THE MILL MORETON BAY

STREETSCAPE GUIDELINES

Guidance Material for the Priority Development Area

MILL CENTRAL AND MILL GREEN

15 January 2020





The Mill at Moreton Bay Streetscape Guidelines

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Reviewed by The Mill Design Review Panel.

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Artist's Impression 1: Urban Village Street Typology - people and vehicular movement

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1. INTRODUCTION

The Mill Priority Development Area (PDA) aims to be a world-class destination, and as such its design and planning must be exemplary.

The Streetscape Guidelines have been produced to assist in the delivery of The Mill at Moreton Bay Priority Development Area (PDA) vision for an active and embellished public realm, and high quality landscape and urban design outcomes.

The guidelines direct the character and experiential qualities of streetscapes as places for people, movement, active transport, and activity.

They assist the design, planning and assessment of streets and laneways in *Place 1- Mill Central* and *Place 5 - Mill Green* in the PDA, and provide the designer with a clear indication of the outcomes that are desired.

The guidelines will be utilised by Moreton Bay Regional Council (MBRC), as the Minister Economic Development Queensland (MEDQ) delegate, in the assessment of street and laneway proposals in the *Mill Central* and *Mill Green*, and by the Design Review Panel (DRP) in its role of providing specific design advice.

The guidelines also provide clarity to investors and the community on the streets and laneways expected in *Mill Central* and *Mill Green*. The standards set out in the guidelines are intended to provide a degree of certainty and clarity of interpretation of the *Development Scheme*, however, as guidelines, they should also be afforded some flexibility in application. Proponents may therefore propose innovative and alternative solutions that demonstrate achievement of the PDA vision, relevant structural elements, PDA-wide criteria and place provisions in the *Development Scheme*.

The guidelines are an evolving document and may be revised, from time to time, to reflect new findings or recommendations made by further planning work for the PDA and on-going review of development outcomes achieved across *Mill Central* and *Mill Green*.

The Mill Streetscape Guidelines are a companion to The Mill Civic Space and Park Guidelines and other future Mill Guidelines.

RELATIONSHIP TO THE DEVELOPMENT SCHEME

The Mill Streetscape Guidelines are 'guidance material' and are to be taken into account in the preparation and assessment of PDA development applications in accordance with sections 2.1.3, 2.2.2 and 2.6 of the *Development Scheme*.

These guidelines are required by the Development Scheme's Implementation Strategy to support the achievement of the vision for the Mill. The relevant Implementation Strategy action is:

4.6 Action 2. Develop additional guidance material as needed to assist in communicating the criteria within the development scheme (for example street profiles and cross sections).

As per the Implementation Strategy, these guidelines will assist in communicating the *Development Scheme* criteria.

The guidelines further refine specific criteria as per **2. Development Scheme Criteria** in the guidelines (page 2).

RELATIONSHIP TO THE MORETON BAY REGIONAL COUNCIL PLANNING SCHEME

The Moreton Bay Regional Council Planning Scheme is also 'guidance material' and where relevant is taken into account in the preparation and assessment of PDA development applications (refer to section 2.2.12 of the *Development Scheme*).

Where the guidelines contain variations to aspects of the planning scheme, the guidelines prevail.

The guidelines prevail over the following public realm related outcomes, which the Moreton Bay Regional Council Planning Scheme also address:

- street and road cross section attributes; and
- street and road typology cross sections.

2. DEVELOPMENT SCHEME CRITERIA

These guidelines provide further detail to specific PDA-wide criteria and Place Provision criteria in the *Development Scheme*. The following is a list of the relevant *Development Scheme* criteria and what part of this guideline provides further guidance that would satisfy and deliver what is required.

Table 1: Development Scheme Criteria and its guidance in this document

PDA-wide Criteria	Streetscape guidance	PDA-wide Criteria	Streetscape guidance
2.5.2 Urban Design		2.5.4 Public realm	'Smart City' concepts are integral to the streetscape
Development delivers high quality urban design by ensuring the form, type and arrangement of buildings, structures, streets and public spaces:		Development delivers an attractive, high quality, accessible, well-connected, multi-functional public realm that:	design. Table 3: Streetscape Cross Section Attributes — Carriageway provides more details about what 'Smart Technology' is appropriate to each street type.
 create an appealing, active, inclusive and vibrant urban environment 	The function and roles of each Streetscape typology, as per section 3. Types and Functions , contribute to an appealing, active and vibrant urban environment.	 incorporate 'smart city' concepts and technology e.g. fibre optic and Wi-Fi networks, smart lighting, connected sensors and CCTV, power and waste 	
 delivers exemplary hard and soft streetscape, utilising sub-tropical design and water sensitive when design principles, that a fitne and sense 	Each streetscape typology has a hardscape and softscape approach that creates its identity and fulfils its function.	systems integration and real time traffic and parking assessment and tracking	
urban design principles, that soften and enhance the physical and visual amenity of the locality.	Hardscape, softscape and water senstive urban design guidance is provided in each Streetscape in section 5 .	Place 1 - Mill Central Criteria	Streetscape guidance
2.5.3 Street and movement network	Guide and Cross Sections.	2.6.1 Built Form and Urban Design	Activation of the neighbourhood main street is critical to its function to be a vibrant and active, contemporary street.
		Development in Mill Central will:	A suggested action to ensure the ease and affordability
Development delivers a high quality street and movement network as well as related infrastructure for pedestrians, cyclists and vehicles that:		30. where a neighbourhood hub main street is designed as a local street, be able to be closed to through traffic for special events and transform to	to close the street to traffic for special events is outline in section 5.3 Typology B Main Street (Innovative suggestion).
 has a clear hierarchy and is easy to navigate with a well-connected, logical network of routes, 	A variety of streetscape types contribute to a logical network.	a more active and flexible space.	
intersections and spaces	Each streetscape type provides differing elements to suit its hierarchy in the network. For guidance refer to section 5. Guide and Cross Sections .		
 minimises conflict between pedestrians, cyclists and motor vehicles through appropriate design 	Each user group has designated spaces in a street to minimise conflict. These spaces are described in section 4. Attributes and illustrated in section 5. Guide and Cross Sections.		
7. minimises the need for service vehicles to park, stop or queue on the public road network	There is no waste collection on the public roads as per Table 3: Streetscape Cross Section Attributes — Carriageway.		
 provides for equitable access for all members of the public 	Equitable access to these experiences is guided in section 5. Guide and Cross Sections (Disability Access and Inclusion).		
10. provides end-of-trip facilities for pedestrians and cyclists	End of trip facilities such as bike racks and drinking/water- bottle refill stations are provided as per the type of street in section 5. Guide and Cross Sections.		

