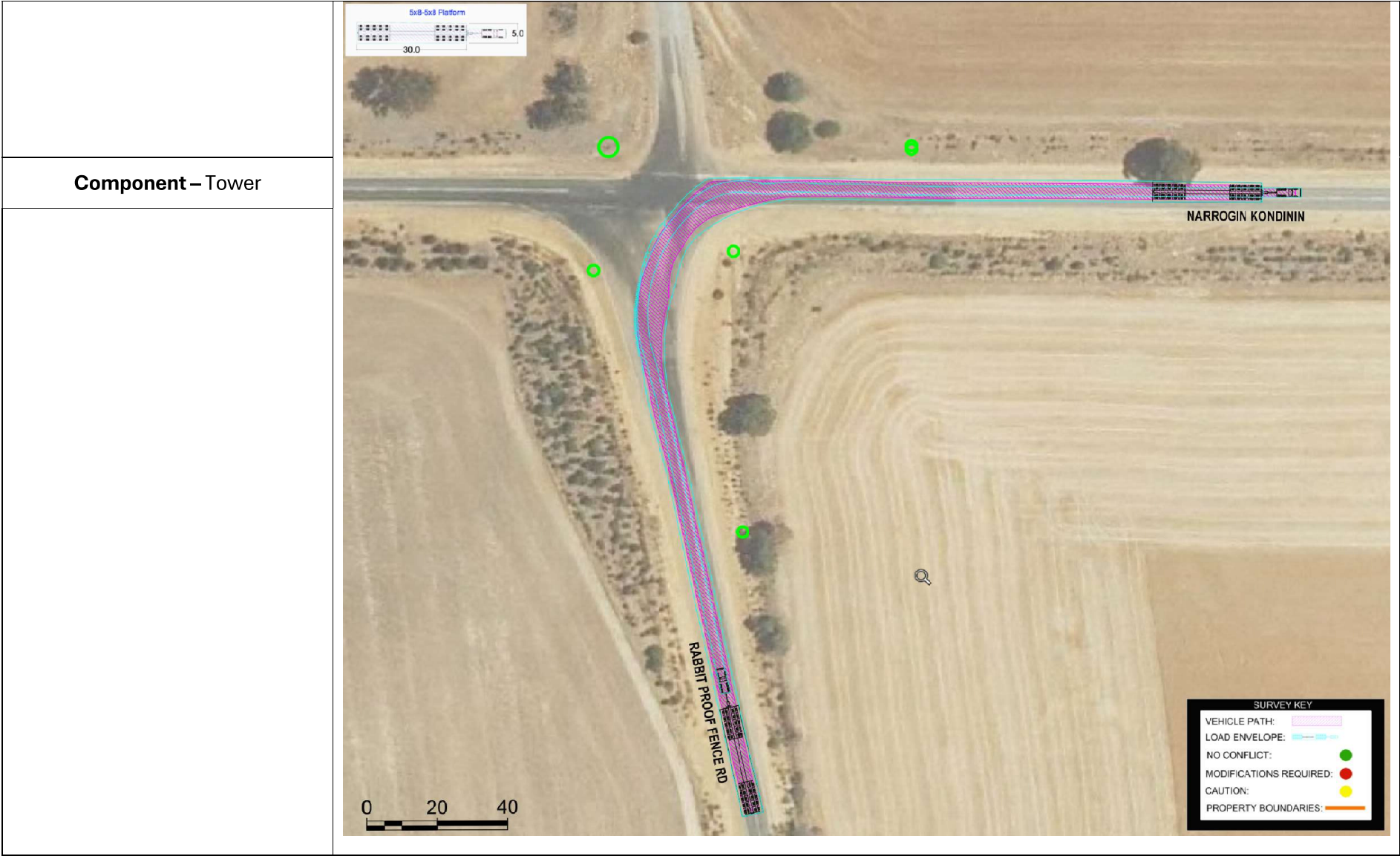
GPS:

<https://maps.app.goo.gl/ceYDKegKCSVDDDuQ8>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

300.0 Km's

Narrogin-Kondinin Road

Jitaming, WA

Component – Blade

PROCEDURE: S-bend

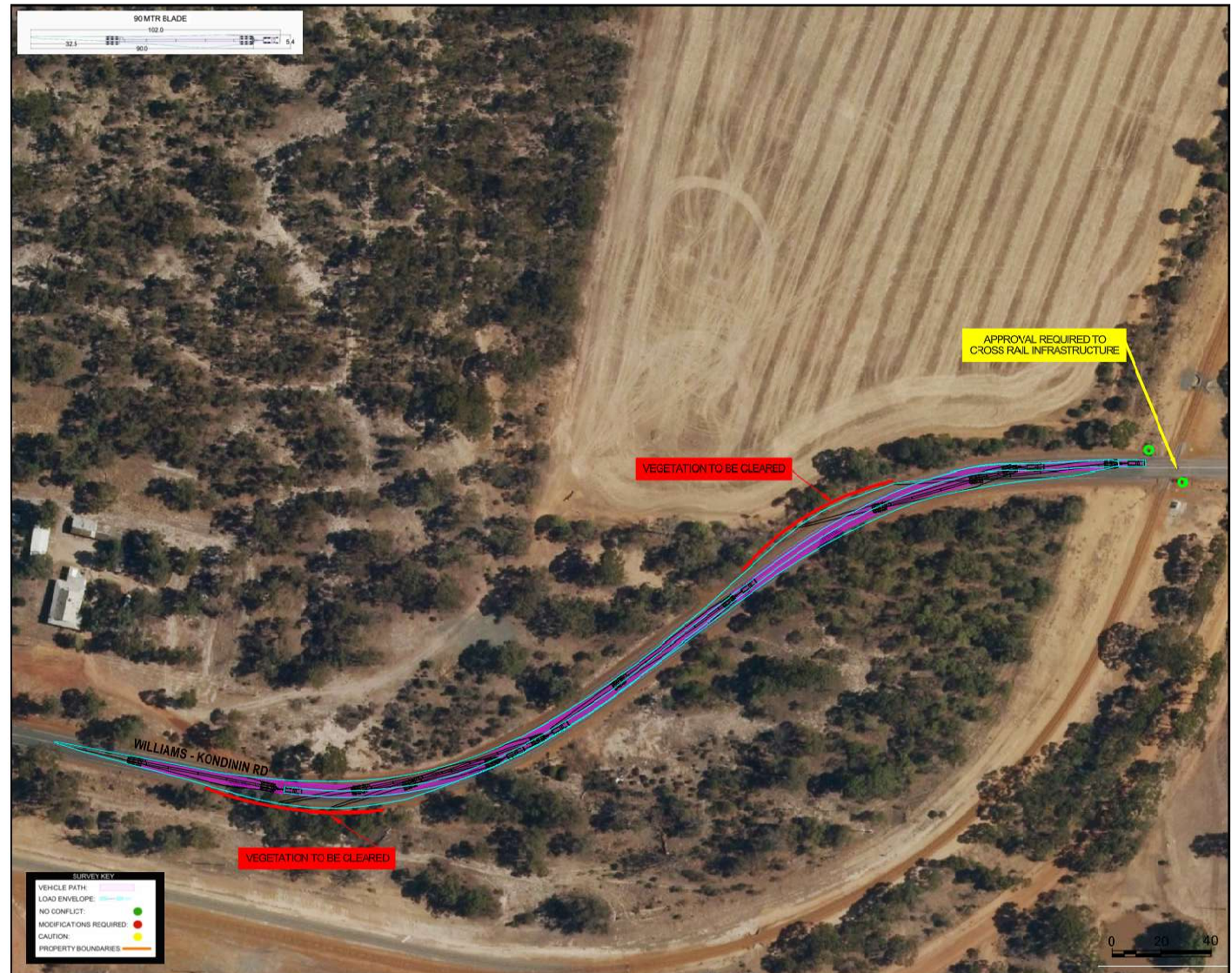
MODIFICATIONS REQUIRED:

Vegetation to be cleared

COMMENTS: Approval required to cross rail infrastructure.

GPS:

<https://maps.app.goo.gl/QOidHzfoKjyZv2s18>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

322.0 Km's

Johnston Street onto Narrogin-
Kondinin Road via Kulin-Lake
Grace Road

Kulin, WA

Component – Blade

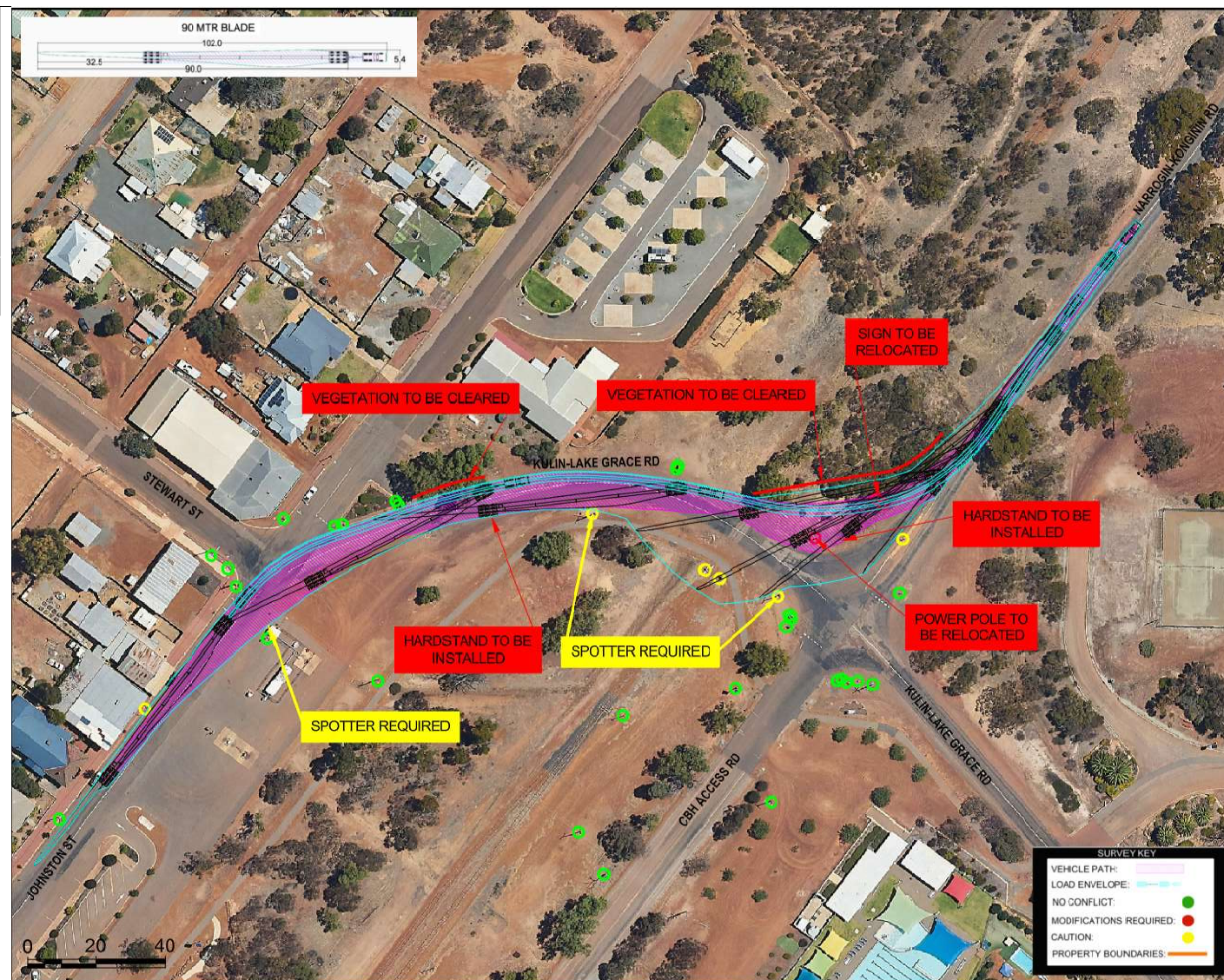
PROCEDURE: Left- and right-hand turns

MODIFICATIONS REQUIRED:

Vegetation to be cleared, hardstand to be installed, power pole and sign to be relocated

GPS:

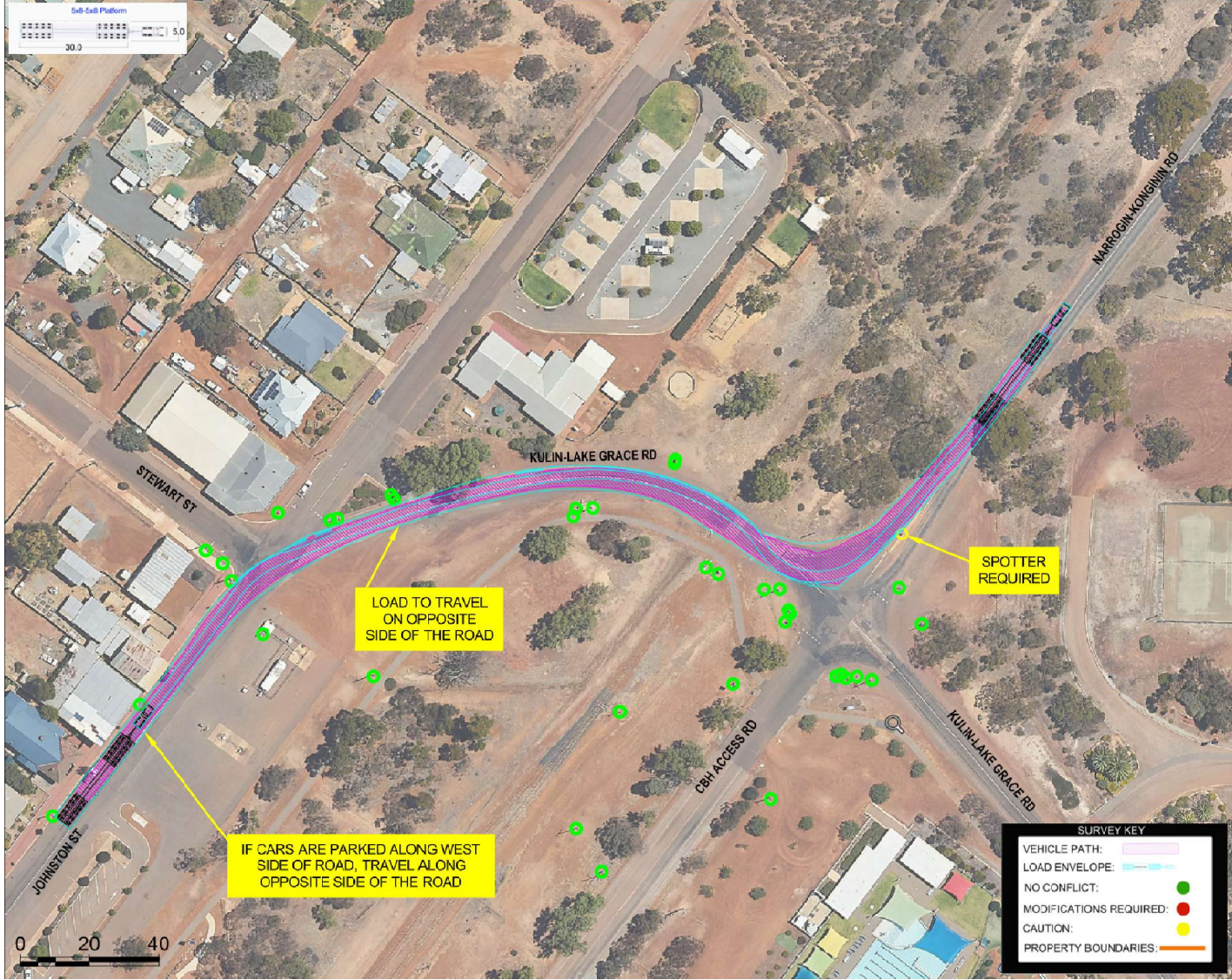
<https://maps.app.goo.gl/h86kfcZ1sYk3BZi39>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

