Community and Stakeholder Engagement Report

Electric vehicle charging infrastructure Plan (Stage 1 of 2)

Impact level: 3

Consultation period: 8 April to 9 May 2021

Contents

1. Summary[1]

This report outlines the community and stakeholder engagement conducted as part of the electric vehicle (EV) charging infrastructure plan project conducted from 8 April to 9 May 2021.

The feedback collected during consultation revealed a high level of support for the draft plan with comments citing the anticipated environmental benefits of encouraging electric vehicle uptake on the Northern Beaches.

Feedback also suggested Council should consider more locations for EV charging infrastructure including at shopping centres, beach car parks and near public transport hubs.

Some of the issues raised during the consultation were regarding compatibility of charging infrastructure and various models of EV, the charging level (preferring ultra-rapid) and how to enforce the EV parking spaces and the time limits.

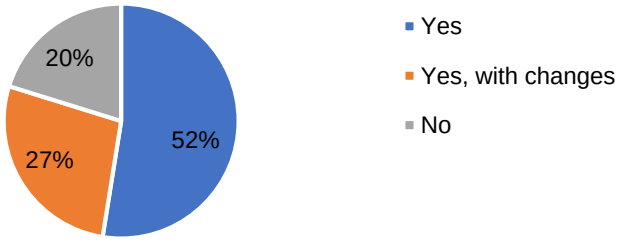
Respondents who were not supportive of the proposal felt that the cost of infrastructure and electricity should lie with the user and not taxpayers/ratepayer. Some felt the plan unfairly supported a minority of people who had EVs and not the general public.

1.1. Key outcomes

Total submissions received

144

Do you support the proposed electric vehicle charging infrastructure plan?



Feedback themes

- Environmental benefits
- More locations of chargers required
- Cost to taxpayers/should be user pays
- Time limit enforcement
- Compatibility issues
- Charger types

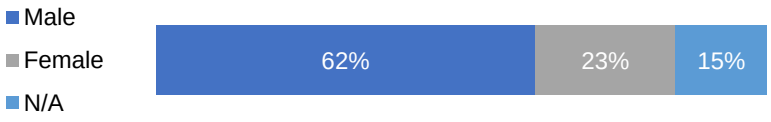
[1] Community and stakeholder views contained in this report do not necessarily reflect the views of the Northern Beaches Council or indicate a commitment to a particular course of action.

1.1 How we engaged

Have Your Say	Visitors: 1,343	Visits: 1,683	Av. time onsite: 2m15s
Electronic direct mail (EDM)	Community Engagement (fortnightly) newsletter: 2 Council (weekly) e-News: 1		Distribution: 20,000 subscribers Distribution: 150,000 subscribers
Drop in sessions	1 x face-to-face 1 x via MS Teams		Total attendance: 5 people

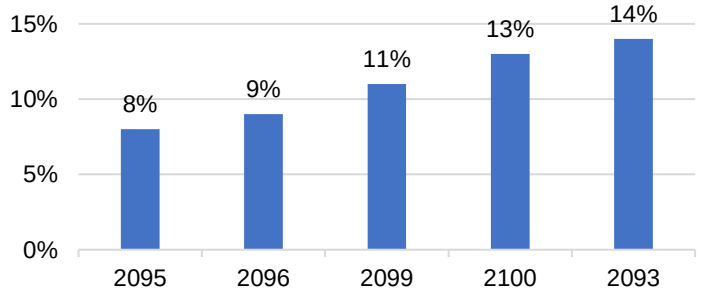
1.2. Who responded[2]

Gender



Age groups

Postcodes*



*Only the top 5 postcodes are reflected in the graph.

[2] Demographic data was gathered by request only. The data represented only includes those respondents who provided this detail.

2. Background

Council is investigating the installation of electric vehicle (EV) infrastructure that is publicly available to encourage and support the uptake of EVs in the Northern Beaches Local Government Area.

The draft Electric Vehicle Charging Infrastructure Plan has been developed to guide the future management of publicly operated EV charging stations in the Northern Beaches. The draft plan creates the framework for establishing a future network of EV charging stations and outlines conditions for the installation, management, maintenance and removal of EV charging infrastructure on identified Council sites.

This report outlines the community and stakeholder engagement conducted as part of stage one. Stage two engagement will be conducted as part of the public exhibition of the Development Application.

3. Engagement objectives

- Build community and stakeholder awareness of proposal and engagement participation opportunities (inform).
- Provide accessible information so community and stakeholders can participate in a meaningful way (inform).
- Identify community and stakeholder concerns, local knowledge and values (consult).

4. Engagement approach

Community and stakeholder engagement for the Electric Vehicle Charging Infrastructure Plan was conducted over a four and a half week period, from 8 April to 9 May 2021, and consisted of a series of activities that provided opportunities and platforms for community and stakeholders to contribute.

The engagement was planned, implemented and reported in accordance with Council's Community Engagement Matrix (2017). The full documented engagement approach is outlined in the Electric Vehicle Charging Infrastructure Plan Community and Stakeholder Engagement Plan (October 2020).

A project page was established on our have your say platform with information provided in an accessible and easy to read format.

The project was primarily promoted through our regular email newsletter (EDM) channels.

Feedback was captured through an online comment form embedded onto the have your say project page. The form included a question that directly asked respondents for their level of support on the proposal.

An open-field comments box provided community members a space to explain or elaborate on their support, not support or neutral sentiment as well as any other feedback they wished to contribute.

Email and written comments were also invited.

Two drop-in sessions were offered, the first held at Dee Why Council Chambers on 21 April and the other held via MS Teams on 6 May, giving the opportunity for people to find out more about the project or to ask questions.

5. Findings[3]

Overall, almost 80 percent of responses supported the draft Electric Vehicle Charging Infrastructure Plan either in full or part.

The main reason for support were the anticipated environmental benefits of encouraging electric vehicle uptake on the Northern Beaches as well as addressing the potential future demand including that access to public charging stations would encourage EV uptake and help reduce carbon emissions.

27 percent of respondents overall indicated that, while they support the plan, Council needed to make further considerations, minor changes or additions to ensure that the plan was sustainable, effective and included additional locations.

In particular, many felt the plan did not go far enough and there should be EV charging stations in more locations across the Northern Beaches including at every shopping centre and public car park.

Specific charging stations locations, including tourist destinations (to encourage visitors) and at the beach carparks were also mentioned.

Other comments that suggested changes to the plan wanted renewable fuels to power the charging stations, feeling that otherwise the environmental benefits of EVs would diminish. Compatibility issues and charging levels preference were also raised. These commentators wanted to ensure that all models of cars would be able to use the charging stations and that ultra-rapid chargers (aim for 50kw) were the preferred option.

Several comments felt the charging stations should be a user pays system or the EV manufacturer should pay for the charging infrastructure. They expressed that Council should not be involved with providing free charging for a small minority of people with electric vehicles. Other respondents mentioned that there were not enough EVs on the Northern Beaches currently to warrant the expenditure for charging infrastructure or that it was a waste of rate payer's money.

Operational matters were raised a few times in the comments. There were queries regarding how the parking conditions would be enforced, maintenance requirements and the addition of shelter over charging stations to make them all-weather. Other comments said locate the chargers away from busy shopping areas so that they are not removing public car parking spaces.

[3] Note: This report represents what Council has heard as accurately and transparently as possible by using consistent quantitative and qualitative analysis techniques.

