Dear Mr Lennon

RE: INTEGRATED MOVEMENT SYSTEMS POLICY DISCUSSION PAPER

The Resilient East Project Steering Committee welcomes the opportunity to contribute to the development of the Integrated Movement Systems Policy towards the preparation of the Planning and Design Code.

This input does not reflect formal Council consideration of the Discussion Paper.

The Resilient East Project is a partnership between the Campbelltown City Council, the Cities of Adelaide, Burnside, Norwood Payneham & St Peters, Prospect, Tea Tree Gully, Unley and the Town of Walkerville and the South Australian Government. The partnership was formalised through a Sector Agreement, signed by the Chief Executive Officers of each of the Councils and Ian Hunter (former) Minister for Climate Change on behalf of the Government of South Australia in March 2017. Through this important collaboration, Resilient East seeks to improve the resilience of the region’s communities, assets and infrastructure, local economies and natural environment to support appropriate planning for the inevitable impacts and challenges of climate change in the short, medium and long term.

Purpose of Feedback

The Committee welcomes the invitation to provide feedback, collaboration and input as the various new planning strategy and policy instruments are developed. On that basis, I am pleased to provide the following feedback in response to Integrated Movement Systems Policy:

- With comments provided in the tables showing the proposed responses;
- By answering discussion questions; and,
- By identifying additional issues and providing potential solutions.
DETAILED RESPONSES TO THE DISCUSSION PAPER

THEME 1: Aligning South Australia’s growth with transport infrastructure

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<tr>
<td>1A</td>
<td>In 2012, a suite of higher density, mixed use zones were introduced into the SAPPL which have been spatially applied to a small number of areas adjacent to key transport corridors and centres. These zones help to integrate land use and transport systems and can provide the foundation for this outcome in the new planning system.</td>
<td>Transition zones that promote improved integration of land use with major transport corridors (for example: Urban Corridor Zone, Urban Core Zone, Residential High Density Zones and Mixed Use Zones). The spatial application of these zones is unlikely to be substantially changed as part of the application of Generation 1 of the Code.</td>
<td>Transition ready</td>
<td>Also consider interactions and planning for nature corridors</td>
</tr>
<tr>
<td>1B</td>
<td>A minimum threshold of population density to ensure public transport and local shops and services are viable and can be located within walking distance of where people live needs to be identified.</td>
<td>Review the inclusion of minimum net residential densities in Suburban Neighbourhood Zones, Urban Core Zones, Urban Corridor Zones and Suburban Activity Node Zones. Further discussion and consultation needs to be undertaken to identify the appropriate net residential densities in the context of evolving demographics, market dynamics and development.</td>
<td>Reform (Gen 1)</td>
<td>No comment</td>
</tr>
<tr>
<td>1C</td>
<td>Some transport corridors are currently underutilised and could benefit from better integration with supporting land uses.</td>
<td>Investigate the spatial application of higher density mixed-use zones (such as those listed above) along appropriate key transport corridors, adjacent activity centres, in urban renewal areas and key strategic sites.</td>
<td>Reform (Commen ce Gen 1)</td>
<td>Also consider interactions and planning for nature corridors. Designate these locations spatially and clearly articulate process and engagement for policy change. Ensure policy reflects the need for increased landscaping and environmental improvements (e.g. WSUD) for these mixed-use zones</td>
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Discussion Questions:

*How can the Code better respond to the differences in public transport availability in urban and regional communities?*

Adelaide’s current public transport system provides reasonable links to and from the CBD and other centres (e.g. The Parade, Unley Road, Prospect Road) but is lacking with respect to inter-suburban services. Centres hierarchy policy has become unclear through recent State strategic directions. Before progressing with changes to Code policy, there needs to be a considered review and understanding of where people are or want to be moving from and to, and what land use and density patterns will best facilitate an integrated and efficient movement system. A Regional Plan is necessary to spatially show where concentrated development and employment nodes are planned and where areas will be designated for low growth/intensification.