Component – Tower



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

350.0 Km's

Corrigin-Kondinin Road onto
Kondinin-Naremben Road

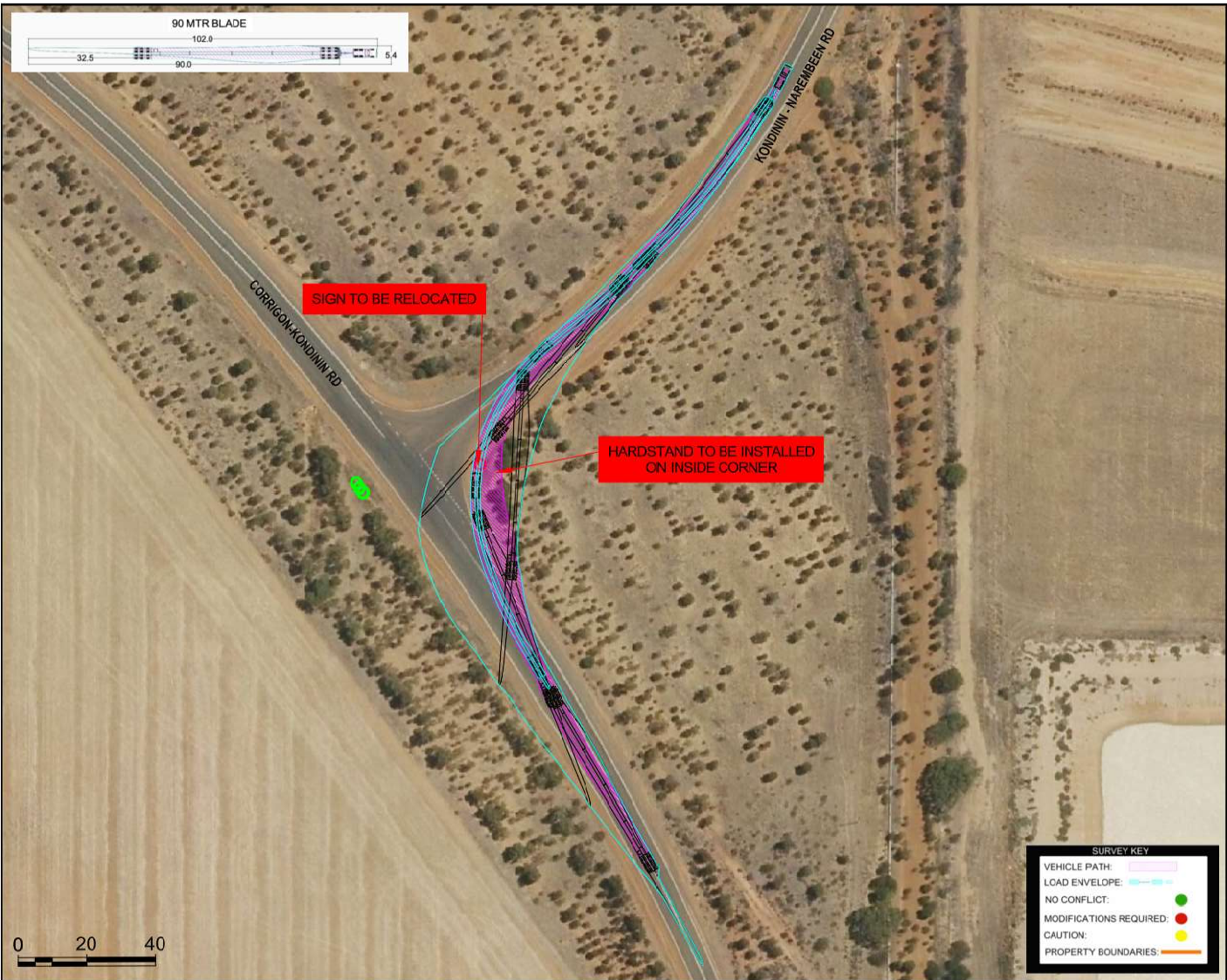
Kondinin, WA

Component – Blade

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED: Sign to be
relocated

GPS:
<https://maps.app.goo.gl/Y9Ptwen8E3FVWfcm7>



OSOM ROUTE ASSESSMENT
TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

374.0 Km's

Kondinin-Naremben Road

South Kumminin, WA

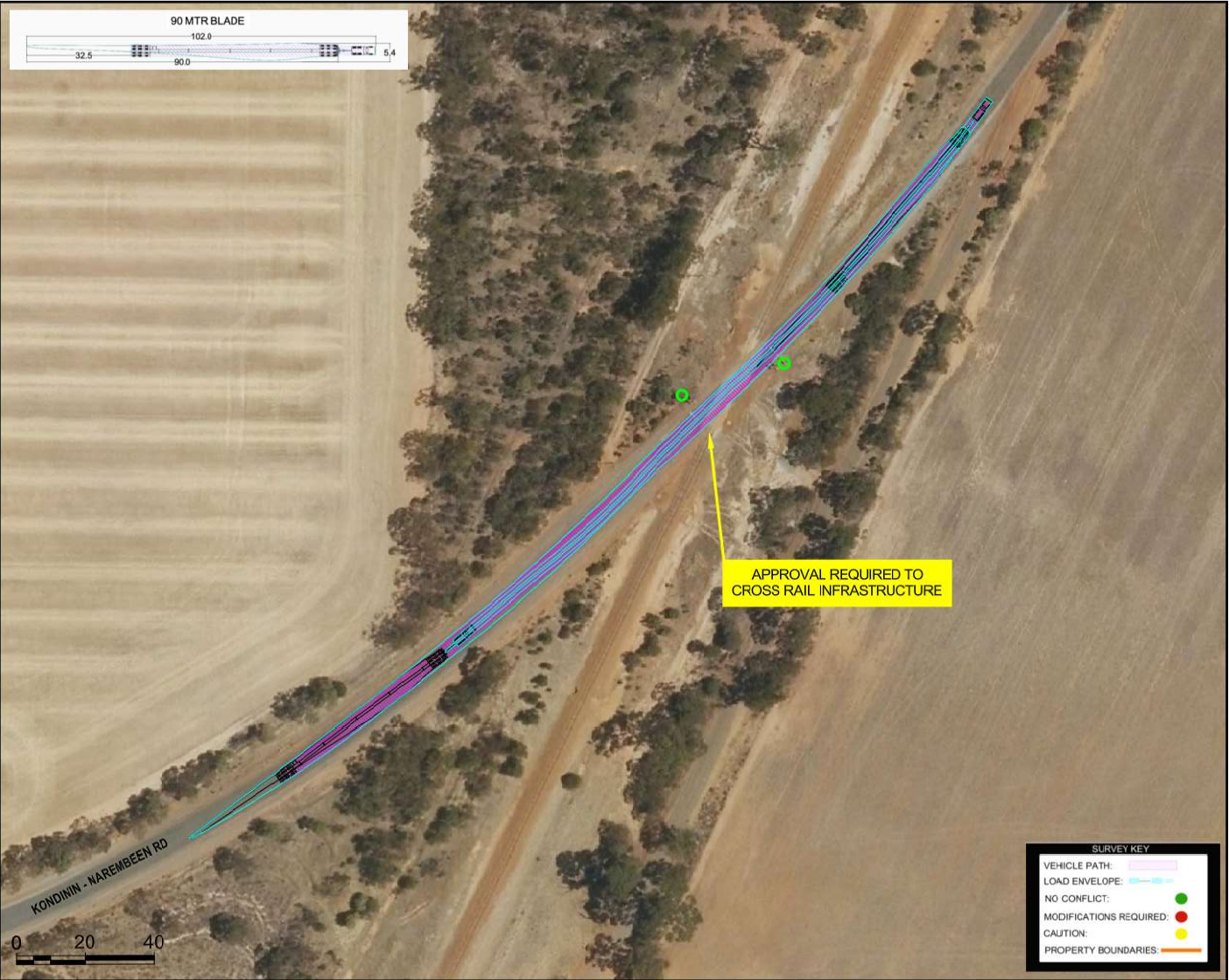
Component – Blade

PROCEDURE: S-bend

MODIFICATIONS REQUIRED: Nil

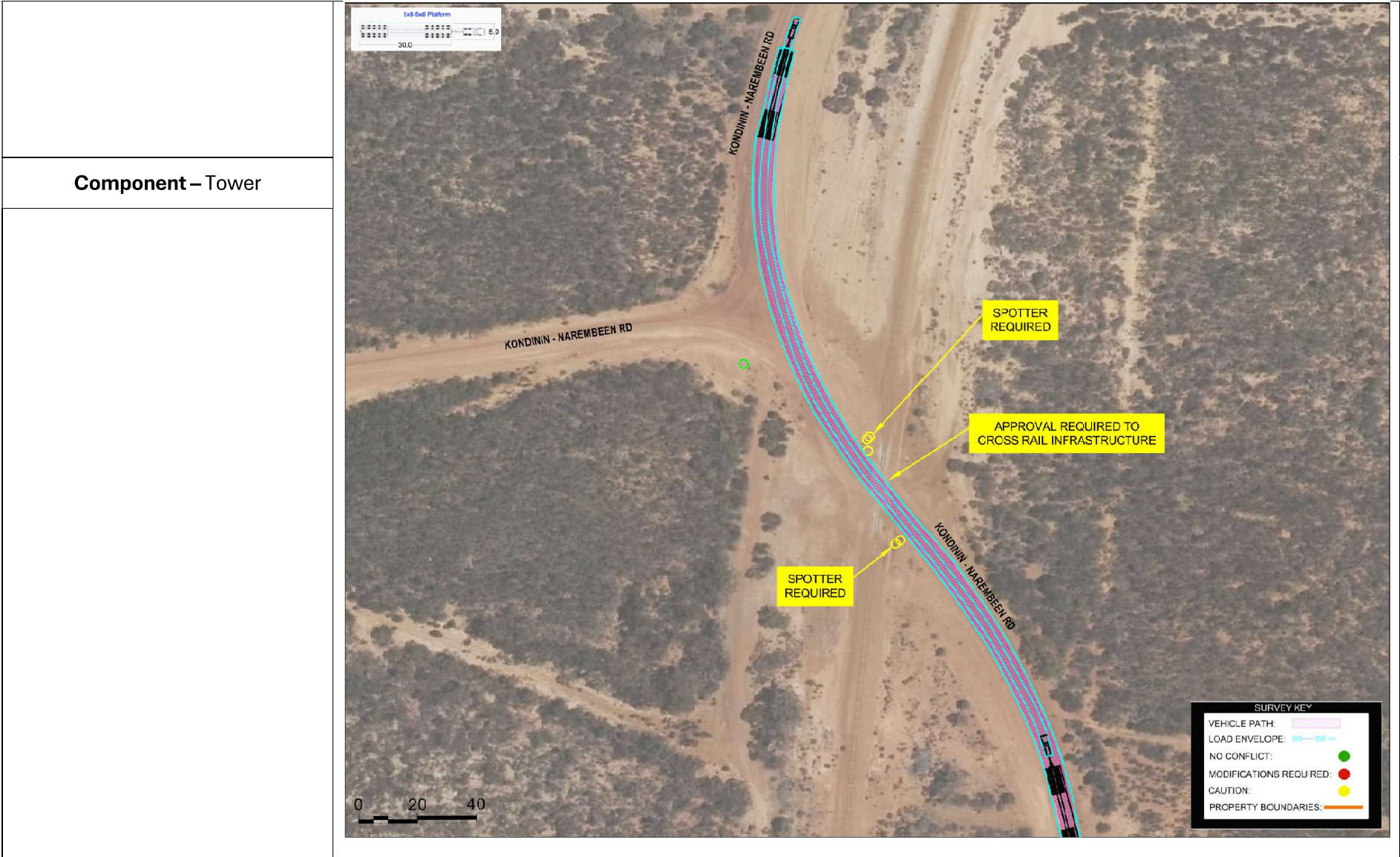
COMMENTS: Approval required to cross rail infrastructure.

GPS:
<https://maps.app.goo.gl/IR6hAEcDaMVyvjTH9>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

403.0 Km's

Frick Road onto Merredin-
Naremben Road

Wadderin, WA

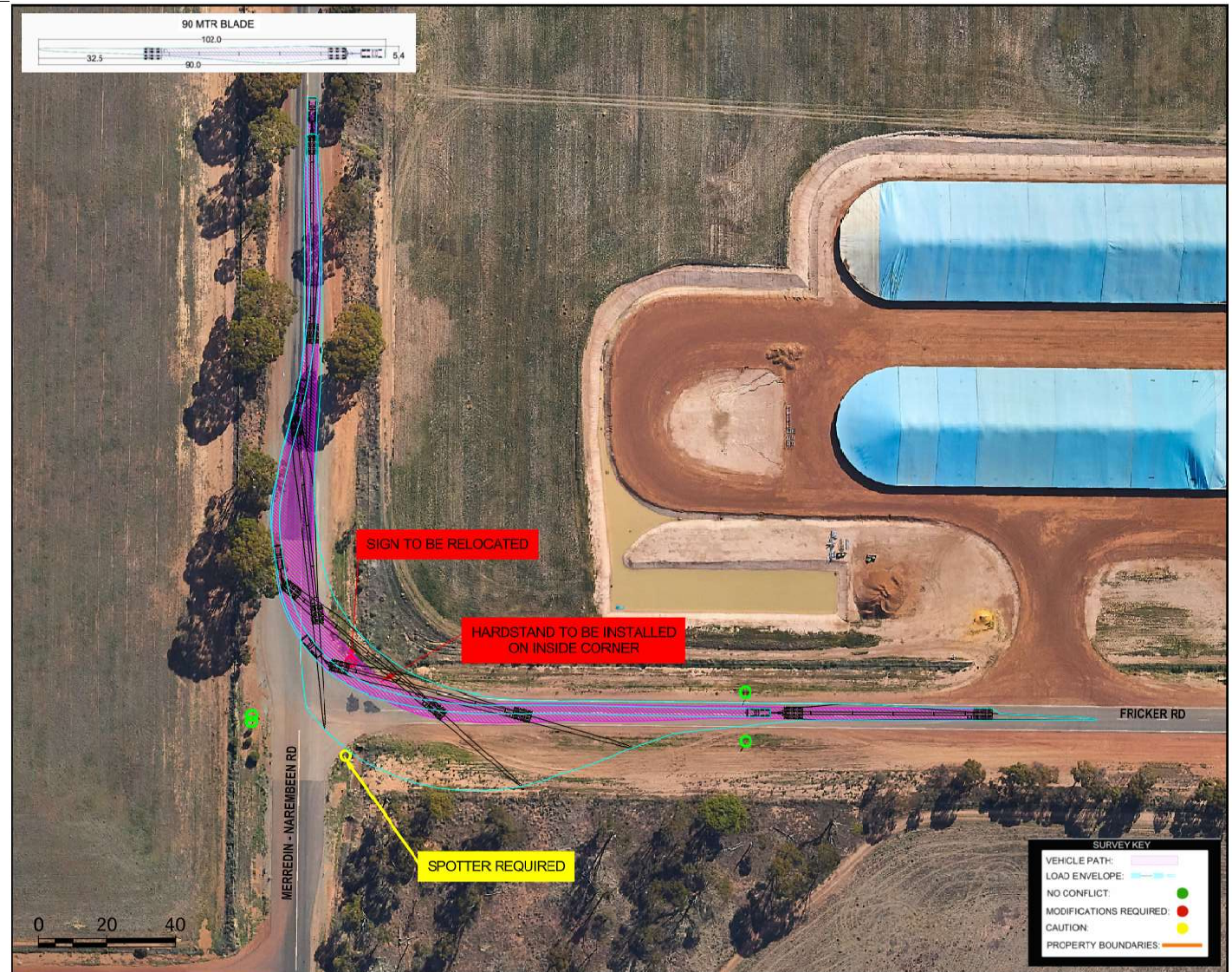
Component – Blade

PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED: Sign to be
relocated.

GPS:

<https://maps.app.goo.gl/9MACPUMFgxhiyqLz5>



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



8.0 Route 1 Review

Following a comprehensive route study and evaluation of all available options, the route, in its current state, will require moderate upgrades before it can be considered fit for purpose for transporting the proposed wind turbine blades.

The following key considerations apply should the project proceed with this route.

SWEPT PATH

- Thirteen pinch points have been identified that will require works, including the relocation of light poles and signage, as well as the addition of hardstand areas and vegetation trimming and removal.
- The Bunbury Outer Ring Road project has been completed and will not conflict with the transport programme; however, additional hardstand will still be required at one of the roundabouts on Raymond Road.
- Long radius bends identified along the route should be monitored, with vegetation clearing carried out in advance of component movements.
- Corners flagged in this report as requiring remediation should be investigated early in the planning phase to prevent delays or route rejections.

VERTICAL ALIGNMENT

- No vertical curve constraints were identified on Route 1.

OVERHEAD STRUCTURES

- No overhead structures are currently present on this route; however, a formal review with Main Roads WA is recommended.

OVERHEAD UTILITIES

- Early engagement with Western Power is strongly recommended to commission surveys and design work. For the most economical transport of the towers a 6.8-metre-high load route would be ideal. This would allow a 5.9 metre tower to be transported on top of a Platform trailer.

BRIDGES

- Although approximately 90% of this route has been used on previous projects, a formal bridge assessment will be required to confirm the route is suitable for the load weights outlined in this report.

RAIL ASSETS

- Thirteen locations along this route involve either level crossings or road bridges over rail infrastructure. Authority approvals will be required at each of these locations before loads can proceed.

VEGETATION

- A moderate amount of vegetation clearing is required at various locations as detailed in this report.

PAVEMENT

- Pavement along Route 1 is of highway standard for the entire route.

ROADWORKS

- Discussions with relevant government authorities should commence no later than 18 months prior to the planned turbine transport programme to identify any potential conflicts with scheduled roadworks. Once a Transport Management Plan (TMP) has been approved, confirmed movement dates must be communicated to all relevant stakeholders to ensure coordinated awareness of daily transport activities.
- The project team should conduct regular checks for any new road upgrades or changes not captured in this report. Where works have been carried out on any section of the route after the date of this report, a supplementary swept path analysis should be undertaken to confirm ongoing suitability.

KINGS ROCK WINDFARM UPGRADES

- Kings Rock windfarm are currently upgrading the route as far as Rabbit Proof Fence Road for the Kings Rock windfarm V162. Once these upgrades have taken place it would be advised to recheck the corners from the port up to Rabbit Proof Fence Road and see if these works would benefit the 90 metre blade.

9.0 Local Route A: Transport Assessment

COMPONENTS: All components

DISTANCE: 9.6 kilometres

GPS LINK: <https://maps.app.goo.gl/vLuQbo5gZmYPHUFs7>

VIA: Merredin-Naremben Road and Briant Road.

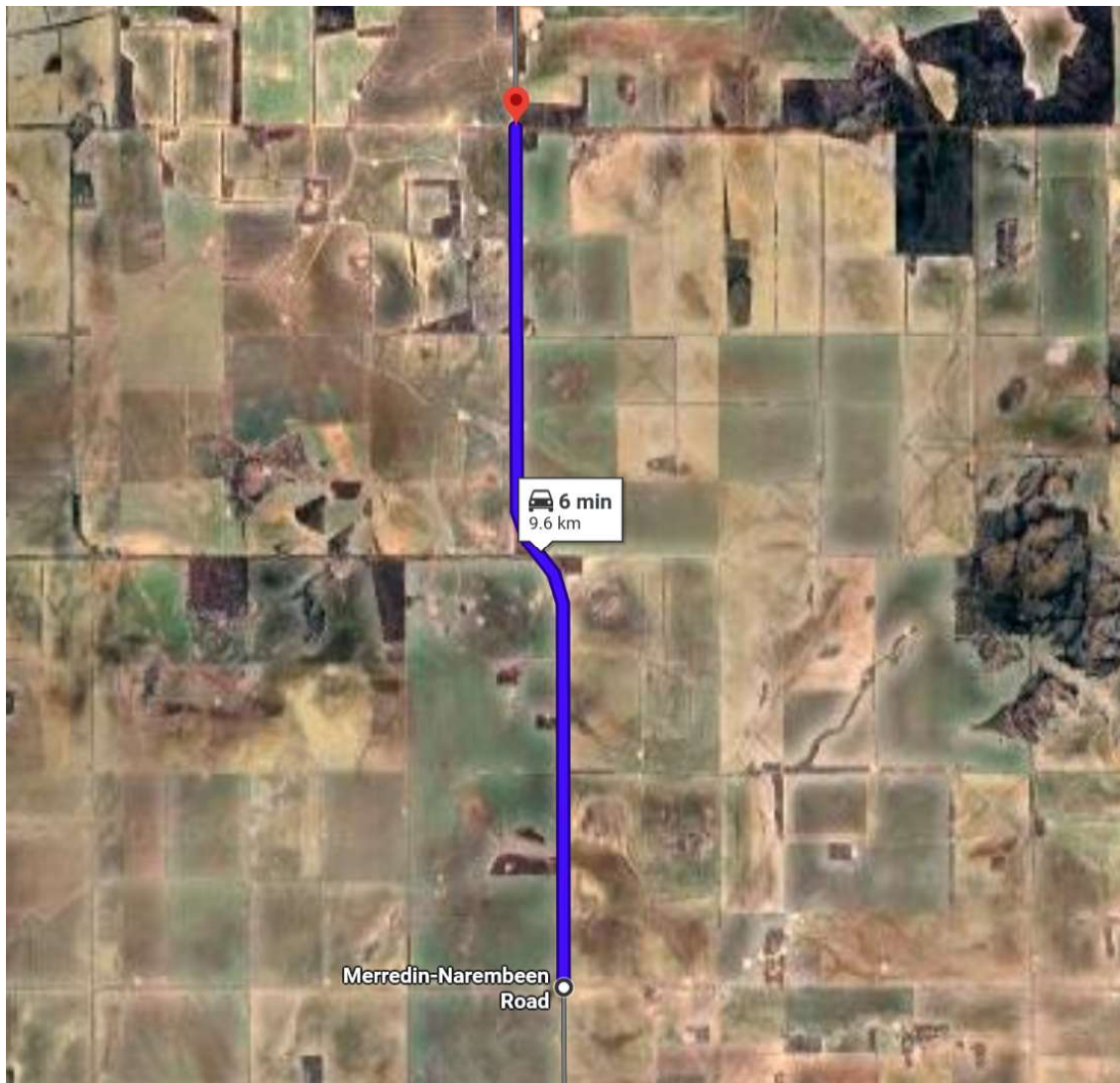


Figure 6: Route A map

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

ROUTE INDEX	
ROAD MODIFICATION	
CAUTION	
EMERGENCY PARKING	

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
0.0	Muntadgin	Merredin-Naremben Road onto Brissenden Road GPS link: https://maps.app.goo.gl/GBtaNpTxcut0ME9	Length: 60.0 metres Width: 6.5 metres	Right - hand turns	Hardstand to be installed at the inside corner, and fence to be modified Unsealed roads to be upgraded and maintained for the duration of deliveries.
2.4	Muntadgin	Merredin-Naremben Road onto Site Entry GPS link: https://maps.app.goo.gl/3HmNUvCKRWWy4gP3A	Length: 70.0 metres Width: 6.5 metres	Slight right-hand bend	Hardstand to be installed at the inside corner. Unsealed roads to be upgraded and maintained for the duration of deliveries.
4.8	Tandegin	Merredin-Naremben Road onto Depot Dam Road GPS link: https://maps.app.goo.gl/5gmG3FYzh59TtcZ0d	Length: 70.0 metres Width: 6.5 metres	Right-hand turn	Hardstand to be installed at the inside corner. Unsealed roads to be upgraded and maintained for the duration of deliveries.
7.3	Norpa	Merredin-Naremben Road onto Site Entry GPS link: https://maps.app.goo.gl/BDercY5SmY8t43eX3	Length: 80.0 metres Width: 6.5 metres	Right-hand turn	Hardstand to be installed at the inside corner; vegetation to be cleared. Unsealed roads to be upgraded and maintained for the duration of deliveries.
9.6	Norpa	Merredin-Naremben Road onto Briant Road GPS link: https://maps.app.goo.gl/XbJEbNgEG17bRyC3	Length: 80.0 metres Width: 6.5 metres	Right-hand turn	Hardstand to be installed at the inside corner, vegetation to be cleared. Unsealed roads to be upgraded and maintained for the duration of deliveries.

