

St Andrews Electric Car Club Potential Expansion Report 2017



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Outline of the Report:

This report aims to show potential new locations for the electric car club operated in St Andrews. At present, the electric Car Club, operated by E-Car, has 10 vehicles operating across three locations in the town: The Gateway, David Russell Apartments and Agnes Blackadder Hall. These locations are university- centric, which may discourage use by the local non-university population. There is therefore an opportunity to expand the electric car club further into the St Andrews community, by increasing the number of locations, and cars, in operation.

A car club provides vehicles for hire on an hourly basis, at all times of the day and every day, parked in dedicated, clearly marked bays (Ansons Consulting, 2015). Public members pay an annual membership fee, as well as an hourly charge and mileage charge when they hire a vehicle: this covers the typical costs of owning a car such as insurance, tax, fuel, cleaning and servicing (Ansons Consulting, 2015).

As stated in the Fife Car Club Feasibility Study (Ansons Consulting, 2015), there are several community benefits with access to a car club:

- Convenience: clubs provide access to a car without the duties of owning one (e.g. MOTs, insurance)
- Cost Effective: clubs allow members a cost effective alternative to owning a car
- Access to high- standard vehicles: club vehicles are, on average, safer, less polluting and newer than privately owned cars
- Reducing car ownership and use: club membership increases the use of public transport, cycling and walking
- Accessibility: clubs improve members' access to goods and services

Furthermore, as the current car club in St Andrews is made up of solely electric vehicles, the expansion would be a step towards sustainable transport in the town, as well as reducing greenhouse gas emissions and congestion- an increasing problem in St Andrews. It will also help contribute towards the Scottish Governments goal of removing half of petrol and diesel fuelled vehicles from urban areas by 2030 (Scottish Government, 2015).

The report will consider the current policies in operation by national through to local level government which support the expansion of the St Andrews electric car club, the legal process required to facilitate new Club locations, and the potential new locations that have been identified throughout the town.

Policy Regarding Electric Car Clubs

Policies from national to local government level support the introduction and expansion of electric car clubs. In 2015, cars accounted for 14% of the United Kingdom's CO2 emissions (Committee on Climate Change and UK Government Department for Business, Energy and Industrial Strategy, 2017). The UK Carbon Plan (UK government Department of Energy & Climate Change, 2011) establishes the need to reduce the transport sectors' greenhouse gas emissions, with the aim that by 2050 the majority of vehicles will be ultra-low emission, a category that includes electric cars: the Committee for Climate Change (Committee on Climate Change Analysis, 2017) estimate that if by 2030, 60% of cars and vans are electric, this could contribute to a 44% fall in emissions of greenhouse gases between 2016 and 2030. However, in 2016 the actual sale of electric cars fell short of the Committee for Climate Change predictions (Committee on Climate Change, Society of Motor Manufacturers and Traders and UK Government Department of Transport, 2017) by 3792 vehicles. This could be due to

the barriers associated with electric car ownership such as access to charging points and consumer acceptability (UK Government Department of Energy & Climate Change, 2011) - an electric car club helps to overcome these obstacles, by providing the infrastructure needed for electric car use, and a less permanent, and more cost effective, opportunity to use electric cars than ownership.

Regional policy regarding multiple local authorities also supports the expansion of the electric car club. St Andrews is included in both the South East Scotland Regional Transport Strategy (SEStran, 2015) and the TAYplan Strategic Development Plan (TAYplan, 2012)- both of which aim to promote sustainable travel and reduce our burden on the planet. Specifically, the TAYplan Strategic Development Plan aims to ‘Support the switch to a low carbon and zero waste economy by providing appropriate infrastructure’ (TAYplan, p.6, 2012)- a goal the expansion of the electric car club would satisfy. It would also ‘Increase transport choices, reducing dependency on the private car’: Objective 3.5 in the South East Scotland Regional Transport Strategy Refresh 2015 (SEStran, p.39, 2015).

