

to its Local Development Plan (2017). The policy makes explicit the need for car clubs in order: "To continue to facilitate and promote the car club in order to provide transport choice without necessitating individual car ownership."

The council has a systematic approach which coordinates car club development in a holistic way across the city. The process applies to residential developments of at least 3 units where full parking provision is limited. The developer makes contributions based on the parking shortfall between the number of spaces there would have been with higher parking ratio compared to the lower standards. As every car club car is shown to remove between 9 and 23 private cars from cars sold or not bought through CoMoUK research, Aberdeen City Council have taken a mid-point figure of 17 cars equal one car club car. They require one car club vehicle to be funded by the developer for every 17 spaces removed by the lower parking ratios.

added gradually as the build rolls out.

Since 2017, £266,000 has been paid to the car club from 42 planning applications. This has funded 8 cars and many memberships. In the future they hope the refreshed planning guidance in 2022 will include an automatic inclusion of car clubs rather than only in scenarios with parking shortfalls.

An example is in Dyce, where Co Wheels were able to provide three vehicles in an area which is demographically challenged for normal kev car club audience. Seed funding from S75 development can help tackle car poverty in some areas and introduce low and zero emission vehicles in some locations.

The developer contributions are pooled to enable the growth of the car club across the city and ensure the whole scheme is more sustainable. For example, for comparison of a similar sized area. Newcastle has only 23 cars compared to 44 in Aberdeen.

Size	Car club in area not at capacity	No car club or car at capacity
Small developments (up to 50 units)	Developer contributes £400 for every unit with parking shortfall plus 2 memberships and driving credit.	If the shortfall of space is more than 17, the developer must fund additional vehicles, and each dwelling receives 2 memberships and driving credit. Funding for the car club is provided for 3 years including EV infrastructure.
Large developments (50 units or more)	Developer contributes £400 for every unit with parking shortfall plus 2 memberships and driving credit.	If the shortfall of spaces is more than 17 then the developer must fund up to 3 additional vehicles. Funding is provided for the car club for 3 years including EV infrastructure.



Importance of early engagement and continued dialogue

Service operators overwhelmingly reported being brought into schemes 'too late', resulting in little to no influence in the overall shared transport strategy of a new development. As it stands, operators tend to provide a fixed cost service responding to a predetermined level of service defined by local policy. From an operator point of view, this limits influence in the scale of deployment, and often results in implementation of the minimum viable product as opposed to a more ambitious target that truly responds to the scheme proposals and might encourage shared mobility uptake.

Operators call for a "build in, not bolt on approach" with soft market testing to be

encouraged as part of early engagement which is at a point to influence density and design.

Whilst a 'traditional' Transport Assessment follows predict and provide principles (required as part of the formal process for attaining planning consent), an alternative approach is to decide which options meet sustainability, air and place quality ambitions, provide those options and then monitor and manage their use.

Operators and developers told us that the planning process itself is limiting as mode share targets are largely based on current data, and not on future trends that consider changes in travel patterns and the need to decarbonise.

Importance of marketing and incentivisation

It is recognised that there is an important role for marketing in supporting the provision of shared transport, especially if coordinated as part of the first impression a potential resident has of a development. Shared transport should be evident within a marketing approach that promotes healthy living and net-zero lifestyles as scheme selling points. This could be in the form of packaged incentives offered to residents to elevate shared mobility to being at least as convenient as private car ownership in meeting mobility needs. With conscious consumerism and an increasing number of people wanting to live sustainably, this is a growing market for developers and house building.

A house move is a pivotal point for potential behaviour change, and with the right incentives, may lead residents to adjust the way they travel.

Packages of incentives such as mobility credits that can be used for a range of sustainable transport options could be funded initially through developer contributions and then continued through service charges.

Stakeholders shared that there is a lack of research and guidance within the planning process to help understand the demand for shared mobility.