Table 1: Feedback that requested specific changes to the proposal/draft

Theme	What we heard	Council's response
Location	Specific charging stations locations, including tourist destinations (to encourage visitors) and at the beach carparks. Request for additional locations to be included	Council will consider a site based on the following factors: • There must be existing and/or potential demand for EV charging. • That any site considered for the provision of EV charging infrastructure is desirable location for the user to stop, spend time in the area or use local amenities. • A safe location for access to the proposed charging infrastructure. • Access to a suitable power supply. Council will also consider sites that are located at key entry points to the Northern Beaches LGA or located near the main road corridors. Council will undertake community engagement to seek support on future EV charging site locations and charging infrastructure.
Additional sites	Council should propose that all future DA such as shopping centres, medium density housing, commercial and industrial building and hotels include EV charging points	Council is currently working to merge existing Development Control Plans (DCP) to one Northern Beaches Document. The DCP will include the provision of EV Charging infrastructure.
Green powered sites	All electricity should be sourced from green electricity sources	Council currently utilises renewable energy for all buildings and facilities. All electricity provided for charging of EVs will be from a renewable energy source.
Cost	EV users should be paying for this infrastructure. It's not the domain of the Council to subsidise green initiatives at the expense of the community	Operational costs will be recovered from the EV customers.
Charging Infrastructure	Variety of charging types and infrastructure (cables / adaptors etc)	Council are continuing to investigate the variety of charging infrastructure to ensure the most appropriate universal charging system will be installed.
Charging Infrastructure	Include facilities for charging of e-bikes and other e-mobility devices	Council will in time include charging facilities for e-bikes and e-mobility devices.

Signage and Enforcement	Previously noticed in other locations existing signage saying ‘Charging Only’ with some EV vehicles not using the charging	Signage displayed at approved sites will be RMS approved sign # r5-41-5 ‘No Parking Electric Vehicles Excepted Only while Charging’. All EV non-charging vehicles or non-EV vehicles are subject to enforcement while parked in these dedicated spaces.

Appendix 1 Verbatim community and stakeholder responses*

Number	Comment/submission
1	1. No details have been provided as to what these charging stations will cost ratepayers. 2. why is this not being left to the private sector? 3. why aren't individuals who buy electric cars responsible for buying and organising charging? 4. what reduction in CO2 emissions will result from this? Given the take up of electric cars, the impact can only be negligable. 5. why is council getting involved in an area which will benefit only a handful of ratepapers over the next 10 years?
2	As a PHEV owner (Mitsubishi Outlander) my family has consciously chosen to invest in a more expensive vehicle to reduce our contribution to vehicle emissions. We support the intention to provide charging stations infrastructure in the Northern Beaches, but note the following points: - a PHEV has a maximum range of ~ 34km on battery; - the current number of charging points within this range of our house in Newport is woeful; - the plan lists only a small number of additional charging stations. To provide an incentive for the public to invest in electric vehicles to meet the stated targets, the number and distribution of charging stations needs to be significantly more; - the cost to charge needs to be at least less than the typical cost of petrol on a per kilometre basis; - Better still, the cost to charge should be free to encourage more electric vehicle owners, given that there is already a higher up front cost in the purchase of an electric vehicle compared with a fuel-only car. (As a point of comparison, in certain European countries the purchase tax for electric vehicles is lower than for fuel-only vehicles as a government incentive for lower vehicle emissions and Australia is still lagging in this respect; lower/no charging costs is also where the government could provide a quantifiable incentive); - the time limits on the electric vehicle parking spots needs to be enforced and penalties applied if fuel-only cars take these spots, given the overall scarcity. In summary, the intent of this plan seems to be in the right direction, but to truly make a difference and encourage change in people's choices about type of vehicle to drive, there needs to be a lot more support from the government in more charging points and financial incentives to drive an electric vehicle.
3	As a rate payer i shouldn't be paying for this type of infrastructure. It's the car owners responsibility to provide a charging point on there own premise or at there work place. Not on pathways or public space. Would be better to set these up at existing service stations
4	As an electric vehicle driver, I would urge the council to avoid placing charging spaces in priority locations as this encourages non charging use by both EV and ICE vehicles. I would also have signage and penalties which stipulates vehicles must be either charging or subject to a very short term limit if not plugged in. DC charging should be subject to 30-45 minute limit.
5	As an owner of Nissan Leaf EV I clearly support increasing provision of charging locations. However, I suspect it will be a long time before people without access to home charging buy EV's, hence focus should be on the beach's and commercial hubs

Personal details have been redacted where possible. Spelling and grammatical errors have been amended only where misinterpretation or offence may be caused.

	initially to support visitors to Northern beaches and hence impact on rate payers not significant but benefit local businesses. Would be good if commercial car park owners could be given non financial incentives to install EV charging. My suggestion is to put more chargers at fewer locations so some reassurance to EV owners that access will be possible. Not sure if EV only is enforceable, but I have seen too many cases of the few available spaces being used by non EV to park. Although sometimes the signage is not clear enough, hence may not be done intentionally.
6	At long last! Good to see NBC move on this. Being a council area with some of the most affluent folk around, the current high price of EV in Australia (thanks for nothing, Fed Gov), finds the least resistance here, and the only remaining obstacle is the scarcity of charging infrastructure. We've been driving a pure EV for over three years now and would never go back to fossil fool car. The plan as proposed is a good start and we can only hope that the time from proposal to implementation will not drag on.
7	Batteries use rare earth minerals that are bad for the environment at end of life. Other options like hydrogen fuel need to be invested in and developed instead.
8	Buying and running an Electric Vehicle is a personal choice.I do not want my rates spent paying for someone else's car running costs.The cost to charge an electric vehicle is an individuals responsibility not Councils.
9	Charging stations are an integral element to achieving an EV network in Australia. The walking distance (400m) from strategic centres is a great addition to hopefully boost the local economy through tourism.
10	Consideration to be given to non EV's parking in charging spaces which seems to be a growing problem where parking is limited. This may be a problem at beach car parks. otherwise a good start
11	Council can ill afford the expenditure while carrying a debt of $100 million. This should be left to private enterprise and no doubt all the fuel outlets now available will provide the necessary capital to have recharge stations. Council are moving beyond their brief and should stick to their main responsibilities, roads ,parks and drainage. I see this as a virtue signalling ego trip by council. Dont go there!!
12	Council should take the opportunity to include facilities for charging for e-bikes and other e-mobility devices. It would be as simple as including a couple of 10A domestic power sockets on each charging station. This would assist active transport users who may be doing the same trips as the EV drivers you are targetting to support. Going to the beach, to the shops, making a stop en-route on a cycle tour is just as likely to be done by riders as by drivers. It would be sensible to also add a quality bike parking rail nearby so that the rider can lock their bike up while it is charging.
13	Councils and state government need to fill the void left by little or no planning from Federal Government for the transition to electric vehicles from fossil fuel-powered ones. Anything that can make it easier to buy, use and maintain an electric vehicle is a positive move forward.
14	Critical for our region to make meaningful contribution to battling climate change and encourage transition to EV's
15	Dedicated parking spots, as per section 8, is crucial to ensuring that petrol based cars don't inadvertently park in these spots. Additionally, Electric car owners (of which I am one) are happy for the EV parking spots to be in less ideal positions (eg not immediately near car park entry points, lifts, 'premium positions') as this will reduce petrol based cars from inappropriately parking in these spots.
16	Dont need 3 locations in dee why- wrong demographic and destination for those who can afford hev/evs. Manly needs more than one location- needs to accomodate current snd future requirements if wishes to maintain or expand itself as destination. Eg- queensie

