Date: 21 February 2018
To: Kathleen Kemp, Sustainable Transport Planner, City of Port Phillip
From: Knowles Tivendale, Phillip Boyle & Associates
Subject: Car Share Provision and complementary measures in Fishermans Bend

This memo has been requested by the City of Port Phillip to summarise advice related to the proposed Fishermans Bend planning framework as well as related issues in the City of Port Phillip planning scheme. It focusses on the requirements related to providing a car share network that is financially viable such that it provides a basis for investment in services that would be used by the future Fishermans Bend community.

Summary

Overall it is recommended that:

- The planning scheme aim to establish the foundations of the service, not define its future growth or scale
- The rates and requirements in the planning scheme be as simple as possible (there should be no concern for the proximity of other transport modes such as transit in considering the base level car share network requirements)
- The same minimum requirements be applied in all precincts in Fishermans Bend
- The metric on which the rate is based should be the number of off-street car parking bays provided on the land
- At least 2 car share vehicles be provided at each location (single vehicles will not be deployed)
- A single ratio be used for all land uses including mixed use developments
- That off-street parking bays for car share vehicles be provided at a ratio of 1:25 to the total off-street bays in each building
- The on-street car share network provides a base level of service with a walkable catchment to each car share node of 150m. The location of nodes in the off-street network will not need reference to walkable catchments, and will therefore be based on scale of parking being built as part of the development.

It was also concluded that there would need to be at least 68 car share nodes to provide coverage of the whole area. The initial (foundation) car share fleet required in Fishermans Bend is estimated to be around 300 vehicles and would grow to 800 vehicles as land use in the area intensifies. The car share fleet will be located predominantly in off-street bays although around 120 vehicles are expected to be provided in on-street parking bays (located at the kerb).

In addition the treatment of other modes will have an impact on car share viability and mode share. The following recommendations were made related to these modes:

- The State Congestion Levy area should be extended over the whole of Fishermans Bend for consistency
- Any new building developer should be encouraged to understand the availability of existing parking in other nearby public facilities
- Ownership of car parking spaces should remain collective (owned by body corporates or building owners) rather than individual
• Zero parking in buildings can be generally supported as public parking will be available nearby in the precinct (both on-street and within other buildings)
• A 'template' or default Green Travel Plan should be developed and used as a baseline for all development. This should include 3-year memberships and credit for transit, bike share and car share services.

Specific aspects of each recommendation are discussed below.

*The planning scheme should aim to establish the foundations of the service not define its future growth or scale*

The City of Port Phillip submission to the Fishermans Bend Framework states 'good planning controls strike the right balance between ensuring that minimum standards are achieved, whilst also providing flexibility for exemplary outcomes to emerge' (Page 6). This memo describes how this principle can be applied directly to car share services.

A key aspect of the minimum level is to ensure that the car share service is in place early, when people and businesses move in. This is true for all transport modes. From this foundation, the car share service can grow in response to the levels of enrolment and usage.

Growth in enrolment and usage occurs when people have noticed or become aware of the service and experience an event that alters their 'status quo' with regard to transport. For example when:

• They experience a life event such as moving house, changing jobs or relationship change;
• Significant vehicle costs such as registration, major repairs and insurance renewal are expected.

These events occur somewhat randomly (from a time perspective) across a residential and business population.

If the planning scheme ensures there is a foundation from which a local car share service can grow (by ensuring a base level of car share service is provided), the service will be able to meet the needs of the community into the future (regardless of how large the community eventually becomes). This is because once the baseload of demand is secured, the service tends to remain commercially viable and will expand as needed.

It would be inappropriate (and impossible) to anticipate the future scale of the car share service. The planning scheme should therefore include provisions that ensure car share services are provided at a base level that makes them financially viable and attractive to the future community. This ensures that the base level of service is provided early in the development life-cycle and can expand in line with demand and each community's needs.

The recommendations below will ensure that a minimum standard is achieved so that exemplary outcomes can emerge.

*The value of simplicity*

It is recommended that the car share rates and requirements be as simple as possible. Simple rates can be understood easily by proponents and checked easily in applications reducing the opportunity for mistakes.
*Should the rates be varied in each precinct?*

It is recommended that all precincts in Fishermans Bend meet the same minimum standard of rates and ratios.