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

0.0 Km's

Merredin-Naremben Road onto
Brissenden Road

Muntadgin, WA

Component – Blade

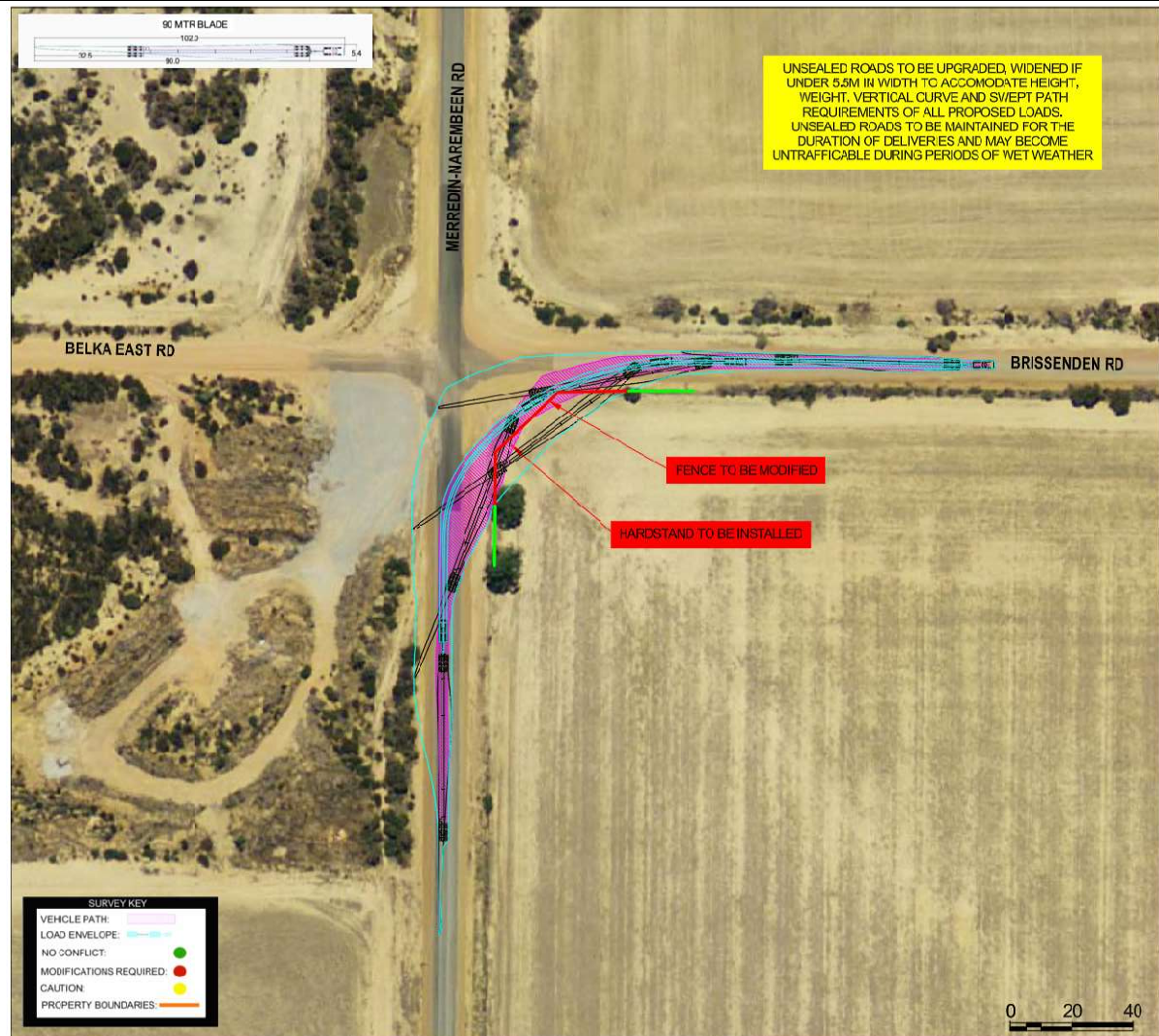
PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside corner, and fence to be modified
Unsealed roads to be upgraded and maintained for the duration of deliveries.

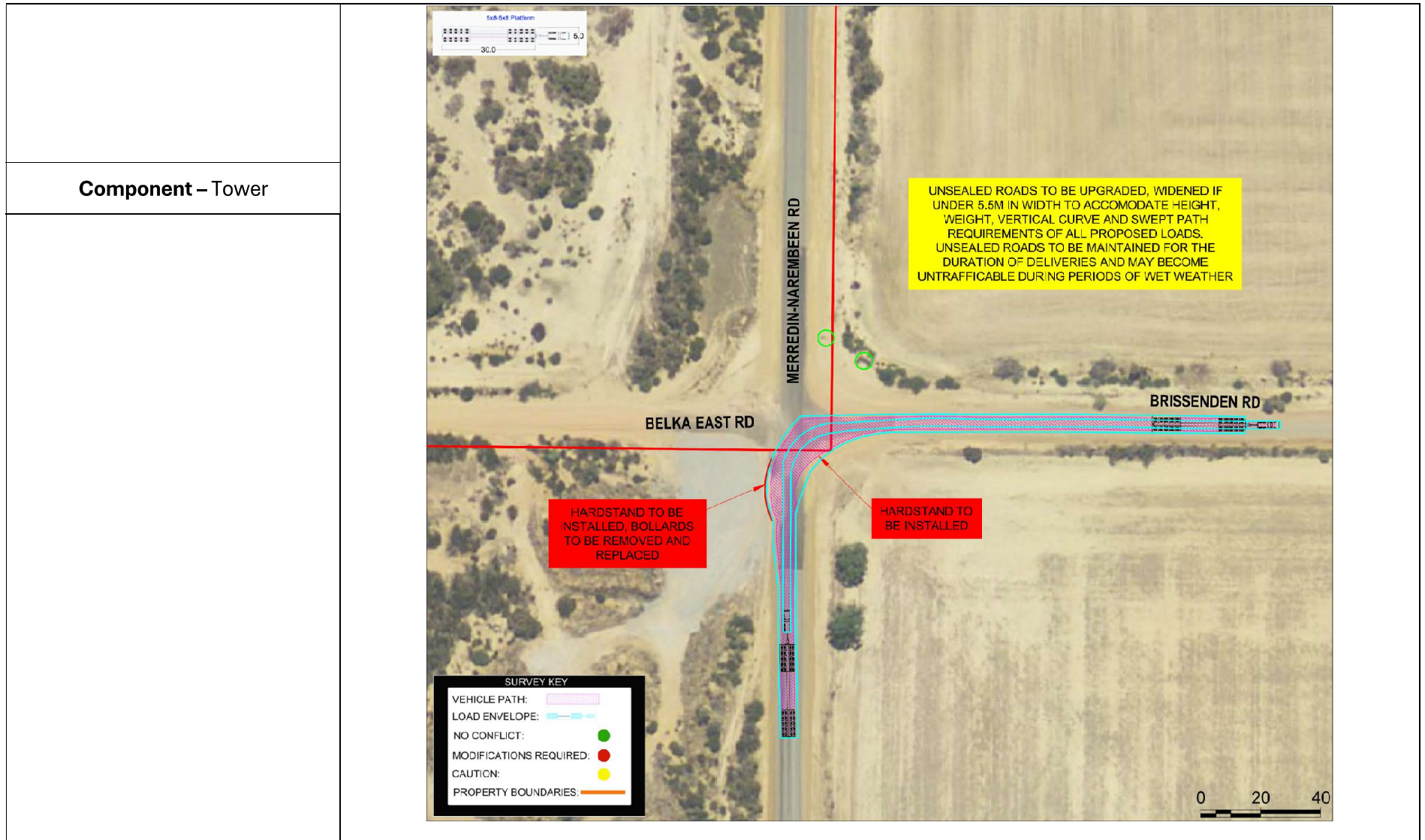
GPS:

<https://maps.app.goo.gl/GBJtaNpTxvrt9MF8>



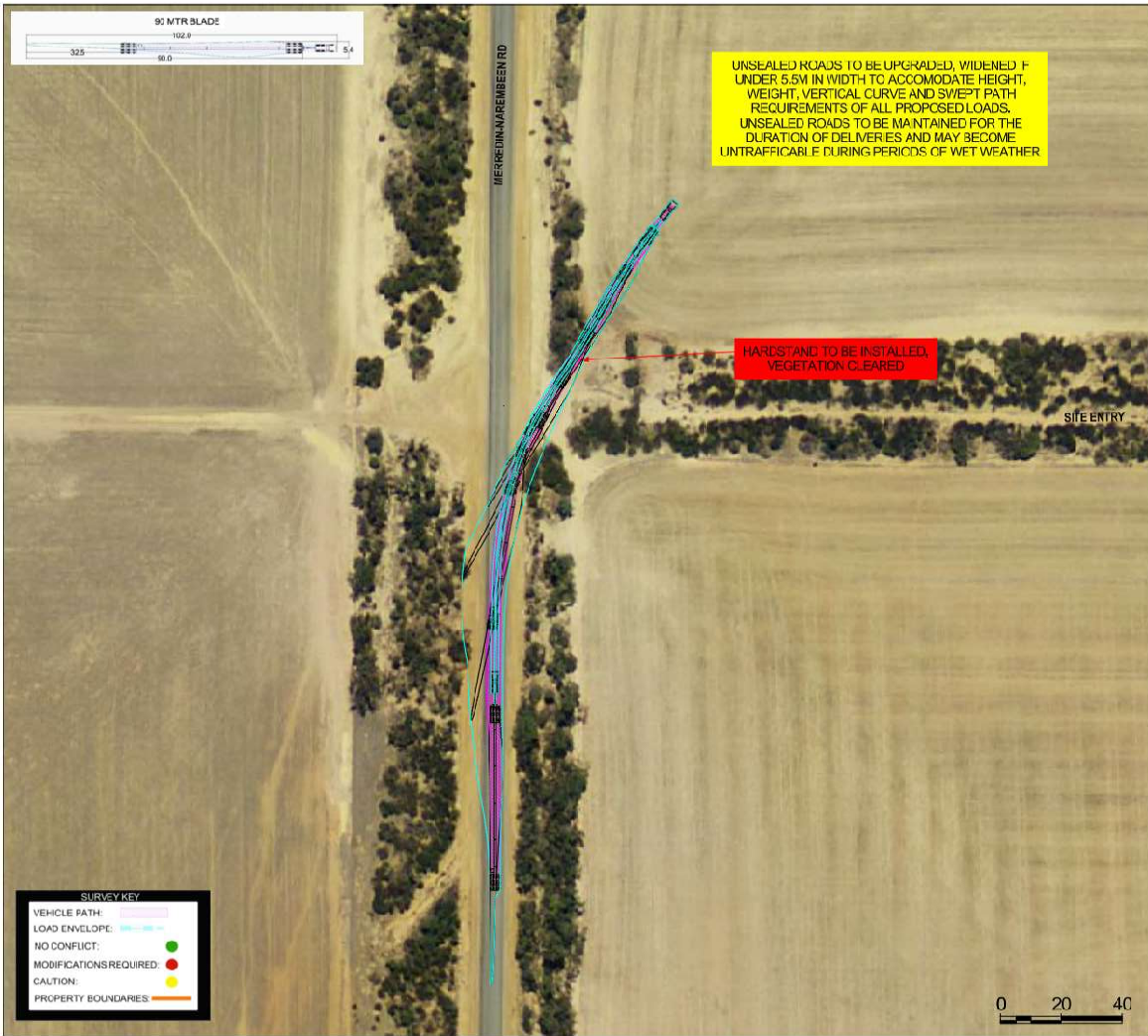
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



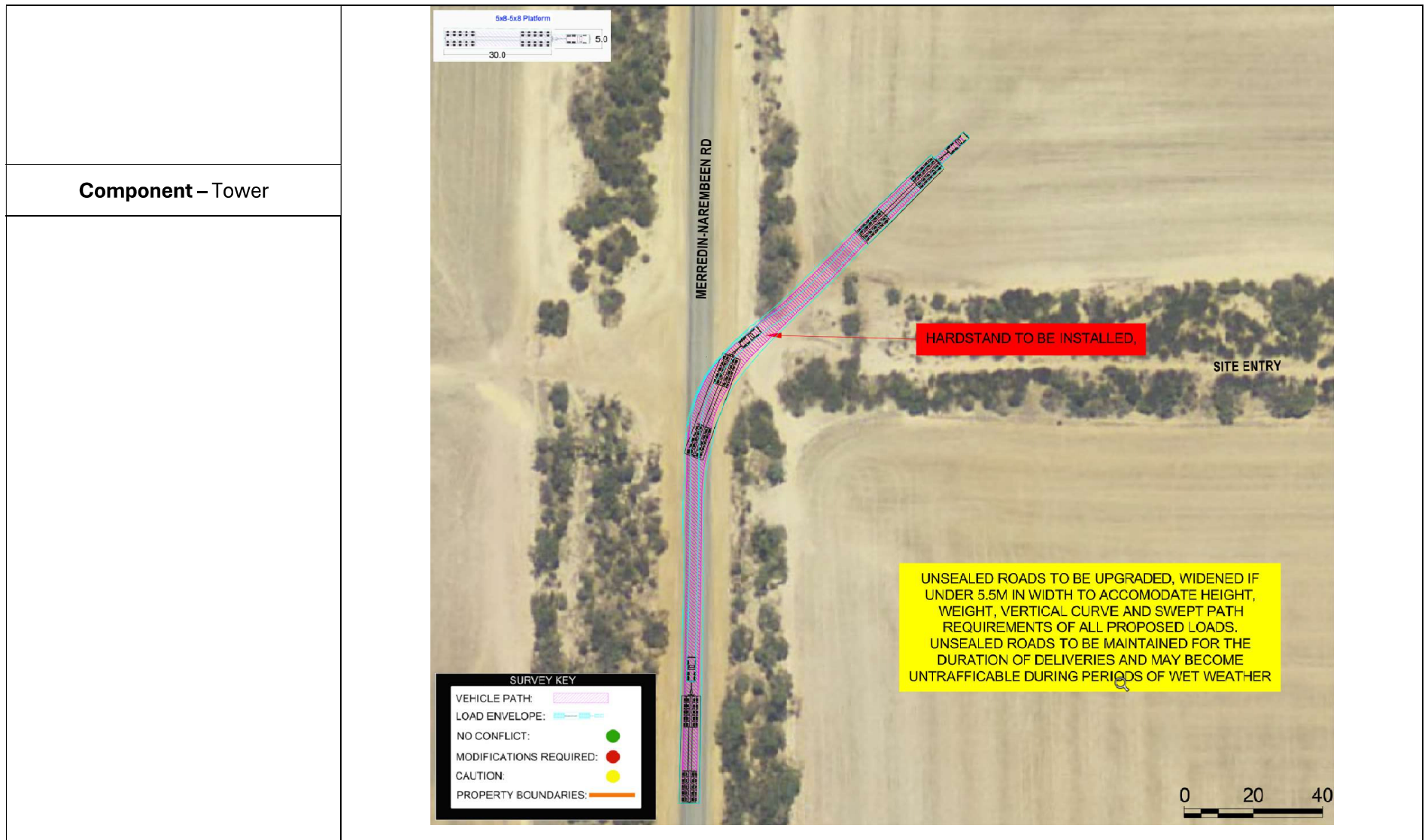
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

2.4 Km's Merredin-Narembeen Road onto Site Entry (1) Muntadgin, WA	 90 MTR BLADE UNSEALED ROADS TO BE UPGRADED, WIDENED IF UNDER 5.5M IN WIDTH TO ACCOMMODATE HEIGHT, WEIGHT, VERTICAL CURVE AND SWEEP PATH REQUIREMENTS OF ALL PROPOSED LOADS. UNSEALED ROADS TO BE MAINTAINED FOR THE DURATION OF DELIVERIES AND MAY BECOME UNTRAFFICABLE DURING PERIODS OF WET WEATHER HARDSTAND TO BE INSTALLED, VEGETATION CLEARED SITE ENTRY MERREDIN-NAREMBEEN RD 0 20 40 SURVEY KEY - VEHICLE PATH: (Cyan line) - LOAD ENVELOPE: (Magenta area) - NO CONFLICT: (Green dot) - MODIFICATIONS REQUIRED: (Red dot) - CAUTION: (Yellow dot) - PROPERTY BOUNDARIES: (Orange line)
Component – Blade PROCEDURE: Slight right-hand bend MODIFICATIONS REQUIRED: Hardstand to be installed at the inside corner. Unsealed roads to be upgraded and maintained for the duration of deliveries. GPS: https://maps.app.goo.gl/3HmNUkCKRjWy4gP8A	

OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

4.8 Km's

Merredin-Naremben Road onto
Depot Dam Road

Tandegin, WA

Component – Blade

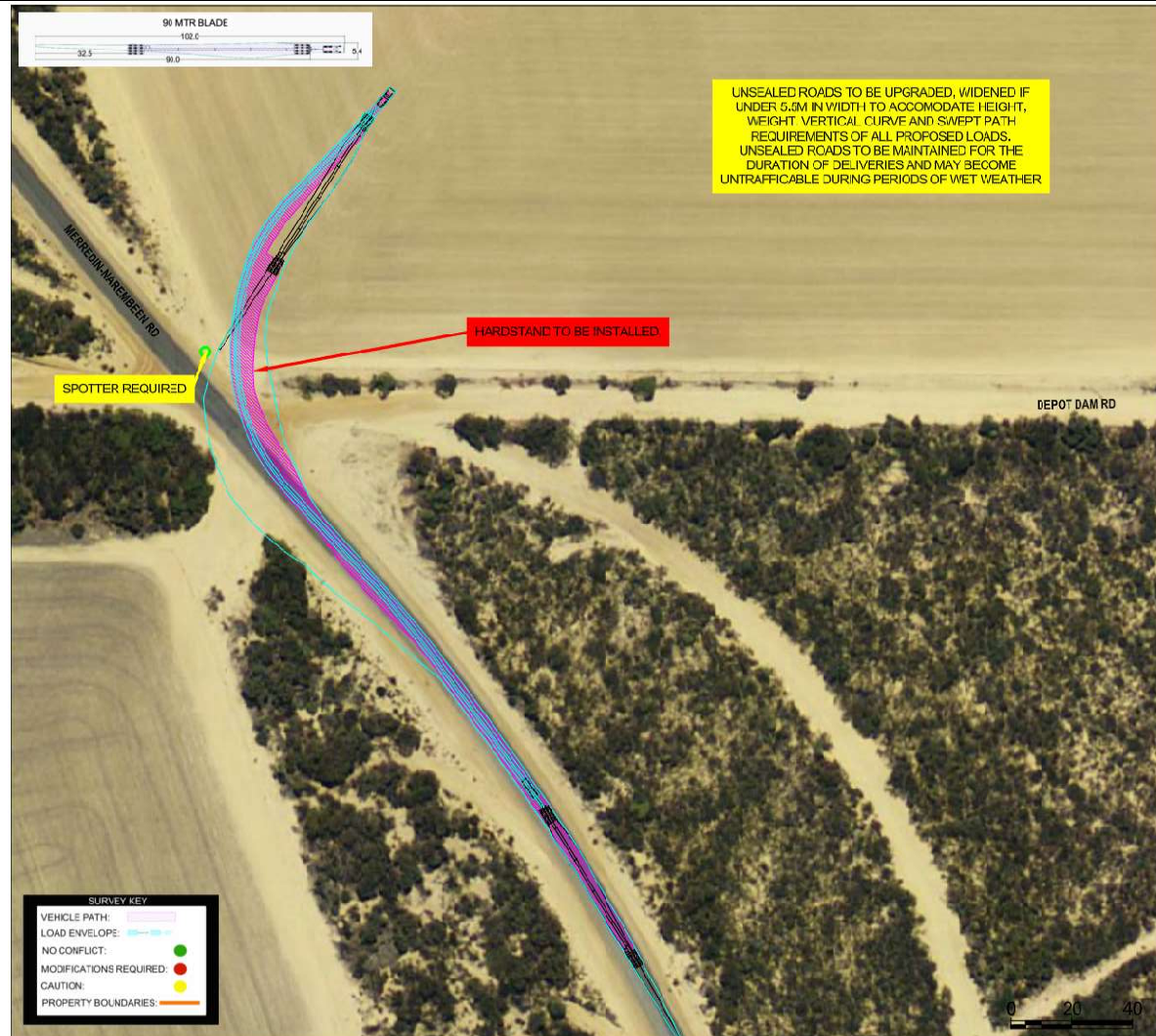
PROCEDURE: Right-hand turn

MODIFICATIONS REQUIRED:

Hardstand to be installed at the inside corner.
Unsealed roads to be upgraded and maintained for the duration of deliveries.