Artist's Impression 2: Entry Street Typology - welcoming formal tree-lined boulevard

3. TYPES AND FUNCTIONS

Urban streets which support appropriate vehicle movement are critical to the functioning and amenity of *Mill Central*.

Some are focused principally on vehicle movement and will use landscaping and other design strategies to help manage vehicle behaviour and speeds.

Other streets are designed to integrate pedestrian, cyclist and vehicle movement, with the amenity and safety needs of pedestrians and cyclists being prioritised.

There are eleven street types in the precinct with differing functions and roles, as summarised in Table 2.

While streets are typically in dedicated road reserves, some streets and laneways may be on private land, but still publicly accessible.

Table 2: Street Types and Functions

Guideline	Primary	Role
Туроlоду	Function	
A - Entry Street	District Collector Street	Entries into Mill Central connecting to Arterial Roads. Creates a sense of arrival.
B - Main Street	Local Collector Street	Neighbourhood hub main street (as identified in the <i>Development Scheme</i>).
		The District Centre Main Street is a State Road, and will need to be guided by Department Transport and Main Roads.
C - Urban Village Street	Local Collector Street	Provides movement and connections throughout the Mill Priority Development Area.
D - Connector Street	Local Collector Street	Connection between two streets.
E - Railway Interface Street	Local Collector Street	Streets adjacent the railway corridor. Provides a link for commuters and buffer to the development along the rail corridor.
F - Shared Zone Street	Local Collector Street	Streets that prioritise pedestrian crossings between destinations.
G - Park Street	Access Street	Access to or within parks in Mill Central and Mill Green.
H - Mid Block Laneway	Access Street or Driveway	Access between or within development lots. May be on dedicated road reserves or on private land that is publicly accessible.
I - Service Laneway	Access Street or Driveway	Access between or within development lots for the purpose of service. May be on dedicated road reserves or on private land that is publicly accessible.
J - Shared Laneway	Access Street or Driveway	Access between or within development lots - shared between pedestrians, cyclists and vehicles. May be on dedicated road reserves or on private land that is publicly accessible.
K - Pedestrian Laneway	Pathway	Access between or within developments lots by pedestrians and cyclists. May be on dedicated road reserves or on private land that is publicly accessible.

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4. ATTRIBUTES

This section includes attributes and guidance for the carriageway and verges of *Mill Central* (see Figure 1). Carriageway includes:

- reserve widths
- bus
- lighting
- driveway access
- waste
- medians
- traffic lanes
- bike lanes
- on-street parking

Verge includes:

- verge width
- public art
- planting beds
- trees
- street furniture
- on-street dining
- dedicated pathways
- awnings
- interim treatments to lot boundaries
- separated bike lanes

For detailed cross sections and guidance on softscape, hardscape and furniture for each street type refer to section **5. Guide and Cross Sections**.

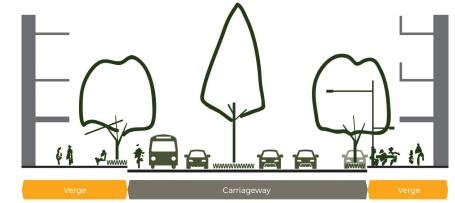


Figure 1: Streetscape Typical Cross Section for reference



4.1 CARRIAGEWAY ATTRIBUTES

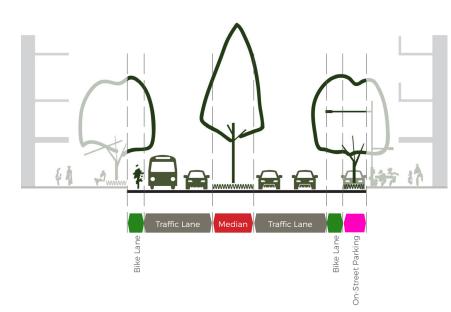


Figure 2: Typical Streetscape Cross Section for reference- Carriageway

Table 3: Streetscape Cross Section Attributes – Carriageway

Street Typology	A Entry	B Main Street	C Urban Village
Total Reserve Width	31.7m	27.8m	25.7m
Intended Speed Environment	40 km/h	40 km/h	40 km/h
Bus Route	Yes	Yes	Yes
Bike Lanes	Dedicated bike lanes or separated bike lanes.	Dedicated bike lanes or separated bike lanes or no bike lanes (where the network supports)	On road bicycle awareness zone with signs to indicate when entering zone, and painted bicycle markers.
Smart Lighting	Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)
Smart Pole components	 Banners Data-capture (eg. Pedestrian counters) CCTV 	 Wi-Fi Banners Data-capture (eg. Pedestrian counters) CCTV Speakers / Community Messaging EV Charging and Parking Management Event Power Outlets 	 EV Charging and Parking Management
Waste Collection	No	No	No
Median	1.5m minimum planted	No median	Only as required for traffic and pedestrian crossing purposes. 1.5m minimum for planting.
Traffic Lane Width	3.3m	3.3m	4.25m
Bike Lane width	1.5m	1.5m	No
On-Street Parking	No on-street parking	 Indented parallel parking. 2.6m wide Disability car parks as per other standards 	 Indented parallel parking. 2.6m wide Disability car parks as per other standards