The precincts will have different characters including density and proportions of various land uses such as commercial, residential and retail. The minimum standard of car share provision will provide a foundation from which car share services can successfully grow in all precincts.

To some extent the character of each precinct will be reflected in the usage of the car share fleet (on and off-street). Vehicles in areas with many jobs will tend to be used during the working day. Residential areas will tend to generate use in the evenings and on weekends. Car share nodes in mixed use areas will generate higher usage and cater for more diverse types of trips.

However, the character of the precinct is not the only factor that influences usage. Other highly influential factors include the cost, size and type of vehicles deployed at nodes as well as the location of the node. Customer demographics also have a significant impact on usage. The use by people in and around one node might be significantly higher than at a seemingly equivalent node.

It would therefore be inappropriate for the planning scheme to try to anticipate or compensate for these management decisions and local conditions.

*What metric should be used in the planning scheme to set the rate for the number of parking bays that are set aside for car share vehicles?*

PBA agrees with the Fishermans Bend Framework Plan that the *number of off-street car parking bays proposed* (by the project proponent) should be the metric against which the number of car share parking bays required is determined.

Calculating car share bays required should be based on the actual number of car parking proposed rather than the maximum or minimum number of parking bays specified in the planning scheme. This will avoid parking bays being provided for car share vehicles in a development that would otherwise have zero parking. It also simplifies the calculation because the number of proposed car parking spaces proposed will always be clear. The reasoning for this includes a range of factors.

- Having a dedicated parking bay is a necessary condition for the car share service.
- This metric will avoid outcomes that are inconsistent with the objectives in the Framework. If dwellings or people are used as the metric for car share provision, there is a risk that the car share parking bay requirement increases the likelihood of small (inefficient) parking areas being provided on the basis of car share access.

There is no reason to require car share services in each building because:

- There will not be car share users in every building
- The service can operate successfully, provided there are car share vehicles within a reasonable distance. If private vehicle owners must store their vehicles off-site, there will be no loss of competitive advantage (because walking will be the first part of any car journey by car share or owner occupied vehicle).
- There will be car share vehicles deployed in on-street parking bays (approximately 300 metres apart).
It should be noted that some car share parking bays will also be located on-street in a defined network (each with a catchment determined by Council policy). The car share bay requirements within future car parking areas are specifically required to supplement the on-street network. Proximity to on-street car share vehicles should not have any impact on the need for additional car share bays in off-street parking areas.

It is also noted that not all buildings will need to provide car share bays. PBA recommend that car share parking bays would only be required if there are 50 or more car parking spaces proposed to be built in the development.

**At least 2 car share vehicles should be deployed in each off-street location**

It is recommended that the planning scheme require that at least two vehicles are provided in each car share node. Noting that nodes will be on-street and off-street locations, and two or more car share vehicles located immediately next to each other constitute a node. The number of cars at the nodes can then be expanded in response to increased users and vehicle use.

Note that this conversion of car parking to car share (or even bike parking) can only be facilitated if the planning permit provides an upper limit on parking, rather than a specific number of parking spaces. This will mean it can occur without needing a new planning permit.

A car share node (on or off-street) needs to have multiple vehicles because:

- Multi-vehicle nodes provide the base level of reliability required by the service. The more reliable the service the more likely it will allow people to reduce or avoid car ownership. When a stand-alone car share vehicle is in use, the service in that location is no longer available to nearby users.
- Multi-vehicle nodes reduce the ambiguity for drivers looking for and returning vehicles. Taxi ranks provide similar certainty to people searching for a taxi.
- Multi-vehicle nodes increase the visibility and recognition of the service. Bus stops provide a similar 'marketing' function for bus services.
- Multi-vehicle nodes allow for efficient regulatory signage at the kerb. Consolidating more than one loading zone bays between two signs provides a similar benefit.
- Multi-vehicle nodes reduce the running costs of the service by reducing the time required to service the vehicles.