GPS:

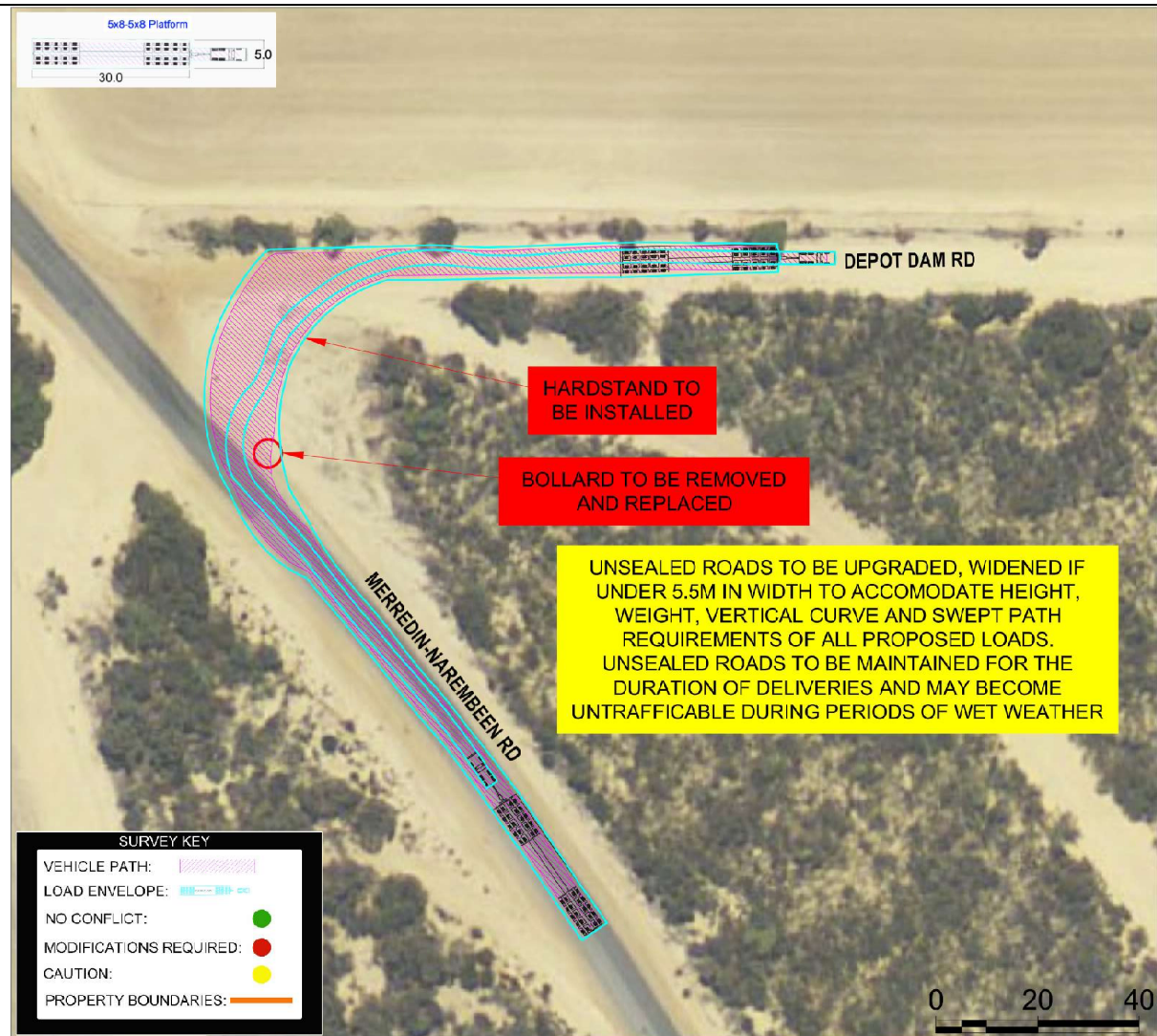
<https://maps.app.goo.gl/5pmG3FVzHe97fcZn8>



OSOM ROUTE ASSESSMENT

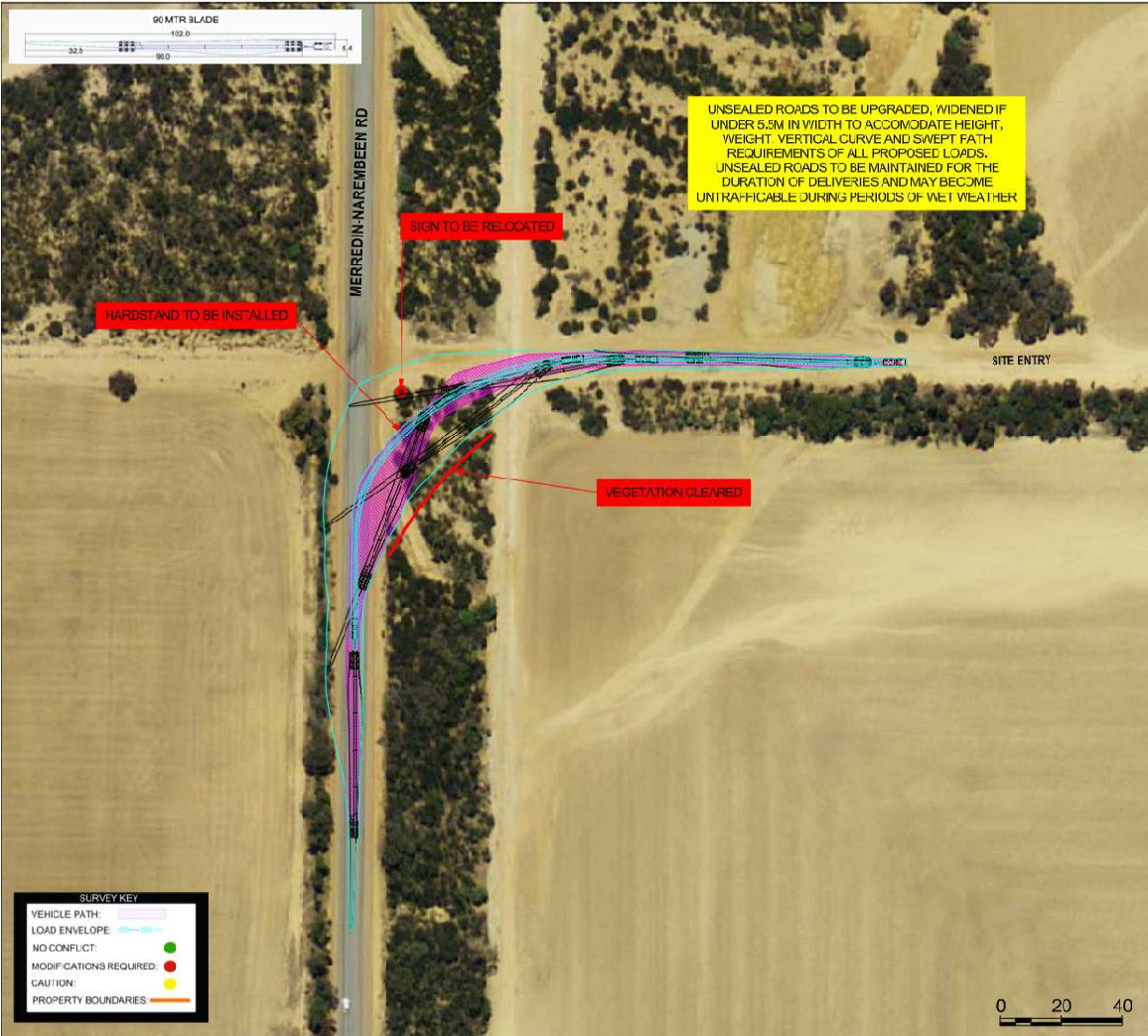
TANDEGIN WIND FARM

Component – Tower



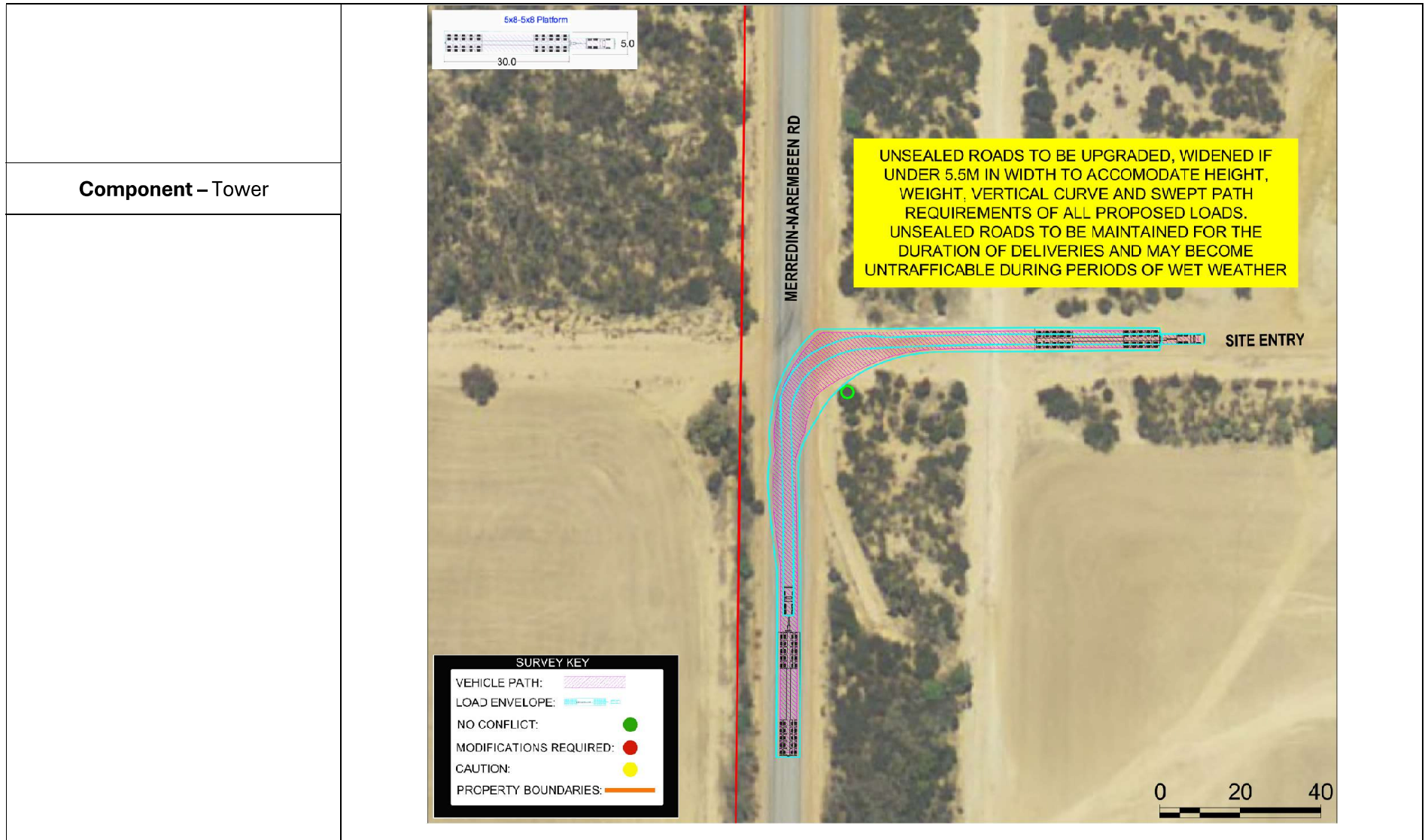
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM

7.3 Km's Merredin-Naremben Road onto Site Entry (2) Norpa, WA	
Component – Blade PROCEDURE: Right-hand turn MODIFICATIONS REQUIRED: Hardstand to be installed at the inside corner, vegetation to be cleared. Unsealed roads to be upgraded and maintained for the duration of deliveries. GPS: https://maps.app.goo.gl/BDprcY5SmYBt43eX9	

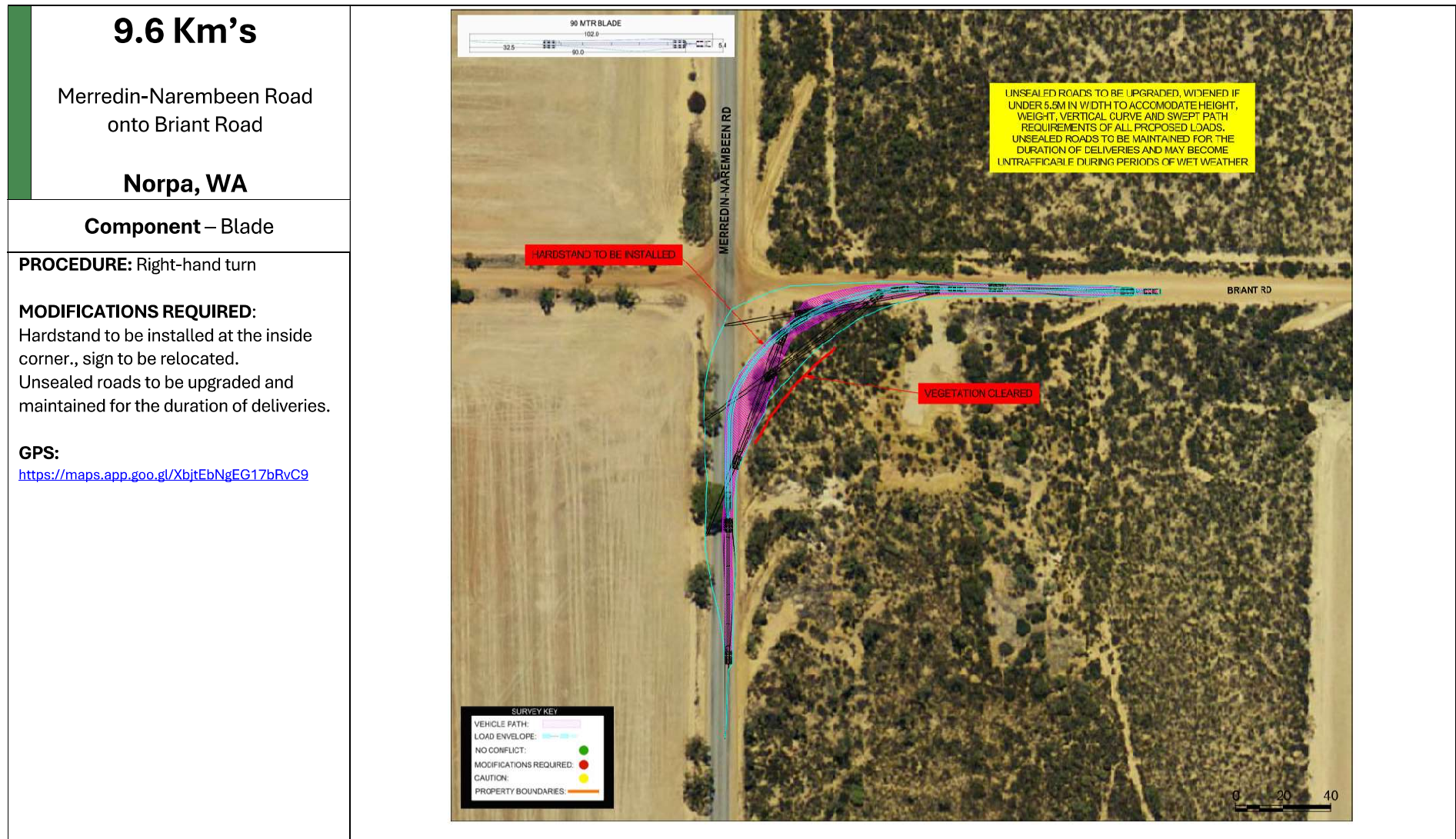
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



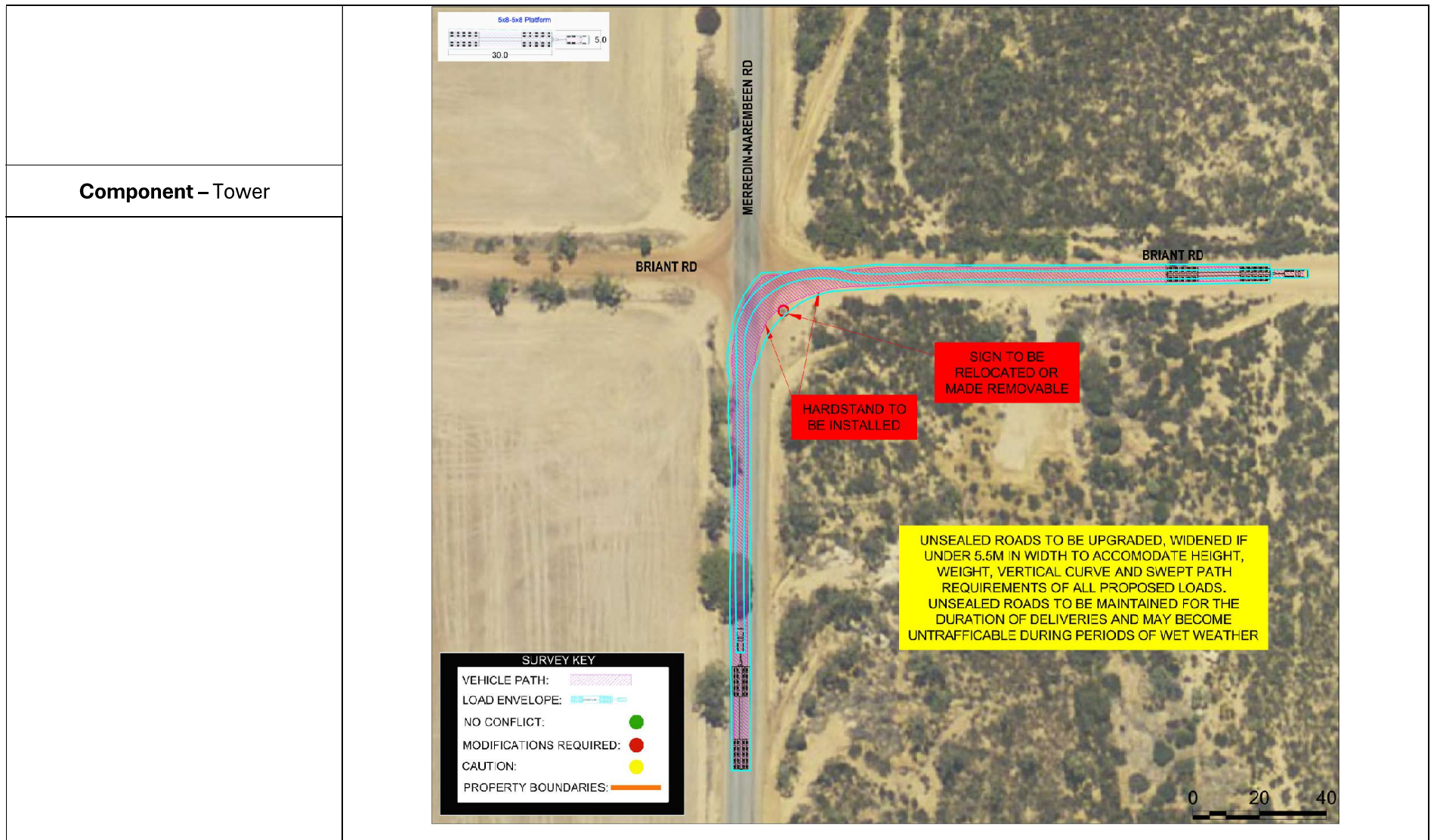
OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



OSOM ROUTE ASSESSMENT

TANDEGIN WIND FARM



10.0 Local Route A Review

Following an evaluation of the clients options, the swept path analysis shows possible options to enter the windfarm if heading northbound on Merridin-Narembreen Road.

The following key considerations apply should the project proceed with this route.

SWEPT PATH

- Vegetation clearing is required at the 7.3 km entry point (Site Entry 2) and the 9.3 km entry point (Briant Road) and must be managed on an ongoing basis throughout the project.
- Hardstand improvements are required at all five intersections. Unsealed roads accessing the site will also need to be upgraded, including widening to 5.5 m where necessary, to meet the height, weight, vertical alignment, and swept-path requirements of all proposed loads.
- Unsealed roads must be maintained for the full duration of deliveries and may become impassable during wet weather events.
- All intersections and corners identified in this report as requiring remediation should be investigated early in the planning phase to avoid delays or route rejections.

OVERHEAD STRUCTURES

- No overhead structures.

VEGETATION

- A moderate amount of vegetation clearing is required at various locations as detailed in this report.

VERTICAL ALIGNMENT

- A vertical curve assessment needs to be undertaken for all access roads from Merridin-Narembreen Road. Through to each hardstand.

PAVEMENT

- Pavement types TBC.

11.0 Executive Statement

Upon completion of the review, it appears that travelling from Bunbury with a 90 Metre blade with a presumed tower diameter up to 5.9 metres could be possible.

The port is okay for the proposed turbine. There may need to be some minor works if more storage is required, but it would be minimal.

The route requires large amounts of upgrades but appears to be the best available option for transporting the proposed wind turbine components from this port.

Nine pinch points have been identified that require moderate to large works, including the relocation of light poles and signage and the addition of hardstand areas. Four other pinch points require just minor works. None of the works appear to be showstoppers, but planning would be required early.

No overhead structures are currently present, though a formal review with Main Roads WA is recommended.

Early engagement with Western Power is strongly recommended given a maximum loaded height of 6.8 metres would be the best transport solution for the project.

A formal bridge assessment will be required, and authority approval will be needed at each of the 13 rail crossing locations before loads can proceed. A moderate amount of vegetation clearing is required at various locations as detailed in this report.

Kings Rock windfarm are currently upgrading the route as far as Rabbit Proof Fence Road for the Kings Rock windfarm V162. Once these upgrades have taken place it would be advised to recheck the corners from the port up to Rabbit Proof Fence Road and see if these works would benefit the 90 metre blade.

Summary

Route 1 is the preferred option, requiring only moderate upgrades and representing the most viable path for transporting the proposed wind turbine components. Key works include addressing nine pinch points, adding hardstands at one roundabout, clearing vegetation, and conducting a formal bridge assessment.

Authority approvals will also be required at 13 rail crossing locations.

Early engagement with Main Roads WA and Western Power is recommended given a maximum loaded height of 6.8 metres is likely required.

12.0 Transport Approvals Required

Approvals will be required from the following stakeholders.

