

## Appendix A: Sight Distance Assessment

# SAMSA CONSULTING

TRANSPORT PLANNING & TRAFFIC ENGINEERING

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Tilt Renewables  
L23, 535 Bourke Street  
MELBOURNE, VIC 3000

Our Ref: *Rye Pk Rd xing SD assessment*  
Direct line: 0414 971 956

Attention: Matthew Glass

Dear Matthew,

## **RYE PARK ROAD SITE ACCESS TRACK CROSSING, BLAKNEY CREEK Sight Distance Assessment**

This assessment of sight distance for proposed windfarm site access track crossing options across Rye Park Road at Blakney Creek, has been undertaken by *Samsa Consulting Pty Ltd – Transport Planning and Traffic Engineering Consultants*.

### **Background**

As part of the design development of the site access tracks for the Rye Park Windfarm project, sight distance issues have been identified with the initial proposed site access track crossing location of Rye Park Road. Consequently, an alternative intersection location for the site access track to cross Rye Park Road has been proposed in order to achieve a safe location, particularly with respect to sight distance. The general location of the subject sites is shown in the *Location Plan* below.



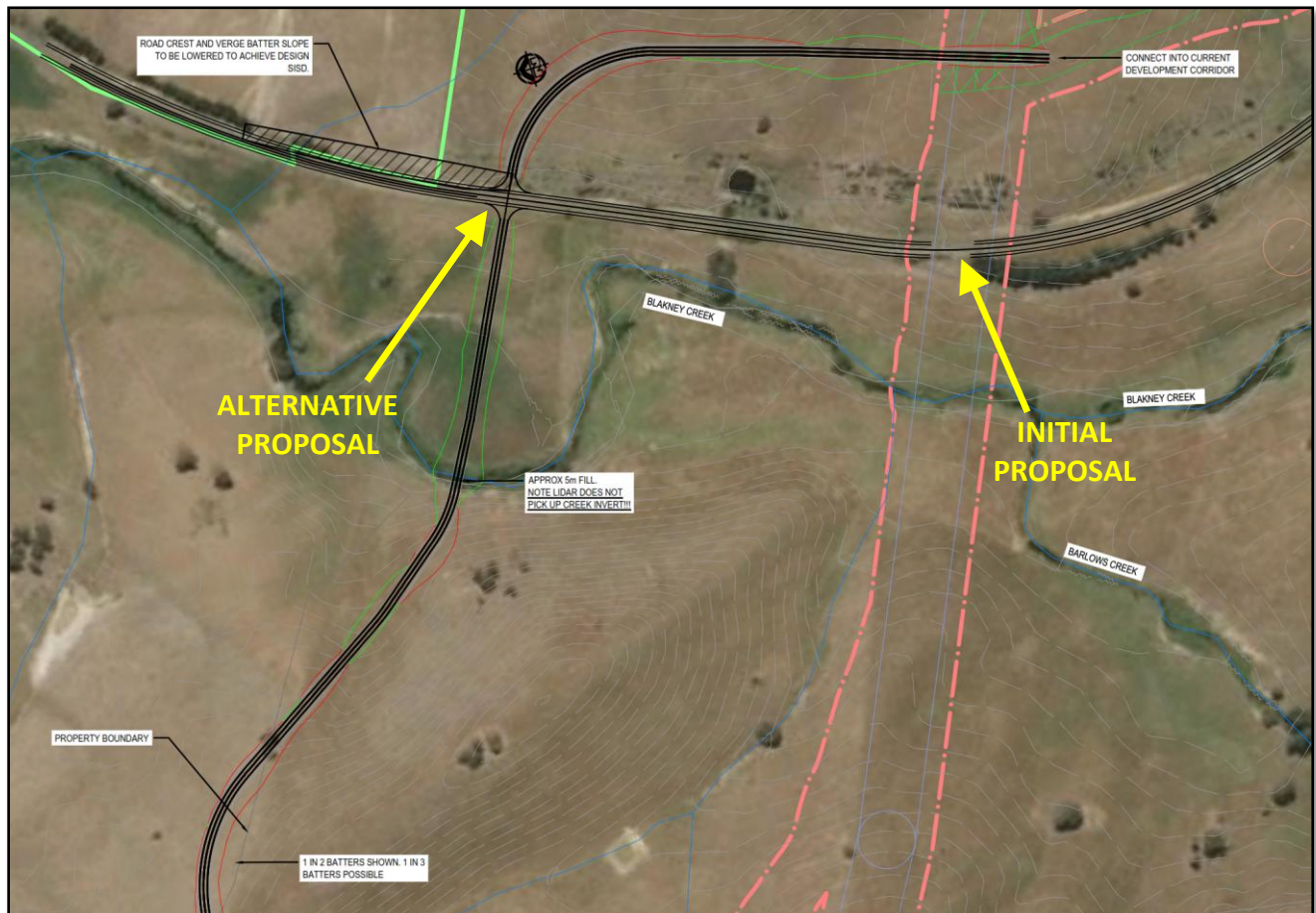
**Location Plan**

### **SAMSA CONSULTING Pty Ltd**

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The initial proposed site access track crossing location is shown in the *Site Access Track Crossing Options* figure below. It is located within the centre of the pink corridor to the north of the tree line on the western side of Rye Park Road.

The alternative proposed site access track crossing location is located approximately 350 m north of the initial proposal. The proposed intersection and site access track approaches are shown in the *Site Access Track Crossing Options* figure below.



