



architectus™

Billboard Locations M7 Motorway

Visual/Landscape and Traffic Safety Assessments

For: Western Sydney Parklands Trust
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1.0 Introduction/Site Locations

Introduction

Architectus and Traffix were engaged to undertake an assessment of possible locations for proposed advertising signage (billboards) on Western Sydney Parklands Trust land adjacent to the M7 Motorway.

The purpose of the assessment was to identify a range of possible sites for the signage by undertaking preliminary assessment, followed by more in-depth environmental assessment for the preferred sites.

Architectus examined the proposed sites from visual, landscape and urban design impact perspectives and Traffix from a traffic safety perspective.

Site Locations

A total of six (6) sites were examined in detail including the previously submitted sites 2-3, 2-4, 2-2 and 2-8 that formed part of previous Development Applications lodged with Fairfield and Liverpool City Councils.

The proposed sites include:

- Site 1 on WSPT land north of Redmayne Rd (North of The Horsley Drive)
- Site 2 on WSPT land south of Redmayne Rd (North of The Horsley Drive)
- Site 3 on WSPT land near the Sydney Equestrian Centre
- Site 4 on WSPT south of the Sydney International Equestrian Centre
- Site 5 on WSPT land south of Elizabeth Drive (2nd pedestrian overpass)
- Site 6 on WSPT land south of site 4 (Cecil Hills)

Draft photomontages photoshopped into approximate locations on still images taken from the video of site inspections made on August 21, 2012 are provided on pages following the location map.

Methodology

The seven proposed sites were investigated along the M7 motorway and video recorded in each direction on August 21, 2012. Individual sites were visited on foot where possible.

The original M7 motorway planting plans were assessed against current field conditions following approximately seven seasons of growth since implementation of planting. This was to determine if proposed signage will be visually obscured by regrowth or future replanting in these locations.

Sign imagery was 'photoshopped' into approximate locations on still images taken from the video recordings and are provided on pages following the location map.

Visual Character of Area

From a visual analysis perspective, the landscape of the M7 has a relatively high visual absorption capacity. The view from the M7 motorway route across the site areas can be described predominately as a peri-urban landscape. There have been a high number of "cultural" modifications such as the road way infrastructure, including signage, walls, bridges etc, telecommunications towers, high voltage powerlines, built form etc.

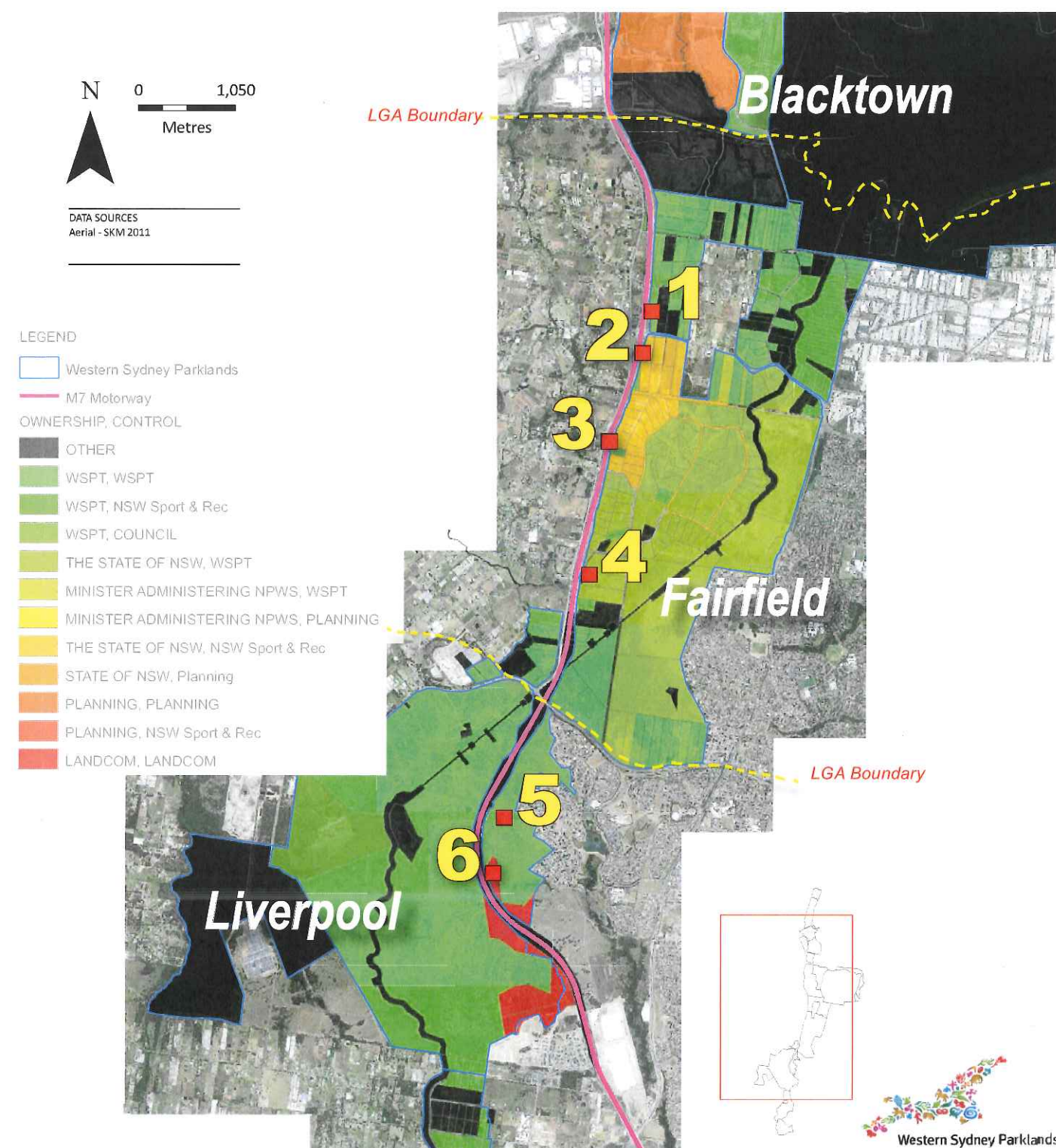
There are patches of remnant or planted native vegetation. The extent of revegetation of the parklands that is visible from the motorway has been highly variable in terms of its success of establishment. This is evident from aerial photo and ground observations along the motorway. It is a highly altered, albeit attractive parkland and "parkway" motorway and cannot be considered a "pristine" environment.

The proposed signage will therefore not undermine the positive qualities and will be acceptable when safety considerations and impacts on residential areas have been factored into siting and design.

ROAD SAFETY NOTE:

To assess the road safety implications of the proposed billboards located near existing motorway advisory signs and variable message signs, a generic 'order of importance' assessment/method has been developed by TRAFFIX, based on the relevance of the relative weighting of importance of the existing signs as viewed by the RMS and M7 Westlink and the likelihood that the information would require drivers to make decisions/manoeuvres. For instance, advisory signs displaying only distance information to destinations are considered 'low-order', signs displaying off-ramp information in excess of 1km in advance of the off-ramp are considered 'middle order' and signs displaying off-ramp information located at the off-ramp are considered 'high-order'. Furthermore, VMS (Variable Message Signs) often display generic driver information; therefore, VMS are considered of 'middle-order' importance.

Refer Section 4.0 Traffic Safety Summary for details



2.0 Methodology for Development of Photomontages

Development of Photomontages

Photomontage simulations were developed for each of the six sites. The methodology for determining the height and width of the signs in each location is described in detail in the accompanying methodology (see inset)

This method of producing visual simulation has been used in determining highway sign locations and telecommunications infrastructure, in particular, for mobile phone towers, in Victoria since the mid 1990s. It has been accepted in the Victorian Civil and Administrative Tribunal (VCAT) Planning and Environment division as a means of portraying the visual impact of proposed installations.

Methodology

Using a digital photograph imported into Photoshop software:

A series of red markers are inserted that represent a one metre height measured from a known element on the site - the Jersey Barrier.

The red markers show that using a known dimension on the site (the control unit) (Height of Jersey Barrier - approx 1m) we can display the sign based on the known dimensions :

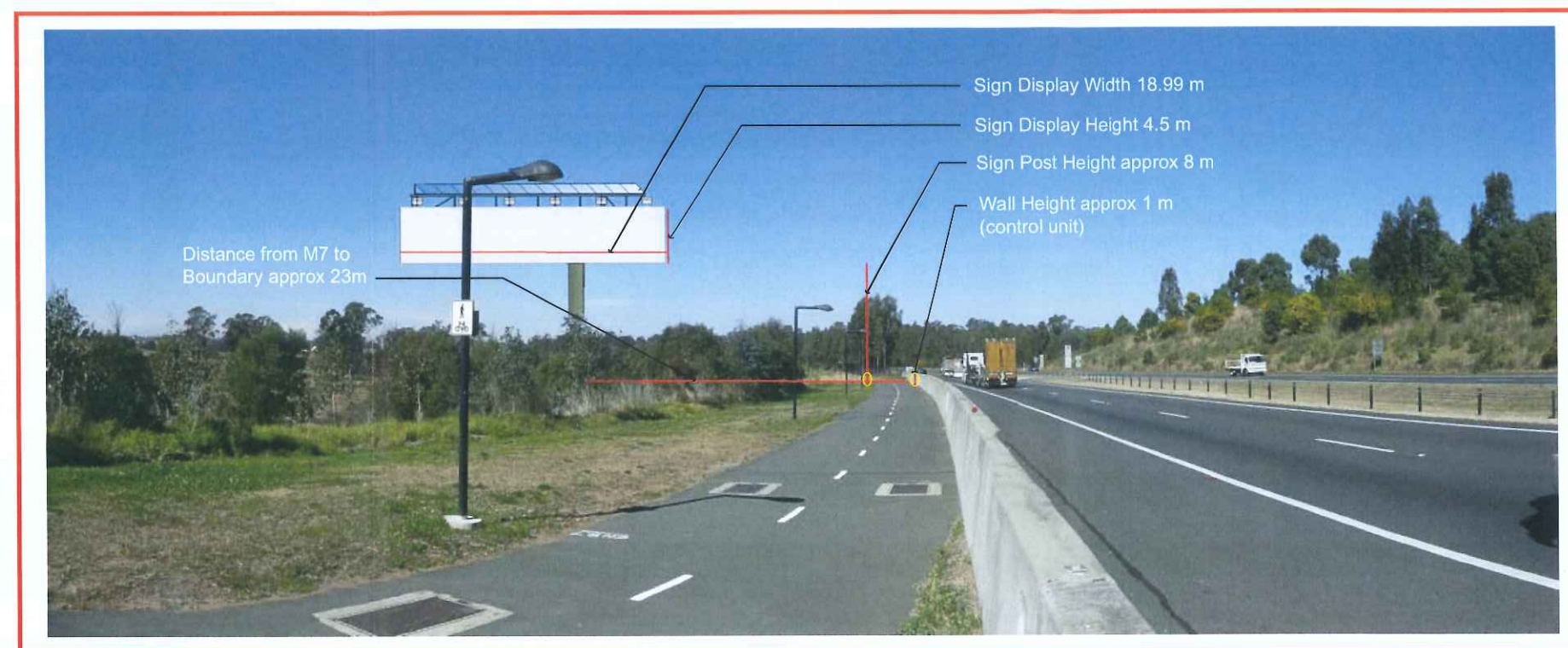
The post is 8 times as tall as the marker unit (8 meters)

The Sign Display is 4.5 times as tall (4.5 meters)

The Sign width is 18.99 times the unit in width (18.99 meters)

The distance from the Jersey barrier to the boundary is 23 times the unit in width (23 meters)

The drawing of the sign was imported from Illustrator software, rendered and "stretched to" fit the above dimensions



Methodology Diagram

Modification of signage structure colour



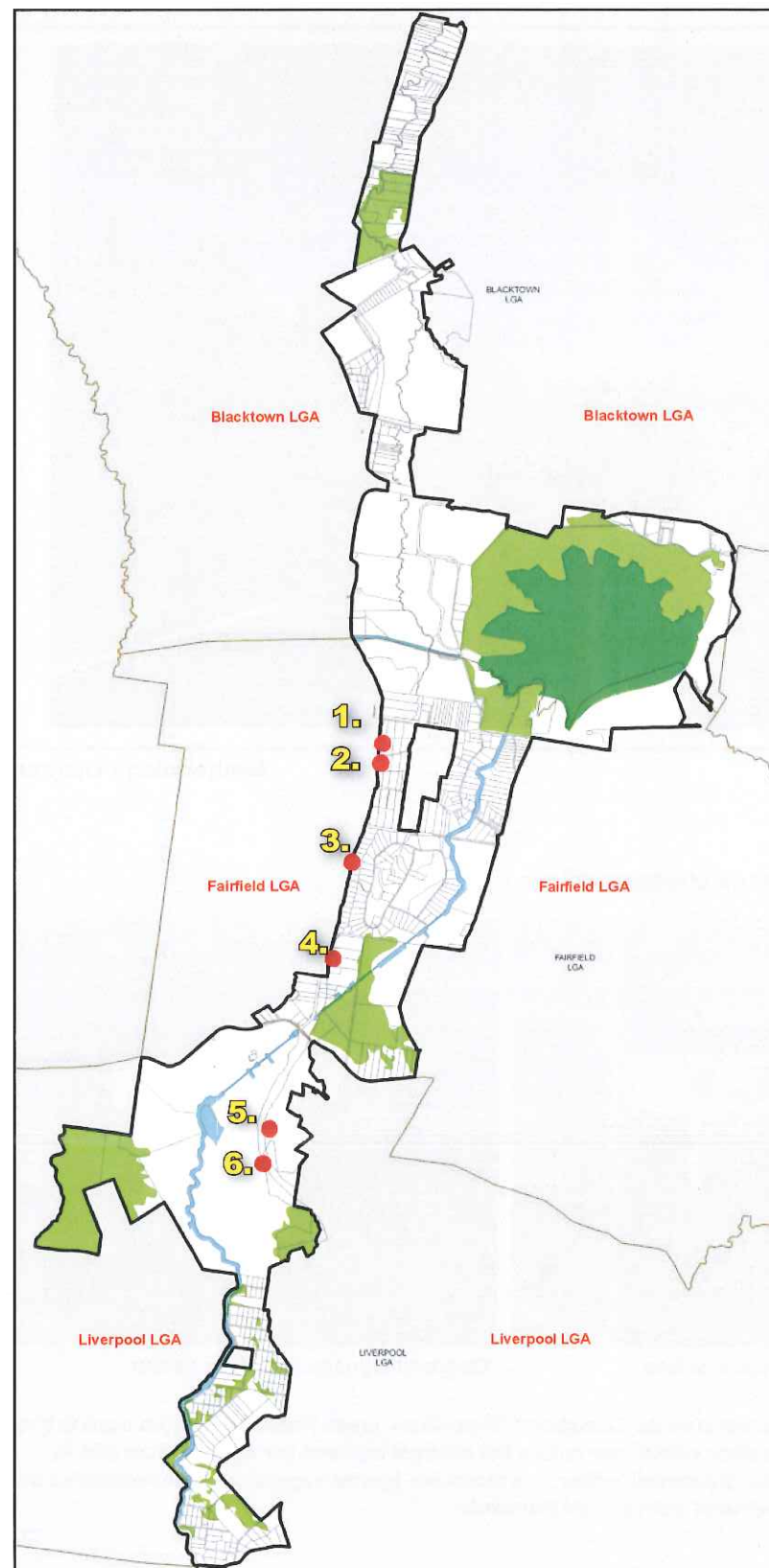
Original signage structure colour



Optional signage structure colour

A suggested use of a colour such as Colourbond "River Gum" green (indicative only) is used to show how using a more naturalistic colour may reduce the contrast between the sign structure and its background. Black is also a potential "colour" it is recessive against vegetation as demonstrated by the M7 infrastructure elements such as light standards

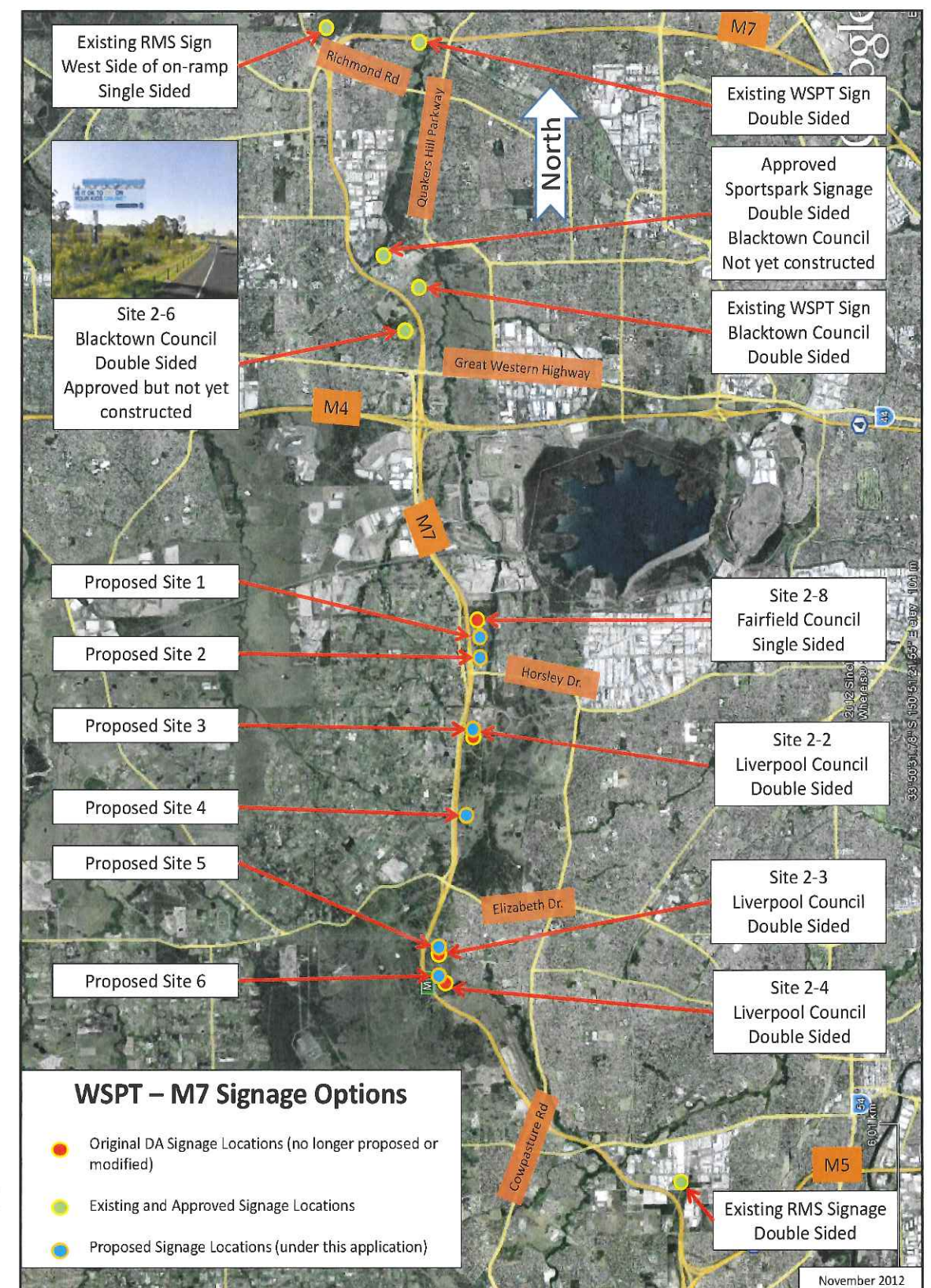
3.0 Overview of sign locations



The signs are not located adjacent to any sites noted in the map at left which is an amalgamation of the State Environmental Planning Policy (Western Sydney Parklands) 2009 maps which show:

- Environmental Conservation Areas.
- Bulk Water Supply Infrastructure.
- Heritage Items.