D Connector	E Railway Interface	F Shared Zone	G Park	H Mid-Block Laneway	l Service Laneway	J Shared Laneway	K Pedestrian Laneway
23.7m	23.7m	17.4m	18.2m	16m	No reserve	No reserve	No reserve
40 km/h	40 km/h	10 km/h	10 km/h	30km/h	30km/h	20km/h	N/A
Yes	Yes	Yes	No	No	No	Yes	No
On road bicycle awareness zone with signs to indicate when entering zone, and painted bicycle markers.	On road bicycle awareness zone with signs to indicate when entering zone, and painted bicycle markers.	On road bicycle awareness zone with signs to indicate when entering zone, and painted bicycle markers.	None	Shared on road. No extra road width to be provided. Consider "Cycle Street" treatment.	Shared on road. No extra road width to be provided. Consider "Cycle Street" treatment.	Shared on road. No extra road width to be provided. Consider "Cycle Street" treatment.	Shared on road. No extra road width to be provided.
Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)	As required	Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)	Vehicular (V5) & Pedestrian (P3)	Pedestrian (P3)
 Data-capture (eg. Pedestrian counters) CCTV EV Charging and Parking Management 	 Data-capture (eg. Pedestrian counters) CCTV 	 Wi-Fi Banners Data-capture (eg. Pedestrian counters) CCTV Speakers / Community Messaging Event Power Outlets 	 Data-capture (eg. Pedestrian counters) CCTV Event Power Outlets 	 Data-capture (eg. Pedestrian counters) CCTV EV charging and parking management 	 Data-capture (eg. Pedestrian counters) CCTV EV charging and parking management 	 Wi-Fi Banners Data-capture CCTV Speakers / Community messaging Event power outlets 	 Wi-Fi Banners Data-capture CCTV
No	No	No	Yes	No	Yes	Yes	No
Only as required for traffic and pedestrian crossing purposes. 1.5m minimum for planting.	Only as required for traffic and pedestrian crossing purposes. 1.5m minimum for planting.	Only as required for traffic and pedestrian crossing purposes. 1.5m minimum for planting.	Only as required for traffic and pedestrian crossing purposes. 1.5m minimum for planting.	No	No	No	N/A
4.25m	4.25m	4.5m	3.3m	4.2m maximum	3.5m maximum	3.5m maximum	No
No	No	No	No	No	No	No	N/A
 Indented parallel parking. 2.6m wide Disability car parks as per other standards 	 Indented parallel parking. 2.6m wide Disability car parks as per other standards 	Indented parallel parking at 2.6m wide for "Kiss and Ride" or Commercial lay-bys only	All street parking types acceptable	Acceptable	N/A	N/A	N/A



4.2 VERGE ATTRIBUTES

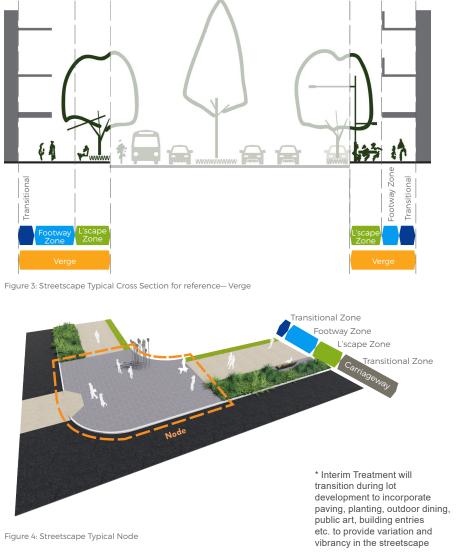


Table 4: Streetscape Cross Section Verge Attributes – Verge

Stre	eet Typology	A Entry	B Main Street	C Urban Village
Verg	je	Typically 6.5m	Typically 6.5m	Typically 6m
Public Art		 Required Any form of public art is acceptable in Landscape Zone Transitional Zones, and Nodes Only non-slip pavement art in Footway Zone. Required Any form of public art acceptable in Landsca Zone Transitional Zones, and Nodes Only non-slip pavement in Footway Zone. 		Acceptable, but only non-slip pavement art in Footway Zone
	Planting Bed Width	No turfMinimum 2m	No turfMinimum 2m	Planting and/or turfMinimum 2m
ø	Trees	Yes	Yes	Yes
Landscape (L'Scape Zone)	Street Furniture	SeatsDrinking FountainsBike RacksBollards	 Seats Tables Water bottle refilling station Drinking fountains Bins Bike Racks Bollards 	 Seats Smart Bins (to alert when full) Bike Racks Bollards
Land Zone	On-Street Dining	No	Yes (but excluded from dedicated pathway area)	Yes (only within Transitional Zone)
ne	Dedicated pathway	3m minimum widthHardscape pavement only	4m minimum widthHigh quality finishes	 3m minimum width Hardscape pavement only
Footway Zone	Awnings	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Yes, required No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable
Transitional Zone	Interim treatment to Lot Boundary*	Minimum 1m turf, planting or decomposed granite	Minimum 1m turf, planting or decomposed granite	Minimum 1m turf, planting or decomposed granite