Feeder solutions can play a key part in assisting commuters get from their doorstep to key transport routes, nodes and interchange stations. The attributes include:
- Public transport as an integral infrastructure inclusion in any new development.
- Planning and Design Code that is policy specific to different metropolitan and regional scenarios to get the best outcomes for regular and accessible pick up of public passengers from distributed stops and satellite towns in the Adelaide Hills and outer suburbs.
- Safe and secure parking and bike lock up facilities in satellite towns and outer suburbs, as well as at the major transport hubs.
- For physically active travel a key aspect is safety for cyclists and safety afforded to pedestrians from cyclists when travelling to public transport points or when travelling as a full route alternative to public transport.

**What other policy provisions are needed to facilitate good quality development that supports the desired minimum residential densities in key zones?**

Increasing densities, particularly in mixed use zones, is a complex policy challenge. It is important for policies to consider the following challenges:

- The need to improve and expand public transport services to service increased populations. It is important this is addressed in advance of need, otherwise residents and commuters will become disenfranchised if they move to these locations and find the services are lacking, quickly leading to a car dominated culture.
- Dispersing developments along linear corridors versus concentrated nodes and activity centres, as this requires dispersed infrastructure and transport services.
- Interface issues with surrounding lower density residential uses – including visual impact, overlooking, overshadowing, setbacks, loss of site vegetation and separation distances.
- Interface issues between different land uses within a mixed use zone such as noise and odour from ground floor commercial tenancies affecting residential tenancies above.
- Avoiding conflicts with road widening requirements, cycle lanes, vegetation requirements.
- Increased traffic volumes in narrow service lanes behind arterial roads.
- Increased traffic generation and demand for car parking (including commuters parking in residential streets).

Regional or Subregional Plans are an important part of indicating where different desired minimum residential densities and mixed use precincts should be located (in a broader strategic network than just at a zone by zone level). The State Atlas could also provide an important contribution to this strategic planning through mapping the following:

- Which high frequency public transport stops/hubs will be the subject of land use policy change.
- Demonstrate changes in density (and green cover) over time to measure whether density targets are on track.
- Road hierarchies and road use e.g. distinguishing major freight routes from main streets, and what roads are for “link” and what roads are for “place”.
- Road widening requirements and public realm improvements (e.g. power undergrounding, shade/canopy planting, lighting).

Other policy provisions could include:

- Additional communal space with mixed use private developments and integrated public spaces to be provided to offset the lower allocation of private open space and promote green, healthy, walkable communities.
- The Planning and Design Code could better encourage site amalgamation for greater design flexibility (working with a larger site, rather than a more constrained site) which can result in more effective preservation and reintroduction of canopy and green cover.
- Standardise the provision of secure bike-parking at public transport nodes (as per Paradise Interchange) that facilitates connection between active and public transport
- The inclusion of suitable end-of-journey facilities. Some excellent examples in Melbourne, (i.e. on Bourke St, The Alfred Hospital, Collins St, The Rialto, The Commons in Brunswick,) where the undercover car park includes modular secure parking and shower facilities.
- Better enable bikes and prams to be included on public transport, for example a dedicated carriage on trains, and lift-on, lift-off toting on buses via racks.

Does existing policy within the SAPPL adequately address issues relating to the perceived quality and impacts of higher density development? For example, the integration and cumulative impacts of parking and vehicle movement, public realm, and streetscape interface. How might targeted policy reform promote or incentivise better outcomes?

As cities are encouraged to become denser and utilise public and physically active modes of transport to a greater extent, the difficulties of planning to accommodate safe and accessible transport are becoming more apparent. Higher priorities for funding and providing infrastructure for physically active and public transport options will provide better long term outcomes compared with infrastructure aimed primarily at cars.

