TRAFFIC MANAGEMENT PLAN

NHO DAPER

SYDNEY SPRING TOUGH MUDDER
Saturday 30th November and
Sunday 1st December 2013

Fernhill Estate 1041-1117 Mulgoa Rd, Mulgoa

239AU OHK

Revised 26th August 2013

WHO DARES PTY LTD

TRAFFIC PLANNERS
SAFETY CONSULTANTS
SECURITY CONSULTANTS

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TMP Version:	1.1
Issue Date:	29 th July 2013
Revision Date:	26 August 2013
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Who Dares Pty Ltd

Phone 9569 9922 Fax 9569 9933

This Traffic Management Plan is approved by:

Event Organiser: Tough Mudder LLC

New South Wales Police:	Date:
Roads & Maritime Services: ROL#	Date:
Penrith City Council:	Date:

Authority of the TMP

This Traffic Management Plan (TMP) when approved by the relevant authorities becomes the prime document detailing the traffic, transport and pedestrian arrangements under which the Sydney Spring Tough Mudder at Fernhill Estate, Mulgoa Rd, Mulgoa, will operate.

In case of emergencies, or for the management of incidents, the NSW Police is not subject to the conditions of this TMP but should endeavour to inform other agencies of the nature of the incident and the Police response.

Planning Contacts

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1. Objectives

- 1.1. To ensure that the 2013 Sydney Summer Tough Mudder event being held at Fernhill Estate, 1041 Mulgoa Rd, Mulgoa is conducted in a safe manner with minimum disruption to the wider community.
- This document is based on the successful operation of the same event help on the weekend of 12th & 13th April 2013.
- To provide a high level description of the various traffic, transport and pedestrian management to make this event a success.
- To provide a framework for each agency to use to develop their own plans.
- 1.5. To serve as the key document that is agreed to by all parties and is the final approval to conduct the event.

2. The Event Details

- 2.1. The Sydney Tough Mudder will take place on Saturday 30th November 2013 and Sunday 1st December 2013.
- 2.2. On-site car parking will be provided for participant, spectators and staff.
- 2.3. Entry to the on-site car parking area will be via traveling northbound on Mulgoa Road with left-turn entry only at the Fernhill Estate main access gate.
- 2.4. Exit from the site will be provided directly to Mulgoa Road with left-turn exit only from a secondary access located approximately 750m north of the entry driveway.
- 2.5. The secondary access may also be used as an entry prior to 11:00am to spread the entry profile more evenly if required.
- 2.6. The start time for the event will be spread evenly between 8:00am and 2:00pm on each day.
- 2.7. There is anticipated to be up to 280 vehicle arrivals every 15 minutes until 2:00pm assuming occupancy of 2.7 people per car. Participants and spectators generally arrive 1.5 to 2 hours before their scheduled start time and generally depart within 1 hour of completing the event.
- 2.8. The arrival vehicle profile is planned to be spread over several hours, participants are generally expected to complete the event in 2 to 3 hours.
- 2.9. The event is an all-weather event.

3. Public Notification

- 3.1. All local residents and the general public will be notified of the event via VMS boards, Tough Mudder web site, newspaper notification, radio advertisements and other opportunities that may arise a minimum of two weeks prior to the event.
- 3.2. RMS operates and maintains a listing of major events with regard to expected traffic delays. This information is provided on the RMS website and via the RMS live traffic web service.

4. Public Transport

- 4.1. Westbus route 795 has limited services along Mulgoa Road on weekends between Penrith Interchange and Warragamba. Three services, in each direction, run from Penrith Interchange between 08:45am and 6:41pm on Saturdays and again on Sunday between 9:42am and 3:38pm. These services may experience some delay due to the traffic volumes generated by the Tough Mudder Event and the traffic control at the access locations on Mulgoa Rd. Minimal delays were experienced at the April 2013 event.
- 4.2. Westbus CDC are to be made aware of this event.
- 4.3. Tough Mudder LLC are to make arrangements should dedicated chartered bus services be required as part of the event.

5. Police

5.1. Discussions regarding the event and the use of User Pays police with the Penrith LAC are ongoing and a meeting will be arrange in advance of the event to confirm requirements.

6. On-site communications

6.1. It is noted that all staff, including on-site marshals and qualified traffic controllers will be in radio contact at all times to allow for appropriate communication and internal and external traffic and parking efficiency.

7. Site Access

- 7.1. Access to and from the on-site car parks will be via dedicated entry and exit driveways along Mulgoa Road, to limit conflict between arrivals and departures as a result of the staggered start times it is noted that the main site entry driveway will permit left-turns only from the south and the exit driveway (located approximately 750m to the north) will permit left turns only due to poor sightlines and safety concerns.
- 7.2. The site access driveways will be under the management and control of RMS accredited traffic controllers to maintain appropriate and safe access for participants and spectators together with managing traffic along Mulgoa Road.
- 7.3. Two traffic controllers will be required at the entry driveway to assist with site access. These traffic controllers will need to be on-site a minimum of 2 hours prior to the first event start time.
- 7.4. Vehicles entering the site via the entry driveway will be guided along the internal access road, by event directional signage and parking marshals, to enter the parking area in an anti-clockwise direction and on towards the planned location for staff to collect the nominated parking fee. It is recommended that vehicles be channelled into a minimum four lanes on approach to maintain safety and moderate congestion. Vehicles will then be directed to proceed to a given car park by marshals at the car park entry points and within the car parks.
- 7.5. One traffic controller will be required at the exit driveway at all times to monitor and enforce the left turn only exit strategy and to allow it to be used as a second entry driveway if required.
- 7.6. During peak egress times to alleviate traffic congestion northbound on Mulgoa road to Penrith the egress to Mulgoa Road will be under traffic control with traffic exiting both north and south on Mulgoa Road.

8. On-site parking

- 8.1. Car parking will be provided on the existing open grassed paddocks within three designated on-site car parks for participants and spectators. These parking areas combined will accommodate between 6,800 and 6,900 vehicles.
- 8.2. The car parks should be filled from west to east, Car park 3 should be utilised first then Car park 2 then Car park 1 to reduce on-site congestion and minimise conflict.
- 8.3. Should these three designated on-site car parks reach capacity, overflow car parking will be provided adjacent to the staff car park and in the vicinity of the entry driveway. The overflow car park will provide capacity for approximately another 1,100-1,200 vehicles.
- 8.4. Dedicated and separate staff parking will be provided on-site for approximately 450 vehicles for the duration of the Tough Mudder

- Event. This car parking area has been designed to accommodate up to 800-850 staff and assumes average car occupancy of approximately two staff per vehicle.
- 8.5. All entry and exit locations will be signposted to reduce driver uncertainty. Where possible, all entry and exit locations to the horse training tracks and also to and from the onsite car parks should use existing gates and accesses to minimise the need to create temporary openings, if any temporary opening are required they will need to be 'made good' after the event.

9. Pedestrian Control

9.1. The participants and spectators walking from the designated car parks to the base area will have partial use of the internal access road with specific crossing points provided as marked on the attached site maps. The interaction of vehicles and pedestrians at these crossing points will need to be monitored and under the management and control of event marshals.

10. Road Closures

- 10.1. The northern entry point of St Thomas Rd will be closed to west of Mulgoa Rd and north of Kings Farm Rd (access road behind St Thomas Historic Church) from 06:00 till 16:00 to help improve traffic flow.
- 10.2. A detour will be provided via event directional signage on the southern entry point of St Thomas Rd to direct participants and spectators to Littlefields Rd and then back onto Mulgoa Rd to enter the event site from the south.

