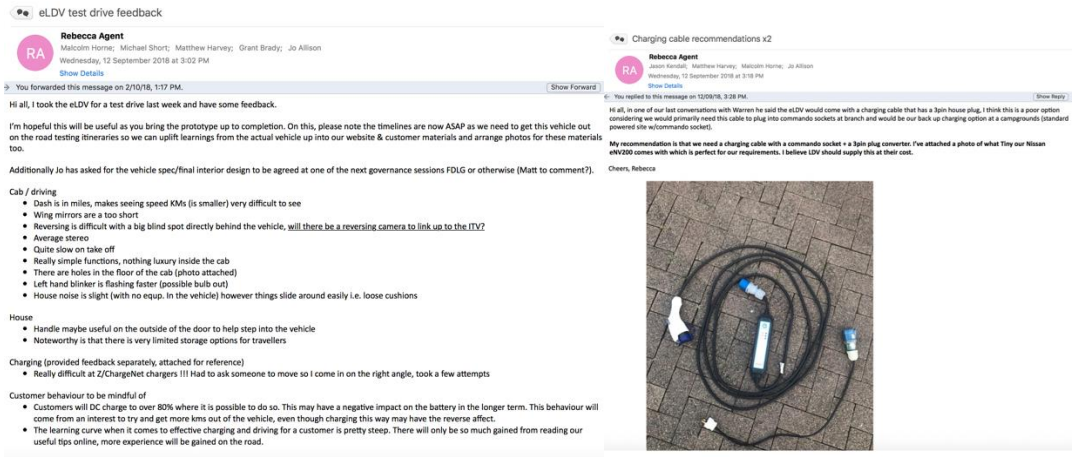
Special Report to claim 100% available funding from Milestone 6

Milestone description	**Trial and evaluation of the imported 2018 model electric campervan:** • Van user trials • User and technical evaluations • Insights into mix of users • Revision of itineraries and promotional material • Learnings for parallel new van design • Business systems processes for campervan operation initiated
Deliverable	A report that contains, as a minimum, the following contents: • Descriptions of user campervan trials undertaken • Summary of results of user and technical evaluations • Learnings to be applied to the parallel conversion of the electric van chassis • Any changes to promotional material and itineraries implemented, and • Any other information that you believe EECA should be aware of.
Funding Claim	**Progress of Funding: $0 out of $20,000. Claiming $20k this period.** As per discussion 5Oct, funding to be release upon receipt of this report.
Tasks delivered	
Descriptions of user campervan trials undertaken	• On-going user trials are in place with *thl* crew booking the Nissan eNV200 van to gather an understanding of the electric experience in charging and travel by trialing our electric itineraries around the North Island Coastal Loop. • Robust testing was undertaken in September to fully iterate improvements to the website, itineraries and gather learnings for next motorhome build
Summary of results of user and technical evaluations	• Many lines of testing have either been completed and/or are underway: o crew testing of the Nissan eNV200 to gather insights to the electric experience o high-level user testing of the eLDV for usability and customer experience in driving the electric motorhome prototype to iterate learnings for the final build o thorough testing of the electric itineraries represented on www.BritzEV.com o booking process testing ahead of rental bookings opening up at the end of the month, and o preparation for robust vehicle performance testing ahead of final build. • See evidence as follows: **insights to the electric experience** – with ongoing crew testing of the electric experience with outputs, themes, learning captured as per example following • See evidence as follows: insights to **usability and customer experience in driving the electric motorhome prototype** achieved with the testing of the LDV. This provided excellent insights