**THEME 2: Capitalising on strategic transport infrastructure**

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<tr>
<td>2A</td>
<td>The SAPPL contains an Airfield Zone which seeks to protect the ongoing operation of airport facilities and manage the interfaces with surrounding land uses. There is an opportunity to expand policy for appropriate complementary development types.</td>
<td>Transition the policy intent of the Airfield Zone and review the permissible uses in these zones to better support complementary development types. Work with Adelaide Airport Limited, City of West Torrens and other stakeholders within the vicinity of strategic airports.</td>
<td>Transition ready</td>
<td>Supported</td>
</tr>
<tr>
<td>2B</td>
<td>With the changing nature of the ways freight is moved, there is an opportunity to review the planning policy in relation to the operation of intermodal facilities and freight transport hubs, including their potential future expansion.</td>
<td>Review and Transition the Intermodal Policy Area into the equivalent zone.</td>
<td>Transition ready</td>
<td>A reduction of freight through residential areas such as Portrush Rd is welcome</td>
</tr>
<tr>
<td>2C</td>
<td>The application of planning policy for airports varies considerably across the state. A key opportunity will be to improve policy consistency with Federal Government guidelines on airports.</td>
<td>Review the SAPPL building near airfields and building heights policies and mapping to respond to the NASF Guidelines.</td>
<td>Reform (Gen 1)</td>
<td>Supported</td>
</tr>
<tr>
<td>2D</td>
<td>Protecting ports from encroachment from incompatible land uses is becoming increasingly important to protect their current operations, critical transport links and future expansion opportunities.</td>
<td>Review the range of zones and policy areas that apply to seaports and supporting infrastructure to ensure that policy is fit for purpose.</td>
<td>Reform (Gen 1)</td>
<td>No comment</td>
</tr>
<tr>
<td>2E</td>
<td>Currently, the spatial extent of land required for future road widening requirements is not included in Development Plans.</td>
<td>Work with DPTI Transport to review, transition and map road widening provisions and investigate whether they can be incorporated as an overlay or similar in the Code.</td>
<td>Transition ready</td>
<td>Supported subject to minimising impacts on communities and the environment. Referral advice is often non-</td>
</tr>
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Moving into a new planning system, there is a need to ensure that land uses are appropriately supported by transport options and that our transport corridors remain efficient.

Transition the Policy intent of the existing strategic Transport Routes Overlay. This will involve:
- reviewing policy and mapping for strategic transport corridors
- refining policy (where required) with regard to access requirements, freight routes and road hierarchy. Targeted consultation with affected stakeholders plus general engagement as part of the Code development.

Supported and recommend that the planning for biodiversity and landscaping corridors be mapped and integrated. Competing or conflicting priorities such as safe bicycle networks need to be spatially designated as separated (or integrated) routes in the Spatial Atlas and Regional Plans to ensure efficient and safe networks.

The cumulative impacts and challenges of increasing residential densities have been outlined above. Planning and Design Code policy and the new planning system more generally, should address these issues through:

- Establishing Infrastructure Design Standards relating to land divisions which ensure footpaths and roads are fit for purpose, accessible and safe for all modes of transport including pedestrians.
- Encouraging a reduced number of driveways (such as through the use of common driveways), to provide greater on-street parking opportunities, reduced opportunities for conflicts with cyclists and pedestrians, and more opportunities for street trees and front gardens
- Greater emphasis on minimum bicycle parking requirements for commercial and apartment developments with end of trip facilities – currently these policies are often overlooked or are considered a lower priority.

Discussion Question:

*How should planning policy balance the need for airports in strategic locations against the impact of these facilities on adjacent land owners?*

Whilst the Resilient East region is impacted by flights associated with both the Adelaide and Parafield Airport, this is not a large issue for Resilient East region. However there is
recognition that as the frequency of flights increase including for both people and freight, then the potential for concerns and incidents is likely to increase over time.

As a general principle, to minimise impact on communities and landholders it would be useful to identify and maintain the optimum open space buffer zones such as for agriculture. This would be particularly applicable when establishing any new airports, (such as the Globelink Freight airport) and new and/or upgraded rural airports.

**Potential solution**

Consider the impact on current land users and future communities together with the issues of growth and encroachment when planning new and upgraded airports, using open space buffer zones to minimise community impacts.

*How can the Code work to protect the operation of major transport facilities whilst managing the impacts on adjacent development opportunities?*

In addition to 'major transport facilities', careful consideration also needs to be given to policy setting for high traffic generating land uses to ensure that these impacts can be managed in locations where there are nearby 'sensitive' land uses (i.e. residential). Planning policy has traditionally dealt with this through floor area maximums and building height limits. However it appears there is a desire to reduce such policy limitations in the Planning and Design Code. Policy settings for large scale retail, bulky goods and other commercial/institutional uses need careful consideration in the Planning and Design Code using either floor area maximums or an alternative approach where better outcomes can be demonstrated.

