



Sight Distance Assessment

**Commercial Vehicle Safety Centre Programme -
Bombay Commercial Vehicle Safety Centre**

WSP Transport Planning Team

14/03/2024

Summary

Concerning sight distance assessment, we have adhered to the Austroads Guide to Road Design (AGRD) Part 4A as our benchmark standard. The sight distance assessment comprises two key components: the Approach Sight Distance (ASD) requirement and the Safe Intersection Sight Distance (SISD) requirement.

Considering the operational speed of 84.6 km/h for southbound vehicles, the minimum ASD and SISD requirements from the site to the north are 141 meters and 212 meters, respectively. The sight distance available to the north of the proposed site is approximately 233 meters, surpassing the AGRD Part 4A requirements. It's crucial to highlight the conservatism of this assessment, given the reduction in the posted southbound speed limit to 60 km/h since 30 June 2022, potentially resulting in an operating speed below 84.6 km/h.

Similarly, for northbound vehicles travelling at an operating speed of 60 km/h, the 150 meters of sight distance available from the site to the south exceeds the ASD of 67 meters and SISD of 117 meters stipulated in AGRD Part 4A.

The methodology used for sight distance assessment entails a thorough analysis utilizing both desktop assessment and on-site visits. Four reference objects were employed to evaluate inter-visibility, incorporating both desktop analysis and on-site photographs. These reference objects consist of:

Reference Object 1: The access point and pole located opposite 1988 Great South Road

Reference Object 2: A silver car parked on the street, positioned opposite the access to SGRT

Reference Object 3: The speed limit signs on both sides of the road

Reference Object 4: The pole on the corner of the roundabout

The combined results from the desktop assessment and on-site observations affirm the presence of adequate inter-visibility between drivers and vehicles in both directions.

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- Line of Sight Distance Measurement
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- Sight Distance Assessment (On site)

Sight Distance from the Site to the South

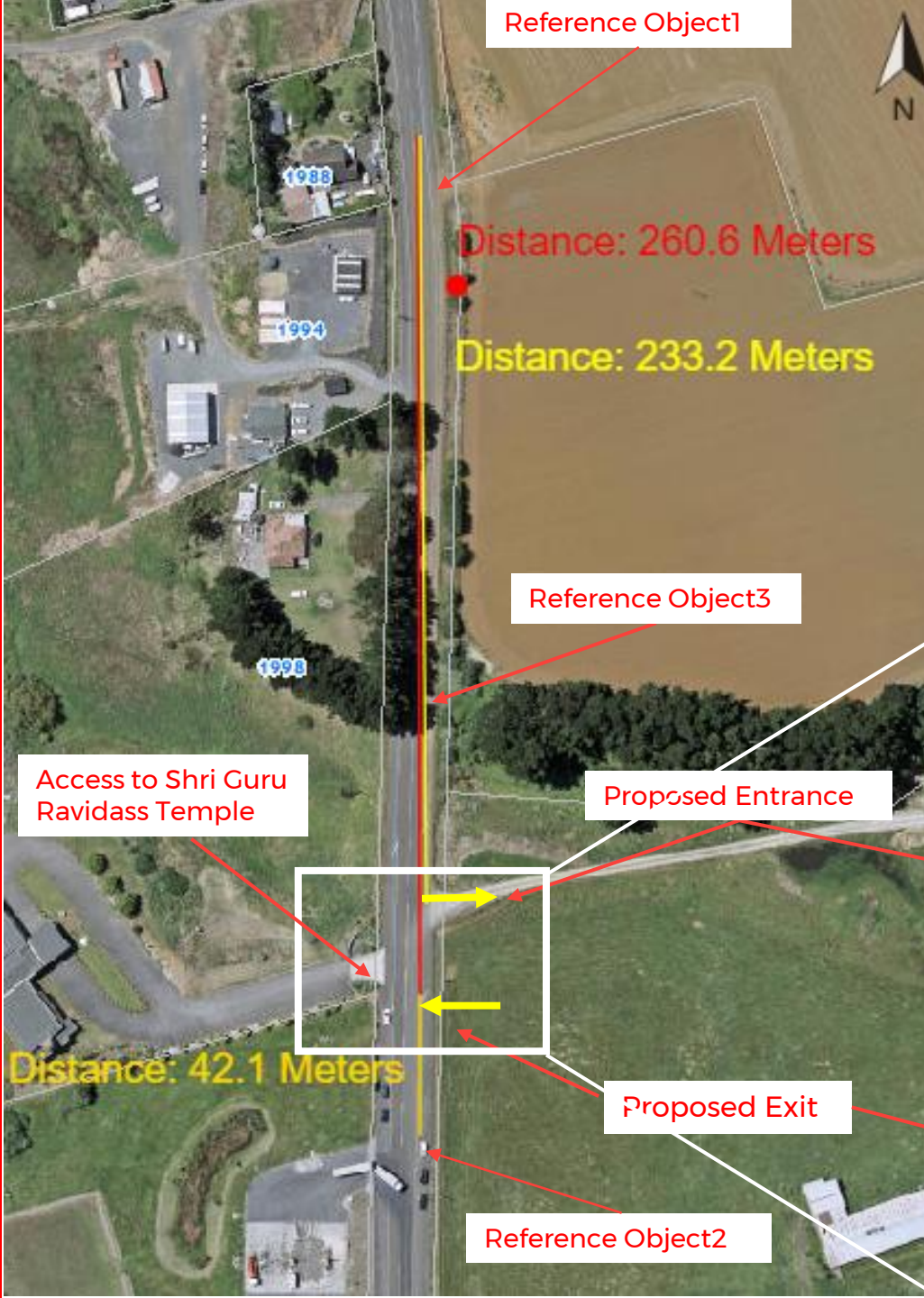
- Line of Sight Distance Measurement
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ASD and SISD Assessment