St Andrews Local Authority, Fife council, have also produced policies which encourage the expansion of an electric car club. The Local Transport Strategy for Fife states that we have become ‘too dependent on use of the private car’ (Fife Council, p.11, 2006), whilst advocating for sustainable travel that allows people to access goods and services in an affordable way. The electric car club can help resolve these issues: it reduces the use of private cars by reducing car ownership, provides access to goods and services those without a car were previously deprived of, and is sustainable due to the sole use of fully electrical vehicles- this will help Fife Council achieve its aim of a strong economy, community and a healthy environment.

Legal Issues with the introduction of Electric Car Club bays

The next stage in implementing the suggested new locations for the St Andrews electric car club is to gain a Traffic Regulation Order (TRO), issued by Fife Council. A TRO regulates the use of highways and off street parking areas, implemented using signs and lines marked on the highway surface (Carplus, 2014). As the expansion of the club into community based sites is a new venture, an experimental TRO is suggested. Experimental TRO’s are fast to install, as they require a public consultation after, not before, the car club bays are installed (Carplus, 2012). This installation occurs on a temporary basis for 18 months, and can result in fewer objections raised by local residents after they’ve had the opportunity to see the car club ‘in action’: however, unlike permanent orders, experimental TRO’s must repeat the process after the trial period, incurring twice the costs (Carplus, 2012).

There has been legal issues with the use of on street parking by commercial activity, such as car clubs. However, it is possible to get around such issues with a TRO. This can be seen in Dundee, where Co-wheels operates a car club:



On street Co-wheels Car Club bay,
Dundee



On street car club parking, Dundee



On street car club only bays, Dundee

Despite the necessary process of gaining a TRO, there are multiple advantages to having a car club with on street parking, outlined by Carplus in the Car Club Parking, Carplus Good Practice Guidance report (2014):

- gives a car club credibility: with a department for transport logo and painted lines
- gives a sense of community ownership and non-exclusivity- especially important in St Andrews to encourage greater use by the local community
- increased visibility of the service helps its success
- integrates the clubs with nearby transport options such as bus stops, cycle racks
- easily accessible for club users
- personal safety: well-lit and busier streets are safer than secluded private land
- security to cars: being overlooked by houses reduces vandalism
- more cost effective than private parking

Potential Car Club locations in St Andrews

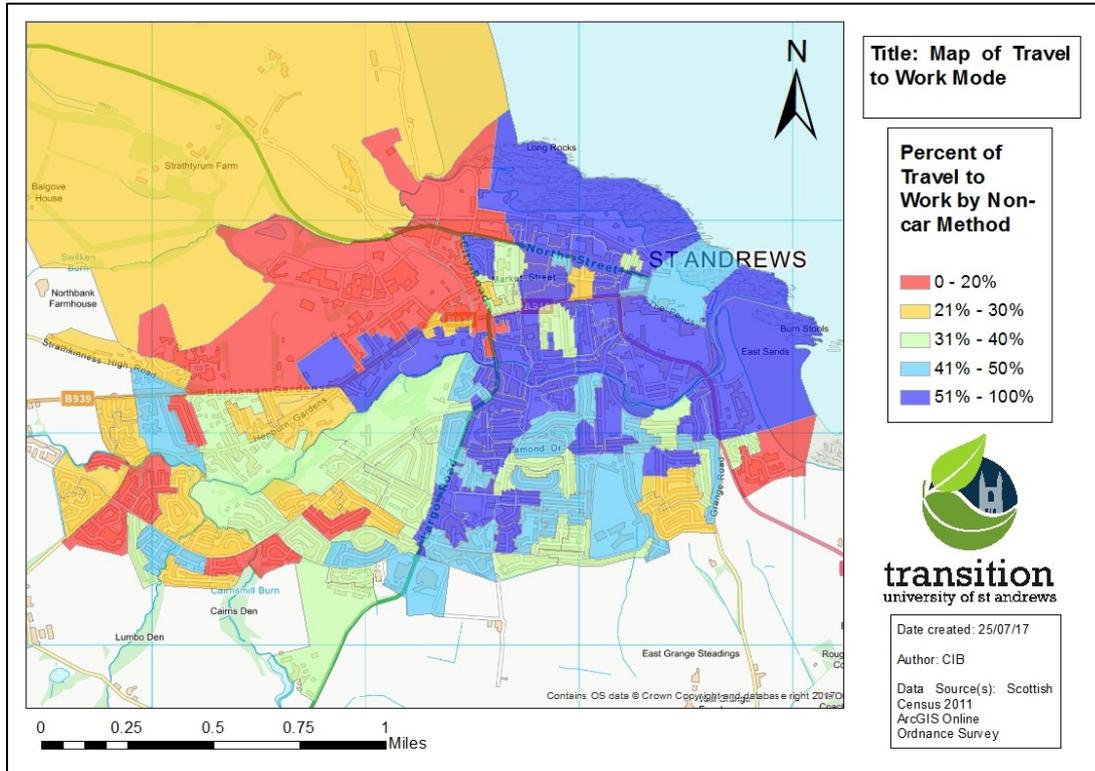
To assess which areas within St Andrews had the propensity for a car club, maps were created of several socio-demographic characteristics which have been proven to indicate car club use. The Fife Car Club Feasibility Study (Ansons Consulting, 2015) and the St Andrews Car Club Feasibility Study (Steer Davies Gleave, 2014) identified these characteristics, and how they influence an areas propensity for a car club. Listed from most important to least:

