

# BYRON WRITERS FESTIVAL 2022

6<sup>TH</sup> MAY 2022

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TRAFFIC  
MANAGEMENT  
PLAN

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**Author:** Michiel Kamphorst, *MSc, BSc, RPEng, RPEQ, NER, MAAS, PWZTMP*  
*0052298287*  
**Client name:** Byron Writers Festival  
**Client's representative:** Shien Chee

**Approved for use by:**

**Name:** Michiel Kamphorst

**Signature:** 

**Date:** 6<sup>th</sup> May 2022

*MSc, BSc, RPEng, RPEQ, NER, PWZTMP 0052298287*

**Ingen Consulting information**

Ingen Consulting Pty Ltd, ABN 18 623 948 112

Alstonville NSW 2477

+61 4 1726 4987

michiel@ingenconsulting.com.au

www.ingenconsulting.com.au

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## 1. INTRODUCTION

Ingen Consulting P/L has been engaged by the Byron Writers Festival to prepare a Traffic Management Plan (TMP) with associated Traffic Guidance Schemes (TGS) for the 2022 festival at North Byron Parklands in Yelgun, NSW.

### 1.1. Scope

This TMP and associated TGS's are prepared for the 2022 Byron Writers Festival at North Byron Parklands in Yelgun, NSW. This TMP with associated TGS's will provide the optimum solution for traffic management throughout this project.

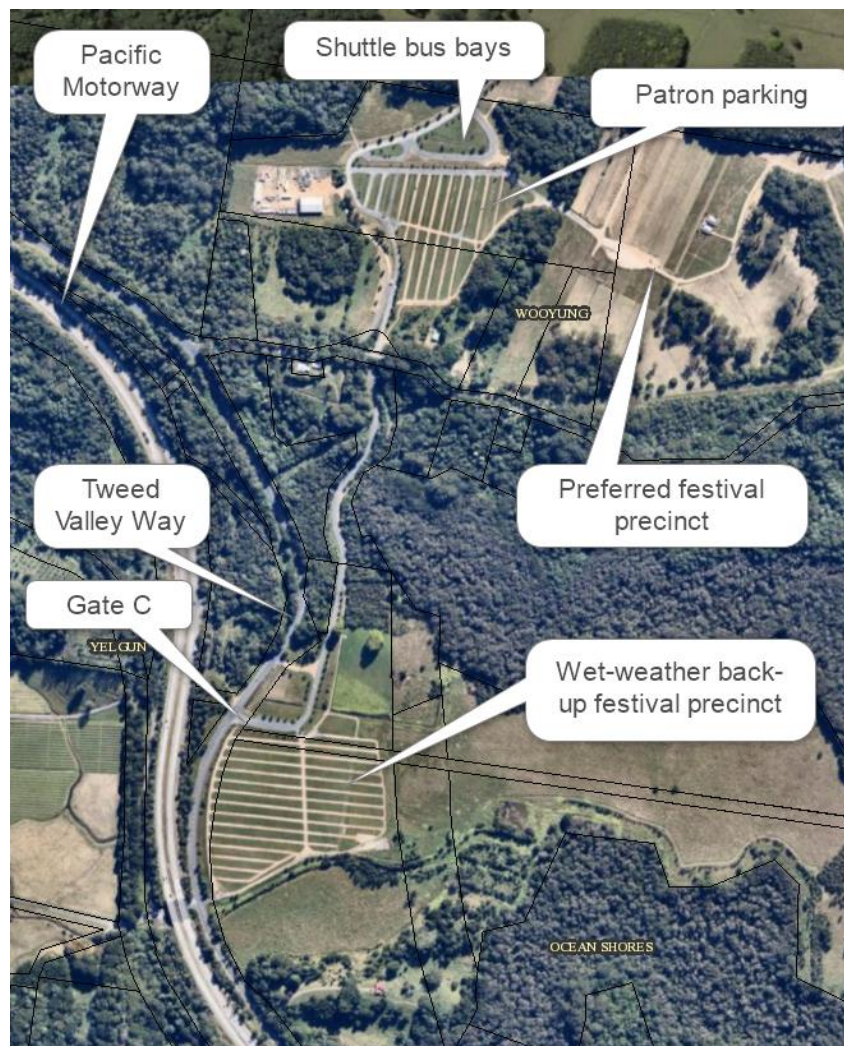
This TMP and associated TGS's have been prepared in accordance with the following standards, guidelines and policies:

- Manual Of Uniform Traffic Control Devices (MUTCD) Part 3 – Works on Roads (AS1742.3-2019)
- Traffic control at worksites version 6
- Contractor Brief requirements

The TMP will address traffic management matters only. For all other, refer to the Construction Environmental Management Plan relevant to this project, if any.

### 1.2. Site description

The festival is held at North Byron Parklands (Figure 1) with traffic management including the Yelgun Interchange. Shuttle bus stops at the North Byron Hotel and the Byron Bus Interchange will be at existing bus stops and therefore do not require any traffic management. The shuttle bus bay at the North Byron Hotel will primarily be used for festival patrons requiring transfers from accommodation at Elements and surrounds to and from the festival site.



**Figure 1 | North Byron Parklands, Image source: Byron Online Maps 2022**

### 1.3. Proposed works

Travel to and from the site will comprise of a combination transport modes. The transport modes are listed below together with an estimate of percentage use:

- Shuttle bus: 15%
- Pick up / drop off: 5%
- Private vehicle parked on site: 80%.

The shuttle bus route commences at the Byron Bus interchange (no works required), via Bayshore Drive at the North Byron Hotel (no works required) to North Byron Parklands. The shuttle bus will run throughout the festival to allow festival patrons to visit Byron Bay during the day and travel to and from accommodation in Byron Bay.

Other relevant parameters are:

- Total patrons per day: 2,500
- Staff, volunteers and contractors per day: 250
- Estimated percentage patrons from the North: 15%
- Estimated percentage patrons from the south: 85%
- Bump in: 17-24 August 2022
- Bump out: 29 August – 2 September 2022
- Festival dates: 25 August (Secondary School Day / Special Event), 26-28 August 2022 (Byron Writers Festival)

No traffic management will be required for the bump in and out periods.

#### **1.4. Abbreviations and definitions**

Short-term work – work requiring traffic control during work taking less than or equal to one work shift and where traffic control is not required when the work is complete and where road conditions are returned to normal when the shift ends.

Long term work – work requiring traffic control taking longer than one work shift and where some form of traffic control must remain when the site is left unattended and may need to operate both day and night.

## 2. KEY CONTACTS

Key persons for this project are as follows.

### **Principal**

Byron Writers Festival  
PO Box 1846  
Byron Bay NSW 2481

### **Operations Manager**

Shien Chee  
0411 079 882  
Shien@byronwritersfestival.com

### **Traffic Control contractor**

Spinifex

### **Traffic Engineer**

Michiel Kamphorst (Ingen Consulting)  
0417 264 987  
michiel@ingenconsulting.com.au



### 3. CONTRACTORS BRIEF

The festival will operate from Friday the 26<sup>th</sup> of August 2022 to Sunday the 28<sup>th</sup> of August 2022 2022. No physical works will be required on the public road – directional signage and speed zones will be employed to enhance road safety during the festival..

No special arrangements will be required at the North Byron Hotel bus stop or the Byron Bus Interchange.

## 4. DETAILED DESCRIPTION OF SITE

Important features of public road approaches to the worksites are listed below.

### **Tweed Valley Way:**

- Traffic volume: Friday: 5,000 vpd approx.; Saturday: 4,000 vpd approx ; Sunday: 4,000vpd approx.
- Posted speed limit in the work area: 80 km/h (90km/h zone commences approximately 500m to the north of Gate C)
- 7m sealed road (2 traffic lanes) with 2m wide sealed shoulders.

### **Link Road:**

- Traffic volume: Friday: 7,000 vpd approx.; Saturday: 6,000 vpd approx. ; Sunday: 6,000 vpd approx.
- Posted speed limit in the work area: 60 km/h
- 15m sealed road, 4 lanes

## 5. TGS DESIGN CONSIDERATIONS

This chapter describes the concept design for the traffic guidance schemes for the two areas.

The TGS's have been designed using the following principles.

### **Delineation**

Delineation using cones will be used in the following situations:

- To delineate the shuttle bus stop at Elemens, to physically prevent cars from parking in the existing car park spaces.

### **Containment fencing**

No containment fencing required

### **Roadworks speed limits**

A roadworks speed limit of 60 km/h will be implemented on Tweed Valley Way near Gate C, to reduce collision risk for patrons driving in and out of the site, colliding with a car coming down the hill from Jones Road. This would significantly reduce likelihood and severity of a crash.

### **Lane closures**

No lane closures are required.

### **Night conditions**

The following shall be adhered to for traffic management infrastructure implemented at night:

- Delineation devices shall comprise or incorporate retroreflectors
- Flashing lamps to be used on advance signs
- Any temporary hazards shall be illuminated

### **Way finding**

Variable Message Signs will be installed at Yelgun, to improve way finding for patrons as this is the first time the festival is held at North Byron Parklands. This is done as a risk mitigation measure as drivers may not be sure where they need to go, which increases collision risk.

## 6. GUIDE TO THE TRAFFIC AND TRANSPORT MANAGEMENT FOR SPECIAL EVENTS

This chapter details the information required as stipulated in the 2018 RMs Guide to Traffic and Transport Management for Special Events (TTMSE).

### 6.1. Special event classification

The Byron Writers Festival at North Byron Parklands is classified as a Class 3 Special Event, as defined in clause 3.4 of the TTMSE.

### 6.2. Event details

The event details are listed below:

- Patron numbers: 2,500 per day
- Event name: Byron Writers Festival
- Event description: The annual Byron Writers Festival is Australia's largest and leading regional celebration of story telling, literature and ideas. The event presents more than 150 sessions during Festival Weeks.
- Event location: North Byron Parklands
- Secondary Schools Day / Special Event: 25 August 2022
- Byron Writers Festival dates: 26-28 August 2022 (Friday, Saturday and Sunday)
- Road network impacted: Tweed Valley Way, Yelgun Interchange, Bayshore Drive
- Event organiser: Byron Writers Festival
- Venue manager: Mat Morris (North Byron Parklands)
- Traffic Manager: Shien Chee
- Byron Shire Council contact: Jess Gilmore

### 6.3. Risk management

A risk assessment for the traffic and transport component of this event is provided in the next chapter. The risk assessment is a guide, in the anticipation that individual parties (such as festival management, traffic controllers and emergency services) will establish their own risk assessment and mitigation methodologies.

### 6.4. Contingencies and emergency evacuation

This TMP has been designed to ensure efficient operation during varying conditions and differing times of day. Contingencies should be in place to allow for the effects of adverse weather and altering traffic characteristics and suitable plans are to be in place for emergency evacuations.

In case of wet weather, it is likely that the traffic volume capacity on site reduces. North Byron Parklands typically has plant on site that can be used to fix potholes and tow bogged vehicles.

Incidents that would potentially require emergency evacuations at this venue include bush fires and flooding. Emergency evacuation plans for such incidents are in place and held on record by the festival management. The NSW Police have the authority to take control of the site in case of an emergency.

## 7. RISK ASSESSMENT

### 7.1. Definitions

The following definitions (as provided in section 2.10 of the Traffic Control at Worksites technical manual) apply to the risk assessment.

**Table 1 | Risk matrix – Consequence descriptions**

Rating	Description
Insignificant	Illness, first aid or injury not requiring medical treatment. No lost time.
Minor	Minor injury or illness requiring medical treatment. No lost time post medical treatment.
Moderate	Minor injuries or illnesses resulting in lost time.
Major	1 to 10 serious injuries or illnesses resulting in lost time or potential permanent impairment.
Severe	Single fatality or 11 to 20 serious injuries or illnesses resulting in lost time or potential permanent impairment.
Catastrophic	Multiple fatalities or more than 20 serious injuries or illnesses resulting in lost time or potential permanent impairment.

**Table 2 | Risk matrix – Likelihood descriptions**

Rating	Description
Almost certain	<ul style="list-style-type: none"> <li>Expected to occur multiple times (10 or more time) during any given year</li> <li>Expected to occur at least 1 in every 4 times the event or action occurs ie more than 25% chance of occurrence.</li> <li>The risk is known to occur frequently</li> </ul>
Very likely	<ul style="list-style-type: none"> <li>Expected to occur occasionally ie 1 to 10 times during any given year</li> <li>Expected to occur between 1 in 4 and 1 in 10 times the event or action occurs ie 10 to 25% chance of occurrence</li> <li>The risk is known to occur often</li> </ul>
Likely	<ul style="list-style-type: none"> <li>Expected to occur once during any given year</li> <li>Expected to occur between 1 in 10 and 1 in 100 times the event or action occurs ie 1 to 10% chance of occurrence</li> </ul>

Unlikely	<ul style="list-style-type: none"> <li>Expected to occur once every 1 to 10 years</li> <li>Expect to occur between 1 in 100 and 1 in 1000 times the event or action occurs ie 0.1 to 1.0% chance of occurrence</li> <li>The risk could occur but not often</li> </ul>
Very unlikely	<ul style="list-style-type: none"> <li>Expected to occur every 10 to 100 years</li> <li>Expected to occur between 1 in 1000 and 1 in 10,000 times the event or action occurs, ie 0.01 to 0.1% chance of occurrence</li> <li>It is unusual that this risk occurs but it has happened</li> </ul>
Almost unprecedented	<ul style="list-style-type: none"> <li>Not expected to occur in the next 100 years ie less than once every 100 years</li> <li>Expected to occur less than 1 in 10,000 times ie if ever the event or action occurs ie less than 0.01% chance of occurrence</li> <li>Any risk can occur but it is very improbable that this risk will occur within the large number of events.</li> </ul>

**Table 3 | Risk evaluation matrix**

			Consequence					
			Insignificant	Minor	Moderate	Major	Severe	Catastrophic
			C6	C5	C4	C3	C2	C1
<b>Likelihood</b>	Almost certain	L1	M	H	H	VH	VH	VH
	Very likely	L2	M	M	H	H	VH	VH
	Likely	L3	L	M	M	H	H	VH
	Unlikely	L4	L	L	M	M	H	H
	Very unlikely	L5	L	L	L	M	M	H
	Almost unprecedented	L6	L	L	L	L	M	M

**Table 4 | Risk matrix – Risk rating and required response or action**

Risk rating	Definition	Response or action
VH	Very high	Significant and urgent action is required to eliminate the safety risk or reduce the consequence or likelihood of the risk and the overall risk exposure.  Activities exposed to this level of safety risk cannot proceed without the approval of the executive director.
H	High	Immediate action is required and effort must be made to ensure that the safety risk is eliminated so far as is reasonably practicable (SFAIRP) or minimised SFAIRP if elimination is not reasonably practicable.
M	Medium	Action is required and effort must be made to ensure that the safety risk is eliminated SFAIRP or minimised SFAIRP if elimination is not reasonably practicable. Activities exposed to this level of safety risk cannot proceed without the approval of the responsible line manager or the change, project or program manager.
L	Low	A level of safety risk that requires monitoring and review to ensure that the safety risk remains at this level.

## 7.2. Crash history

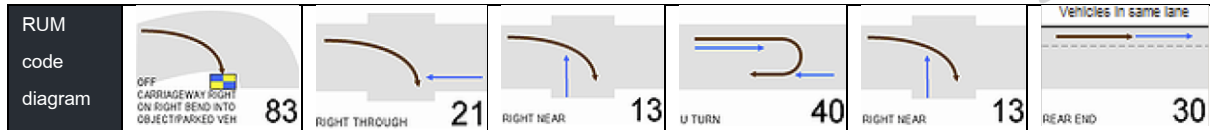
2016 to 2022 crash history obtained from the website of the Centre for Road Safety is shown in Figure 2 below. Our focus is on crashes that occurred at the Yelgun Interchange and on Tweed Valley Way.





Figure 2 | Crash history, Source: Transport for NSW, Centre for Road Safety website 2022

Crash ID	1197688	1110760	1111000	1245735	1191020	1191653
Location	Tweed Valley Way, North of Jones Road	Tweed Valley Way, just north of Gate C	Unclear, location type is roundabout but mapping shows on Tweed Valley Way just north of Gate C	TVW and Link Road intersection	TVW and Link Road intersection	Link Road roundabout
Reporting year	2019	2016	2016	2020	2018	2019
Degree of Crash	Moderate injury	Moderate injury	Non-casualty (towaway)	Moderate injury	Moderate injury	Minor/moderate injury
RUM code	83	21	13	40	13	30
RUM description	Off rt/rt bnd => obj	Right through	Right near	U turn	Right near	Rear end
Type of location	2-way undivided	2-way undivided	Roundabout	2-way undivided	Roundabout	Roundabout
Natural lighting	Daylight	Daylight	Darkness	Daylight	Daylight	Daylight
Longitude	153.506063	153.515015	153.514665	153.520361	153.520759	153.520468
Latitude	-28.468796	-28.481458	-28.481872	-28.490823	-28.490899	-28.491787
Number killed	0	0	0	0	0	0
Number injured	1	3	0	1	1	1



### 7.3. Risk identification

Based on the crash data provided above and knowledge of the site and proposed works and traffic management measures, the following potential hazards can be identified specifically for the purpose of this risk assessment.

- **R1:** Rear-end collision on approach to TVW roundabout, coming from Yelgun interchange, due to hesitation on behalf of driver to festival, potentially making last minute lane changes
- **R2:** Incident between through traffic and vehicle turning right from TVW into Gate C.
- **R3:** Incident between through traffic and vehicle leaving Gate C, turning onto TVW.

### 7.4. Risk assessment

The risk assessment is carried out in the table below. All residual risks are satisfactory.

Risk ID	No mitigation			Mitigation measure	With mitigation as per TMP			Satisfactory
	Likelihood	Consequence	Risk score		Likelihood	Consequence	Risk score	
R1	L4	C4	M	VMS board for directional way finding	L5	C4	L	Yes
R2	L4	C2	H	VMS board for directional way finding and road works speed limit	L5	C4	L	Yes
R3	L4	C2	H	Road works speed limit	L5	C4	L	Yes

## 8. DRIVER CODE OF CONDUCT

It is assumed drivers will follow road rules in an ordinary fashion.

## 9. MONITORING PROGRAM

Given the low impact of the works, the preparation of a detailed monitoring program is not warranted.

The Principal Contractor and Traffic Control Supervisor will be given the contact details of the traffic Engineer, to discuss any changes that may be required to the TCP's once the site is operational. Inspections of the implementation of this plan will be at the discretion of the traffic engineer.

Given this is the first Writers Festival at NBP, we recommend the traffic management measures are reviewed after the event and recommendations made for any changes for future Writers festivals at this site.

## REFERENCES

*Australian Standard Manual of Uniform Traffic Control Devices Part 3: Traffic control for works on roads*, Council of Standards Australia, Sydney, 11 December 2019

*Traffic Control at Work Sites*, Roads and Maritime Services, version 6.0, 14 September 2020

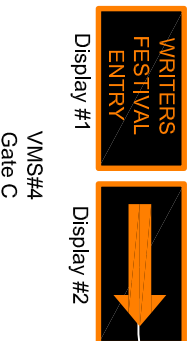
*Guide to Traffic Management Part 10: Traffic Control and Communication Devices*, Austroads, Sydney 2019

*Guide to Traffic and Transport Management for Special Events*, NSW Government, Version 3.5, July 1 2018.

## APPENDIX A – TRAFFIC GUIDANCE SCHEMES

**TGS NOTES:**

1. These Traffic Guidance Schemes (TGSs) are to be read in conjunction with the Traffic Management Plan for this project.
2. These TGSs are to be implemented only by SafeWork NSW certified traffic control contractors.
3. Contractor to contact our office in a timely fashion if any issues are encountered for setout or if changes are to be made. All changes to be noted and signed off prior to execution.
4. Installation of signs, barriers and other traffic control devices shall be in accordance with the AS1742 series and the TfNSW Traffic Control at Work Sites version 6.0.
5. All unnecessary signs are to be covered in between shifts.
6. TCP type: Long term work.
7. Cover existing speed signs within roadwork speed limit zone.



VMS#4  
Gate C



REV: DESCRIPTION:	DATE:	DRAWN:	REVIEWED:	APPROVED:
0 For Construction	6/5/22	MK	MK	MK

NORTH APPROACH  
1:2,500  
Source of map: Byron Shire Online Mapping 2022

SOUTH APPROACH  
1:2,500  
Source of map: Byron Shire Online Mapping 2022

APPROVED BY:  
**Michiel Kamphorst,**  
MSc, BSc, RPEng, RPEQ, NER  
Prepare a Work Zone Traffic  
Management Plan 0052298287  
Date: 6th May 2022

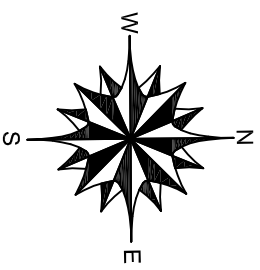
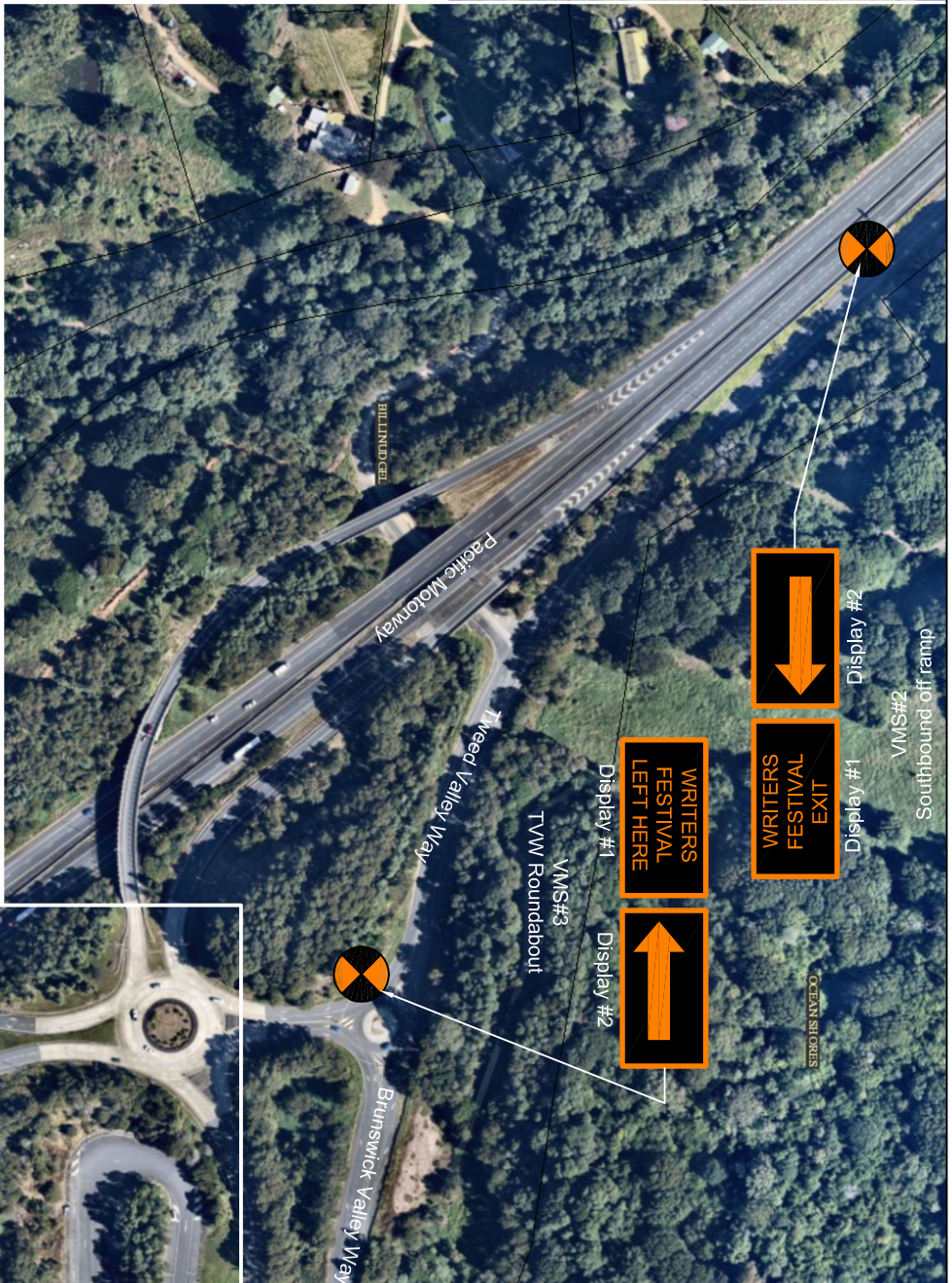
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Ingen Consulting Pty Ltd ACN: 623 948 112 a: Alstonville, NSW p: +614 1726 4987 e: michiel@ingenconsulting.com.au w: www.ingenconsulting.com.au	CLIENT: Byron Writers Festival PO Box 1846 Byron Bay NSW 2481	PROJECT: Byron Writers Festival 2022 at North Byron Parklands, Yelgun, NSW	DRAWING TITLE: Traffic Guidance Scheme - VMS directional signage	PROJECT NUMBER: J1200	ORIGINAL SIZE: A3
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