| Approach Sight Distance (ASD) | | | |
|-------------------------------|-----------------|----------------------------|--------------------------|
| Direction | Operating Speed | Recommended Sight Distance | Available Sight Distance |
| To the north | 84.6 km/hr | 141 metres | >233metres |
| To the south | 60 km/hr | 67 metres | >150 metres |

| Safe Intersection Sight Distance (SISD) | | | |
|---|-----------------|----------------------------|--------------------------|
| Direction | Operating Speed | Recommended Sight Distance | Available Sight Distance |
| To the north | 84.6km/hr | 212 metres | >233metres |
| To the south | 60 km/hr | 117 metres | >150 metres |

Note: Despite the southbound speed limit being reduced to 60 km/h since June 30, 2022, a conservative estimate of 84.6 km/h has been maintained for the operating speed.



Line of Sight Distance Measurement (From the site to the north)

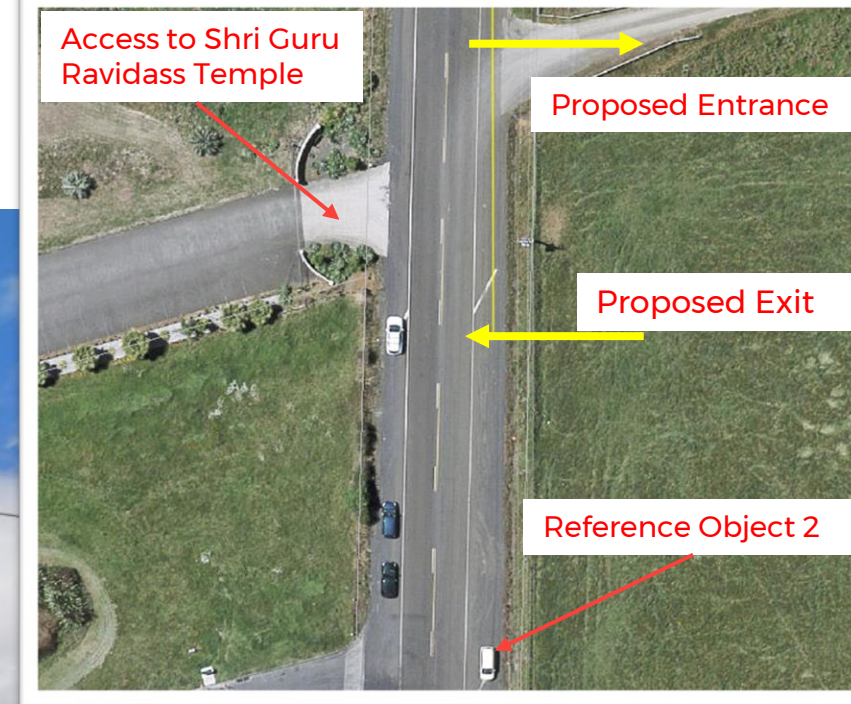
1. The line-of-sight distance between Reference Objects 1 and 2 is 300 meters. (260m+40m)
2. The line-of-sight distance between the proposed entrance and Reference Object 1 is 233 meters.
3. The line-of-sight distance between the proposed exit and Reference Object 1 is 260 meters.