Communities are impacted negatively when planning:

- Has enabled clashing developments to be approved that are incompatible in land use operational impacts and scale,
- Has not envisaged the ultimate growth and then requires compulsory acquisition or closure of industry, and
- Has not envisaged the need for natural buffers, nature corridors, flood spill, and flexibility to adapt to climate change.

**Potential solutions**

The Planning and Design Code can incorporate forward thinking in order to minimise excessive conflicts regarding social, economic and environmental impacts.

- Policy relating to scale/function of large traffic generating uses, and structure plans included in the Planning and Design Code to show coordinated access/ circulation movement etc.
- Identifying the optimum open space buffer zones (could be for biodiversity or agriculture).
- Consider the impacts on current adjoining land holders and future communities.
- Project forward potential issues of growth and encroachment.
**How can planning policy better manage and minimise the impacts of transport corridors on surrounding development (i.e. noise and air pollution for residents)?**

Transport planning is generally undertaken in a way that is not integrated with the needs of biodiversity and ecosystems. Protection and clearance of native vegetation is typically considered at the local scale of immediate impact rather than the broader landscape scale of how populations and ecosystems can continue and co-exist. There have been few best practice examples of nature crossovers and safe wildlife crossings. There are almost no speed management initiatives where major transport road and rail infrastructure passes through or adjacent to conservation parks and biodiversity priority areas.

Closer to urban areas, the rapid increase in guard rail and longer sections of guard rail appears to be trapping more wildlife on roads and causing an increase in roadkill, particularly where the design of guard rail is not integrated with assessments to determine where animals are regularly crossing roads.

**Potential solution**
- The Planning and Design Code could incorporate Biodiversity Greening Corridors planning for protecting and enhancing landscape scale nature corridors across South Australia.

**THEME 3: Sustainable mobility, car parking and the impact of technology**

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<tr>
<td>A</td>
<td>The current walking and cycling SAPPL policy is well placed to be transitioned into the Code.</td>
<td>Transition the SAPPL off-street bicycle parking and the end-of-trip facilities (such as showers, changing facilities and clothes storage).</td>
<td>Transition ready</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>B</td>
<td>Cycling routes are not universally incorporated into Development Plans. This leads to inconsistency of application of design rules etc. relating to cycling.</td>
<td>Incorporate identified cycling routes into the Code.</td>
<td>Reform (Gen 1)</td>
<td>Strongly supported through designation in Regional Plans, Spatial Atlas, Overlays and Concept Plans</td>
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**Discussion Question:**

*How can planning policy better enable the delivery of more walking, cycling and active travel opportunities in our neighbourhoods?*

It is acknowledged that Adelaide is largely already developed which means additional effort is required to design and retrofit physically active transport infrastructure. Whilst initiatives such as the Frome Road North-South cycleway assist, there are still considerable risks due to the level crossings over roads, driveways and footpaths, confusion by unfamiliar users, and gaps such as between North Terrace and Rundle St.

Where priority cycling routes are identified, these need to be accompanied by appropriate planning policy to ensure development on sites adjoining these routes do not create significant additional crossovers or other conflict points between pedestrians, cyclists and motorists.

How will the Planning and Design Code enforce the development of cycling and walking routes across Council zones? Will there be strategic routes developed into the Planning and Design Code that need to be enhanced or upgrade within new developments?
Potential solutions

In urban areas, a strategic transport plan could provide for:

- pram ramps at every street corner;
- maintaining and widening ageing footpaths and improvements to footpath surfaces to minimise trip hazards;
- increased bike racks;
- park benches (these are increasingly important, particularly with an ageing population);
- street trees and WSUD features along walking and bike designated paths; and
- creating climate change responsive public transport waiting areas to ensure comfortable microclimates for waiting passengers.

Street infrastructure is largely fixed and requires careful planning to retrofit infrastructure to accommodate all transport and movement modes. Priorities need to be established and well-funded, often requiring State Government funding support.

Regional, Subregional and structure plans should identify local and arterial cycling and pedestrian networks in localities where these can be retrofitted into existing infrastructure. This may mean prioritising different networks for different purposes - for example, providing car parks for commuters on one route, facilitating freight on another route, and removing car parks to accommodate bicycle and pedestrian friendly paths on another route. Design policy should respond to these designated areas, such as requiring better and more welcoming design outcomes on pedestrian routes and safer access to sites.