Booking	Crew Member	Range	Charging	Vehicle	Itinerary	Planning
15-18Aug	Tom Norman	Range was fine around coromandel but then when we charged at thames and had to return to auckland we knew we couldnt make it and just made it to a charge point in pukekoe with 4% and the km gauge flashing!	Our biggest issue was getting from auckland to Thames (the first quick charge) we arrived with 6% battery after leaving with 100%. It was such a nervous drive that it made us nervous for the rest of our trip! We had a great time once we got to coromandel in tiny! The charging points around coromandel work great and everyone at the holiday parks were super helpful and excited about tiny's journey!	Some of the best things about tiny was the super easy set up and comfort of the sleeping area, the ease of being able to park in pretty much any place instead of being restricted to van spaces. It was a great drive overall and space saving areas were great. However a couple of things we struggled with: - not being able to use the heaters/aircon due to the massive reduction of range and power (even when we needed to de-mist the windscreen so we could see, we opted for manual wiping rather than heaters) -no fans/air vent to help reduce condensation overnight -the features like heated seats and steering wheels seem completely un-necessary. I would imagine they are super heavy as well which doesnt help the range! We love the idea and ease of tiny but think it would do so much better with some less weight and it would definately need a better range! If left the same at the moment i think it might mean very stressed customers/negative feedback due to people being too worried or getting stuck and having to call out recovery	.Departing Auckland with full charge (130km of range) - stoped in Takanini with about 70km of range left so fast charged to 80% (100km range) .After a nervous drive to Theams with 5% charge left - another fast charge back up to 80% and set off tp the campsite at Shelly Beach . Arriving at shelly beach campsite with with about 30% of charge (25km range) left - pluged in to the campsite for a full charge overnight . The following day we set off full of charge to Whangapoua and then made it to Whitianga with a much welcomed 50% left - A quick fast charge back up to 80% then on to Hot water beach, later arriving at the campsite with plenty of charge but plugged in for a full charge overnight .Next day left for Whangamata arriving with 45% charge and fast charge back up to 80% - then setting off to Waihi arriving with 60% and with another fast charge went to Karenghake Gorge and then back to Waihi campsite and a full charge overnight . Final day we left Waihi for Theams - Arriving with about 30 - 40km of range left and then fast charged and then leaving with 103km of range . Leaving Theams for Pukekoe which was nervous as hell due to us being affraid to exceed 75kmh on a busy highway - after crawling into Pukekoe with 4% charge we managed to fast charge which we managed to get back to Mangere branch with 30% charge left	Thanks for the opportuni a great experience it wou see how tiny could work north island trip! Maybe some more charge points help!

for the customer experience, helped us to test the act of charging specific to this vehicle, and allows us to analyse what cable requirement will be best for the motorhome configuration



eLDV test drive feedback

Rebecca Agent
Malcolm Horne; Michael Short; Matthew Harvey; Grant Brady; Jo Allison
Wednesday, 12 September 2018 at 3:02 PM
Show Details

You forwarded this message on 2/10/18, 1:17 PM. Show Forward

Hi all, I took the eLDV for a test drive last week and have some feedback.

I'm hopeful this will be useful as you bring the prototype up to completion. On this, please note the timelines are now ASAP as we need to get this vehicle out on the road testing itineraries so we can uplift learnings from the actual vehicle up into our website & customer materials and arrange photos for these materials too.

Additionally Jo has asked for the vehicle spec/final interior design to be agreed at one of the next governance sessions FDLG or otherwise (Matt to comment?).

Cab / driving
- Dash is in miles, makes seeing speed KMs (is smaller) very difficult to see
- Wing mirrors are a too short
- Reversing is difficult with a big blind spot directly behind the vehicle, will there be a reversing camera to link up to the ITV?
- Average stereo
- Quite slow on take off
- Really simple functions, nothing luxury inside the cab
- There are holes in the floor of the cab (photo attached)
- Left hand blinker is flashing faster (possible bulb out)
- House noise is slight (with no equp. In the vehicle) however things slide around easily i.e. loose cushions

House
- Handle maybe useful on the outside of the door to help step into the vehicle
- Noteworthy is that there is very limited storage options for travellers

Charging (provided feedback separately, attached for reference)
- Really difficult at Z/ChargeNet chargers !!! Had to ask someone to move so I come in on the right angle, took a few attempts

Customer behaviour to be mindful of
- Customers will DC charge to over 80% where it is possible to do so. This may have a negative impact on the battery in the longer term. This behaviour will come from an interest to try and get more kms out of the vehicle, even though charging this way may have the reverse affect.
- The learning curve when it comes to effective charging and driving for a customer is pretty steep. There will only be so much gained from reading our useful tips online, more experience will be gained on the road.