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D Connector	E Railway Interface	F Shared Zone	G Park	H Mid-Block Laneway	l Service Laneway	J Shared Laneway	K Pedestrian Laneway
Typically 5m	Typically 5m	Typically 4.2m	No minimums or maximums	Typically 5m	Typically 4m	Typically 6m	Full width (typically 9m)
Acceptable, but only non-slip pavement art in Footway Zone	 Required Any form of public art is acceptable in Landscape Zone Transitional Zones, and Nodes Only non-slip pavement art in Footway Zone. 	 Required Any form of public art is acceptable in Landscape Zone Transitional Zones, and Nodes Only non-slip pavement art in Footway Zone. 	Required to incorporate art elements into park entry signage/statement	Acceptable, but only non-slip pavement art in Footway Zone			
No turfMinimum 2m	No turfMinimum 2m	 No planting beds or turf 	 As required 	Planting and/or turfMinimum 2m			
Yes	Yes	Yes	Yes	Yes	Acceptable	Yes	Yes
 Seats Drinking fountains Bins Bike Racks Bollards 	 Seats Water bottle refilling station Bins Bike Racks Bollards 	 Seats Water bottle refilling station Drinking fountains Bins Bike Racks Bollards 	SeatsBollards	 Seats/Tables Bike Racks Bollards 	 Seats/Tables Bike Racks Bollards 	 Seats/Tables Bike Racks Bollards 	Seats/TablesBike Racks
Yes (but excluded from dedicated pathway area)	No	Yes (but excluded from dedicated pathway area)	Yes	Yes	No	Yes	Yes
 3m minimum widthHardscape pavement only	2.5m minimum widthHardscape pavement only	 3m minimum width Hardscape pavement only	As required in park design	3m minimum width	2m minimum width	3m minimum width	3m minimum width
 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	N/A	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable 	 Not required, however acceptable No turf or trees under awnings; groundcovers and shrubs planting acceptable
Minimum 1m turf, planting or decomposed granite	Minimum 1m turf, planting or decomposed granite	Minimum 1m turf, planting or decomposed granite	Minimum 1m turf, planting or decomposed granite	N/A	N/A	N/A	N/A

Artist's Impression 3: Main Street Typology - highly pedestrian focused, active frontages with awnings and formal shade trees in grates

1/1/HUITIM



5. GUIDE AND CROSS SECTIONS

The following guide applies to all street types, and provides guidance about softscape, signage, lighting, innovation, and disability access and inclusion.

The cross sections illustrate attributes from section **4. Attributes**, and provide further guidance for each street typology in regards to softscape, hardscape, and furniture.

5.1 GENERAL DESIGN GUIDE

The following general design guidelines apply to <u>all</u> Streetscapes within the *Mill Central* and *Mill Green* Place. Refer to Cross Sections for information unique to each typology.

Softscape

- a. Select tree and other plant species that are culturally significant to the site, the suburb of Petrie and North Pine area, or native. Do not use invasive or weed species.
- b. Select:
 - *landmark* tree species for the purposes of wayfinding and grand entry statements
 - » shade tree species that provide shade through a large canopy and a clear trunk
- c. Select species that require less watering post-establishment, or that can be passively irrigated.
- d. Select species that are manageable and reasonable to maintain to a level expected from an Urban Centre.
- e. Select no koala attracting species for street trees unless approved by Moreton Bay Regional Council Environmental Services.
- f. Eight cubic metres of uncompacted soil is allowed per street tree using structural soil cells or similar. Where trees are clustered a larger pit or common trenching is used to combine drainage, irrigation provision and to maximise volume. Soil pits extend under road pavement.
- g. Where overland flow is an issue select inorganic mulch (gravel) or an organic mulch type that has an appropriate shape and size which locks together and resists dislodgement such as hoop pine mulch.

Signage

- h. A-frame signage is not placed within the dedicated pathway spaces or separated bike lanes in the verge.
- i. All Wayfinding Signage as per Moreton Bay Regional Council Region Wayfinding Style Guide (August 2017).

Lighting

- j. Street and pedestrian lighting is modular smart lighting poles integrated with other smart technology.
- K. Trees are placed as close to street and pedestrian lights as possible based on Smart Lighting specifications (eg. lighting lumens), tree species and expectations for maintenance.

Innovation

 Hubs for future passive hire and storage of small, low speed personal transportation devices eg. bicycle hire and motorised scooters are publicly accessible. Can be located on the verge, in place of an onstreet parking spot, located mid-block or co-located with bus stops.

There are to be located at a minimum 300m, maximum 500m intervals.

These hubs are hardscape areas of at least $10m^2$, with a minimum width of 1.8m.

Disability Access and Inclusion

- When planning routes for footpaths, steep gradients are minimised to the extent practicable.
- n. Driveways are designed to meet the road surface at level.
- o. The instances where people may inadvertently restrict the use of footpaths and parking facilities by people with a disability are minimised through design and the installation of furniture items, trees and bollards.
- p. No chicane barriers are installed along shared pathways.
- q. Provide accessible car parking bays at onstreet and off-street locations. Accessible parking bays are positioned to enable ease of access to council buildings and facilities, parks and open space.
- r. Ensure equitable, convenient and safe access to public passenger transport as per standards, legislation and best-practice.
- s. Bus shelters provided by council include features designed to increase accessibility to public transport. Examples include: a designated wheelchair waiting bay and directional and warning tactiles.

Water Sensitive Urban Design

t. Water Sensitive Urban Design elements are to be incorporated as per the Healthy Land and Water¹ *Water Sensitive Urban Design Technical Design Guidelines* and Healthy Land and Water Water Sensitive *Designs* document, as amended or replaced from time to time, and Moreton Bay Regional Council *Planning Scheme Policy -Integrated design.*

¹ The Development Scheme footnote 19 in 2.5.5 Environment references Healthy Waterways. Healthy Waterways are now Healthy Land and Water.



5.2 TYPOLOGY A1 | ENTRY STREET

The following design guidance applies to all Entry Streets within *Mill Central*. The Entry Streets are predominately used by vehicles transitioning between or entering/exiting Place Provision boundaries within the PDA. Although these streets will be used by pedestrians, the predominant movements will be vehicular. Entry Streets are dedicated road reserves.