- Main roads WA
- WA Police
- Local councils
- Energy & telecommunication infrastructure owners/managers
- Rail Managers/Owners

13.0 References

Rex J Andrews Route Survey # 564 REV01

Rex J Andrews P/L Drawings

AutoDesk Vehicle Tracking

Google Earth/Maps

Collgar Renewables

Nearmaps

QGIS

Main Roads Western Australia

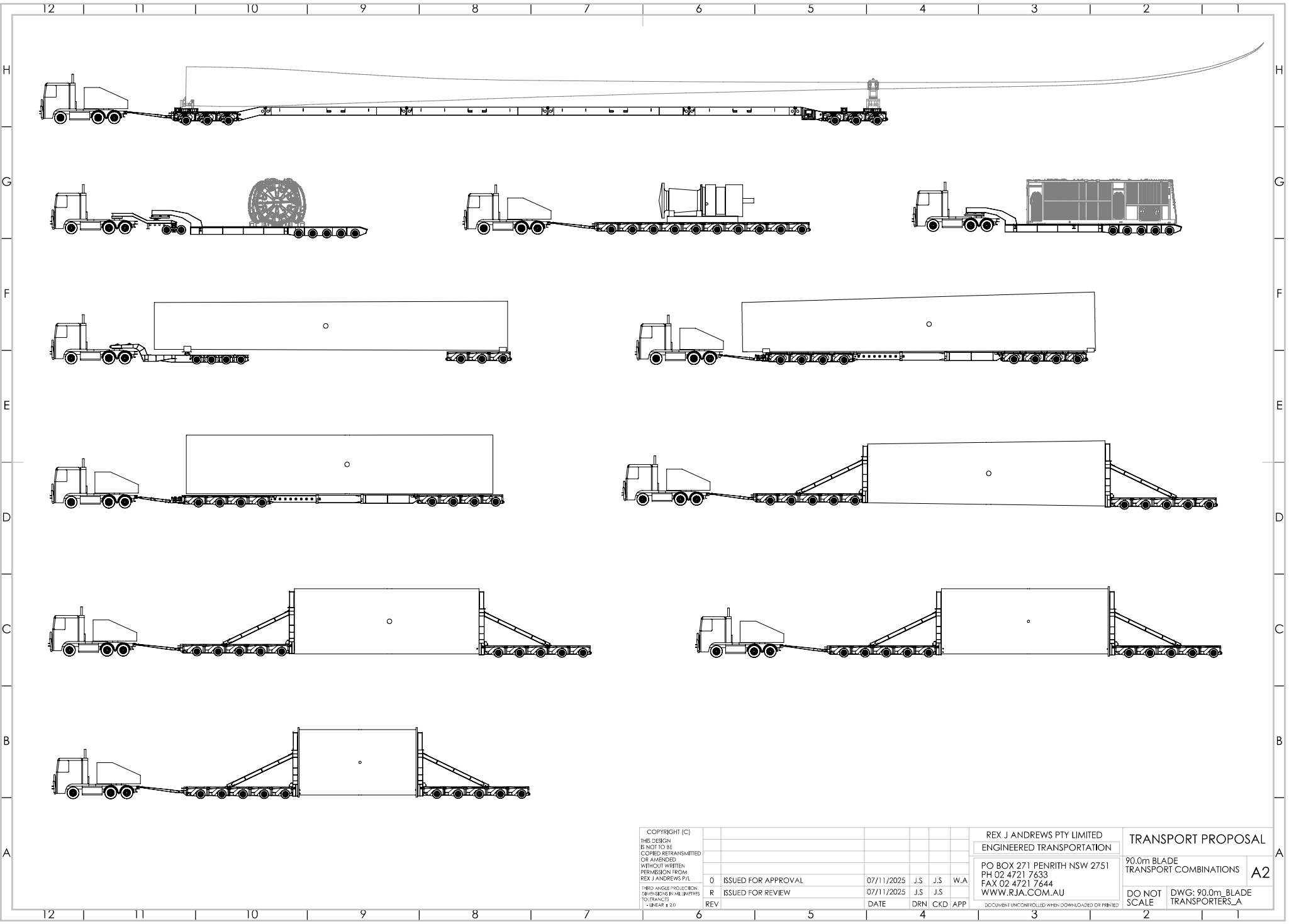
WA Heavy Vehicle accreditation

Disclaimer: This route study is a guide only; government approvals would be required before these routes could be deemed suitable for transporting the components.

This study was undertaken using data supplied by Rex J Andrews P/L. Equipment and swept paths may vary when using a transport methodology other than the one supplied by Rex J Andrews.

14.0 Transport Drawings (Examples)

\\SERVER\Volume_1\Projects\Blade Transporters\TRANSPORTERS_COMBINED_A_9_1_5m_BLADE



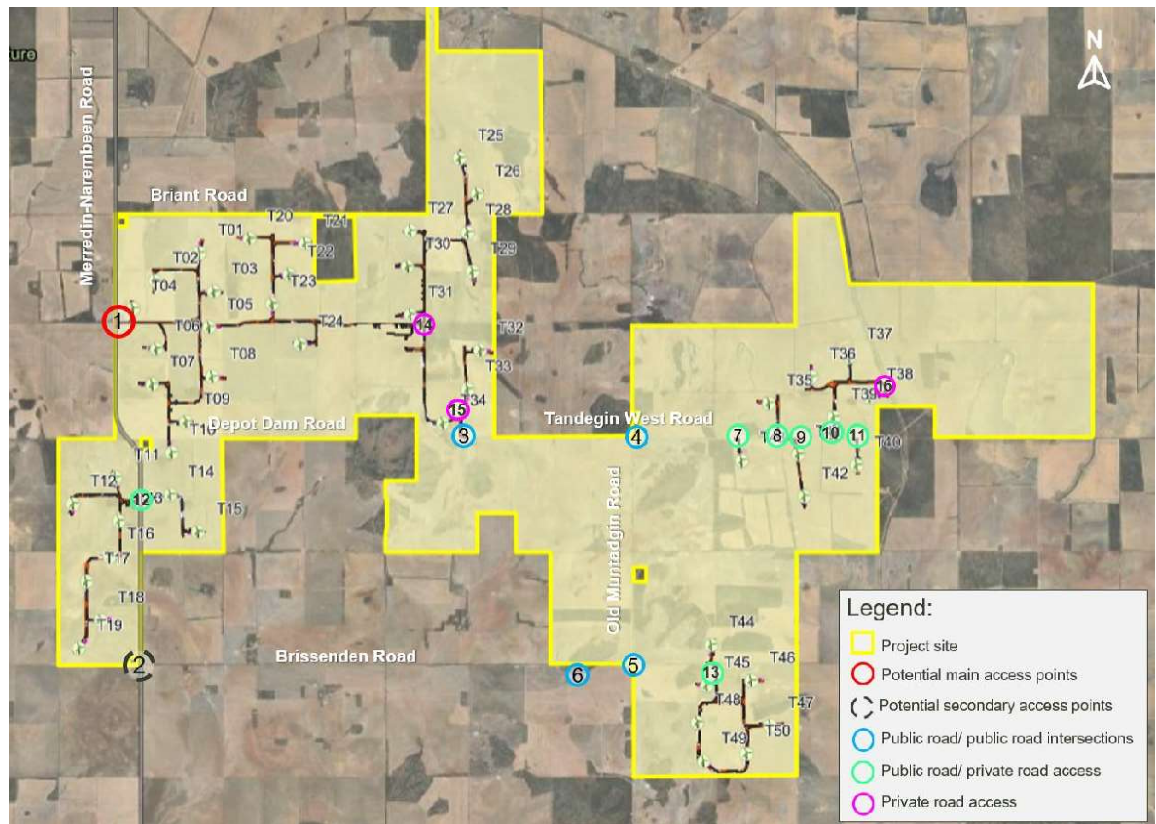
COPYRIGHT (C) THIS DESIGN IS NOT TO BE COPIED, REPRODUCED, OR AMENDED WITHOUT WRITTEN PERMISSION FROM REX J ANDREWS P/L THIRD ANGLE PROJECTION ON INSIDE VIEW, ALL DIMENSIONS TO FRANCES - LINEAR ± 2.0				REX J ANDREWS PTY LIMITED ENGINEERED TRANSPORTATION				TRANSPORT PROPOSAL	
				PO BOX 271 PENRITH NSW 2751 PH 02 4721 7633 FAX 02 4721 7644 WWW.RJA.COM.AU				90.0m BLADE TRANSPORT COMBINATIONS	A2
0	ISSUED FOR APPROVAL	07/11/2025	J.S	J.S	W.A	DOCUMENT UNCONTROLLED WHEN DOWNLOADED OR PRINTED			
R	ISSUED FOR REVIEW	07/11/2025	J.S	J.S					
REV		DATE	DRN	CKD	APP	DO NOT SCALE DWG: 90.0m BLADE TRANSPORTERS_A			

Appendix B – Site Access Review

Site Access Review

Notes

- The purposes of this review is to provide high-level insight of potential conflicts with the design vehicle as to inform the initial stages of the Project. The conducted swept path tests do not cover every possible turn and scenario at the site, and were rather selected based on interaction with public roads and provided significant vegetation layer.
- Swept paths based on AutoTURN software, noting other software applications may produce a different swept path profile. Furthermore, swept paths may vary based on variations in preferences across OEM specifications and transport operator equipment/methodology.
- Identified conflicts should be verified on-site. This current review is a desktop study only (and subject to change based on any changes on-site).
- No vertical geometry checks (e.g. no survey data reviewed).
- Impacted vegetation is measured at a high-level only against the significant vegetation extents provided.
- Clearing requirements for impacted vegetation may vary if located within swept path of blade over sail (i.e. blade overhang which is approx. 2.5m above ground), or if under truck wheel path. Trimming rather than complete clearing may be an option for blade over sail (subject to further investigations).

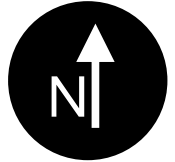


Note Site 1 and 2 undertaken as part of OSOM Route Assessments (RJA) so not included in this document.

Merredin-Narembeen Road Site Access - Preferred option

Legend:

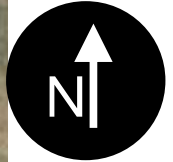
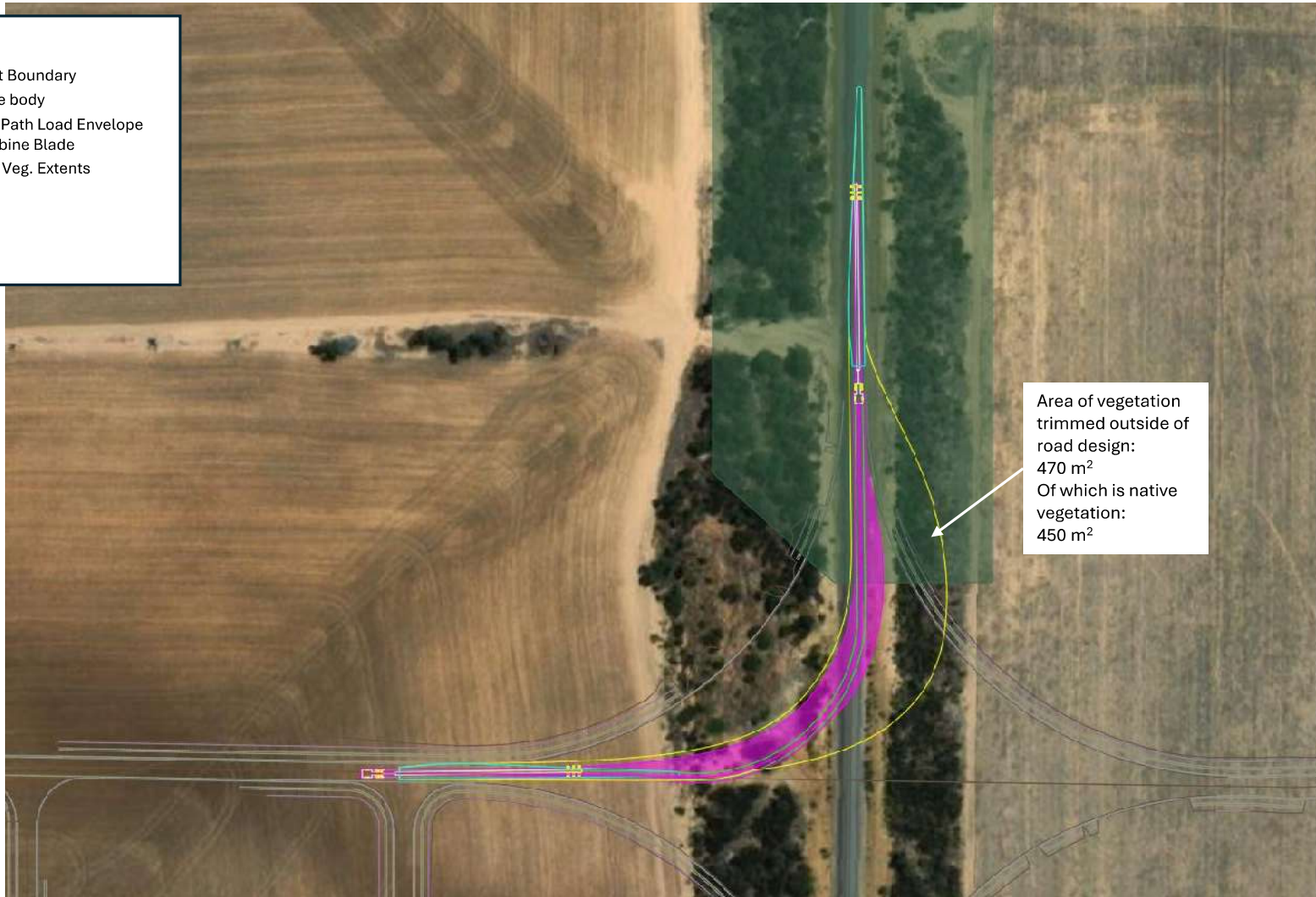
- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



Merredin-Narembeen Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

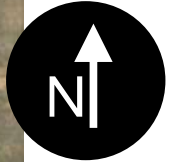


Merredin-Narembeen Road Site Access - Preferred option

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design:
100 m²
Of which is native vegetation:
100 m²

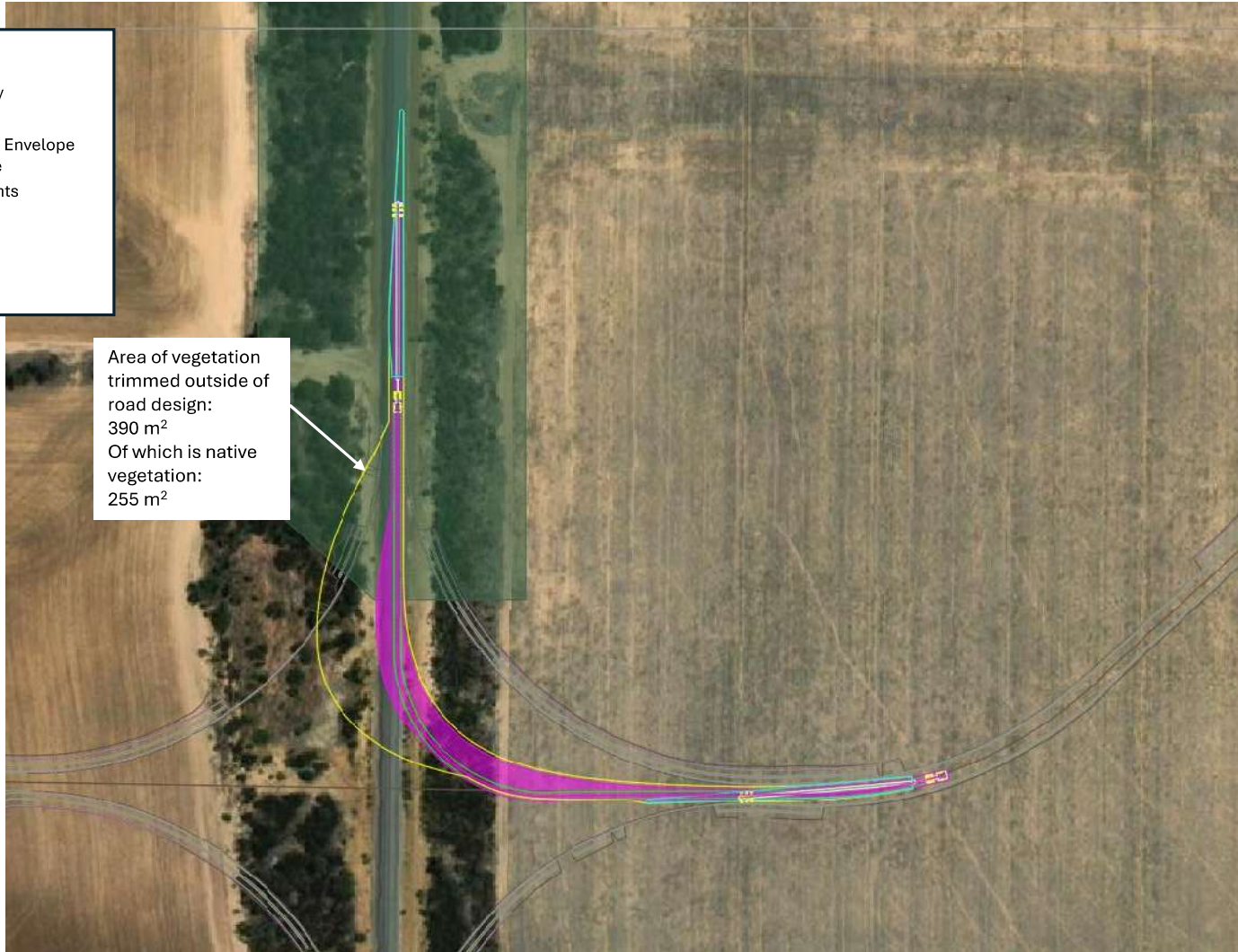
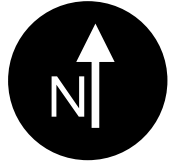


Merredin-Narembeen Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

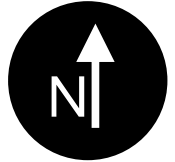
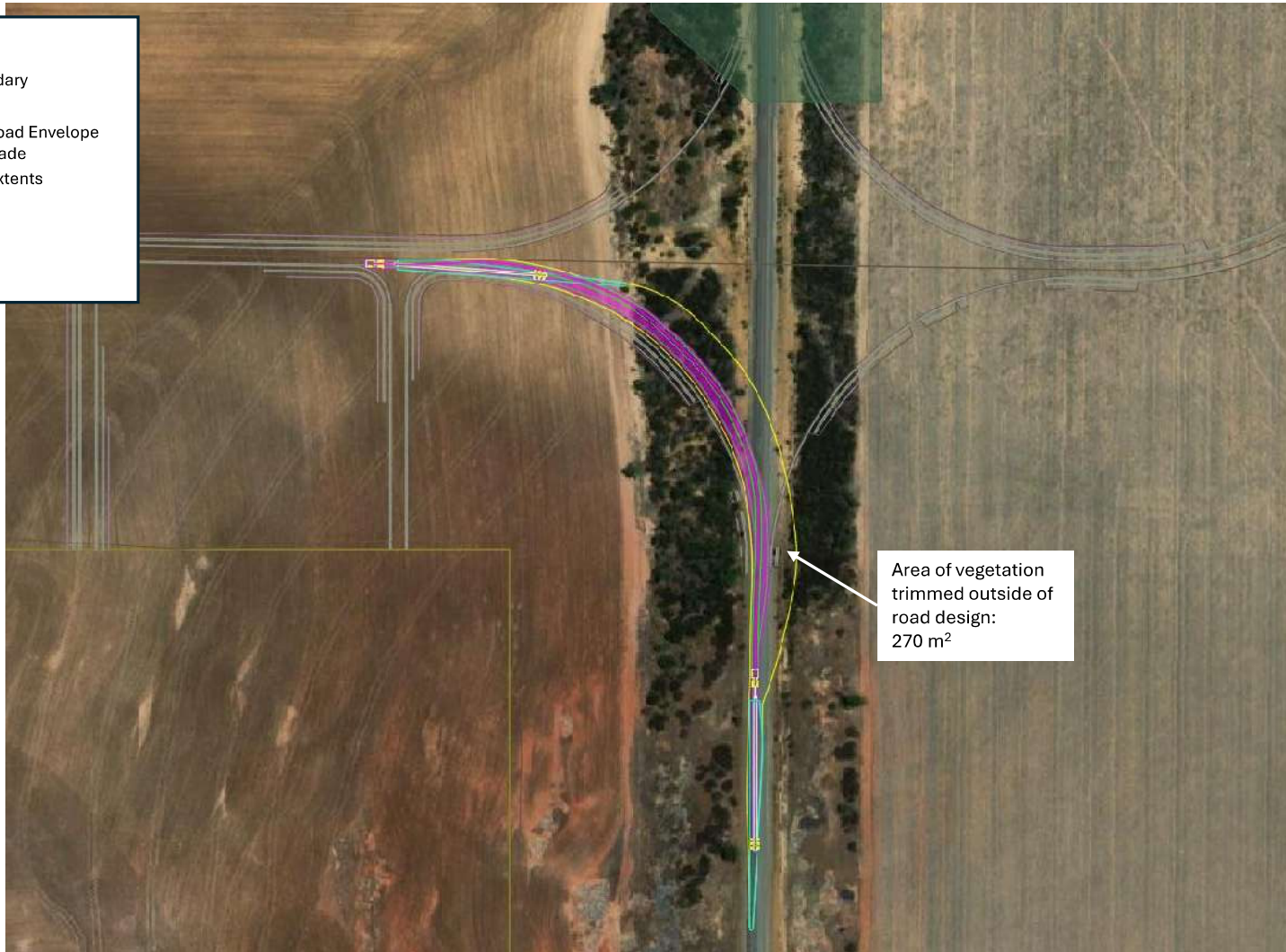
Area of vegetation
trimmed outside of
road design:
390 m²
Of which is native
vegetation:
255 m²