There are a number of major signage installations and approved installations not yet installed along the M7 motorway as described on the plan at right.



4.0 Traffic Safety Summary

BASIS FOR TRAFFIC SAFETY ASSESSMENTS

The Traffic Safety Assessments consider the signs in respect of the Transport Corridor Outdoor Advertising and Signage Guidelines. In particular, the 'Advertisements and road safety' section of the Guidelines.

Criterion (f) of the Guidelines states:

"(f) A sign should not be located:

(i) less than the safe sight distance from an intersection, merge point, exit ramp, traffic control signal or sharp curves."

Traffic consultant, Traffix, provides the following justification and methodology in response to this criterion for addressing traffic safety:

The guidelines refer to Safe Sight Distance (SafeSD); however, this is not a term that is generally used and no clear definition of it, or methodology for calculating it, could be found within other RMS guidance or Austroads. However, Stopping Sight Distance (SSD) and Safe Intersection Sight Distance (SISD) are terms that are clearly defined. The following presents the methodology used to determine SafeSD, using the accepted derivations for SSD and SISD:

Firstly, Stopping Sight Distance is the distance that a vehicle travels (in total) during:

- the time it takes the driver to react to a 'hazard' (for a high-speed road this is generally 2.5s) and apply the brakes; plus
- the time it takes for the braking to bring the vehicle to a stop.

For a 100km/h speed environment such as the M7 motorway, SSD is 175 metres, consisting of 70 metres to react plus 105 metres to stop.

Secondly, Safe Intersection Sight Distance (SISD) consists of SSD plus an additional three (3) seconds of observation time. It is required at intersections where the presence of a car is not initially considered a hazard and gives a driver (on the major road) the time to observe the situation and then react and brake if required.

For a 100 km/hr speed environment, SSD is 255 metres.

Therefore, based on these two sight distances above, it can be concluded that in a 100 km/hr speed environment, a vehicle driver requires 80 metres (i.e. 255m – 175m) to 'observe' a decision making point (i.e. an on-ramp merge point) and 70 metres to 'react'. On this basis it is considered that 150 metres would be a Safe Sight Distance for the M7 environment.

Motorways by definition are designed to reduce conflicts between vehicles and opposing traffic flows with a view to achieving a safe, high speed traffic corridor. Therefore, with regard to criterion (f)(i), the only relevant 'decision points' that would be encountered by a driver on the M7 motorway would be:

- Merge Points, the point where merging traffic from an on-ramp meets motorway traffic; and
- Exit Ramps, the point where exiting traffic diverges at an off-ramp.

These are the most significant areas as distracting a driver at these points would have the greatest risk of creating a safety hazard. Accordingly, all billboard sites are located in positions so that they are not visible to drivers within 150 metres (SafeSD) off merge points or exit ramps.

With regard to other features that drivers would encounter on the M7 motorway, in particular motorway signage (such as distance advisory signs, Variable Message Signs [VMS], etc), it is worth noting that the guidelines also state the following:

"(d) The advertisement must not distract a driver from or reduce the visibility and effectiveness of directional signs, traffic signals, other traffic control devices, regulatory signs or advisory signs or to obscure information about the road alignment."

In summary, criterion (d) requires that the proposed billboards do not:

- (1) Distract a driver from signage;
- (2) Reduce the visibility of signage; and
- (3) Reduce the effectiveness of signage.

With regard to (2) visibility, all relevant motorway signage is located within the motorway corridor and is generally positioned immediately adjacent to (or for VMS, directly above) the traffic lanes. Conversely, all proposed billboards are located on WSPT land which is external of the M7 motorway corridor. Therefore, none of the proposed billboards block the visibility of existing motorway signage.

With regards to (1) and (3), there is a level of 'subjectiveness' that cannot be quantified in terms of travel time or travel distance. In addition, it is recognised that different motorway signs have different levels of 'importance' based on the likelihood that the information on a particular sign would require drivers to make decisions/manoeuvres instantaneously.

Where practical, billboards have been located so that 150 metres (SafeSD) of clear viewing of the motorway signage can be achieved. Where constraints have not allowed this, all relevant factors (such as achievable clear signage viewing distance, implications of shared billboard and signage viewing, level of importance of the signage, etc) have been considered and a professional judgement on a site's suitability has been made. In this regard, all proposed sites within 150 metres proximity of motorway signage are considered acceptable. It is noteworthy that a number of potential sites were deemed unacceptable on these grounds and are no longer the subject of this submission.

Finally, the sites have also been assessed against visibility cone criteria. At 100km/hr, a driver's angle of vision ('field of view' or 'visibility cone') is 20 degrees either side of a point on the road, 580 metres in front of the driver. This visibility cone is referred to as the Focusing Point Distance Cone and a driver can safely observe see

and comprehend features within this cone. Motorway signage is generally designed to be legible from 450 metres. Therefore, once motorway signage and (for the purpose of this study) billboards are within 450 metres of the driver (referred to as the Legibility Distance Cone), they should become legible to the driver. The visibility cone assessments indicate that all proposed billboards are located within the legibility distance cone and can therefore be safely viewed by drivers."

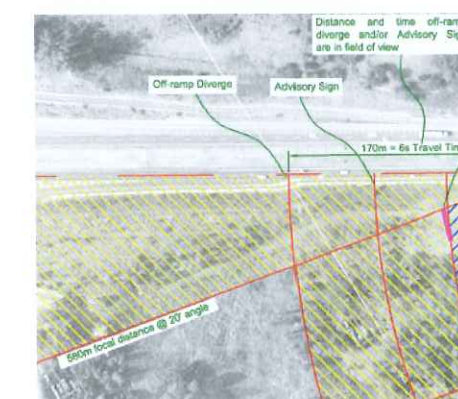
ROAD SAFETY METHODOLOGY

To assess the road safety implications of the billboards located near motorway advisory signs and variable message signs, a generic 'order of importance' has been developed by Traffix, based on the relevance of the information and the likelihood that the information would require drivers to make decisions/manoeuvres. For instance, advisory signs displaying only distance information to destinations are considered 'low-order', signs displaying off-ramp information in excess of one (1) kilometre in advance of the off-ramp are considered 'middle order' and signs displaying off-ramp information located at the off-ramp are considered 'high-order'. Furthermore, VMS often display generic driver information; therefore, VMS are considered of 'middle-order' importance.

Traffic field-of-view 'cone' diagrams have been prepared for each Billboard site. These diagrams have been developed on the basis of the following parameters:

FOCUSING POINT DISTANCE (FPD)

Is the distance to a point or position on the road in front of the driver that he/she is focussing on. It is noteworthy that on curved sections of road, this point is not always directly in front of the driver's immediate position. FPD increases as speed increases. The RMS (formerly RTA) Road Design Guide indicates that in a 100 km/hr environment (such as the M7 Motorway), FPD is 580 metres in front of the driver;



ANGLE OF VISION (AOV)

Is the angle to the left or right of a straight line between the driver and the focussing point. AOV decreases as speed increases. RMS guidance indicates that AOV is 20 degrees in a 100 km/hr speed environment;

LEGIBILITY DISTANCE (LD)

Is the distance at which a sign/billboard becomes legible. LD is generally a function of the size of text used on the sign/billboard and can therefore vary depending on this. However, it is noteworthy that Austroads Guidance indicates that Variable Message Signs (VMS) in a motorway environment should be designed so they are legible from 450 metres. This 450 metre LD has been applied to all VMS, Advisory Signs and proposed Billboards in the following individual site assessments.

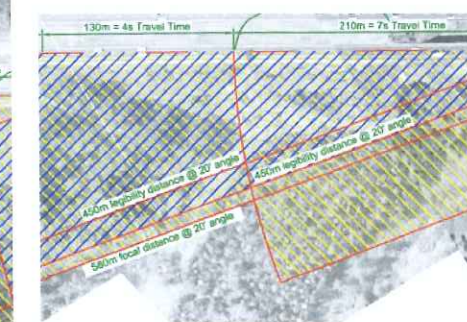
From the above, two field-of-view cones have been developed:

FOCUSING POINT DISTANCE CONE

The field-of-view 20 degrees to the left and right of a point on the road 580 metres in front of the driver. Features, such as on-ramp merges, are comprehended once they are within the FPD Cone;

LEGIBILITY DISTANCE CONE

The field-of-view 20 degrees to the left and right of a point on the road 450 metres in front of the driver. Subject to being designed in accordance with the requirements of a 100 km/hr speed environment, signs/billboards should be legible once they are within the LD Cone.



Portion of Traffic field-of-view 'cone' diagrams

5.0 Proposed Sign Locations

Site 1

Plan location:

WSPT land north of Redmayne Rd (north of The Horsley Drive)

Lot 6 DP 1021711 73-83 Chandos Rd, Horsley Park

LGA: Fairfield City Council

Description of sign

Single sided Billboard Sign oriented to southbound traffic

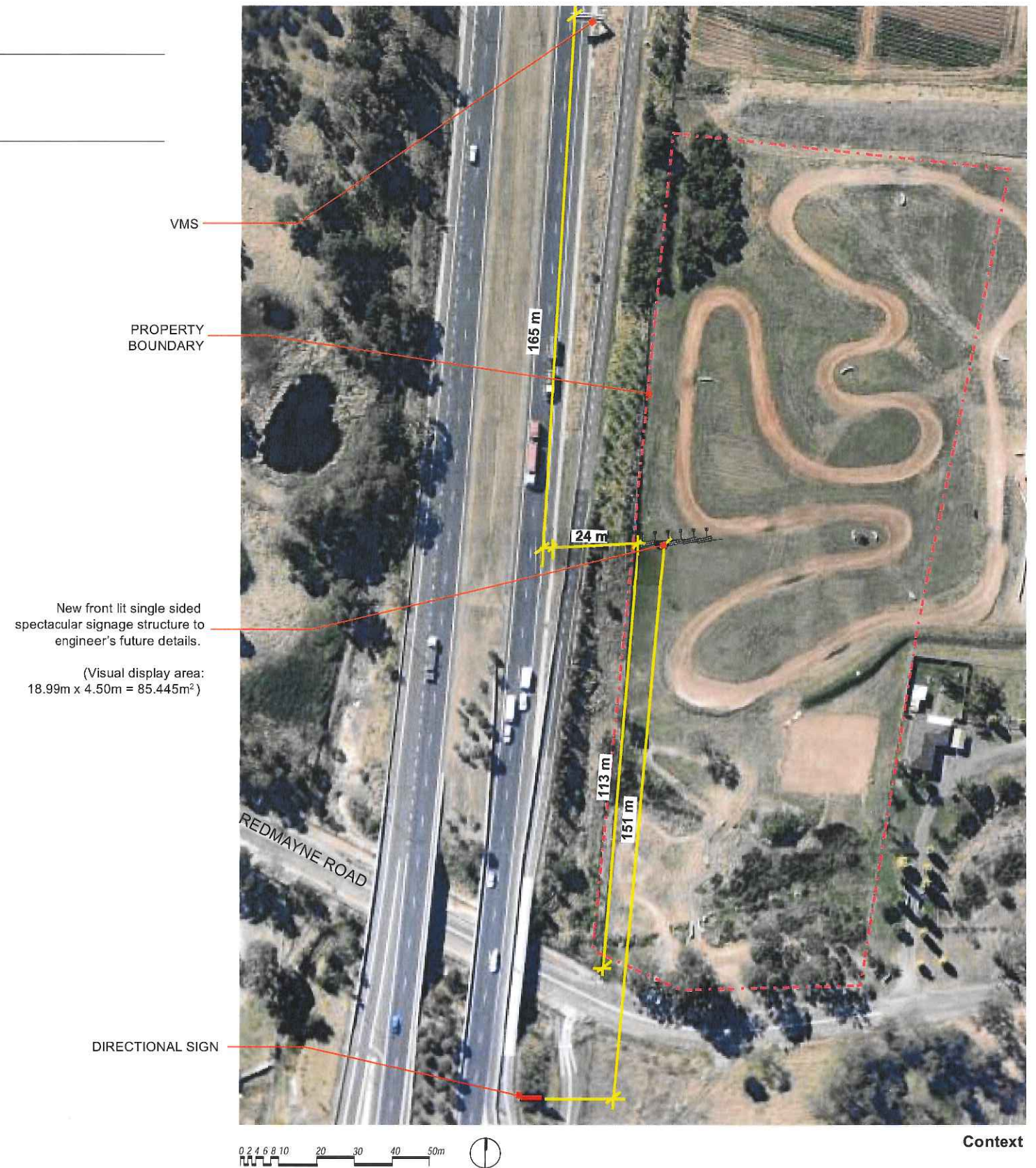
Details of sign

New front lit single sided (display oriented to southbound traffic) spectacular signage structure to engineer's future details.

(Visual display area: $18.99\text{m} \times 4.50\text{m} = 85.445\text{m}^2$)

8 meters in height to base of display area

Colour of support frame and post "River Gum" or similar. Solar powered lighting.



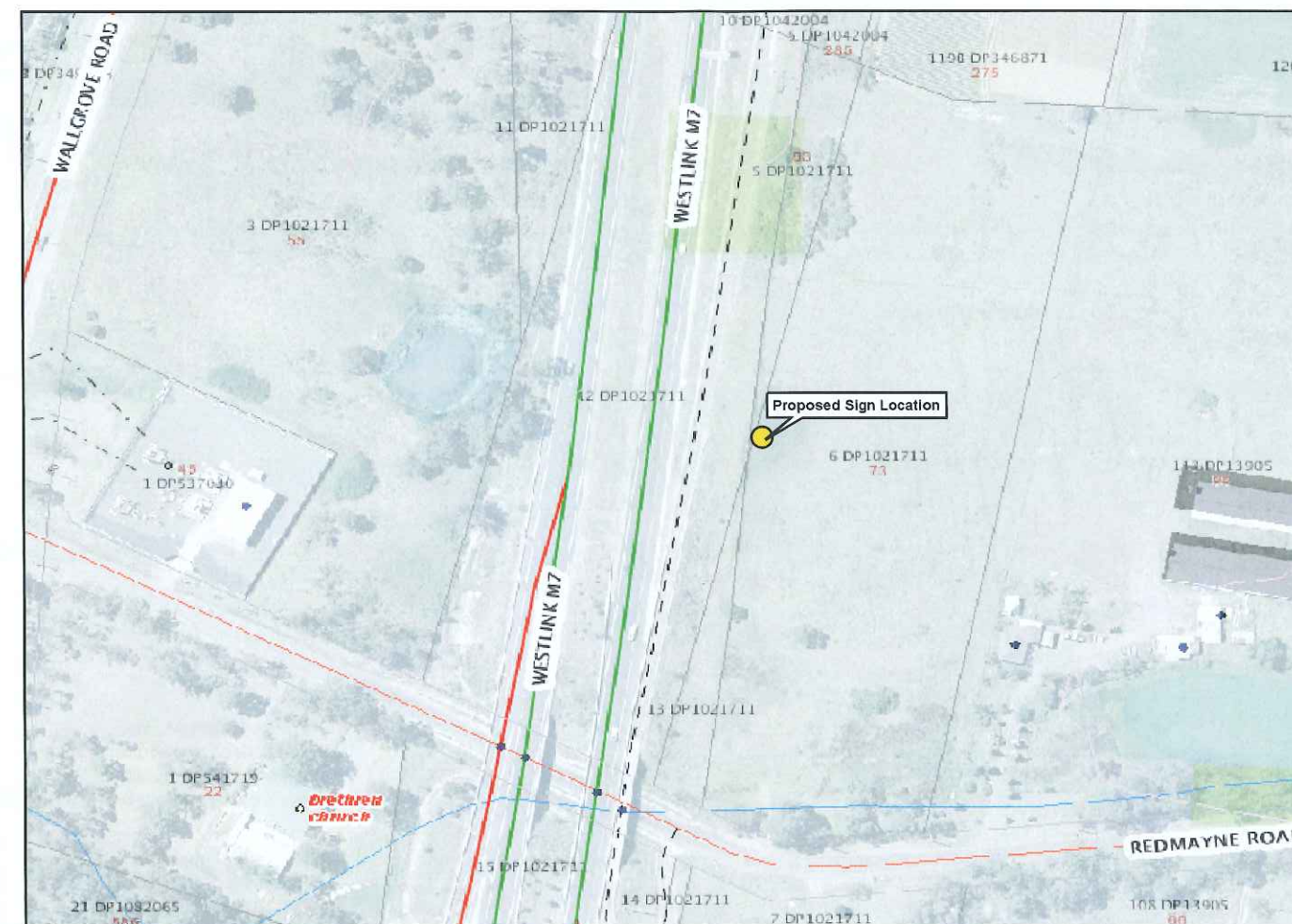
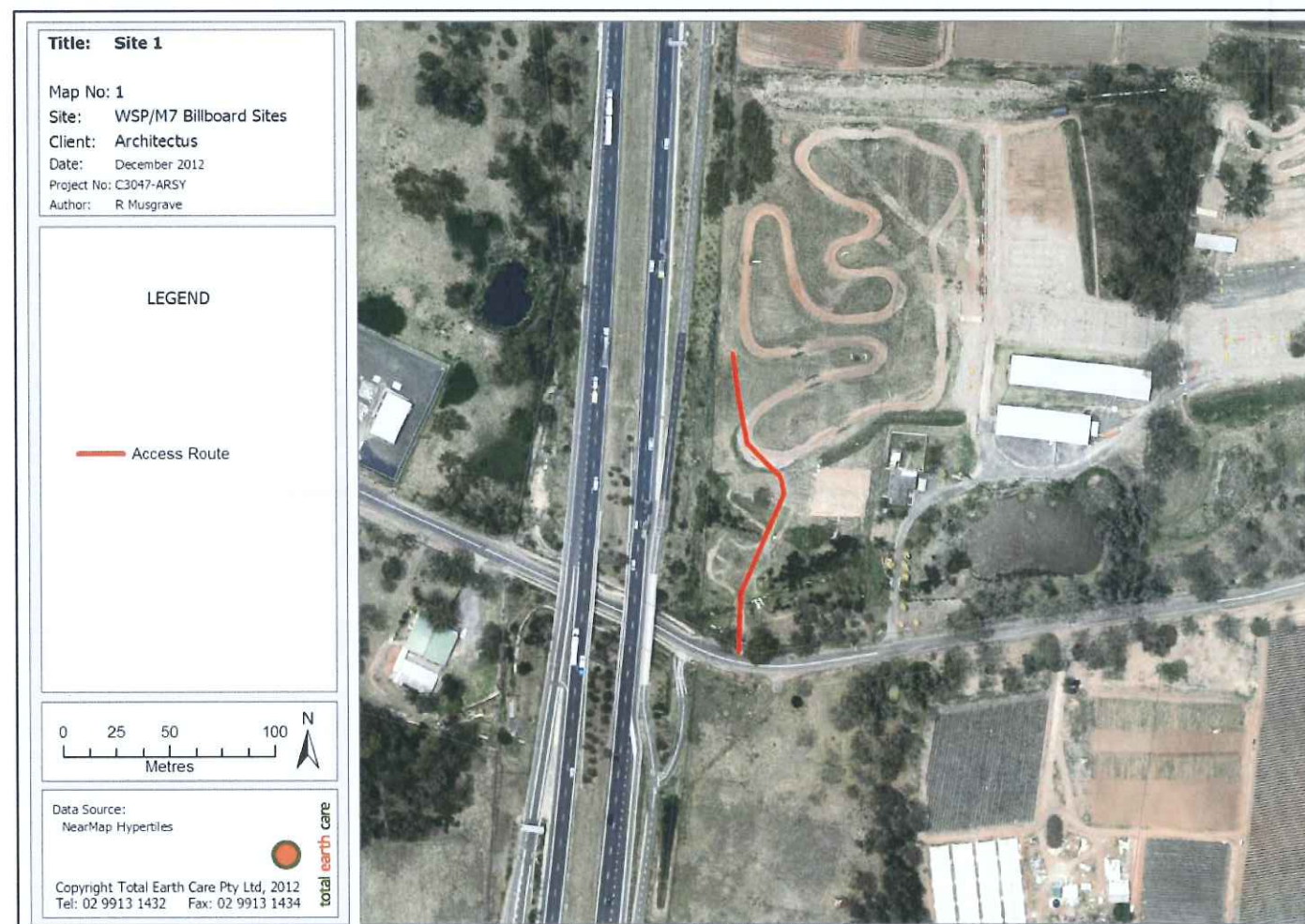
Site 1 - Site Plan & Access