**Should the ratio vary depending on the land use or land uses proposed?**

It is recommended that the metric be the same for all land uses. This is because all uses need a base level of car share service provision, and the market will provide more service if it is warranted in any particular catchment. This approach also recognises that a reasonable catchment around a car share node is around 7 hectares, sufficient area to have a very wide range of land uses. It also recognises that the problem addressed by car share services is related to provision of car parking spaces regardless of the land use or built form.

The recommended approach avoids any confusion on mixed use sites that combine retail, office and residential uses. It complements the directions and strategies related to collective ownership and off-site provision proposed in the Draft Fishermans Bend Framework.

It is expected that with this approach in place, the parking areas provided within developments will tend to become parking and car storage facilities accessible to all owners, renters and visitors. In this context, off-street car parking bays for the car share vehicle network will be provided by all land uses, while all users of the service will be able to access vehicles even when they do not have a direct relationship with the land use.
on that site. Business users of the service may source a vehicle based in a residential building and residents may use a vehicle based in an office building. Only developments of a significant scale (the critical mass being at least 50 car parking bays) will be required to provide car share bays. Occupants of smaller developments will rely on the network that results (on-street nodes and off-street nodes in larger buildings).

**How many parking bays should be set aside for car share vehicles?**

The Fishermans Bend Framework Plan proposed schedule to the Parking Overlay proposes:

> "Car parking spaces allocated to car share parking provided at a rate of 1 space per 60 car parking spaces or 1 space per 90 dwellings whichever is higher unless the responsible authority is satisfied that a lesser number is sufficient."

PBA considers this rate to be inadequate – particularly as it will undermine the reliability of the service for customers and financial viability of the service, thus reducing the overall level of service in the precinct and increasing the need for public subsidy of future services.

It is recommended that the ratio be set as:

- 2 car share vehicle bays within any development that provides 50 or more parking bays
- 1 car share vehicle bay for every 25 parking bays thereafter
- Where provided car share vehicles will be located together (multiple groups of vehicles and car share service providers are acceptable, but single vehicles by themselves are not).

The implication of this recommendation is that the planning scheme will not require developments with fewer than 50 off-street car parking bays to have car share vehicles on site.

This does not mean that car share vehicles will not be sited in these smaller parking facilities. It is likely that the collective owners of the off-street car parking bays will request service providers to provide car share vehicles to service users in the building and that the collective owners of the parking bays will be approached by service providers, users and potential users to provide car parking bays for car share vehicles.

The minimum requirement of 2 car share vehicles reflects the role of the planning scheme is to 'ensure that a minimum standard is achieved so that exemplary outcomes can emerge'.

**Why has a ratio of 1:25 been recommended?**

It would be inappropriate (and impossible) to anticipate the future scale of the service as any estimate would by its nature mis-scope the needs of the community.

What is required in the planning scheme is a foundation ratio that is not so high that car share vehicles bays would be empty as the service providers would not be able to sustain vehicles in all the bays until the enrolment and use grew large enough to support them. Nor should the foundation requirement be so low that the scheme is not a viable alternative to ownership during early stages of development in Fishermans Bend. A few isolated car share vehicles could be compared to a bus service that only runs a couple of times a day.

The recommended foundation ratio of 1:25 is derived from the following assumptions and calculations.
What base level of car share fleet will meet the needs in the precinct?

The scale of the future car share fleet in the precinct can be understood in two ways:

- By estimating how many vehicles are needed to provide ‘network coverage’ across the precinct (a calculation of the base service required for reliability)
- How many residents and employees will use the service (a calculation of the base level of use expected for development in the area).

The following assessments have been made to determine the scale of the car share fleet in the precinct.

Network Catchment

Car share vehicles compete with private car ownership principally by offering motor vehicle trips more cheaply than a private owner can achieve. Their competitive advantages are undermined when the car share vehicles are located ‘too far away’ from the user, thus adding extra travel time and inconvenience relative to their other transport options. The actual measurement of this distance varies from trip to trip and person to person.