Reference Object 1



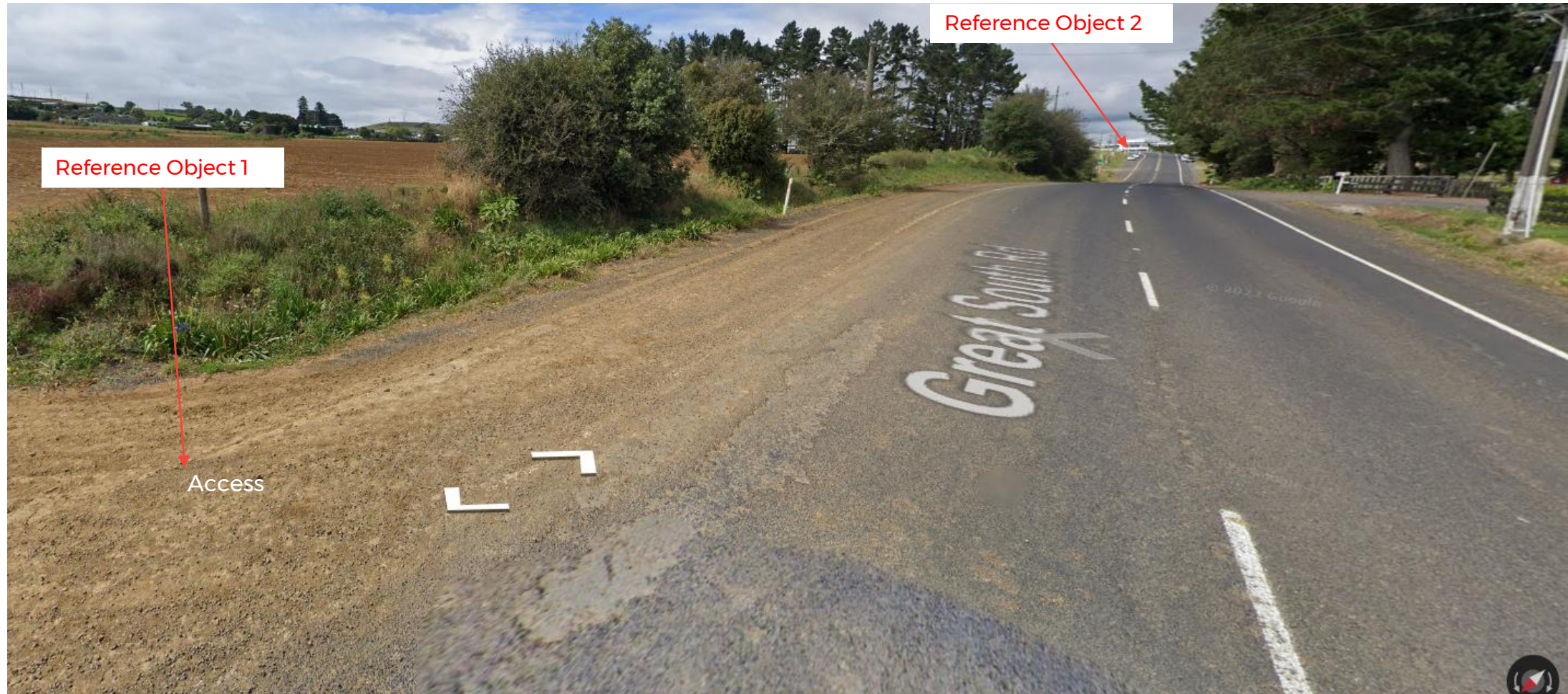
Reference Object 2



Reference Object 3



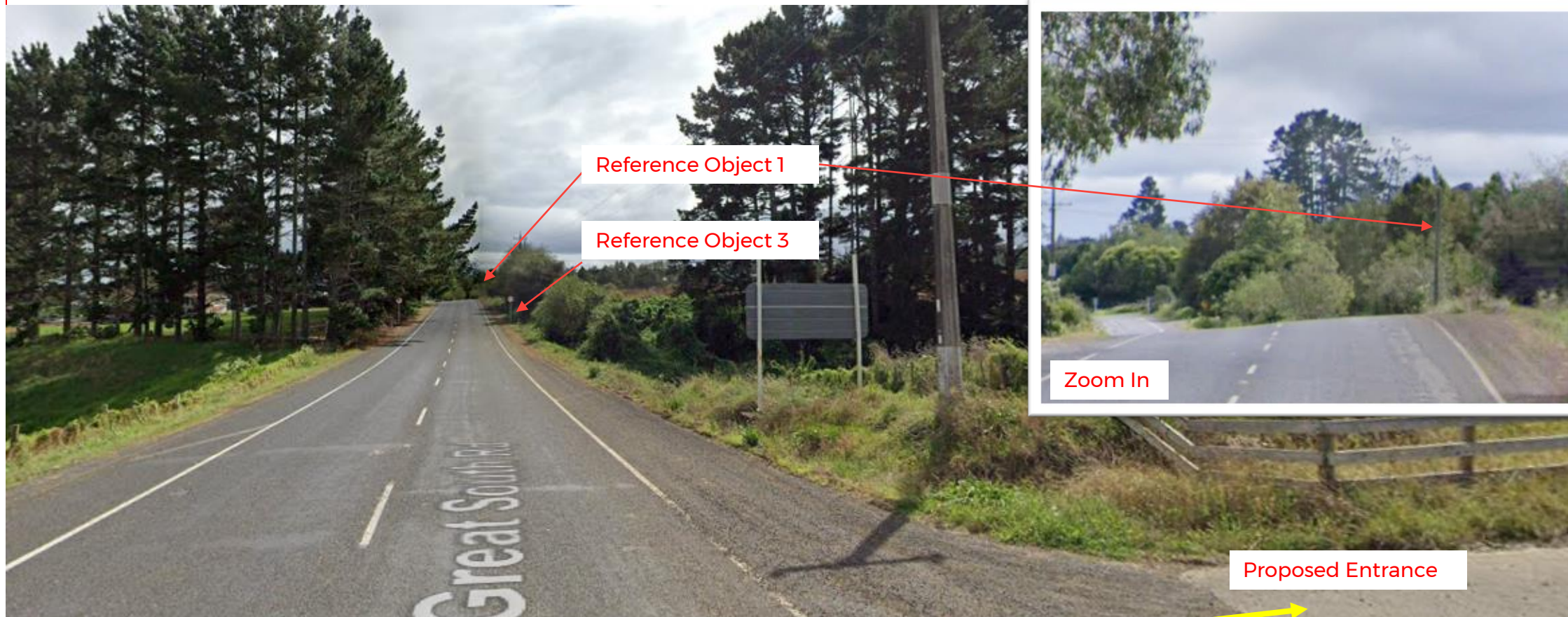
Sight Distance Assessment (Desktop)



Visibility from the Object 1 to Object 2

Notes: The available sight distance between Objects 1 and 2 is approximately 300 meters, which indicates that southbound drivers have adequate sight distance to see the vehicles turning right to the entrance (233m far) or vehicles turning left from the exit (260m far).