	park/kierle park/ raglan street/ by ocean world/ Also ff/Davidson/belrose not serviced as yet. Might want to reconsider given massive transport and infrastructure happening in this are. Maybe ff shops/Glenrose
17	EV charging Stations – [redacted] – OR TAKE IT AS A SUBMISSION ON [redacted] 1. I don't own an EV and therefor I don't see why I should contribute in my rates to charging stations as it should be user pays not ratepayers. 2. I don't see why I should contribute to Council staff having EV's and again it should be user pays not ratepayers. 3. When?? EV's are cheaper than conventional petrol cars then they could be considered. If this project proceeds please let me know my contribution and I shall deduct it from my rates.
18	Ev users should be paying for this infrastructure. It's not the domain of he council to subsidise green initiatives at the expense of the community coffers
19	Fantastic proposal. Service Stations should be setup with these, and they can have internet cafes included with their 'supermart' type centres. Uber and taxi bays provided and near bus stops, so charging vehicles can be left for short periods while appointments are attended.
20	Given the number of new vehicle sales for 2020 at least represented 0.56% of new car sales, the whole proposal smacks of a waste of rate payers money. When the council has the fundamentals of doing what we rate payers expect and pay for such as: 1, Providing and managing footpaths so they are clear of trip hazards 2. Clearing of gutters to remove vegetation to avoid blockage of drainage 3. Ensure there is adequate lighting and that lighting is maintained and functional to name a few. And then and only then start considering other community projects it might be better off financially. All too often the Warringah Council and councilors are far too worried on how they appear to be seen by waving their virtue flags, suggesting there is a climate emergency (because a 16 year old said so?) and trying to ensure you have some appeal to the voters rather than having sound policy and doing what we pay you for. There is no business plan for these charging stations, what is the return on the investment? How many electric vehicles are there in the Northern Beaches? How many would use the charging stations? (have they been surveyed?) How would they pay for it? And since when did the council become an energy supplier? The council pretends to be wanting to be seen to be green, however the electricity to supply these charging stations will be coming from what source? Yes base load power which is currently, coal fired! Therefore and unequivocal NO to the proposal. By the way, climate change has been happening since day 1, so the council seems to be gullible to the climate change cause of it being anthropogenic. I do suggest you do more research and more reading from various sources on both sides of the political debate.
21	Good proactive work. Is Freshwater a good contender for a site, by the electric sub-station and the shops / supermarket nearby?
22	Great progress whilst the Federal Gov etc sit on their hands. One area the plan does not make clear is what happens if a vehicle overstays the time limit at s charging station? If the limit is 1 he then what happens. Easy to stop the charging process and maybe even text the owner but meanwhile no-one else can use the facility.

23	Great stuff. Anything Council can do to promote the use of EVs (versus petrol driven cars)will help the sustainability and air quality of the Northern Beaches.
24	Great to see council looking at electric car infrastructure.
25	Has the council considered green-powered charging sites? Perhaps installing them in the existing council carpark in Mona Vale and installing solar panels on the roof of the structure? Or could one run from the existing solar on the council chambers in Mona Vale and Avalon? They look to be large systems.
26	Hello, I fully support having as many charging hubs as possible on the Northern Beaches. If the Northern Beaches Council is working towards zero carbon emissions then it is important that the electricity being provided at the charging hubs is coming from a renewable energy provider or directly from installed solar panels. Kind regards
27	Hi,Thanks for producing a plan for EV charging in the Northern Beaches. I have used an EV in our daily family life (BMW, then Tesla) for the last 4 years. I now run a small EV rental business in [redacted]. I also helped start a public EV charging business in 2019. My primary feedback is to avoid 25kw DC Fast Charging for Level 2. The charge rate is not fast enough to provide a meaningful charge in the proposed potential 30 minute time limit in some locations. Please aim for at least 50kw and above for DC fast chargers - this is the basic minimum standard really for a 'fast' charger. You'll find 25kw DC chargers will quickly become overwhelmed with too many cars waiting to charge and a poor service level will ensure. NRMA are installing 50kw chargers as the minimum standard and public expectation is that this charge rates qualifies for a 'fast' charge. Secondly, please consider charging (dollars!) for a charge at AC chargers in public car parks. We are beyond now the need for free charging as an incentive for EV uptake. Electricity - especially at the wholesale rates council must procure it at - is cheap enough vs the use of fuel that the provision of an AC charger which charges a fee within the public car park would still be of use, and get used. There is also the perception that EV owners are 'free loaders' vs those that pay for fuel - this can only be addressed by charging a fair rate for electricity within public car parking locations. Within commercial parking locations offering free charges, that is a different commercial incentive to attract customers. Council do not need to encourage people to the beaches for free electricity. I support fully the need for two charging spaces at each location. The charging experience is very frustrating if arriving at a charger which is 'blocked' by other vehicles charging or who have finished charging but haven't moved. Two spaces go a long way to mitigating this issue. Maintenance - please ensure council budget for maintenance of chargers or have this included within their commercial agreements. Chargers go offline at times. Mittagong NRMA has been offline for 3 weeks at the time of writing. Staff and dollars need to be allocated to jumping on problems and fixing them quickly to avoid white elephant perception of non-used chargers due to breakage. In conjunction, key staff within each parking location need to be educated about the processes for what happens with customers who have an issue with a charger, and who to call if a space is blocked by a non-charging vehicle. If you would like further information about electric vehicles from a local owner first-hand, please get in touch. I would be happy to share my experiences of >100,000kms in EVs with council.
28	Highly supportive of having more EV charging points on the Northern beaches
29	How about situating charging points near community batteries too? That would : - Offer a truly carbon-free drive

	- Boost uptake of the community battery program - Open up local users of the charge points who already have an interest in EVs Or put community batteries near charging points, where space allows.
30	I agree that the NBC needs to begin to put in the infrastructure in place to support the use of Electric vehicles. However there needs to be greater support from the Government to encourage EV ownership. For instance tax breaks, a greater variety of models available for purchase in Australia. At the moment there is little to incentivise EV ownership apart from a green conscious and a spare $50,000 in your bank account.
31	I am against council setting up this draft I have read it and a lot of changes need to be taken into account . Not on public land,Council could charge whatever they like ,plus charge all ratepayers in the Northern beaches to set this up. Keep building high rise not enough car spaces so where do they charge. I agree for public transport to be charges at Mona Vale,Brookvale ,and Frenches Forest Depots, council also has land where they could charge their trucks. I was led to understand that homeowners would have their own charging set up. Wind, Solar and batteries may work some of the time. We still need gas coal and nuclear power for the whole of the nation. We have not got the NBN right yet if power goes off no phone no internet Our internet goes off most weeks for an hour or two, no lights no hot water no cooking ,And you want electric Cars ?
32	I am an EV driver, so I welcome this project. However, I think it would be worth having more than one carpark offering charging station in Manly. Also, I do not think the Whistler street carpark should be the one chosen to provide charging stations. There are several other carparks in Manly that are a lot more spacious and convenient to use. The Whistler street carpark has too many levels, poles everywhere, and very tight car spaces. If I was visiting Manly, that would be the last carpark I'd use. This carpark should have been demolished, and I hope one day the proposal will be back on the table to get rid of it. Lets EV drivers recharge their car in a modern, recently built carpark, not in this outdated eyesore.
33	I am fully supportive of added EV charging infrastructure that provides at a minimum Level 2+ 22Amp or Stage 3 - 50A DC both 400 - 800V capabilities for use by any Electric vehicle and PHEV vehicles. As a resident in Freshwater I am a supporter of the Lawrence St, Freshwater Car park as a good local charging station due to its proximity to the Ausgrid sub station and access for Stage 2 & Stage 3 fast DC charging.
34	I am fully supportive of this plan with council to fund the initial capex and customers to fund the ongoing opex. This should be designed to be break-even for Council after the initial outlay. I would support measures that encourage frequent car users (even taxi's etc) to utilise charging points.
35	I am very supportive of the electric vehicle charging infrastructure plan. I do feel it important that solar energy or other evolving green energy sources by used for the public recharging. There will also need to be some mechanism to ensure that individuals do not abuse the privilege of charging their vehicles, eg not monopolising charging stations.
36	I believe that EV charging should also be installed at Glen St Belrose
37	I believe this is the way of the future. We must keep ahead of the changes rather than be caught retrospectively adding charging stations.
38	I do not agree that my Council rates are to be used in any way to support electric charging stations! Footpaths, local roads are in a dismal state . If electric cars are your future then find private business to pay for this infrastructure. Electricity is changing from reliable sources and being used more and more...look at our humble telephone now having to use electricity to phone people because of the nbn! More electricity use