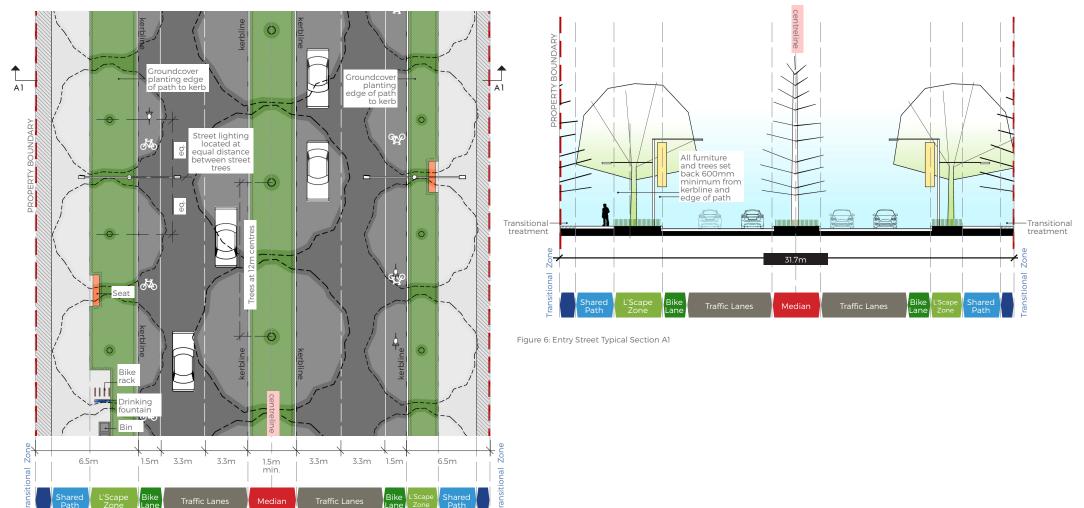


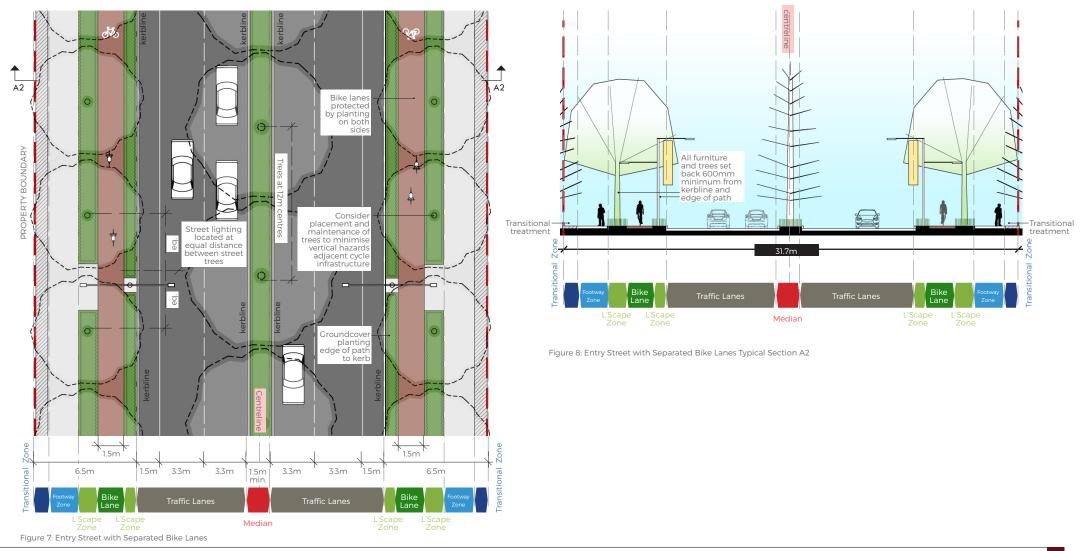
Figure 5: Entry Street Typical Plan

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5.3 TYPOLOGY A2 | ENTRY STREET - SEPARATED BIKE LANE OPTION

This option gives bicycles a dedicated lane separated by planting on both sides. Although these streets will be used by pedestrians, the predominant movements will be vehicular. Entry Streets are dedicated road reserves. The option for separated bike lanes is to be determined based on the cycle network.





Entry Street | Softscape

Trees and plantings are formally arranged as a boulevard, with regular spacings, symmetrically mirrored on both sides of the street. Trees are planted in planting beds.

Landmark, tall, wayfinding tree species feature prominently, and are inspired by the Gympie Road, Strathpine species and the historic tree plantings of Anzac Avenue.

Trees provide dappled shade for pedestrians and mitigate the heat island effect of the traffic lanes. The trees shade 40% of the landscape and footway zones at full maturity.

An automated, reticulated irrigation system is required to establish and maintain the Entry Street softscape.

Entry Street | Hardscape

Pattern

Stretcher bond

Nodes (Refer Figure 4)

1

44		Material 1	Material 2
	Location	Base pavement	Feature banding
	Material	Engineered concrete paver (large rectangular size)	Bricks (long and thin dimensions) with off white joints
$\left\langle \right\rangle$	Colours	Base colour - Warm/grey Aggregate - Mix of warm and white	Mix of 40% cool/grey and 60% warm/dark
\angle	Pattern	Stretcher bond	Stack bond pattern
1			

Pathway

1

	Material 1	Material 2
Location	Coloured concrete with exposed aggregate (large rectangular size)	Feature banding
Material	Base colour - Mid-grey Aggregate - Mix of warm, cool and white	Bricks (long and thin dimensions) with off white joints
Colours	N/A	Mix of 40% cool/grey and 60%