Merredin-Narembeen Road Site Access

Legend:

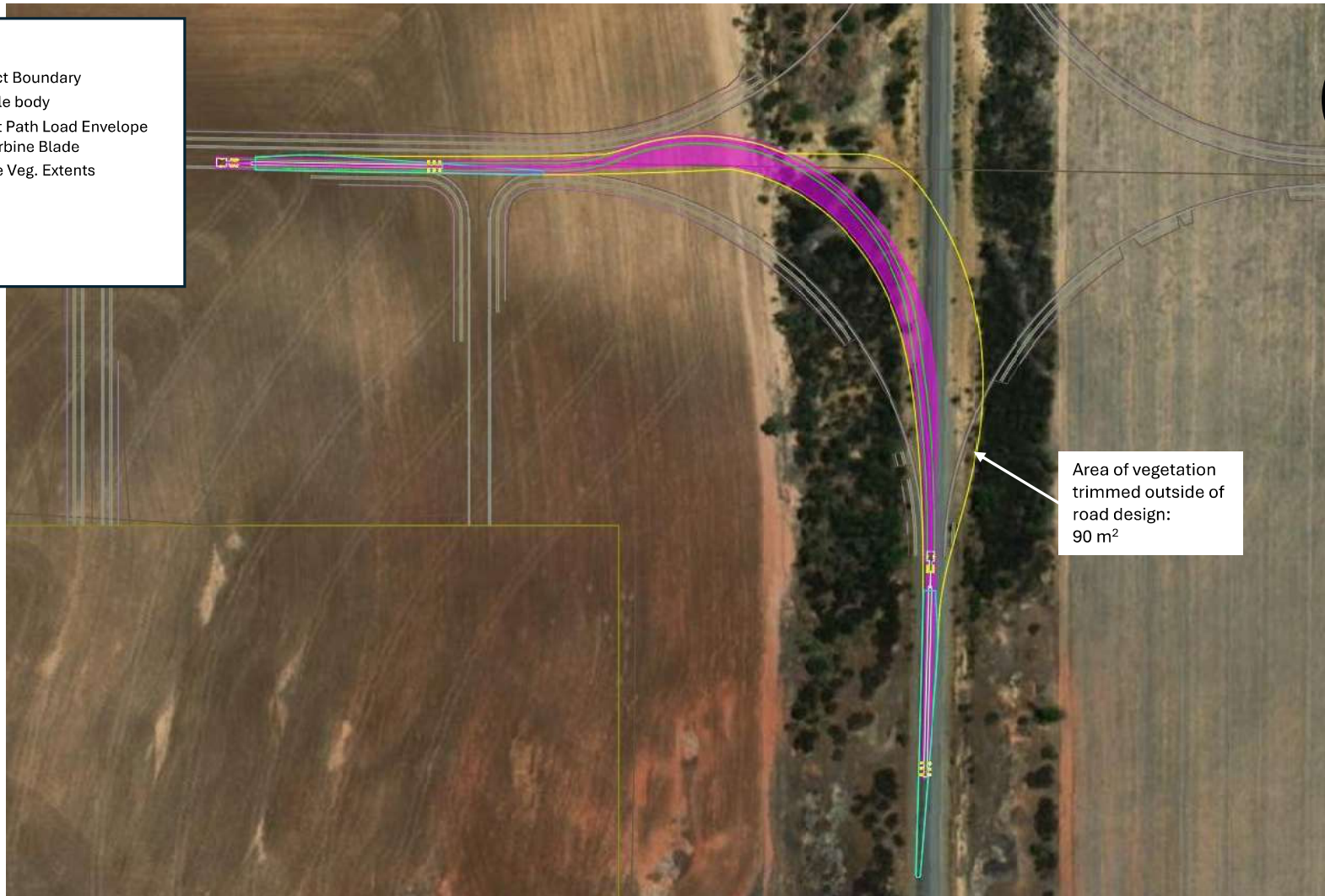
- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



Merredin-Narembeen Road Site Access - Preferred option

Legend:

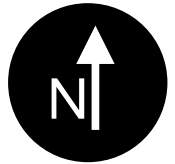
- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



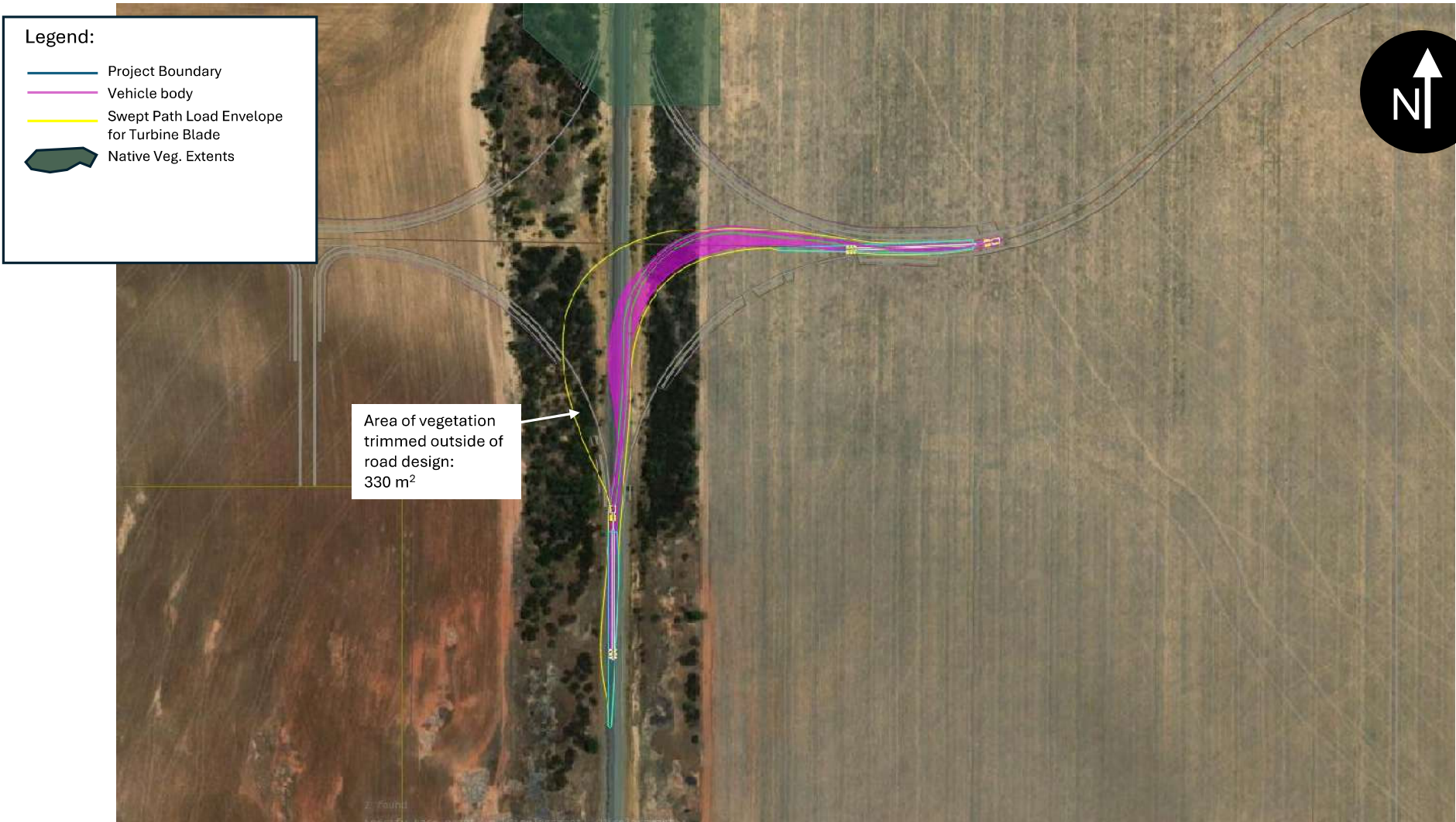
Merredin-Narembeen Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



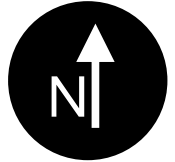
Merredin-Narembeen Road Site Access - Preferred option



Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

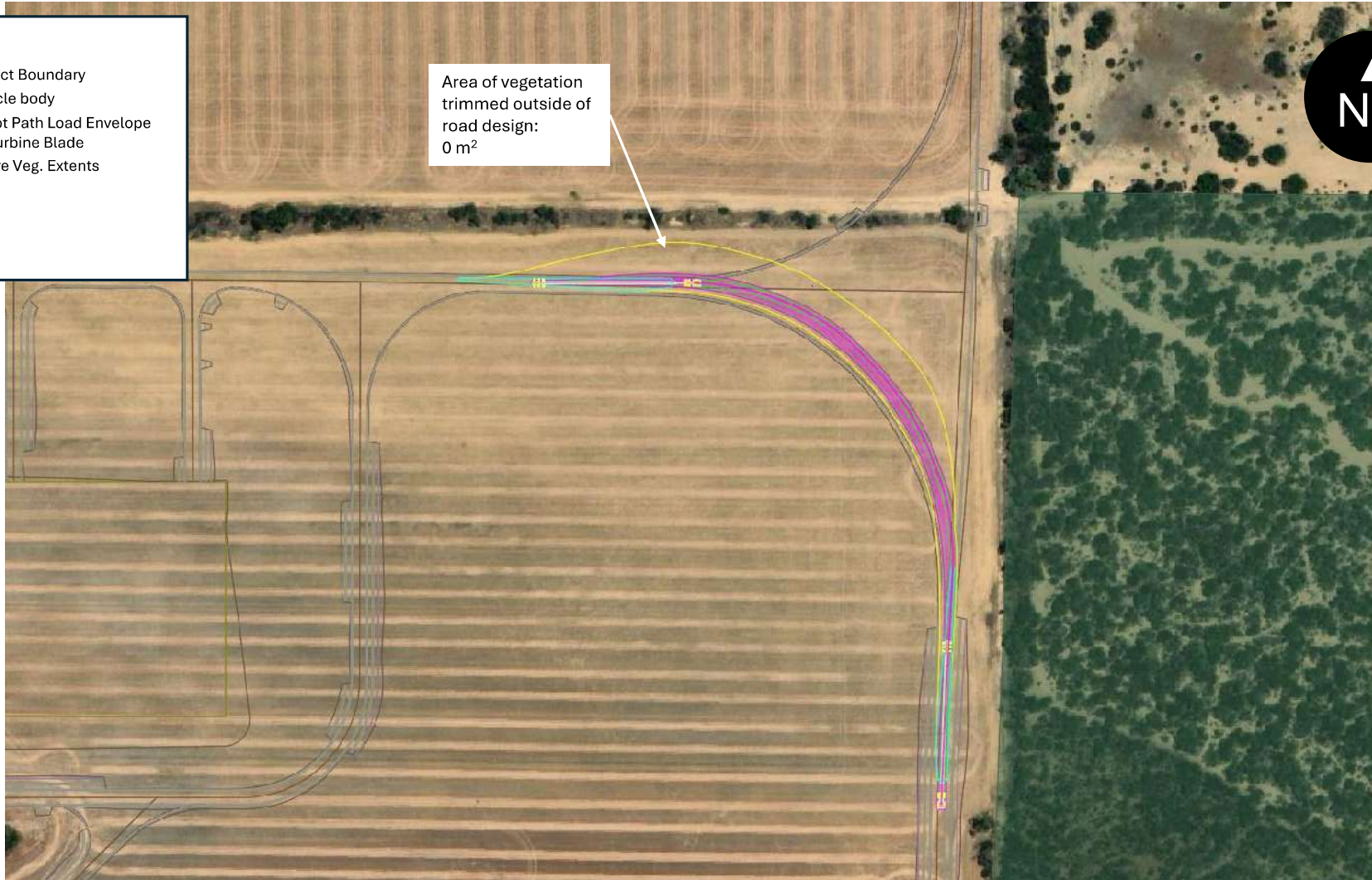


Private Road Site Access - Preferred option

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design:
0 m²

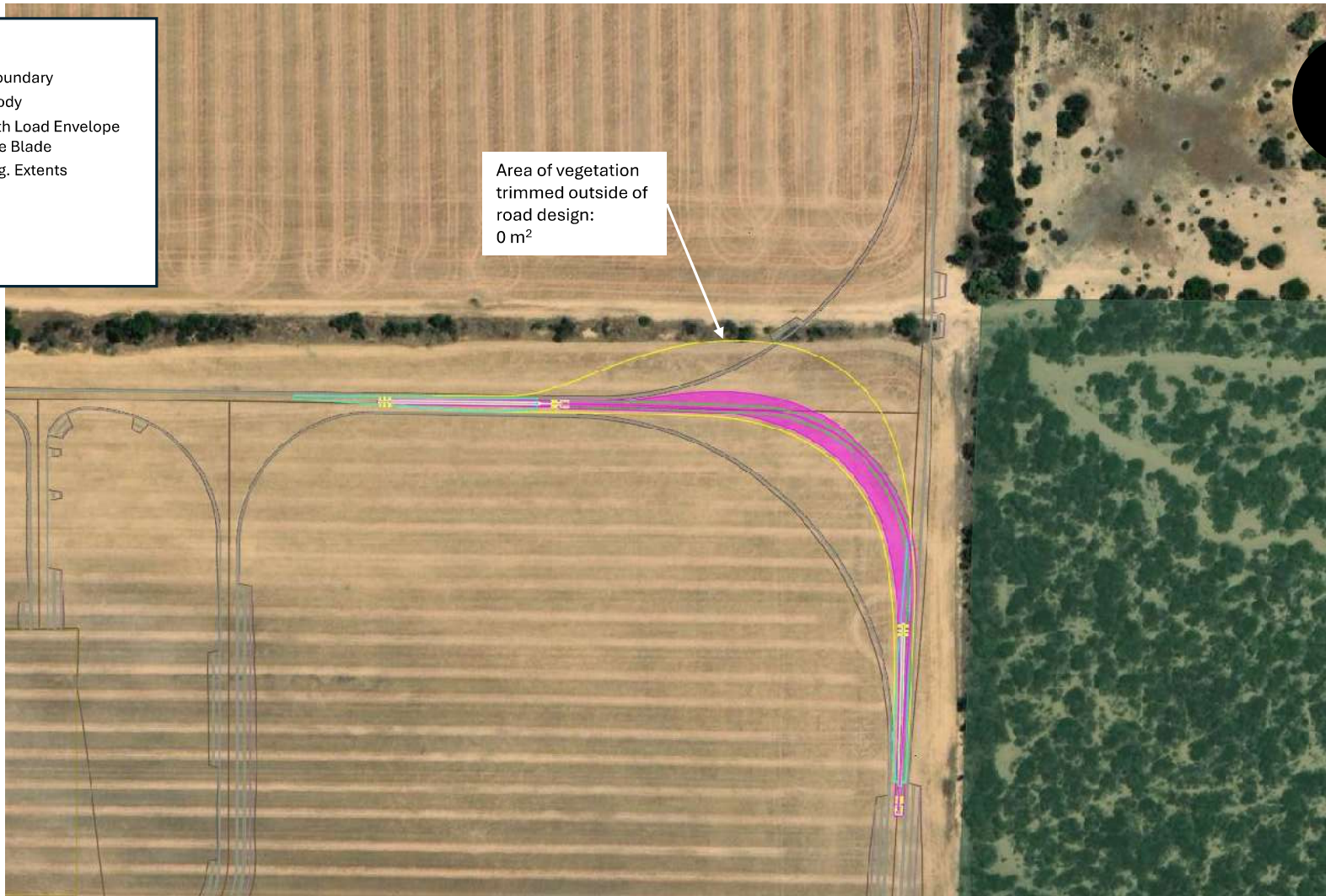


Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation
trimmed outside of
road design:
0 m²



Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation
trimmed outside of
road design:
0 m²



Private Road Site Access

Legend:

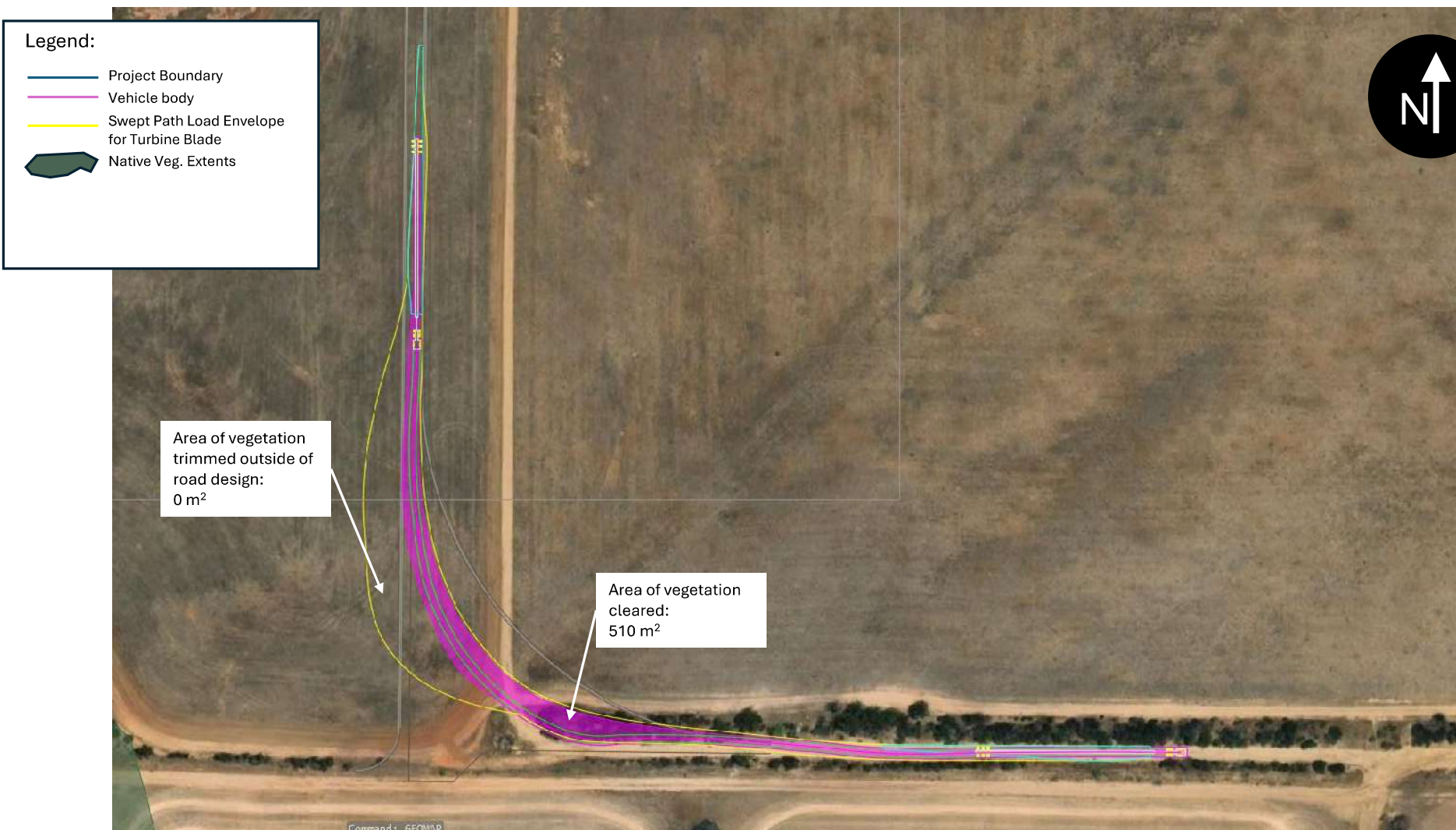
- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation
trimmed outside of
road design:
0 m²