	of the grid....now cars to be added to this. If green policies are popular then nuclear energy is more the answer!
39	I don't understand why the council is building these. The council doesn't build petroleum service stations or power stations. This area should be left for the market to supply and provide planning support for commercial operators to build and provide. This would allow for a demand led rollout rather than an inefficient system run by well meaning power bloc officials.
40	I have had a relatively quick review of the proposal and I find, like many proposals from Northern Beaches Council, there is NO BUSINESS CASE presented to justify dedicating space or even allocating resources to these projects BEFORE setting up the proposal. How many electric vehicles on the Northern Beaches? (Even Ms Steggall does not have an electric vehicle) What existing infrastructure is in place already, and what is private enterprise doing about it before the Rate Payers have to fork out our "hard earned $'s? Where is the technology heading by the various vehicle manufacturers? what is the maintenance costs for these charging stations likely to be? The proposal has Zero of this information. Perhaps this should have been put forward and opened for comment on April 1.
41	I have just ordered a new electric vehicle due in July and see little or no infrastructure support in the form of charging stations outside the Tesla and limited NRMA sites. This is particularly concerning in the regional areas and neither the State or Federal governments have any real interest in supporting the move to Electric vehicles. This is contrary to every first worlds future car and climate policy. Well done Northern Beaches for moving ahead with such a plan.
42	I have owned a Kona EV since May 2019 and travelled extensively through NSW. I have four recommendations. 1. Locate 1 x 50kW Level 3 fast charger in each of the Pittwater, Warringah and Manly areas at tourist destinations. Places like RSL clubs are good such as Mittagong RSL as you charge in 40 minutes and can grab lunch or a coffee. 2. Provide Level 2 chargers at shopping centre and supermarket locations for the use of residents and in particular apartment dwellers. 3. Level 1 chargers are not worth the effort. 4. Consider shelter to the stations located externally. The shelter should extend as required to cover the charge point in any vehicle (approx 3m) Wet weather functionality
43	I own a Mitsubishi Outlander PHEV, which I mostly run from home solar power (and offset) for getting to work and back, dropping the kids at school, shopping, etc. My range isn't large; approximately 35km. However, this means that I can drive most days without touching the petrol and producing significant pollution. I intend to buy a newer Mitsubishi PHEV in 2-3 years so I am very supportive of the plan and that you have noted that many current PHEVs cannot use the intensive power outlets provided at most malls now. I'd like to suggest that you consider including 1-2 parks with the new chargers for Queenscliff Surf Life Saving Club during the substantial building works there at present. [redacted] and there has been a lot of interest in my vehicle. I suspect that having a local charging station will be very effective in helping people see that electric vehicles offer great advantages for the future.
44	I own a Tesla and live in Queenscliff, a very small suburb with at least five other Teslas. I support rapid expansion of EV charging. We need more EV charging points in the Manly area than just at Whistler St carpark.
45	I submit that if the council is serious about encouraging local residents and businesses to swap from conventional petrol and diesel road vehicles to electric vehicles then

	significantly more charging stations are required. I am a resident of Balgowlah and my nearest council supplied charging stations would be several suburbs away. Seeing how many cars park outside to serve both locals, visiting shoppers, tradespeople and commuters, it seems like a significant missed opportunity not to see a more ambitious and comprehensive location list. I would have thought that having an EV charging point at every publicly utilised council facility as well as every set of shops in the area is sending the right message about electric vehicles being the right choice for local motorists, and a choice that does not compromise their access to fuel for their vehicle. If you make it an additional journey and chore to recharge, then it will not encourage uptake!
46	I support any moves towards providing as many charging stations to encourage Northern Beaches residents to buy electric cars. Obviously the current lack of charging stations makes the decision to buy electric even harder.
47	I support more EV charge points to encourage ppl to have EV, rather than fossil fuel, cars.
48	I support the proposals but don't feel they go far enough. I would like council to propose that all future development applications such as shopping centres, medium density housing, commercial and industrial buildings and hotels include EV charging points. I would also like to see that existing premises be requested to include EV charging points in their public carparkz
49	I think the plan makes sense. I believe that you will need to carefully consider the cost passed on to the customer for using the charging facilities given there are a number of free options currently available but otherwise the plan seems sound. I have no further comments except a minor correction that doesn't impact the validity of the report: On page 4 you note that PHEVs are not able to make use of fast charging, This is incorrect. My PHEV has a CHAdeMO charger (2018 Mitsubishi Outlander).
50	I think this an excellent initiative. This will help pave the way for more people switching to EVs.
51	I would like to see the plan require that all EV points use renewable energy sources, rather than the current wording which appears not to require renewable sources. EV charging from standard non-renewable coal power is somewhere between pointless and counter-productive.Thanks.
52	If my choice was to convert my internal combustion engine to run on ammonia, could I expect a vehicle refilling plan at the community's cost? Not likely. If I chose to buy a vehicle powered by hydrogen, could I expect a public refilling station? It appears to me that this plan is nothing more than a greenwash to try to put lipstick on the Council Pig and make it look environmentally aware. Worse, the power will still come from coal-fired power stations so banners can be used to advertise the proposed charging plan as 'Electric vehicles - powered by coal.'
53	I'm glad to read this. I hope to switch to an EV once there are more charging stations and so i support this plan.Thank you
54	I'm glad to see the local government making plans in this space. Whilst the federal government is being resistant, the global car manufacturing is changing, so when all we can buy is electric vehicles, we better hope, or better still, plan to have the necessary infrastructure in place.
55	In my opinion, Council should not use scare public funds (and take the risk) to pay for the provision of this infrastructure. Council does not fund any other types of infrastructure, e.g. solar, utilities, communications, therefore, why single out this one. As with other sectors, if there is sufficient demand then private sector will step in to meet this.