- Travel to Work: lower car use can increase potential, with greater public transport use and walking
- Population Density: higher densities increase potential
- Car Ownership: this is a descriptive factor, as car ownership levels can influence the marketing strategy
- Access to Local Services: greater provision of local services can increase potential, as there is less need to drive, car clubs are an attractive alternative to owning a car, providing occasional access
- Demographics:
 - Qualifications: higher qualifications can increase potential

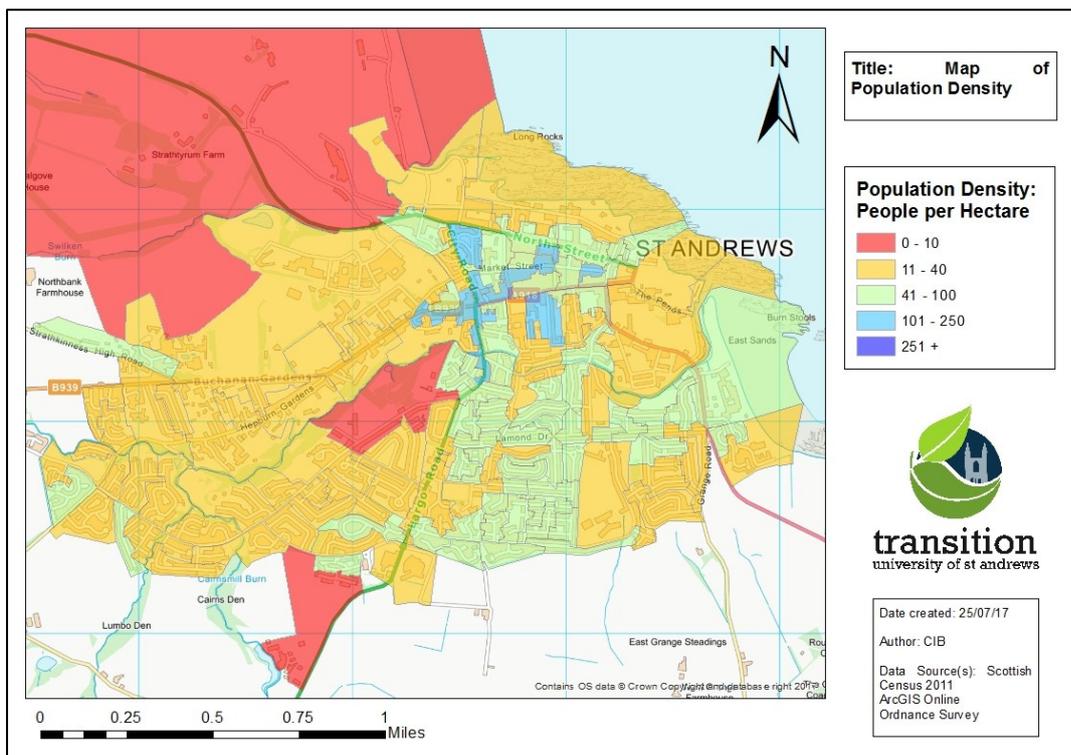
- Socio-economic: higher incomes can increase potential (in this case, % of individuals in higher management has been used as a proxy for a higher income)

