

**Wanaka Community Board
11 May 2017**

Report for Agenda Item: 1

Department: Property & Infrastructure

Wanaka Electric Vehicle Fast Charging Stations

Purpose

The purpose of this report is to consider granting a Licence to Occupy Road Reserve to Chargenet Ltd, for the first electric vehicle fast charging stations in Wanaka.

Recommendation

That the Wanaka Community Board:

1. **Note** the contents of this report;
2. **Approve** a licence to occupy (LTO) for Chargenet Ltd to install, operate and maintain electric vehicle (EV) fast charging stations subject to the following conditions:
 - a. The structure must not compromise roading or services maintenance activities;
 - b. Ongoing maintenance of the structure is to be the responsibility of the Licensee along with any damage that may occur to the road reserve as a result of the structure;
 - c. A fee may be applicable for the use of this area in the future following implementation of a proposed Council Licence to Occupy Policy. Any future fee if applicable will be required to be paid or the area shall be vacated;
 - d. Any other requirements of the future Licence to Occupy Policy are to be adhered to;
 - e. Located on the Ardmore Street build-out adjacent to the internal boundary between 38 and 42 Ardmore Street;
 - f. Any works within the road reserve to be undertaken to the specification and approval of Council's Engineers; and
 - g. Licence to be for an initial term of 5 years.
3. **Delegate** signing authority to the General Manager Property and Infrastructure;

4. **Authorise** the General Manager Property and Infrastructure to reallocate \$10,000 of uncommitted Wanaka unsubsidised transportation budget to a new project to facilitate EV fast charging station installation;
5. **Note** that legalisation of new electric vehicle parking signage, its implementation and enforcement and amendments to existing parking restrictions will be the subject of a review of the current parking by-law and a separate report to the Board; and
6. **Note** that this report does not prescribe or predict the outcomes of the overarching Wanaka town centre strategy, or other strategies or policies, in terms of promotion, facilitation and implementation of electric vehicles and the infrastructure supporting them.

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24/04/2017

Reviewed and Authorised by:



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26/04/2017

Background

- 1 Hybrid petrol/electric and diesel/electric vehicles have been around for some time but this technology is mostly now obsolete.
- 2 Current production fully electric vehicles (EV) are normally capable of being both slow charged and fast charged using a specific fast charging station. Fast charging stations are relatively expensive and require a 3 phase 80A supply and are therefore unlikely to be used in a domestic application. Depending on the size of the vehicle's batteries, a fast charge can take 20-40 minutes.
- 3 Chargenet Ltd is providing a nationwide roll out of electric vehicle (EV) fast charging stations and is offering to cover the cost of supply and installation of these stations. Chargenet operates the stations remotely and handles billing for the service. A smart phone application directs the client to the station location and advises when it is available. Chargenet services are being delivered in conjunction with BMW and the NZ Government. Chargenet's introductory publication is Attachment B to this report.
- 4 Chargenet considers Wanaka strategically important in terms of a nationwide network and has indicated that it is keen to see a fast charging station installed as soon as is practicable. In the short term Chargenet's appetite for investment is likely to be limited to one fast charging station in Wanaka.
- 5 Currently the closest EV fast charging unit is in Dunedin, however Central Otago District Council has recently approved installation of Chargenet units in Alexandra, Tarras and Ranfurly.

- 6 The main reasons given for acquiring an EV are significant reductions in pollution, fuel costs and carbon emissions. An EV also has considerably less moving parts and does not require oil and water like a conventional vehicle. Consequently it is claimed that the overall upkeep and maintenance of an EV is considerably less than a conventional vehicle.
- 7 According to the local EV club there are approximately 14 fully electric private EVs in Wanaka. Currently these vehicles will be slow charged for 4-10 hours at home using a domestic 240v supply. The club has indicated it is likely that Wanaka based EV owners would use a fast charging station on occasion if one was available. Of wider benefit to the community is that a fast charging station would attract visitors to Wanaka who own, or have hired, an EV.
- 8 According to the club there are no commercial EVs in Wanaka. The likely reason for this is that commercial vehicles generally need to be available all day, or at short notice, i.e. taxis, courier and trade vans. Having a vehicle on slow charge does not compliment the commercial vehicle general mode of use. Conversely a fast charger should allow a commercial vehicle to be available for use for more than 23 hours per day depending on the total daily mileage of the vehicle. It follows that a fast charging facility in Wanaka would allow local businesses to adopt the latest EV technology.
- 9 The club contends that New Zealand is behind parts of North America and Europe on the uptake of EVs and the infrastructure required to support them. It follows that there will be an expectation to have EVs available for hire by overseas visitors. Not having EVs and their supporting infrastructure available may well lead to reputational damage.