56	It is a form of subsidy to foreign vehicle manufacturers, who sell prestige cars to wealthy Australians. Council land and resources should be focused on public transport.
57	It is up to the vehicle retailers to provide the infrastructure for EVs not rate payers. As EVs are not neutral in their emissions I strongly feel that no government body should be biased towards these vehicles. Users must pay for any charging of their EVs (without subsidies) and until the power network is 100% renewable this is a false environmental benefit. Users must also pay for road usage through a form of road tax based on kilometres travelled, given they do not pay fuel excise. I see EVs as a transition as they are not carbon neutral and hence they are not the final environmental breakthrough. What happens with the used batteries for example.
58	It should be mandatory for all shopping centres to have a few charging point. The plan should give the number of charging point per location.
59	It's encouraging to see Council moving ahead with EV infrastructure implementation, as demand is likely to increase significantly with the ramp up in the availability of affordable EVs later this year.
60	It's a good idea. Maybe even partner with Tesla to build a supercharger on the northern beaches
61	It's good to see Council being proactive with EV charging infrastructure. Even though many people on the Northern Beaches should be able to charge at home (if it's a house with a garage) the provision of many highly visible well planned charge points will enable local EV owners living in units and non residents to easily charge their cars and encourage others to think more seriously about buying an EV as their next car.
62	Looks good to me. We need this in place before the impending tsunami of EVs. It will happen faster than anyone anticipates.
63	Manly is a major destination so we need more than 1 location. I see two proposed for Palm Beach, Dee Why etc so surely Manly will attract more visitors with EVs? I have a PHEV and would use this in many of these locations so YES YES YES, bring them on ASAP. Also strongly recommend fast chargers and link with providers and sponsors to fund these.
64	Overall, I strongly support what Council is doing. I have read these web documents plus the draft plan. We have used a Renault Zoe BEV for all Sydney travel for the past three years and note there are currently limited charging locations in the NBC area. We can utilise Type 1 and 2 charging only. The facilities at Dee Why are good- well done! However, there is not much else. The Ausgrid Jolt facilities will be good for some vehicles but not for us (no compatibility). These Jolt facilities should be accompanied by a Type 2 charging cable which would make them MUCH more effective and accessible to just about any EV rather than a limited subset. We live in Avalon and the proposal to put something at Palm Beach is good (provided it includes Type 2, which I suspect is your intent) but we would also like to see something at Avalon Shops.
65	Plan says decisions made on future forcast use of EV's. Is it not a no brainer that EV's are coming and are here to stay? The biggest issue is the actual availability of EV's in Australia. There aren't any real options to consider. Choice, availability, price! EV's are being designed and made but are being sent to the US, Europe and UK where their governments have proper emissions targets, unlike Australia. We are missing out massively and are already years behind the rest of the world with EV uptake. This must be addressed at government level with new stricter policies in place to pursuade car manufacturers to send EV's to Australia as soon as they are designed. I want to buy an EV today, but there are no realistic options for full electric cars for Australia.

	Putting the infrastructure in place is obviously the right thing to do, but this is again years behind. They should have been installed years ago along with the right government policies so Australians could take up EV's at the same time and pace as the rest of the western work have. Having interest in and wanting to buy an EV is very frustrating living in Australia. Big changes need to be made quickly by all departments, governments and councils to fast track Australia and catch up with the rest of the world. How ever many charging points are being proposed, my guess would be that you need to increase these by 10 fold. Finally, I read there is a target of 30% reduction of emissions by 2038.....that figure is absolutely laughable. It's not enough and Australia is doing very little to help at the current speed of EV policy!
66	Please be aware unless the charger has an on/off switch it is not possible to remove the charger plug from the vehicle during charging. Therefore short time (under 1+hours) charging would not be practical. It is possible to make an adjustment with the vehicle's charging regime but this is not something everybody could do.
67	Please only consider level 3 chargers, so that charging can be quick, rather than people using it as a cheap way to park
68	Please press the government to make all recharging consistent among manufacturers. We are at the beginning of change, let's not make it like the Apple iPhone charger vs the rest. Also a smart NB council would make this a destination for EV tourism (poor Tesla drivers do not exist) .
69	Providing charging stations is fine, however they should not be at the expense of parking bays as in most areas there is limited parking. Also the usage charge should also recover the set up costs. Those with non electric vehicles pay significant amounts in fuel excise which electric vehicles dont pay.
70	Provision of charge points for electric cars is essential. Surely the council does not require 'permission' from the public to go ahead with their plan. I am sure that the development of a new petrol station in the Northern Beaches does not require public support before it is built. Just DO IT....Northern Beaches can be the leader; stop procrastinating and take the 'plunge'. It is impossible to have 100% agreement on anything these days, but once implemented, the debate will subside and having charge points will be the norm.
71	Support full user pays - this includes a charge to cover/repay the cost of establishing the charging stations. This ensues that ratepayers are not subsidising EV owners. It also ensues that private EV charging operators are not disadvantaged by the provision of council charging stations.
72	Thank you. This is a good first step towards EV charging infrastructure. However, the plan seems to not yet reveal how residents with no off-street parking can possibly charge their EV in their neighbourhood. Is the council planning to allow for residential charging on the street? Will the council provide opportunities for third parties to provide street charging in residential areas? Will residents be allowed to run a cable to their vehicle over the footpath if that'/s the only way to charge their EV? Thanks,
73	The aspiration of 30% by 2038 seems out of step with most developing plans. 50% by 2030 is emerging as a common goal. Greater London already has regulations which require by 2023 all public transport including cabs to be engineered to meet requirement of travelling zero emissions in 30 miles of travel. Incentives of 7,500 UK pounds discount off new vehicle tax for purchase of EV's is already in place. From 2030 no new ICE vehicles can be sold across UK.
74	The infrastructure is good. Please ensure that all construction costs and electricity costs are charged to the user of the stations on a user pays basis. All electricity should

	be sourced from green electricity sources. If non green electricity is used, this pollutes more than conventional motor vehicles
75	The more charging stations that are installed will hasten the move of Australians, particularly those in cities, to move to electric vehicles. It's chicken and egg, so the investment in charging stations is a true investment in the future of our planet. Do more, even if some of them are pay for use, I think those that are converting now are doing so for the result, and cost is not the main consideration.
76	The more the better.
77	The number of locations seems quite limited - there are many areas not on that list that don't have EV charging. Perhaps near sporting facilities (where there is a regular turn over of attendees and spectators) might make sense (such as Melwood Oval or Lionel Watts Reserve)? It feels like there should be more in Manly from both the perspective of tourists and the higher density of living so residents might be less likely to have access to their own charging infrastructure? Same could be said for Narrabeen. Having EV charging near the lagoon and retail might attract more people to the area to spend money with retailers etc.
78	The Plan discriminates in favour of a very small minority of car users (electric cars), and discriminates against the overwhelming number of users of normal petrol/diesel cars (normal cars). Discrimination arises from the following; (i) Plan deprives users of normal cars, of increasingly rare street parking, and, (ii) Plan does not provide for fuelling normal car users with petrol/diesel outlets on street. Let those who choose to experiment with electric cars, make their own arrangements to "fuel" their cars, as normal car users have done for more than 100 years. Council has no authority to work against the convenience of the majority of its voters. What will Council do when "hydrogen" cars come into usage?
79	The plan should provide 1. No loss of public car park spaces overall in the lga 2. Should make a commercial return 3. Should not be subsidised by ratepayers ie needs to stand on its own merits 4. Should not be developed on sensitive council owned land
80	The slow charging stations could be located adjacent main transport lines (e.g b-line carparks) but you need to assume most people using these chargers will need more than 6 hours. anyone in the city on their daily commute would be away for 10hours on average. Additional consideration to promote EV's is to locate these sites close to the points of interest (e.g. shops, access to the beach, etc) like accessible car spots and pram friendly spots. if the spots are closer, people will be more incentivised. otherwise the proposal is sound and could be expanded to more locations such as sportfields with fast charging.
81	There are a number of existing charging companies who will install the infrastructure at no cost to ratepayers. This would be a better proposal than Council funding the infrastructure.
82	there are not enough electric cars in the community to support it..no benefit electricity is the second largest polluter..going backwards and where are you going to store the old batteries once they are depleted who is going to pay for the electricity
83	There are too may socket types unfortunately but please make sure: - J1772 is available. - The cables are long enough. The Mitsubishi Outlander PHEV charges form the side of the car, not the front. The cables of the charging station in Jindabyne are too short, as an example. - Any plan to make sure petrol cars do not park in EV bays (so called gasholes)? I have seen that happen in a Chatswood car park.