Charging cable recommendations x2

Rebecca Agent
Jason Kendall; Matthew Harvey; Malcolm Horne; Jo Allison
Wednesday, 12 September 2018 at 3:18 PM
Show Details

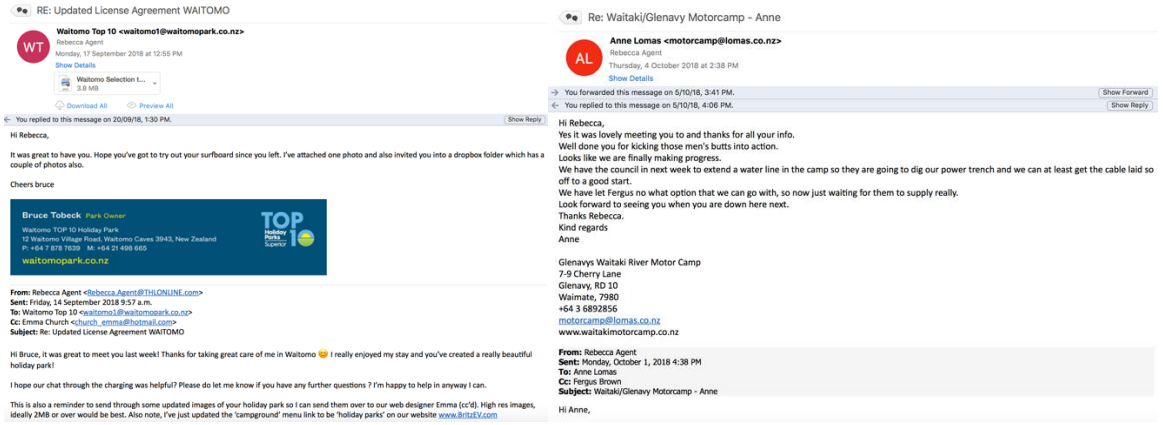
You replied to this message on 12/09/18, 3:28 PM. Show Reply

Hi all, in one of our last conversations with Warren he said the eLDV would come with a charging cable that has a 3pin house plug, I think this is a poor option considering we would primarily need this cable to plug into commando sockets at branch and would be our back up charging option at a campgrounds (standard powered site w/commando socket).

My recommendation is that we need a charging cable with a commando socket + a 3pin plug converter. I've attached a photo of what Tiny our Nissan eNV200 comes with which is perfect for our requirements. I believe LDV should supply this at their cost.

Cheers, Rebecca

- See evidence as follows: thorough **testing of the electric itineraries** was completed in September with Rebecca traveling both the North and South Island routes represented on www.BritzEV.com providing extensive edits to the information represented (see "Any changes to promotional material and itineraries implemented below") and gave *thl* an opportunity to meet with holiday park owners face to face to walk through the project and review locations for charging installations



RE: Updated License Agreement WAITOMO

Waitomo Top 10 <waitomo1@waitomopark.co.nz>
Rebecca Agent
Monday, 17 September 2018 at 12:55 PM
Show Details

Waitomo Selection t... 3.8 MB
Download All Preview All

You replied to this message on 20/09/18, 1:30 PM. Show Reply

Hi Rebecca,

It was great to have you. Hope you've got to try out your surfboard since you left. I've attached one photo and also invited you into a dropbox folder which has a couple of photos also.

Cheers bruce

Bruce Tobeck Park Owner
Waitomo TOP 10 Holiday Park
12 Waitomo Village Road, Waitomo Caves 3943, New Zealand
P: +64 7 878 7639 M: +64 21 498 665
waitomopark.co.nz

From: Rebecca Agent <Rebecca.Agent@THLONLINE.com>
Sent: Friday, 14 September 2018 9:57 a.m.
To: Waitomo Top 10 <waitomo1@waitomopark.co.nz>
Cc: Emma Church <church_emma@hotmail.com>
Subject: Re: Updated License Agreement WAITOMO

Hi Bruce, it was great to meet you last week! Thanks for taking great care of me in Waitomo 😊 I really enjoyed my stay and you've created a really beautiful holiday park!

