



A consensus view of 35 parties on the delivery of streets in Canberra

Streets for Community

Places to Be, Walk, Cycle & Drive

Final Paper 27 August 2014

Introduction

'Street for Community: Places to Be, Walk, Cycle and Drive' is an issues paper prepared on behalf of the Land Development Agency (LDA). It has been commissioned to explore concerns raised by LDA project teams regarding the delivery of streets in Canberra, and the difficulties in achieving an appropriate balance between good social, economic and environmental outcomes.

The observations included in the paper were gathered through an interview process conducted with 35 parties involved in the use and delivery of streets within Canberra. This included engineers, urban designers, architects and landscape architects working within the private and ACT Government sectors.

The paper presents a consensus view drawn from the interview process. It outlines the objectives and elements of 'good streets' and identifies key barriers to achieving 'good streets' within Canberra. It outlines consolidated recommendations to enable improved outcomes and investigates how the urban structure of our city could better meet social, economic and environmental objectives through amendments to the codes and standards.

The paper is not intended for public circulation but rather to highlight industry experiences and inform discussion at senior levels of the ACT Government.



Interview Findings

Despite the diverse nature and role that streets play within our city the interview process revealed a consistent view on the objectives for 'good streets'. A 'good street' was seen primarily to provide a pleasant, active and safe place for all user groups including pedestrians, cyclists, vehicle users and local residents. 'Good streets' have a local character and sense of place, and incorporate traffic and servicing in a holistic and integrated manner.

A 'good street' was considered to be one that promoted safety and a slow speed environment, allowed integrated servicing, had a distinctive character, used attractive materials, had a strong presence of trees and landscape and incorporated continuous path networks.

The interviews explored the barriers to delivering streets that met the identified objectives and contained the preferred elements. A series of structural and systemic issues were identified, at all stages of the street delivery process, spanning all involved parties including Consultants, Clients and Authorities.

The barriers preventing the delivery of 'good streets' were commonly identified as either broad cultural issues such as consultant team imbalance and lack of community consensus, or structural and institutional issues such as procurement processes, approval authority limitations and insufficient funding models.

Interviewees were invited to make suggestions on how these barriers might be overcome. Changes to code based regulations, assessment processes, procurement processes, and funding models were proposed. The need for a document that outlined a clear vision for Canberra's streets was highlighted.



Case Study Findings

A key barrier to the delivery of 'good streets' was considered by the interviewees to be the lack of flexibility in applicable codes and standards.

The 'Case Study' included in this paper demonstrates that alternate ways of delivering streets can better our current practice and improve cost effectiveness.

The study identifies cost savings that have an ability to be reinvested into our community. These savings are realised through a reduction of construction costs and additional revenue being generated through an increase in saleable land, stamp duty and rates revenue.

The analysis has revealed an estimated economic benefit to the ACT Government of \$128,000 per hectare if alternative street models are implemented.

Extrapolated across a typical greenfield subdivision such as Throsby (106 hectares), the economic benefit to the ACT Government is estimated to be \$13.5M.

Through the implementation of alternative street typologies Canberra can realise significant economic benefits and create communities that are pleasant to inhabit and healthier for its residents.

Objectives for Good Streets

Streets are diverse in nature, having variance in function, location and the people that use them. 'Good streets' have been identified through the interviews process as those that deliver the following intentions. A 'good street':

Provides Equally for All User Groups

A model street provides an accessible and convenient environment for everyone. They provide for cars, public transport and service vehicles, and respond to the needs of cyclists, pedestrians, disabled persons and the young and the old. Successful streets are not simply a traffic conduit. Good streets also recognise they are places occupied by residents and businesses and provide appropriate space for these activities.

Is Safe for all Users

An occupant will naturally feel at ease while using a street if their wellbeing is not being compromised. Safe streets provide passive surveillance of open areas, adequate street lighting, clear sight lines, low traffic speeds, quality material selections and clearly delineated and direct paths of travel for all users.