Maps:

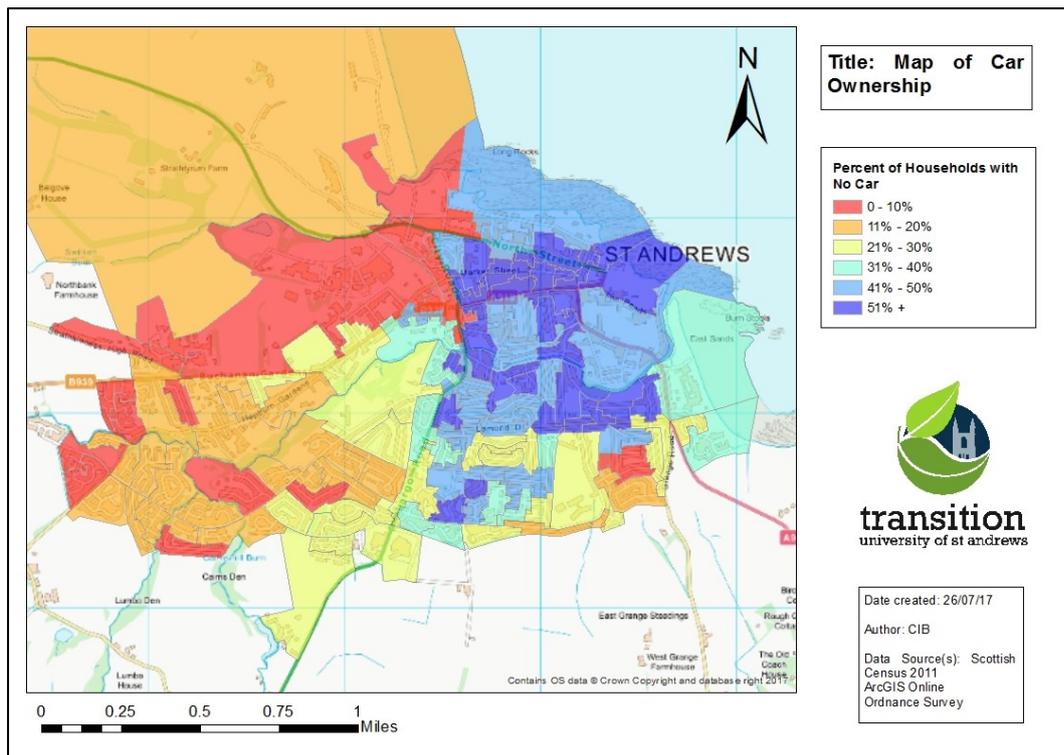
Travel to Work:



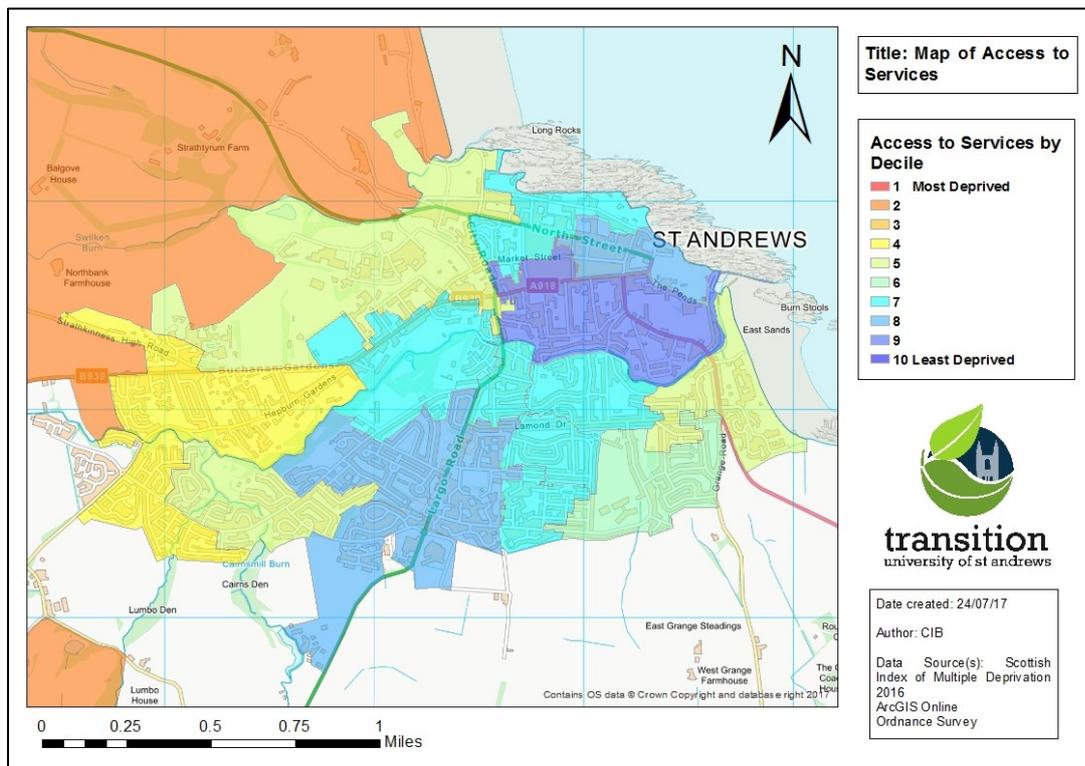
Population Density:



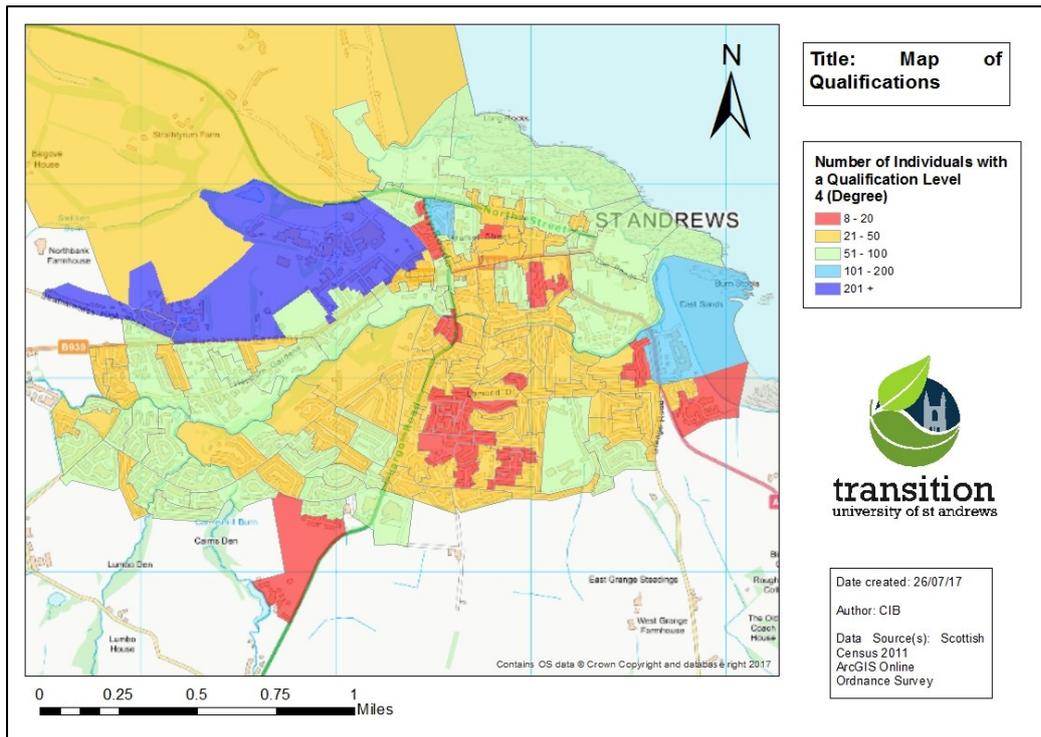
Car Ownership:



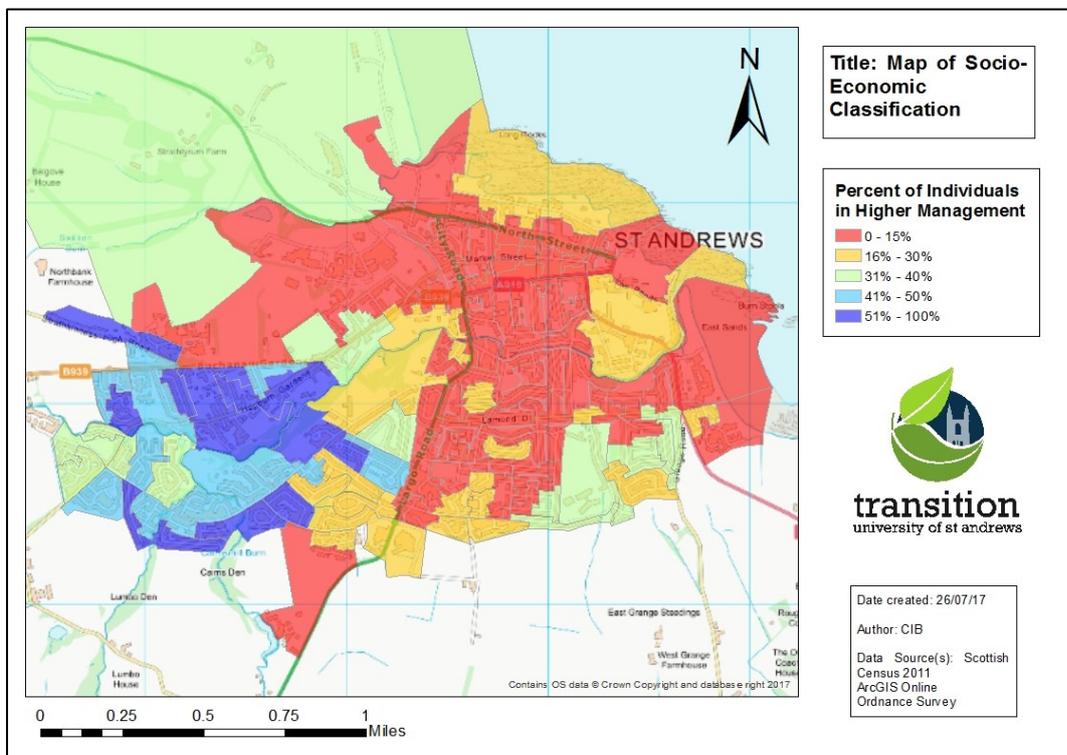
Access to Local Services:



Qualifications:

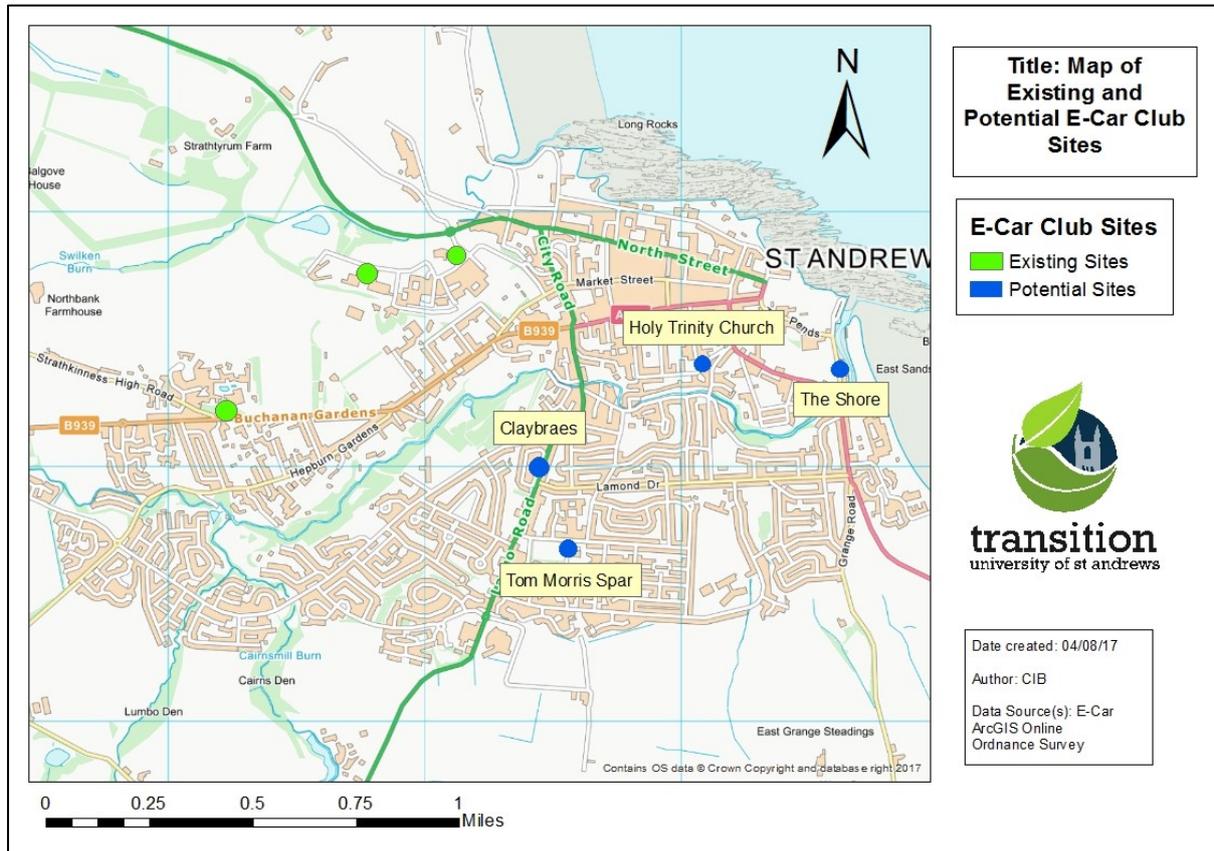


Socio-economic:



By assessing the maps above of where characteristics performed well for propensity for a car club, and taking into account the relative importance of the characteristics, four potential locations for electric car club bays were produced. As the greatest potential demand is situated within the area bounded by Tom Morris Drive, Largo Road, Kinnessburn Road and East Sands, these four locations will serve this area, and its surroundings:

Map of Existing and Potential Electric Car Club Bays:



1. The Shore, East Sands

The current car park at The Shore, East Sands provides an ideal location for electric car club Bays.

The high stone wall and housing provide shelter from corrosive salt carried in the wind from the nearby harbour.

Corrosion of electric charging points has not been an issue at Anstruther, a nearby small fishing town which also has electric charging points at its harbour.