I hope our chat through the charging was helpful? Please do let me know if you have any further questions ? I'm happy to help in anyway I can.

This is also a reminder to send through some updated images of your holiday park so I can send them over to our web designer Emma (cc'd). High res images, ideally 2MB or over would be best. Also note, I've just updated the 'campground' menu link to be 'holiday parks' on our website www.BritzEV.com

Re: Waitaki/Glenavy Motorcamp - Anne

Anne Lomas <motorcamp@lomas.co.nz>
Rebecca Agent
Thursday, 4 October 2018 at 2:38 PM
Show Details

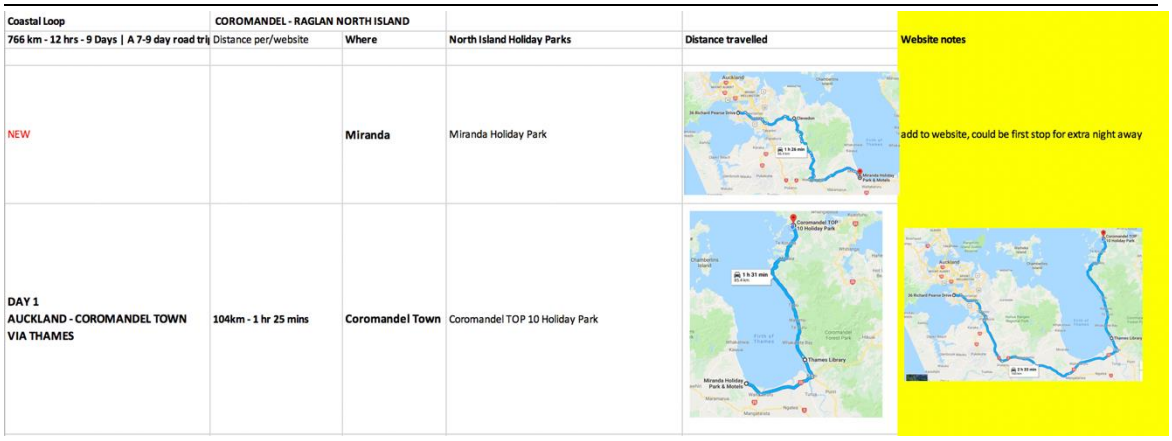
You forwarded this message on 5/10/18, 3:41 PM. Show Forward
You replied to this message on 5/10/18, 4:06 PM. Show Reply

Hi Rebecca,
Yes it was lovely meeting you to and thanks for all your info.
Well done you for kicking those men's butts into action.
Looks like we are finally making progress.
We have the council in next week to extend a water line in the camp so they are going to dig our power trench and we can at least get the cable laid so off to a good start.
We have let Fergus no what option that we can go with, so now just waiting for them to supply really.
Look forward to seeing you when you are down here next.
Thanks Rebecca.
Kind regards
Anne

Glenavys Waitaki River Motor Camp
7-9 Cherry Lane
Glenavy, RD 10
Waimate, 7980
+64 3 6892856
motorcamp@lomas.co.nz
www.waitakimotorcamp.co.nz

From: Rebecca Agent
Sent: Monday, October 1, 2018 4:38 PM
To: Anne Lomas
Cc: Fergus Brown
Subject: Waitaki/Glenavy Motorcamp - Anne

Hi Anne,



Coastal Loop	COROMANDEL - RAGLAN NORTH ISLAND				
766 km - 12 hrs - 9 Days | A 7-9 day road tri	Distance per/website	Where	North Island Holiday Parks	Distance travelled	Website notes
NEW		Miranda	Miranda Holiday Park		add to website, could be first stop for extra night away
DAY 1 AUCKLAND - COROMANDEL TOWN VIA THAMES	104km - 1 hr 25 mins	Coromandel Town	Coromandel TOP 10 Holiday Park		

- See evidence as follows: Further testing is scheduled to test booking process testing ahead of rental bookings opening up at the end of the month, with preparation underway for robust vehicle performance testing ahead of final build, example list of test requirements generated from final reporting outputs expected

EV reporting

Ashley Perry
Rebecca Agent; Matthew Harvey; Jason Kendall; Saskia Verraes; Nicky Bree
Monday, 8 October 2018 at 2:07 PM
Show Details

You replied to this message on 9/10/18, 1:19 PM. Show Reply

Hi all,

As discussed, the initial EV reporting will include the following.

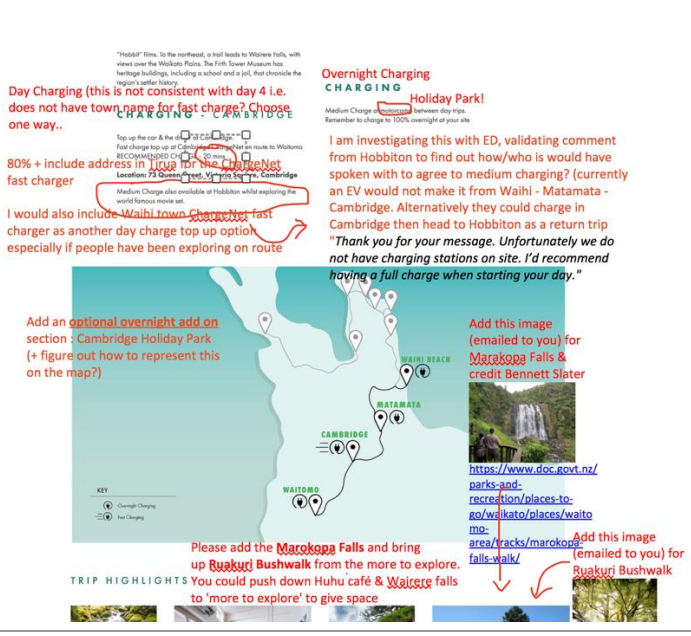
- Distance per trip
- Distance per rental
- Battery level when recharging
- Driver behaviour impact on battery level
- Range of vehicle including, min, median and max
- Engine load impact on battery level and depletion rate
- Routes driven
  - Overlay charge stations for geospatial reports
  - Backend analytics against charge stations
- Charge type (AC or DC)
- Time to recharge
- Day charge vs night charge
- Temperature impact on battery level and depletion rate
- Incline of vehicle and impact on battery depletion rate

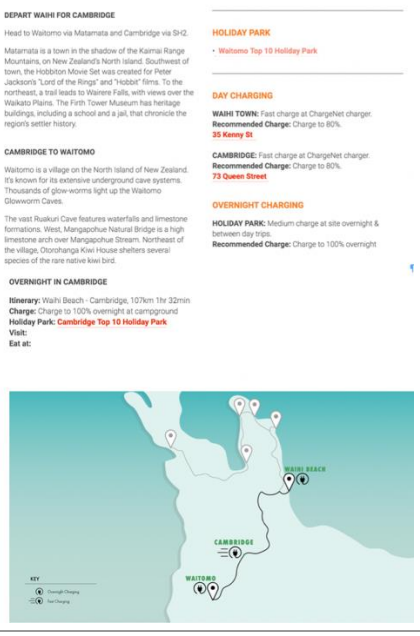
This requires the following 'customisations' to the telematics data, above the basic data a telematics device would normally retrieve:

- Dash odometer
- DTC's
- Temperature
- Charge status (charging or not)
- Charge type
- Battery level
- Incline- If not available from the device, it can be calculated on the backend with basic accelerometer data