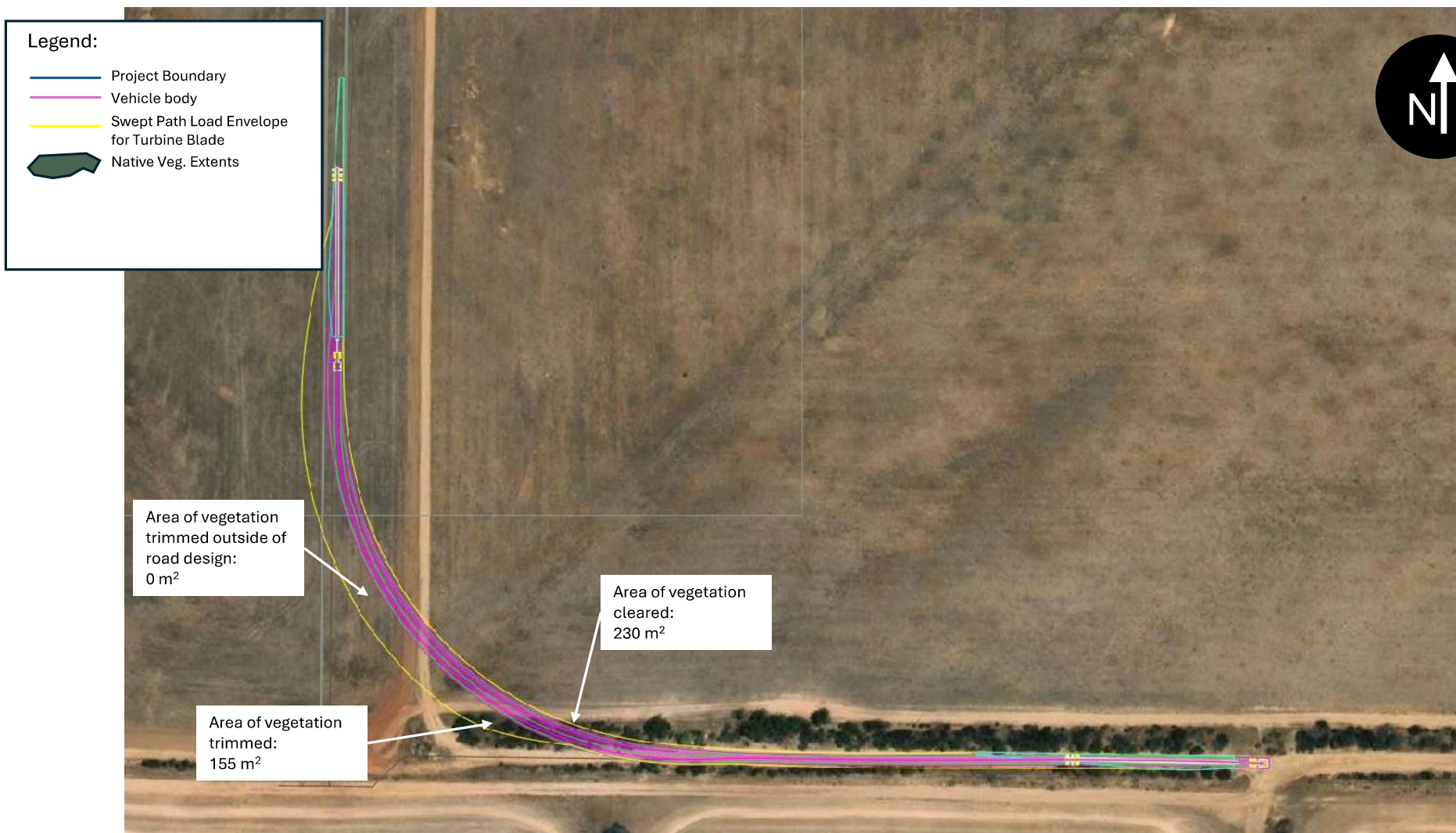
3

Tandegin West Road / Private Road Site Access - Preferred option



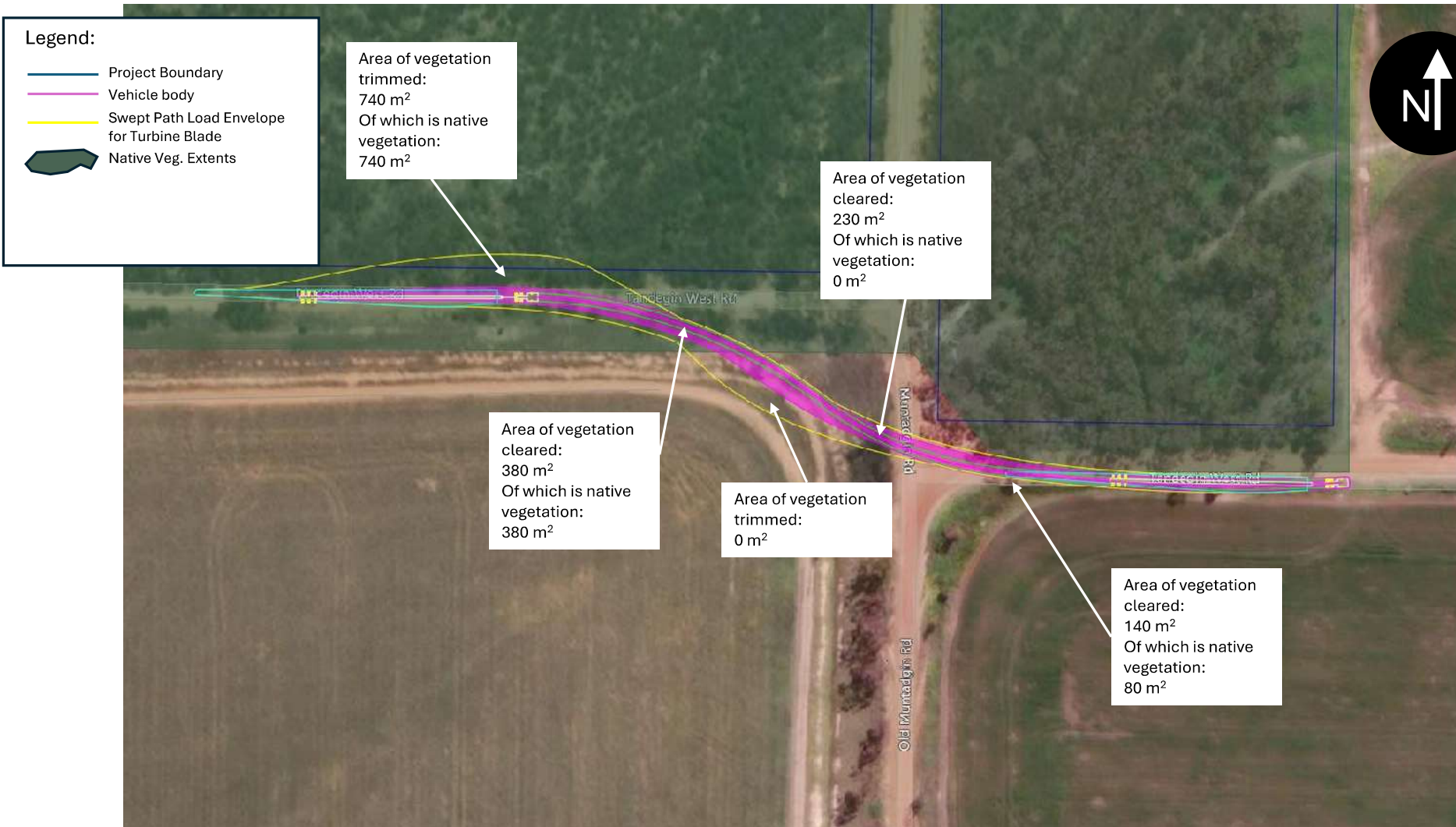
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Tandegin West Road / Private Road Site Access - Preferred option



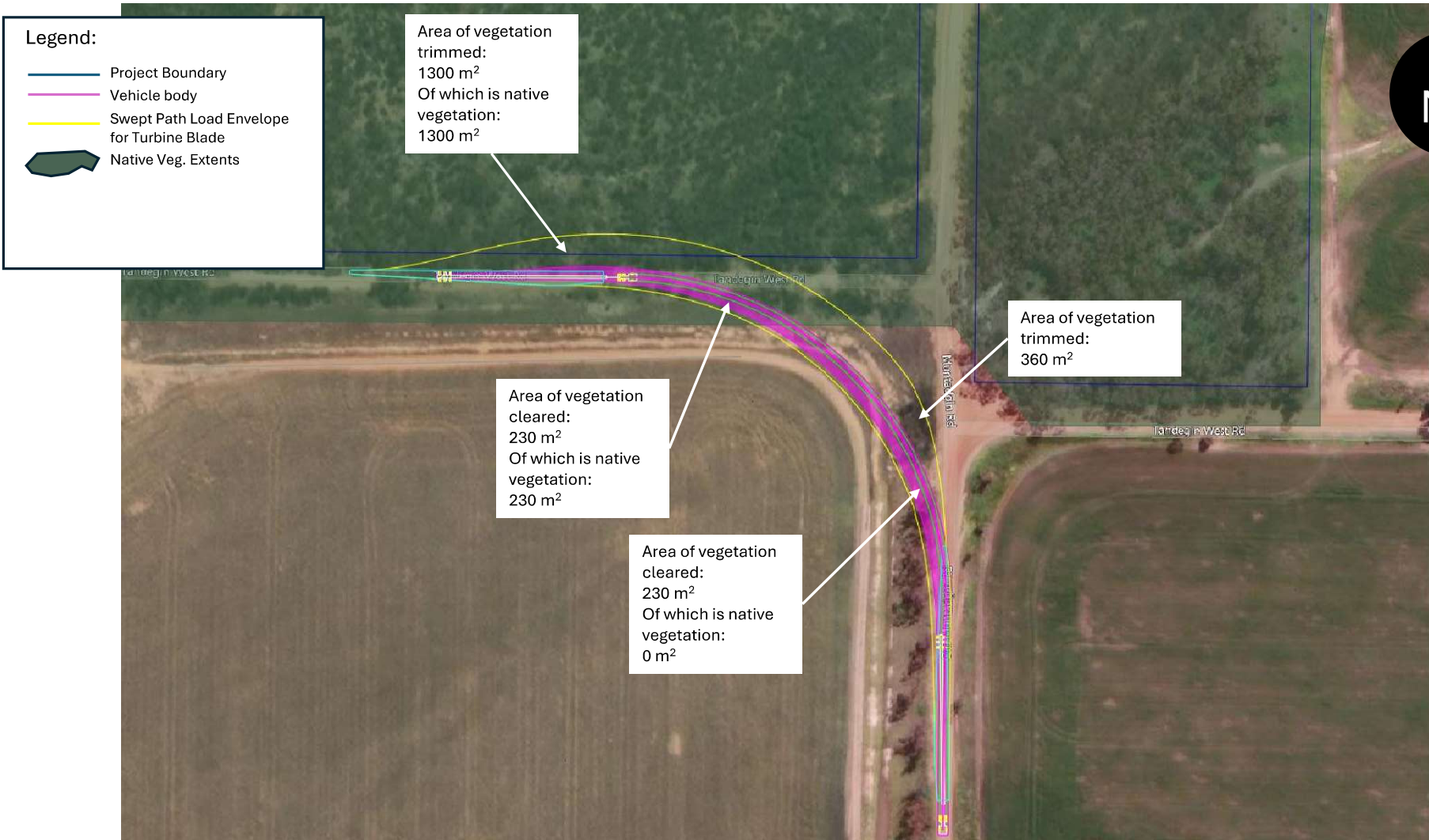
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Tandegin West Road / Old Muntadgin Road Site Access



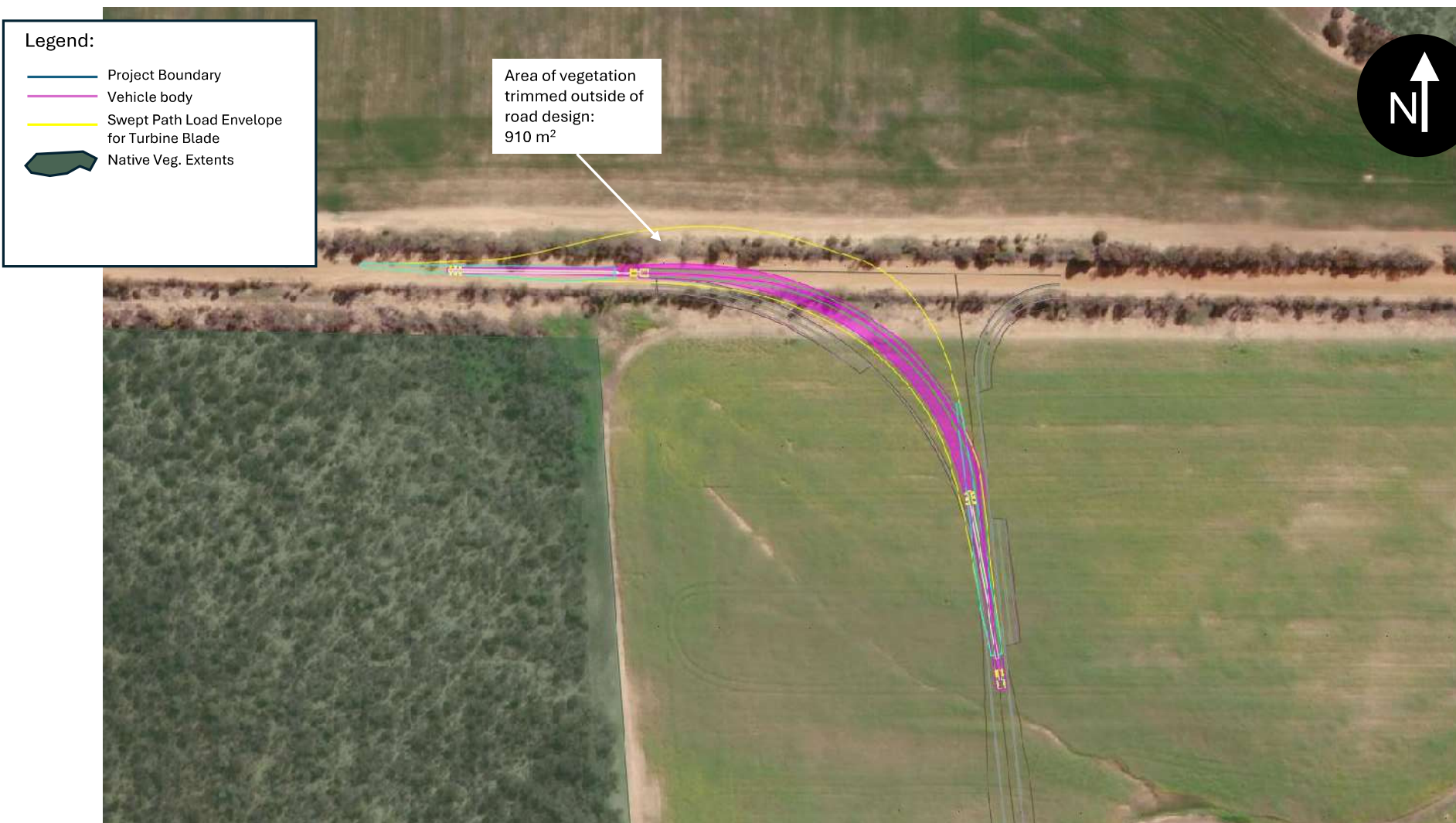
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Tandegin West Road / Old Muntadgin Road Site Access