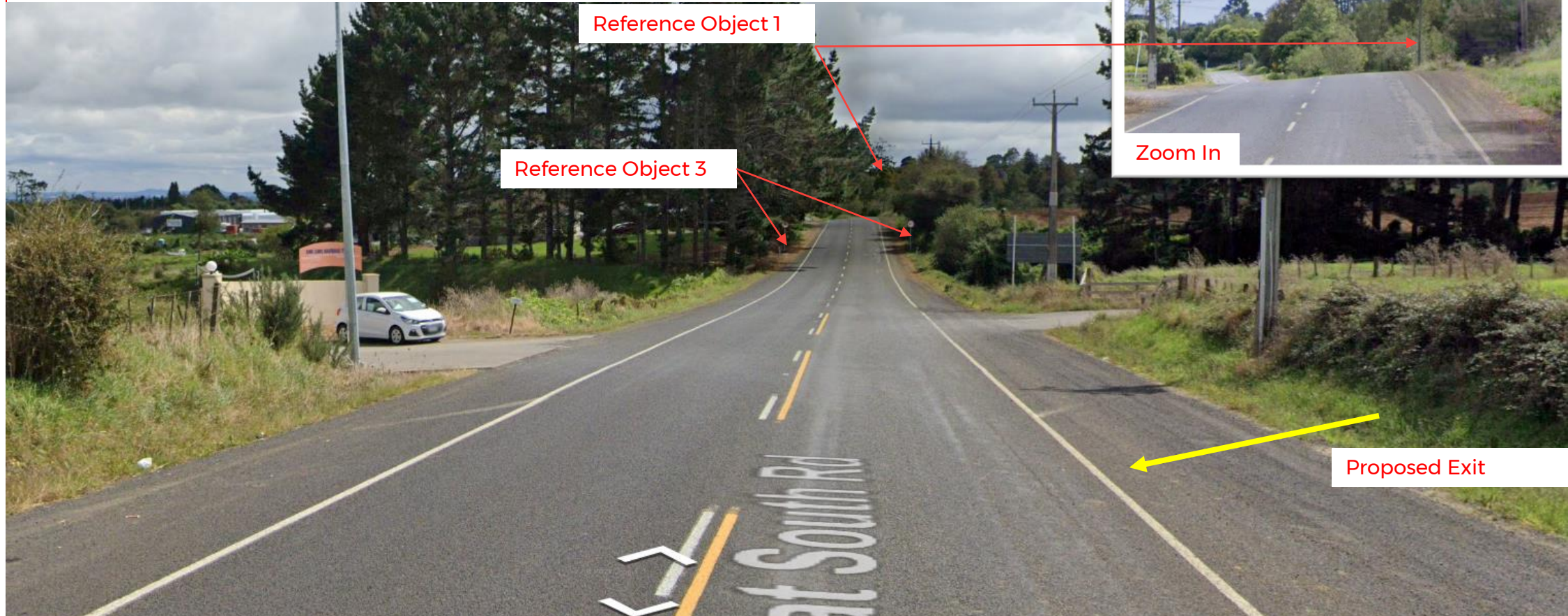
Sight Distance Assessment (Desktop)



Visibility from the point of the proposed entrance to Object 1

Notes: As Object 1 of the pole blends with the background due to its similar colour, we utilized Reference Object 3 (Speed limit sign) as an alternative reference point. Examining the street view, we can observe a considerable distance extending beyond the speed limit sign. Moreover, the trees behind Object 1 can be seen clearly, which demonstrates the available sight distance of 233 meters between the proposed entrance and Object 1.

Sight Distance Assessment (Desktop)



Visibility from the point of proposed exit to Object 1

Notes: As Object 1 of the pole blends with the background due to its similar colour, we utilized Reference Object 3 (Speed limit sign) as an alternative reference point. Examining the street view, we can observe a considerable distance extending beyond the speed limit sign. Moreover, the trees behind Object 1 can be seen clearly, which demonstrates the available sight distance of 260 meters between the proposed exit and Object 1.

Sight Distance Assessment (Desktop)



Visibility from Object 3 to Object 1 (To the north)
The available sight distance between Objects 1 and 3 is more than 160 meters

Resource from Geo Maps

Sight Distance Assessment (On site)



Visibility between a point adjacent to the proposed entrance and Object 1 (To the north)
Notes: The southbound approaching car and Reference Object 1 can be easily discernible from the point of turning right to the proposed entrance observed on site. The available sight distance is more than 233 meters.

