7 February 2025

Mr Michael Wright
Senior Advisor
Western Sydney Planning Partnership Office
Locked Bag 7064
Liverpool BC NSW 1871

RE: Western Sydney Streets Design Guidelines – Second Edition

Dear Mr Wright,

The Urban Development Institute of Australia NSW (UDIA) is the state's leading development industry body. We represent the leading participants in the industry and have more than 450 members across the entire spectrum of the industry including developers, financiers, builders, suppliers, architects, contractors, engineers, consultants, academics and state and local government bodies.

UDIA NSW invests in evidence-based research that informs our advocacy to state, federal and local government, so that development policies and guidelines are developed to best meet user needs and ensure critical investment is directed to where they are needed the most. Together with our members, we shape the places where people will live for generations to come and in doing so, we are city shapers.

UDIA welcomes the opportunity to make a submission on the Western Sydney Planning Partnership (PPO), Western Sydney Streets Design Guidelines – Second Edition (The Guidelines). UDIA NSW applauds the PPO for the collaborative approach and significant work that has occurred with multiple stakeholders, including Western Sydney Councils, Transport for NSW, utility providers and Industry, in the review and updates to The Guidelines, to ensure they remain current, relevant and best practice.

UDIA has prepared this submission noting that we support The Guidelines and have suggested some items to consider to further improve the recommendations, as well as emphasise key items that are strongly supported. In preparing our submission we have had an opportunity to canvass the proposal with our members who have experience

with greenfield and infill development across Western Sydney, with feedback structured under key headings from the document for easy tracking of feedback.

Section 2.1 Street Design Objectives: Objective 3 Streets are inclusive with footpaths on both sides.

The objective to have good accessibility with equal access for all is supported, however the objective to have footpaths on both sides of all streets may not be the best outcome. The objective for additional footpaths should be considered alongside other desired outcomes including reduced hardstand, reduced water runoff and urban cooling. Some streets with low traffic and speeds can be shared spaces, and in other locations a narrow street with a footpath on one side is adequate, particularly if provided with regular crossing locations and equal access design. Consider rewording the objective, with a focus on pedestrian accessibility and safety, with equal access for all users.

Section 2.1 Street Design Objectives: Objective 4 Streets are safe for cycling, with separated bicycle facilities on busy streets.

The notion to support safe cycling is fully supported, however the objective doesn't provide clarity on the nuance required to deliver safe cycling networks. Specific reference should made to connectivity with broader bicycle networks, specifically commuter networks, with the need for design of the street to support network connections to these key routes, that can translate to transport mode shift.

Section 2.1 Street Design Objectives: Objective 6 Water sensitive urban design (WSUD) is integrated into every street.

Water Sensitive Design is supported and is critical to long term waterway health in Western Sydney. Perhaps not as part of the objectives, however, reference with recommendations should be made in the document to staging and construction works to ensure long-term WSUD objectives are maintained. UDIA NSW members who have recently delivered WSUD in residential projects (e.g. Kellyville), have constructed WSUD elements within the streetscape, which have been damaged during construction of resident housing and/or further stages of the development. This in turn has resulted in

poor amenity outcomes within the street, and diminished water quality improvements, as the WSUD element is not able to function to their original design intent. It is recommended that a section is included in The Guidelines to give recommendations to Councils on how to overcome WSUD elements being damaged during future construction activities.

Section 2.1 Street Design Objectives: Objective 8 Future transport solutions maximise place outcomes for streets.

This objective cannot be under-estimated. Western Sydney is severely under serviced by public transport and the ability for Western Sydney to achieve excellent urban design and streetscape outcomes, is contingent on NSW Government investment in further public transport and public transport infrastructure. While The Guidelines aren't able to influence the broader public transport outcomes, it is worth noting as a significant issue that will affect street design in Western Sydney if not addressed adequately.

Section 2.3 Street types: General items

Utilities

The cross sections for Enterprise Street, Connector Streets, Neighbourhood and Yield Streets, show a 'utilities zone' under the vehicle parking space. This is inconsistent with services / utilities layout diagrams later in the document and is generally inconsistent with technical specifications from utility providers. Clarity is sought on the utilities proposed in this location, confirmation this is the proposed location for such utilities and if utilities are proposed under the parking areas, clearly note this has been approved by the utility providers.

Street Lighting

In multiple cross-sections, street lighting poles are located behind the kerb. There is currently conflicting feedback from industry regarding the best practice location. Some note the historical practice of alignment near the property boundary, while others note this can cause issues for utility providers should maintenance and repairs be required. Ensure this has been coordinated with and approved by utility providers, councils and other key stakeholders.

Intersection Design

Multiple plans depict raised thresholds at intersections. This is supported in urban retail areas, particularly to promote pedestrian priority and safety. The design of this will need to be considered to address stormwater overland flows (refer additional comments under the feedback section 'Section 2.3 Street types: Connector Street').

Review the approach for raised thresholds for the entire intersection in residential areas as this is generally not practicable in these locations, with items such as acoustic issues for residents commonly occurring with existing precedents of this type of design.

It is requested that road engineering advice be provided for the dimensions of road pavements at street intersections to confirm minimum lane widths and ensure adequate planting or paved areas are provided for pedestrians.

Engineering design verification

To ensure the smooth transition and adoption of The Guidelines and to alleviate concerns from some key stakeholders including design engineers, it would be appropriate to undertake detailed validation of the proposed engineering designs proposed in The Guidelines. This should include the interface of turn paths, kerb ramps, driveway cross overs, pedestrian crossing locations, junctions of various road typologies and build out kerb designs, as well as with stormwater design and various utility infrastructure elements, to ensure the various street parts all work together.

The proposed design for utility layouts should also be verified by the relevant service authorities, to ensure that they meet each of the utility providers' requirements and Australian Standards.

Once this validation is complete, a written section should be included in the early parts of The Guidelines to clearly outline to readers that this work has been completed, and The Guidelines meet Australian Standards, requirements from TfNSW and each of the relevant utility providers.

Clarification required on sweep paths statements

The Guidelines require some clarification on the design guidance comment and intent of:

> *"Use advance stop bars or other elements to accommodate movements by Design Vehicles."*; and

"Accommodate the swept paths and turning movements of vehicles that frequently make turns (the Design Vehicle) and use geometric techniques such as shifting stop line locations to accommodate less frequent vehicle types (the Check Vehicle). "

Both statements were interpreted differently by member engineers, so it is recommended the statements are rewritten to ensure no ambiguity exists on their direction and intent.

Section 2.3 Street types: Destination High Street

The street design is supported, especially since the proposed design does not have separate cycle lanes. This is an excellent outcome to minimise road width and ensure maximum urban impact. The nominated street with <20 metres is strongly supported to deliver this vision, allowing for a cohesive and integrated high street environment, fostering better pedestrian experience and urban character.

Section 2.3 Street types: Enterprise Street

The intent of the Enterprise Street design is supported, however safety for pedestrians and users entering or exiting vehicles should be considered. Multiple Councils across Sydney have adopted wider parking areas in Enterprise areas, with car parking widths of 2.6m or 3m wide. This is to ensure a safe operating environment, reducing potential conflict in the travel lane with buses and trucks moving at speed. Consider making parking lanes wider (preferred) or make the travel lanes wider. It is recommended that guidance is sought from a traffic engineer on best practice in this busy and potentially dangerous street environment.

Section 2.3 Street types: Urban Centre Street

The precedent imagery highlighting Summer Street, Orange, doesn't correlate with the proposed street section or written street intent. Update the Summer Street, Orange precedent image with one that clearly shows one travel lane and one parking lane in

either direction. It is essential to have clear visual examples to guide the implementation and ensure consistency in the design approach and to avoid any potential confusion.

As per the recommendation for the proposed Enterprise Street, review the proposed parking lane widths to ensure recommendations are providing a safe operating environment for users entering and exiting parked cars.

Section 2.3 Street types: Connector Street

As per the recommendation for both proposed Enterprise Street and Urban Centre Street typologies, the Connector Street requires a review of the parking lane width to ensure a safe operating environment for users entering and exiting parked cars.

Ensure consideration has been given to the raised intersection treatment and how overland flow / stormwater will be treated, specifically at the raised intersection. 'Australian Rainfall and Runoff' (ARR) recommends roads be designed for minor major flows – pipes for minor flows and roads as major flows for major storm events (i.e. 1%AEP) or when the system fails. As such, the roads enable safe flow of water in major events. A standard strategy will need to be considered to accommodate stormwater movements (to stop the raised area acting as a dam), and the desired outcome of a raised road environment at the intersection.
It is assumed the marked pedestrian crossing as indicated on the plan (page 49) is just an example and for indicative purposes only (i.e. busiest case possible). The shown number of marked pedestrian crossing, one at each intersection, appears excessive and generally would not meet the traffic engineering guidelines and TFNSW warrants and requirements. Typically, pedestrian crossings will only be required at high volume pedestrian areas such as schools, shops, sports venues /fields or transport hubs. Unmarked pedestrian crossings at each intersection are supported. It is recommended that a note is added to articulate the design highlighting potential locations should they be required.

Section 2.3 Street types: Neighbourhood Street

This design is supported and delivers a great compact outcome with good canopy cover over the paved street environment. It will require councils to agree to parking and tree planting within the 2.1 metre lanes, which isn't always the case in Western Sydney. Appropriate design details that afford protection of the road pavement will be crucial to maintain the street's functionality and aesthetic appeal. Collaboration with local councils to agree on a construction road/planting edge detail, will be necessary to deliver this desired outcome.

The marked travel speed will need to be confirmed with Transport for NSW (TfNSW). The document outlines a posted speed of 20-30km/h, which is desirable, but not in accordance with current TfNSW guidelines.

A strategy will need to be considered for kerb build outs and the staged delivery of residential streets in areas of fragmented landownership. This is particularly important in areas where half road design is delivered, which will have considerable issues with the proposed kerb build outs.

Section 2.3: Yield Street

The Yield Street typology is a very important street type for Western Sydney, with a relatively narrow pavement and a need to serve many functions. It is recommended that footpaths should be reduced to 1.2 metres wide to increase the planting area with permeable services, particularly, considering there are ample pedestrian passing opportunities at driveway crossovers. This adjustment would enhance the green spaces and overall street aesthetics.

While the precedent examples are good, they are not quite matching the street sections; the Orth Street precedent example has parking on each side of the street, the section only has it on one side; and the Butler Crescent example appears very narrow.
It is recommended another version of this street type is prepared, called 'Yield Street with Buildouts', which would have the same reserve of 16 metres but with verge / planted built outs into the parking lane to increase planting areas and provide more shade. The proposed dimensions of this additional street typology are proposed to be:

0.6m (verge) | 1.2m (footpath) | 2.6m (planting) | 2.1m (parking) | 3m (carriageway) | 4.7m (planting) | 1.2m (footpath) | 0.6m (verge) = 16m.

Section 2.3: Residential Way

UDIA NSW recommends that further design options analysis and work with stakeholders is undertaken to determine the viability, cost impact and market acceptance of this street typology. The current proposed section may introduce significant costs without additional benefits, and possibly negative environmental outcomes.
The 1.2m footpath is redundant in the low-speed environment of 10km/h. This will remove unnecessary hardstand and improve stormwater infiltration opportunities, as well as delivering space (and cost) efficiencies. Adoption of this cross-section could reduce the overall width to approximately 13 metres.
During the proposed review of this street option, please ensure on-street parking within the local street is maximised, as this is critical when delivering affordable, small lot housing projects.

Section 2.3: Residential Lane

The cross section of the Residential Lane can be reduced to an 8-metre width that is typical in other states. It is suggested the verge is narrowed to 1.25 metres on either side of the street, as a wider verge of 1.5 metres or more encourages parking in front of garages. By narrowing the verge, the design can discourage inappropriate parking behaviour and maintain a clear and unobstructed lane.