Comment

- 10 Modern EVs have either the European (SAE) or Japanese (CHAdeMO) fast charging sockets. To address this Chargenet units have two charging cables, one with a European plug and one with a Japanese plug. However, the unit can only charge one vehicle at a time. Importantly the Chargenet unit is only a rapid charger and cannot slow charge vehicles. This highlights that EV technology has advanced from the hybrid type and will continue to advance and develop with competition in the market. The risks associated with changes in technology rest with Chargenet. In addition, the agreement with Chargenet will be for no more than a 5 year term.
- 11 There is variation in the location of charging sockets on vehicles. There are three main locations; centre front of the vehicle, or behind either the left or right rear passenger door. This complicates finding a suitable location for the charging unit. The ideal location is in the middle of 90° parking stalls where vehicles can enter either forward or reverse to minimise the reach required of the charging cables. Parallel parking stalls can work but their use is complicated by the direction of traffic flow and the requirement to park in the same direction. Angle parks where entry can only be in one direction are normally avoided. Extracts from Chargenet's installation manual are Attachment C to this report.
- 12 The two recently installed build-outs in Ardmore Street offer an alternative solution where a charging station can be located between angle park stalls rather

than at the head of the stall. This means the charging station is equidistant between the potential socket locations. This solution still requires longer than normal cables (which Chargenet are happy to provide) and EV drivers need to be mindful of the side that a rear mounted socket is on (similar to conventional fuel refilling at a petrol station.) These build-outs are close to a suitable 3 phase power supply. The charging stations will be several metres from the footpath and the build-outs are not pedestrian crossing points so conflict between pedestrians and cables will be minimal. This location is described further in Attachment A to this report.

13 The number of car park stalls in central Wanaka is limited, therefore as part of Council facilitating installation of the charging stations it is recommended that:

- a. Three additional car parks are created, see attachment A. However this will need to be deferred until the purchaser of the redundant fire station confirms the existing vehicle crossing is no longer required.
- b. Council maintains authority over parking restrictions around the charging units.
- c. The car parks immediately beside both build-outs are designated for EV vehicles but otherwise the P60 restriction is maintained. The stalls would likely be painted blue or green with 'EV' written on them.

14 The Ardmore Street build-out locations are adjacent to Council's offices. Chargenet have indicated that the charging units could be branded in QLDC livery which would clearly emphasise Council's involvement in the project. Examples of branded livery are shown in Attachment D to this report.

Options

15 This report identifies and assesses the following reasonably practicable options for assessing the matter as required by section 77 of the Local Government Act 2002.

16 Option 1 Do Nothing

Advantages:

17 No further expenditure by Council, or use of Council resources.

Disadvantages:

18 Potential reputational damage – Council not being seen as proactive or having commitment to sustainable energy and the reduction of carbon emissions.

19 Option 2 Install alternative charging units, either slow or fast charge, owned by and administered by Council, or another third party.

Advantages:

20 Slow and fast chargers in road reserve may become commonplace in New Zealand as it is in North America and Europe. Council could have control over all charging and parking of EVs.

Disadvantages:

21 High capital expense, unknown financial viability and risk that the technology develops further and detracts from Council's investment.

22 Option 3 Install Chargenet charging units in alternative locations.

Advantages:

23 Potentially 90° parking stalls could be developed for EV charging.

Disadvantages:

24 Wanaka's 90' parking is within reserve areas. Legalisation processes would markedly increase the cost and time taken to secure a location with no surety of success.

25 Option 4 Enter into an agreement with Chargenet Ltd for the installation, operation and maintenance of a fast charging station on the northern Ardmore Street build-out location.

Advantages:

26 Minimal capital and operational expenditure by Council. Minimal risk to Council as agreement limited to 5 years. Demonstrates Council's commitment to provide for the current and future needs of communities for good-quality local infrastructure. Two car park stalls can be designated for EV charging.

Disadvantages:

27 Potential negative response from local conventional vehicle owners who perceive an overall reduction in car park stall numbers and little value in EV uptake.

28 Option 5 Enter into an agreement with Chargenet Ltd for the installation, operation and maintenance of a fast charging station on the southern Ardmore Street build-out location.

Advantages:

29 Minimal capital and operational expenditure by Council. Minimal risk to Council as agreement limited to 5 years. Demonstrates Council's commitment to provide for the current and future needs of communities for good-quality local infrastructure. Only one car park stall can be designated for EV charging. Marking the second designated EV charging stall would be subject to the purchaser of the redundant fire station confirming that the existing vehicle crossing is no longer required.