In greenfields development, the integrated transport infrastructure should provide for:

- **Safe passage for walking / running together with place destinations** for recreation and exercise for families and dogs
- **Dedicated cycle ways and expressways** that enable transit cyclists to be safe from motorcycles, cars, vans, trucks and buses, whilst not becoming a risk to pedestrians, families, dogs and wildlife.
- **Overlays for cycle paths**, significant pedestrian access routes.
- **Recognition and enhancement of nature corridors**, including greenways, linear parks on streams and rivers, and backyard biodiversity habitat that connects parks and remnants across the urban landscape.
- **Specific policy and Deemed-to-Satisfy criteria** to compel consideration in development assessment of applications
- **Land divisions** to require minimisation of crossovers, continuity of footpaths and walking or shared access paths and incorporate open space and usable public realm.

In existing established areas in the longer term, new approaches to safe segregation will need to be considered through appropriate reservation of land and:

- **Standardise the inclusion of adequate bicycle lanes** on new roads and on road redevelopments. For example, the recent upgrade of Glen Osmond Rd has not catered for the needs of cyclists despite the ample road which allows for two lanes for cars plus bicycle lanes.
- **Standardise the improved markings** and other treatments for bike lanes to better protect cyclists - ie. green textured lane **identification**, delineation of the lane boundary
to use cats eye reflectors or similar, and where feasible the use of Copenhagen lanes, as per Frome St.

- **Limit the car parking in bike lanes.** Many *feeder* streets have bike lanes that are only dedicated during peak traffic times, outside of which cars are often parked within these lanes.

- **Clearer allowance for cyclists at intersections and roundabouts.** Too often the lanes disappear and it is unclear where to cycle.

**How can planning policy assist in balancing the tensions between prioritising the movement of vehicles (Link) and the quality of the space for pedestrians (Place) along our streets?**

Greater effort to spatially delineate which roads and streets are required for movement, as different from the roads and streets which are primarily for local access and place. Once this requirement is identified (potentially at different grades) this should be followed by the subsequent planning for how to design and manage the roads, including the appropriate speed restrictions.

In particular, smaller urban fringe and hills roads and dirt tracks (non movement/link) in what could be regarded as rural residential areas are often established without a defined speed constraint or as an 80 km/h constraint outside towns. In many locations these might be better designed for and operated at lower 50km/h or 60 km/h speed limits enabling safer walking and cycling.

**Potential Solutions**

- Roads to be treated as shared use zones with variable speed zones (i.e. 60km peak, 40km off peak) and roads and footpaths at a different grade to favour pedestrians over vehicles.

**How can the Code promote development that contributes positively to streets and the serviceability and quality of the public realm?**

Transport planning policies and Regional Plans should establish the vision, principles and criteria to ensure that transport planning is integrated with social, economic and environmental needs. This can include supporting climate adaptation, mitigation, electric vehicles, physically active transport options and reducing conflicts between transport routes and corridors with nature corridors and crossover points.

**Potential Solutions**

- The Planning and Design Code when guiding adequate levels of practical onsite parking for development to consider consolidation of multiple parking areas between commercial properties to reduce crossovers and promote more efficient use of parking spaces.

- The Planning and Design Code to provide adequate options to manage resource recovery collection (waste and recycling) in a planned and orderly manner.

- The Planning and Design Code to require that developments provide adequate levels of canopy and green cover including front gardens addressing the street with greater requirement for developers to undertake landscaping.

- In commercial settings car parks should be treated like public open space and have higher amenity value that integrates these places into surrounding precincts and
promote multiple benefits including cycle and pedestrian access, increased shade cover, WSUD and runoff treatment.

- Incentives could also be established to underground power lines and plant trees that can reach an unrestricted canopy (not affected by overhead wires) to reduce the urban heat island effect.

**Does the Code need to more explicitly anticipate the needs of an ageing population through provision for things like mobility scooters or access vehicles?**

Yes, the design of travel pathways for an ageing population does need to cater for the safety and support of mobility scooters taking into account the issues of surface smoothness and continuity, travel pathway width, driveway crossovers and street crossings.