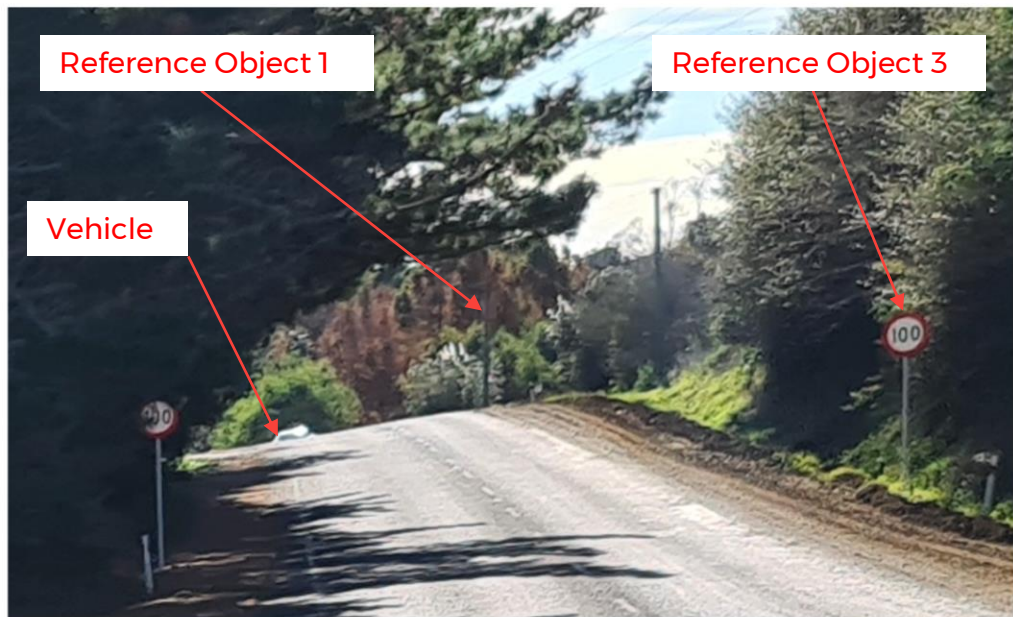
Sight Distance Assessment (On site)

