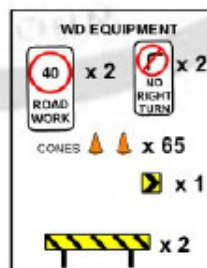
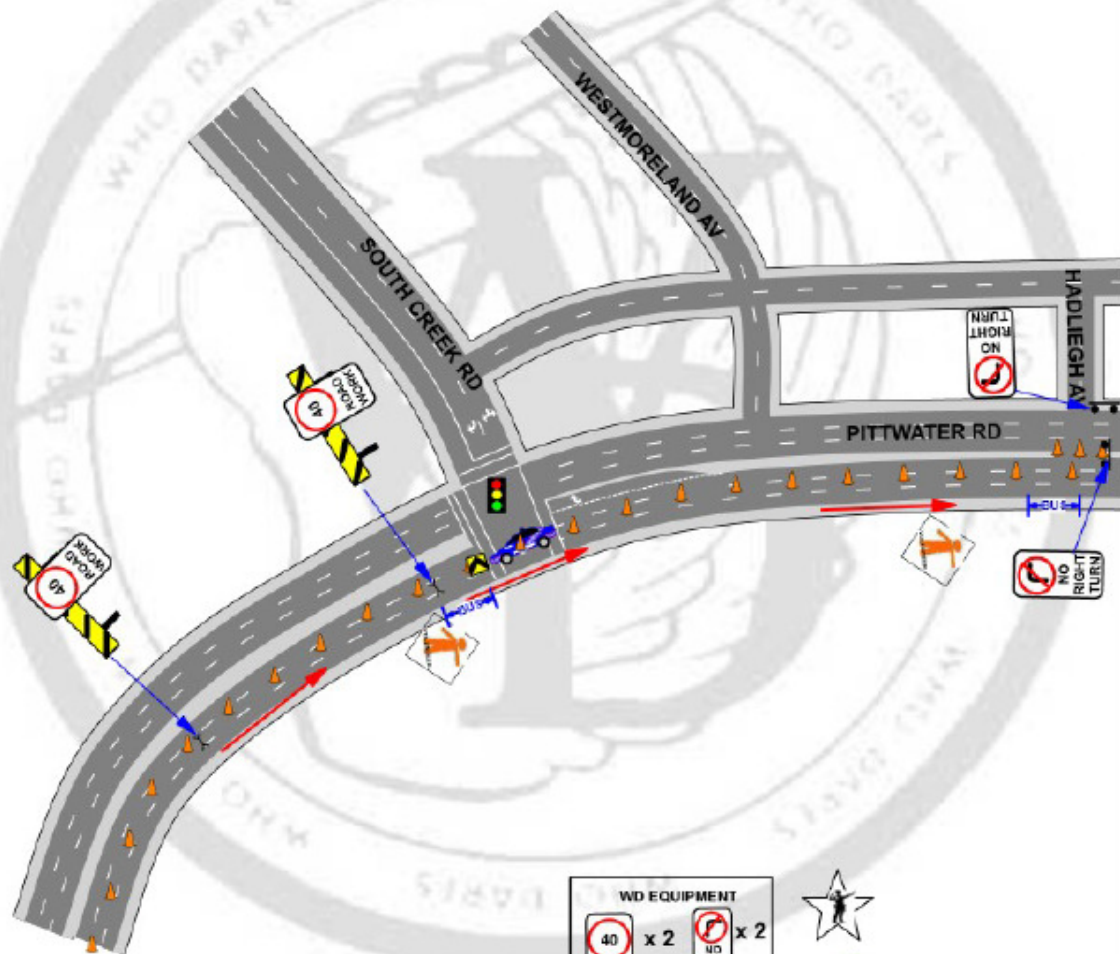


Contingency If lagoon is closed
 Closure of lanes 1 and 2 south bound of Pittwater Rd
 from Hawkesbury Ave Dee Why to Anzac Ave Collaroy
 Police, RMS and a traffic control ute with arrow board will
 be placed in lane two.
 Traffic cones will be placed along lane two lane markers
 Runners will use lane one.



AGENCY	PRIMARY TASK	SECONDARY TASK	TIME STAFF
POLICE	Monitor Intersection	Car to block lane 2	0730-0900 1
TMC/RMS	Monitor altered road conditions		
WHO DARES	Deliver Equipment		0700-0900
MARSHAL	Maintain Road Closure Points	Assist at Bus Stops	0730-0900 2

PUB TO PUB
 Pittwater Road COLLAROY
 Closure lane 1 and 2 south bound

Bus stops will be facilitated by marshalls.

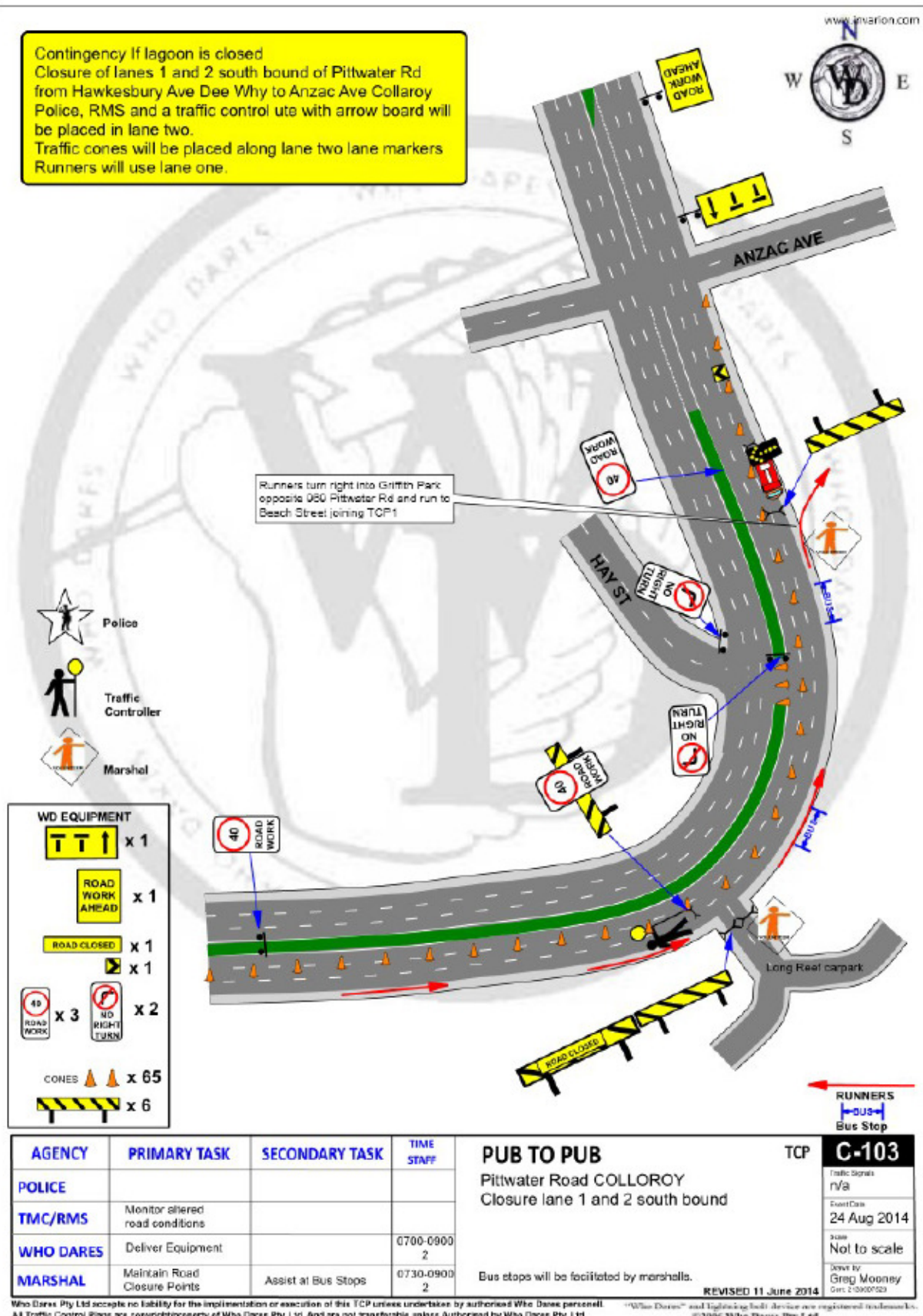
REVISED 11 June 2014

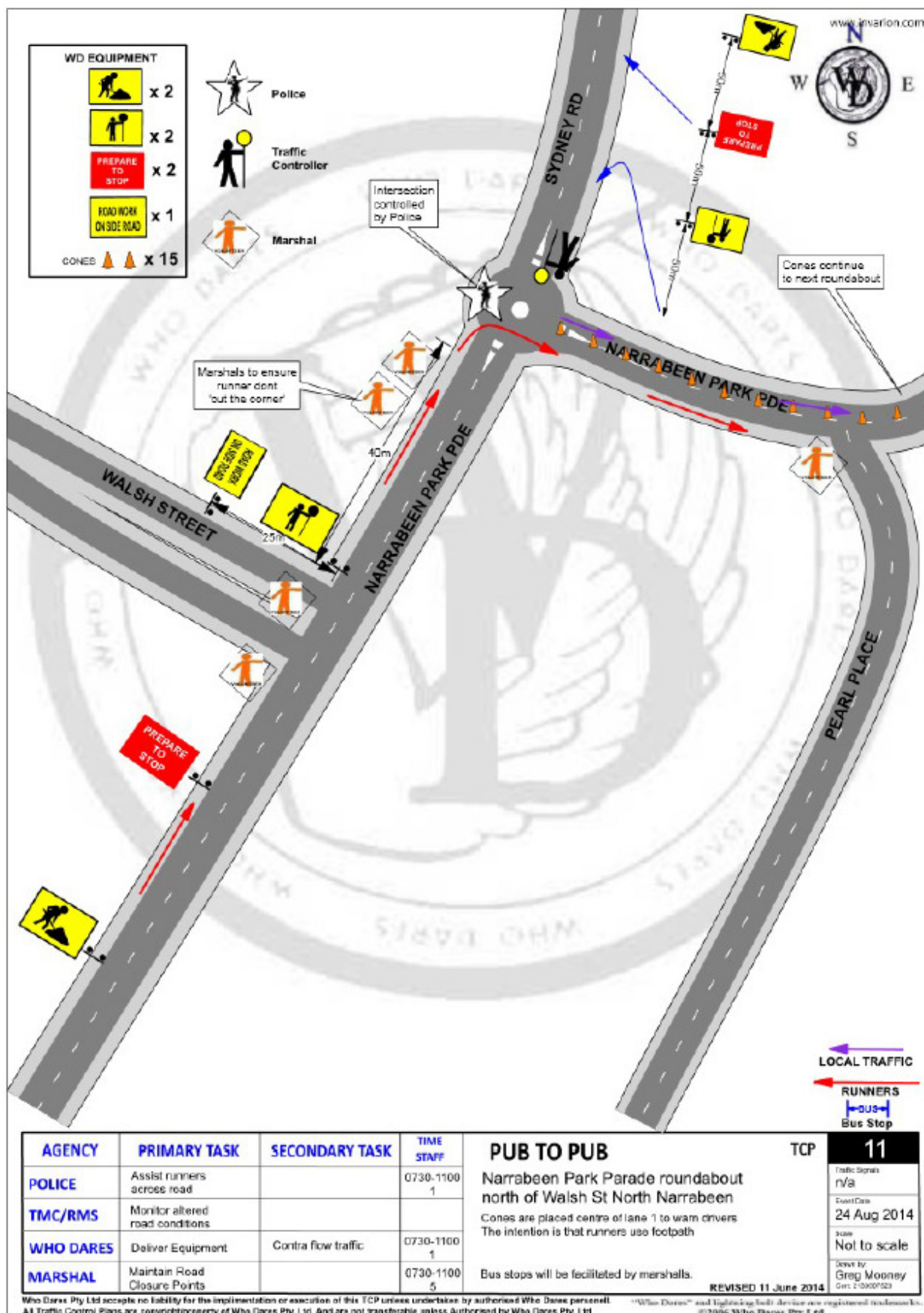
TCP C-102
Traffic Signals XXXXX
Event Date 24 Aug 2014
Scale Not to scale
Drawn by Greg Mooney GMS 210300523

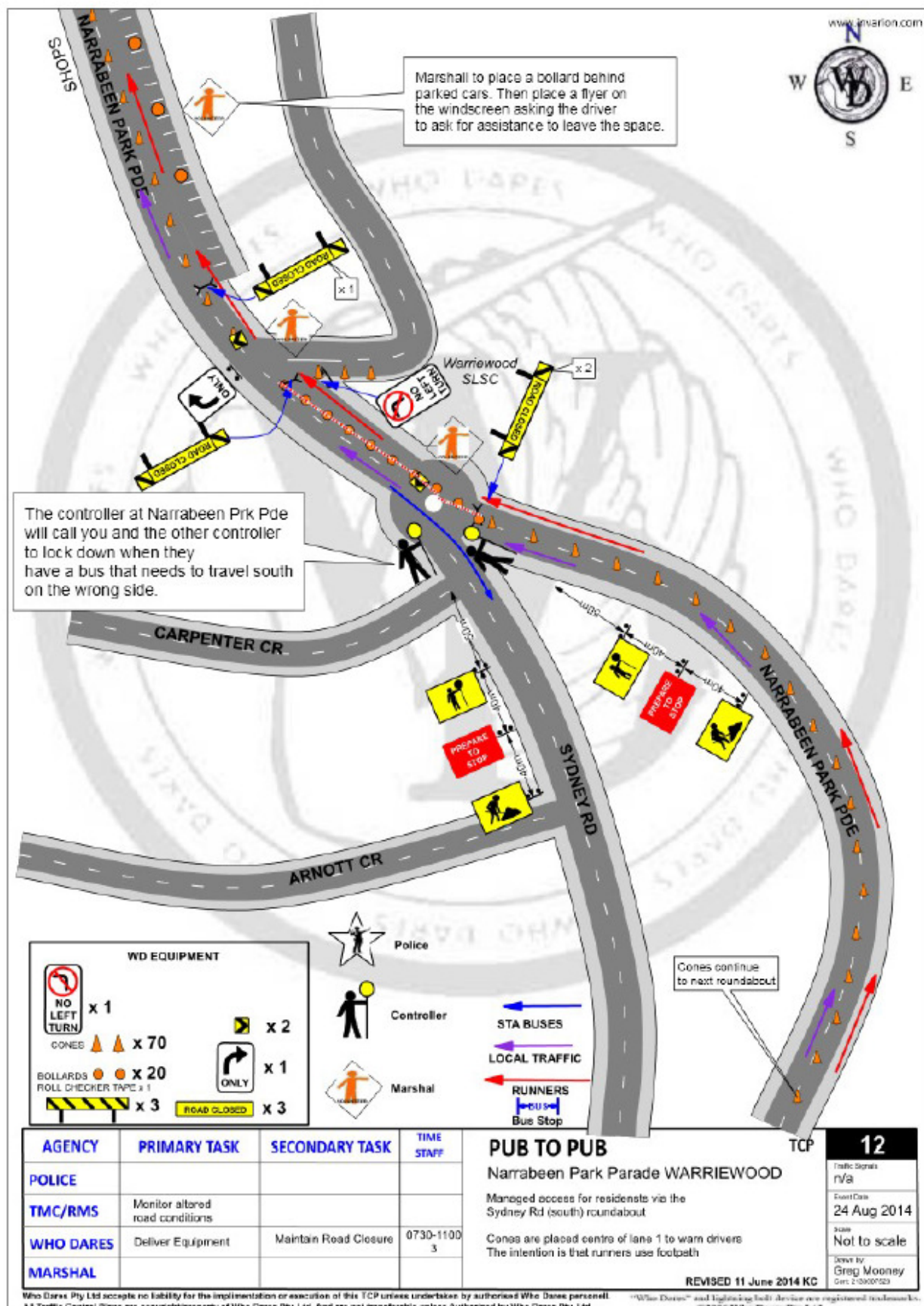
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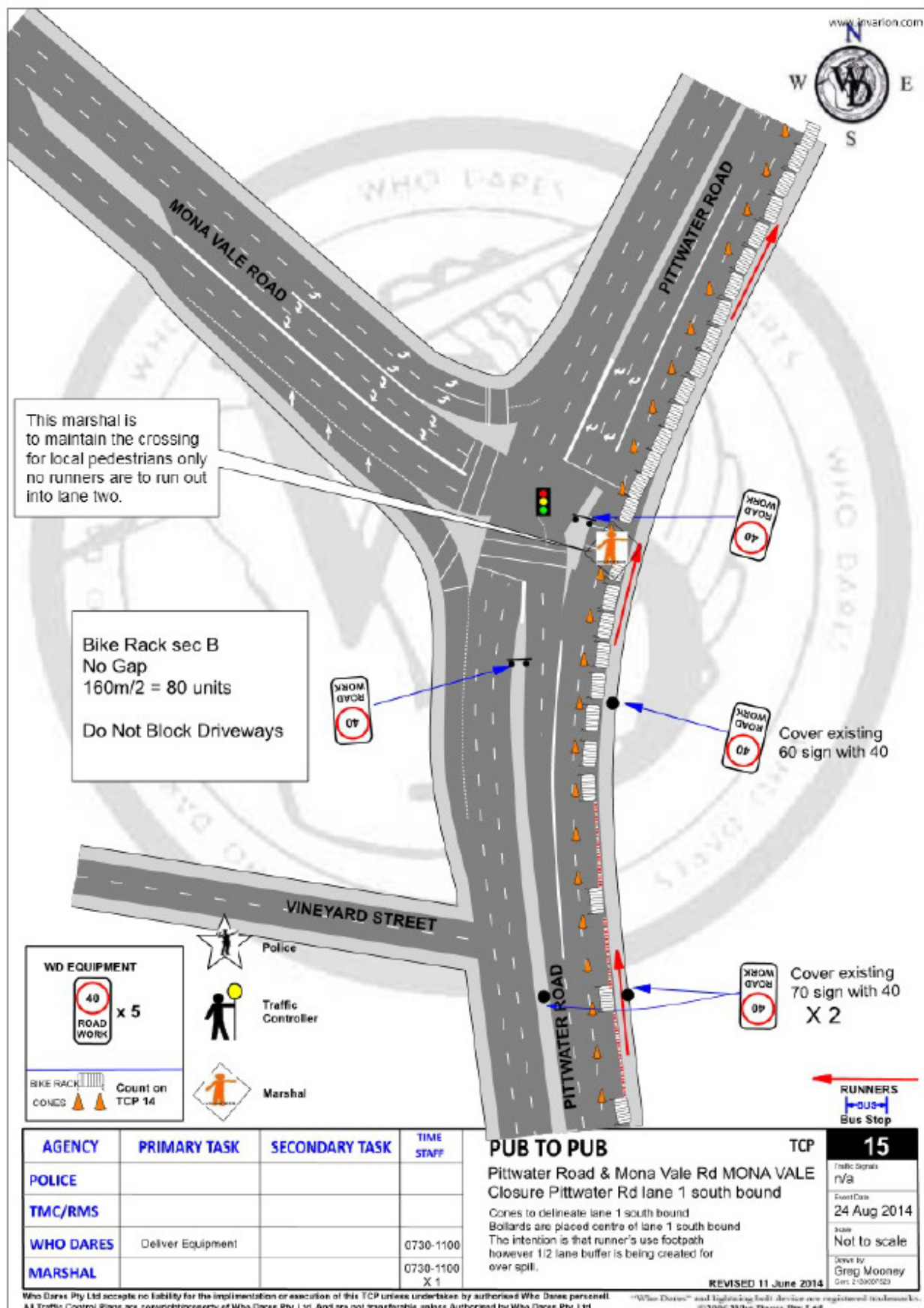
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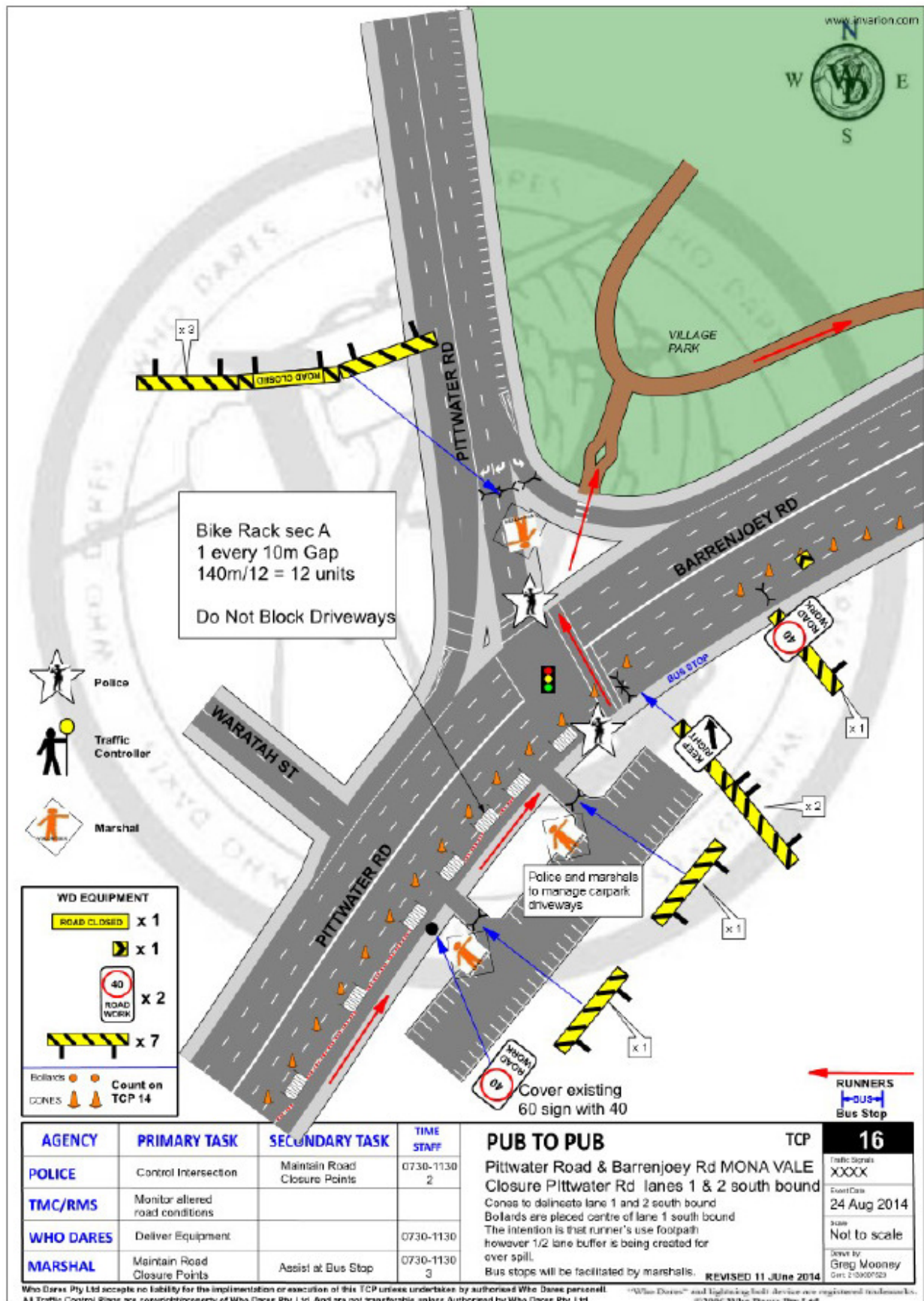
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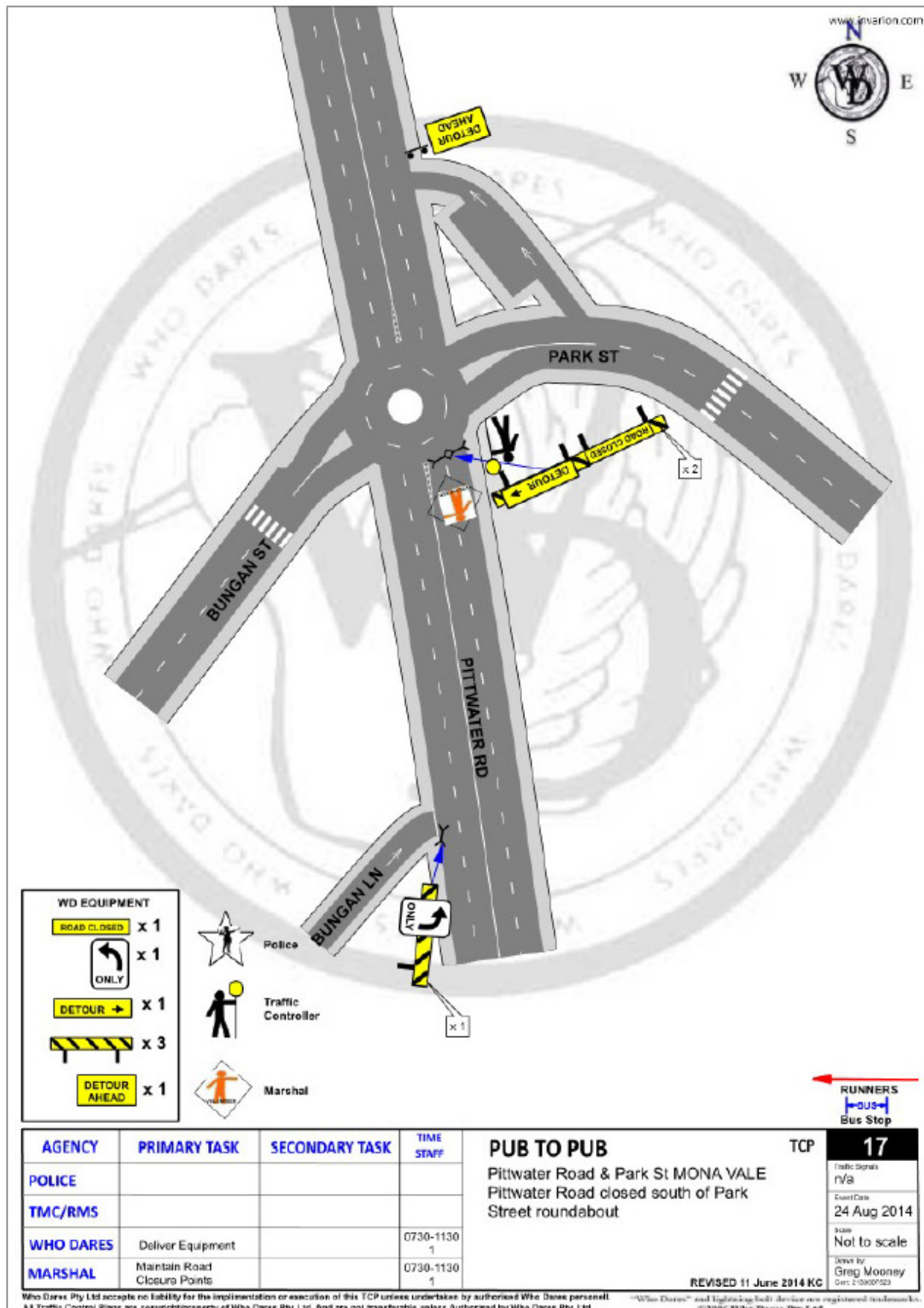


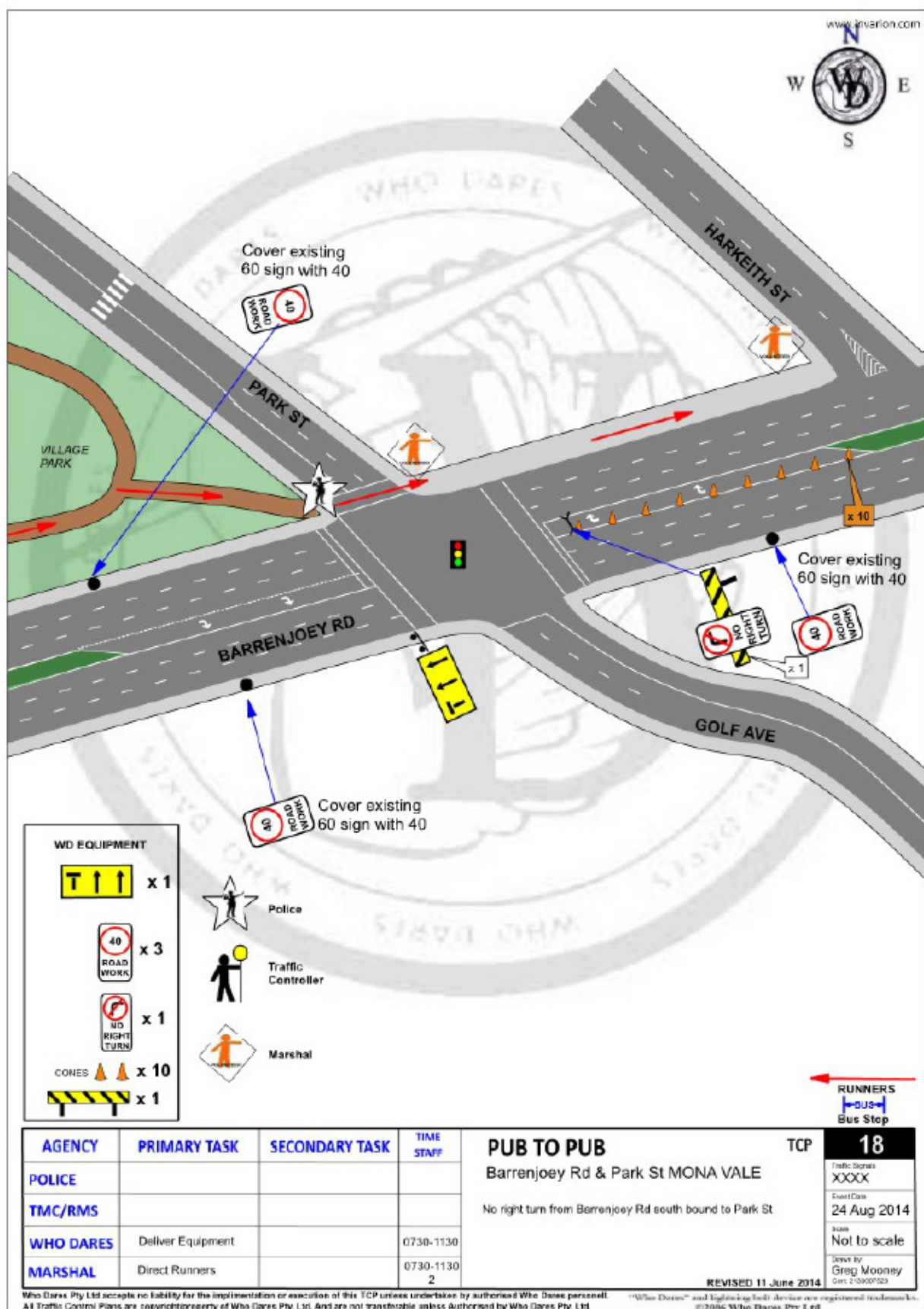


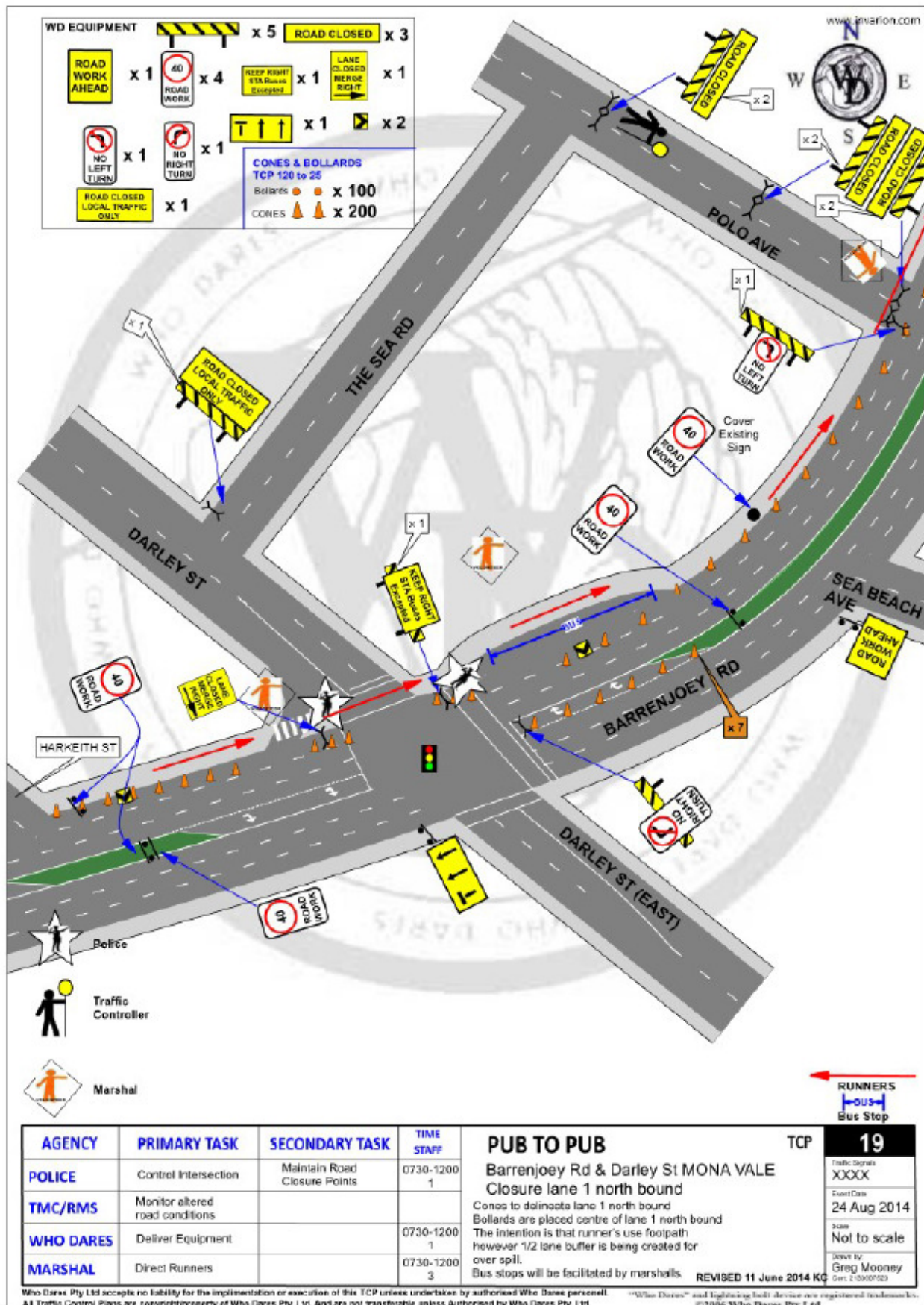


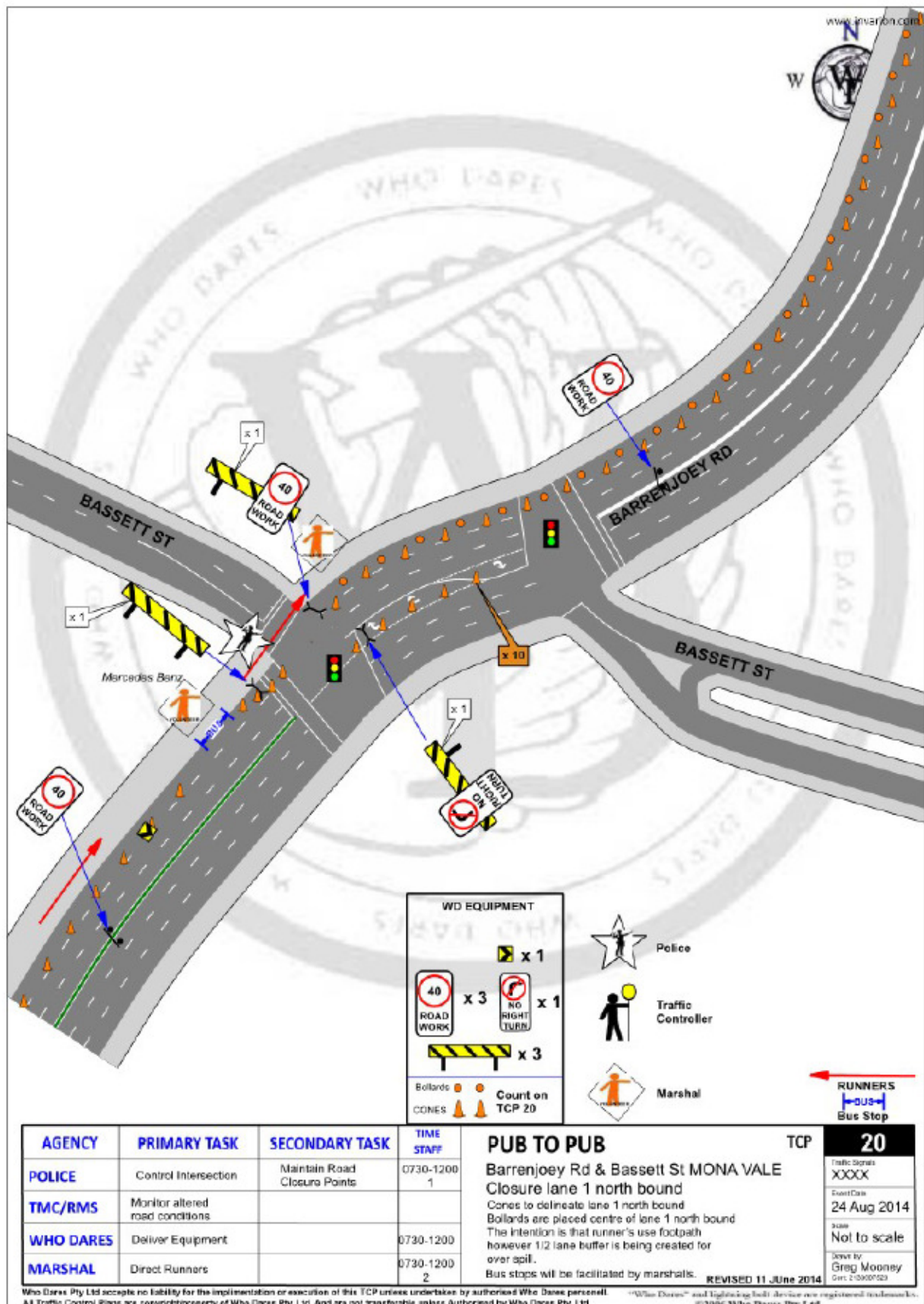


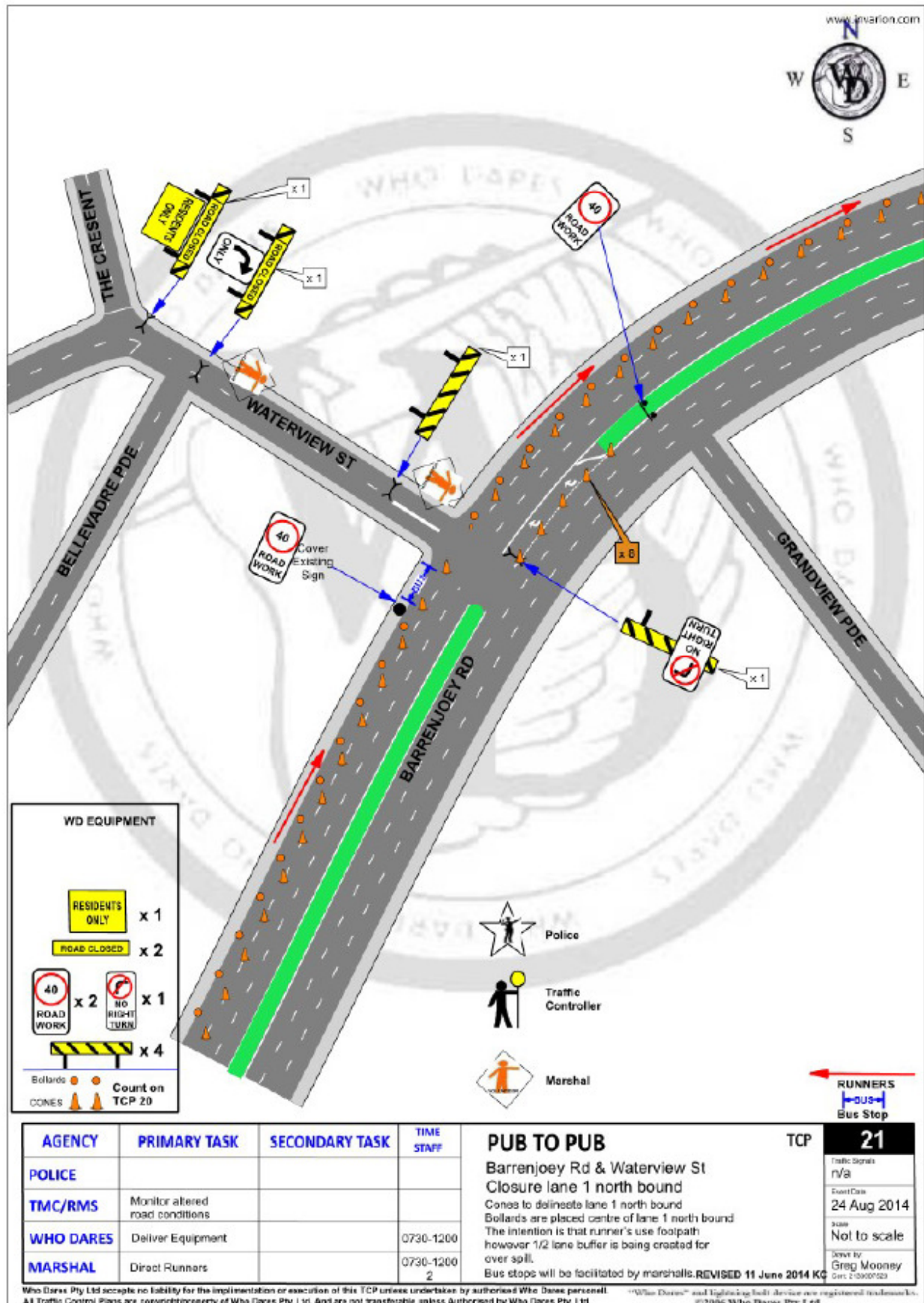


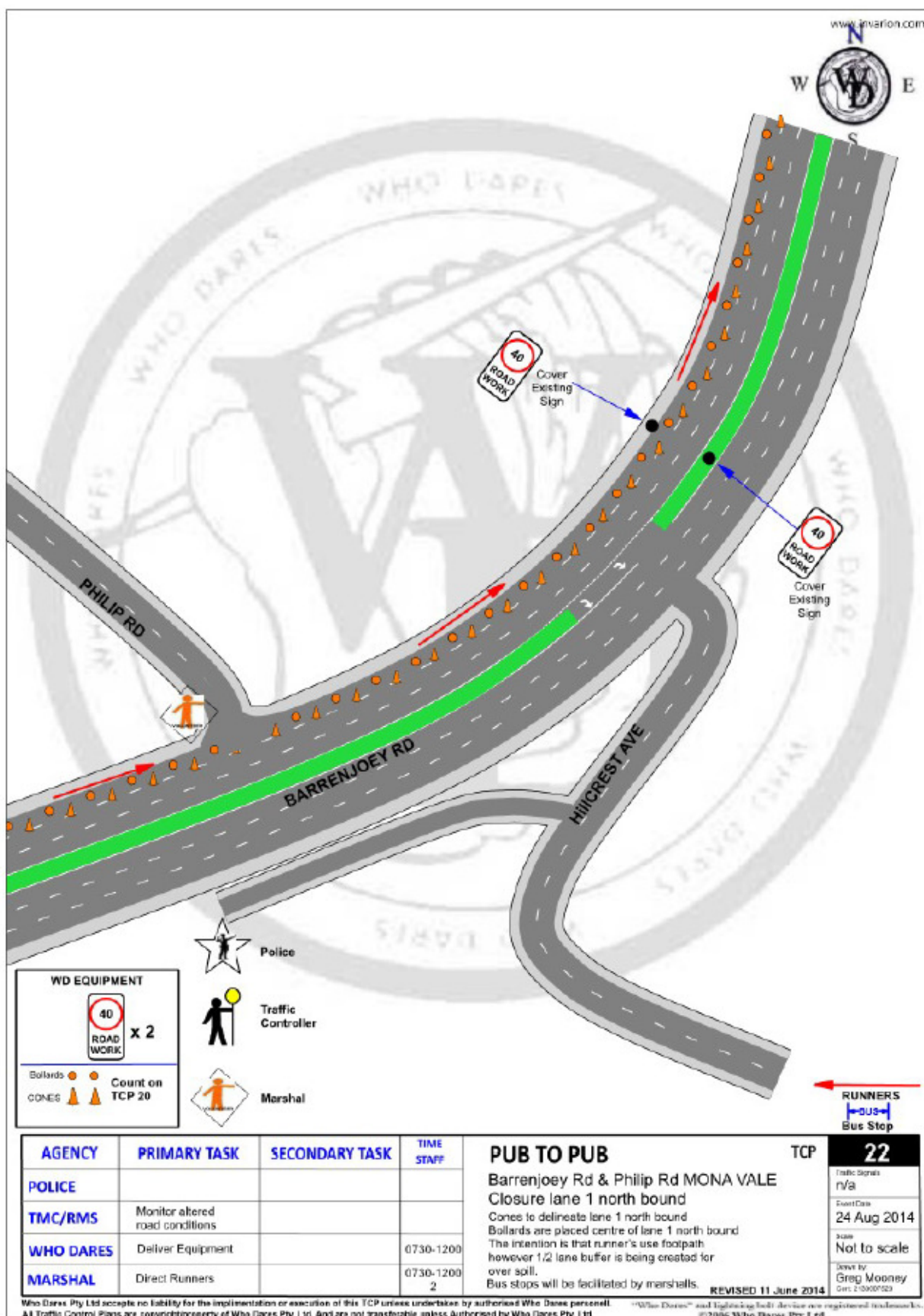


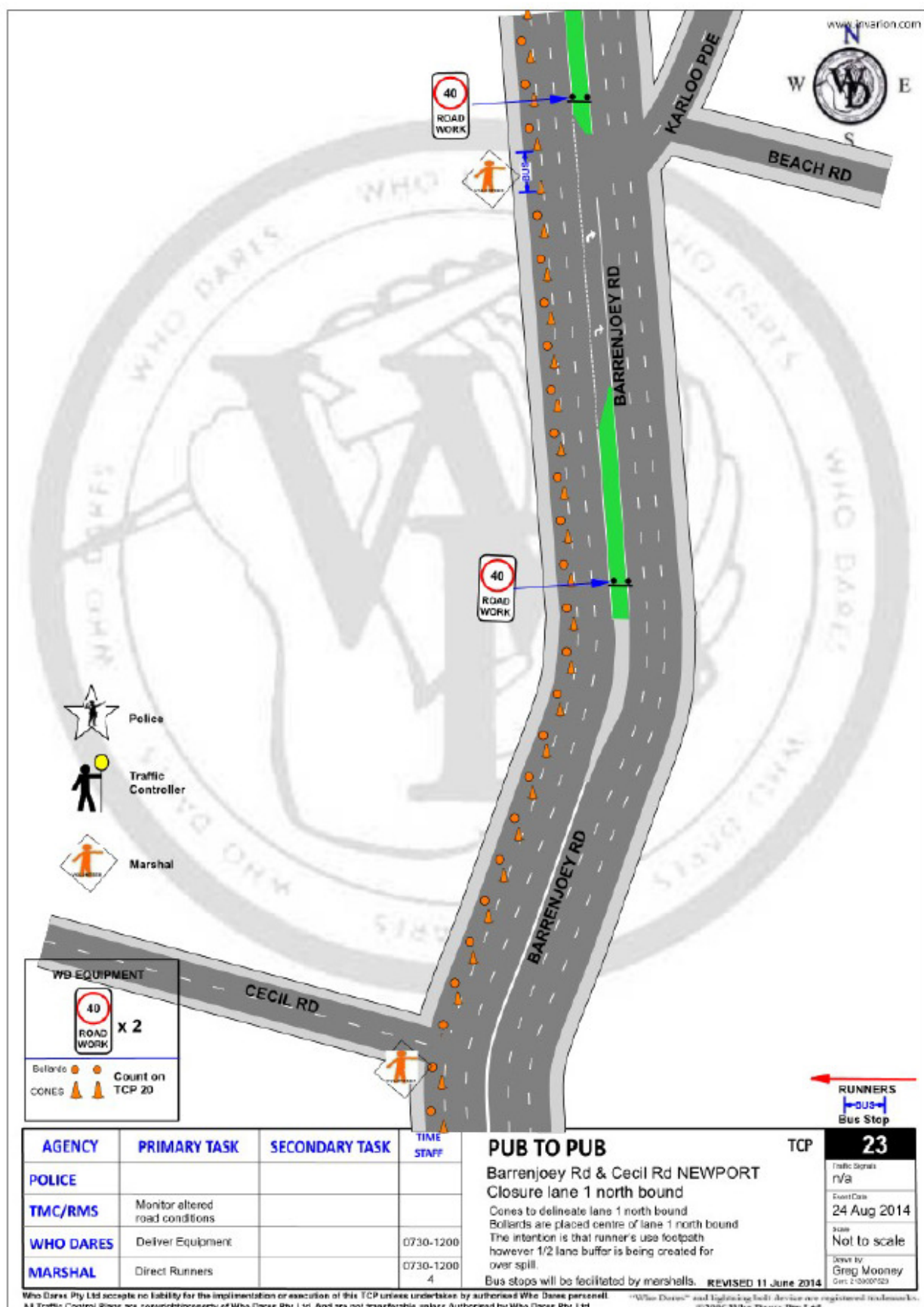


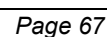


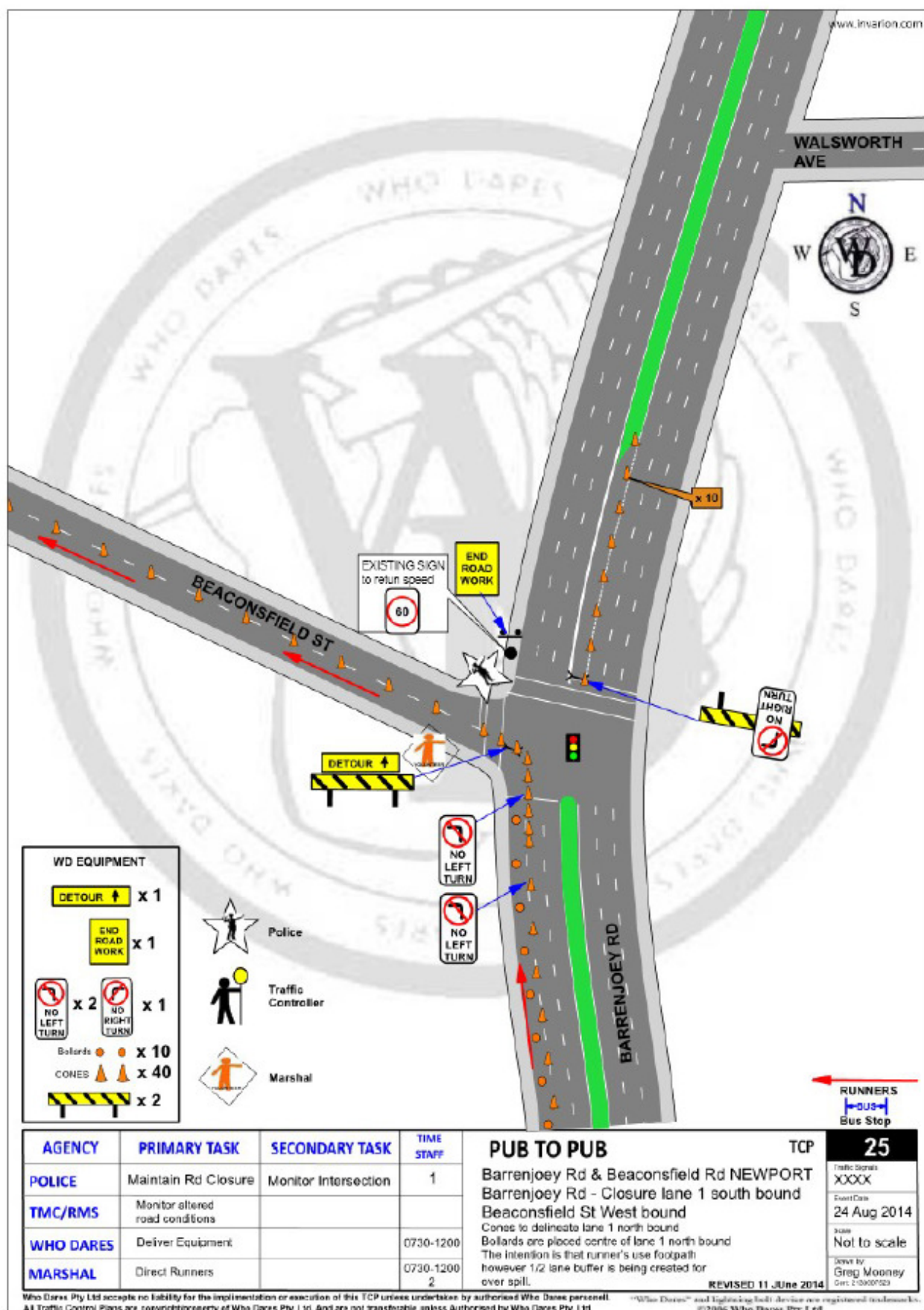


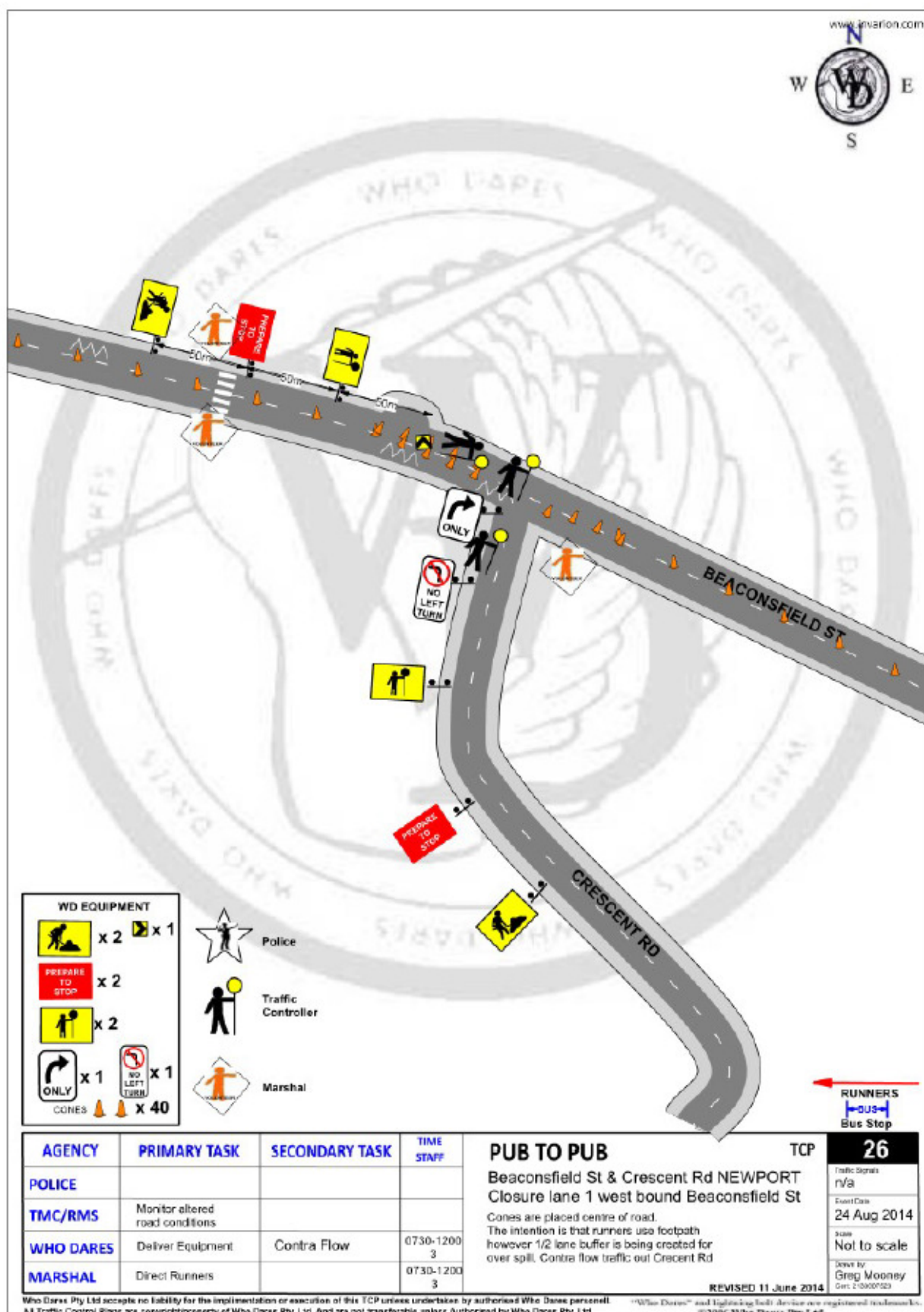


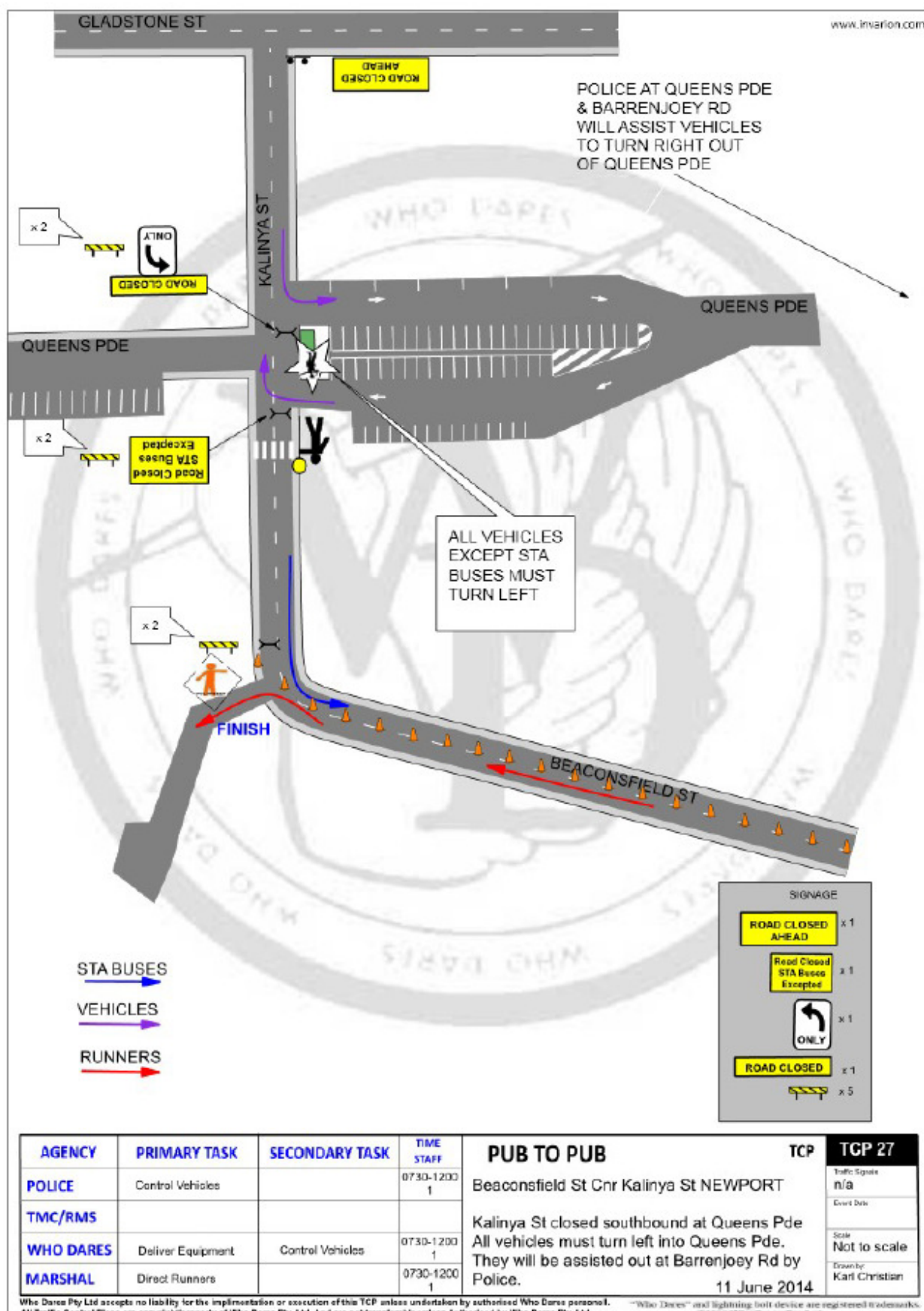


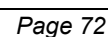








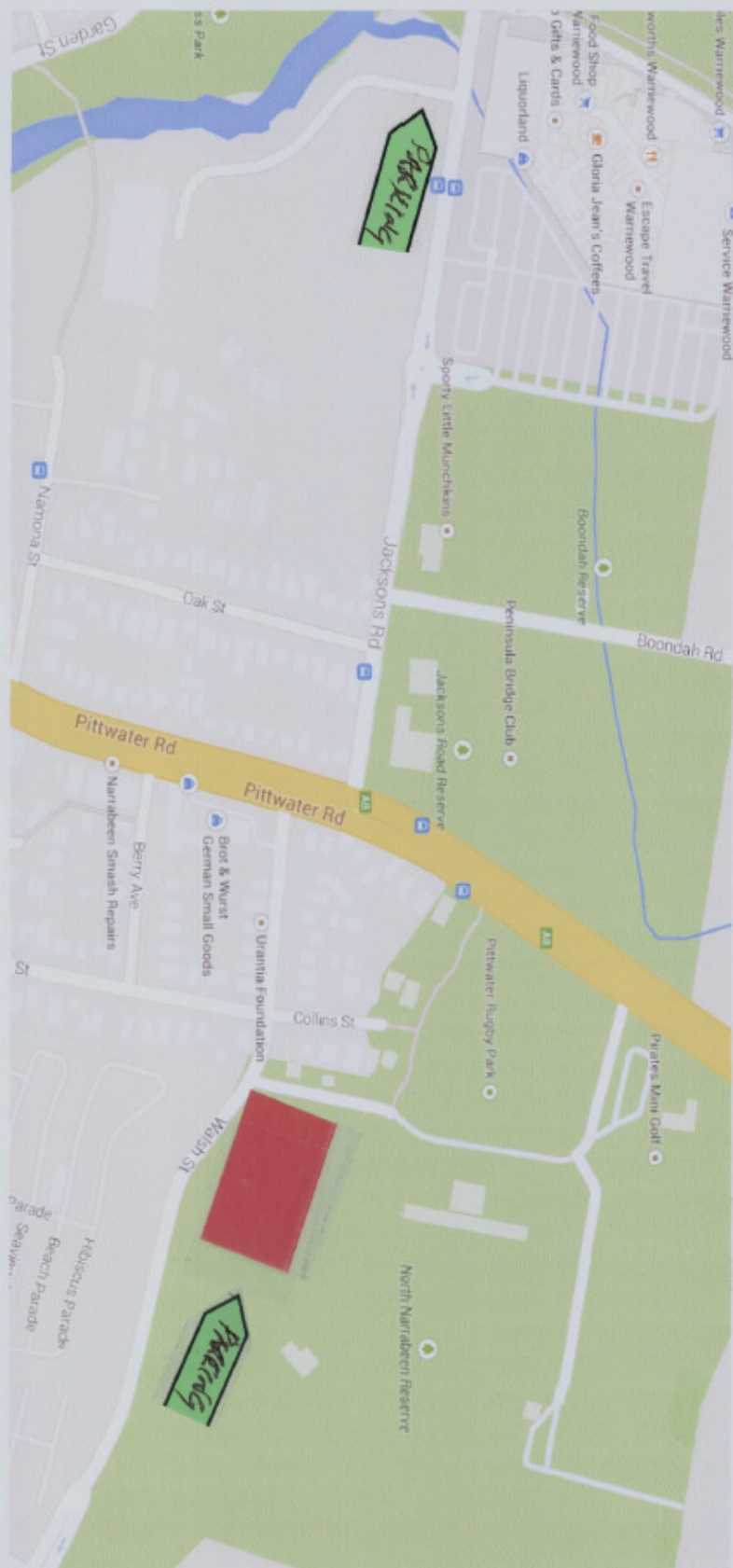








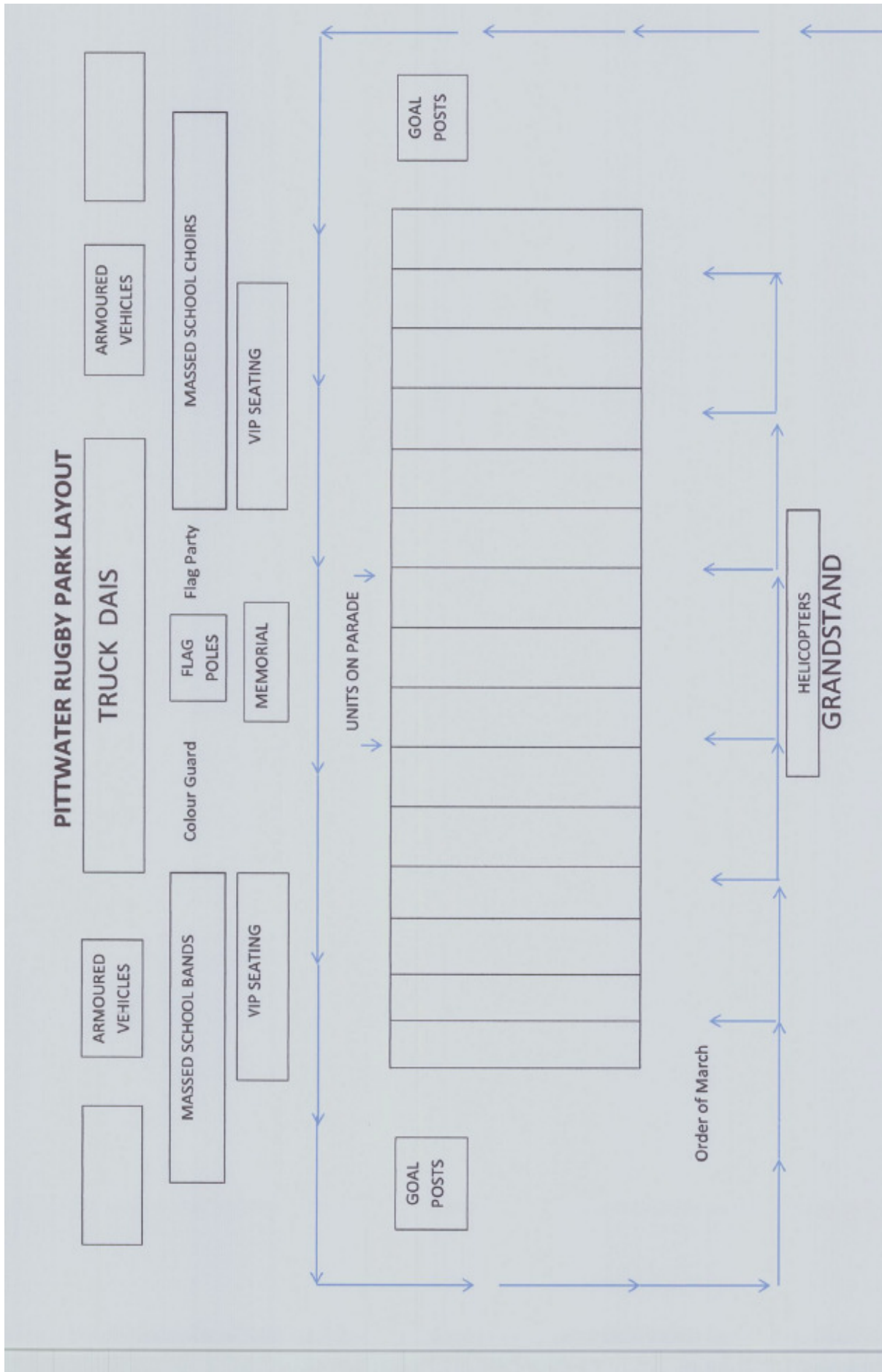




Map data ©2014 Google 100 m

<https://www.google.com.au/maps/@-33.6975359,151.3005724,17z>

1/04/2014



Natural Environment Committee

10.0 Natural Environment Committee Business

C10.1	Cannes Reserve Grey-headed Flying Fox (GHFF) Camp Issues and Management
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Meeting: Natural Environment Committee

Date: 4 August 2014

STRATEGY: Biodiversity Strategy

ACTION: Implement program to complete Plans of Management

PURPOSE OF REPORT

To inform and update Council of the situation with the Grey-headed Flying Fox camp at Cannes Reserve Avalon, outline some of the background to the issue, the current situation with regards to recent changes in direction at State level, and the agreed way forward in managing the issue.

1.0 BACKGROUND

- 1.1 A Grey-headed Flying Fox (GHFF) camp has been resident at Cannes Reserve in Avalon for approximately ten years. Cannes Reserve is a small and narrow bushland reserve located between Cannes Drive, Gunyah Place and Therry Street. It is located around a small creekline situated in a northwest-facing valley and the reserve contains vegetation classed as Littoral Rainforest which is a listed endangered ecological community as per the Threatened Species Conservation Act 1995. Grey-headed Flying Foxes are listed as Vulnerable in NSW under this Act. They are also federally listed as Vulnerable under the Environment Protection & Biodiversity Conservation Act 1999.
- 1.2 The GHFF is a communal species which forms day-roosts (known as camps) in selected locations where the micro-climate is favourable. This is thought to be determined by warmer temperature and higher humidity, as well as proximity to food sources. The species is intelligent and also highly unpredictable in its movements and as such camp numbers can fluctuate both yearly and seasonally for reasons mostly unknown to researchers. A number of camps occur throughout urban areas of Sydney, with numbers in some camps upwards of 40,000 animals. The numbers in the Cannes Reserve camp have usually fluctuated between 200 to 1,500 animals, however there has been a recent spike where the population increased significantly to over 3,500. The only other known camp in the Pittwater LGA is at Warriewood Wetlands, which fluctuates between zero (currently) and 5,000 animals.
- 1.3 The current Plan of Management for Cannes Reserve includes recommendations for management of the GHFF camp, which mainly involves habitat modification. This has been undertaken by Council over the past few years with input and licencing from the Office of Environment and Heritage (OEH) under the current legislation. Council has had to apply to OEH for Section 91 licences in order to modify habitat, this has also involved providing a Species Impact Statement.

2.0 ISSUES

2.1 Due to the small size and narrow nature of Cannes Reserve, the GHFF camp is in close proximity to surrounding residences in Therry Street, Gunyah Place and Cannes Drive. Residents have complained continuously over the past five years about the loss of amenity due to the camp and impacts on their health and wellbeing. Issues include;

- the level of noise (up to 70 decibels measured);
- smell emanating from the camp;
- faecal drop on cars, houses and clotheslines,
- fear of diseases associated with the GHFF.

Allegedly, this has had ramifications on the residents' health in some cases. Residents also have concerns about potential impacts on the value of their properties and inability to be able to sell or lease out their houses. The impacts on residents are most apparent when the camp has increased numbers as is currently the case.

2.2 In response to residents' concerns Council has undertaken some habitat modification in line with the Cannes Reserve Plan of Management and Section 91 licences. This has involved removing selected roost trees both in the reserve and on the most affected private property. The reserve contains weeds such as Privets which have provided both roosting trees and likely contributed to the humidity levels favoured by the GHFF. Council has a regular bush regeneration/weed control contractor working in the reserve however the implementation of the Plan of Management has been limited as these weeds are classed as habitat of a threatened species by OEH and to date Council has been restricted in what it can remove in this regard. The attitude of the affected residents is that this limited removal has not worked and the flying fox issue is as bad as it's ever been and is in fact increasing due to greater numbers present.

2.3 Council staff have conducted extensive research and consultation with experts as well as having networked with both OEH and other organisations with similar flying fox camp issues to try to develop a solution. The Royal Botanic Gardens (RBG) undertook a dispersal of the large camp which was impacting on heritage vegetation at the Gardens. This dispersal involved a lengthy and complicated process of approvals at huge expense and some public opposition and legal appeals. Dispersal methods involve extremely loud industrial noise being played when the animals are flying back to the roost at 4am. The RBG has been successful at dispersing the camp but this involves an ongoing management and monitoring process for the foreseeable future at a significant cost. No other organisation (including Councils) has attempted dispersal in Sydney due to the cost and unknown nature of the results.

Dispersal projects in Queensland have had mixed results to date with only half of the projects being successful. A review of the success of dispersal actions is provided as **Attachment 1**, this review being undertaken by leading experts in GHFF camp management. It indicates that in 63% of cases the animals have relocated <600 metres from the original site and in all cases the animals did not abandon the local area. The cost for each dispersal project ranged between \$28,000 and \$3 million, with most over \$100,000 and all costs are ongoing. Due to this evidence and recommendations provided by experts in the field, a specific and evidence-based plan will be required to further consider the dispersal option.

- 2.4 The OEH are currently changing the current policy with regard to GHFF management, as was outlined by OEH at the most recent Cannes Reserve community meeting (16 July 2014). The OEH focus has shifted to a more balanced approach taking in both the needs of the species and needs of the impacted residents. This new approach allows Council more freedom to explore further management options with OEH more acceptable of these options provided they are supported with the most current information and research. In most cases a section 91 license under the *Threatened Species Conservation Act 1995* to harm or pick a threatened species, population or ecological community* or damage habitat would still be required. Depending on the level of action required the current Plan of Management for Cannes Reserve may also need to be amended. An additional restriction is the upcoming GHFF birthing season which runs from August through to March and no disturbance can occur within this period.
- 2.5 In order to act as quickly as possible to mitigate the impacts of the GHFF camp on affected residents, Council has put together a three-stage management strategy which has been agreed in principle by the OEH staff. This was communicated to the residents at the community meeting on 16 July 2014. This strategy involves the following:
1. In the immediate two weeks prior to commencement of birthing, Council will identify non-indigenous vegetation (including Privet roost trees) and have it culled and removed by contractors. This process is currently underway with staff identifying 63 non-indigenous trees around the reserve edge buffer zone which will be removed by the start of August. This should hopefully reduce roosting sites on the edge of the reserve and also hopefully reduce the humidity in the reserve which could change the micro-climate and make it unfavourable leading to a reduction in GHFF numbers.
 2. Pittwater Council apply for a Section 91 Licence to implement the buffers as described within the current plan of management. The Plan of Management specifies a 7 metre buffer around the edge of the reserve where all canopy trees (including indigenous species) will be removed and replaced with low vegetation below 2 metres. Council needs to undertake an assessment and finalise the Plan and it also requires State and possibly Commonwealth approval. Applications will be made as soon as possible, however due to the timeframe, any approved removal will be after the current birthing period.

The process above which requires staged vegetation removal, gradually making the habitat unattractive to the GHFF hopefully will result in self-dispersal over time. This is the preferred option of Council and will be implemented as per steps 1 and 2 above.

3. If the habitat modification steps above are unsuccessful in mitigating impacts and reducing numbers, then Council will work with relevant experts and Government Agencies to investigate viable dispersal options. This will also require the amendment of the Cannes Reserve Plan of Management. . In the meantime Council will monitor the situation with dispersals in other states, as well as consulting with experts and other organisations in similar situations with regards to the most effective method of dispersal.

* A threatened species, population or ecological community means a species, population or ecological community identified in Schedule 1, 1A or Schedule 2 of the *Threatened Species Conservation Act 1995*.

^The personal details of all Section 91 licences will be displayed in the register of Section 91 licences required under Section 104 of the *Threatened Species Conservation Act 1995*. See notes.

Further options have also been suggested by a consultant recently engaged by Council who has had extensive experience with GHFF management and dispersal in Queensland. These include the buffer area containing deterrents such as odours, and visual deterrents however most of these options are still under trial for effectiveness.

2.6 There are significant risks in the management of Flying Foxes as they are unpredictable and highly intelligent animals. Attachment 1 includes a breakdown of past dispersal actions. Specific risks include:

- The colony forming splinter camps in less desirable locations which may need to be dispersed;
- The GHFF returning to the camp area at any time, and the process recommencing;
- Management actions can be ongoing for many years at a significant expense.

The currently available budget is approximately \$30,000. This might cover the habitat modification however initial estimates are around \$100,000 if we have to proceed to a dispersal.

Community meetings will be continued to keep all stakeholders including residents informed of progress.

3.0 SUSTAINABILITY ASSESSMENT

3.1 Supporting & Connecting our Community (Social)

3.1.1 Council is facilitating outcomes to help address concerns of the local community and trying to resolve this issue in a sensitive manner.

3.2 Valuing & Caring for our Natural Environment (Environmental)

3.2.1 The issue involves long-term conservation of a threatened species, by minimising conflict with the species and adjacent residents we can facilitate that the correct balance is met between its impact on residents and its continued survival.

3.3 Enhancing our Working & Learning (Economic)

3.3.1 By reducing the impacts of the Grey Headed Flying Fox on residents, it will improve appreciation of the species and education about its important role in the environment.

3.4 Leading an Effective & Collaborative Council (Governance)

3.4.1 The issue involves management of conflicts between native fauna and residents within an urban environment and the difficulty in managing these issues.

3.4.2 Council has undertaken to keep all stakeholders in the community informed of decisions relating to management of the reserve.

3.5 Integrating our Built Environment (Infrastructure)

There are no infrastructure implications.

4.0 EXECUTIVE SUMMARY

4.1 Cannes Reserve in Avalon has contained a permanent camp of Grey-headed Flying Fox (GHFF) for approximately ten years, the numbers of which have recently spiked to a record 3,500 animals. This has further exacerbated the tension with the adjacent residents who have indicated their health and wellbeing is suffering due to the impacts from the GHFF.

- 4.2 The Plan of Management for Cannes Reserve outlines management options around habitat modification, however due to the threatened status of the GHFF, Council has been previously restricted by OEH as to what can effectively be done. Previous modification attempts have had little success in mitigating impacts or reducing numbers of GHFF to the frustration of the residents.
- 4.3 A recent change in policy and direction around GHFF management has occurred with OEH which provides a more balanced approach to management options and likelihood of OEH approvals. In response to this and the recent population spike in the GHFF camp, Council will now implement a three-stage management strategy as outlined in this report.

RECOMMENDATION

1. That the update report on the Cannes Reserve Flying Fox camp, particularly the change in the OEH policy regarding Grey Headed Flying Fox be noted.
2. That Council support the implementation of a three-stage management strategy to mitigate the impact of the GHFF at Cannes Reserve and the residents in the area, including.
 - Stage 1 - Immediate removal of non- native vegetation within the reserve;
 - Stage 2 - Council apply to the OEH for a Section 91 Licence to harm or pick a threatened species, population or ecological community* or damage habitat. This is to implement habitat modification in the buffer areas as detailed in the Cannes Reserve and Gunyah Place Reserve Plan of Management.
 - Stage 3 – Subject to the habitat modification being unsuccessful, Council in consultation with the community, Government Agencies and Flying Fox specialists investigate viable dispersal options and amend the Plan of Management accordingly.
3. That appropriate funding be made available for Stages 1 and 2 to implement these actions, with a further report to Council on the success of these management strategies and Stage 3 implications should further action be required.

Report prepared by
Matt Hansen – Principal Officer Natural Environment & Education

Mark Beharrell
MANAGER, NATURAL ENVIRONMENT & EDUCATION

* A threatened species, population or ecological community means a species, population or ecological community identified in Schedule 1, 1A or Schedule 2 of the *Threatened Species Conservation Act 1995*.

^The personal details of all Section 91 licences will be displayed in the register of Section 91 licences required under Section 104 of the *Threatened Species Conservation Act 1995*. See notes.

Review of past flying-fox dispersal actions between 1990-2013.

Prepared by Billie Roberts and Peggy Eby June 2013

To understand the utility of dispersals as a management tool to resolve conflict between humans and flying-foxes, the outcomes of 17 recent camp dispersal attempts were systematically reviewed. The review identified a set of common outcomes of camp dispersals that should guide their use in Australia. A further observation was that the outcomes of dispersals are often not known for several years.

1. In all cases, **dispersed animals did not abandon the local area**¹.
2. In 16 of the 17 cases, **dispersals did not reduce the number of flying-foxes** in a local area.
3. **Dispersed animals did not move far** (in approx. 63% of cases the animals only moved <600m from the original site, contingent on the distribution of available vegetation). In 85% of cases, new camps were established nearby.
4. In all cases, it was **not possible to predict where replacement camps would form**.
5. **Conflict was often not resolved**. In 71% of cases conflict was still being reported either at the original site or within the local area years after the initial dispersal actions.
6. **Repeat dispersal actions were generally required** (all cases except extensive vegetation removal).
7. The **financial costs of all dispersal attempts were high** ranging from tens of thousands of dollars for vegetation removal to hundreds of thousands for active dispersals (e.g. using noise, smoke etc).

There were a few exceptions to these patterns, but they only occurred when there were abundant financial and human resources (e.g. RBG Melbourne and RBG Sydney) and/or specific landscape characteristics (e.g., isolation from neighbours (Batchelor, NT) or habitat link to 'acceptable' location (RBG Melbourne)).

Further reading:

Roberts B.J., Catterall C.C., Eby P., and Kanowski J.K. (2012a) Long-distance and frequent movements of the flying-fox *Pteropus poliocephalus*: implications for management. *PloS ONE*, 7(8): e42532. doi:10.1371/journal.pone.0042532.

Roberts B.J., Eby P., Catterall C.C., Kanowski J.K. and Bennett G. (2012b) The outcomes and costs of relocating flying-fox camps: insights from the case of Maclean, Australia, pp. 277-287 in *The Biology and Conservation of Australasian Bats*, edited by B. Law, P. Eby, D. Lunney and L. Lumsden. Royal Zoological Society of NSW, Mosman, NSW, Australia.

Table 1 Summary of known documented attempts to disperse Australian flying-fox camps using non-lethal methods, during 1990 to 2013.

Location	Species	FF population estimate at time of dispersal	Method	Did the animals leave the local area?	Did the local population reduce in size?	How far did they move?	Were new camps formed (number of new camps if known)?	Number of separate actions	Cost (if known)	Was conflict resolved at the original site?	Was conflict resolved for the community?	Source+
Barcaldine, Qld	R	>50,000	VN	no	no	≈2 km	yes (1)	trees in township		yes	no	1,2
Batchelor, NT	B	200	BNS	no	no	<400 m	yes (1)	2		yes	yes	3,4
Boyne Island, Qld	BR	25,000	LNS	no	no	<500 m	yes (2)	3		yes	no	5,6,7
Bundall, Qld	GB	<400	V	no	no	uk, but 4 camps were within	yes (3)	1		yes	uk	8,9,10
Charters Towers, Qld	RB	variable	HLNPOW	no	no	200 m	no (returned to original)	repeated since	>\$500,000	no	no	11,12
Dallis Park, NSW	BG	28,000	V	no	yes	300 m	yes (1)	2		yes	no	13
Duaringa, Qld	R	>30,000	VNFO	no	no	400 m	yes	1	\$150,000	yes	uk	14
Gayndah, Qld	RB	200,000	VN	no	no	600 m	yes	3 actions,		yes	no	9
Maclean, NSW	BGR	20,000	NS	no	no	350 m	yes (7)	>2 3	>\$400,000 and ongoing	no	no	13
Mataranka, NT	BR	>200,000	BHLNOSW	no	no	<300 m	uk	> 9		no	no	13
North Eton, Qld	B	4800	VNFB	uk	no	<1.5 km initially	yes (≈4 majority temporary)	2	\$45,000	yes	yes (conflict at one site)	10,15,16,17

Location	Species	FF population estimate at time of dispersal	Method	Did the animals leave the local area?	Did the local population reduce in size?	How far did they move?	Were new camps formed (number of new camps if known)?	Number of separate actions	Cost (if known)	Was conflict resolved at the original site?	Was conflict resolved for the community?	Source+
Royal Botanic Gardens, Melbourne, Vic	G	30,000	NS	no	no	6.5 km	yes (2)	6 mths	\$3 million	yes	yes, ongoing management required	13
Royal Botanic Gardens, Sydney, NSW	G	3,000	LNPOW	no	no	4 km	no	ongoing daily actions for 12 mths	>\$1 million and ongoing	yes	yes	13,18,19
Singleton, NSW	GR	500	LNUW	no	no	<900 m	no (returned to original site)	>3	\$117,000 and ongoing	no	no	13,20
Townsville, Qld	BR	35,000	BNS	no	no	400 m	no (returned to original site)	5		no	no	13
Warwick, Qld	GRB (dispersal targeted R)	200,000	NLBP	no	no	≈1 km	no (site known to be previously occupied by GB)	5 days	\$28,000	yes	uk (complaints persisted until migration)	8,21,22
Young, NSW	L	<5000	VN	no	no	<600 m	yes (1)	uk		yes	no	23

* G = grey-headed flying-fox; B = black flying-fox; R = little red flying-fox uk = unknown

B = "birdfrite"; F = fog; H = helicopter; L = lights; N = noise; P = physical deterrent; O = odour; S = smoke; U = ultrasonic sound; V = extensive vegetation removal; W = water.

+ 1 Storm Stanford (Wildlife carer, pers comm. 2013); 2 Louise Saunders (Bats Qld, pers comm. 2013); 3 Phillips *et al.* (2007) Displacement of Black flying-foxes *Pteropus alecto* at Batchelor, Northern Territory *Australian Zoologist* 34: 119-124; 4 John McCarthy (Northern Territory Government, pers comm. 2010); 5 Roberts (2006) *Management of Urban Flying-fox Camps: Issues of Relevance to Camps in the Lower Clarence, NSW*, Valley Watch Inc., Maclean; 6 Information from Gladstone Regional Council in 2010; 7 Joe Adair (formerly DEHP, pers. comm. 2010); 8 Trish Wimberly (Australia Bat Clinic pers. comm. 2013); 9 Information obtained from Department of Environment and Heritage Protection (DEHP) in 2013; 10 Billie Roberts unpublished data; 11 Scott Sullivan (DEHP, pers. comm. 2010); 12 Information from Charters Towers Regional Council in 2010 and 2013; 13 Roberts *et al.* (2012b) and additional references within; 14 Perry Deeds (Central Highlands Regional Council, pers. comm. 2013); 15 Jarman (2010) *Species Management Plan*, Mackay Regional Council; 16 Heidi Jarman (Mackay Regional Council, pers. comm. 2013); 17 Daryl Barnes (Walkerston resident, per comm. 2013) 18 Peggy Eby (Ecologist, pers comm. 2013) 19 John Martin (RBG, pers comm. 2013); 20 Singleton Council Meeting Minutes; 21 information from the Southern Downs Regional Council in 2013; 22 Tim Low (pers. comm. 2013); 23 Young Shire Council.

C10.2	Submission - Draft 10/50 Vegetation Clearing Code of Practice
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Meeting: Natural Environment Committee

Date: 4 August 2014

STRATEGY: Flora & Fauna

ACTION: To sustainably manage urban forest tree canopy and native bushland

PURPOSE OF REPORT

To present for the consideration of Council a submission in response to the proposed 10/50 Vegetation Clearing Code of Practice, prepared by the NSW Rural Fire Service (refer **Attachment 1**).

1.0 BACKGROUND

- 1.1 The draft 10/50 vegetation Clearing Code of Practice is in response to property loss associated with the bushfire in the Blue Mountains in 2013.
- 1.2 The code was on exhibition for four weeks with comments being received up until 21 July 2014. Council staff have forwarded a submission (refer **Attachment 2**) regarding concerns to the Manager Community Planning, NSW Rural Fire Service.
- 1.3 The Code allows for the removal of trees for 10m and any vegetation less than 3m for 50m from any residential structure.
- 1.4 Compliance with the code supersedes all other “clearing legislation” for example Council’s tree preservation order.

2.0 ISSUES

- 2.1 The actual locations of 10/50 Vegetation Clearing Entitlement Areas have not yet been provided to Council. The impacts cannot then be fully understood.
- 2.2 Depending on the location and uptake by property owners there are potentially numerous impacts, these include:
 - Loss of scenic amenity and change to the character of Pittwater
 - Impacts on flora and fauna,
 - Geotechnical problems.

3.0 SUSTAINABILITY ASSESSMENT

3.1 Supporting & Connecting our Community (Social)

The submission on the 10/50 vegetation Clearing Code is an opportunity for Council and the community to provide comment on the legislation that may significantly affect the aesthetic significance of our sense of identity, culture and place.

3.2 **Valuing & Caring for our Natural Environment (Environmental)**

The review of the 10/50 vegetation Clearing Code is an opportunity for Council to advocate for our desired environmental outcomes and express concerns regarding environmental conservation and management that may be affected by implementation of the code.

3.3 **Enhancing our Working & Learning (Economic)**

The review of the 10/50 vegetation Clearing Code will have minimal impact on the local economy, employment or educational opportunities.

3.4 **Leading an Effective & Collaborative Council (Governance)**

The review provides an opportunity for Council to be proactive and clearly outline the issues and concerns we foresee before the state wide implications are imminent and certain.

3.5 **Integrating our Built Environment (Infrastructure)**

The review of the 10/50 vegetation Clearing Code provides Council an opportunity to raise concerns with the NSW Rural Fire Service regarding the recommendations and deficiencies in the code.

4.0 **EXECUTIVE SUMMARY**

- 4.1 The Code allows for the removal of trees for 10m and any vegetation less than 3m for 50m from any residential structure. The draft code is provided as attachment 1. Council staff has forwarded a submission (provided as attachment 2) regarding concerns to the Manager Community Planning.
- 4.2 Depending on the location and uptake by property owners there are potentially numerous impacts, these include:
- Loss of scenic amenity and change to the character of Pittwater.
 - Impacts on flora and fauna.
 - Geotechnical problems.
- 4.3 The actual location where 10/50 Vegetation Clearing Entitlement Area have not yet been provided to Council. The impacts cannot then be fully understood.

RECOMMENDATION

1. That the information provided in the report be noted.
2. That the submission outlined in **Attachment 2** to the Manager Community Planning, NSW Rural Fire Service, be endorsed by Council.
3. That Council make representations to Minister of Environment and the Minister for Emergency Services on the potential impacts of the draft code.

Report prepared by

Mark Beharrell
MANAGER, NATURAL ENVIRONMENT & EDUCATION