Has a Local Character and Sense of Place

Character is imparted through the combination of a street's scale, the massing of adjacent built form and its articulation, landscaping treatments, and inherent natural features. These components make up a street's appearance and can impart an identity or sense of place, which creates value for users.

Is Pleasant to Experience

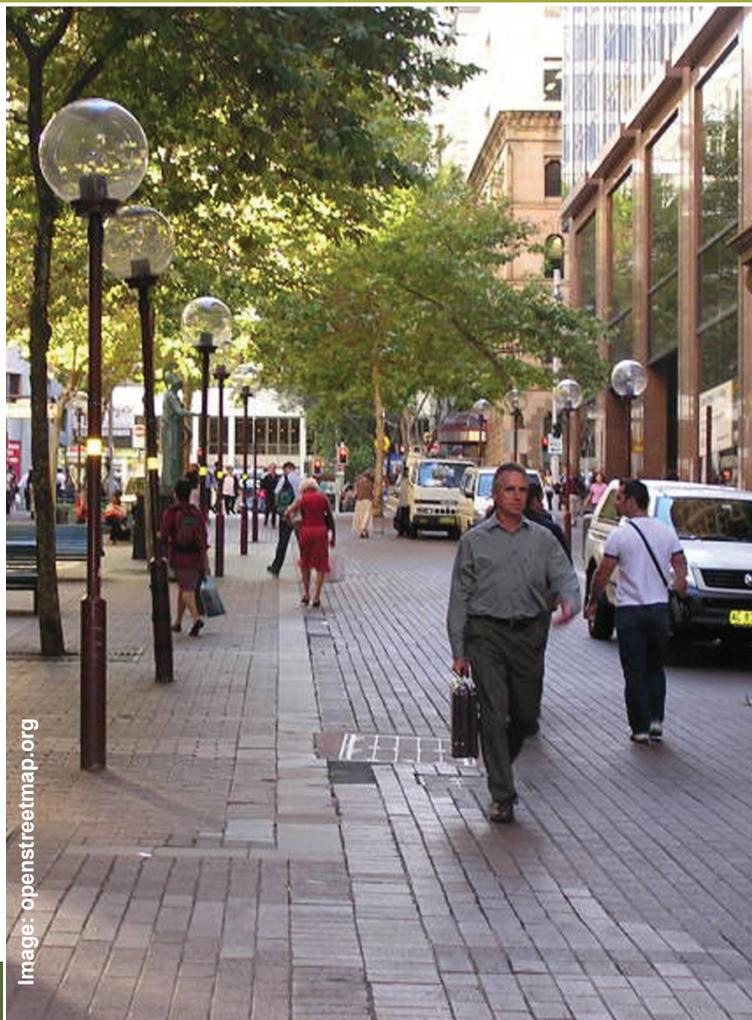
Good streets appeal to the occupants' senses through visual interest, pleasing aesthetics and physical comfort. The considered application of landscaping and materials, along with traffic and safety conditions has a meaningful impact on a user's enjoyment of a street.

Provides a Mix of Development Types

Providing for a variety of land uses and development types along a street contributes to a varied and engaging built environment. A good street achieves this mix, and responds to the differing uses in its form and functional layout.

Incorporates Functional Traffic Movements

To be suitable for use a good street provides for efficient and safe traffic movements. A street's role within its local area must be clearly expressed, and easily convey traffic at speeds controlled to be at an operational minimum.



Actively Connects the Community

A good street encourages dynamic occupation by providing connections to other pathways, open spaces and areas of rest and engagement. An exemplary street connects people to places, encourages walking, induces local activity and provides for social interactions.



Integrates Servicing Requirements

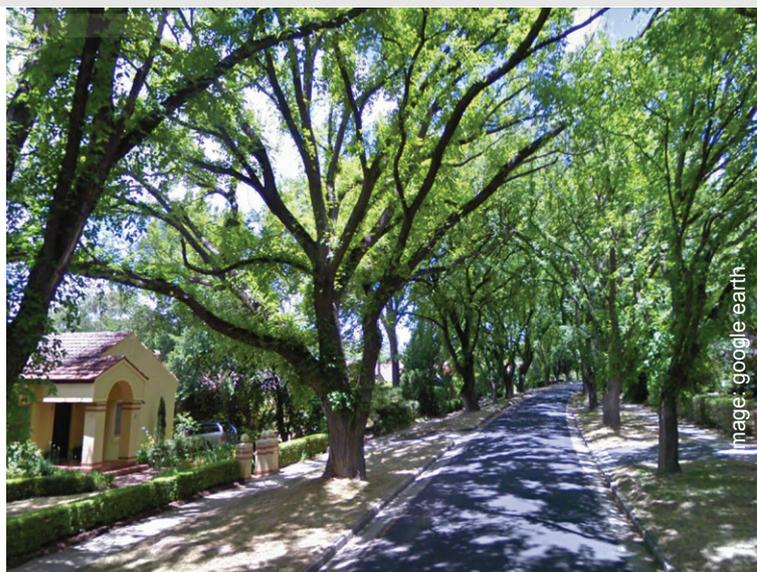
A good street is one that fulfils its role as a service corridor in a readily maintainable and unobtrusive manner. The servicing arrangements on a good street respond to the street's multifaceted functions and the requirements of all user groups.

Is Easy to Navigate

Within a broader urban network, a good street is clear in its layout and is intuitively easy to move through. For a street to be legible it should be relatively direct in connection to higher order roads, and utilise wayfinding elements to assist in navigation.

Elements of Good Streets

'Elements' are the array of items that combine to create a street. The interviews process identified the elements that come together to create environments that are of value to the user groups and the community. A 'good street' includes:



Large Street Trees and Strong Landscaping

Large trees and continuous plantings are an important component of good streets, and hold particular significance in Canberra. Providing vegetation benefits a streetscape by alleviating hard paved surfaces with softer, attractive greenery. It encourages natural habitats, produces shade and shelter, moderates the climate and allows for opportunity to integrate water sensitive urban design. Large trees have the added benefit of reducing the visual impact of adjacent large scale developments.

Materiality

Materiality in streetscapes provides a sense of place and a human scale. The considered and consistent application of materials through pavements, street furniture and landscaping creates pleasant, safe and navigable places.

Adequate Street Lighting

Lighting streets well is imperative for achieving user safety at night and should be applied continuously along a streetscape, along paths, and at activity nodes such as local parks and shops, bus stops, bike and vehicle parking clusters, seating spots and connections to laneways.

Continuous Path Networks

Equipping streets with adequate pedestrian and cycle paths which are a part of broader movement corridors was deemed essential. Providing path networks allows for pedestrians and cyclists to use the street in a safe manner and actively connects the broader community area. The treatment of path networks at intersections to prioritise direct and convenient street crossings is fundamental to ease of movement.



A Sense of Scale

Streets are spaces that people occupy and use, and the extent of the road carriageway, the verges and building setbacks all impact upon how wide, easy to cross and attractive a street is. A good street considers the distance between buildings on either side and the resulting proportion of the enclosed space. It enhances the user experience and safety by reducing the scale of the carriageway at crossing points.



Image: tait waddington

Points of Interest and Amenity

Good streets feature highlights that give variety and amenity to a streetscape. These assets can assist in wayfinding by contributing to a street's character and providing enhanced usability and desire to linger. Assets may include a landmark piece of architecture, a distinguished park or shop, a preserved natural feature, a place to rest or an enhanced view corridor.

Integrated and Discreet Servicing

Essential servicing is a necessity to support land development. However the principle objective of the street is not servicing alone. Services should be delivered in a manner that does not detract from the other important elements of the street such as landscaping, direct path networks, sense of scale and materiality.