Section 3.3 The green and blue grid: WSUD features

The document should be updated to ensure information isn't misunderstood. On page 102, the guide notes 3-5% of catchment size (total impervious catchment). However, this should be noted as a guide and actual size is to be determined by modelling to achieve the agreed water quality targets.

Section 3.3 The green and blue grid: Lo flow passive irrigation

The concept of passive irrigation is supported. Please include a note however, that indicates that stormwater design needs to be resolved and consider overland flow, as the road and its kerbs are often used to direct overland flow in flood events (Refer previous note - 'Section 2.3 Street types: Connector Street). This note will assist in ensuring accidental flooding of adjacent properties is avoided.

Section 3.3 The green and blue grid: Street tree planting areas

Street trees with vegetated understory planting is supported as it offers ecological benefits, water treatment and assists with urban cooling; it is however important to not overstate the habitat potential for small fauna. There are multiple impacts of urban development — such as vehicles, dogs, and light spill that are often pose significant conflicts with native wildlife. There is no request to reduce planting areas, just be mindful of not overpromising the benefits (of habitat) in the text.

Section 3.3 The green and blue grid: Street tree and urban heat

The case study used is a good example to articulate the benefits of trees in the urban environment, it would be even stronger to adopt a case study example that has been successfully approved by Council and delivered. This approach would not only highlight the benefits but also demonstrate the practicality and effectiveness of the design.

Section 3.6 Utilities: Street cross section with utilities

It is assumed that coordination and collaboration with various infrastructure providers by the PPO has ensured that a workable cross section has been developed. UDIA NSW appreciates this careful consideration with the proposed cross-section illustrating how appropriate service utilities and deep soil plantings can coexist within the revised street types. As per previous statements, ensure that validation has occurred with the utility providers, and clearly state early in the document that such support / approval has been received.

In addition, spatial considerations are required for spare distribution and transitions ducts in each of the proposed street cross-sections and standard utilities details. LV ducts and cables to future proof battery and EV installation should also be allowed for,

along with access to the assets in future years for maintenance. Finally, the proposed use of multifunction poles is supported, however when they contain electrical services, spatial requirements need to be considered as part of the space allocations within the street. As already noted, engagement with and approval by the utility providers will enable any of these requirements to be considered and approved in the proposed standard details and cross sections.

Recommended next steps

Delivery modelling

The vision and intent of the Western Sydney Street Design Guidelines are commendable and strongly supported by UDIA NSW. Unfortunately, the cost of delivering houses in NSW, including Western Sydney, is exceptionally high and is contributing to reduced investment by Industry.

As the work is finalised and hopefully adopted by the key stakeholders (e.g. TfNSW, Councils), it is highly advisable to model the commercial impacts of these provisions, to ensure that proposed street standards are not significantly increasing costs of street delivery, which could ultimately impact housing supply and or affordability of purchases. If there are significant changes to street delivery costs, it is recommended that further consideration is made into these elements, with options analysis undertaken to ensure the right details from design, amenity and cost outcomes are equally considered.

Adoption and Implementation

Clarity is sought on the proposed implementation of the street guidelines. To ensure certainty for Industry, it is advisable that each of the Western Sydney Councils, Department of Planning, Housing and Infrastructure and Transport for NSW each endorse and adopt the guidelines into their standard documents including engineering guides, planning policies and DCPs. This standardised approach was the original vision for the development of the Western Sydney Street Design Guide – First Edition.

The holistic adoption of the guide will reduce the recent experience by some Industry members, where challenges have occurred with having 10km/h speed zones (for example) not being adopted by Councils due to relevant road legislation, technical guidance or practice notes conflicting with DCP documents or Road Design Guidelines. It is essential that cross government agency buy in is established to deliver the numerous benefits this document can provide, including increased certainty, reduced

consultant costs and reduced delivery costs which have always been the intent of The Guidelines.

We again thank the PPO for the opportunity to provide a submission to this exhibition. Should you or your team have further questions or would like to meet and discuss our submission, please contact David Petrie, Director Infrastructure Policy at dpetrie@udiansw.com.au or on 0447 646 202.

Kind regards,

Hon. Stuart Ayres
Chief Executive Officer
UDIA NSW