Learnings to be applied to the parallel conversion of the electric van chassis

- A recent full itinerary and electric vehicle test of the North and South Island provided many essential insights to customer experience particularly around the act of charging. Learning such as a.) are the itineraries practical and representing fair and true information, b.) are the itinerary distances between destinations do-able, c.) are the charging facilities going to be practical for use with the eLDV, d.)
- See evidence as follows: see below itinerary edits specifically for **distance traveled**. The learning from test was that the kms traveled on this particular day may not be practical between Waihi – Matamata – Cambridge with the outlined stop off at Hobbiton. On enquiry of an assumed trickle charging point at Hobbiton, it was uncovered: "Thank you for your message. Unfortunately, we do not have charging stations on site. I'd recommend having a full charge when starting your day". Subsequently this stop has been removed & investigations continue if this routing can be achieved upon next phase testing the eLDV prototype in the next month





- See evidence as follows: Example testing of **the act of charging at with DC fast chargers and anticipated AC charging at holiday parks.** Learnings & feedback has been provided to manufacturing regarding charging port placement on the vehicle and cable requirements for the vehicle. Successful outcomes are a move of the location of the DC charging port, along with the refinement of the cabling types that the manufacturer will supply with the vehicle.

RE: AC Kit for Ev80 - Arriving in Taupo tomorrow.

Grant Brady
Rebecca Agent; Malcolm Horne; Michael Short; Jo Allison
Tuesday, 11 September 2018 at 9:54 AM
Show Details

You replied to this message on 12/09/18, 2:52 PM. Show Reply

Hi Rebecca, Its on our list, and we have a few ideas about the moving of the plug, so fingers crossed we can get it sorted.

Cheers

From: Rebecca Agent
Sent: Monday, 10 September 2018 7:11 PM
To: Grant Brady <Grant.Brady@ActionManufacturing.co.nz>; Malcolm Horne <Malcolm.Horne@actionmanufacturing.co.nz>; Michael Short <michael.short@actionmanufacturing.co.nz>
Cc: Jo Allison <Jo.Allison@THLONLINE.com>
Subject: Re: AC Kit for Ev80 - Arriving in Taupo tomorrow.

Hi gentlemen & Jo *cc'd (for this reply I've removed Warren and his colleague),*

Having the AC charger arrive in country is a great milestone for us in working towards having the prototype roadworthy! However, I'm sure as you'd expect I am concerned about where the charging port is located on the side of the vehicle...

To give some weight to this, I took Tiny's Big Brother out for a test drive from Mangere last week and decided to test this charging port location issue...

I've attached photos of the test. The final spot, taking over three parallel spaces, took me 4 attempts to get on the angle need to charge + politely asking an annoyed Uber driver to move so I could reach the charger.. My main concern, other than a horrible customer experience, is that Britz will plastered all over the vehicle so this may have a negative impact on the Britz reputation with the vehicle and these customers 'hogging' all the spots/jumping the curb to get a charge.

I sent this through to Warren and got a reply " *laughing emoji* the joys of early adaptation! Ac invertor will help, you'll be able to have chargers at the depot".

Unfortunately it isn't that simple, and having chargers in the campgrounds** will not solve this 'day charge' issue. This is highlighted even more being on the road testing our electric itineraries where I have needed to use every single faster charger on the route so far – finding all of these to be problematic (photos attached of Thames & Tirua as examples).

**Please note, having the DC charger located in the front of the vehicle solves the day charging , but if the AC is also located in the front then this raises another issue in the campground due to the standard placement of the power source at the back of a site. For example I've found my charging cable in Tiny to not be long enough to provide the ability to park privately (AC/DC plugs are in the front) i.e. usually I want to reverse in but my charging cable won't run the length of the car. I think this could be solved with a long cable so we can pick this up with Warren at LDV & Nigel at ChargeMaster. I've attached Coromandel Town & Hot Water beach as examples.