Image: courtyardhousing.org

Traffic Calming Measures

Slow traffic speeds are vital to providing a safe environment for all street users. The subtle use of devices such as throttle points, narrow carriageways, pedestrian crossings, textured pavements, on-street parking and tight kerb radii work to create a safe road environment for all users.

Barriers to Good Streets

The interviews process identified a series of cultural, structural and systemic barriers to the delivery of 'good streets', spanning all stages of the street delivery process and all involved parties. The barriers are:



Lack of a Common Vision

Canberra lacks a vision document that sets out the overarching objectives and planning principles for different street types. An agreed vision would help consultancy teams work towards the achievement of common goals, balancing service provider and agency requests, and promoting optimal outcomes for all stakeholders.

Procurement Processes

The current culture of engaging project teams on a stage by stage basis results in a lack of ownership of the project and its vision. Project teams are driven by a requirement to deliver their component of the project with minimal risk and within short timeframes.

Short Project Timeframes

Tight timeframes to develop land encourages the delivery of 'standard' streets which are non-controversial. They discourage fresh ideas and inhibit innovation. The length of time taken by the approvals process is a major disincentive for submitting alternative design proposals.

Advocacy Disincentive

There is the absence of an environment which encourages the delivery of better streets. The land development process is heavily controlled by the ACT Government, and consultants are not engaged or empowered to challenge the status quo. There are commercial disincentives to exploring innovative ideas and advocating for their adoption.



Approval Authority Limitations

There is a lack of consistency in the interpretation of codes and standards which leads to uncertainty and results in a risk adverse design approach. Authorities seem ill-equipped to assess proposed alternative solutions. The lack of relevant experience and training for authority staff inhibits any possibility of performance based assessment, or flexibility in the application of codes and standards. The lack of consistency throughout the development continuum - Estate Development Plan, Development Approval, Detail Design, Design Acceptance - causes uncertainty and frustration.

Lack of Flexibility in the Codes and Standards

Current codes and standards are mandatory, inflexible, and do not allow for review based on performance or merit. Discussion is stifled by the absence of a formal avenue for challenging Territory and Municipal Services decisions other than through an appeal to the court. The codes and standards are often based on historical precedents and applied with a one-size-fits-all mentality that prioritises the private motor vehicle.

Current Funding Models

There is a lack of understanding of the real life cycle costs resulting from current arrangements where outcomes are driven by code compliance and maintenance costs. The system should take into account capital, construction and maintenance costs, increased developable land and revenue rates, health and well-being, pedestrian and cycle safety and climate change costs.



Consultant Team Imbalance

Canberra lacks a culture of collaborative design where all parties involved in the delivery of streets work towards implementing an agreed common vision. Engineering is given priority in the urban design process, sometimes at the expense of creating better streets for pedestrians and cyclists.

Lack of Community Consensus

There is a lack of community consensus or common vision for city streets. Introducing responsive street typologies as we move to a more compact city form needs to be coupled with consultation and education so that change is possible and better managed in the interest of the community.

Recommendations

A range of measures were proposed by the interviewees to overcome the identified barriers. Implementation of the recommendations will promote the delivery of 'good streets' that meet 'good streets' objectives and include the desirable elements. The recommendations are:

Implement a Streets Vision Document

Establish overarching objectives and principles to guide consultant teams towards an agreed quality for streets and associated public spaces, and facilitate design assessment. A formalised common vision for streets would consider the priorities of stakeholders and ensure those responsible for the delivery of streets achieve the right balance.



Provide Consistency in Advice and Approvals

Provide consistency throughout the development pipeline, ensuring that formal advice and approvals at one stage of the project are not questioned and overturned at the next.

Introduce Performance Based Regulations

Broaden codes and standards to be less prescriptive and allow for innovation. Performance based criteria (rather than mandatory regulations) which are assessed against agreed objectives would allow for outcomes to be evaluated within their context. Ensure assessors have appropriate experience and training and are empowered in their roles.



Image: LDA

Overhaul Existing Standards

Consensus from conducted interviews indicates discord with a variety of standards applied in Canberra's streets. Concerns consistently raised include the location and types of services, landscape amenity and the provisions for large street trees, pedestrian path requirements, the current use of design vehicle templates, road reservation widths, intersection treatments and the codes for commercial, industrial and mixed-use zones.



Prioritise Innovative Urban Design through Procurement Processes

Engaging project teams for consecutive stages of projects will allow a common vision to be developed and implemented with consistency. The importance of holistic urban design needs to be emphasised over engineering led solutions, and thus various disciplines better integrated. This will provide project teams with support and incentives to deliver innovative outcomes, within appropriate timeframes, and establish feedback loops to inform change and development that is driven by end users.

Invest in Community Education and Support

The vision for Canberra's identity and its streets needs to be understood and supported by the local community. The whole of ACT Government needs to adopt and market the vision so that community members feel ownership and take pride in the evolving city streets and associated public open space. Leadership is required at all levels.



Reconsider Current Funding Models and Whole of Life Costs

Consider costs for the delivery and maintenance of good streets in relation to possible gains made in the areas of health, environment, commercial and social well-being. Refer to the 'Case Study' of this paper which highlights potential cost savings if alternate codes and standards were permitted. Consider alternate funding models such as developer contributions, federal funding, pilot projects and shared risk.

Establish a Forum to Review Design Solutions

Open discussion and interaction between ACT Government agencies and project teams needs to be improved, with disparate views integrated behind a common vision. This could be brought about by the appointment of an urban design manager, an estate team where all disciplines are represented, a specialist review panel, or a 'place manager' who fulfils a role similar to a council mayor in other jurisdictions. Project objectives need to be upheld as the various disciplines come to work together on the best outcome for the project.

Case Study

A key barrier to the delivery of 'good streets' was considered by the interviewees to be a lack of flexibility in applicable codes and standards. The 'Case Study' investigates the parameters that drive Canberra's current street conditions, explores alternatives and their economic implications.

The 'Case Study' looks at targeted opportunity for change within the street cross section as put forward by the interviewees. In particular it focuses on two typical Canberra street types, a 'Major Collector' and an 'Access Street B' type in a residential setting.

The study describes the requisite elements in cross section as currently required by codes and standards, and explores three alternative models.

The alternative street models compare the typical Canberra condition to:

- One based on **Austrroads, the national standard** and;
- Two methods used in other jurisdictions:
 - **services under pavement** and;
 - **services in easements on-block.**

Key findings for the 'Major Collector' are included in the facing pages. Detailed analysis of both the 'Major Collector' and the 'Access Street B' types are included in the Appendices.

Importantly, no compromises have been made in these alternative street types that would limit the achievement of the stated 'good street' objectives, or identified street elements. Indeed it is considered that these alternative outcomes may better meet the stated objectives.

The 'services under pavement' alternative street model has been subjected to a cost benefit analysis with consideration of ongoing and life cycle costs including revenues to ACT Government, rates and construction costs.

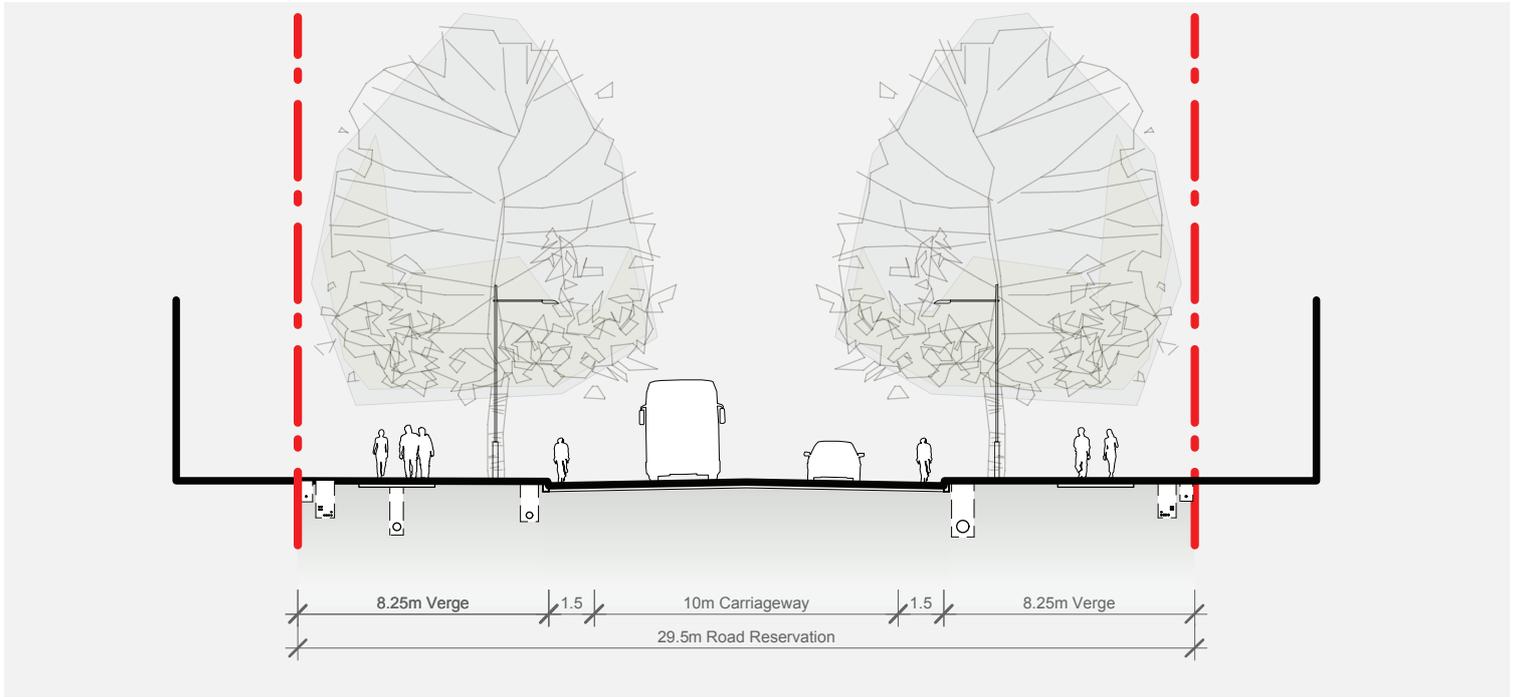
Potential land savings were established through the analysis of Bonner Stage 1A, a 25 hectare estate recently delivered with the ACT. Square meter rates were applied to the delivered outcome and the alternative model, establishing the construction cost difference between the two scenarios across a typical subdivision. Land value, profit margin and rates revenue were applied to the two scenarios deriving the additional revenue available to the ACT Government under the alternative model. A detailed methodology is available in the Appendices.



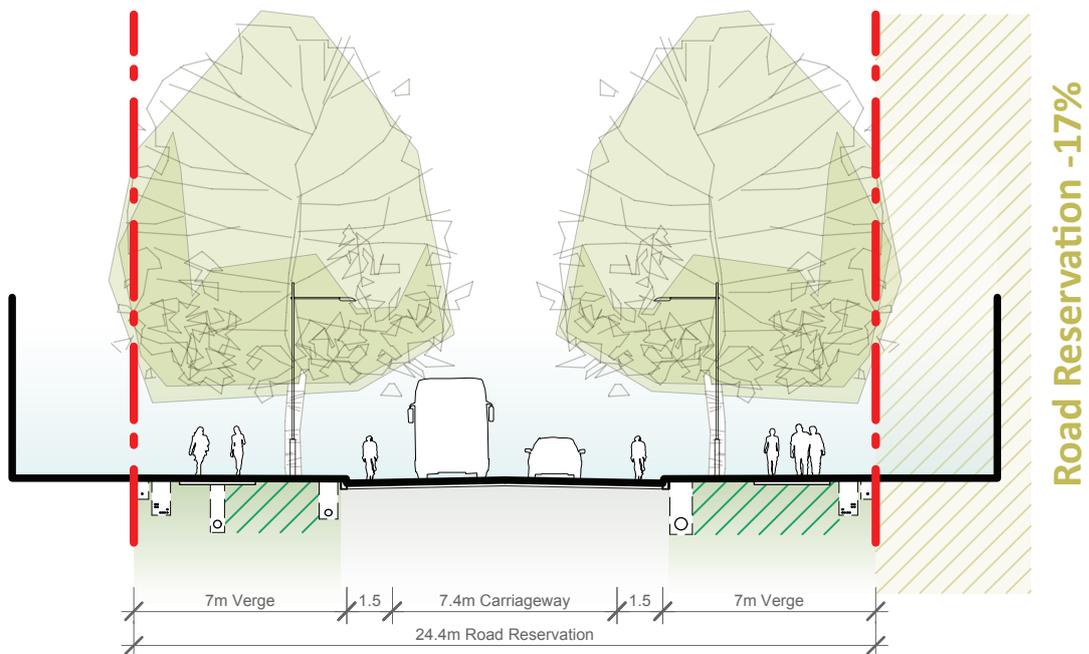
Image: COX Architects

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Extrapolated across a typical greenfield subdivision such as Throsby (106 hectares), the economic benefit to the ACT Government is estimated to be **\$13.5M.**



Compliant Canberra Street - Major Collector



Alternative Street - Austroads Standards

Changes Made from Compliant Canberra Street:

- Traffic lanes reduced to 3.7m
- Boundary to path clearance reduced to 1.5m
- Path to tree clearance reduced to 1m
- Reduction in area for the growth of tree roots

Case Study

The exploration of the opportunity for change in Canberra streets reveals that alternative methods of delivering streets, as found in exemplars nationally, can have a net benefit outcome for all Canberrans.

Economic Considerations:

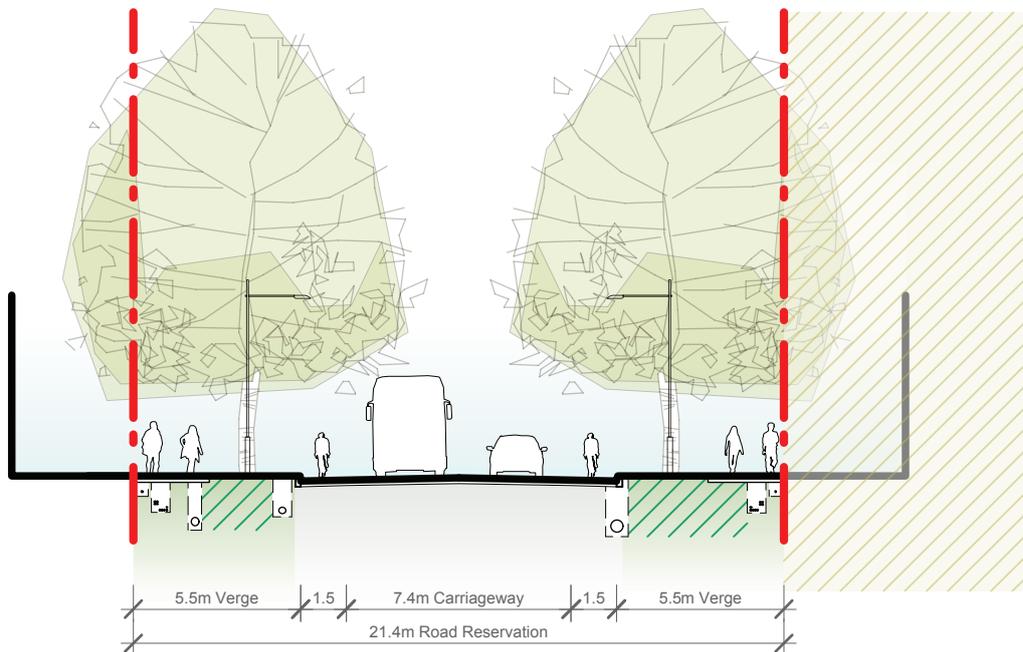
- An overall increase in the amount of developable land available;
- An overall increase in stamp duty and rates revenue;
- An overall saving in construction costs.

Social and Environmental Considerations:

- Reduced street widths allow for easier and safer pedestrian and cycle movement;

- Increased passive surveillance and sense of overlook to public spaces as interface between buildings reduced;
- Heightened sense of social inclusion as the proximity of amenities such as paths, cycle ways and frontyards is increased;
- Streets become more human in scale and encourage inhabitation;
- Reduced heat island effect through reduced carriageway widths;
- Reduced distances between tree canopies increase comfort levels for street occupants;
- Service realignment provides better conditions for healthy trees to grow;
- Streets become pleasant for all users as traffic speeds are appropriately managed and safer street environments established.

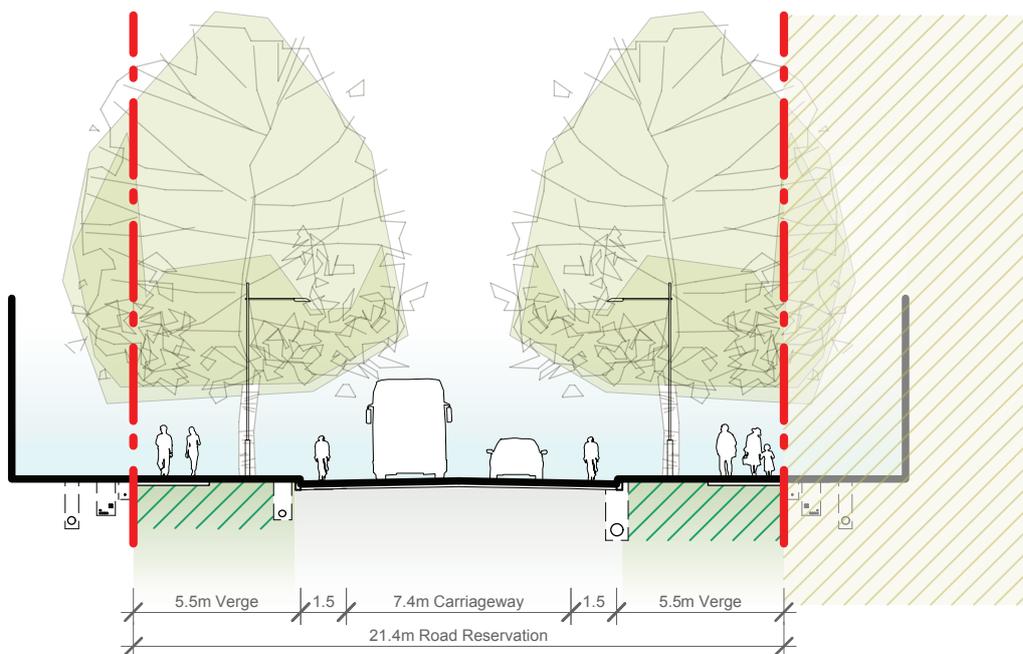




Alternative Street - Servicing Under Pavement in Verge

Changes Made from Compliant Canberra Street:

- Traffic lanes reduced to 3.7m
- Path to tree clearance reduced to 1m
- Boundary to path clearance reduced to 0m
- Services located under pavements
- Further reduction in area for the growth of tree roots



Alternative Street - Servicing in On-Block Easement

Changes Made from Compliant Canberra Street:

- Traffic lanes reduced to 3.7m
- Path to tree clearance reduced to 1m
- Boundary to path clearance reduced to 0m
- Services & easements located on-block
- Expansion in area for the growth of tree roots



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