Plan location:

WSPT land north of Redmayne Rd (north of The Horsley Drive)

Lot 6 DP 1021711 73-83
Chandos Rd, Horsley Park

LGA: Fairfield City Council



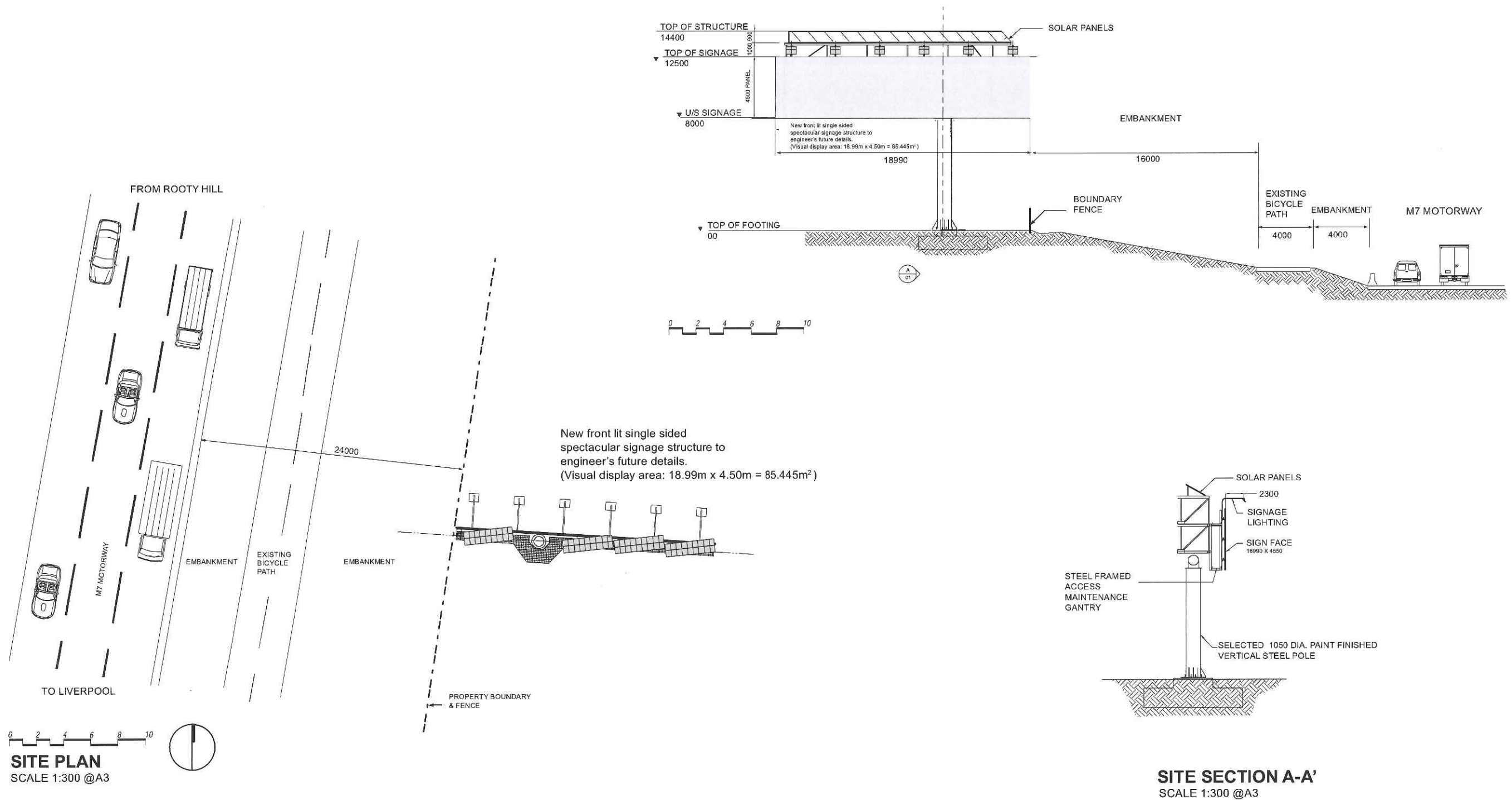
Site Plan

Source: Cadastre from
NSW Land Property and Management SIX Viewer

Site Access Plan

Source: Total Earth Care Pty Ltd

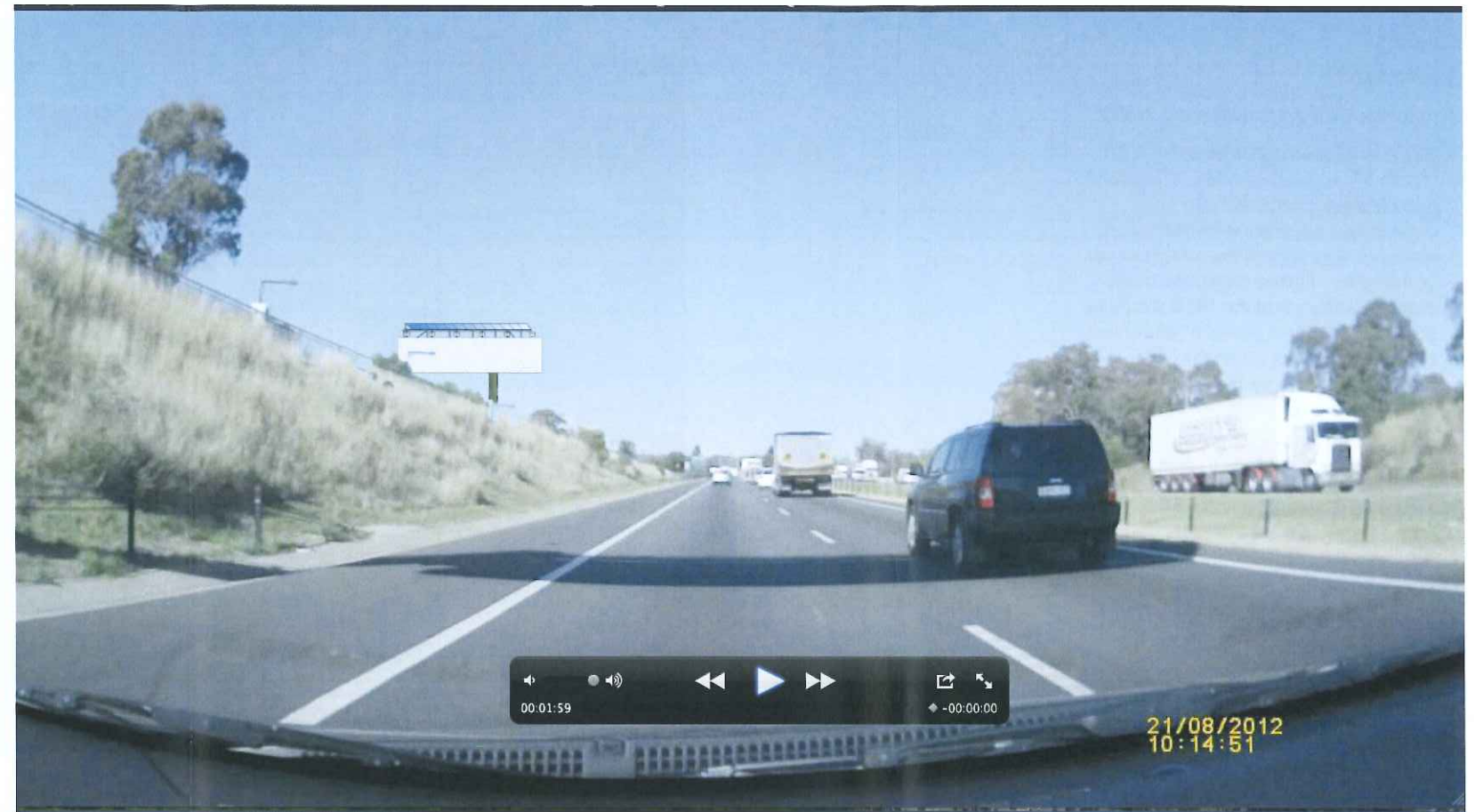
Site 1 - Plans & Sections



Site 1 - Visual Impact

Visual Impact

- Site is on WSPT land (Motorcycle Club lease area)
- The existing motorway planting is not fully established – gaps exist
- Sign will generally be visible southbound and will be framed by adjoining vegetation as it becomes established
- Residences to west of site will not be affected because of dense trees along Wallgrove Road and screening effects of substation and mounding
- Sign would not detract from visual amenity of area



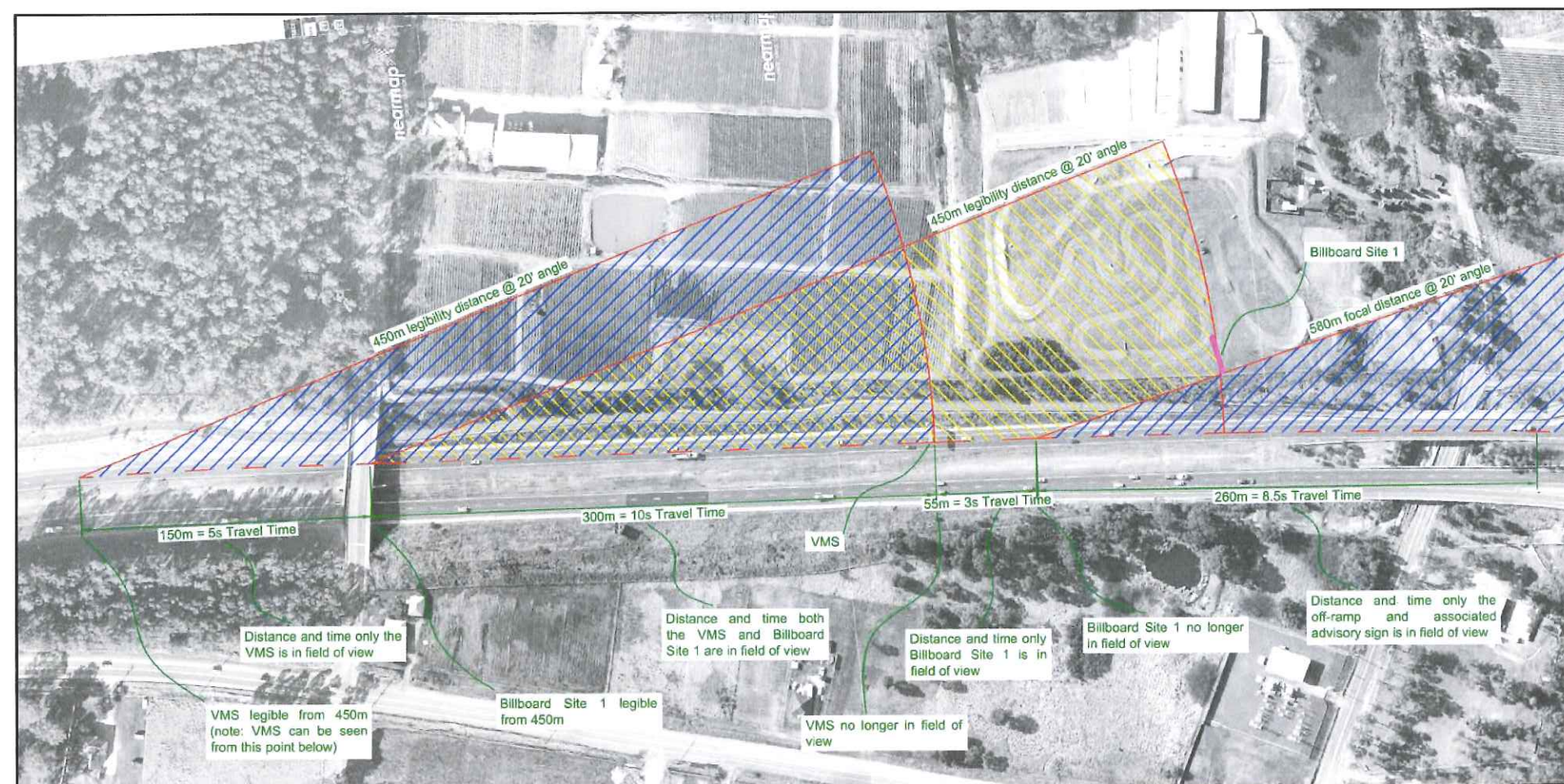
Photomontage

Site 1 - Traffic Safety Summary

Traffic Safety

Single-sided facing Southbound Traffic.

- Site 1 is located 165 metres beyond (south of) an existing VMS. Therefore, this distance combined with an appropriate advertising format would not adversely impact the effectiveness of the VMS. Furthermore, the cone diagram shows that the VMS would be solely legible for a period of about five (5) seconds, after which the VMS and Site 1 would both be legible for a further 10 seconds.
- Following the VMS, Site 1 would be legible for a further three (3) seconds.
- The cone diagram also shows that Site 1 would exit a southbound driver's field-of-view at a point about 260 metres in advance of the off-ramp diverge section to The Horsley Drive (and the associated advisory sign). This provides southbound drivers with up to nine (9) seconds of travel time to satisfactorily observe the advisory sign and subsequently observe and negotiate the diverge taper.
- Proposed as a single-sided billboard facing southbound traffic only; therefore, Site 1 would not be a distraction to northbound traffic merging at the on-ramp from The Horsley Drive.
- In summary, the assessment above, including the cone diagram opposite, shows that Site 1 is located in a position that is within a driver's field-of-view. Furthermore, its location would not reduce the effectiveness of the existing VMS or advisory sign, nor would it distract driver's attention from The Horsley Drive off-ramp. Accordingly, Site 1 is considered acceptable on road safety grounds.



Viewing Cones

Site 2

Plan location:

WSPT land south of Redmayne Rd (North of The Horsley Drive)

Lot 7 DP 1021711 - 54-64 Chandos Rd, Horsley Park

LGA: Fairfield City Council

Description of sign

Single sided Billboard Sign oriented to northbound traffic

Details of sign

New front lit single sided (display oriented to northbound traffic) spectacular signage structure to engineer's future details.

(Visual display area: 18.99m x 4.50m = 85.445m²)

8 meters in height to base of display area

Colour of support frame and post "River Gum" or similar. Solar powered lighting.



Context

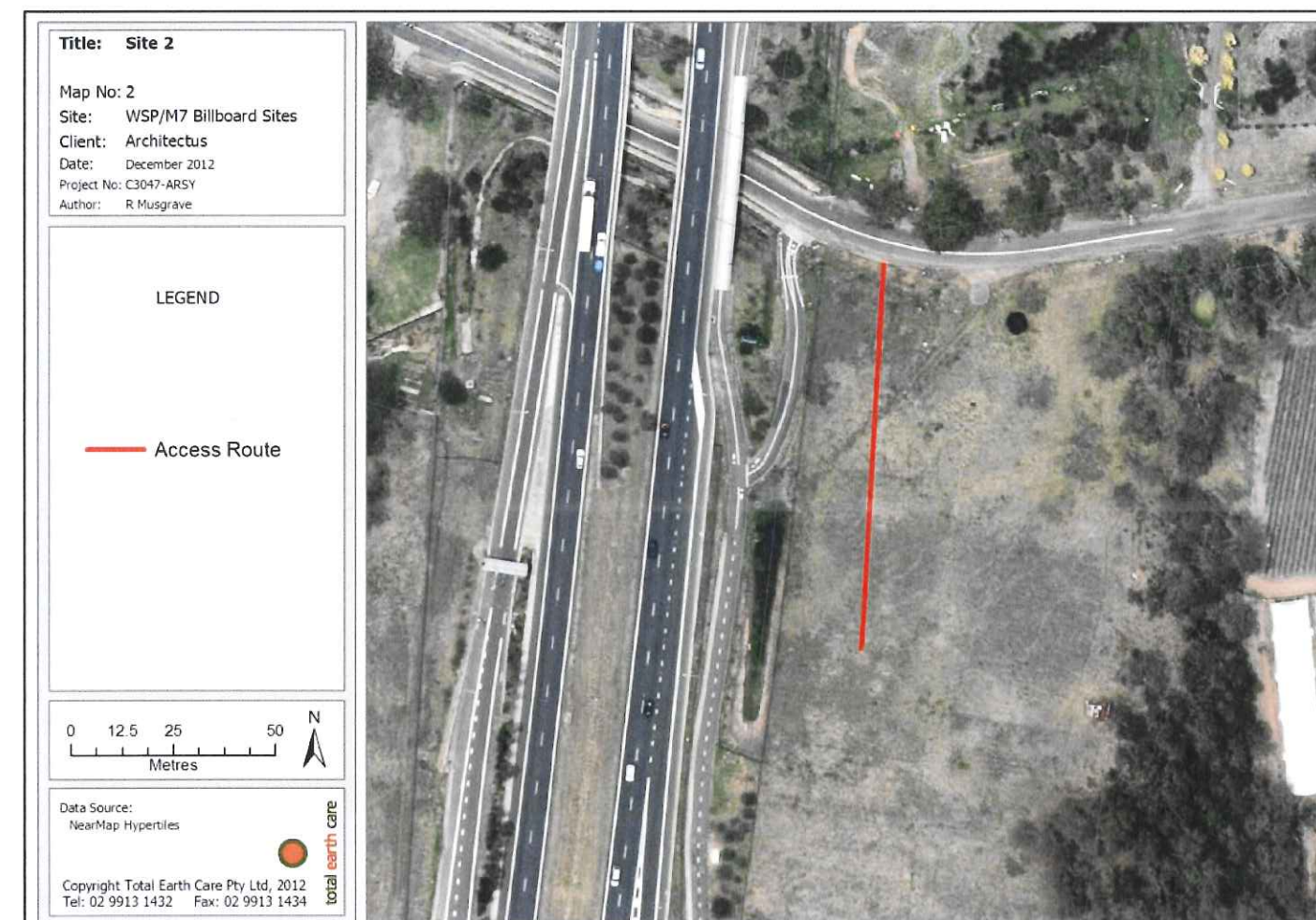
Site 2 - Site Plan & Access

Plan location:

WSPT land south of
Redmayne Rd (North of The
Horsley Drive)

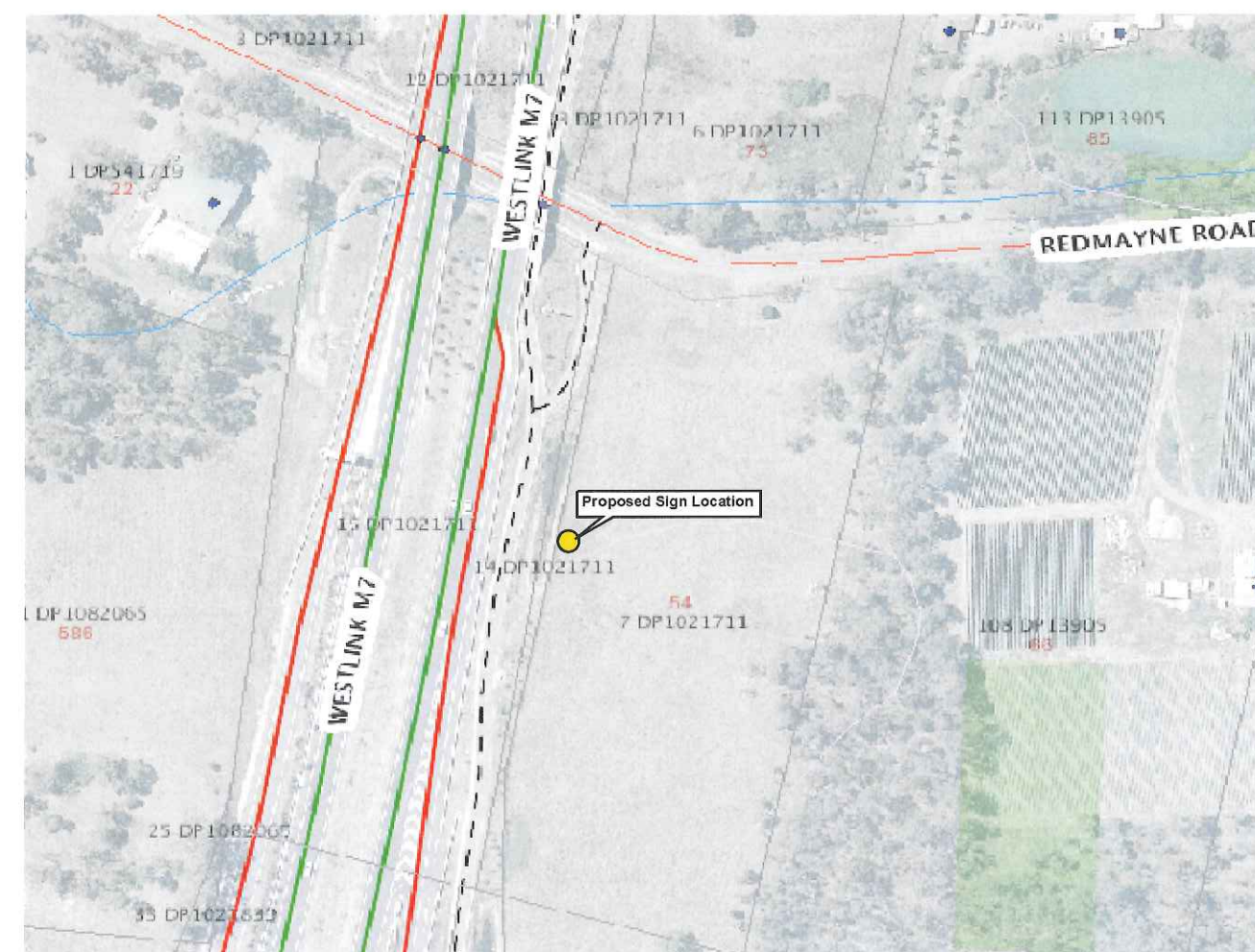
Lot 7 DP 1021711 - 54-64
Chandos Rd, Horsley Park

LGA: Fairfield City Council



Site Access Plan

Source: Total Earth Care Pty Ltd



Site Plan

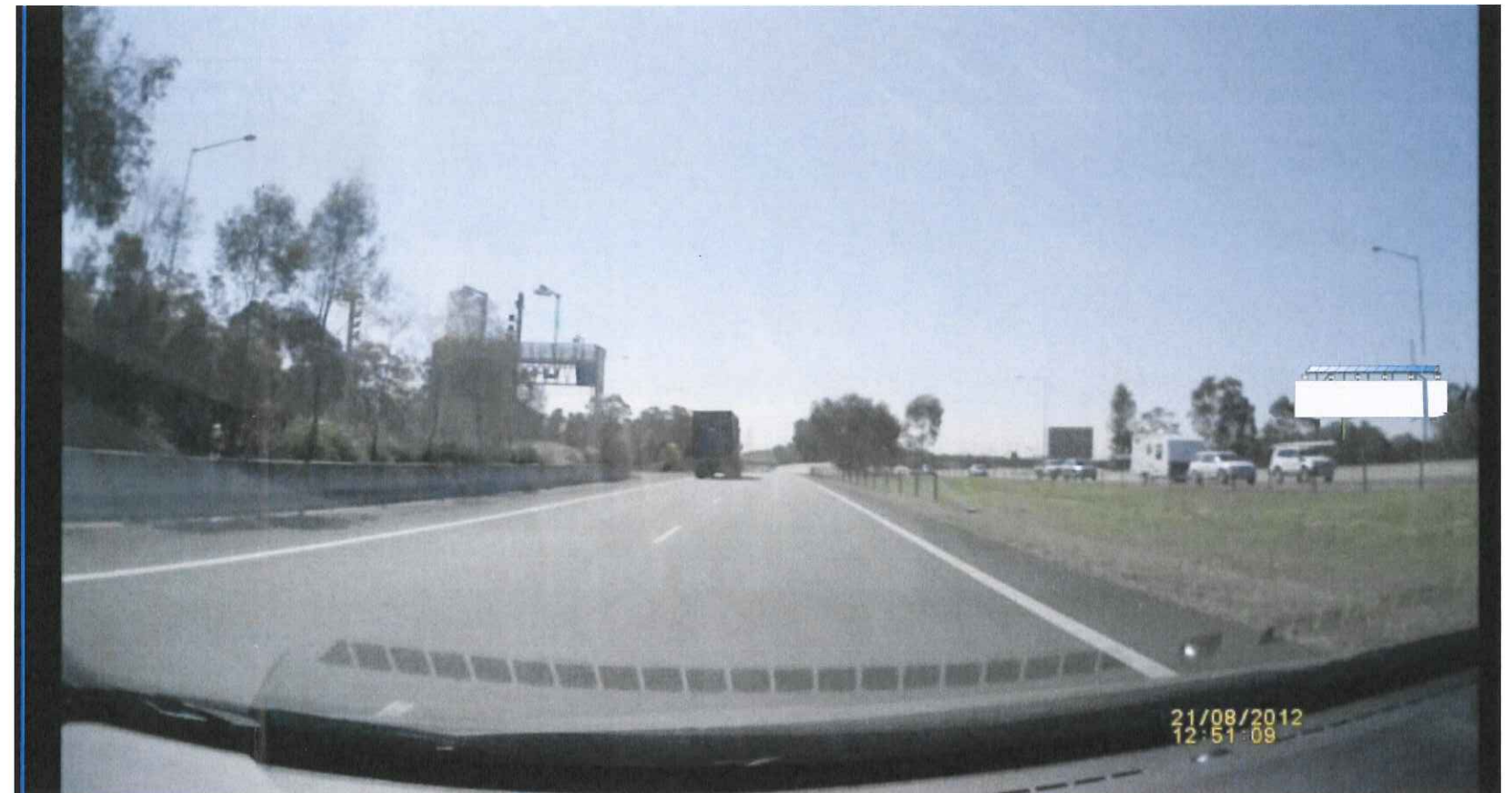
Source: Cadastre from
NSW Land Property and Management SIX Viewer



Site 2 - Visual Impact

Visual Impact

- Powerlines form part of backdrop when viewed southbound
- Visible motorway infrastructure elements such as Jersey Barrier
- The existing motorway planting is not fully established –gaps exist
- Sign will generally be visible northbound and will be framed by adjoining vegetation as it becomes established
- Residences to west of site will not be adversely affected and less so as trees further establish along Wallgrove Road and will be further assisted by the screening effects of mounding
- Sign would not detract from visual amenity of area



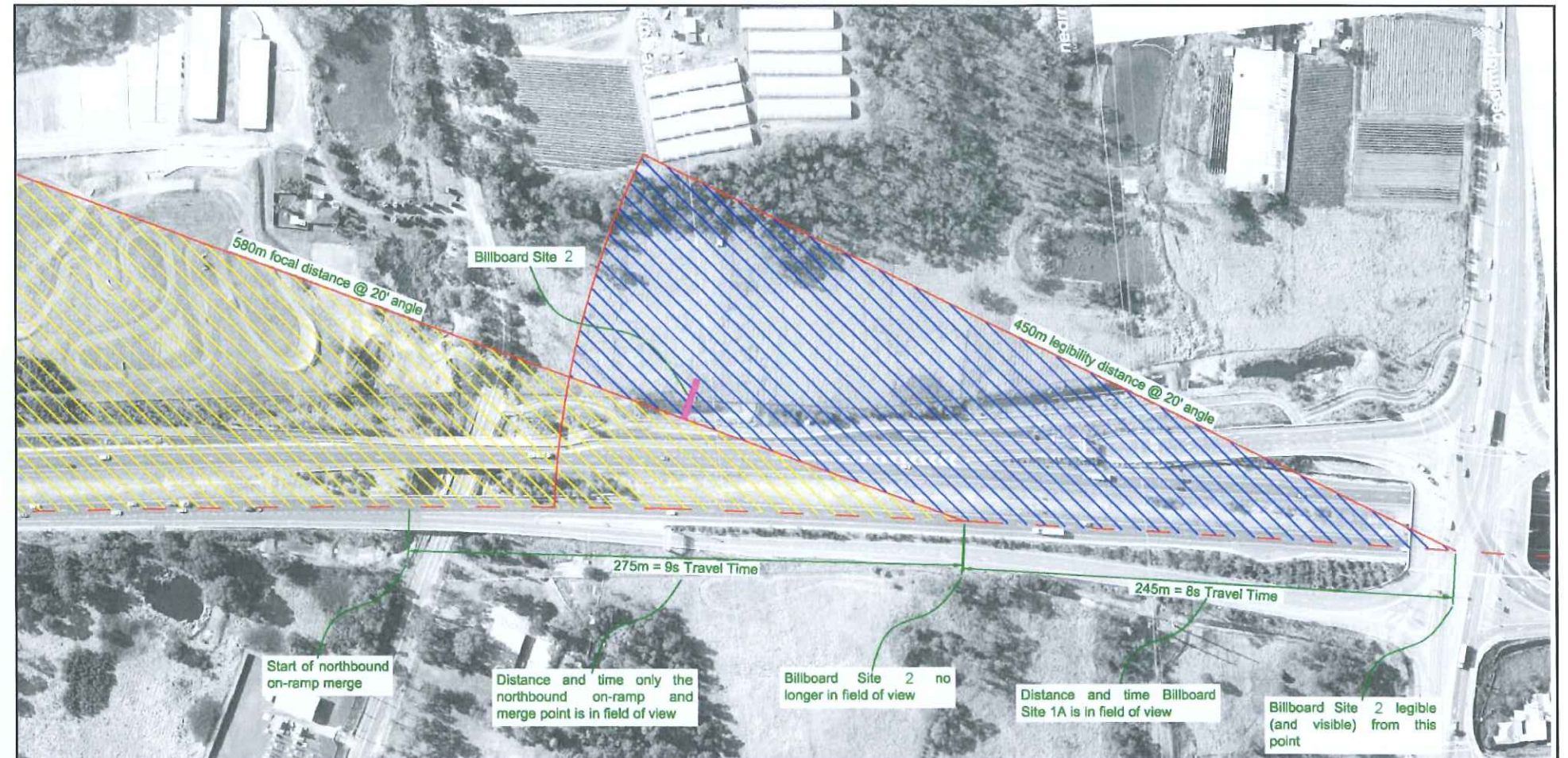
Photomontage

Site 2 - Traffic Safety Summary

Traffic Safety

Single-sided facing Northbound Traffic

- The cone diagram shows that Site 2 would exit a northbound driver's field-of-view at a point about 275 metres prior to (south of) the start of the merge section of the northbound on-ramp from The Horsley Drive. Therefore, Site 2 would be out-of-view for about nine (9) seconds of travel time, allowing northbound drivers to observe the merge situation and subsequently manoeuvre safely with merging traffic.
- In summary, the assessment above, including the cone diagram opposite, shows that Site 2 is located in a position that is within a driver's field-of-view. Furthermore, its location would not distract driver's attention from The Horsley Drive on-ramp. Accordingly, Site 2 is considered acceptable on road safety grounds.



Viewing Cones

Site 3

Plan location:

WSPT land near the Sydney Equestrian Centre

Lot 19 DP 1022008

372 Wallgrove Rd, Horsley Park

LGA: Fairfield City Council

Description of sign

Double sided Billboard Sign oriented to southbound and northbound traffic

Details of sign

New front lit double sided (display oriented to southbound and northbound traffic) spectacular signage structure to engineer's future details.

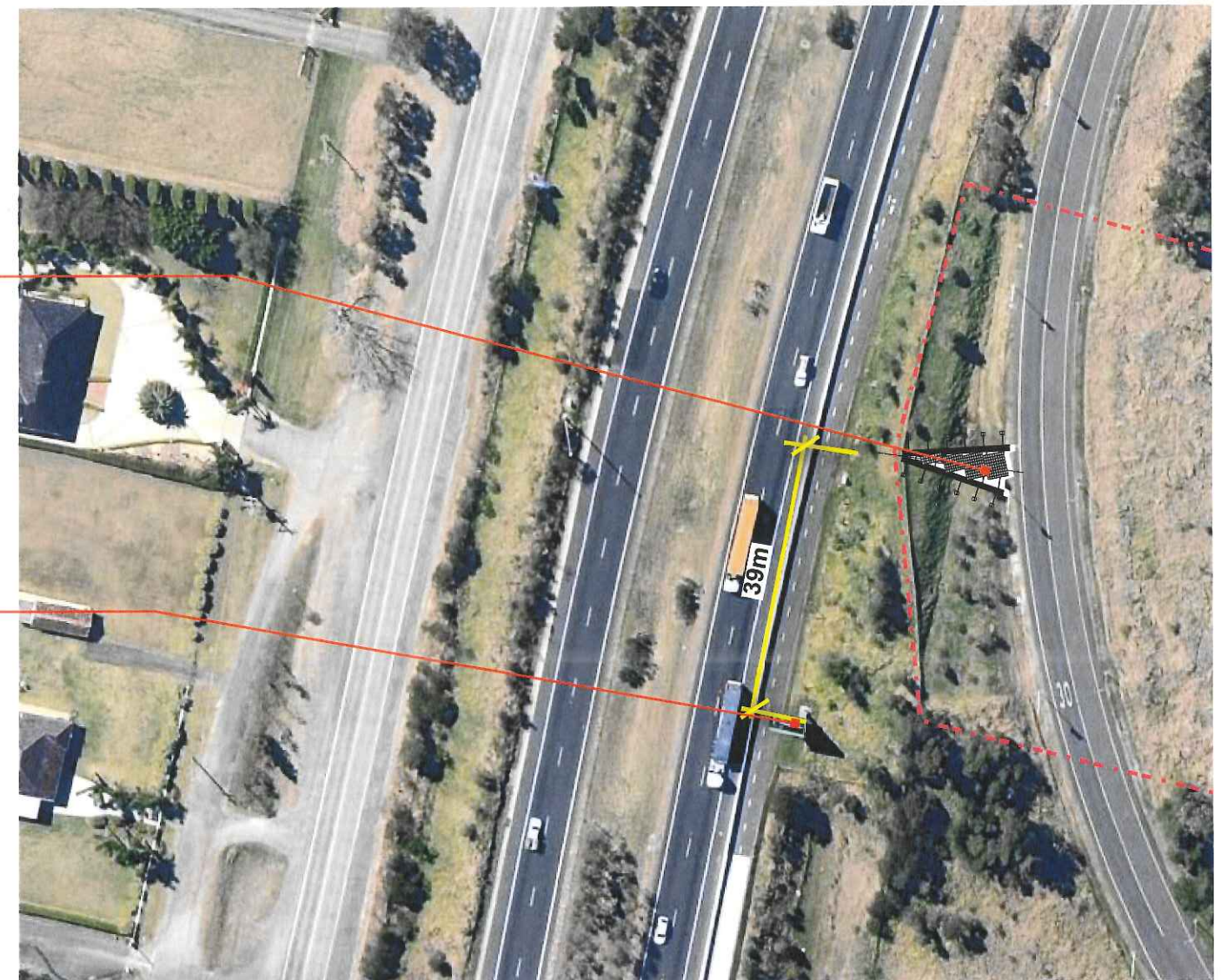
(Visual display area: 18.99m x 4.50m = 85.445m²)

8 meters in height to base of display area

Colour of support frame and post "River Gum" or similar. Solar powered lighting.

New front lit double sided spectacular signage structure to engineer's future details. (Visual display area: 18.99m x 4.50m = 85.445m²)

Directional sign



Context

Site 3 - Site Plan & Access

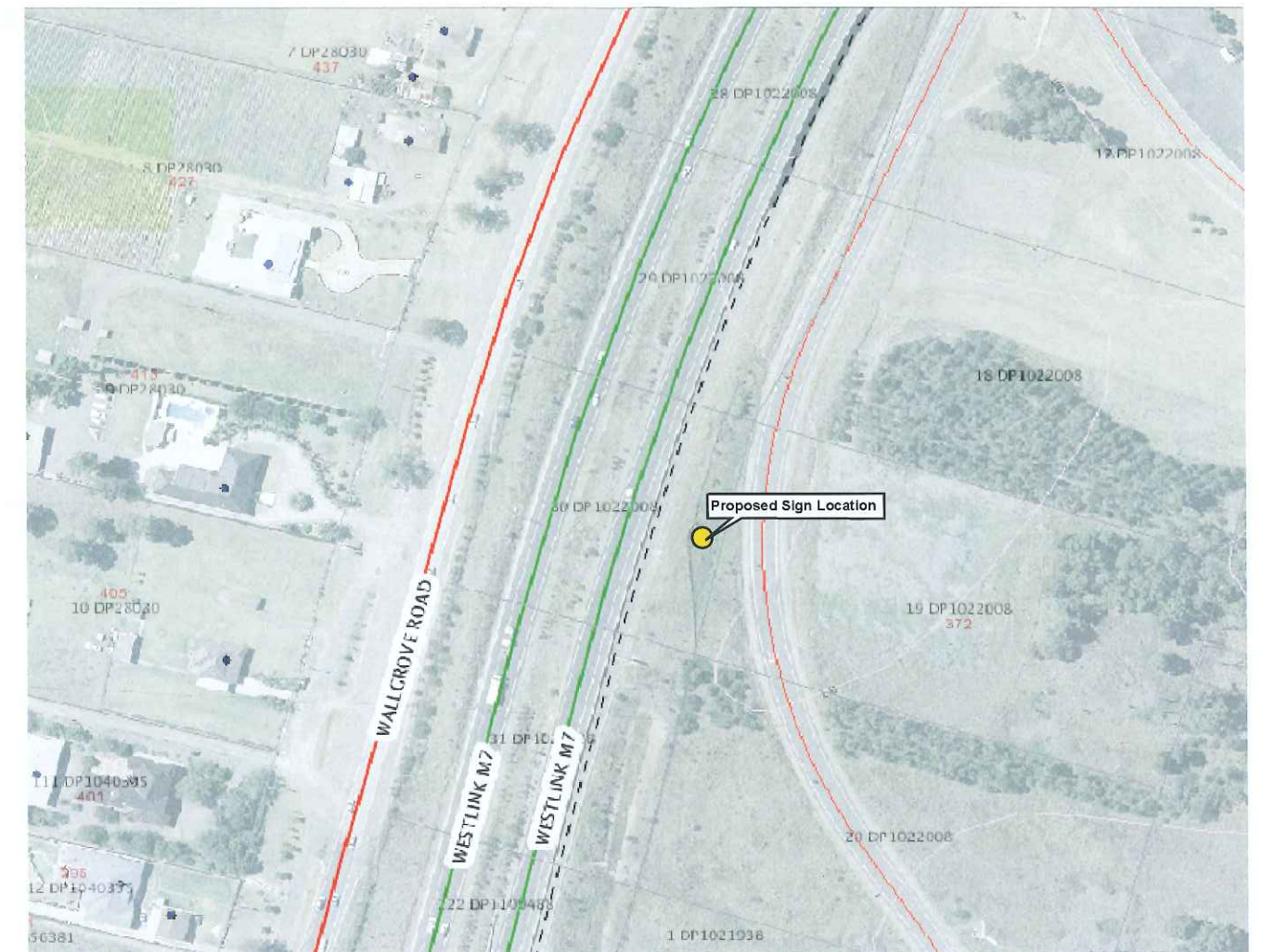
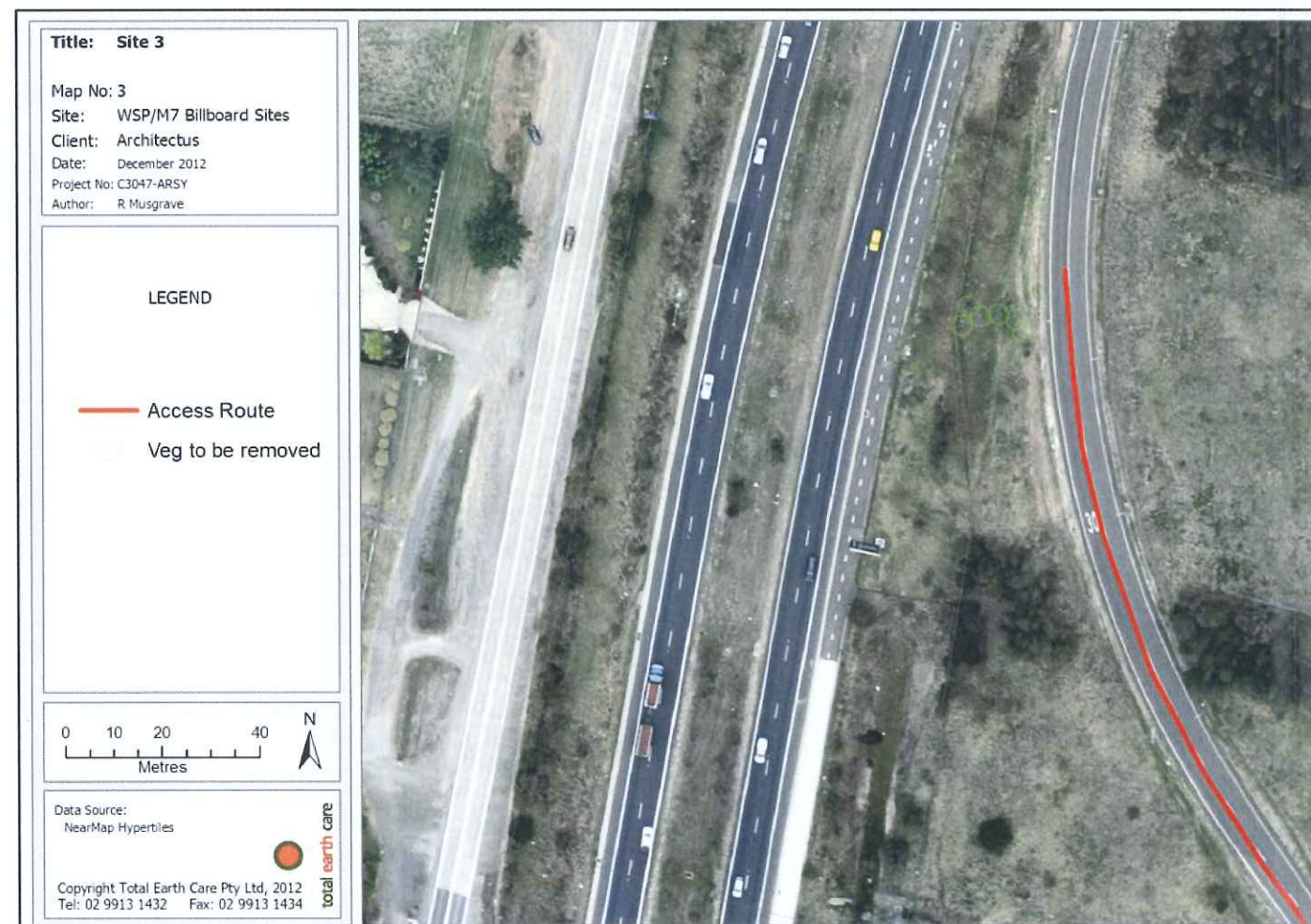
Plan location:

WSPT land near the Sydney Equestrian Centre

Lot 19 DP 1022008

372 Wallgrove Rd, Horsley Park

LGA: Fairfield City Council



Site Plan

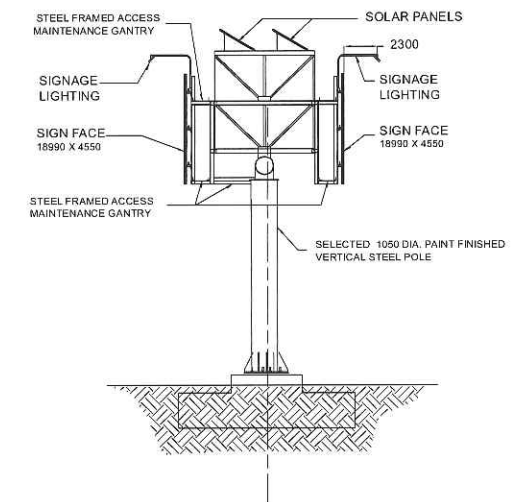
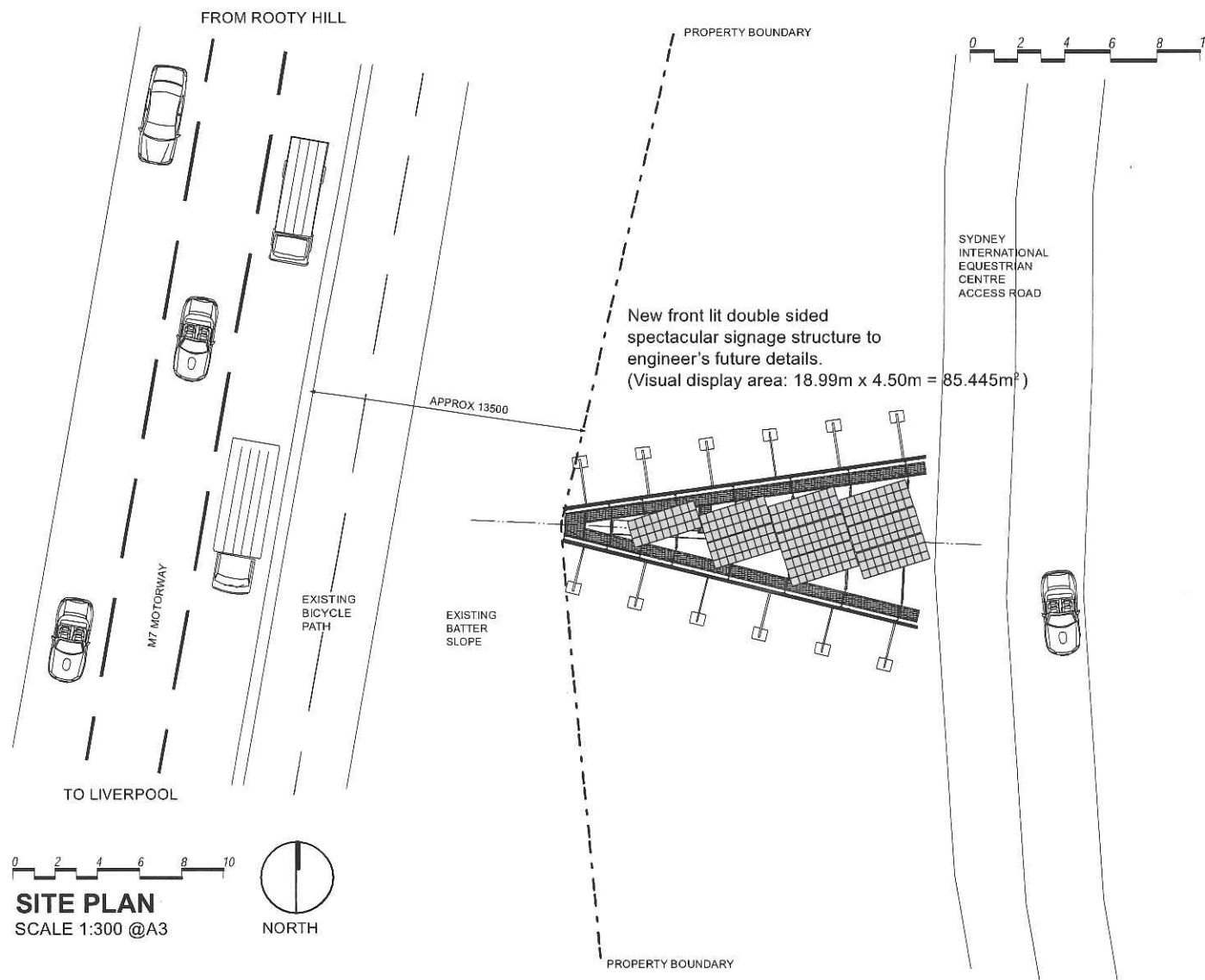
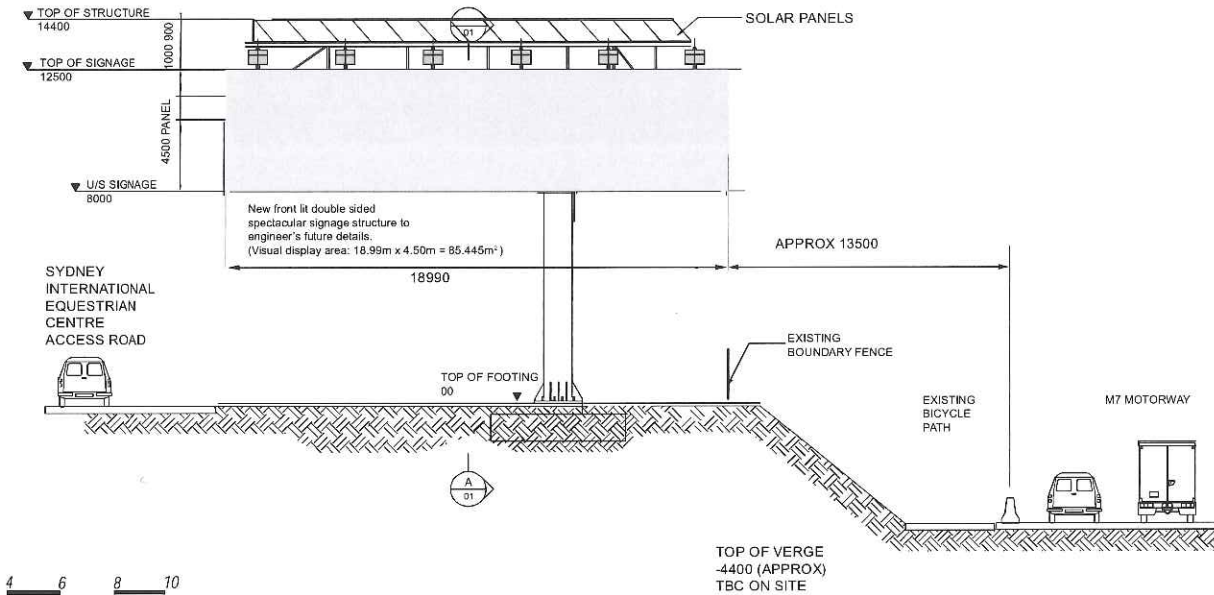
Source: Cadastre from NSW Land Property and Management SIX Viewer

Site Access Plan

Source: Total Earth Care Pty Ltd

Landscape plan to provide compensatory planting using same species which are required to be removed at a rate of 5 times planted per tree removed (species selection subject to approval of LGA)

Site 3 - Plans & Sections



SITE SECTION A-A'
SCALE 1:300 @A3

Site 3 - Visual Impact

Visual Impact

- Site is on elevated area above motorway before directional sign
- Visible motorway infrastructure elements such as Jersey Barrier
- The existing motorway planting is not fully established –gaps exist
- Sign will generally be visible southbound and will be framed by adjoining vegetation as it becomes established
- Sign may be partly blocked by planting northbound
- Sign location is “revealed” following a long stretch of concrete acoustic barrier wall
- Residences to west of site will not be adversely affected and less so as trees further establish along Wallgrove Road and will be further assisted by the screening effects of mounding
- Sign would not detract from visual amenity of area



Photomontage southbound



Photomontage northbound

Site 3 - Traffic Safety Summary

Traffic Safety

Double-sided

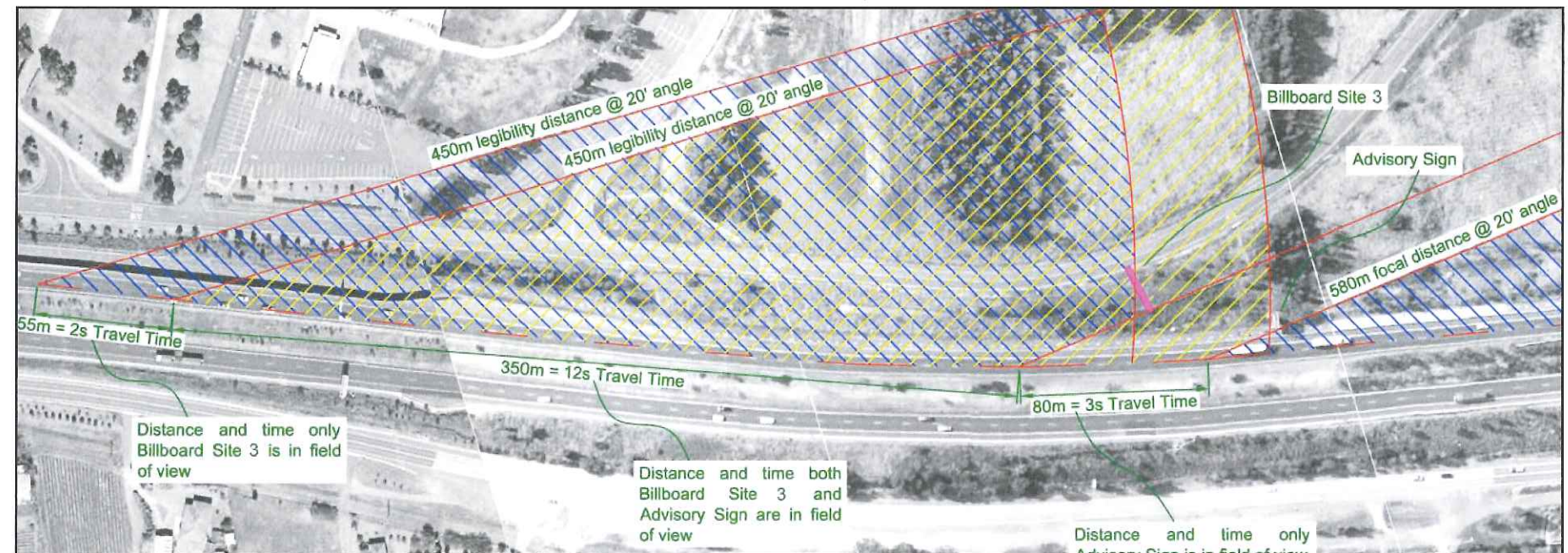
Side facing Southbound Traffic

- Site 3 is located about 40 metres prior to (north of) an existing advisory sign advising that it is two (2) kilometres to the Elizabeth Drive southbound off-ramp.
- The information on the advisory sign is considered to be of 'middle-order' importance because no immediate decision is required of the driver. In addition, it is noted that there are supplementary signs to the Elizabeth Drive off-ramp at a distance of one (1) kilometre and also at the off-ramp.
- The cone diagram shows that Site 1 would be legible for 14 seconds and the advisory sign would be legible for 15 seconds. In addition, the cone diagram shows that Site 1 would exit a southbound driver's field-of-view at a point about 80 metres in advance of the advisory sign, ensuring that drivers would view it solely for a period of about three (3) seconds.

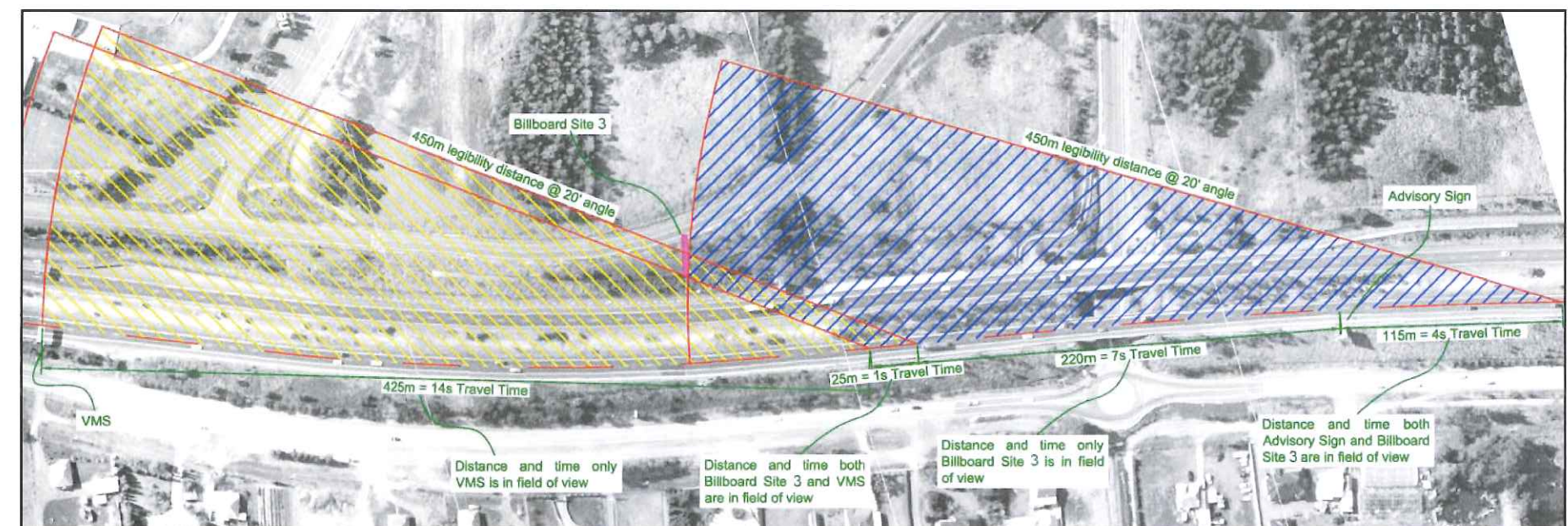
- In summary, the assessment above, including the cone diagrams opposite, shows that Site 3 (with regard to southbound and northbound traffic) is located in a position that is within a driver's field-of-view. Furthermore, its location would not reduce the effectiveness of the existing VMS or advisory signs. Accordingly, Site 3 is considered acceptable on road safety grounds..

Side facing Northbound Traffic

- Site 3 is located 280 metres beyond (north of) an existing advisory sign; however, the cone diagram shows that the legibility distance to Site 3 would only overlap with the legibility distance for the advisory sign for about 115 metres, or the equivalent of four (4) seconds travel time.
- Site 3 is also about 370 metres prior to (south of) an existing VMS; however the cone diagram shows that Site 1 would exit a northbound driver's field-of-view at a point about 425 metres in advance of the VMS, ensuring that drivers would view it solely for a period of up to 14 seconds.



Viewing Cones - Southbound



Viewing Cones - Northbound

Site 4

Plan location:

WSPT land south of Kosovich Place (east side)

Lot 14 DP 1021940

144 Wallgrove Drive, Cecil Hills

LGA: Fairfield City Council

Description of sign

Single sided Billboard Sign oriented to southbound traffic

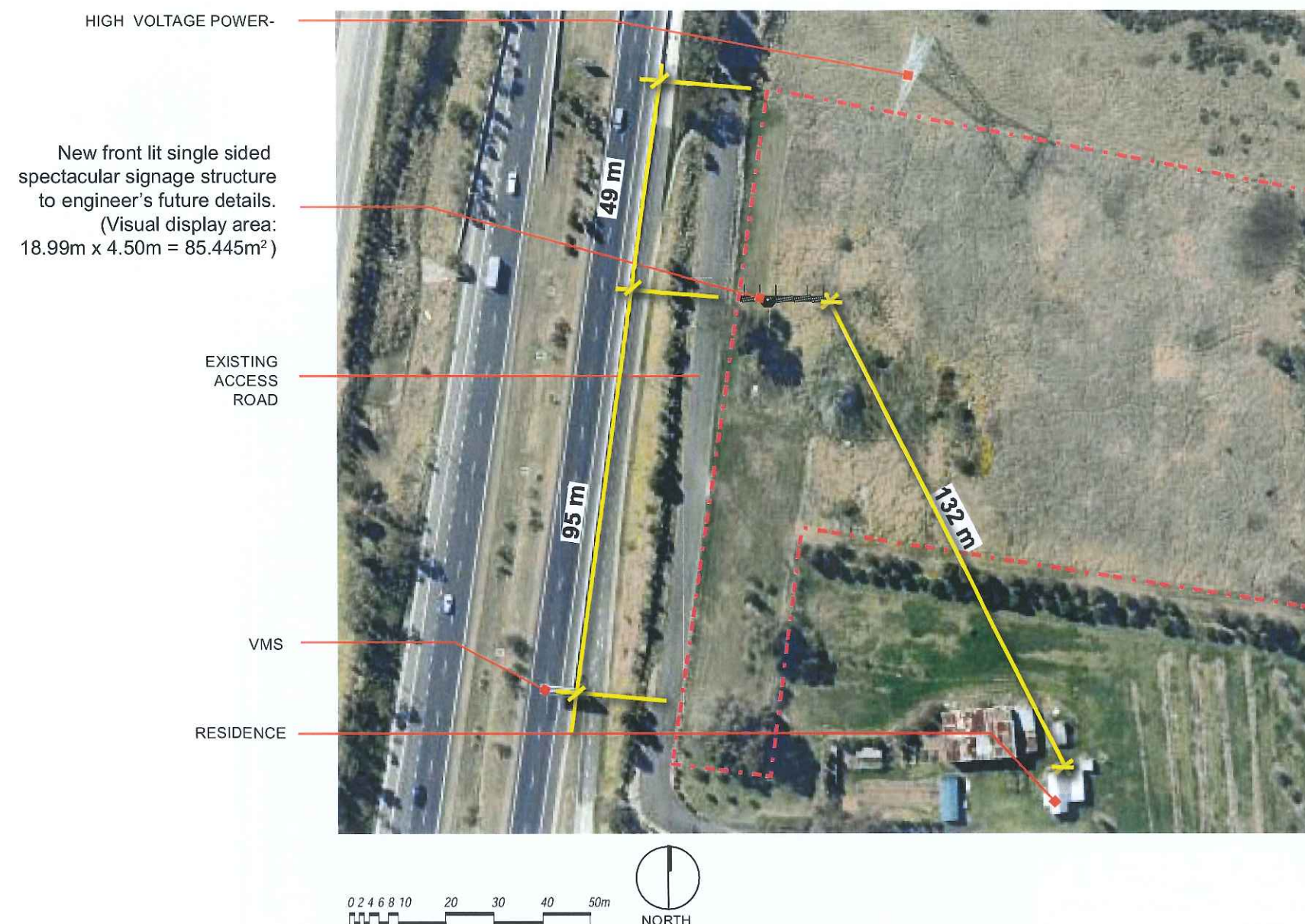
Details of sign

New front lit single sided (display oriented to southbound traffic) spectacular signage structure to engineer's future details.

(Visual display area: 18.99m x 4.50m = 85.445m²)

8 meters in height to base of display area

Colour of support frame and post "River Gum" or similar. Solar powered lighting.



Context

Site 4 - Site Plan & Access

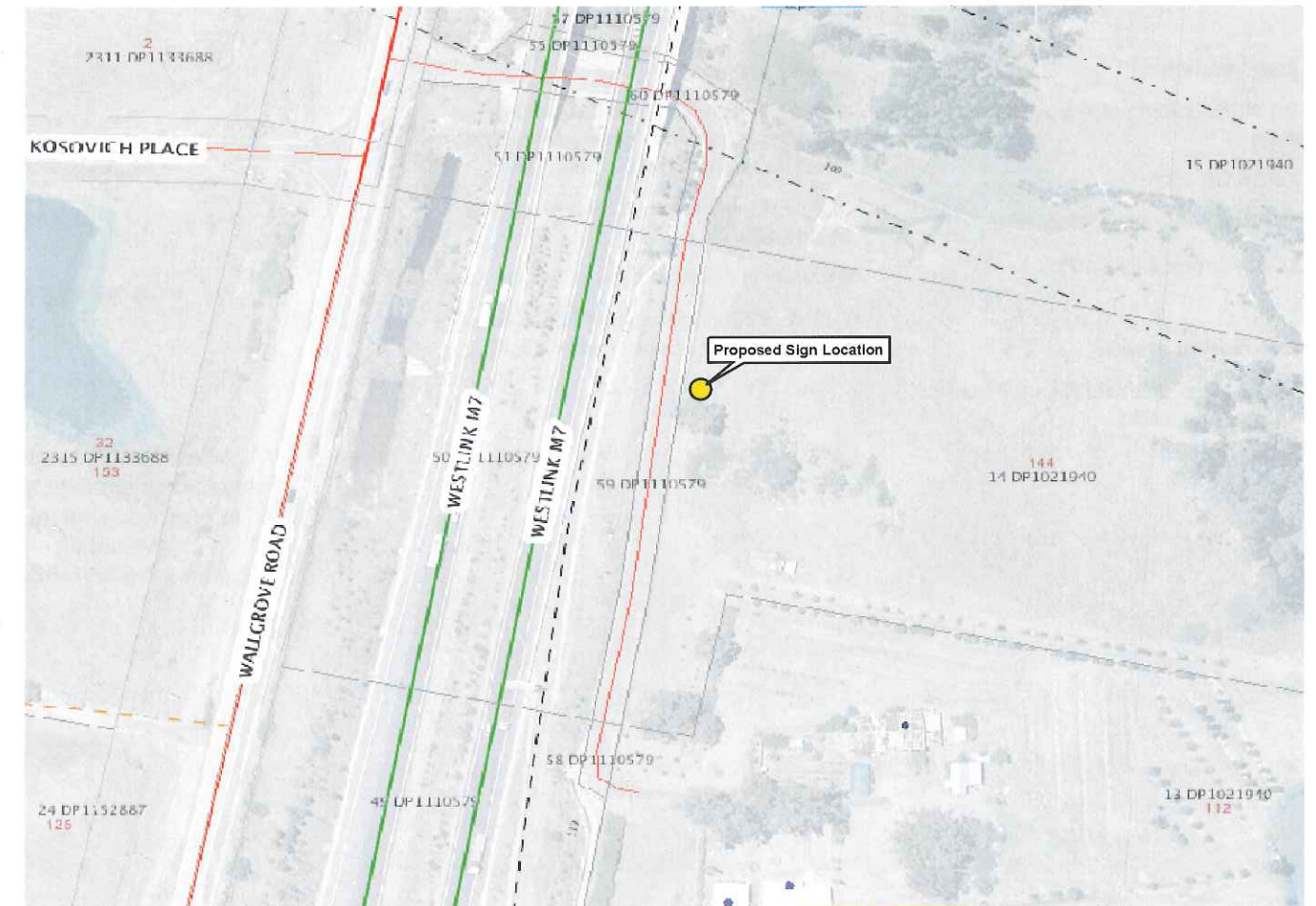
Plan location:

WSPT land south of Kosovich Place
(east side)

Lot 14 DP 1021940

144 Wallgrove Drive, Cecil Hills

LGA: Fairfield City Council



Site Plan

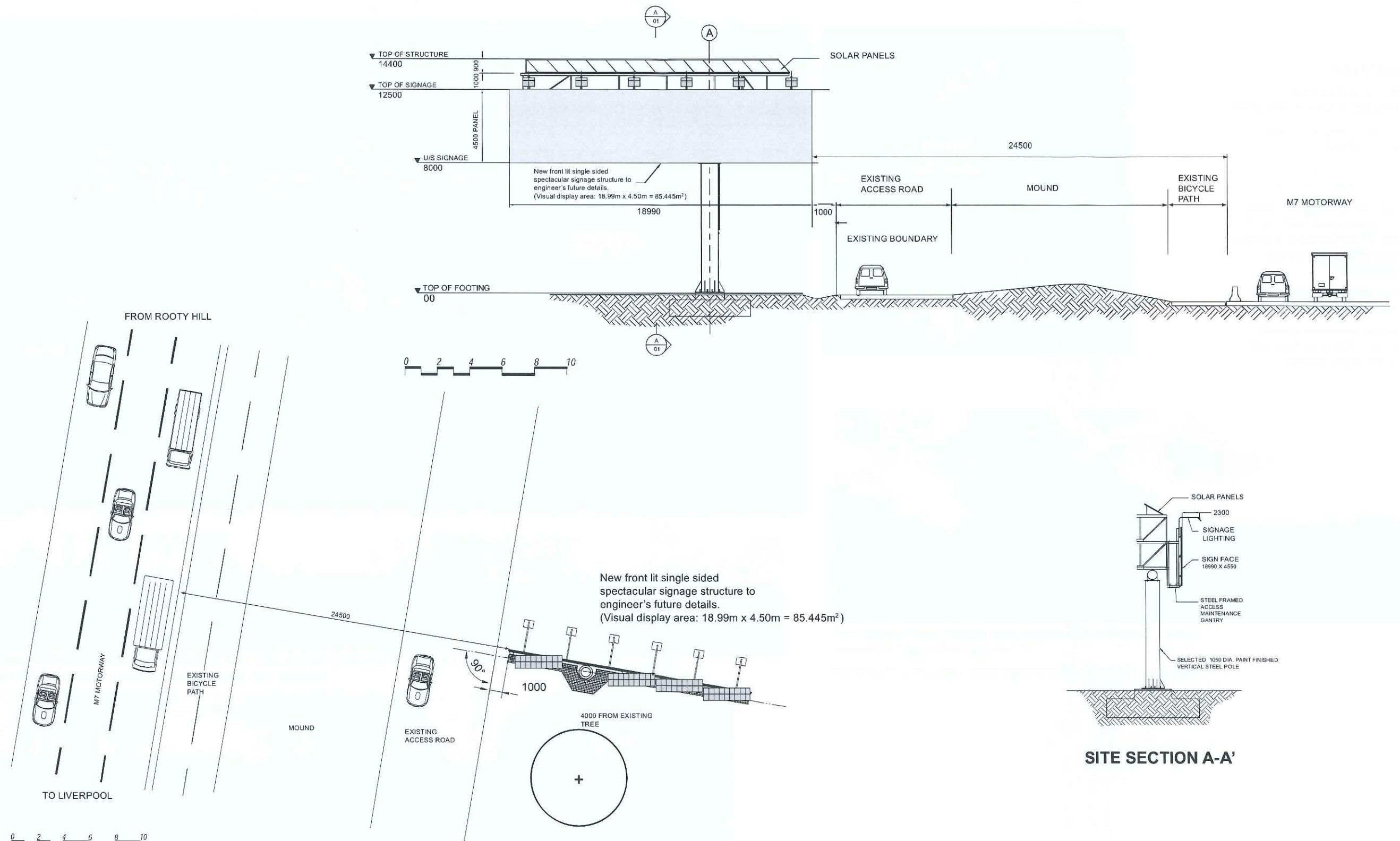
Source: Cadastre from
NSW Land Property and Management SIX Viewer



Site Access Plan

Source: Total Earth Care Pty Ltd

Site 4 - Plans & Sections



SITE PLAN
SCALE 1:300 @A3

Site 4 - Visual Impact

Visual Impact

- Sign is located south of overpass below the crest of hill
- Some planting may obscure sign southbound
- Little median planting to obscure sign northbound
- Sign will generally be visible southbound and northbound and will be framed by adjoining vegetation as it becomes established
- Sign would not detract from visual amenity of area.
- Nearby residence to south screened by large trees will not be adversely affected



Photomontage



Photo 1 - Location of proposed sign as seen from access road, M7 southbound to right of mound.

Sign to be located in front of large trees adjacent to road at left



Photo 2 - Location of proposed sign as seen from entry driveway to residence showing vegetation between sign location and residence (distance of over 150 meters)



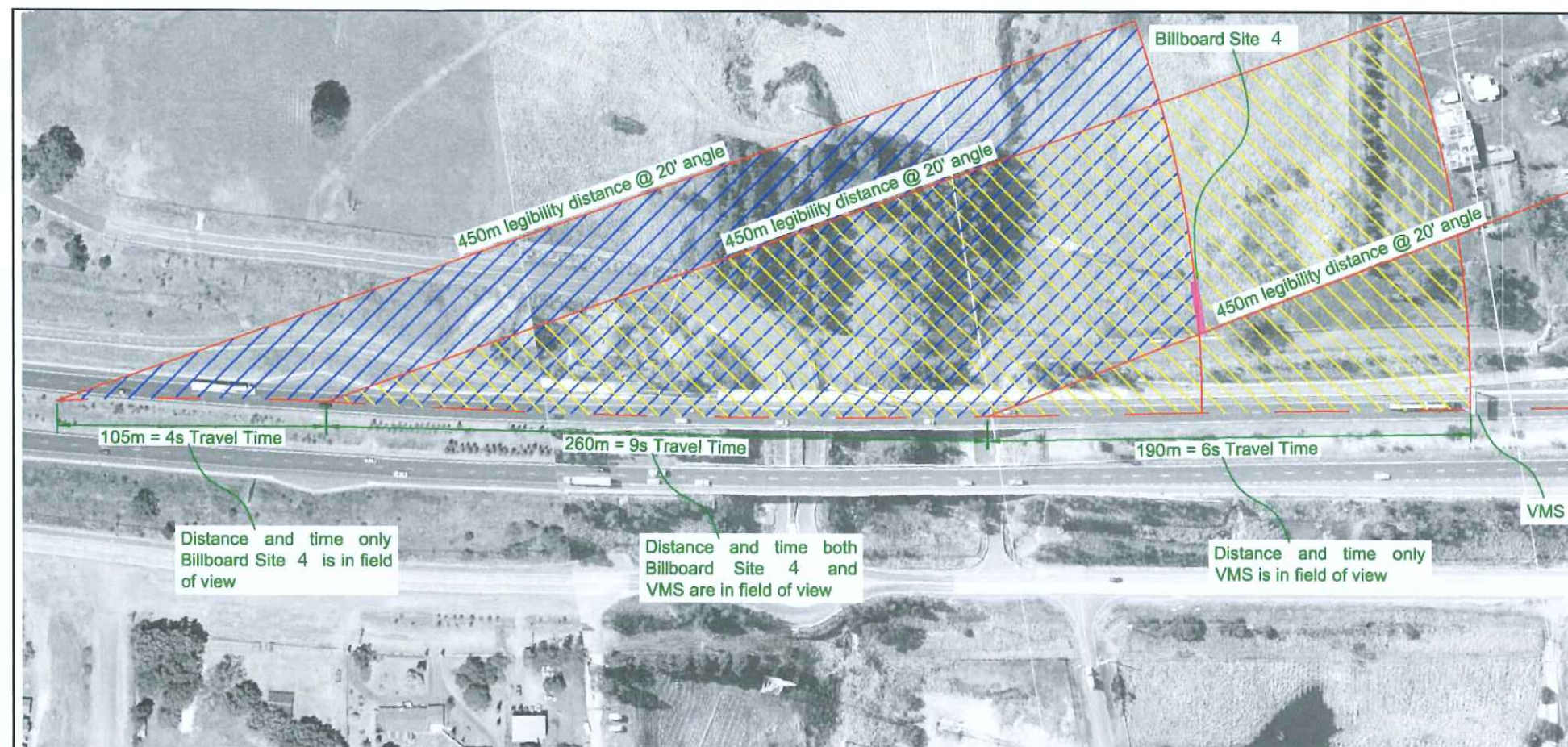
Photo 3 - Location of proposed sign as seen from entry driveway to residence further south

Site 4 - Traffic Safety Summary

Traffic Safety

Single-sided facing Southbound Traffic.

- Site 4 is located 95m in advance of an existing VMS. The cone diagram shows that Site 4 would be legible for 13 seconds and the VMS would be legible for 15 seconds. In addition, the cone diagram shows that Site 4 would exit a southbound driver's field-of-view at a point about 190 metres in advance of the VMS, ensuring that drivers would view it solely for a period of about six (6) seconds.
- In summary, the assessment above, including the cone diagram opposite, shows that Site 4 is located in a position that is within a driver's field-of-view. Furthermore, its location would not reduce the effectiveness of the existing VMS. Accordingly, Site 4 is considered acceptable on road safety grounds.



Viewing Cones

Site 5

Plan location:

WSPT land south of Elizabeth Drive (2nd pedestrian overpass south of Elizabeth Drive)

Lot 3 DP 1087825 Elizabeth Drive, Cecil Hills

LGA: Liverpool City Council

Description of sign

Double sided Billboard Sign oriented to southbound and northbound traffic

Details of sign

New front lit double sided (display oriented to southbound and northbound traffic) spectacular signage structure to engineer's future details.

(Visual display area: 18.99m x 4.50m = 85.445m²)

6 meters in height to base of display area

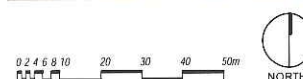
Colour of support frame and post "River Gum" or similar. Solar powered lighting.

New front lit single sided spectacular signage structure to engineer's future details.
(Visual display area: 18.99m x 4.50m = 85.445m²)

Directional sign



Residential Area is approximately 300 m to the east with intervening undulating topography and vegetation



Context

Site 5 - Site Plan & Access

Plan location:

WSPT land south of Elizabeth Drive (2nd pedestrian overpass south of Elizabeth Drive)

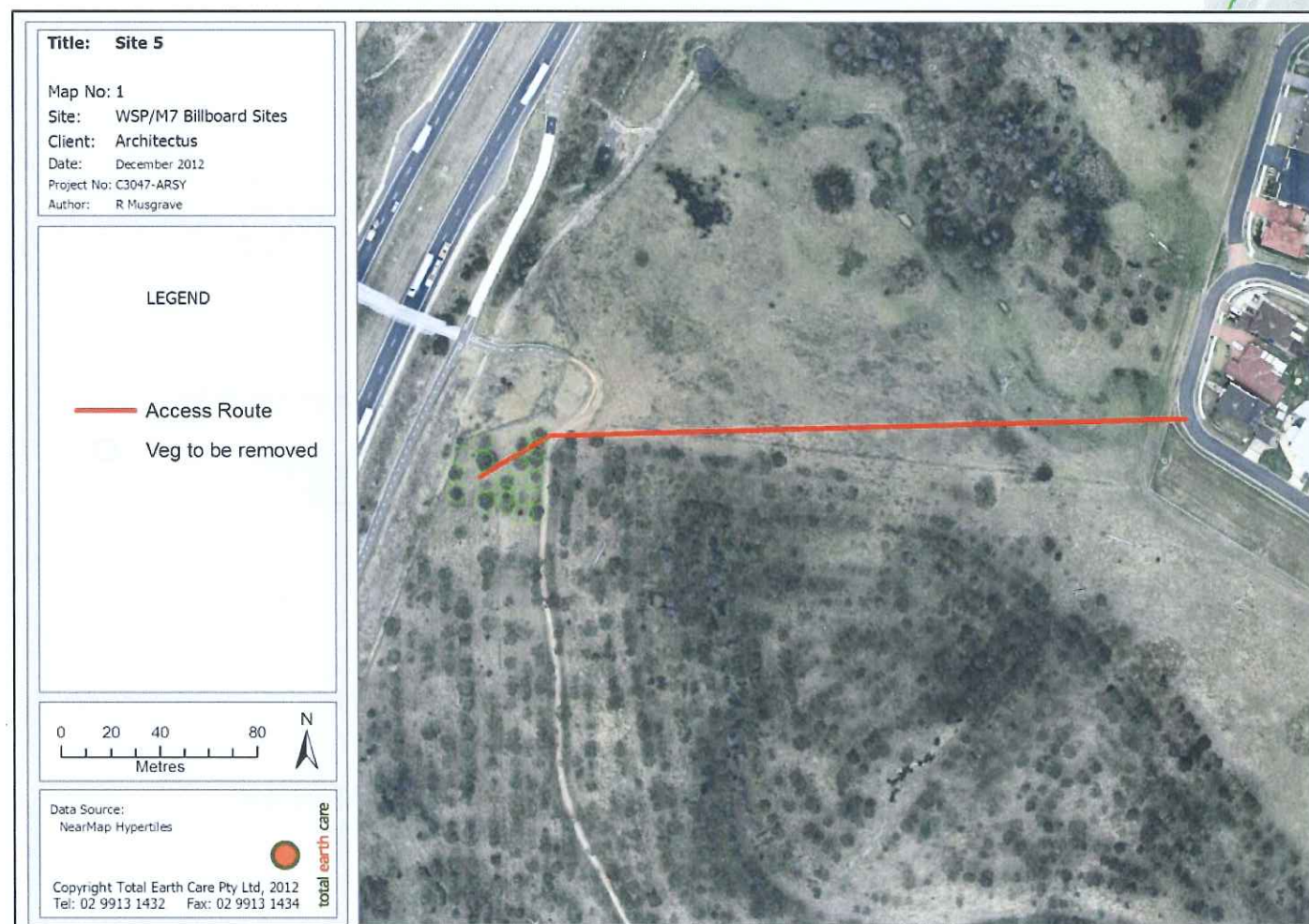
Lot 3 DP 1087825 Elizabeth Drive, Cecil Hills

LGA: Liverpool City Council



Site Plan

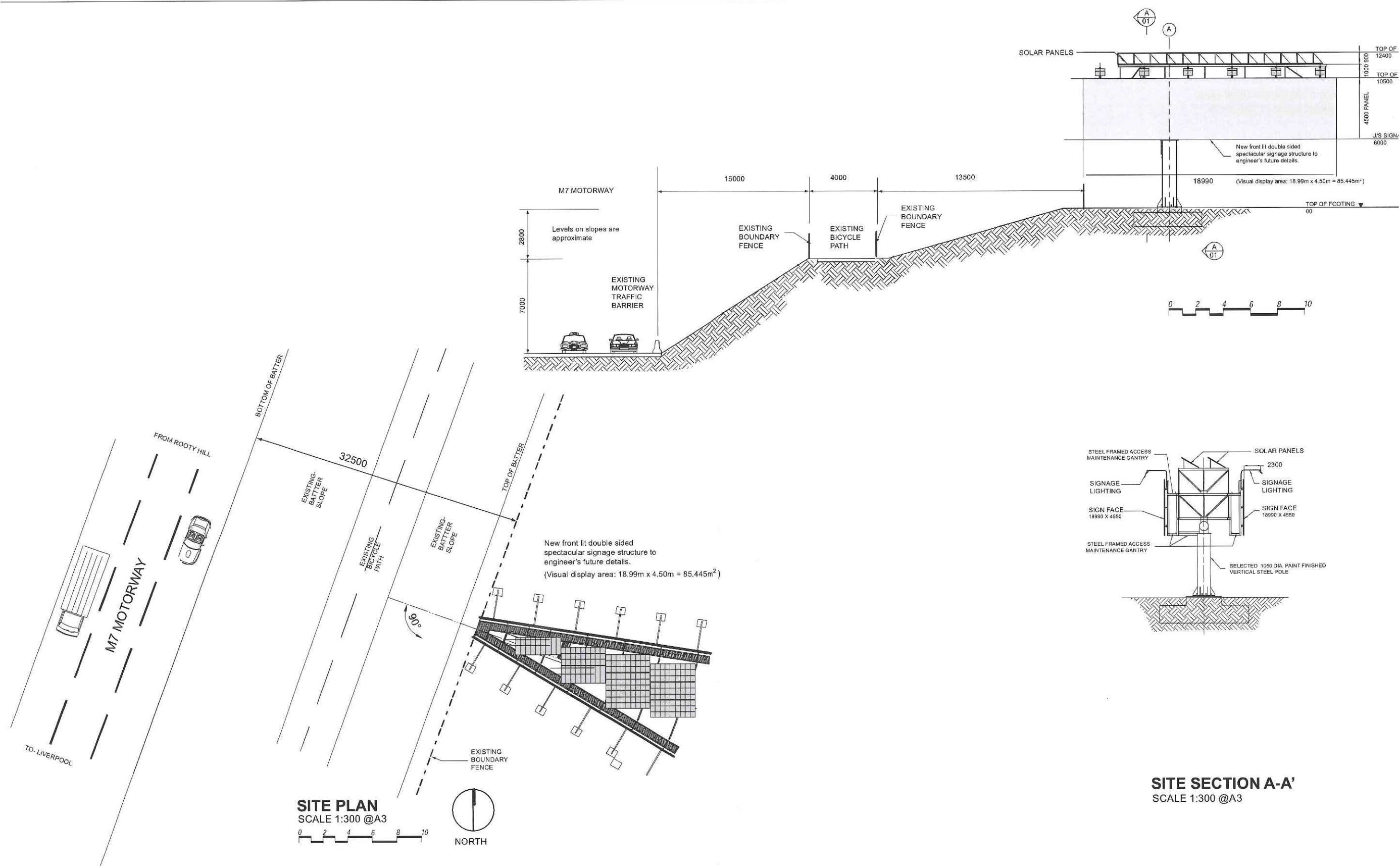
Source: Cadastre from
NSW Land Property and Management SIX Viewer



Site Access Plan

Source: Total Earth Care Pty Ltd
Landscape plan to provide compensatory planting using same species which are required to be removed at a rate of 5 times planted per tree removed (species selection subject to approval of LGA)

Site 5 - Plans & Sections



Site 5 - Visual Impact

Visual Impact

- Sign is located at crest of hill above the pedestrian bridge
- Little median planting to obscure sign northbound
- Curve in road limits views somewhat southbound
- Sign will generally be visible southbound and northbound and will be framed by adjoining vegetation as it becomes established
- Residences to east of site will not be adversely affected and less so as trees establish further on the intervening undulating topography
- Sign would not detract from visual amenity of area.



Photomontage Southbound



Photomontage Northbound

Site 5 - Traffic Safety Summary

Traffic Safety

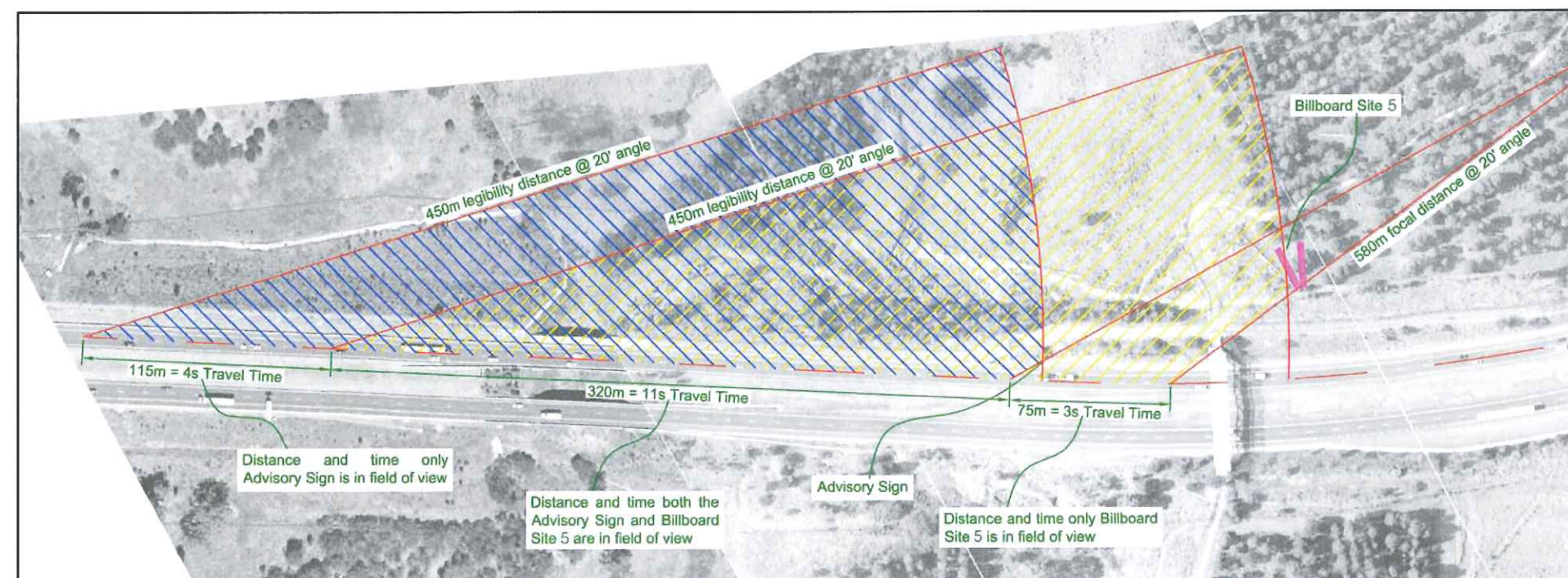
Double-sided facing Northbound and Southbound Traffic

Side facing Southbound Traffic.

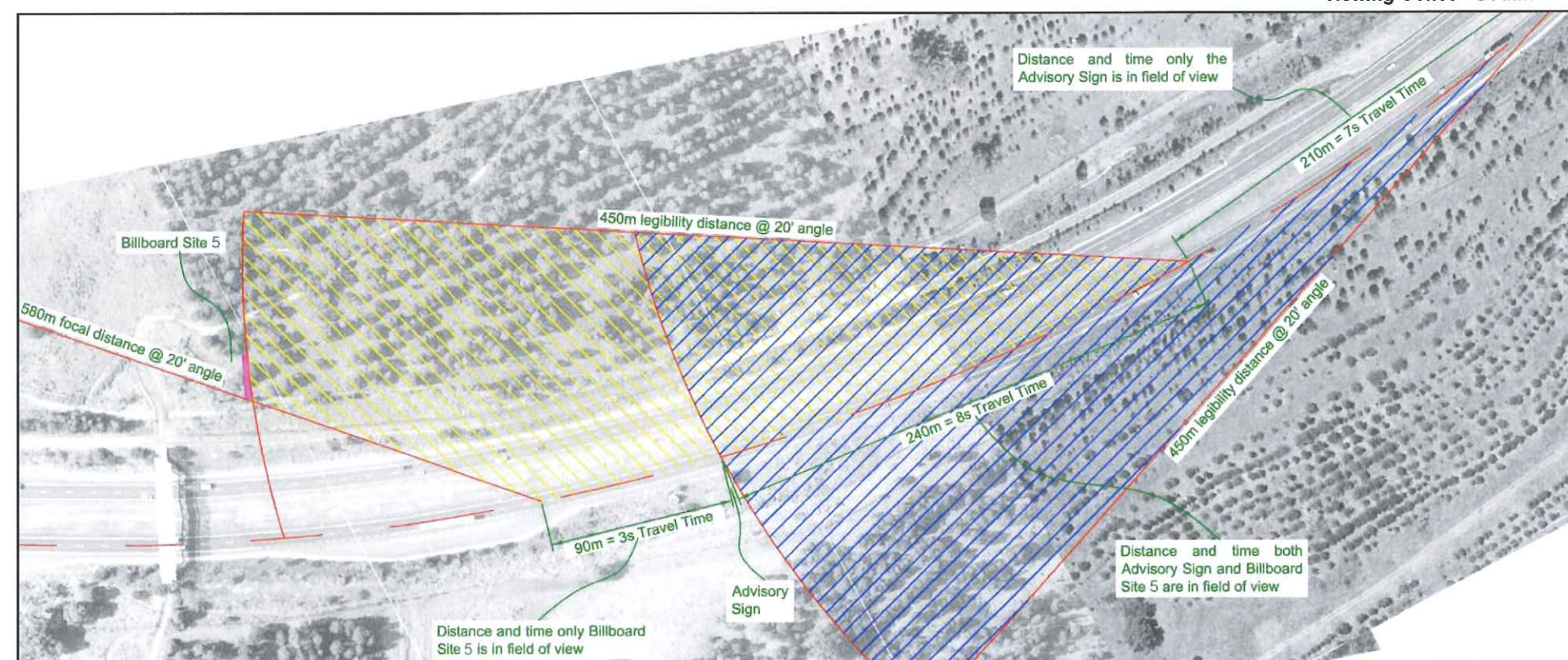
- Site 5 is located 120 metres beyond (south of) an existing advisory sign advising of distance to upcoming destinations. The cone diagram shows that the advisory sign would be the sole feature within a southbound driver's legibility field-of-view for about four (4) seconds, after which it would share the legibility field-of-view with Site 5 for another 11 seconds.
- The information on the advisory sign is only distance related and does not require the driver to make any decision. Therefore, it is considered to be of 'low-order' importance.

Side facing Northbound Traffic.

- Site 5 is located 280 metres beyond (north of) an existing advisory sign advising that it is one (1) kilometre to the Elizabeth Drive northbound off-ramp.. The cone diagram shows that the advisory sign would be the sole feature within a northbound driver's legibility field-of-view for about seven (7) seconds, after which it would share the legibility field-of-view with Site 5 for another eight (8) seconds.
- The information on the advisory sign is considered to be of 'middle-order' importance because no immediate decision is required of the driver.
- In summary, the assessment above, including the cone diagrams opposite, shows that Site 5 (with regard to southbound and northbound traffic) is located in a position that is within a driver's field-of-view. Furthermore, its location would not reduce the effectiveness of the existing advisory signs. Accordingly, Site 5 is considered acceptable on road safety grounds.



Viewing Cones - Southbound



Viewing Cones - Northbound

Site 6

Plan location:

WSPT land south of site 5 -Lot 3 DP
1087825 Elizabeth Drive, Cecil Hills

LGA: Liverpool City Council

Description of sign

Double sided Billboard Sign oriented to southbound and northbound traffic

Details of sign

New front lit double sided (display oriented to southbound and northbound traffic) spectacular signage structure to engineer's future details.

(Visual display area: 18.99m x 4.50m = 85.445m²)

8 meters in height to base of display area

Colour of support frame and post "River Gum" or similar. Solar powered lighting.



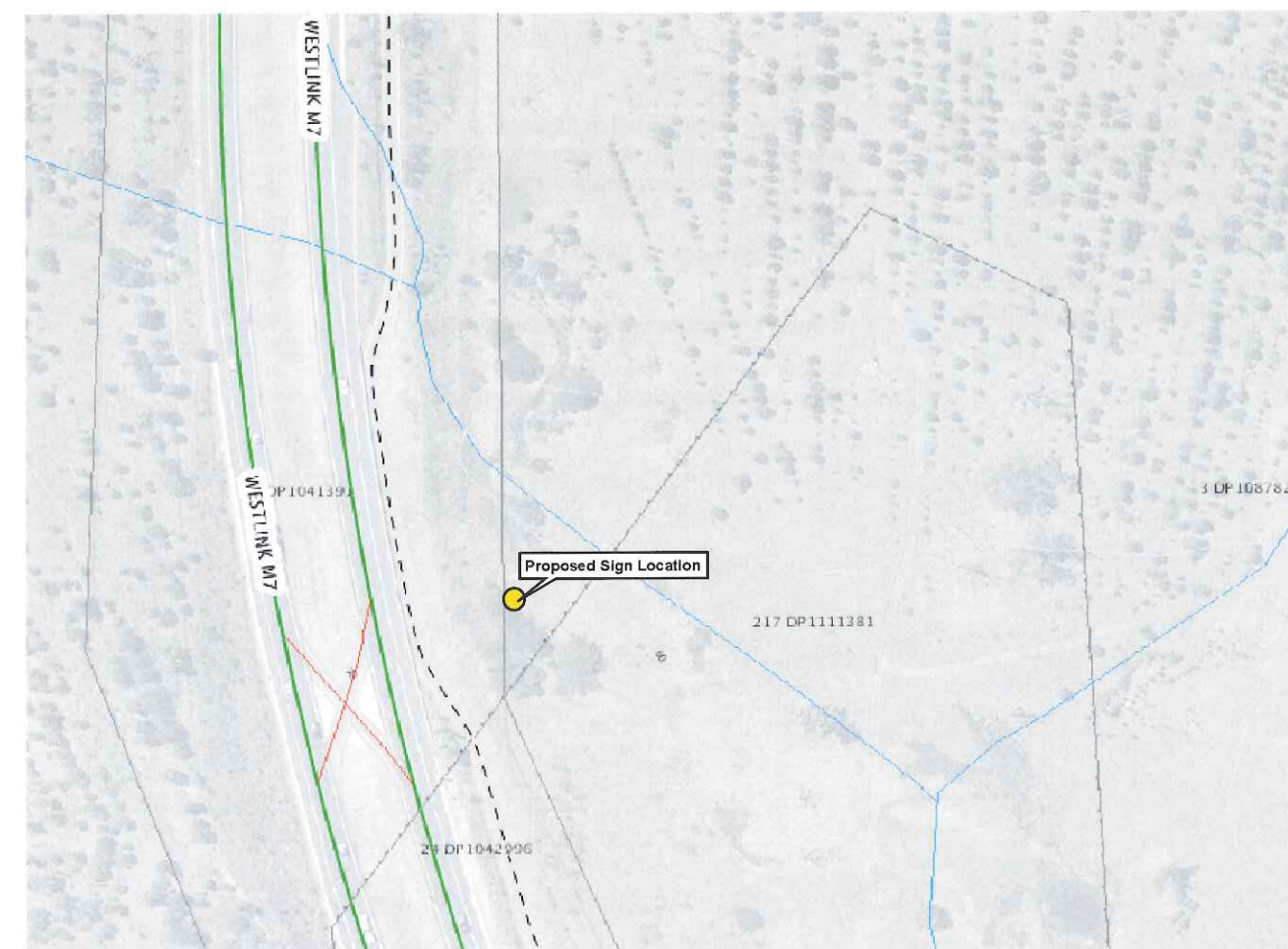
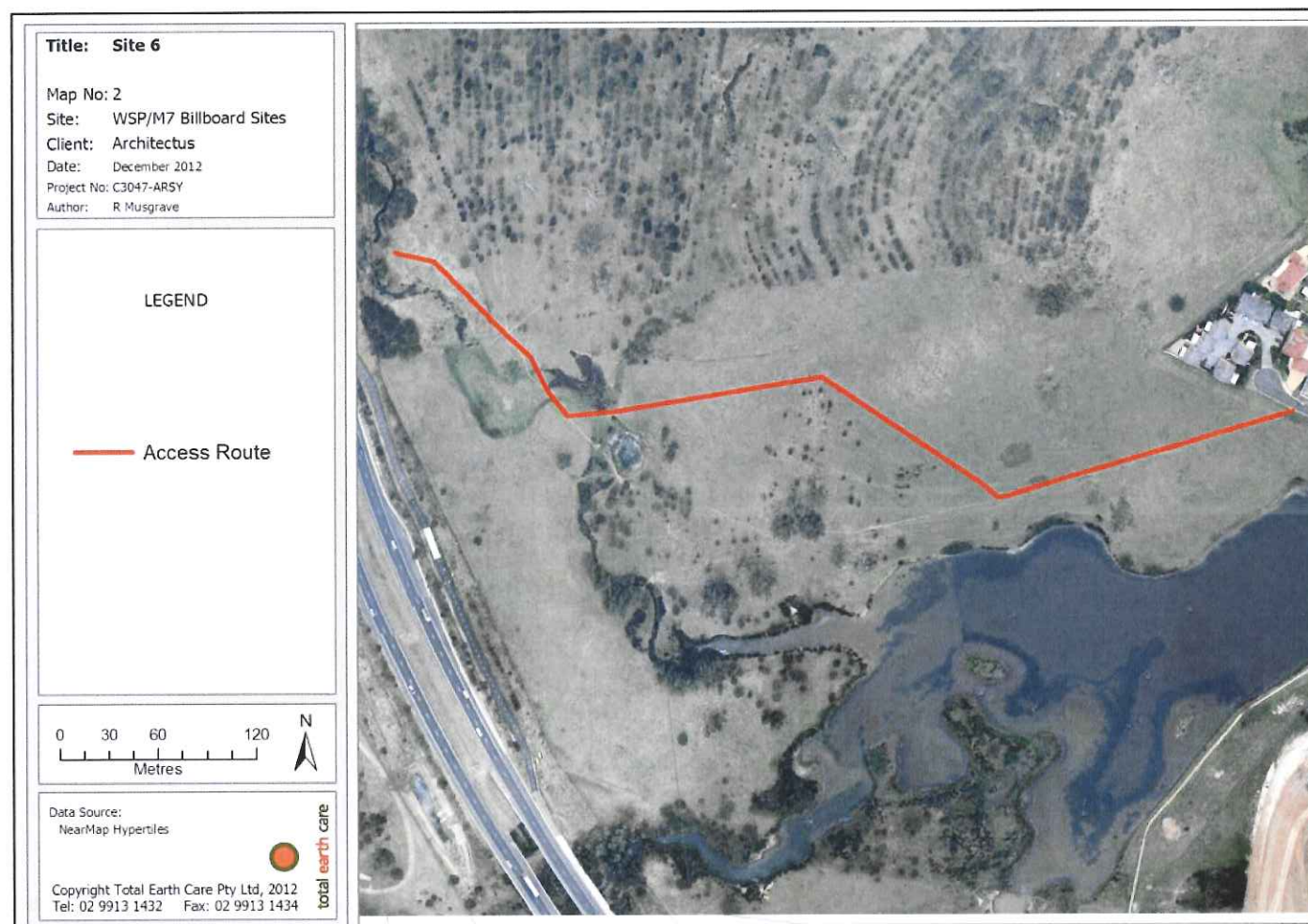
Context

Site 6 - Site Plan & Access

Plan location:

WSPT land south of site 5 -Lot 3 DP
1087825 Elizabeth Drive, Cecil Hills

LGA: Liverpool City Council



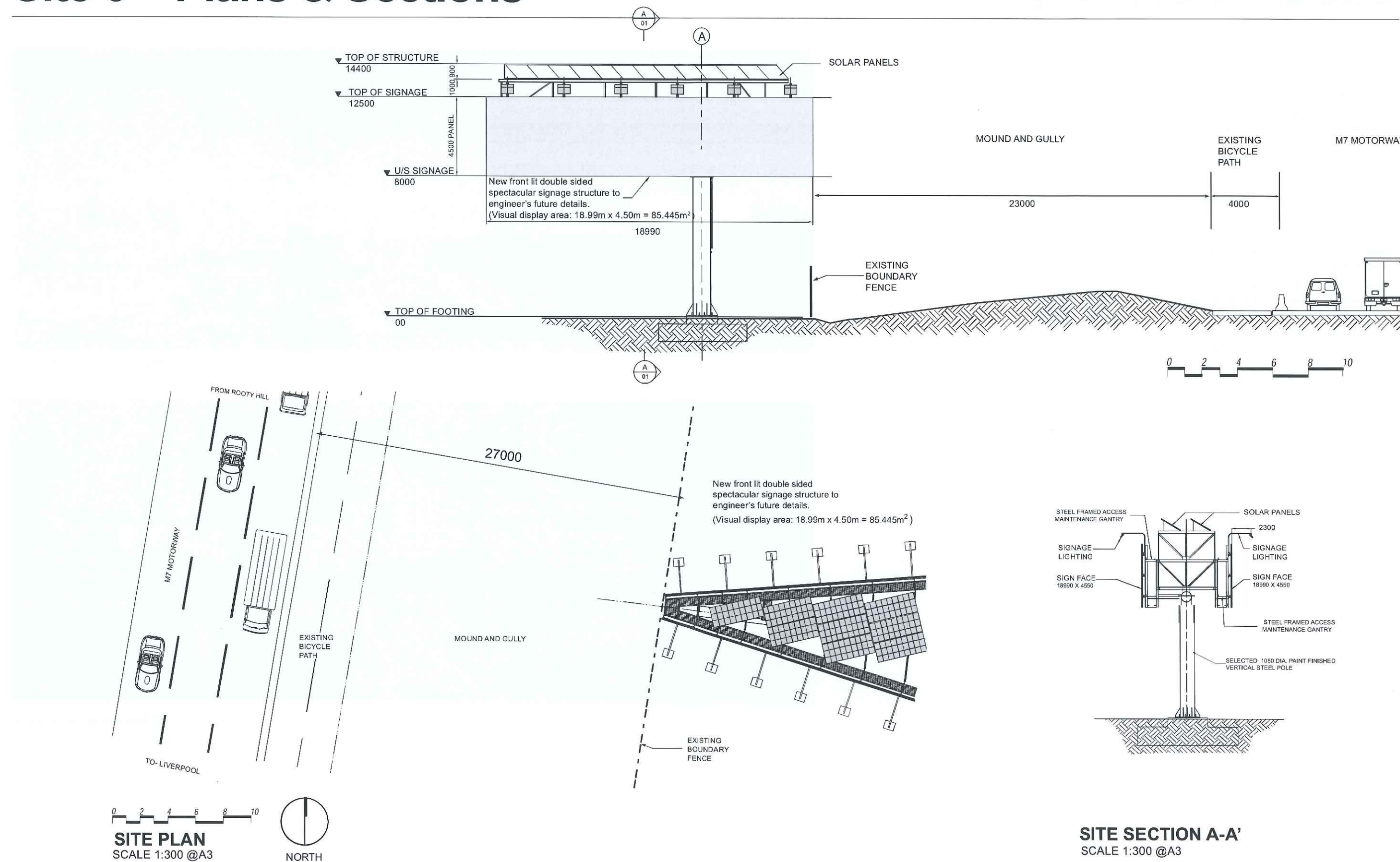
Site Plan

Source: Cadastre from
NSW Land Property and Management SIX Viewer

Site Access Plan

Source: Total Earth Care Pty Ltd

Site 6 - Plans & Sections



Site 6 - Visual Impact

Visual Impact

- Sign is adjacent to shared path between planted mounds and behind Jersey Barrier
- Existing planting on mounds screens sign somewhat
- Sign will generally be visible southbound and will be framed by adjoining vegetation as it becomes established
- Sign may be partly blocked by planting northbound
- Residences to east of site will not be adversely impacted and less so as trees establish further on the intervening undulating topography
- Sign would not detract from visual amenity of area.



Photomontage Southbound



Photomontage Northbound

Site 6 - Traffic Safety Summary

Traffic Safety

Double-sided

Side facing Southbound Traffic

- Site 6 is located more than 300 metres from any advisory signs or on & off-ramps. Accordingly, installation of the proposed billboard raises no safety implications.

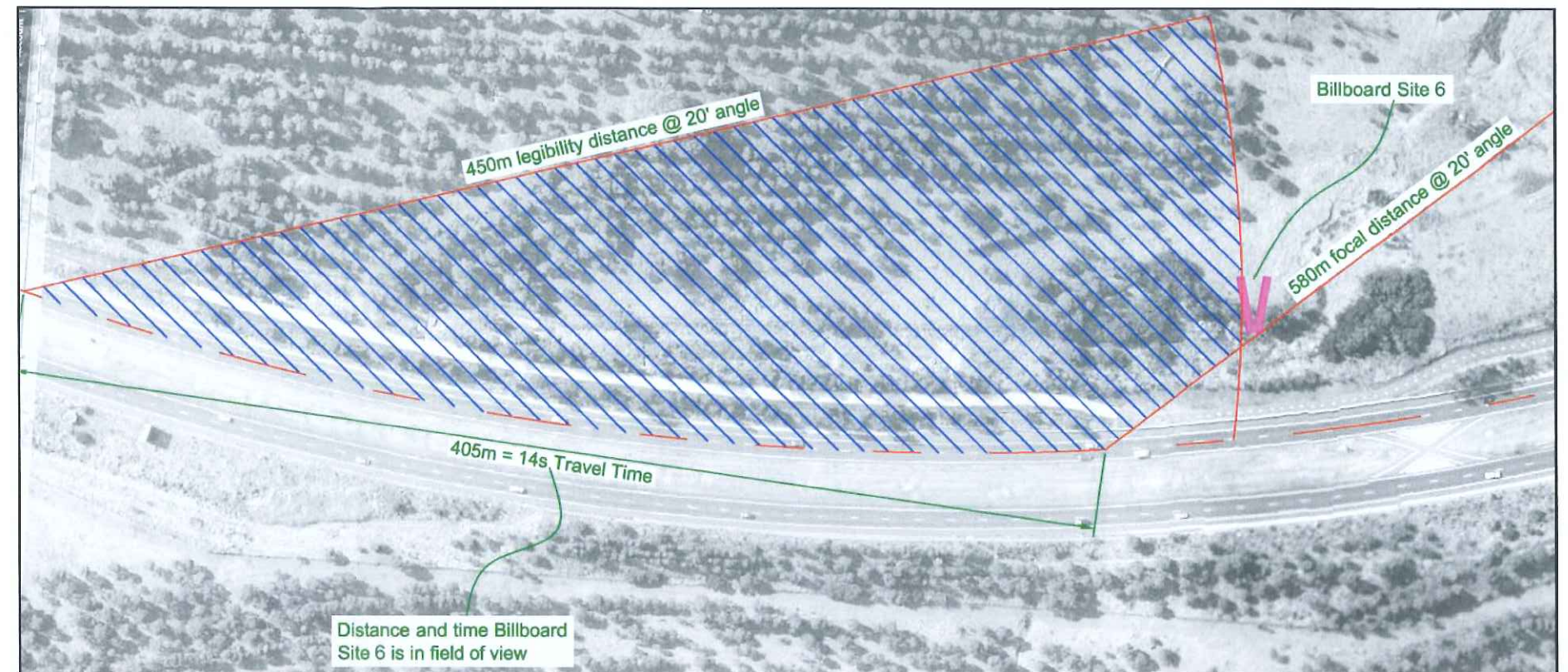
- The cone diagram shows that the Site 6 would be in the legibility distance cone of a southbound driver for about 14 seconds.

Side facing Northbound Traffic.

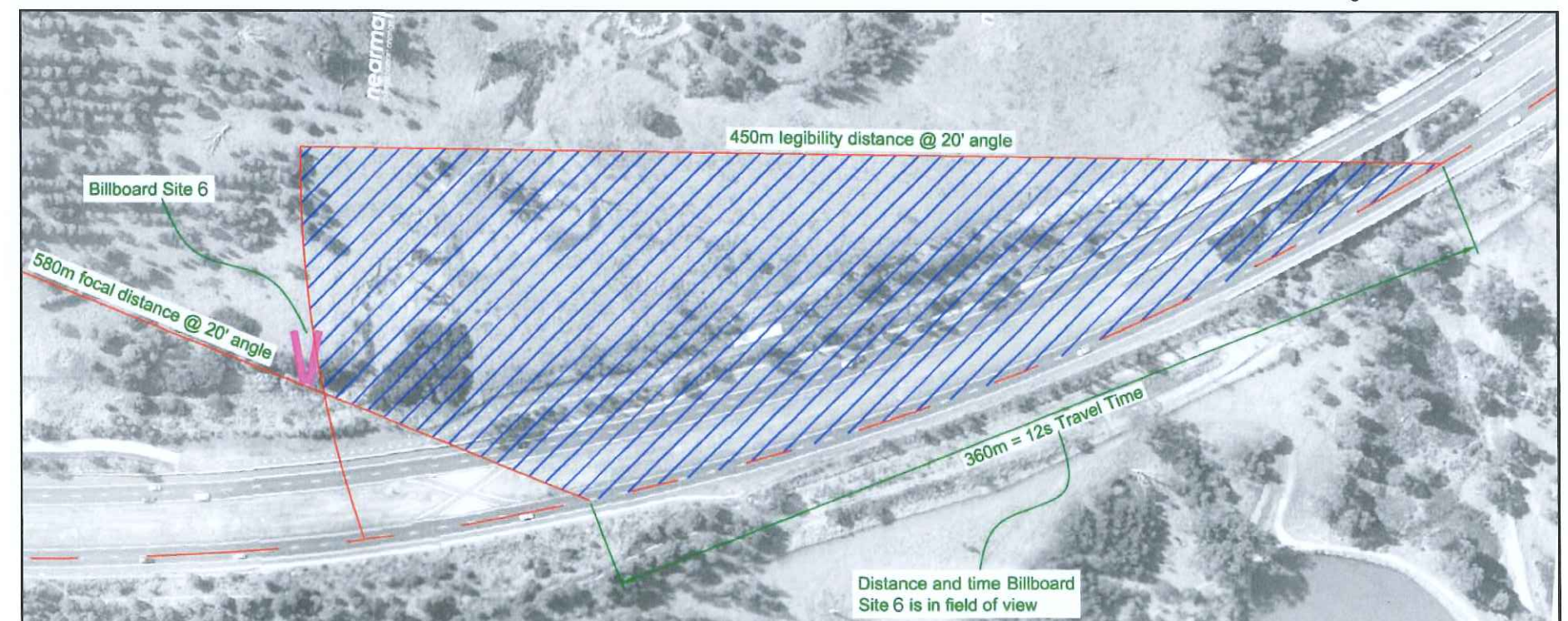
- Site 6 is located more than 300 metres from any advisory signs or on & off-ramps. Accordingly, installation of the proposed billboard raises no safety implications.

- The cone diagram shows that the Site 6 would be in the legibility distance cone of a northbound driver for about 12 seconds.

- In summary, the assessment above, including the cone diagrams opposite, shows that Site 6 (with regard to southbound and northbound traffic) is located in a position that is within a driver's field-of-view and more than 300 metres from any advisory signs or on & off-ramps. Accordingly, Site 6 is considered acceptable on road safety grounds.



Viewing Cones - Southbound



Viewing Cones - Northbound