CASE STUDY: Bremen, Germany

Bremen, in northwestern Germany, is an exemplar city for showcasing the possible with regards to car clubs, reportedly having removed more than 6,500 private cars from the streets. Through the introduction of a Car-sharing Action Plan in 2009, the city now (as of January 2022) has a total of 500 car club cars available at over 125 car club stations to its ca. 21,500 users, including 80 free-floating vehicles.

The city has a parking norm of 0.8 cars and 2 bike parking spaces per dwelling. In new developments, specifically, developers are required to fund a package of mobility management measures, for example, public transport tickets, car club memberships or bike sharing stations as incentives that support a low car lifestyle.

Impacts analysis	Developments with Mobility Management Offers	Developments without Mobility Management Offers
% car free households	34%	16%
% daily trips made by car	29%	40%
% trips on public transport	17%	10%



5. Best practice guidelines

The recommendations to address the observed industry painpoints, concerns and confusion surrounding shared mobility provision are broken down by stakeholder below:

Stakeholder / planning Stage	Site selection and feasibility	Concept design to planning consent	Build-out to occupation	Operation
Developer & design team / consultants	 Ensure site feasibility work encompasses shared transport assessment process providing shared transport feasibility score. Quantify shared transport benefits for the site's investment case and development value (such as savings from reduced car parking footprint, and market value of lifestyle offerings). Map existing shared transport provision as part of the local transport network. Whole Design Team awareness of shared transport opportunities and risks. 	 Attend soft-market testing event with operators. Determine what could be viable, desirable and feasible. Consider how shared transport sits as part of the downstream business model and occupation (e.g. Build-to-Rent and managing agent responsibilities). Include shared transport in the preparation for planning conditions. Analyse existing and future shared transport provision (through sociodemographic analysis, propensity mapping and mapping local service models) developed as an accessibility scoring. Off-plot parking and flexible designs to accommodate shared transport both now and with future expansion. 	 Secure provision of services. Pay the contribution to the operators in full at start and not "drip fed" over 3 years although the number of vehicles can be added gradually as the build rolls out. Gather requirements from end operators and develop handover strategy. Advertise shared transport lifestyle benefits through estate agent and marketing suite. Resident-facing / personalised Travel Plan packs. 	 Provide handover to end occupier / managing agent / stewardship so shared transport proposals do not get lost between planning and occupation. Design and monitor surveys against original forecasts to quantify the demand (and unmet demand) for shared mobility. Point other development applications to conduct site visits and end user interviews of those sites considered best practice.



	Build-out to Operation	
Local Authority - Planners; Highways; & District / County Authority - Planners and Highways - Establish an internal starting point (between Planning and Highways departments) to support a deviation from parking minimums subject to a strong shared transport offer. - Develop SPG and point gprosing type and location (e.g. proportion onoff lot) - Encourage teams to be organised as place-based, offering a more holistic view to planning process whilst valuing shared transport mobility. - Seek a design code that consolidates parking to open up opportunities for change. - Require applicants to develop a 'decide, provide, monitor and manage' approach for trip generation and mode share. - Promote people and place-centric policy. - Fromote people and place-centric policy.	Prioritise a long-term stewardship strategy through planning conditions over Section 106 contributions (or future versions such as community infrastructure levy). Focus attention on Travel Plans with granular monitoring of trip rate and mode share targets (i.e. to further validate the case for low car parking and more shared mobility). Focus attention on Car Park Management Plan ensuring appropriate controls and flexibility is in place to support a shared transport offer. Point other development applications conduct site and end user interviews of sites conside best practice. • Collect and aggregate th on shared trauptake at new development time by diffe site typologic. • District/ count to require Lo Authorities to best practice recently com and monitore schemes, and elevate this to be portal to agg shared transport offer.	to visits those red to those red to those red to the test of the t

Stakeholder / planning stage	Site selection and feasibility	Concept design to planning consent	Build-out to occupation	Operation
Service providers & operators	Produce and share case studies of successful operations to support development applicants in 'making the case'.	Share operational data and uptake thresholds with developer and design team.	Provide tailored service proposal refined to reflect end user demand and adjacent user base.	Deliver dashboard performance of shared transport provision to developer (with option to share with authorities). This level of data sharing can inform better decision making around shared mobility.