Integrated design solutions need to be encouraged but mandatory solutions may be unrealistic in the near term.

**THEME 3: Continued**

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<tr>
<td>3C</td>
<td>As travel behaviours continue to change, the demand for car parking will also change. It is important that new buildings and structures, particularly multi-level car parks, are adaptable for future uses.</td>
<td>Transition the existing SAPPL policy on the design of car parking structures so they are adaptable for new uses in the future.</td>
<td>Transition ready</td>
<td>Supported subject to also supporting green infrastructure &amp; canopy cover with Deemed-to-Satisfy and Performance Outcome detail</td>
</tr>
<tr>
<td>3D</td>
<td>Car parking rates in current planning policy are often inflexible and do not consider innovative design or proximity to other transport options.</td>
<td>Rationalise and transition existing car parking rate policies which allow for variation to prescribed minimum parking rates for development proposals which satisfy specific design and transport option criteria.</td>
<td>Transition ready</td>
<td>Supported where this is able to be demonstrated to not impact on surrounding property owners</td>
</tr>
<tr>
<td>3E</td>
<td>There is potential for greater standardisation of car parking rates, while still allowing for different rates for conditional and geographical contexts.</td>
<td>Review and consult on car parking rates in Greater Adelaide and regional centres to identify opportunities for greater standardisation through the Code, where appropriate.</td>
<td>Reform (Gen 1)</td>
<td>Standardisation should integrate needs for electric vehicles or shared vehicles Standardisation should still be dependent on demonstrated increases in public transport, priorities and changes in travel behaviour.</td>
</tr>
<tr>
<td>3F</td>
<td>Planning policy has a role to play in encouraging and supporting the uptake of technology which helps future-proof our neighbourhoods.</td>
<td>Develop policy that encourages new developments, in higher density or mixed use zones, to incorporate electric vehicle charging provisions and ensure appropriate infrastructure is in place.</td>
<td>Reform (Gen 1)</td>
<td>Agreed. To reduce fossil fuel dependence and consequences should be powered from local renewable generation and/or accredited GreenPower</td>
</tr>
<tr>
<td>3G</td>
<td>It is important to ensure that planning policy is in place to help facilitate the uptake of emerging technologies that support better car parking efficiency.</td>
<td>Develop policy for new car parking areas (of a certain size) which encourages the adoption of technologies which can better manage impacts.</td>
<td>Reform (Gen 2 and beyond)</td>
<td>Agreed</td>
</tr>
</tbody>
</table>
Discussion Questions:

*How can planning policy best respond to the impact of emerging technologies on our city and communities and how we move to and through them?*

Smart Technology is an excellent opportunity to *connect people* - through movement and information - to place.

**Potential Solutions**

For the greater metropolitan area, embracing a smart cities approach for integrated transport with a clear objective could be embedded in Regional Plans and the Planning and Design Code with sustainability principles. For example, future Greater Adelaide Regional Plan could include an objective such as:

‘Creating a Smart City through the use of smart transport technology and design to meet the social, economic and environmental needs of current and future communities’.

For integrated transport planning, smart technologies and concepts can be embedded in real and tangible projects and working in collaboration with councils and the private sector.

The design of car parking should not only be adaptable for future uses, but should also integrate all aspects of sustainability for present day use. For example, car parks demonstrate green infrastructure incorporating shade planting, rooftop and sidewall gardens, renewable electricity, sustainable water management and place-based services and experiences.

As a principle, the Planning and Design Code should encourage that multi level car parks fully utilise the rooftops and sidewalls for Green Infrastructure, and end-of-trip bike facilities similar to the interstate example shown in photos 1&2 below.