The Shore, East Sands





The current car park at The Shore, East Sands

For the specific location of the electric car club bays, it is suggested that the extended area of pavement, adjacent to the Scottish Water treatment plant be used:

Water treatment plant



This area is not in regular use, and already has an electrical power supply (see photo below), so would be a suitable location for electric car club bays.

The proximity of the bays to the Scottish Water site may be contentious; however, as many companies are converting to a fully electric vehicle fleet, it may benefit Scottish Water in the future.

Electrical Power Supply



2. Holy Trinity Church Hall, Queens Terrace

The car park at Holy Trinity Church Hall is spacious and underused, whilst the nearest electric charging point, in the neighbouring Bute building, will be lost in a redevelopment. As an electric car club is environmentally friendly and socially inclusive, this type of commercial activity would be appropriate to operate in the grounds of a church hall, and the commercial activity of an electric car club bay could be beneficial to the community, as well as replacing the lost charger in the Bute. Furthermore, this site is private land- so therefore would not require a TRO to have bays constructed.

The Holy Trinity Church Hall Car Park:



It would be preferable to place the car club bays at the front of the car park, to increase their visibility and the awareness of this service in the community.

As E-Car, the electric car club company currently operating in St Andrews, have already considered this site for the development of electric charging bays, we can assume that the necessary infrastructure for the bays, such as an electrical supply, is already present, or can be developed.

3. Claybraes, situated off Largo Road

Claybraes is a potential location for on street electric car club bays. The street is set just off the one of the main routes into St Andrews, Largo Road, as well as opposite the end of Lamond Drive, another busy and residential road in St Andrews. Therefore, the car club would have high visibility at this site, which could increase awareness of the club and members.



Claybraes

Nose to nose bays may be suitable for this location (see Legal Issues section, On street car club parking, Dundee photo), created by removing part of the grass verge present.



Grass verge at Claybraes

4. Tom Morris Spar Car Park

This car park is council owned, and is situated in a densely populated residential area. It is adjacent to a post office, Spar and takeaway, so would be a highly visible location for potential car club members.

The electric car club bays could be situated in the car park:



Car Park adjacent to Spar and other local services

Or alternatively, they could be place across the road, on what is currently a grass verge adjacent to the playing field:



Grass verge next to playing field

Other Locations

The area surrounding East Sands leisure centre also indicated a strong propensity for a car club, and the leisure centre car park would have been a suitable location for the bays. However, there are plans for electric car club charging points to be included in the new Albany Park development (carried out by the University of St Andrews)- as this is neighbouring the leisure centre, it negates the need to place electric car club charging points there. There will also be 12 electric car chargers included in the University of St Andrews' new Eden Campus development at Gaurdbridge.

Another option for a community based car club bay is the car park of the Boys Brigade hall: as shown in the photo below, the car park is large so could accommodate the necessary infrastructure for car club bays. Furthermore the hall is located at the junction of Kinnessburn and Langland Road- an area with a high propensity for a car club.



Boys Brigade Hall Car
Park, St Andrews

Conclusion and Next Steps

This report has outlined the potential locations for the expansion of the St Andrews electric car club. The next step in developing the expansion should be to send leaflets around local residents, especially those in the surrounding areas of the locations named in this report, briefly describing what a car club is, how it works, and asking them to respond as to whether they would be interested in becoming a member.

The local authority, Fife council, would need to research and ensure the correct infrastructure, such as electrical provision, is present at these locations, before completing a TRO.

Finally, it is worth researching the use of private land to situate car club bays. Non-University corporations in St Andrews such as Marks and Spencer's, Aldi and the Premier Inn are all located in areas with a high propensity for a car club, and are also all situated on Largo Road, so have the advantage of high visibility. These companies should be approached regarding their interest in the scheme, as any of these sites would be a suitable location for electric car club bays. The aim for a car

club such as in St Andrews is to have every resident within a 10 minute walk of a car- hence more sites, such as on private land will help achieve this goal.

Note of Acknowledgement

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