11. Traffic Control

- 11.1. RMS accredited traffic controllers will be supplied to install signage and manage traffic as per the supplied Traffic Control Plans.
- 11.2. The intersection of Littlefields Road and Mulgoa Road will be under the management and control of RMS accredited traffic controllers.
- 11.3. Given that the primary intended arrival route will be via The Northern Road/ Littlefields Road/ Mulgoa Road, the intersection of Mulgoa Road/ Littlefields Road will be the main constraint (rather than the entry driveway) for both vehicles associated with the special event and other traffic in the local area. As per the traffic volumes observed at the April 2013 event, the cycle time at this intersection should not exceed three minutes to help minimise delays to motorists.
- 11.4. The intersection of Littlefields Road and Farm Road will be under the management and control of RMS accredited traffic controllers to assist

- with the movement of event traffic, following special event directional signage, needing to turn right from Farm Rd onto Littlefields Rd in order to access the event site from the southern direction
- 11.5. Assuming 1,200 vehicles per hour (vph) (in excess of the anticipated 1,120 vph) will turn right from Littlefields Road into Mulgoa Road during the peak arrival periods, the queue heading east could reach lengths of approximately 1 km which the traffic controllers at the Littlefields and Farm Rd intersection can monitor and report back on. There will also be queues of approximately 250m for the north and south Mulgoa Road approaches assuming 350 vph in each direction (as per RMS permanent count data). The traffic control manager along with police will regularly patrol Mulgoa Rd and provide feedback to traffic control teams who may have to adjust the cycle lengths.

12. Emergency Access

- 12.1. At all times, the traffic management seeks to maintain direct and convenient emergency vehicular access at either access location via Mulgoa Road.
- 12.2. A secondary internal road linking the entry road and the exit road will be maintained for use in emergency situations only.

13. Execution

13.1. This TMP was developed in consultation with the RMS, the NSW Police, the Penrith City Council and the event organisers.

14.Insurance

14.1. A \$20,000,000 Public Liability Insurance Certificate has been undertaken by Tough Mudder LLC. The Roads and Maritime Services and Transport for NSW, must be listed as an interested party on this policy.

15. Variable Message Signs

- 15.1. The use of Variable Message Signs (VMS) is proposed for the event period. The VMS's will be positioned in safe locations and should not obstruct vehicle or pedestrian access, visibility to traffic signals, road signs or pedestrian crossing locations. They are to be in place and ready for operation prior to the days set out below.
- 15.2. VMS will be placed on Mulgoa Road a minimum of one week prior to the event at the following locations:
 - Mulgoa Road north approach 900 metres north of the site entry
 - Mulgoa Road south approach 450 metres south of the site entry.

Sign frames to be displayed between 18/11/13 and 29/11/13 are illustrated in Figure 15.3 to Figure 15.4 below:

Figure 15.3 Pre-event VMS - Frame 1



Figure 15.4 Pre-event VMS - Frame 2



Sign frames to be displayed during the weekend of the event 30/11/13 and 01/12/13 between the hours of 06:00 and 19:00 are illustrated in Figure 15.5 to Figure 15.8 below:

Figure 15.5 Pre-event VMS - Frame 1



Figure 15.6 Pre-event VMS - Frame 2



Figure 15.7 Pre-event VMS - Frame 1



Figure 15.8 Pre-event VMS - Frame 2



SYDNEY SPRING TOUGH MUDDER 2013 TMP 26 AUGUST 2013 – 1.1 16.9. During the event weekend (30/11/13-01/12/13) additional VMS will be placed on the M4 Motorway, The Northern Road and Mulgoa Road (north of the M4) to direct participants, spectators and staff to the venue. The locations are detailed on the VMS location plans. Figures 15.10 to 15.15 illustrate the message requirements for each VMS frame to be placed on the M4 Motorway directing traffic to The Northern Road

Figure 15.10 M4 East Approach before The Northern Rd – Frame 1

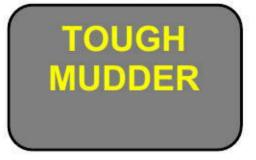


Figure 15.12 M4 West Approach before The Northern Rd – Frame 1

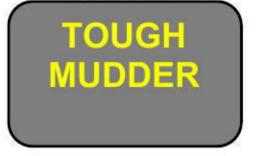


Figure 15.14 M4 West Approach before Mulgoa Rd – Frame 1



Figure 15.11 M4 East Approach
The Northern Rd – Frame 2



Figure 15.13 M4 West Approach
The Northern Rd – Frame 2



Figure 15.15 M4 West Approach Mulgoa Rd – Frame 2

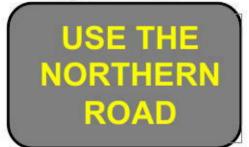


Figure 15.16 and Figure 15.17 illustrate the message requirements for each VMS frame to be placed on Mulgoa Road, north of M4 Motorway directing traffic to use the M4 and The Northern Road.

Figure 15.16 Mulgoa Rd North approach at M4 motorway – Frame 1



Figure 15.17 Mulgoa Rd North approach Mulgoa Rd – Frame 2

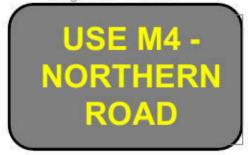


Figure 15.18 to Figure 15.23 illustrate the message requirements for each VMS frame to be placed on Mulgoa Road, north of M4 Motorway directing traffic to use the M4 and The Northern Road.

Figure 15.18 The Northern Rd - North Approach at Chain-O-Ponds Rd - Frame 1

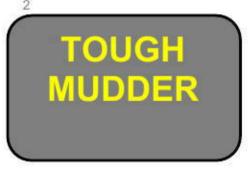


Figure 15.20 The Northern Rd - North Approach at Kings Hill Rd - Frame 1

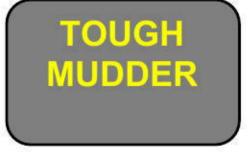


Figure 15.22 The Northern Rd – South approach Approach South of Littlefields Rd – Frame 1

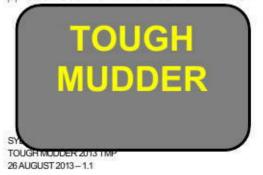


Figure 15.19 The Northern Rd - North Approach at Chain-O-Ponds Rd - Frame



Figure 15.21 The Northern Rd - North Approach at Kings Hill Rd – Frame 2



Figure 15.23 The Northern Rd - South Approach South of Littlefields Rd - Frame 2



It is noted that the VMS and static signs will be installed by a suitably qualified contractor with appropriate insurances.

16. Special Event Directional Signage

16.1. Appropriate directional signage will also be implemented on-site and in approaching streets to the site to manage and control the movement of vehicles to and from the event site and the car parks. All entry and exit locations will be signposted and staffed with RMS qualified Traffic Controllers to reduce driver uncertainty. The staff car park will be signposted to allow easy access by staff with the use of marshals (to be on-site early) as required.

Figure 16.2 illustrates the static sign layout for the following locations:

- The Northern Road north approach at Littlefields Road
- Mulgoa Road opposite Littlefields Road (facing Littlefields Road)
- St Thomas Road east approach at Farm Road
- Farm Road north approach at Littlefields Road

Figure 16.2 Static sign (various locations listed above)



Figure 16.3 illustrates the static sign layout at the following locations:

- Mulgoa Road directing vehicles approaching from the north to use St Thomas Road in order to approach the entry driveway from the south. Given the VMS's located on The M4 Motorway and Mulgoa Road (north of the M4), this volume of traffic is expected to be relatively low. It is also recommended that a qualified traffic controller be present at this location, and at the main site entry to direct/ inform vehicles as required.
- Mulgoa Road at the site entry.