Note, I have provided feedback to ChargeNet about cable length but it was said that the cable length of a DC fast charger is a H&S issue i.e. longer cables lengths would lie on the ground

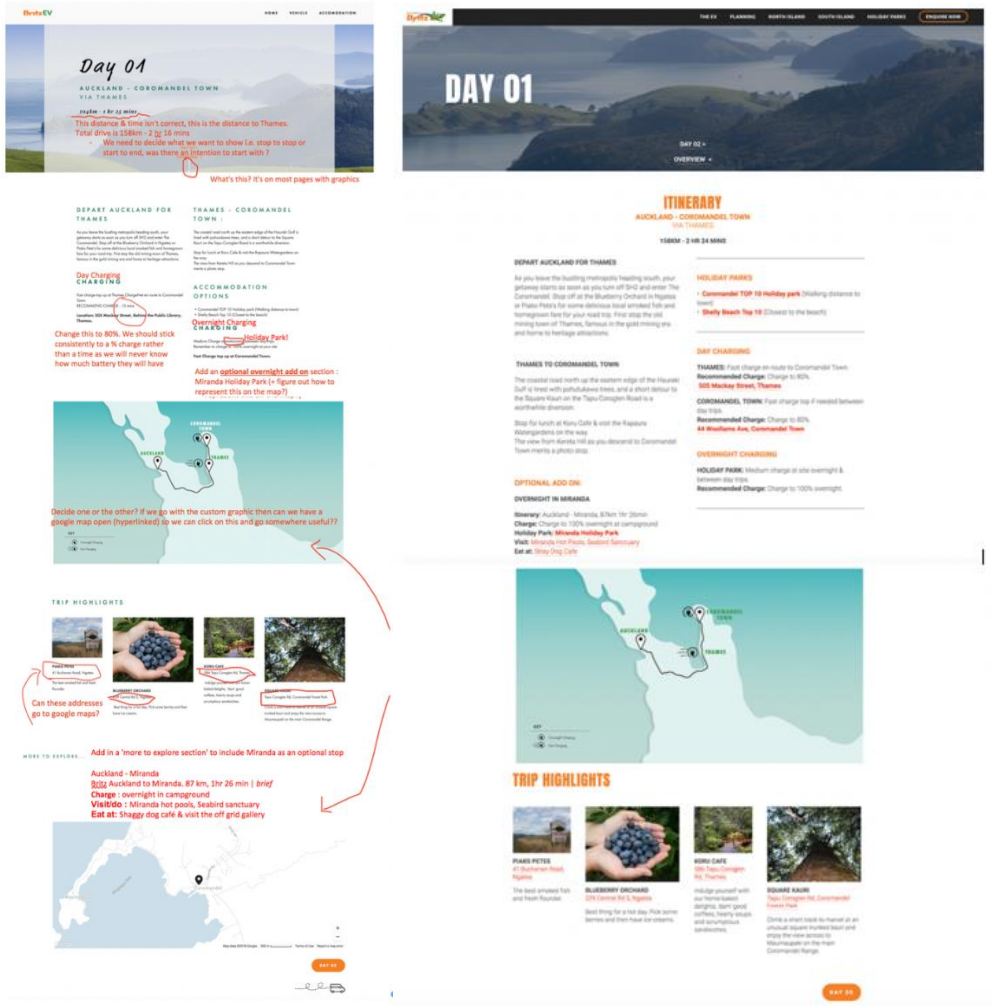
I hope this helps your thinking with placement of the charger port? I'm keen to hear your thinking on how we can work around or solve this ...?

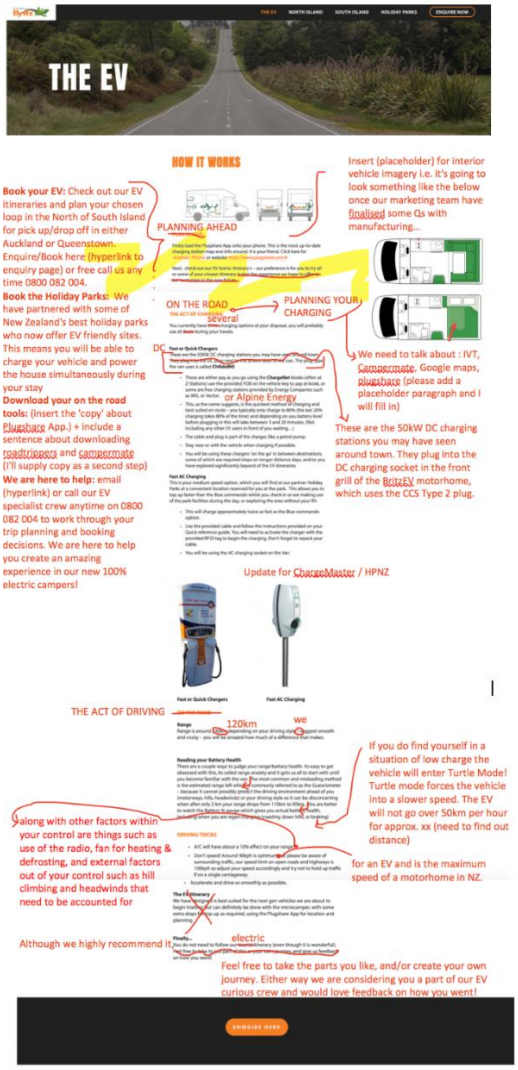
Warmest, Rebecca

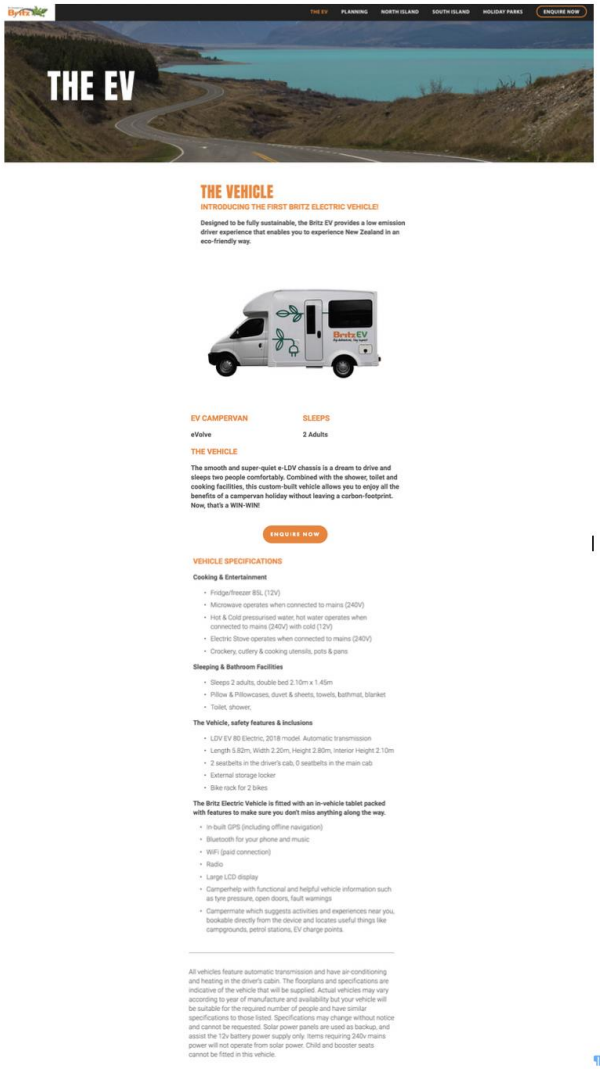
ChargeNet DC charging learnings

Coromandel Town Holiday Park Learnings

9(2)(a)

9(2)(a)	Hot water Beach Top 10 learnings 
Any changes to promotional material and itineraries implemented	• Extensive updates to the www.BritzEV.com website (itineraries, vehicle info, bookings processes) have occurred as a result of vehicle trials and itinerary testing. Everything from overall look and feel, branding, voice, usability, mapping and content has been uplifted and updated • See evidence as follows: see below example edits of Day 1 of the North Island Itinerary, along with updates to the general 'The EV; page that follow 





We hope this satisfies requirements against EECA 03-149 agreement.