**Site Access Track Crossing Options**

### ***Documentation / References***

The assessment of sight distance involved a desk-top review of various design documentation as well as site inspections. In addition, reference has been made to the following pertinent documents:

- i3 Consulting “Rye Park Windfarm: Rye Park Dalton Road – Alt Intersection (Drawing 16-007 - SK 02: Internal Track to Rye Park Dalton Rd Crossing Plan – Alternate Intersection 1)”, 17/12/2020
- Austroads “Guide to Road Design Part 3: Geometric Design (2<sup>nd</sup> Edition)”, October 2016
- Austroads “Guide to Road Design Part 4: Intersections and Crossings – General”, 2017
- Austroads “Guide to Road Design Part 4A: Unsignalised and Signalised Intersections”, October 2017
- RTA “Delineation Guidelines: Parts 1 to 19 & Appendices A & B”, assorted dates
- Standards Australia “AS 1742.1 – 2003: Manual of uniform traffic control devices, Part 1: General introduction and index of signs”, 2003



- Standards Australia “AS 1742.3 – 2009: *Manual of uniform traffic control devices, Part 3: Traffic control for works on roads*”, 2009
- Transport for NSW “*Traffic Control at Work Sites, Technical Manual – Issue 6.0*”, 14 September 2020

### ***Sight Distance Assessment***

The following comments are provided with respect to sight distance for the two proposed site access track crossing options across Rye Park Road:

- The relevant sight distance applicable to the proposed site access track crossing options across Rye Park Road is safe intersection sight distance (SISD) at the intersection crossing area.  
Rye Park Road has a 100 km/h rural speed zone along the subject section being assessed. Assuming a reaction time of 2.0 secs for cars and 2.5 secs for trucks (appropriate for this type of road), the desirable minimum SISD<sup>1</sup> would be 248 m for cars and 262 m for trucks.  
While the above guideline SISDs are based on appropriate reaction times, lower minimum sight distance lengths could be adopted in constrained locations for specific road types, eg. lower volume, lower speed urban roads. However, it is considered that the subject section of Rye Park Road does not fall under the constrained and specific road type and that the above minimum SISD values should be used.

### ***Initial Proposal Location***

- Sight distance to the south from the Initial Proposal location is restricted by a combination horizontal / vertical (crest) curve alignment as well as a significantly high, roadside batter slope on the eastern side of Rye Park Road. The available sight distance to the south is approximately 90 m, which is sub-standard with respect to SISD for the Initial Proposal location – refer to *Photos 1 and 2* following. It is considered there is minimal scope to improve sight distance to the south of the Initial Proposal location without significant road realignment and batter slope removal works.



***PHOTO 1 – Rye Park Road northbound approach to Initial Proposal location: sight distance is approximately 90 m***

<sup>1</sup> From Table 3.2 of Austroads “*Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*”, 2017



*PHOTO 2 – Rye Park Road looking south from the Initial Proposal location (eastern side of road): sight distance is approximately 90 m*

- Sight distance to the north from the Initial Proposal location is essentially unrestricted along a relatively straight, flat section of Rye Park Road. The available sight distance is significantly over 300 m, which satisfies SISD criteria for the Initial Proposal location – refer to *Photos 3 and 4* following.



*PHOTO 3 – Rye Park Road looking north from the Initial Proposal location: sight distance is greater than 300 m*





*PHOTO 4 – Rye Park Road southbound approach to Initial Proposal location: sight distance is greater than 300 m*

Alternative Proposal Location

- Sight distance to the south from the Alternative Proposal location is essentially unrestricted along a relatively straight, flat section of Rye Park Road (similar to that north of the Initial Proposal location). The available sight distance is significantly over 300 m, which satisfies SISD criteria for the Alternative Proposal location – refer to *Photos 5 and 6* following.



*PHOTO 5 – Rye Park Road northbound approach to Alternative Proposal location: sight distance is greater than 300 m*



*PHOTO 6 – Rye Park Road looking south from the Alternative Proposal location: sight distance is greater than 300 m*

- Sight distance to the north from the Alternative Proposal location is partially restricted by a relatively moderate horizontal curve alignment as well as a minor roadside batter slope and roadside vegetation including tree foliage and shrubs / grasses on the eastern side of Rye Park Road. The available sight distance is estimated at approximately 200 m, which is sub-standard with respect to SISD for the Alternative Proposal location – refer to *Photos 7 and 8* following.



*PHOTO 7 – Rye Park Road looking north from the Alternative Proposal location: sight distance is approximately 200 m*





*PHOTO 8 – Rye Park Road southbound approach to Alternative Proposal location: sight distance is approximately 200 m*

It is considered that the sight distance to the north of the Alternative Proposal location could be improved by cutting / pruning some tree foliage and shrubs / grasses, which could potentially increase the sight distance to comply with the required SISD, ie. 248 m for cars and 262 m for trucks, which is approximately 20 m north of the 'School Bus Stop Ahead' sign on the western side of Rye Park Road. It should be noted that this would necessitate ongoing maintenance to maintain the required sight distance.

### **Conclusions**

The Initial Proposal location has inadequate sight distance to the south along Rye Park Road and would require significant road realignment and batter slope removal works to achieve the suitable SISD. The Alternative Proposal location has restricted sight distance to the north along Rye Park Road but with some cutting / pruning of tree foliage and shrubs / grasses along the eastern side of Rye Park Road, could potentially increase the sight distance to comply with the required SISD. Therefore, it is considered that the Alternative Proposal location is feasible and the preferred option.

If you have any queries with respect to the above, please do not hesitate to contact the undersigned.

Yours faithfully,

**ALAN SAMSA**

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