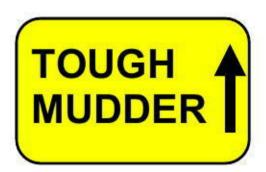
Figure 16.3 Static sign (various locations listed above)



Figure 16.4 illustrates the static sign layout at the following locations:

 Northern side of St Thomas Rd facing eastbound traffic 100m m east of Mulgoa Rd, then repeated a further 200m up the road

Figure 16.4 Static sign (various locations listed above)



Physical Survey of the Route

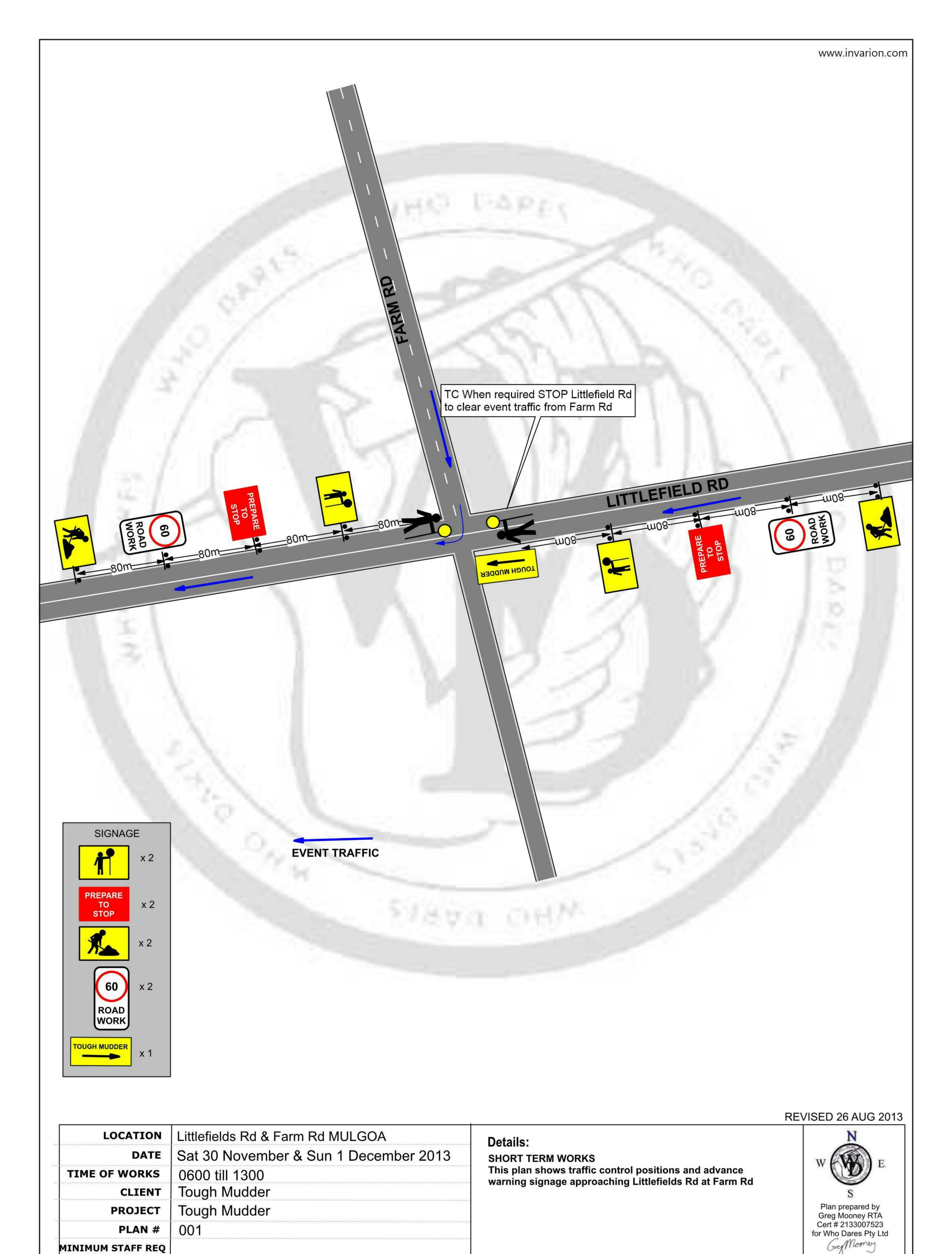
Item	Verified	Action Taken
All one way Sts are as described	×	
Block access to local businesses		Local Businesses will be aware of the road closures
Block Ambulance access		All Emergency Services notified of event. Police to facilitate emergency vehicle access
Block local resident access		Limited access provided under police or nominated traffic management contractor control
Block Police vehicle access	×	Police to facilitate access
Block public transport access	×	Some delays due to traffic diversion
Restricted movements – banned turns, heavy/high vehicles		Intersections under Police/Traffic Controller
Road signage - existing/temporary	\boxtimes	
Signalised intersections		To be managed by RMS
Traffic generators – shopping centres, schools, churches, industrial area, hospitals	×	Traffic generators are aware of standard road closures