warm/dark

Stack bond pattern

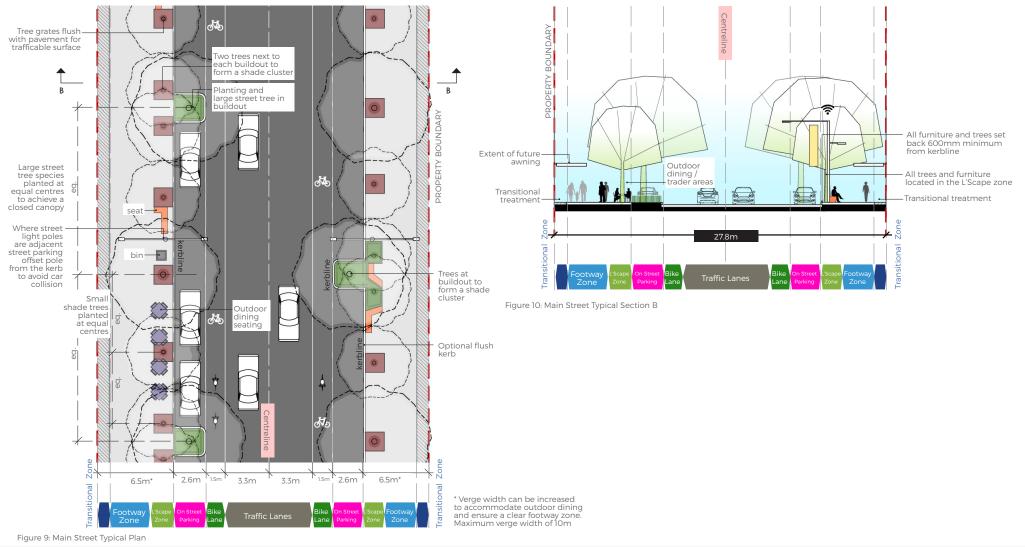
Entry Street | Furniture

Furniture	Locations
Seats	Maximum 200m intervals.
	Under shade trees.
Drinking/ water-bottle refill fountains	Maximum 200m intervals.
Bike Racks	Maximum 400m intervals.
Bollards	Where there are no other barriers to stop vehicles from entering parks and public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.

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5.4 TYPOLOGY B1 | MAIN STREET

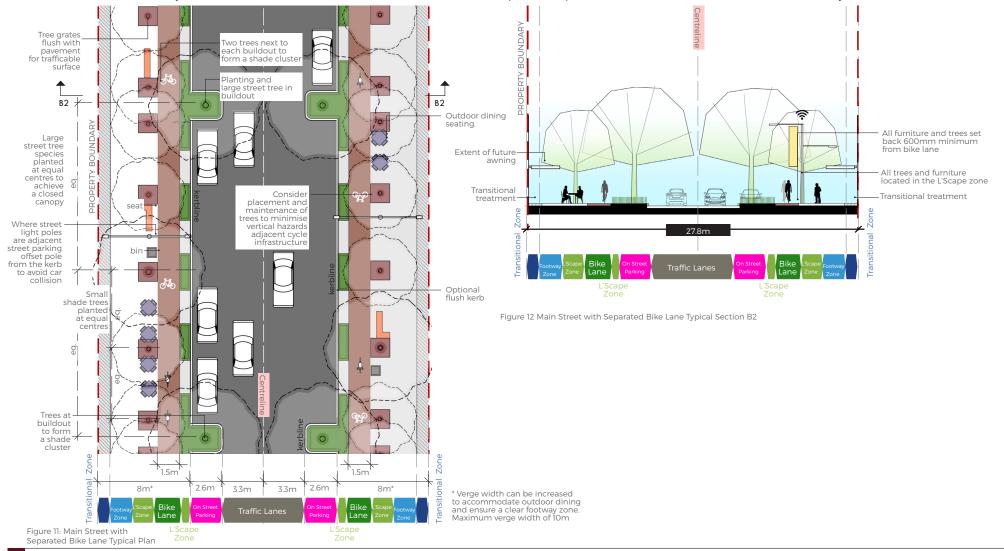
The following design guidance applies to the Neighbourhood Hub and District Centre Main Street, as defined by the *Development Scheme*. Main Streets are streets with major pedestrian activity and are the hub for commercial activity and activation. Main Streets are dedicated road reserves.





5.5 TYPOLOGY B2 | MAIN STREET - SEPARATED BIKE LANE OPTION

The following design guidance applies to the Neighbourhood Hub and District Centre Main Street, as defined by the *Development Scheme*. Main Streets are streets with major pedestrian activity and are the hub for commercial activity and activation. Main Streets are dedicated road reserves. The option for separated bike lanes is to be determined based on the cycle network.



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Main Street | Softscape

Trees and plantings are formally arranged in regular spacings, or in groves at intersections. Trees are planted in either tree grates or planting beds.

Larger trees species are placed in buildouts to mitigate the heat island effect of the traffic lanes. Tree species in the Landscape Zone are selected to consider awnings. The trees shade 50% of the landscape and footway zones at full maturity.

An automated, reticulated irrigation system is required to establish and maintain the Main Street softscape.

Main Street | Hardscape

Nodes (Refer Figure 4)

		Material 1	Material 2
	Location	Nodes	Nodes
2	Material	Bricks (long and thin dimensions) with off white joints	In-situ Coloured Concrete and aggregate with sawn joint pattern
	Colours	Mix of 40% cool/grey and 60% warm/dark	Base colour - Warm grey/ mauve Aggregate - Dark grey
	Pattern	Mix of stretcher bond pattern, and stack bond pattern	Stretcher bond

Pathway

	Loca
	LUUG
	Mate
1 2	0-1-
	Colo
	Patt

		Material 1	Material 2
Concernence of the second	Location	Landscape Zone (areas for street furniture, signage, bus stops, rest spaces)	Footway Zone
	Material	Engineered concrete paver (small, long rectangular size)	Engineered concrete paver (large rectangular size)
	Colours	Base colour - Mid-grey Aggregate - Mix warm and white	Base colour - Mid-grey Aggregate - Mix warm and white
A PUBLIC	Pattern	Stack bond	Stretcher bond

Main Street | Furniture

Furniture	Locations
Seats	Maximum 50m intervals. Under shade trees and smart poles.
Drinking/	Maximum 100m intervals.
water-bottle refill fountains	At least one along total extent of Main Street, located close to major pedestrian crossing or mid-block.
Bins	Pair of regular waste bin and recycling bin at maximum 100m intervals.
Bike Racks	Maximum 200m intervals.
Bollards	Where there are no other barriers to stop vehicles from entering parks and public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.

Innovative suggestion

Encourage temporary activation by allowing the Neighbourhood Main Street to be easily and affordably closed to vehicle traffic through the following.

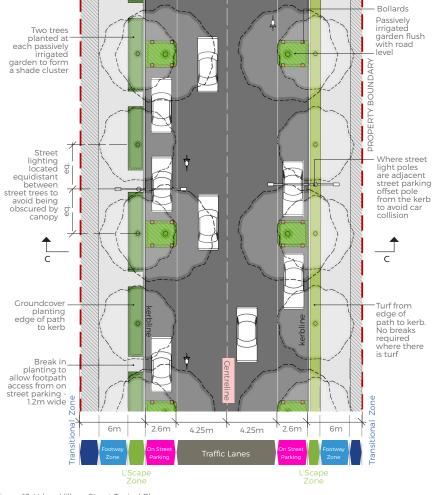
- Place the embedded receivers and lids for removable bollards within the road carriageway to assist in road closures for events and markets. Place the removable bollard a maximum of 10m from an intersection to ensure traffic can use an alternate route.
- Removable bollards are stored on verge in Landscape Zone in embedded receivers with lids (locked) when not in use for events and markets.
- This innovation has been added to Albert Street (between Charlotte and Mary Streets) in Brisbane City, and is used for night events outside of peak traffic times.



5.6 TYPOLOGY C | URBAN VILLAGE STREET

The following design guidance applies to all Urban Village Streets within *Mill Central*. Urban Village Streets accommodate moderate levels of vehicle and pedestrian activity, ultimately acting as a link or collector to the Main Street, Entry Street and other destinations.

Urban Village Streets are dedicated road reserves.



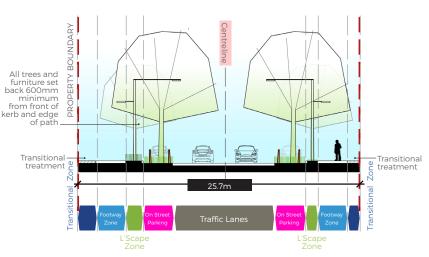


Figure 14: Urban Village Street Typical Section C

Figure 13: Urban Village Street Typical Plan

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Urban Village Street | Softscape

Trees and plantings are arranged to create a variation of full and dappled shade for pathway users. Trees are arranged in groves and groupings to alleviate the heat island effect of the traffic lanes. The trees shade 40% of the landscape and footway zones at full maturity.

Trees are planted in planting beds, or if adjacent grass, located in mulch with concrete edges.

An automated, reticulated irrigation system is required to establish and maintain the Urban Village softscape.

Urban Village Street | Hardscape

Nodes (Refer Figure 4)

1

Location	Deee nevement	
	Base pavement	Feature banding
Material	Engineered concrete paver (large rectangular size)	Bricks (long and thin dimensions) with off white joints
Colours	Base colour - Mid-grey Aggregate - Mix warm and white	Mix of 40% cool/grey and 60% warm/dark
Pattern	Stretcher bond	Stack bond pattern

Urban Village Street | Furniture

Furniture	Locations
Seats	Maximum 300m intervals.
Drinking/ water-bottle refill fountains	Maximum 300m intervals.
Bins	Smart waste bin at maximum 300m intervals.
Bike Racks	Minimum 600m intervals.
Bollards	Where there are no other barriers to stop vehicles from entering parks and public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.
	Bollards to planting bed build outs between car spaces with flush kerbs.

Footway

	Material
1	Colours
	Pattern

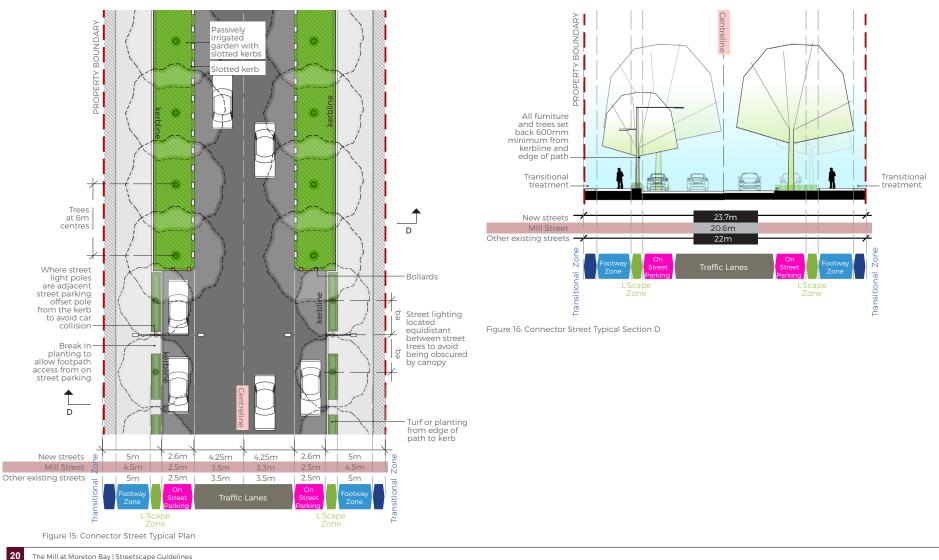
	Material 1
erial	Coloured concrete with exposed aggregate (large rectangular size)
ours	Base colour - Mid-grey
	Aggregate - Mix of warm, cool and white

ttern N/A



5.7 TYPOLOGY D | CONNECTOR STREET

The following design guidance applies to all Connector Streets within Mill Central. Connector Streets connect the Entry Street or Main Street to other streets. They will act as a transition between these street typologies. Connector Streets are dedicated road reserves. Dimensions of the verge and carriageway are slightly different for existing streets, to minimise disruptive changes, as illustrated below.





Connector Street | Softscape

Trees and plantings are formally arranged in regular spacings. The trees shade 40% of the landscape and footway zones at full maturity. Trees are planted in planting beds.

An automated, reticulated irrigation system is required to establish and maintain the Connector Street softscape.

Connector Street | Hardscape

Nodes (Refer Figure 4)

1

HL		Material 1	Material 2
	Location	Base pavement	Feature banding
	Material	Engineered concrete paver (large rectangular size)	Bricks (long and thin dimensions) with off white joints
Z	Colours	Base colour - Mid-grey Aggregate - Mix warm and white	Mix of 40% cool/grey and 60% warm/dark
	Pattern	Stretcher bond	Stack bond pattern
1.1.1.			