The walkable catchment recommended for car share vehicles is 150m. In planning terms this distance assumes that the car share vehicle will be closer than the open space, reflecting the widespread expectation that ‘your car will be outside your front door’. If the catchment is expanded beyond 150m, it can be predicted that the car share service will be perceived as more inconvenient to users and some people will retain private ownership of a car. The catchment is determined relative to the proximity of other competing transport options (particularly car ownership). When a private car is stored overnight more than 150m from a person’s place of residence, the hassle of getting to the car prevents some car trips from occurring. If the Fishermans Bend planning requirements is expecting some car parking to be provided within the buildings that people reside, then is should expect car share vehicles to be provided within 150m of every building.

It is judged that a tighter walking catchment is unnecessary. Tightly spaced nodes can be observed in Surry Hills in the City of Sydney where cars are sometimes 75m apart. The difference in convenience experienced between a walk of 75m and 150m is small. Although a certain level of convenience is necessary, the users of the service are not walking to the cars every day and at some point shorter distances lose their impact. Tighter catchments also impose a cost on the service providers as they require more nodes in a given area. This risks unnecessary deployment of vehicles which could stress the service or the requirement for more bays than are needed.

Catchments greater than 250m have been observed. For example two thousand Stonnington residents belong to a particular car share service provider that does not have any vehicles in the municipality – despite this they use vehicles in neighbouring municipalities. This suggests the service can operate successfully when cars are remote. However it is likely that the inconvenient access suppresses enrolment and reduces the impact of the service on motor vehicle ownership and use in Stonnington.

To provide ‘network coverage’ with 150m radius (7 hectare) catchments across the 480 hectare precinct there will need to be a network of at least 68 on-street car share nodes.

Every node must have two vehicles and many will have more. With an average of three vehicles at each node this suggests a foundation fleet of 204 vehicles.

People

The density of people and jobs will have more impact on the size of the foundation fleet than the number of vehicles required to provide ‘coverage’ across the precinct and an appropriately reliable service.
It can be expected in time that 20% of the population will belong to a car share service. This has been achieved in inner Sydney over 5 to 10 years and aligns with City of Port Phillip Car Share Policy of 10% of the population being members by 2021.

If the precinct has 80,000 residents in 2050, then around 16,000 people will belong to the service. Each car share vehicle needs 20 active members for it to remain viable (noting that members are not tied to any specific vehicle). This suggests that the residents will need a fleet of 800 vehicles.

It is estimated that there will be 80,000 jobs in the precinct. If the mode share for the journey to work by private motor vehicle is 20%, then 64,000 people will be at work in precinct without a private car. It is likely that 20% of this group will make work trips by car share a user group in the order of 13,000 people. The number of businesses users per car is likely to be lower than the residential rate possibly 40 enrolled staff per car. This suggests that the workforce might require in the order of 320 cars.

This suggests on a population (residential and employment) basis the fleet in the Fishermans Bend area will grow to 300 – 800 vehicles.

**Conclusion**

The car share fleet in the precinct is likely to grow to 300 – 800 vehicles. It should be noted that the employee calculation (300 vehicles) provides an estimate of the smallest potential service required while the residential calculation provides an upper estimate for what can confidently be financially viable. More cars that this may be necessary depending on the market response to the service providers.

**Link on-street and off-street car share vehicle parking bays including linking on-street parking bays and off-street parking bays**

Some cities seek to establish a link between the number of on-street parking bays provided to car share service providers and the number of off-street parking bays leased by the service. This setting reflects the reasonable expectation that most of the car share fleet should be stored in off-street parking bays.

The policy has proved impractical however as there is no third-party database through which they can understand the total car share service supply. The policy also typically reflects an attempt to slow or reduce the growth in the number of car share vehicles in on-street parking bays.

Such concerns are inappropriate in context of the Draft Fishermans Bend Framework Plan and City of Port Phillip transport strategies. The car share service providers need to remain financially viable, and do so by ensuring cars are located in the places that members use them most. The City of Port Phillip (and the Victorian Government) need car share services to succeed in Fishermans Bend, as without them local congestion will be much worse and significant expense would be required to cope with private car ownership and use.

In the City of Sydney, there are more than one thousand vehicles in the car share fleet and the membership above 20,000 and yet the vehicles only occupy 3% of the kerbside parking bays. It is very helpful to establish this on-street network early in the development process. This provides the base from which existing residents (about 500 people) and businesses will have improved transport access. It is therefore reasonable to establish the initial car share network using on-street parking spaces and then supplement that network with off-street spaces as developments provide additional users and car parking spaces.
Around 3% of the kerbside parking bays will be used for car share fleet

The risk of under-provision is, to some extent, mitigated by the Council’s ability to locate vehicles at the kerb. However, the Council does not wish to:

- Allocate a high proportion of kerbside space in the precinct to parking bays
- Allocate many of the kerbside parking bays to car share vehicles.

In the long term, Council envisages the total number of kerbside parking bays will be reduced as other more important uses are found for the limited space. This reflects a long standing community desire and Council policy to emphasize active transport modes, through the reallocation of road space for non-car use.

It is therefore assumed that the number of car share vehicles that can be located in on-street parking bays is directly related to the:

- Total Car share fleet required
- Car share network plan
- Total number of kerbside parking bays in the precinct.

It is assumed that there will be 4,000 kerbside parking bays in the whole of Fishermans Bend. (There are 2,200 kerbside bays in the area of the precinct in the City of Port Phillip.)

The car share service in the City of Sydney has been estimated to use 3% of the kerbside bays.

Using this proportion and an estimated on-street parking supply of 4,000 bays would allow for 120 car share vehicles in on-street parking bays within the precinct. There should be no limit on the number of car share vehicles located in on-street kerbside parking bays, just as there is no hard limit on other uses of car parking (the allocation of bays needs to be flexible and should cope with variations in demand over time). However the 3% figure can be used as a base to understand how the foundation network can be provided prior to significant influx of residents and businesses.

If 10% - 20% of the car share fleet were at the kerb, then the total fleet would be in order of 600 - 1,200 vehicles.

How does the size of the car share fleet relate to the number of off-street car parking bays likely to be constructed in the precinct?

It is worth considering how population, dwellings and car parking provision relate to the potential car share fleet in the precinct. It is forecast that 80,000 people will live in the precinct, and we can assume (broadly) they will use 40,000 dwellings. The Framework proposes a maximum rate of 0.5 for off-street car parking bays per dwelling. If, on average, every dwelling met this maximum then there would be 20,000 parking bays in the precinct.

An 800-vehicle car share fleet with 120 car share vehicles in on-street spaces, will need 680 off-street spaces - or 1 in 30 of the 20,000 off-street car parking bays in the precinct.

This estimate sets an upper range for what could be required depending on the scale and type of development in Fishermans Bend. It would therefore be inappropriate for the planning scheme to set a ratio lower than 1:30 car parking bays. The Draft Fishermans Bend Framework suggests a ratio of 1:60 car parking bays. In our professional opinion this rate of provision risks not adequately serving the community’s needs, similar to a tram route that only operates once every hour. The result would be lower car share membership, lower use and reduced financial viability of the service.
Three factors suggest that the recommended ratio of 1:25 is more appropriate:

- There is reason to expect that the numbers used in the estimate will change. It is possible, perhaps likely, that there will be fewer than two people in each dwelling. This would raise the ratio. It is also likely that the maximum setting in the planning scheme will not be used in all developments. A lower ‘in practice’ provision of off-street car parking bays would reduce the supply of bays and lower the car share to parking bay ratio. If there are 1.8 people in each dwelling and 60% of the maximum level of off-street car parking bays are provided, then the ratio is 1:25

- The Framework makes it clear that it is appropriate to provide a car share network in the precinct. (Draft Strategy 1.6.5 Encourage inclusion of car share spaces within new developments). To meet community needs in the precinct and be financially viable, Car Share service providers will need to have access to a critical mass of car spaces in a network that meets customer needs.

- It is preferable to have a higher proportion of the car share fleet in off-street car parking bays rather than in on-street bays because on-street space will be better used for many other things including trees, pedestrian space, loading (passengers and freight) and short term parking rather than storage.

- To adequately cover the precinct (with a vehicle in easy walking distance) there needs to be at least 120 car share vehicles on the street. While more could be provided, the other competing uses are likely to make it difficult to provide significant more than that number (and certainly very difficult to provide 800 if needed)

**Distance from transit**

It is not recommended that the settings for car share provision in Fishermans Bend have any relationship to the distance of a development from transit services. Specifying transit standards and linking them to the provision of off-street car parking bays for car share vehicles is not necessary in the Fishermans Bend precinct and would add unnecessary complexity and confusion to the planning scheme.

The level of car share use is dependent on several factors including:

1. The density of population and jobs
2. The presence of mixed land use in which employment, commercial and residential uses are co-located
3. Whether people can meet most of their needs most of the time by walking, transit, bicycle riding and delivery services
4. Whether default settings in the planning scheme (such as compulsory off-street parking bays) favour vehicle ownership
5. The scarcity of kerbside parking and storage and whether out-of-pocket fees are charged

Each of these factors has a negative, neutral and positive range.

The level of transit service available in the area is a component of just one of the factors. Transit service can be measured by factors such as frequency, quality and distance. The level of these (and other) factors determines the transit advantage enjoyed at a particular site.

Some planning schemes in the United States define the positive range of these factors in the planning scheme. These schemes allow developments that meet or exceed the standard to vary other provisions in the planning scheme such as the number of off-street car parking bays.
The Fishermans Bend Framework Plan states that the precinct will ‘boast unprecedented levels of walking, cycling and public transport connectivity that will set a new benchmark for Melbourne’. It can therefore be assumed that all land in the precinct is (or will be) within a positive range and that transit in the precinct will be sufficient to support the growth of car share use. Even with limited transit services, the base level of car share provision will be appropriate in the whole of the area as the other factors will lead to a base level of demand that makes the service financially viable.

Green Travel Plan

The State Government has proposed that green travel plans be incorporated in the planning scheme for the Fishermans Bend precinct. The Framework also proposes a lower parking rate per dwelling.

Green travel plans have potential strengths and practical weaknesses. The weaknesses include that:

- They are plans and do not always lead to action
- Compliance can be achieved by providing a plan that is (or would be) ineffective if implemented or by ignoring the plan once an occupancy permit is issued.
- The plans are prepared by unrelated third parties. The development proponent generally lacks the capability and capacity to develop or implement the plans in an appropriate manner that delivers behaviour change. As a result, implementation of the plans is often left to relatively unqualified staff with minimal interest in the actual transport outcomes.
- In general, these weaknesses cannot be overcome through education, facilitation support or strict enforcement by Responsible Authorities, because there is limited ability to required ongoing delivery of a green travel plan through the Planning & Environment Act 1987.

The best way to achieve the outcomes envisaged from a Green Travel Plan by the Framework Plan is to define a set of default actions within the planning scheme. This would be an ‘off-the-shelf’ Green Travel Plan, that every developer must sign up to. It would provide a base level of actions that all developers must undertake – recognising that some developers may choose to do more.

Clause 52.06 typically requires 1 car parking space for each dwelling with up to two bedrooms and 2 car parking spaces for dwellings with 3 or more bedrooms.

It can be assumed that developers and future purchasers might factor this cost into the typical cost of a dwelling. Not requiring the parking therefore generates a saving to the developer and purchaser. It is appropriate to allocate some of that expenditure on other transport measures that directly improve transport outcomes for occupiers of the development. Allowing some savings to pass through will also improve housing affordability.

PBA therefore estimate that the Green Travel Plan could include transport initiatives with a cost equivalent to half the cost of the maximum permissible car park construction. The factors influencing this are:

- The cost of providing car spaces that would typically be required (as per Clause 52.06 of the VPP)
- The ability for a developer to reduce this number to zero spaces in Fishermans Bend
- Awareness that all development costs are passed onto occupiers and the need to improve housing affordability and cost of living
- The ability to increase the number of dwellings provided on each site within a defined building envelope.
The planning scheme would require the default actions by the developer and building managers and would be enforceable through a condition of the Planning Permit. Proponents would be able to vary the conditions by submitting an alternative approach (Enhanced Green Travel Plan) along with the evidence that the improvements would have a more beneficial impact than the default requirements.

The default requirements would be designed to change behaviour of building occupiers. This would make them complementary to the physical measures included in the Planning Scheme (and Green Star as built ratings) such as the provision of car share vehicles and bicycle storage.

It can be expected that most residents and employees in Fishermans Bend are currently car dependent. This situation will persist unless several 'radical' interventions make other modes more competitive relative to private car use. Several behavioural barriers make it less likely that people in the habit of using a car for most journeys will experiment with alternatives. These include up-front enrolment and pay-by-use fees related to public transport and car share services.

The requirement for up-front enrolment for car share services imposes a barrier of 'red tape' that requires strong motivation to overcome. This motivation is not available to people who have not experienced the value of the transport option. Up-front fees present the experimental user with a financial loss which strongly suppresses motivation. Transit and car share both require people to cross these particular barriers. Capital cost is a barrier to trialling e-bikes. The default actions would be designed to overcome these barriers.

People arriving to live and work in the precinct would be enrolled in Myki and the car share services by default (unless they opt out). Access to short term loans for e-bikes would be offered as part of the scheme.

The Council (and State Government) would be responsible for ensuring that people knew about their eligibility. Council could provide support services, identifying new arrivals through the rate system for example and offering enrolment assistance and benefit access through community centres and libraries.

It is likely that developers will include the default requirements in their marketing. Competition may motivate some to add to the default package to establish a point of difference.

The requirements can be considered against the current requirements to provide off-street car parking bays. Off-street car parking bays cost around $40,000 to construct, leaving aside the opportunity cost of the space that they occupy. Since the parking bay requirement in the Fishermans Bend precinct is 0.5 bays per dwelling, then a green travel requirement that cost around $6,000 per person would be well below the amount required to be spent on parking otherwise. An indicative program cost could be:

- 3 years of Myki - $3,500
- 3 years of car share membership and driving credits - $1,500
- 1 month of e-bike use and interest on a loan - $1,000

After 3-years the green travel plan responsibilities would conclude. This is because it takes more than 24 months of exposure for new residents and employees to understand options well and form new habits. Minimal change is achieved from extending the program beyond 3 years.

**Zero parking in buildings**

City of Port Phillip's submission on the draft Framework supports the use of the Parking Overlay Schedule 1 (PO1) to minimise the supply of car parking through maximum car parking rates (including allowing for zero car parking – noting further guidance is required).
The benefits of zero parking in buildings include:

- A building without car parking bays can be designed with more natural ventilation and daylight and with a greater proportion of the site and building to dedicated to higher value uses such as open space, through block access or dwellings.
- Apartments without car parking bays are cheaper to buy and rent than an equivalent apartment with a parking bay or bays. Offices and commercial premises without car parking bays are cheaper to rent and do not attract Fringe Benefits Tax on the car spaces.
- Buildings without a parking facility do not ‘occupy’ the public space required for their driveway. A parking facility entrance eliminates the opportunity to provide an uninterrupted kerbside lane for bicycles or for a bus platform. The area of land back of the kerb in front of the entrance cannot be used for planting, trading or passive open space. The footpath is interrupted and pedestrians are at risk from motor vehicles crossing the footpath.
- Buildings without a parking facility entrance minimise negative impacts on the transport network and have a higher value relationship with the street including providing passive surveillance and an active frontage.
- Off-site parking (whether to access a car share vehicle at the kerb or a vehicle in a facility in another structure) reduces the chance that mode choice will be ‘automatic’ and car dependant.

The Framework provides for two complementary measures that are as important as the introduction of a ‘maximum’ rate:

- ‘Car parks must be ... subdivided as common property (not individually titled) to be managed by the owners corporation and leased to property owners’. Leasing of bays allows people to move in and out of motor vehicle ownership without the bias of owning a parking bay. This provision will act to reduce ownership and use of motor vehicles. People who do not own a parking bay but have access to one are likely to evaluate how much they need to own a car. People who have paid for a parking bay are inclined to buy a car to put in it. People who own a car are likely to use it.
- ‘Support the off-site delivery of precinct car parking stations’. Off-site parking facilities are common in Europe, especially in historic town centres. Off-site storage acts to replace short distance trips by motor vehicle with trips by alternative modes. In a high-density area with many high value destinations the number of car trips taken when the vehicle is stored off-site is likely to fall to a level where ownership will be evaluated.