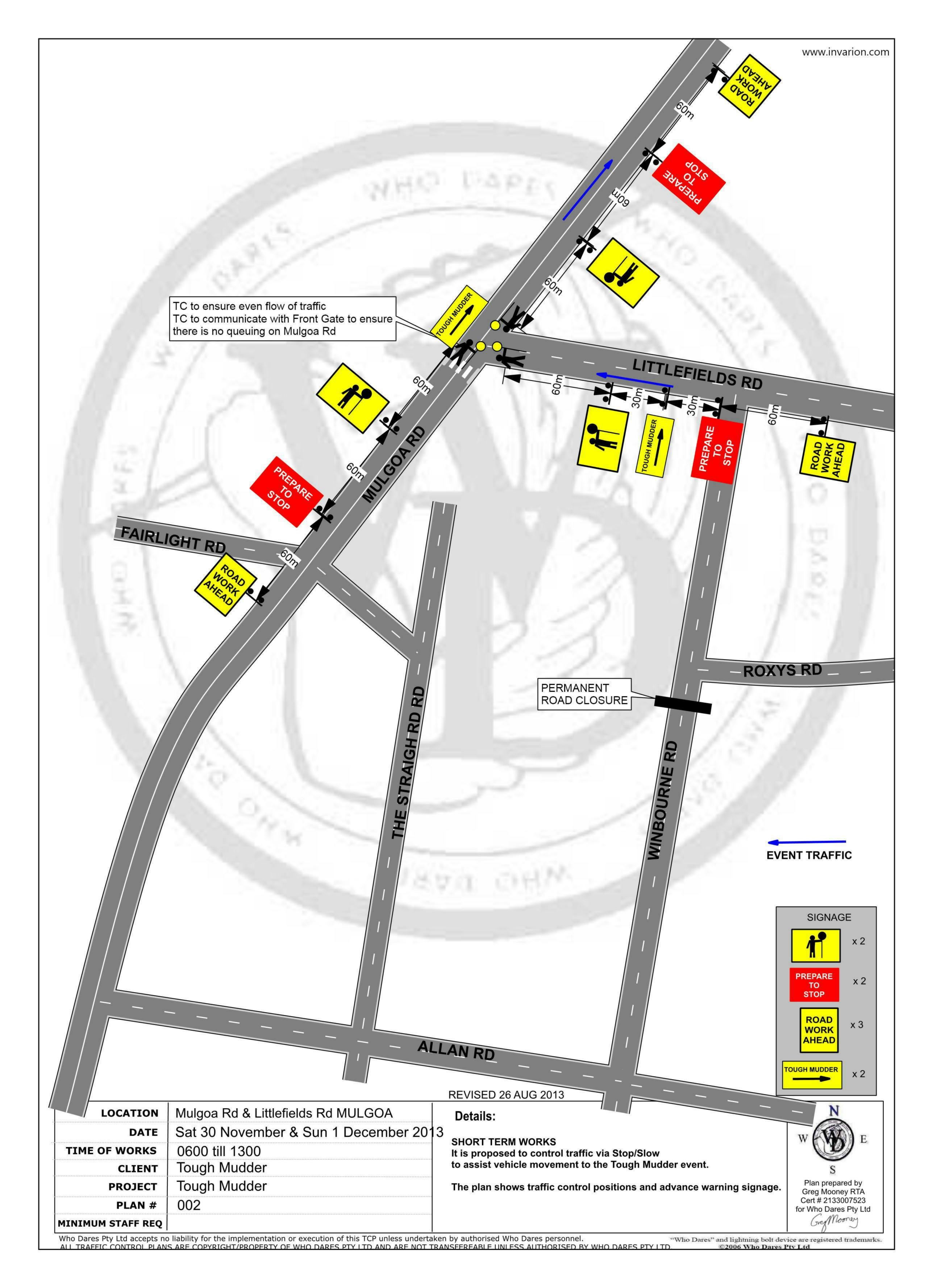
Contingency Plan Checklist

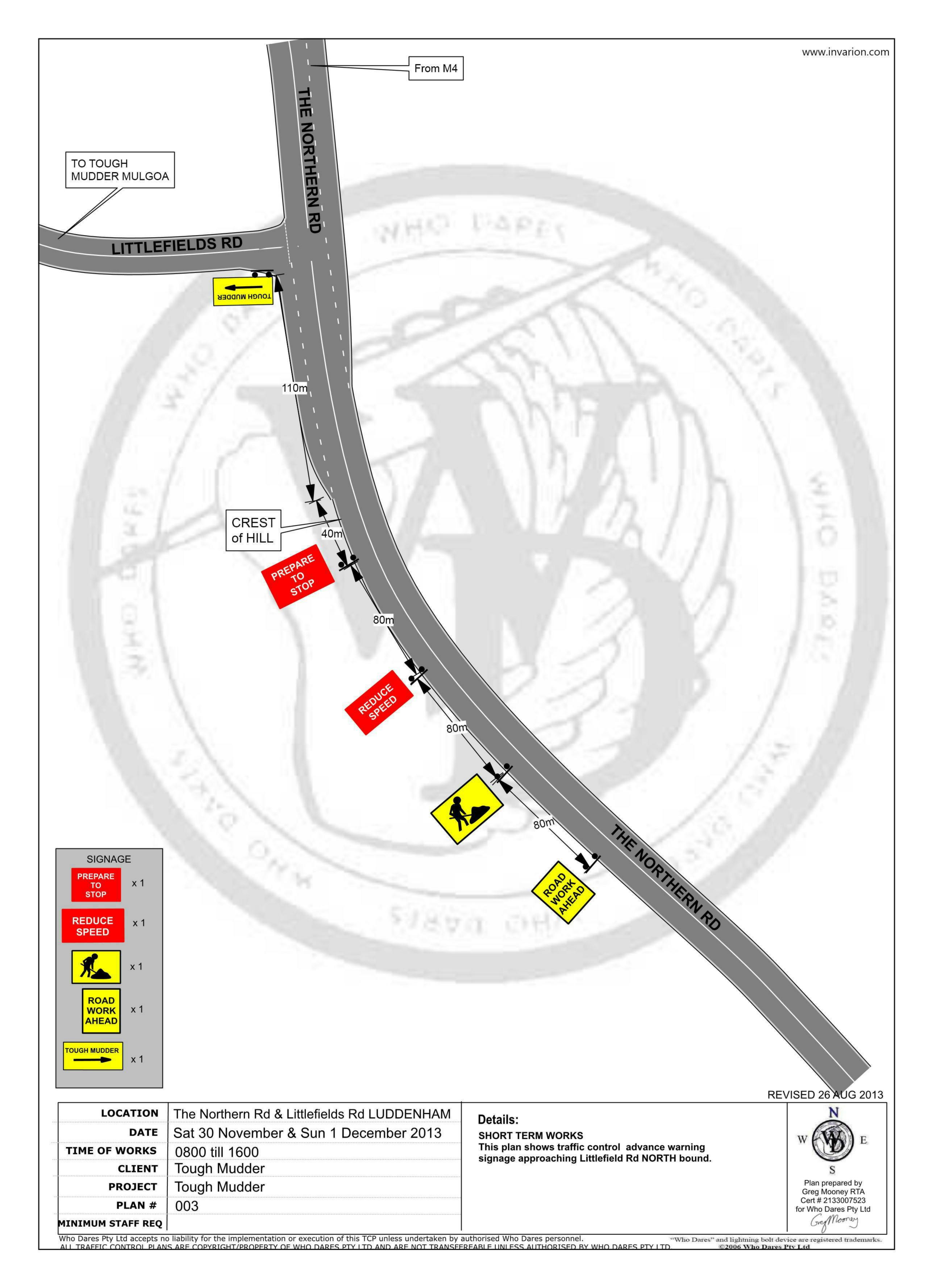
Issues/Risks	Applicable	Action Taken
Heavy Weather	⊠ No	This is an all-weather event
Accident on the route	⊠ No	Standard
Breakdown of vehicle or heavy vehicle	⊠ No	Standard
Security of participants		Security will be on-site
Security of very important persons (VIPs)	⊠ No	Security on the day.

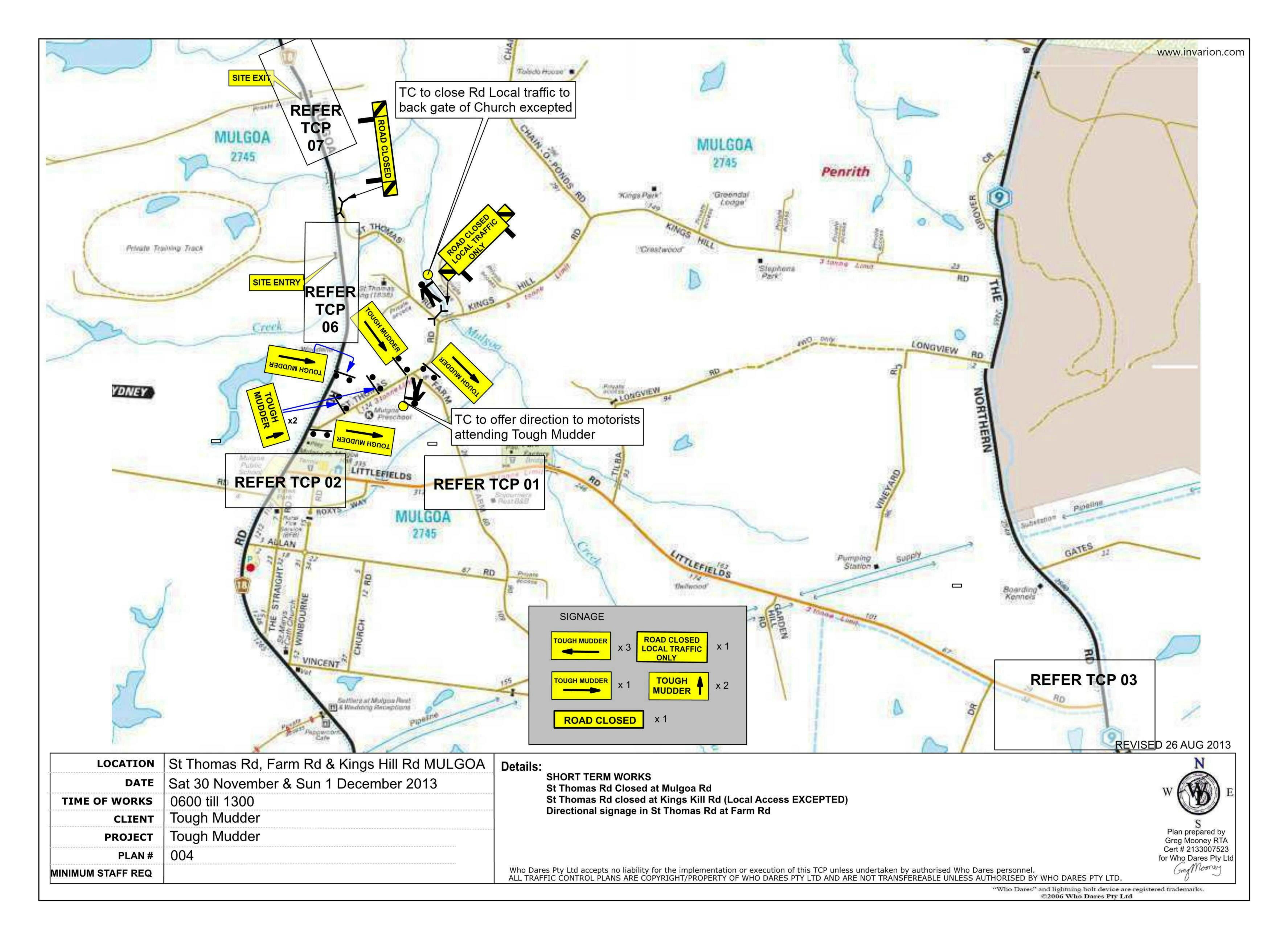
Attachments:

- TCP 01 Littlefields Rd & Farm Rd
- TCP 02 Mulgoa Rd & Littlefields Rd
- TCP 03 Northern Rd & Littlefields Rd
- TCP 04 St Thomas Farm & Kings Hill
- TCP 05 Mulgoa Rd & Glenmore Parkway
- TCP 06 Mulgoa Fernhill Estate ENRTY
- TCP 07 Mulgoa Rd Fernhill Estate EXIT
- TCP 08 Vehicle & Pedestrian Movement Plan
- . TCP 09 Car park fill rate
- TCP 10 VMS Location map 1 (Mulgoa & The Northern Rd)
- TCP 11 VMS Location map 2 (M4)
- TCP 12 Internal Service road to exit gate











REVISED 26 AUG 2013

LOCATION	Mulgoa Rd & Glenmore Parkway GLENMORE PK
DATE	Sat 30 November & Sun 1 December 2013
TIME OF WORKS	12noon till 1700
CLIENT	Tough Mudder
PROJECT	Tough Mudder
PLAN#	005
MINIMUM STAFF REQ	

Details:

SHORT TERM WORKS

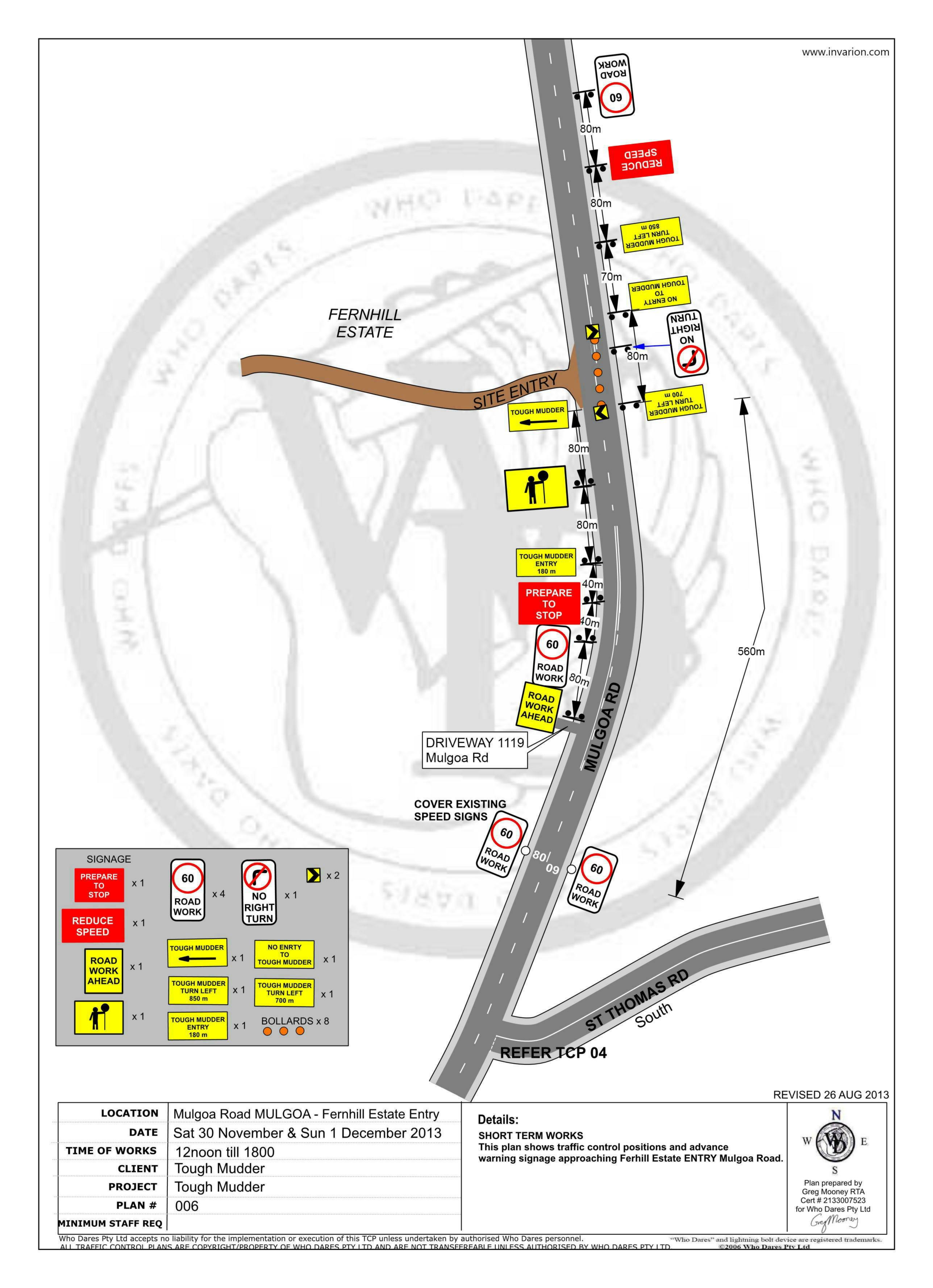
Police have requested a line of bollards to delineate lane 1 EAST BOUND through the roundabout