6. Future pipeline case studies



CASE STUDY: Hatfield, Hertfordshire

The redevelopment in Salisbury Square, Old Hatfield, comprises five houses, five flats, 12,000ft² of commercial space and significant public realm works. The scheme should be complete by the autumn of 2025, with the public realm and mixed-use block finished first in 2024. It sits in a sustainable location, less than 100m from a major bus interchange and railway station, but is constrained by its position in a conservation area and high levels of car ownership in the surrounding community.

The scheme will initially include one car club space accessible to the wider community, with auto-enrolment for new residents. There is an aim to add a second car club space after completion based on demand.

Additionally, the location will provide more than double the required amount of bicycle parking in the scheme, including modern, attractive and secure long-term storage for occupiers of the flats and offices.

Critically, the car parking area is designated as 'shared space'. Due to the landowner and developer - Gascoyne Estates' on going ownership and interest in the scheme, spaces can be removed over time and replaced with public realm improvements.

It is important to engage meaningfully with the community, giving them genuine choices which have an impact on the scheme – the results are often substantially different from the views of the noisy minority, especially in relation to parking.





CASE STUDY: Wolverton, Milton Keynes

The Love Wolverton scheme will regenerate an important town-centre site comprising a 1970's shopping centre and adjacent car park in Wolverton, a Victorian railway town now forming a diverse neighbourhood within Milton Keynes. Wolverton is a compact, walkable, tight-knit place formed mainly of red-brick terraces laid out on a grid of streets, with a traditional, highly independent mixed-use high street and market square.

The new development is made up of 6 compact blocks with 115 homes, including 29 homes for the over 50s, 9 commercial / community units. The scheme is working with the co-housing group, Still Green.

Love Wolverton promotes sustainable transport through the following initiatives:

- Proximity to local public transport nodes including train and bus in addition to easy access to MK's redway cycle network.
- Upgrading the bus stop on the site boundary and off-site public realm improvements.

- Provision of a new sustainable transport hub including a Brompton Bike Dock, Wolverton's first MK Nextbike dock and four car club vehicles provided on and off-site. Vouchers for residents as part of Travel Planning.
- Above policy compliant cycle parking for residential accommodation.
- Improved connectivity across the town centre through reinstated historic route and two new car-free little streets aligning with existing pedestrian routes.
- Restricted private car parking spaces in line with census data, controlled through on-site, paid-for permit scheme.
- EV charging provision in the form of active and passive infrastructure.
- Active communications around low-car scheme when marketing properties.
- Potential CPZ accounted for in the S.106 agreement.

Having gained planning permission in July 2021, the project is expected to start on site Q3 2022 and achieve practical completion in Q4.





CASE STUDY: Streatham Vale, London

Streatham Vale is a development site by the Hadley Property Group and Clarion Housing Association created as a joint venture. Streatham Vale will see 258 homes, commercial spaces and a Cycle Hub. The scheme also incorporates 2 accessible car club spaces from the outset, with 3 years membership for residents paid for by the developer. Use and take up of the car club will be monitored via the travel plan, with future provision for an additional 2 spaces proposed if required.

The Cycle Hub is aimed at encouraging residents to take up active travel through the provision of rental of cargo bikes, e-bikes, e-scooters, beginners' cycling lessons, bike storage, bike and scooter charging points, a bike lift, lockers, a drinking fountain, a bike part vending machine, washing facilities, and changing rooms.

There will also be bike repair services available for residents of the scheme, bookable via an app. The app will also provide information about facilities, social ride events, cycle routes and weekly competitions.



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