**Complementary measures in the Draft Fishermans Bend Framework**

The Framework proposes a number of measures that are relevant to and supportive of car share services. These measures are listed under Sustainability goal 1 – a connected and liveable community Objective 1.6 Support long-term sustainable transport patterns. The following areas of discussion highlight ways in which the complementary measures in the Draft Framework can be strengthened.

**One: The maximum rate and the freight loading requirements in the planning scheme could encourage provision of parking facilities**

It is likely that Draft Strategy 1.6.1 which sets a maximum limit on the provision of car parking bays for dwellings and offices will act to reduce unnecessary car ownership and use. There is however a risk with a ‘maximum’ setting that it will encourage parking facilities to be provided.
Ideally all parking bays should require a permit and the permit conditions should include evidence of the current supply and use of off-street bays in the neighbourhood. By requiring a permit for all parking bays, the planning scheme sets the default to zero and requires proponents to formally establish why a parking facility needs to be provided on the site.

A similar risk exists in Draft Strategy 1.7.1 which requires buildings to be designed to ensure their deliveries, servicing and waste management are managed on-site. In practice, this requirement is only necessary for larger buildings. However, combined with the discretion to provide some parking bays, it risks encouraging even small buildings to have a parking facility when otherwise they might have done without.

Two: The benefits of collective ownership of parking bays

Draft Strategy 1.6.2 requires that parking bays are held as common property (not individually titled) and be managed by the owners’ corporation and leased to property owners. The requirement in Draft Strategy 1.6.2 will increase the market of residents and employees for car share by removing the barrier of private ownership of parking bays that currently acts to keep people in car ownership. Elsewhere in Melbourne car parking bays are linked to the dwelling title or held on separate private titles. This makes the sale, lease or rental of the bay impossible in most cases. ‘Captive’ owners of parking bays are more likely to own vehicles and private motor vehicle owners are more likely to use cars for trips.

Collective ownership of parking bays by the owners’ corporation will make it easier for the car share service to expand to off-street locations. Car share service providers will be able to negotiate access and car parking bays on private land with the owners corporation just as they do currently with commercial car park managers. With this requirement in place, it can be expected that the parking bays provided by private investors in the precinct will tend to become a multi-site collective car parking and storage facility for all owners, renters and visitors to the precinct.

Consideration should be given to limiting the time of leases if this is seen to ensure a more robust market that responds to customer needs.

Three: Off-site provision of car parking bays

Draft Strategy 1.6.3 allows developments to provide parking bays at other sites. This provision is likely to support higher levels of car share use. When the private motor vehicle is the nearest and most convenient mode of transport the proportion of trips by car will be inflated. If the vehicle is located nearby, it is less likely to be used for trivial trips. When trivial trips by car are replaced by other modes and total vehicle kilometres travelled falls people are more likely to consider avoiding car ownership all-together.

It is important that the requirement for collective ownership and the flexibility of off-site provision is complemented by a requirement that all parking facilities are set up to allow internet based controlled public access.

Access by visitors to private parking facilities in many buildings in Melbourne is often managed informally and insecurely. Apartment dwellers might ‘lend’ a tradesman or friend their spare pass key or fob. Alternatively, they might trigger the access for the vehicle. This method risks unauthorised entry to the facility and, depending on the design of the building, access to the building itself.

Controlled public access refers to internet based accredited booking and short-term access systems that provide limited and monitored access for occasional visitors. Generally, the booking and access system is complemented by building design that isolates the car parking facility from the rest of the building.
With such a system in place someone who has booked a car share vehicle can enter the parking facility of a build to which they would not normally be able to gain access. The system can also be used for service vehicles, deliveries, private visitors and other people who need access.

Unless the building is designed with such a system in mind and unless such a system is installed the impact of the beneficial requirements for off-site parking and collective ownership will not be realised.

*Four: The State Congestion Levy*

It is important that the Congestion Tax zone (administered by the State Revenue Office) is extended across the Fishermans Bend area for consistency.

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