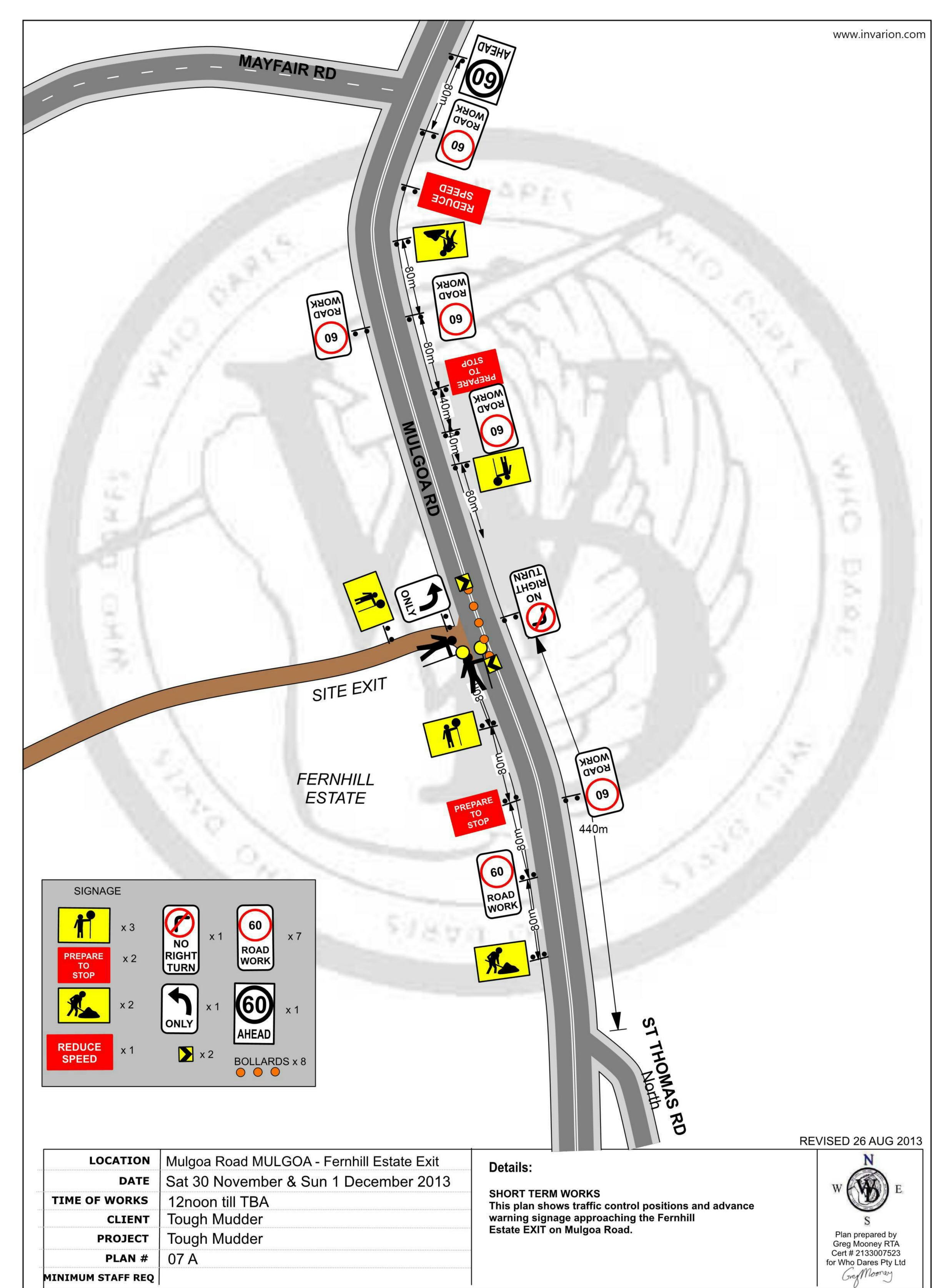


Plan prepared by
Greg Mooney RTA
Cert # 2133007523
for Who Dares Pty Ltd

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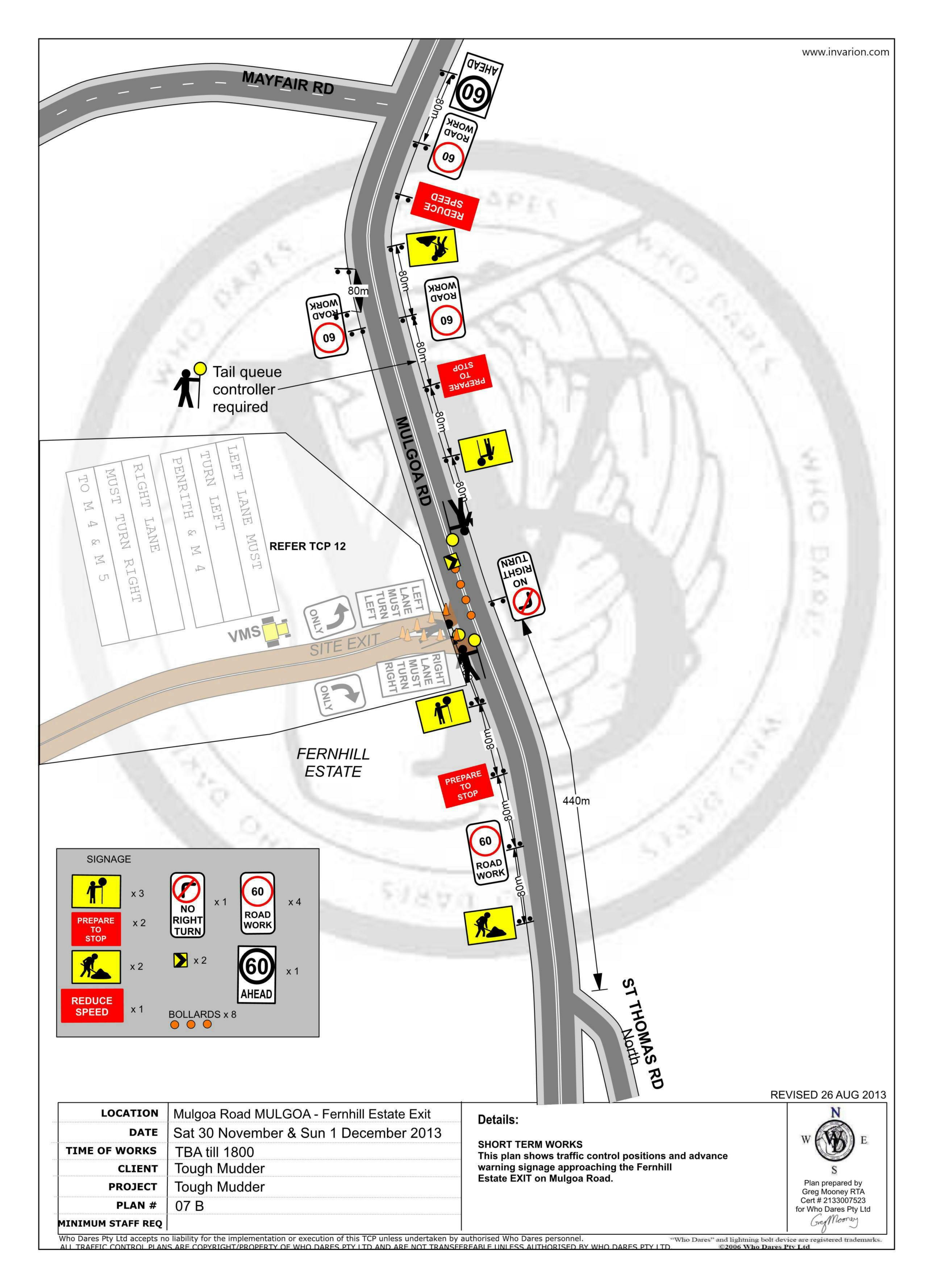


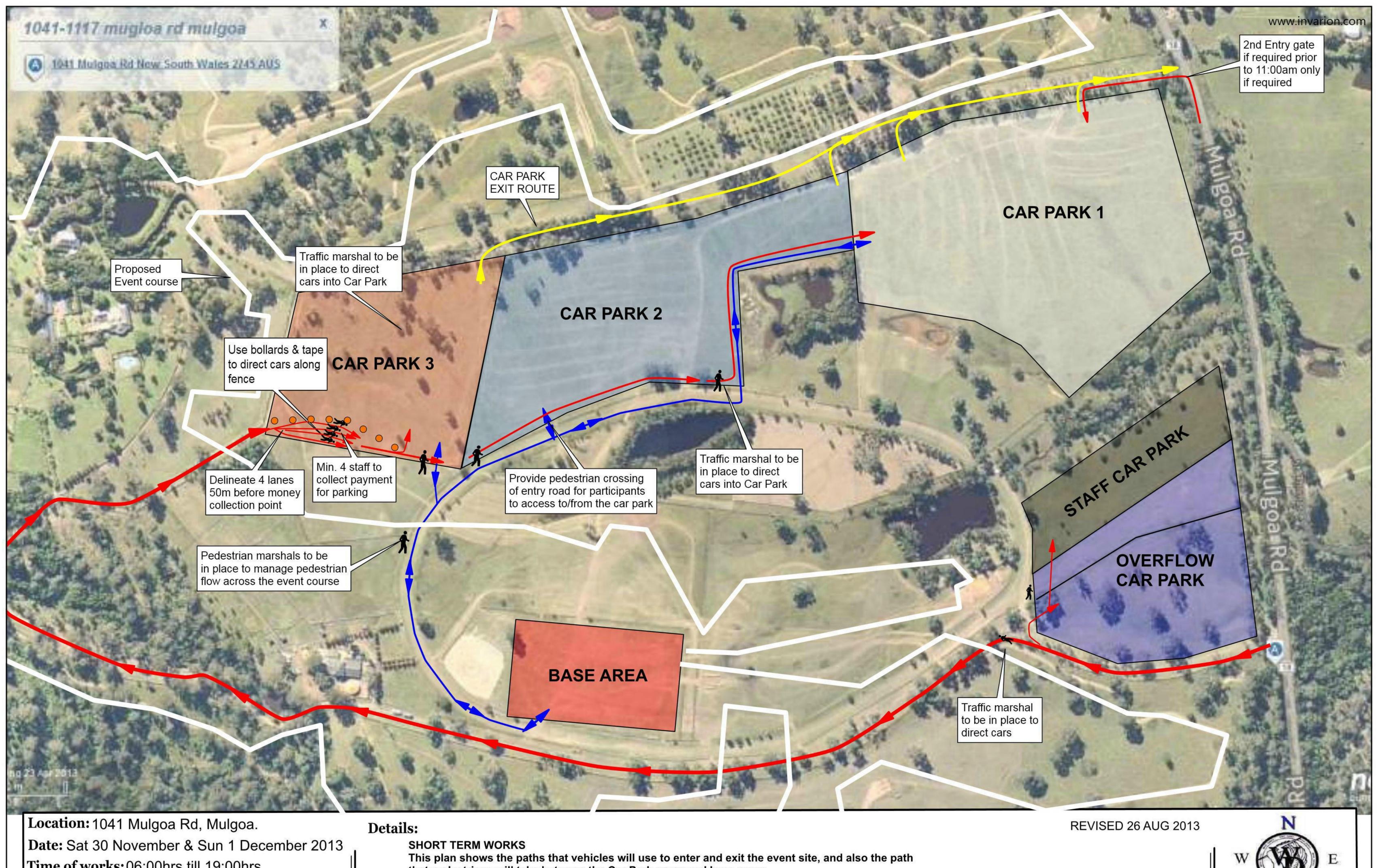
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Time of works: 06:00hrs till 19:00hrs

Client: Tough Mudder LLC

Project: Sydney Spring Tough Mudder 2013

Plan No.: WD/SiteMap/TM/GA978

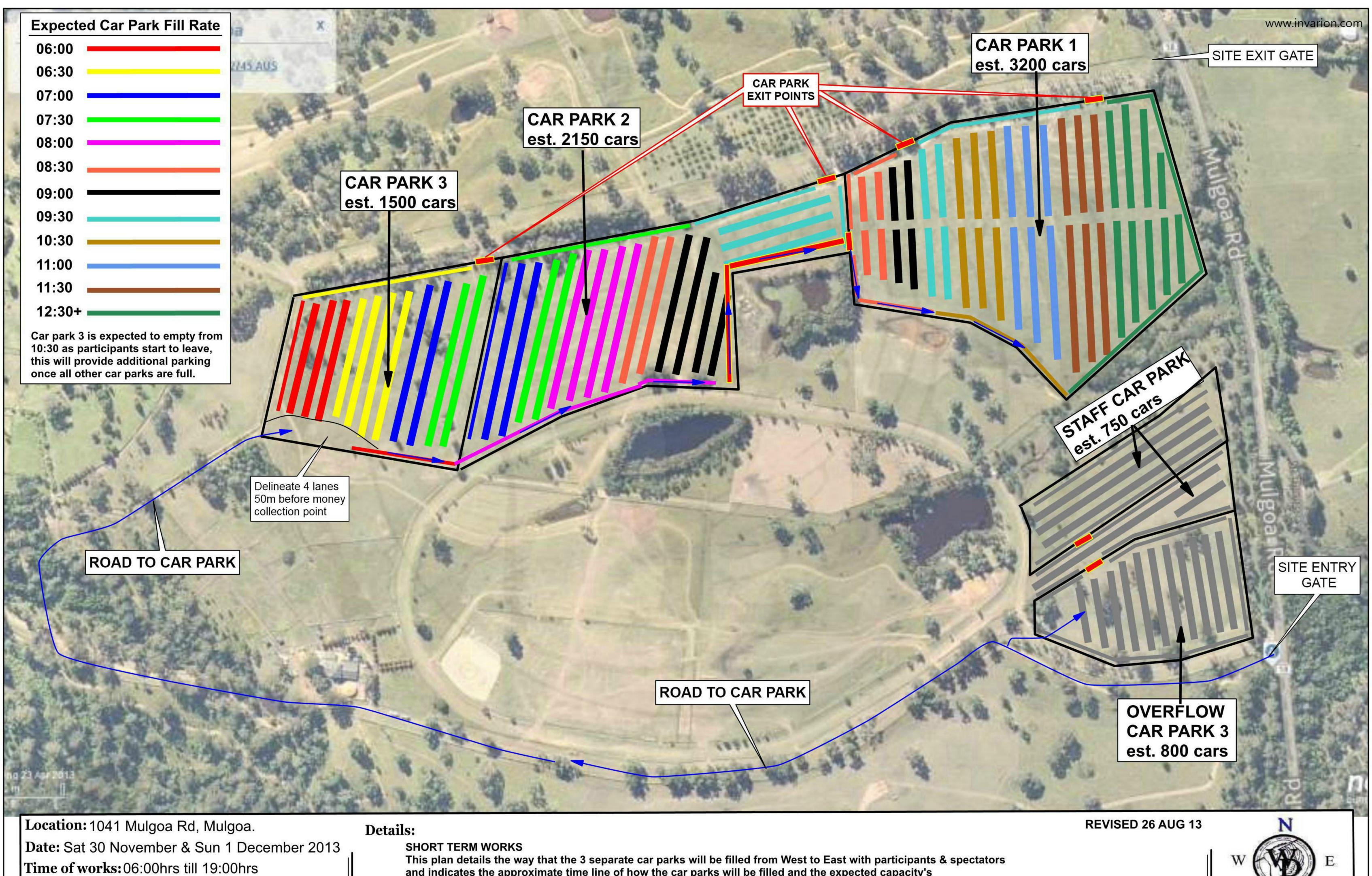
that pedestrians will take between the Car Park areas and base camp.

it has been designed to minimise the conflict between them and at the few points where the paths do intersect, there will be event marshals to safely maintain the movement both vehicles and pedestrians.

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Client: Tough Mudder LLC

Project: Sydney Spring Tough Mudder 2013

Plan No.: WD/CarPark/TM/GA977

and indicates the approximate time line of how the car parks will be filled and the expected capacity's