	- What about charging costs? - Any requirement for registration, app or anything else? Great initiative.
84	there is not enough demand to support this spending. you are behind the times even toyota Aust CEO advised (last week) the hydrogen tech is prefered over electricity. far superior and toyota will phase out the electric project. battery disposal issues. there are not enough electric cars to justify this expense. Please look at the needs of the many to the needs of the very few. waste of money
85	There should be a EV site in Seaforth. A charging station would make it convenient for locals to charge their EV when at one of the excellent Seaforth restaurants. I would suggest either the RSL car park or in Kempbridge Ave.
86	These need to be ubiquitous.
87	This is a great idea. As a Phev owner “Range Rover” I would recommend you review if the cables will be supplied or owner uses there own. All type two charges need adaptors for type 1.
88	This is an exciting step for those who own and are enthusiastic about Electric Vehicles. I have owned a Renault Zoe for almost three years and would not willingly return to a non- electric vehicle especially for around town use. Ours is charged mainly at home by our solar power system. My failure to completely endorse this plan is related to the big geographical gaps in proposed sites. I live in Avalon which is not mentioned. Judging by the number of EVs I have seen in this area, I believe that an EV charging point in one of the Council carparks would be a great asset for tourists and residents alike- charge while shopping or dining, the perfect way. We regularly stop at Taste Buds at Terrey Hills to have coffee and a muffin and top up our car from the Tesla charger, which is compatible. Win for us, and for the merchant too, all solar powered. So great that you are considering this move, i hope it is done wholeheartedly.
89	This is excellent in principle. It needs to plan for the future by addressing potential future demand as EV take-up climbs in Australia (when the Feds get their act together). It is not ambitious enough in terms of locations, although it is a start. As an example, when I stayed in Hermosa Beach, a beachside suburb of Los Angeles, there were two EV charging spots in the normal parking bays outside the shops at the local shopping centre (ie not a mall). They were constantly in use by EVs, and well and appropriately-utilised ie not by non-EVs. There is no reason NBC can’t plan on doing something similar as EV take-up increases, eg there are quite a few EVs already in Avalon, and more to come once prices start to come down and hopefully as the Federal Government develops a policy which does not discriminate against EVs
90	This is great to see. Good that it is in line with Future Transport Plan. Also that it is aiming for universal compatibility. Please consider making it mandatory that a 100% renewable energy option be provided to customers as a requirement for operating a charging facility.
91	This is NOT a role of council to provide FREE publicly funded fuel with our rates for private ev owners...unless NBC proposes to charge for it to recoup costs for ratepayers!!
92	This may be a first stage strategy, but should support both a wider location, spaces at kerbside for rideshare vehicles and encouragement for fast charge at private locations (ie shopping centres that are not council carparks)
93	This plan has left out almost every bit of detail that Northern Beaches residents would actually care about. It is so vague that it is meaningless. The plan does not state: 1)Where the EV spaces will be created 2) When the EV spaces will be created 3) How many EV spaces will be created

	4) Whether these EV spaces are newly created or replacing ICE spaces 5) Whether this plan is aligned to a NSW or Federal EV Plan of Objectives 6) What the long term strategy is for EV's on the Northern Beaches generally 7) Whether the "demand" this 'plan' intends to address is the current demand, or anticipated future demands...and if future demands, what are the growth projections on an annual basis (I know what the EV growth projections are over the next 5-10 years and this 'plan' is a joke of an offering to try and meet that demand) 8) What the "strategic decision criteria" it will be basing its decisions on or how they will be developed. This is to be expected though, given the last plan which stated there was a "perception" that the cost of parking on the Northern Beaches was extremely high....when in fact the cost of parking is ACTUALLY extremely high when running comparisons...well, that says a lot about whomever is running things.
94	Using EVs is a good way to reduce our carbon footprint. Efficient and easy to drive. We should increase the speed of introduction of EVs. NOrthern Beaches council should go 100% carbon free ASAP.
95	We are keen to purchase an EV. We live in Terrey hills and it is great to know that there will be provision of charging stations locally in the area to support EVs. We would love to see more incentives for consumers to purchase EVs.
96	We burn fossil fuels to create electricity. Complete waste of time. Technology needs to improve further. This will just clutter parking spaces.
97	We need to be much more aggressive in our targets to transition to EVs and the provision of public charging will play a major role. - I would like to see : - priority parking/charging spots in all public spaces - rooftop solar on all community buildings with ultra fast charging spots available - ultra fast charging spots provisioned in joint venture with any private company with on-site solar
98	We need to provide as much help as possible to our decrepit federal government to encourage them to move towards supporting ev transport. I suggest far more places than mentioned in this proposal- at least triple.
99	We prefer you fix the roads and markings on the roads as a priority.
100	What is the actual take-up of EV's in the shire & hence the real possible demand? It would appear that the cost of purchasing EV,s is relatively expensive compared to other vehicles. This would reduce any calculated forecast of take-up and thus demand. Does this mean that those residents that are monied up enough to afford an EV are being helped along the way by those that can't. Parking generally in the shire is rather short in supply, except for taxi ranks. So providing EV charging in what would normally be parking spaces is not that wise. How permanent is the notion of EV's anyway most of the major car manufactures have been looking at other energy sources such as hydrogen. The Council could run the risk of spending on an infrastructure that could soon become obsolete.
101	What will be the charge to use the charging stations? I don't want my rates to pay for the electricity that is supplied. Like the NRMA supplying free electricity.
102	Wherever there is a requirement to buy a vehicle/machinery the council should prioritise the purchase of electric vehicle/machinery.
103	Whole heartedly support the move. We need more EV chargings stations AND local government putting pressure on state and federal government to stop imposing EV taxes when they are already Taxed (stamp duty, Rego etc). Why should EV's be taxed more than any other vehicle? Benefits far outweigh the negatives (unless you are hte fossil fuel industry). Who would love to breath clean air in our towns and cities instead of carcinogenic BTEX (aromatic hydrocarbons) or PM2.5s? What's the cost to society through breathing related

	illnesses. Did I mention noise benefits from EVs and noise pollution from the current vehicle stock?
104	Why should Ratepayers pay for Rich people to charge their expensive electric cars - Electric Car Makers should be responsible for installing the infrastructure not Ratepayers.
105	Why should ratepayers pay for the cost of charging stations for electric vehicles? This is another subsidy foisted on the populace. Let the suppliers of electricity pay for the charging stations, they already enjoy vast subsidies to generate power from solar and wind which has resulted in Australia "enjoying" some of the most expensive electricity prices in tge world. They have plenty of money in their budget. There is also the question of charging the vehicle at night, necessitating coal generated power!!! The propsal is bereft of financial responsibility and common sense
106	Why should the rate payers be subsidising the very small minority of rate payers who are owners of EF's or lose valuable car parking lots. Surely, if EV owners are capable of recharging their vehicles at home just as owners of vehicles running on Petrol or Gas have to ensure that they have sufficient fuel to reach their destination ?. It is bad enough that Council, which is supposed to reflect the wishes of all rate payers, has installed idiotic poorly designed and constructed hubs on the main street through Manly for some unknown reason as the majority of restaurant clients are not using these hubs and Manly has lost very valuable car parking spaces..
107	Why support the lithium in the batteries being processed in China and the cobalt in Electric cars being mined in Africa by black children slaves.
108	With regard to Level 3 chargers - the draft plan states these will be 25kW DC, and may have time limited to 30 minutes. 30 mins at 25kW would only provide about 50-70km range for an EV, so is not particularly helpful (this assumes the charger is operating at 25kW, which will not always be the case). May I suggest that the Level 3 chargers be true ultra-rapid chargers, that can charge up to 350kW. This will allow most EVs to charge to at least 80% within the 30 minute time limit. These chargers are being rolled out by charging networks such as ChargeFox and Evie, so perhaps organisations such as these could be incentivised to deploy their EV charging stations on the Northern Beaches. With respect to Third Party electric vehicle infrastructure management - the document doesn't read as being particularly friendly toward third party providers, particularly in relation to payment of fees and security deposits. May I suggest council take a different approach, and seek to incentivise third party providers through fee-free arrangements to these providers, to make it more appealing to them to install chargers on the Northern Beaches. Please note, at present there are no Level 3 chargers on the Northern Beaches at all, which makes the Northern Beaches a 'dead zone' for rapid charging. At a minimum, I'd like to see ultra-rapid (350kW) chargers on key transport corridors such as Pittwater Road (maybe around Brookvale & Mona Vale, and Warringah Road.
109	Yes I support the Charging Stations but , the recharging must only come from Solar or Wind otherwise you are defeating the whole exercise. I will not support EV charging stations if the are taking power from the grid or coal fired power stations
110	Yes, agree to provide charging stations. Would be good to have more in the Manly, queenscliff, Fairlight balgowlah area.