Disadvantages:

30 Potential negative response from local conventional vehicle owners who perceive an overall reduction in car park stall numbers and little value in EV uptake.

31 This report recommends **Option 4** for addressing the matter because it offers Council the least risk whilst facilitating the introduction of EV fast charging to the district and does not preclude Council developing alternative solutions in the future.

Significance and Engagement

32 This matter is of medium significance, as determined by reference to the Council's Significance and Engagement Policy as it relates to Council's roading network which is identified as a significant asset.

Risk

33 This matter relates to the strategic risk SR3 Management Practice – working within legislation, as documented in the Council's risk register. The risk is classed as moderate. This matter relates to this risk because a variety of operational risks (such as meeting levels of service, regulatory compliance and the health and safety risks associated with parties using roads) are triggered when the Council considers whether or not to grant the licence to occupy.

34 This matter also relates to strategic risk SR6a – assets critical to service delivery (infrastructure assets), with the risk classified as low. This is because the impact of the occupation is minimal for the public and does not have a significant permanent impact on Council's infrastructure.

35 In addition, this matter relates to operational risk SR27 levels of service, as documented in the Council's risk register. This risk is classed as moderate. This matter relates to this risk as it requires a decision from the Wanaka Community Board for a private activity.

36 The recommended option treats the risks by ensuring conditions are included in any licence and/or associated agreement which ensures measures are in place which directly impacts the risk.

Financial Implications

37 Although Chargenet covers the cost of supply and installation of the fast charging units there will likely be Council costs associated with facilitating the installation, consultation, new parking signage development and bespoke livery. It is recommended that \$10,000 of unallocated Wanaka unsubsidised transport budget be transferred to a new project to facilitate the installation of the fast charging units.

38 Council is currently in the process of drafting a Licence To Occupy Roading Policy. The draft policy considers that in situations such as this, where a public park is being used for commercial gain, the licensee will be charged market rent for the use of the park. It is understood that in the interests of supporting this

fledgling green industry, that rent will be waived for the term of the licence of 5 years.

Council Policies, Strategies and Bylaws

39 The following Council policies, strategies and bylaws were considered:

- Significance and Engagement Policy 2014 – providing clarity on Council's decision making processes and assessing the extent to which individuals, organisations, groups and sectors in the community are affected by the Council's decisions.
- Long Term Plan – this consideration to grant or otherwise a Licence to Occupy in line with the terms of reference of the Wanaka Community Board and is considered part of the Council's 'Regulatory Services' outlined in the Plan.

40 The recommended option is consistent with the principles set out in the named policies.

41 This matter is not currently included in the 10-Year Plan/Annual Plan. The majority of costs associated with this project will be met by Chargetnet. Council's costs will be limited to facilitating installation, acquiring knowledge and developing processes to administer EV charging. It is likely that the knowledge and processes will assist Council in developing its long term policies on the matter.

Local Government Act 2002 Purpose Provisions

42 The recommended option:

- Will help meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses by establishing a service that is commonplace in North America and Europe with minimal cost to the community;
- Can be implemented through current funding under the 10-Year Plan and Annual Plan;
- Is consistent with the Council's plans and policies; and
- Would not alter significantly the intended level of service provision for any significant activity undertaken by or on behalf of the Council, or transfer the ownership or control of a strategic asset to or from the Council.

Consultation: Community Views and Preferences

43 The persons who are affected by or interested in this matter are the NZ Fire Service, Chargetnet, local ratepayers, EV owners and suppliers and Aurora the electrical reticulation provider.

44 The Council has consulted with Chargetnet which is keen to be involved, Aurora which has confirmed suitability of electrical supply and local EV owners and suppliers.

- 45 A drop-in session was held on site on Friday 21 April 2017 to allow visitors, ratepayers, residents and business owners to discuss the proposed installation of the fast charging station. Council officers, Wanaka Community Board members and Chargenet representatives were present. The drop-in session was advised through social media, local and national press and by mail drop and post to adjacent property owners and businesses.
- 46 Council has engaged with the NZ Fire Service. The Fire Service is currently in the process of disposing of the redundant fire station at 45 Ardmore Street. At this time it is unclear how or when the property might be redeveloped by a new owner. Consequently the Fire Service has indicated that they wish to maintain the property's vehicle crossing. Without creating an additional car park stall outside the redundant fire station the proposed fast charging station on the southern side of Ardmore Street would be limited to the existing car park stall to the west of the build-out.

Attachments

- A Ardmore Street build-out charging unit locations
- B Chargenet's introductory publication
- C Extracts from Chargenet's installation manual
- D Examples of branded livery