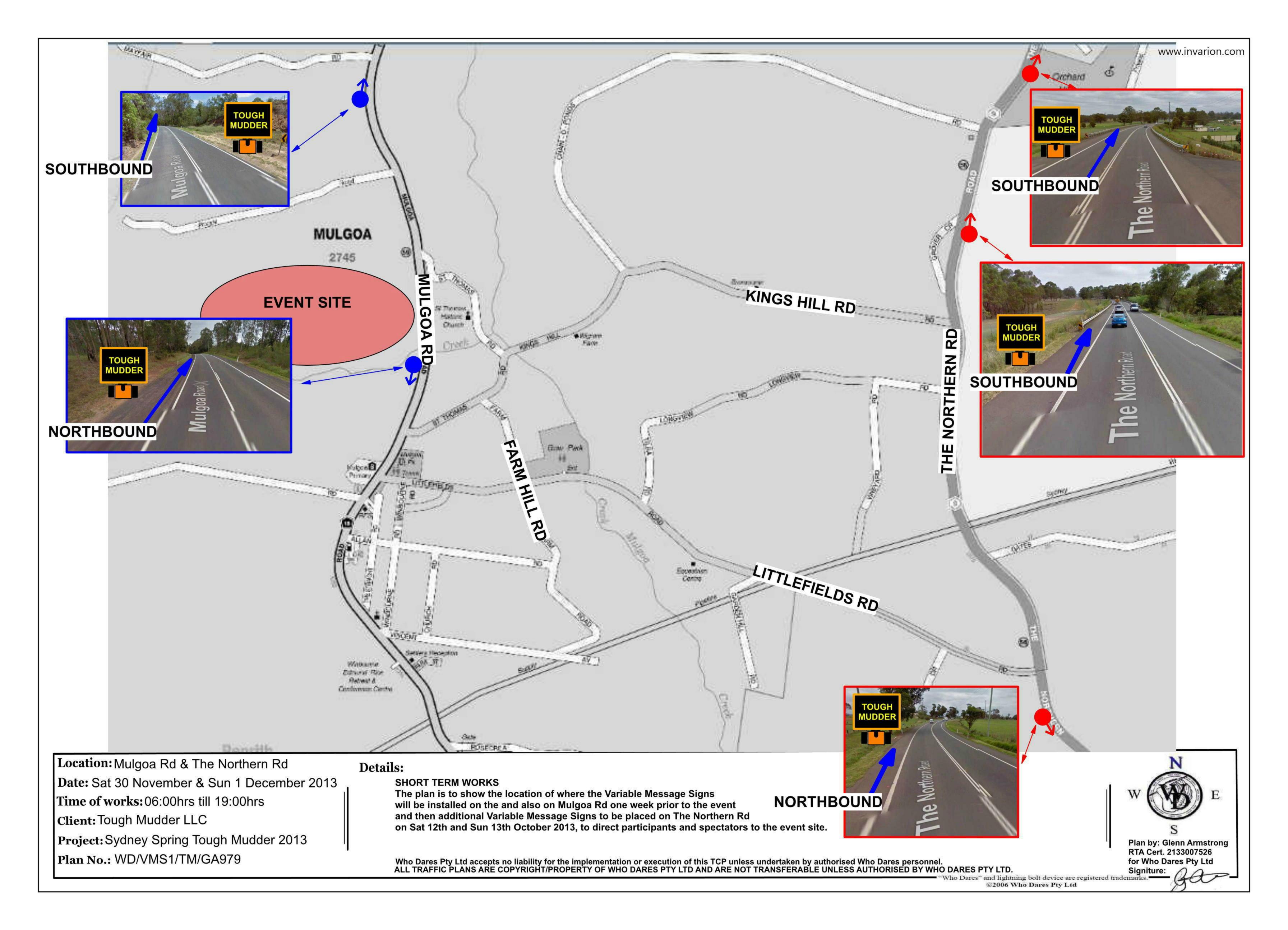
It also details the location of the staff and overflow car parks and there approximate capacity's.

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Plan by: Glenn Armstrong RTA Cert. 2133007526

for Who Dares Pty Ltd Signiture:





Location: M4 Motorway & Mulgoa Rd

Date: Sat 30 November & Sun 1 December 2013

Time of works: 06:00hrs till 19:00hrs

Client: Tough Mudder LLC

Project: Sydney Spring Tough Mudder 2013

Plan No.: WD/VMS2/TM/GA980

Details:

SHORT TERM WORKS

The plan is to show the location of where the Variable Message Signs will be installed on the M4 Motorway and also on Mulgoa Rd, on Sat 12th and Sun 13th October 2013, to direct participants and spectators to the event site.

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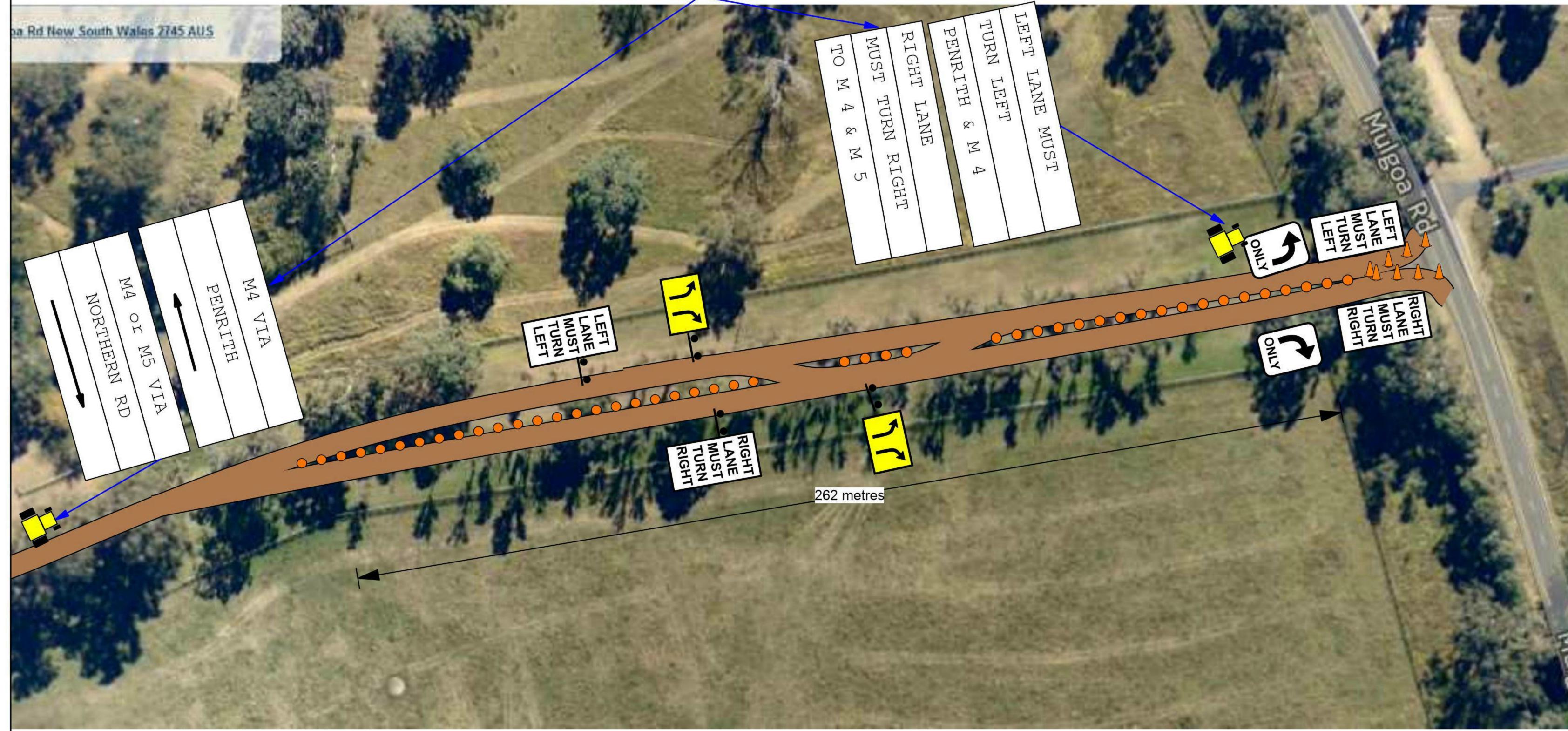


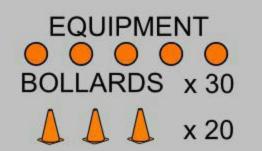
Plan by: Glenn Armstrong RTA Cert. 2133007526 for Who Dares Pty Ltd Signiture:

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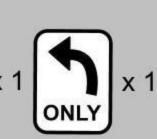












LOCATION	Mulgoa Road MULGOA - Fernhill Estate Exit	
DATE	Sat 30 November & Sun 1 December 2013	
TIME OF WORKS	TBA till 1800	
CLIENT	Tough Mudder	
PROJECT	Tough Mudder	
PLAN#	12	
MINIMUM STAFF REQ		

Details:

SHORT TERM WORKS

REVISED 26 AUG 2013



Plan prepared by Greg Mooney RTA Cert # 2133007523 for Who Dares Pty Ltd GreeMooney

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