111.

GO ELECTRIC. GO ANYWHERE

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7 May 2021

Ms Michelle Carter
Strategic Transport Coordinator
Northern Beaches Council NSW

Via: transport@northernbeaches.nsw.gov.au

RE: Northern Beaches Council Draft Electric Vehicle Charging Infrastructure Plan

Dear Michelle,

Evie Networks welcomes the opportunity to provide a submission to the Northern Beaches Council on the draft Electric Vehicle Charging Infrastructure plan (the Plan).

Evie Networks (Evie) is an Australian-owned company with the largest electric vehicle fast-charging network in Australia. Owned by the St Baker Energy Innovation Fund, and with the support of ARENA, we have received up to $100M in funding to build this network and give electric vehicle owners across the country the freedom to travel anywhere.

In addition, we are deploying metropolitan-based electric vehicle (EV) fast-charging networks in Australia's major capital cities, focusing on supporting mobility-as-a-service (MaaS) solutions.

These services are offered to local communities at no cost to Council.

We understand there is a real need to shift to electric vehicle, with Australia's transport emissions making up around 20% of our greenhouse pollution. EV technologies are essential for Australia to fulfil its commitments under the Paris Agreement; a legally binding international treaty on climate change which aims to limit global warming.

With this in mind, we welcome Council's consultation to support investment in the right infrastructure and enable our community to make the transition to electric.

Principles focused on driver needs

The principles outlined in the Plan are critical to provide communities with access to EV infrastructure.

In addition to these principles, there must be a key focus on local driver needs to enable the community to engage and make the transition to electric. Therefore, we recommend Council considers adding the following principle to the Plan:

- Public Charging infrastructure must carefully consider the needs of local drivers.

The following will need to be considered in the design and overall approach to ensure driver needs are centric to the location and technology choices adopted:

- Local residents without access to charging at home: must be able to perform a weekly top up (200-300km) in 60mins or less.
- Local business fleets: fast top ups (eg. 15mins) to keep on the move if their batteries run low.
- Visitors to the area: fast top ups so they are free to continue engaging with the community and local businesses.
- Professional drivers: fast top ups so they can continue carrying passengers.

Public Charging Infrastructure: Location and technology choice

Fit for purpose

According to Australian Bureau of Statistics (ABS) Census data, 42% of homes in the Northern Beaches are either apartments or attached dwellings. Most of these homes will not have access to home charging anytime soon as retrofits are difficult, both technically and economically.

Body Corporates will be faced with the decision of who pays to enable this technology to be installed, and how ongoing costs would be managed. Along with the ABS data, this supports the need for public charging infrastructure to be available for communities across the Northern Beaches.

We understand the community needs fast charge-up options for use on the go. Level 2 AC charging (22kW and less) proposed in the Plan is not suitable for short stay Public Charging. This level of charging is most suited to back-to-base and long-stay parking applications (4hrs+).

Other Councils in Sydney have experimented with Public Level 2 AC charging in two to three-hour parking areas and found usage of the infrastructure is very low due to the lack of convenience and speed.

Technology choice

It is worth noting that irrespective of 7kW or 22kW AC charging, most vehicles are limited to 7kW by their on-board chargers. Hence the range added will only be c.35km per hour.

Teslas can charge at 11kW AC. The 25kW DC Charging is half the speed of industry standard DC Fast Charging and falls short of driver needs. Many drivers will need to stay for two hours or longer to complete a full charge.

Funded primarily by advertising screens, the Ausgrid/Jolt solution is not the best outcome for the community when faster, advertisement-free solutions are available at no cost to Council.

Public Fast Charging (50kW and greater), delivering 300km+ range per hour, is essential infrastructure for local drivers to make the transition to electric. This infrastructure is currently lacking in the Northern Beaches area where the provision of charging infrastructure is necessary to relieve range anxiety for prospective consumers.

A gap in electric vehicle policy

In Australia, the lack of formative electric vehicle policy continues to have a devastating impact on electric vehicle uptake. However, research published by the Electric Vehicle Council in August 2020 found that 56% of respondents would consider purchasing an electric vehicle as their next car purchase (up from 48% in 2018 and 53% in 2019).

Furthermore, 68% of respondents overwhelmingly indicated support for government policies to reduce the cost of electric vehicles and provide public charging infrastructure to encourage take up.

While public support is strong, uptake of EVs is still very low due to policy failures. Private investment in public charging carries significant risk hence it is important for policies at all levels of government to encourage investment rather than impose barriers, whether they be commercial, regulatory or otherwise. Furthermore, we also discourage free-charging models as it sets the wrong expectations with the community and can therefore be detrimental to ongoing investment in public charging.

Conclusion

In summary, we encourage Council to ensure driver needs are considered in the Plan by encouraging investment in essential Public Fast Charging infrastructure without imposing terms that are too onerous. We believe this is in the best interests of Council, infrastructure providers and the community to ensure the right infrastructure is deployed in the right locations and is well utilised.

Evie's recent installation of 50kW Public Fast Charging at Mosman is an example of a successful deployment that has been very well received by the community, with high utlisation and community engagement.

We ask the Council to consider each of the issues and recommendations raised above and invite you to meet with us. Please [redacted] to discuss our submission in more detail.

Yours Sincerely,

112.

I am delighted to see the Council taking the initiative in this area since I expect the demand for charging will take most of us by surprise (especially when the Federal Government starts to promote electric vehicles).

However, I would call the document a strategy rather than a plan. For a plan what is required is an estimate of the demand and a calculation of how many charging stations are required over time. Since the strategy is a mixture of Council and Third Party facilities it is essential for the Council to make a strategic decision on the proportion of the demand which will be satisfied by Council stations. This is important, not only because it is the essential basis of a plan, but because Council charging facilities will be considerably cheaper to use than those provided by a Third Party. This is obvious because the Third Party must cover bonds, leases, infrastructure, operating costs and still make a profit while the Council charges only for operating costs. This will surely result in a bigger demand for Council facilities.

Consideration needs to be given to a booking system so that there are no queues.

Should demand exceed supply, consideration needs also to be given to giving priority to BEVs in preference to PHEVs since PHEVs are not reliant on their batteries.

There is mention of support for electric bicycles but the three types of chargers listed do not include bicycle facilities. A bicycle rider cannot be expected to carry a cable and charger to plug into a GPO.

There appears to be an inconsistency in the employment of charging types. Under the section EV Charging Technology (p10) it is stated that ALL charging infrastructure will have a minimum power capacity of 22kW AC or 50kW DC. However it is then stated (pages 4 and 10) that there also be 7kW slow charging in parking stations for commuters and those with limited off street parking with an allowed charging time of 2 to 6 hours. I do not understand the logic in providing slow charging because it reduces the throughput and certainly a limit of 6 hours will not help a daily commuter. The EVC Resource pack referenced in the document nominates slow (7kW) charging as suitable only for homes and workplaces, not public carparks and shopping centres (EVC p12).

In summary, this document needs more work to move it from a strategy to a plan with a defined outcome but it is a welcome start to what will be a massive change in our motoring lifestyle.

113.

Thank you for the opportunity to comment.