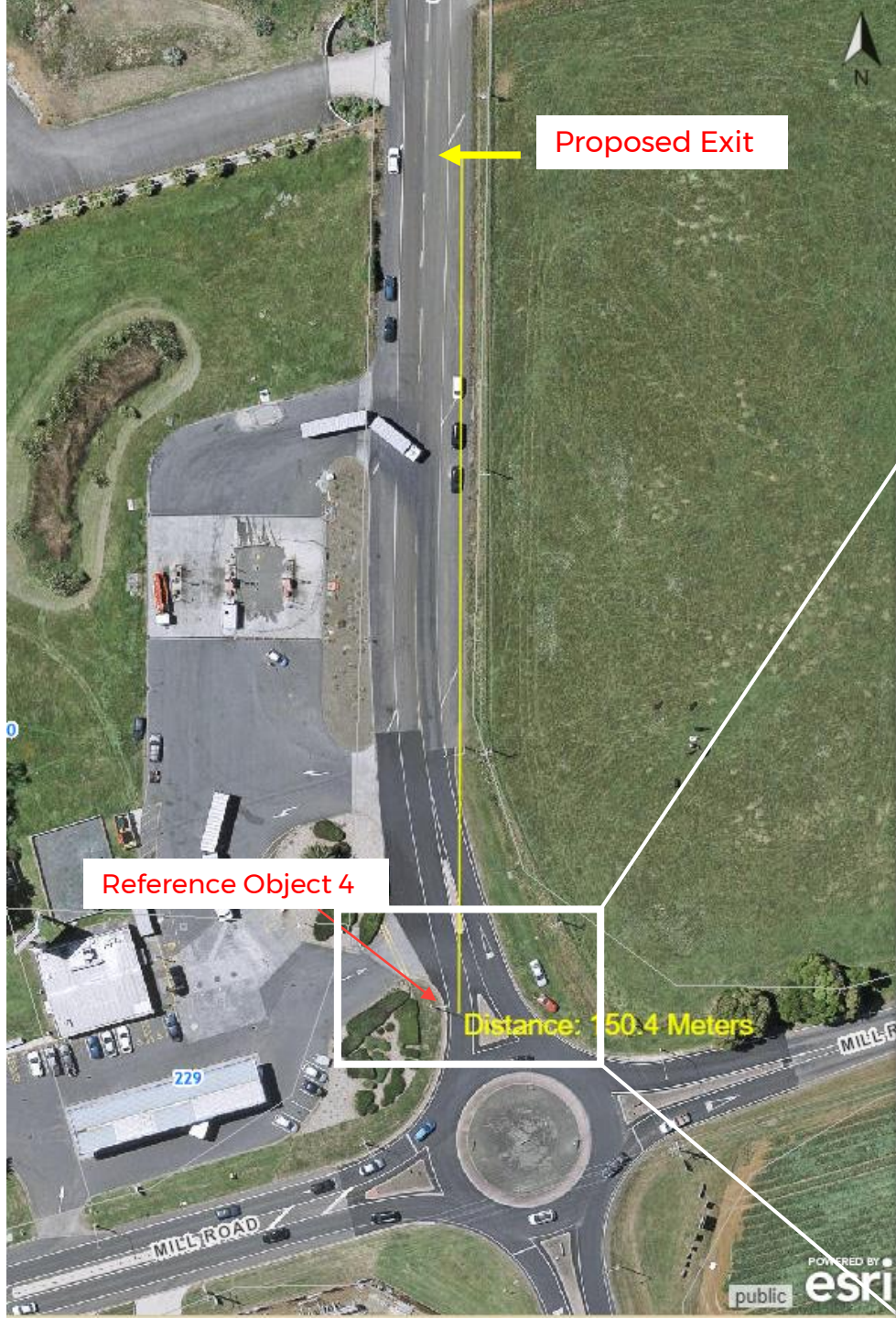


Visibility from the Site to Object 1 (To the north)
The available sight distance between Object 1 and the proposed entrance is more than 233 meters

Resource from site visit

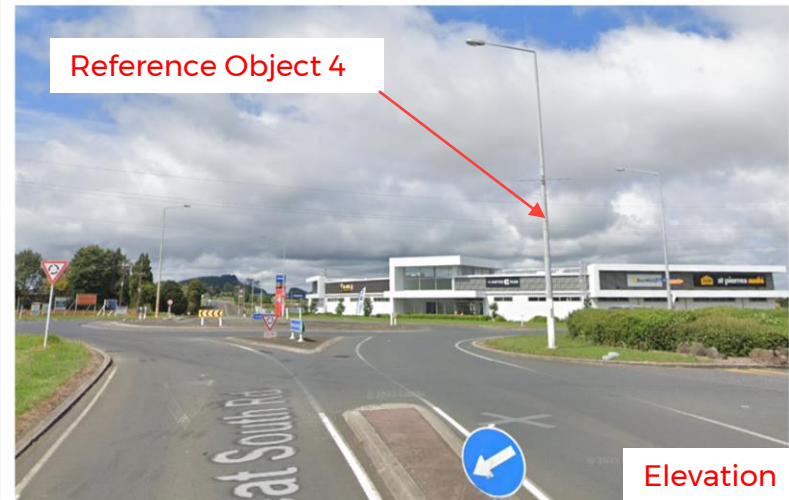
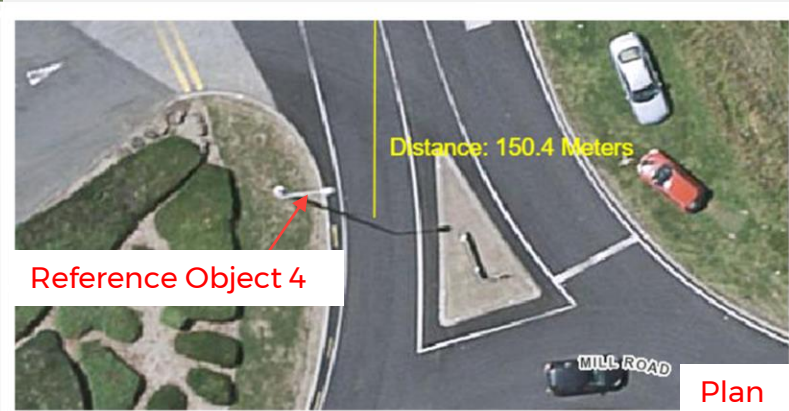
Sight Distance Assessment (On site)