7

Tandegin West Road Site Access - Preferred option



7

Tandegin West Road Site Access

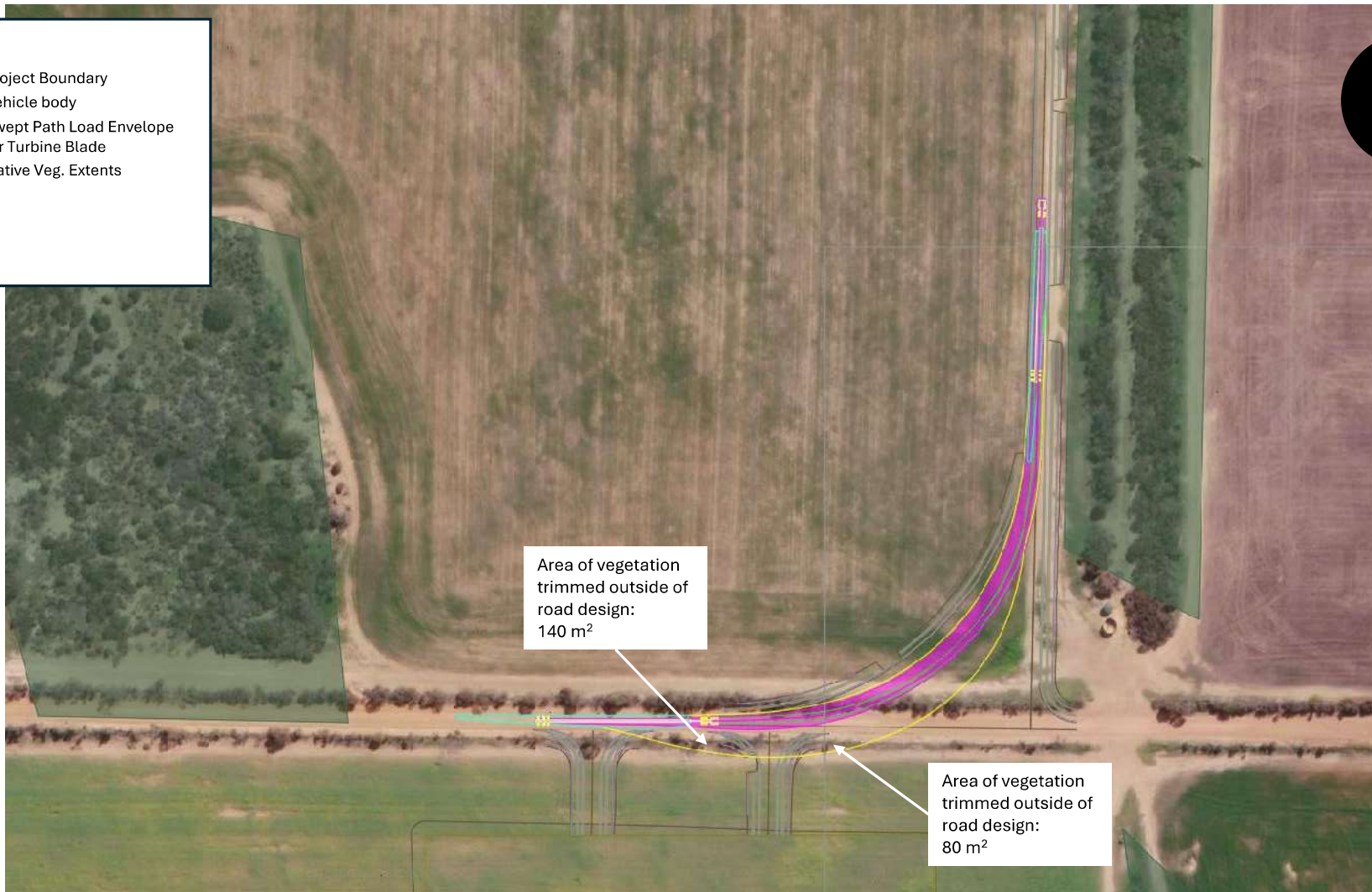


8

Tandegin West Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



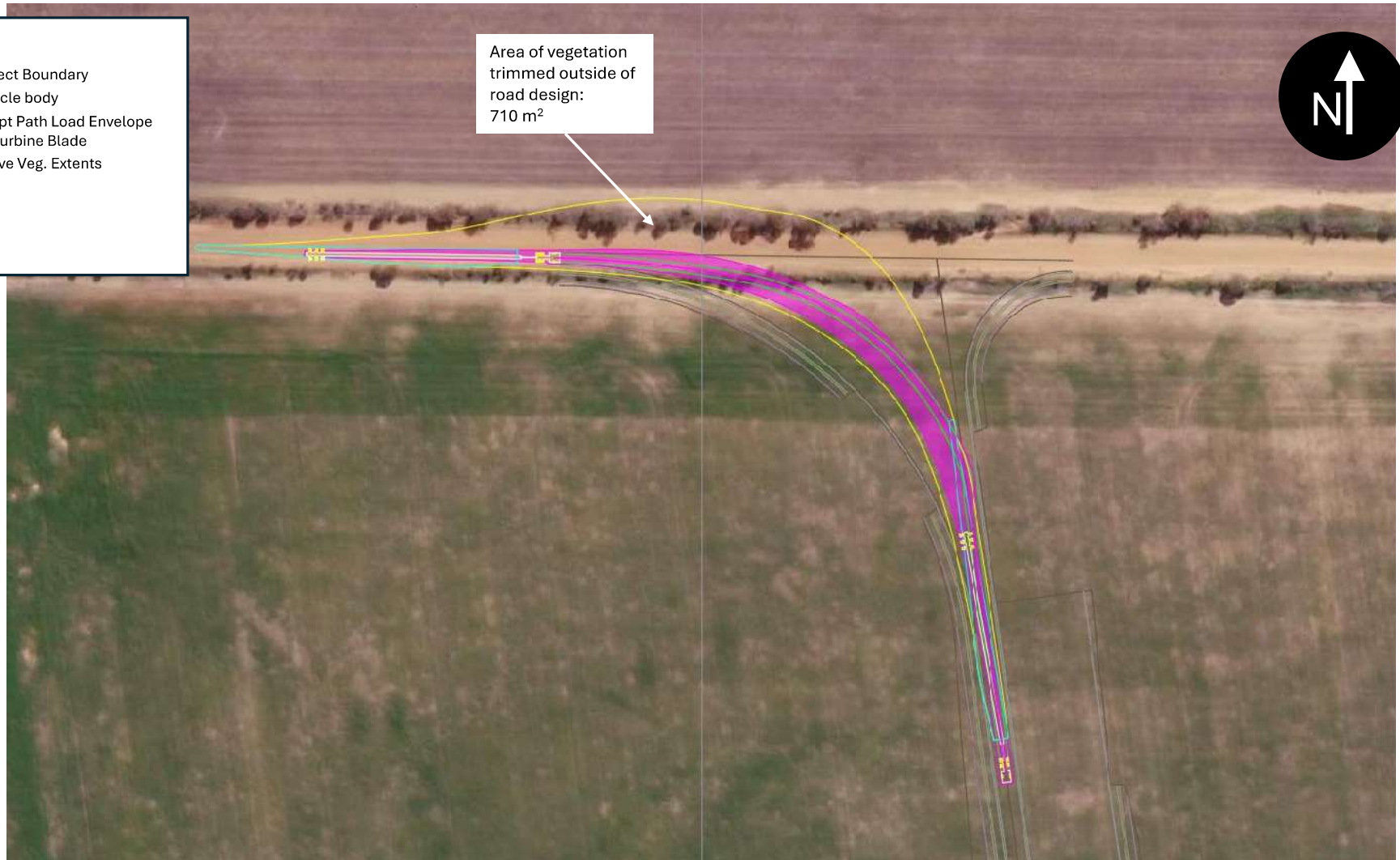
9

Tandegin West Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design: 710 m²



Tandegin West Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

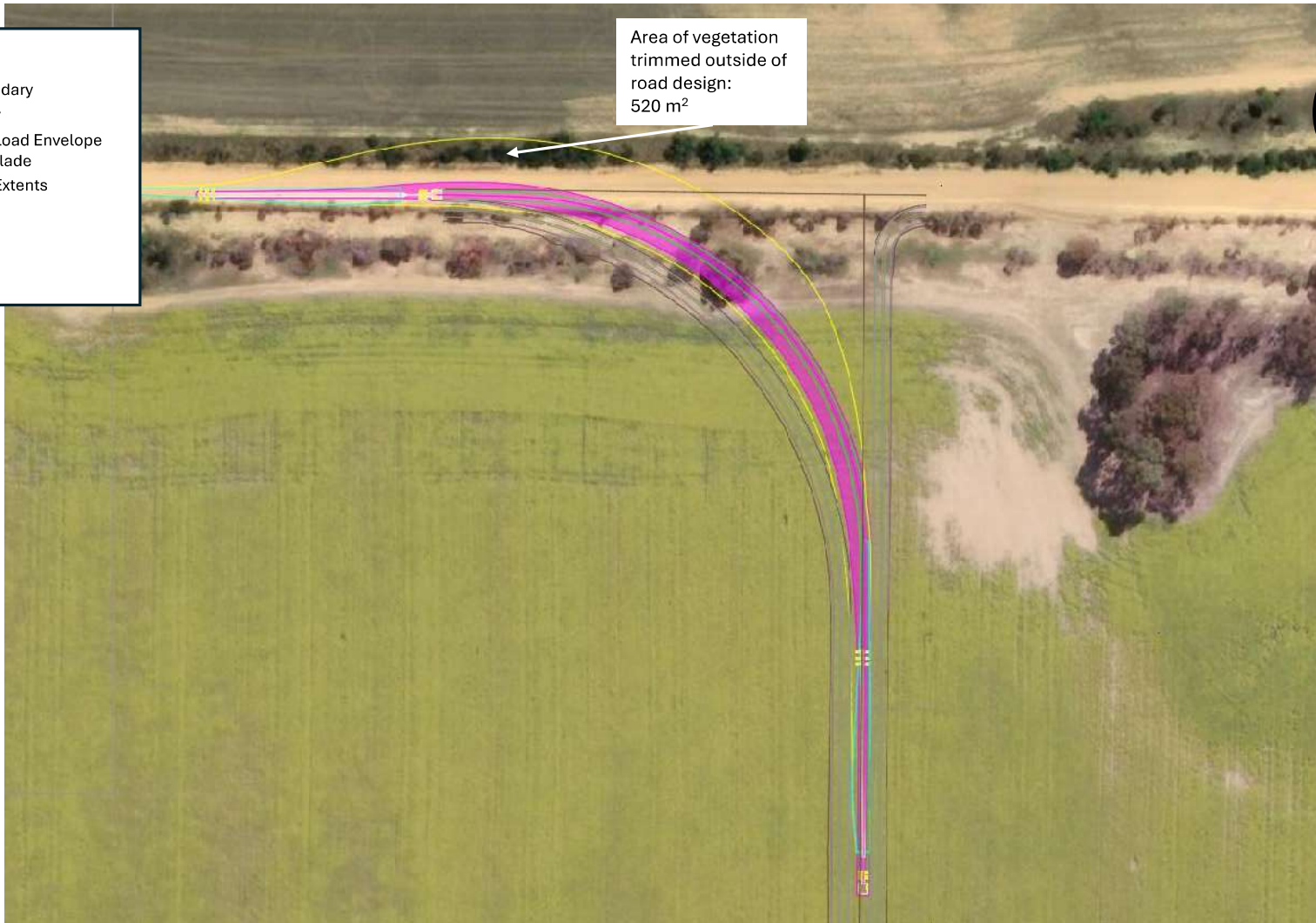


Tandegin West Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation
trimmed outside of
road design:
520 m²



Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design:
130 m²
Of which is native vegetation:
130 m²



6

Brissenden Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



6

Brissenden Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



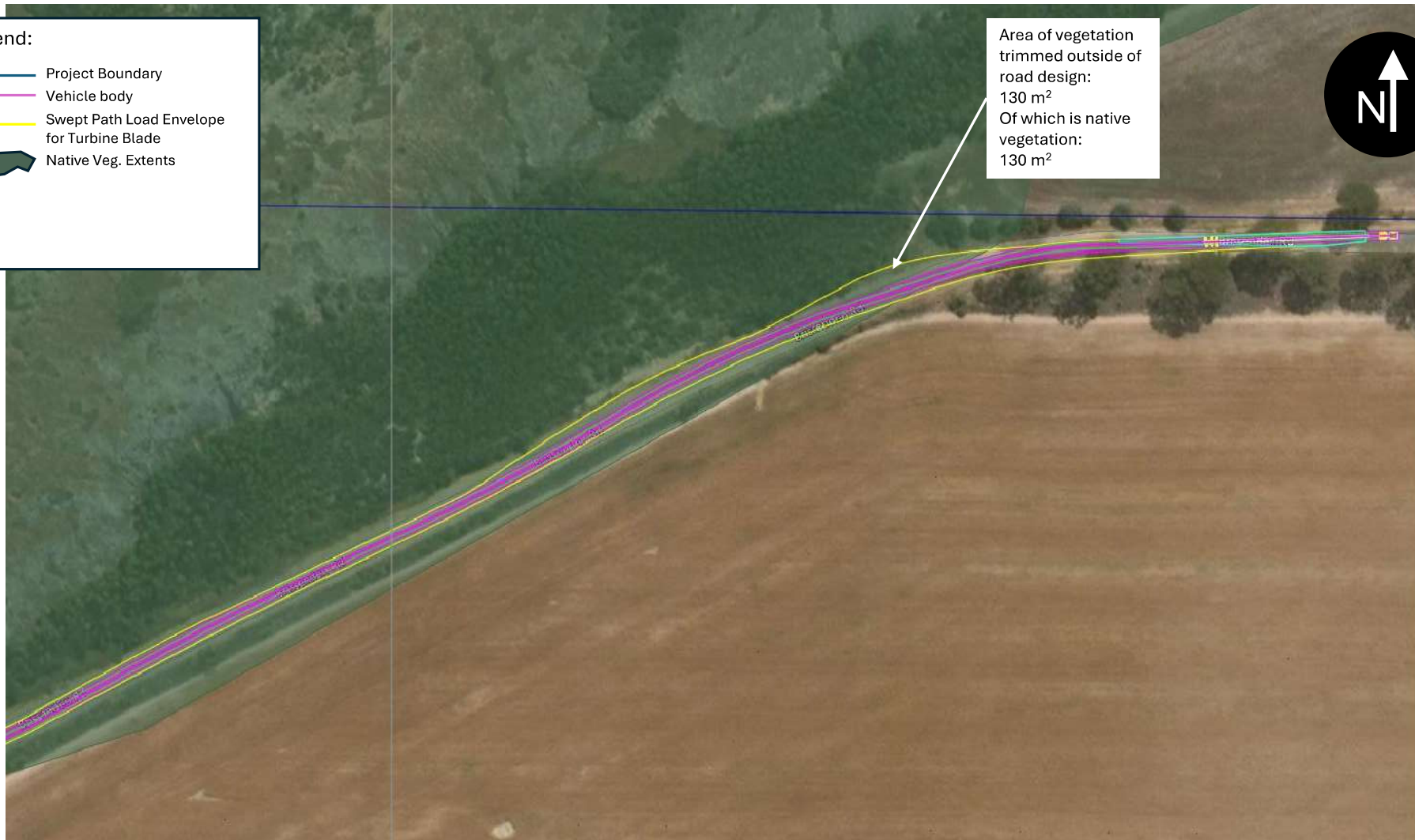
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Brissenden Road Site Access

Legend:

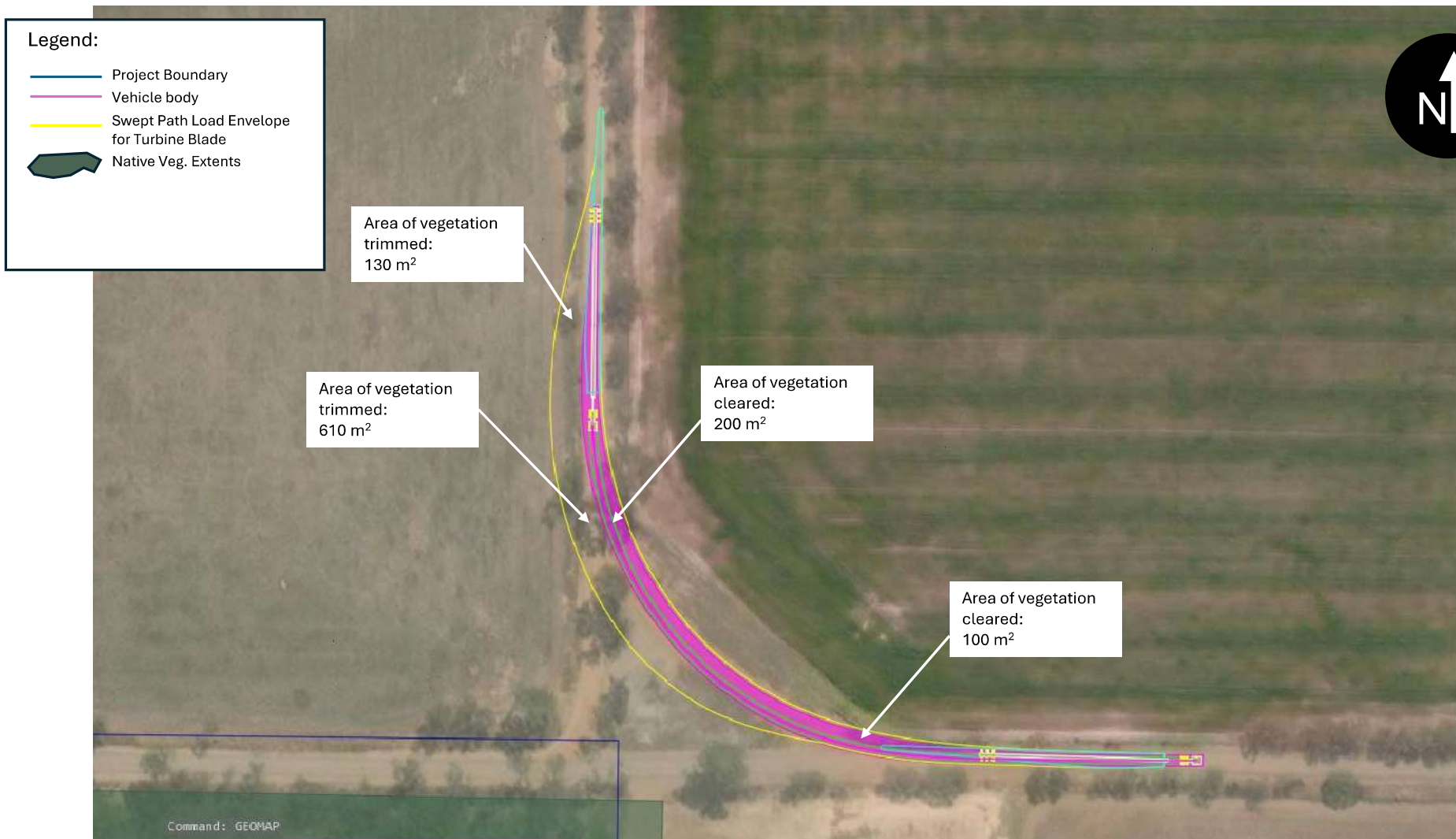
- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design:
130 m²
Of which is native vegetation:
130 m²



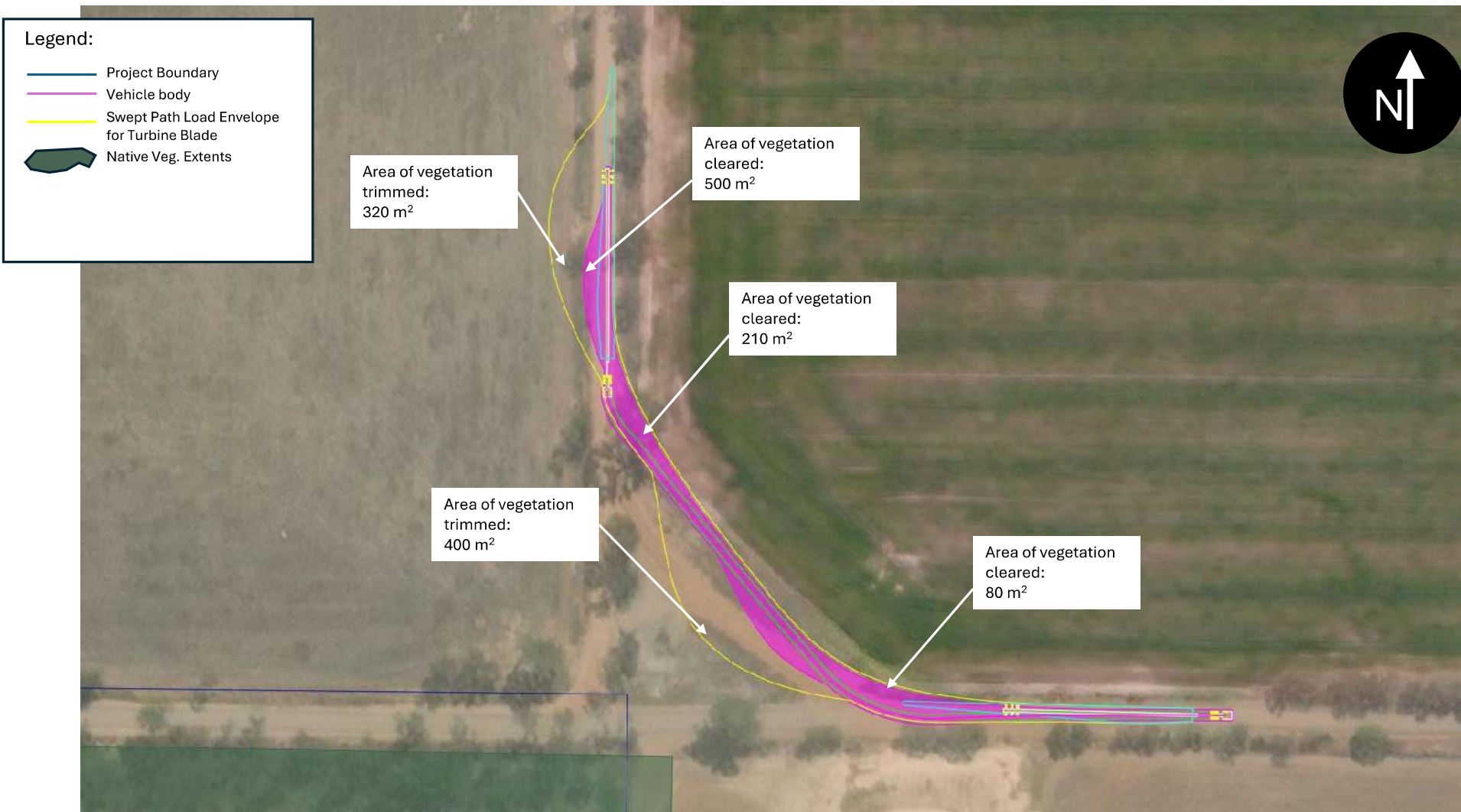
5

Old Muntadgin Road / Brissenden Road Site Access



5

Old Muntadgin Road / Brissenden Road Site Access



Brissenden Road / Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents



Area of vegetation
trimmed outside of
road design:
440 m²



Brissenden Road / Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

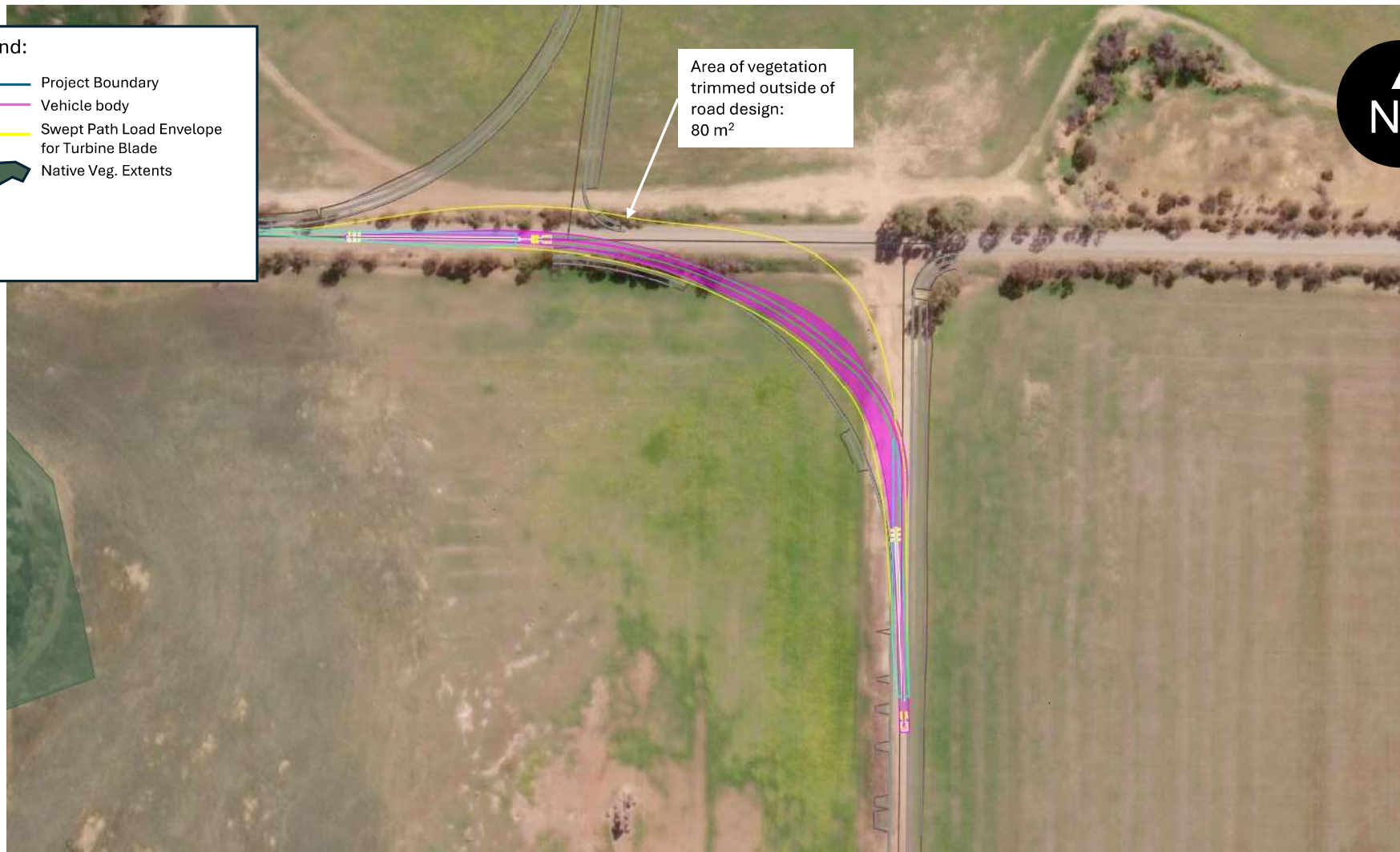


Brissenden Road / Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation trimmed outside of road design:
80 m²



Brissenden Road / Private Road Site Access

Legend:

- Project Boundary
- Vehicle body
- Swept Path Load Envelope for Turbine Blade
- Native Veg. Extents

Area of vegetation
trimmed outside of
road design:
400 m²



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