*Photos 1&2: Established in 1985, Sydney’s Embarkation Park is in Victoria Street, Potts Point, opposite Challis Avenue. It is on the roof of the Navy car park in Cowper Wharf Roadway, Woolloomooloo.*
Best application of transport technology

• **Catenary free** (no overhead wire) trams now provide the opportunity to maintain or re-establish urban street trees close to trams along much of the urban light rail pathways. Catenary can be maintained at stops and stations but battery operation can power the trams in catenary free zones. See [https://www.youtube.com/watch?v=uDABPY1a88k](https://www.youtube.com/watch?v=uDABPY1a88k)

• **Trackless trams** (Photo 3) can operate within narrow defined lanes but without the need for fixed light rail infrastructure, instead using optical and LIDAR guidance technology. Trackless trams enable greater flexibility and manoeuvrability and reduced establishment cost, particularly if coupled with catenary free zones. See [https://theconversation.com/why-trackless-trams-are-ready-to-replace-light-rail-103690](https://theconversation.com/why-trackless-trams-are-ready-to-replace-light-rail-103690)

• **Electric and hydrogen buses** have an important role to play towards reducing fuel costs, emissions along routes that require greater vehicle flexibility.

• **Electric bicycles** are rapidly becoming commonplace and have additional needs for charge points and lockup parking. Electric cycles are increasing the traffic load in shared walking areas which poses a greater risk for pedestrians.

• **Electric skateboards and scooters** are being noticed on footpaths and cycleways and may become more commonplace as part of a variable transport model.

• **Electric cars and vans** (driven and driverless) are poised for rapid market transition that could be triggered by a fuel price shock. All types of electric vehicles will require targeted recharging solutions and combination of forward planning, integration into new development projects and retrofitted options. Car parking areas (particularly basement car parks) should be designed to accommodate a greater number of electric vehicles in the future, such as through higher ceilings for ceiling mounted charge stations, or additional space around bays for ground charging stations.

Photo 3: The battery-powered trackless tram, or ART, in operation in Zhuzhou, showing the trackless autonomous guidance system (Source CRRC Zhuzhou Institute).
• **Shared Vehicles** (cars, bikes, and scooters) are likely to become an increasingly attractive alternative to single person car ownership, so car parking requirements could incorporate the need for a portion of shared vehicle parking spaces and appropriate access by users (i.e. not behind locked private car parks)

*How can the Code best respond to the variances in car parking requirements for different neighbourhoods?*

Ongoing monitoring and evaluation of vehicle ownership and use across different suburbs is a necessary foundation for planning and decision making. Whilst it may be hoped that personal ownership of vehicles may reduce, the rate of any change should be monitored and evaluated to identify trends.

As there is a transition towards more physically active modes of transport there may also be a need for more distributed but high density car parking, and less street parking.

There is a need to address parking at different scales across the urban landscape towards a greater proportion of the footprint being designed to provide canopy, green cover and renewable energy and recharging solutions.

Where vehicle parking is provided, it needs to be generous enough to accommodate larger SUVs and allow for parking and exiting and circulation around the vehicle to encourage use of the space.

*Will the current approach of minimum car-parking rates, with potential for discounted provision, adequately support the desired shift toward more sustainable mobility? Should the Code provide greater opportunity for low or no parking in appropriate circumstances or contemplate maximum parking rates?*

Careful assessment can determine whether a discount is motivating a desirable or an undesirable behaviour.

For those using node based transport, their travel habits and needs should be researched and understood in order for any barriers to be addressed. For example: people from outlying areas travel to Modbury to access both public transport and physically active travel. To use the Modbury Park and Ride car park with public transport for travelling to the city will cost $2 per day. To use the same car park to cycle to the city results in a cost of $10 per day, as the $8 automatic discount is not applied.

How will the minimising of car-parking be achieved when there is such a heavy dependence on cars in suburban developments? This will further exacerbate on street parking issues for Councils. There must be a staged approach to assist the transition from current state to a future with less car parking options. This will need to include the provision of attractive alternatives to reliance on vehicles.
Conclusion

In conclusion, the Resilient East Steering Committee considers that the State Planning Reforms and Planning Design Code will play a critical role in transitioning South Australia to climate ready and sustainable transport solutions. The next decade will be an exciting and perhaps revolutionary transition towards electric vehicles a greater role for public transport and greater physically active transport practices. Planning for this transition is of critical interest to our region as we seek to improve our sustainability and improve resilience to our changing climate.

The Resilient East Steering Committee is would be pleased to discuss this submission with the relevant Planning reform Team representatives.

Yours sincerely

Tim Kelly
Resilient East Project Coordinator (Mon-Thurs)
City of Unley

Email: