

## 19.1 AUTONOMOUS ELECTRIC VEHICLE TRIAL

### Objective Reference:

**Authorising Officer:** Louise Rusan, General Manager Community & Customer Services

**Responsible Officer:** David Jeanes, Group Manager City Planning & Assessment

**Report Author:** Ben Clarke, Transport Planner

**Attachments:** Nil

The Council is satisfied that, pursuant to Section 275(1) of the *Local Government Regulation 2012*, the information to be received, discussed or considered in relation to this agenda item is:

- (h) other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage.

### PURPOSE

This report provides an update and outlines action needed from Council for Redlands Coast to host an innovative transport initiative for South East Queensland – providing a test facility at Alexandra Hills and a subsequent open-road autonomous electric vehicle trial on Karragarra Island.

### BACKGROUND

South East Queensland Council of Mayors (COMSEQ) has partnered with RACQ and EasyMile to trial an autonomous electric vehicle (AEV). The purpose of this trial is to demonstrate the viability of autonomous vehicles to provide a service and engage with the State Government to introduce legislation enabling the rollout of autonomous vehicles in Queensland.

The collective is working together with the Department of Transport & Main Roads (TMR) and Sunshine Coast University to assess the impact of this emerging technology focusing on vulnerable transport scenarios. COMSEQ have approached Council to deploy a 6 month trial on SMBI islands in 2019. Council has also been asked to support the State Government permit and to provide Infrastructure and operation of the trial service.

If agreed by Council, the project is set to occur in two phases:

Phase 1 is autonomous vehicle scenario testing at the recently purchased Council owned land at Macarthur Street, Alexandra Hills. This is a critical phase of the project to test the vehicle in numerous circumstances, collect data to inform vehicle analysis and develop our capabilities as a service operator (Estimated February–March 2019).

Phase 2 is the open road extended trial. Karragarra Island has been recommended as the SMBI trial location for the initial 6 month trial. Karragarra Island was chosen due to ease of deployment, ideal target demographic, good balance of terrain for trial AEV and a smaller population which means it is a more manageable risk, and suitability within existing island infrastructure (6 month trial estimated April-October 2019).

Note that the timing of the project phases is contingent upon the order and delivery of the AEV. The AEV will be ordered by RACQ once TMR issue a conditional permit, which is anticipated to be December 2018.

## ISSUES

Redland City Council recently provided a submission to the Parliamentary Transport and Public Works Committee. The submission outlined some of the demographic and social challenges present on SMBI, including:

- A higher rate of unemployment (SMBI 16%, compared to Redlands Coast 6%)
- A higher median age (SMBI - 57 years old, Redland City – 41 years old, QLD – 36 years old)
  - 25% of SMBI residents are aged between 60-69 years old (double that of Redland City - 12%)
- A higher population percentage of persons with a disability (SMBI 13%, compared to 5% for mainland Redland City residents)
- A higher rate of crime, with specific regard to drug offences, and domestic violence breaches

The combination of isolation, social and demographic challenges for our islands makes the need for transport innovation to overcome these challenges imperative. This trial is an opportunity to demonstrate emerging transport technologies in the Redlands Coast, while providing support to our island communities.

For this trial to proceed, Council has been requested to provide any required supporting infrastructure and operational costs associated with the trial on Karragarra Island (please see Financial below).

## STRATEGIC IMPLICATIONS

### Legislative Requirements

Council will be required to enter into a Memorandum of Understanding between COMSEQ and RACQ. This agreement will highlight roles and responsibilities and specify the financial and operational commitment for Council.

The trial will be required to meet the conditions prescribed by the TMR conditional permit for the 6 month trial on Karragarra Island (permit expected late 2018 for mid-2019 trial).

### Risk Management

#### Opportunities

This project is the first extended open road trial utilising an autonomous vehicle for a public transport service in Queensland.

While RACQ are the owners of the vehicle there may be an opportunity to use Redlands Coast branding in some capacity on the vehicle during the trial. This may also extend to using space on the screen inside the vehicle. However it is important to note that the extent of branding opportunities will be discussed and confirmed at a later date. Timing of release of information around the details of the AEV trial is yet to be finalised. This will occur as a result of, and in agreement with RACQ, Council of Mayors and Council.

The project is likely to generate media interest and provides an opportunity to raise the profile of the Redlands Coast branding. There is potential for island tourism and local economy experiencing a boost during the trial on Karragarra Island. It is even feasible to consider surrounding islands may experience an increase in visitor numbers as people may choose to hop around the islands.

One of the key aims of understanding an autonomous vehicle trial on Karragarra Island is to test the demand of commuter parking at ferry terminals in the face of a viable alternative transport choice.

It is considered that while the trial is operating, there will be a reduced demand upon carparking numbers as the local community will choose to take the AEV to the terminal instead of drive.

Minimal capital and operational investment required by Council to facilitate the implementation of the trial.

### Risks

The Autonomous Electric Vehicle Trial is subject to finalising service agreements and managing service risks with key stakeholders.

Unsuccessful trial with low patronage take up, will potentially limit future services on other islands.

There is a potential risk that the Autonomous Electrical Vehicle may be susceptible to being vandalised or damaged while docked in its temporary depot.

There is a potential logistical and capability issue with delivering a service on Karragarra Island.

There is a risk to Council for not committing the necessary budget to accommodate the operational requirements for the trial. Following the issuing of a conditional permit for the trial from TMR (expected December 2018), RACQ will be ordering the AEV from Easymile, which will commit all project partners to deliver their contribution towards the trial.

### **Financial**

The following have been identified as key components that will require Council funding:

- Initial investment including infrastructure and site preparation is required in the 2018-19 and 2019-20 financial years. The identified components for initial investment include:

Item	Estimated Cost	Program	Financial year
Test site facility preparation	\$20,000	Operational	2018/19
Bus stops (waiting areas and supporting signage and information)	\$7,500	Operational	2018/19
Traffic management (signs, lines, vegetation and minor road improvements)	\$10,000	Operational	2018/19
AEV vehicle shelter (including power supply, overhead cover and lockable containment fence)	\$60,000 (high level cost estimate)	Capital	2018/19
Council to attain TMR Operator and Driver Accreditation	\$1,200 (for two drivers)	Operational	2018/19
Recruitment of two part time level 5 Council officers as passenger service operators for the duration of	\$40,000	Operational	2018/19

training/testing and operations	\$30,000	Operational	2019/20
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- Should Council endorse the trial the associated budget requirement will flow through as a subsequent budget review.
- The total required financial commitment for 2018-19 is an estimated \$138,700. There will be a contribution from the Mayor, from her component of the Additional Infrastructure Program (AIP) of \$35,000, leaving a balance required from 2018-19 budget of \$103,700.
- The required financial commitment for 2019-20 is an estimated \$30,000 (The 2019-20 budget commitment will be addressed as part of the annual budget submission process).
- Over the life of the project there is an estimated commitment of \$168,700.

### People

Implementing this project will require an operational commitment of at least two (2) additional resources, in a part time capacity designated as vehicle operators. Recruitment of these positions is expected to occur later in the 2018/19 financial year, dependent on timing of the manufacture and delivery of the autonomous vehicle.

### Environmental

The route for the service will be on adequate existing road infrastructure on Karragarra Island with small improvements for bus stop waiting areas and vehicle shelter (in existing parking area near the ferry terminal) meaning very low environmental impact only within the existing road reserve.

It is worth mentioning that it is an electric autonomous vehicle, and will not require fuelling, only a charge station at the vehicle shelter.

### Social

This project will provide a trial public transport service on Karragarra Island providing a viable transport choice for the island community.

### Alignment with Council's Policy and Plans

The draft Redlands Coast Transport Strategy outlines the future vision for the Redlands Coast transport network - "Redlands Coast has an efficient, accessible and integrated transport system which sustainably facilitates the movement of people and goods within and beyond the city and the bay".

In order to achieve the vision of the Transport Strategy, targets and priorities have been laid out to provide strategic direction. One of Council's advocacy priorities is SMBI public transport. One of the objectives (1b) of the Transport Strategy is to: "Adopt technology, innovative thinking and alternative solutions tailored to the Redlands context".

### CONSULTATION

- Chief Information Officer – October 2018
- Group Manager City Planning & Assessment – October 2018
- Principal Transport Planner, City Planning & Assessment – October 2018
- Team Leader – Capital Project, Infrastructure and Operations – October 2018

## OPTIONS

### Option One

Council resolves to:

1. endorse the Autonomous Electric Vehicle trial at the test facility at Alexandra Hills and the subsequent extended trial on Karragarra Island, noting the associated budget will be included in a subsequent budget review;
2. delegate authority to the Chief Executive Officer, under s.257(1)(b) of the *Local Government Act 2009* to negotiate, make, vary and discharge all related contract documents and where applicable, obtain Operator Accreditation; and
3. maintain the report as confidential, with release of information to occur once contractual negotiations between the relevant parties conclude.

### Option Two

That Council resolves to not endorse the Autonomous Electric Vehicle Trial on Karragarra Island.

## OFFICER'S RECOMMENDATION

That Council resolves to:

1. **endorse the Autonomous Electric Vehicle trial at the test facility at Alexandra Hills and the subsequent extended trial on Karragarra Island, noting the associated budget will be included in a subsequent budget review;**
2. **delegate authority to the Chief Executive Officer, under s.257(1)(b) of the *Local Government Act 2009* to negotiate, make, vary and discharge all related contract documents and where applicable, obtain Operator Accreditation; and**
3. **maintain the report as confidential, with release of information to occur once contractual negotiations between the relevant parties conclude.**