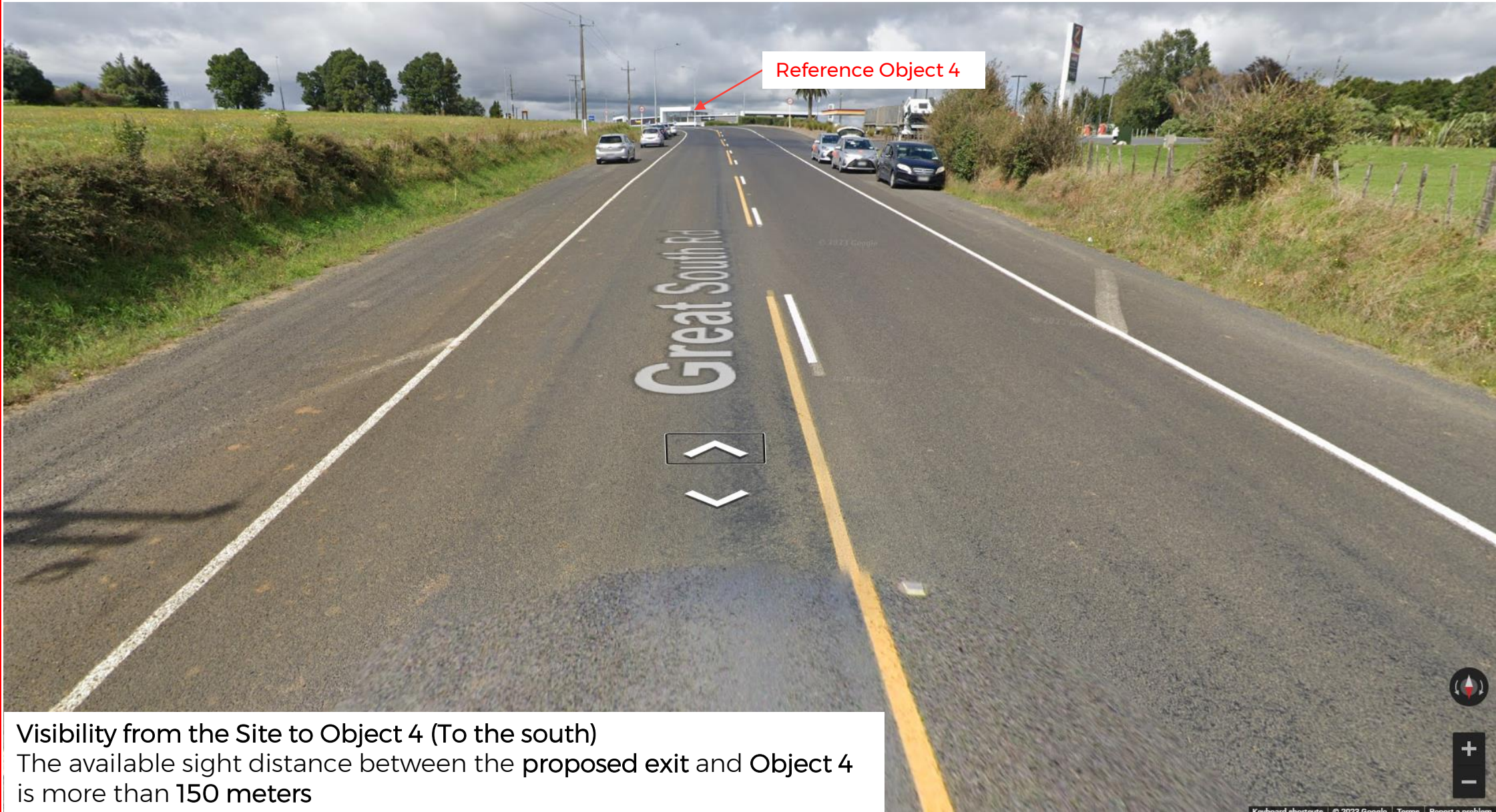


Line of Sight Distance Measurement (From the site to the south)

The line-of-sight distance between the proposed exit and Reference Object 4 is 150 meters.



Sight Distance Assessment (Desktop)



Reference Object 4

Visibility from the Site to Object 4 (To the south)
The available sight distance between the proposed exit and Object 4 is more than 150 meters



Sight Distance Assessment (On site)



Visibility from the Site to Object 4 (To the south)
The available sight distance between the proposed exit and Object 4 is more than 150 meters



Thank you



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