The transition to renewable energy is the inevitable most economic, least cost greatest employing future that is fully decarbonised and gives our children and grandchildren a survivable future. It is also extremely urgent – we don't have until 2050 to get to net zero, we have until 2030. Every level of government MUST do everything in their power to make this future happen and fast. The most significant problem in making this transition is to move from centralised baseload continuous power generation to distributed intermittent power generation that does not always match demand. This requires electricity storage in batteries or pumped hydro schemes. If the storage is distributed around our grid, then the demands on the grid for transporting electricity go down and grid infrastructure costs go down. If the storage is localised (like Snowy 2.0) then infrastructure costs go up significantly to distribute the storage benefits to generators and consumers. There is a serious problem in Australia with siloed thinking about the grid and about the transition to EV's. If the transition to EV's is greatly accelerated to match the transition to renewables, then all the EV batteries can provide distributed storage to the grid via smart (and ideally bi-directional) chargers. This is game changing. Australia has 2million private vehicles and if each of these has at least a 60kWh battery, then this adds up to 120GWh of distributed storage. That's the same as 3.5 Snowy2.0's and can provide 2.3days of storage of Australia's entire generation/consumption. If we had governments capable of joined-up thinking, then they would be investing massively in the transition to EV's and not wasting money on Kodak technologies like Hydrogen, Carbon Capture and Storage, or even Snowy2.0 and its expensive grid wiring or wasting public money on a price gouging cartel's gas-led recovery, because mass adoption of EV's is the inevitable future and will make all of these cul-de-sac developments uneconomic and redundant. On the Northern beaches lets show the rest of Australia the way – massive investment and uptake of EV's so that renewables become even more cost-effective and compelling (because there is loads of local EV battery storage). These will even overtake community batteries needed in the interim.

So up-front, thank you to the Council for taking this crucial initiative.

Responding section by section:

This Plan will:

Also provide greater distributed electricity storage to the Northern Beaches electricity grid, making solar and all renewables even more cost-effective and compelling to homeowners and businesses.

Council installed and managed infrastructure

i) Provision of Service

Agree that the charging should suit all EV's. In long-term parking locations, the charging should be smart and bi-directional so as to provide storage back to the grid at times when renewables generation is not meeting demand for all batteries that are over 80% charged.

ii) Cost Recovery – Fees and Charges

I think that it's a mistake to use cost-plus charging – Council should use value pricing to recover greater revenue from the charging points for two reasons:

- Firstly, this revenue should be ring-fenced to build a rolling fund to invest in further increases to the EV charging infrastructure – there are ~250,000 cars on the Northern Beaches that need to transition to EV as soon as possible. It seems appropriate that the beneficiaries of the charging points should help fund the roll-out of charging infrastructure.
- Secondly, if Council provide cost-plus rather than market rate charging, then the market will default to the Council's cost-plus charging rates instead of finding its own level. Initially the charging rate might be higher, but as the numbers of charging points increase, so competition will bring down charging costs closer to a cost plus basis.

iii) Council will supply a variety of charging solutions across the area

This seems rational. Over time, the charging infrastructure will need to also transition to respond as the technology improves for both batteries and charging. For longer-term charging the chargers must be smart and bi-directional to provide the benefits to grid and renewables economic benefits.

Third party provider electric vehicle infrastructure management

All of these conditions appear to be excessively bureaucratic and onerous and honed down to the minimum necessary not the maximum possible in order to best motivate the uptake of EV charging

Eligibility of provider

Obligation of provider

Lease arrangement

Security deposit and/or bond

Site Selection

The requirement for there to be existing and/or potential demand for EV charging should be removed because it is tautologically self-defeating. If you are trying to stimulate demand and uptake for EV's then the last thing you should state as a requirement is that there is existing demand.

Any relevant legislation at the proposed location that restricts the provision of EV chargers and thereby restricts the uptake of EV's is no longer fit-for-our future and must be repealed, not used to frustrate this essential and urgent transition.

Design Considerations - Visibility and Identification

Environmental

ALL CHARGING **MUST** SUPPLY **ONLY** RENEWABLE ELECTRICITY! If the chargers use fossil fuelled electricity this is completely counter-productive to the transition to cheaper, more employing renewable energy that gives our children and grandchildren a survivable future.

Parking Configuration

Electric Vehicle Charging Technology

Council should recognise that there will inevitably be considerable innovation in battery technology, charging technology and grid integration and should commit to maintaining a programme of rolling response as the technologies improve.

Council should coordinate with AusGrid and assist needed upgrades to infrastructure as this becomes necessary through the transition, not be a potential road-block (forgive the pun) to the transition. Investment in the transition in the short-term will pay handsome dividends to the entire community from accelerating the EV transition.

114	Well done on this initiative. The switch to electric cars will happen sooner than most people think, so the bigger your plan the better.
115	Good to see this proactive policy. It all makes sense to me. I just have one comment: I live in a unit block where there are no electric points in the car park. This is preventing me from moving to an EV. Has the Council considered this situation? Are there any initiatives to guide and help strata setup charging points for residents in these situations? Thank you for your consideration.
116	Hi There, Great plan… One thing maybe worth considering is signage saying "Charging Only." I have noticed at the charging spaces at Stockland Balgowlah that sometimes they are full, and one or two EV's aren't using the charging - they are just parked there…Not fair to an EV owner that needs to charge… If they are not charging, they should park in normal spaces.
117	Hi EV team, Great plan! Love it, with only a couple of comments on minor points: Locations Targeting locations up to 400m from village centres etc may be too far. I realise you would always look for closer locations, but 400m is too far to be attractive to users or useful to some with kids, prams etc, or shopping on return. I suggest 200m would be a better limit. Private land Is it possible to have an extension of the plan to include EV charging for public use on private land? eg, a commercial development may be offered incentives to install charging facilities accessible from a public street but actually located inside the lot boundaries,

	such as a reduced number of car spaces required ifX number are for EV charging. That way the plan's goals can also be achieved with no capital outlay by council.
118	I am very disappointed to learn that there are no public charging locations on the Northern Beaches for me to charge my new electric Mini. It seems that despite the fact that the number of charging stations may have increased that most (all on the Northern Beaches) are either Tesla or Type 1 stations. I believed (rather naively it appears) that when I had seen charging stations at shopping centres that I would be able to charge any EV car there without a problem. I now learn that I am unable to use Tesla chargers as they are using their own network and only Tesla's can use these (and no adaptors are available) and I am also unable to use all Type 1 stations unless I buy an adaptor for over $200. I understand that most EVs (other than Tesla's) are now Type 2, so why is it that most of the stations have not been updated, or at least have adaptors available to ensure that they can be used by all EV owners. I realise that the charging stations are installed and owned by private companies and presumably are funded by the owners of the shopping centres, but surely there should be clearer information available to potential EV owners. No wonder the uptake is so poor in Australia when the infrastructure for this type of vehicle is not keeping pace with the changes in the industry. I know that this is a problem for other EV users too, as my friend has just purchased an Audi EV and is experiencing the same frustrations. I note also that the council are asking for submissions from the public regarding potential new charging sites on the Northern Beaches. If my understanding is correct, you are proposing 2 sites in Palm Beach, 2 sites in Mona Vale, 2 sites in Dee Why and only one site in Manly (in the oldest, car park with the tightest spots). Surely Manly has many more residents and visitors than the other locations and should ideally have charging stations -which cater for all 3 types of connectors - at every car park. I note also that the councils proposal talks about installing these stations 'when funds allow', which I guess could be never! It is very frustrating that the government both state and federal are not promoting the use of this new greener technology like the rest of the world. We are blessed in Australia to have an abundance of solar power which could be generated on public buildings to power these EV stations too which would also reduce the use of fossil fuels to generate the electricity required.

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