Connector Street | Furniture

Furniture	Locations
Seats	Maximum 50m intervals under shade trees and smart poles.
Drinking/ water-bottle refill fountains	Maximum 200m intervals.
Bins	Pair of regular waste bin and recycling bin at maximum 200m intervals.
Bike Racks	Maximum 200m intervals.
Bollards	Where there are no other barriers to stop vehicles from entering public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at minimum 1.5m intervals.
	Bollards to planting bed build outs between car spaces with flush kerbs.

Footway

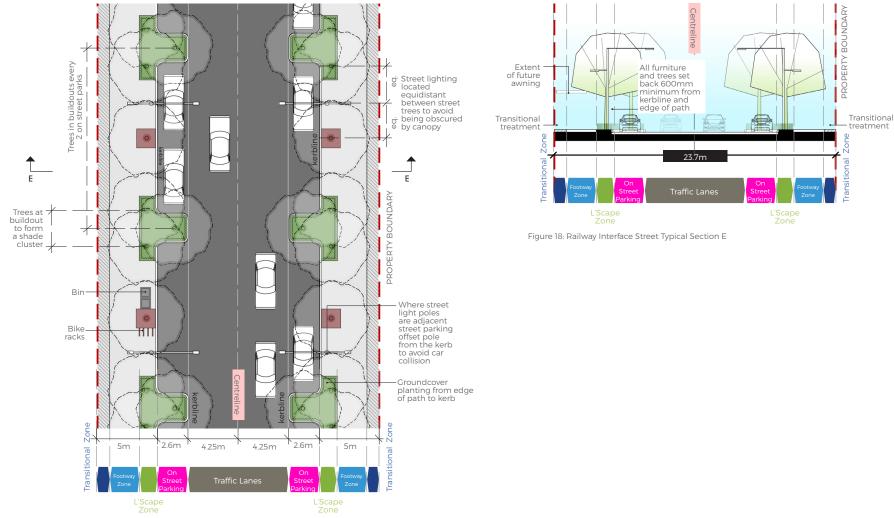
		М
1		C
		Pa

	Material 1
Material	Coloured concrete with exposed aggregate (large rectangular size)
Colours	Base colour - Mid-grey
	Aggregate - Mix of warm, coo and white
Pattern	N/A



5.8 TYPOLOGY E | RAILWAY INTERFACE STREET

The following design guidance applies to all Railway Interface Streets within *Mill Central*. Railway Interface Streets are located parallel to a railway line. Railway Interface Streets are dedicated road reserves.



Railway Interface Street | Softscape

Trees and plantings are formally arranged in regular spacings in groves and larger tree species are placed in buildouts to alleviate the heat island effect of the traffic lanes. The trees will shade 40% of the landscape and footway zones at full maturity. Trees are planted in a combination of tree grates and planting beds.

An automated, reticulated irrigation system is required to establish and maintain the Railway Interface Street softscape.

Railway Interface Street | Hardscape

Nodes (Refer Figure 4)

(1)

H		Material 1	Material 2
	Location	Base pavement	Feature banding
	Material	Engineered concrete paver (large rectangular size)	Bricks (long and thin dimensions) with off white joints
$\sum_{i=1}^{i}$	Colours	Base colour - Mid-grey Aggregate - Mix warm and white	Mix of 40% cool/grey and 60% warm/dark
4	Pattern	Stretcher bond	Stack bond pattern

Railway Interface Street | Furniture

Furniture	Locations
Seats	Maximum 200m intervals.
Drinking/	Maximum 200m intervals.
water-bottle refill fountains	At least one along total extent of Railway Interface Street, located close to major pedestrian crossing or mid-block.
Bins	Pair of regular waste bin and recycling bin at maximum 200m intervals.
Bike Racks	Maximum 200m intervals.
Bollards	Where there are no other barriers to stop vehicles from entering parks and public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.

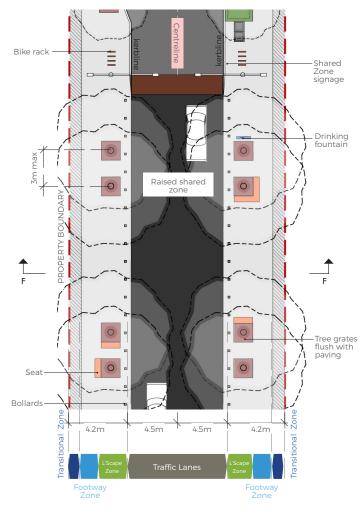
Footway

		Material 1
	Material	Coloured concrete with exposed aggregate (large rectangular size)
1	Colours	Base colour - Mid-grey Aggregate - Mix of warm, cool and white
	Pattern	N/A



5.9 TYPOLOGY F | SHARED ZONE STREET

The following design guidelines apply to all Shared Zone Streets within Mill Central. Shared Zone Streets experience a high level of pedestrian activity and vehicular activity. They may be dedicated road reserves or located on publicly accessible private land.



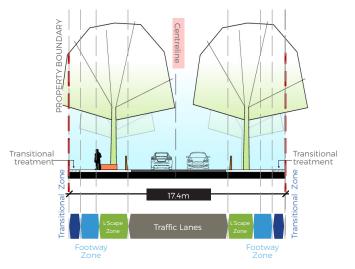


Figure 20: Shared Zone Street Typical Section F

Figure 19: Shared Zone Street Typical Plan

Shared Zone Street | Softscape

Trees are formally arranged in groves, symmetrically mirrored on both sides of the street. Trees are located in tree grates. The trees will shade 30% of the landscape and footway zones at full maturity.

An automated, reticulated irrigation system is required to establish and maintain the Shared Zone Street softscape.

Shared Zone Street | Hardscape

Nodes (Refer Figure 4)

		Material 1	Material 2
Loc	cation	Nodes	Nodes
Ma	iterial	Bricks (long and thin dimensions) with off white joints	In-situ Coloured Concrete and aggregate with sawn joint pattern
Co	lours	Mix of 40% cool/grey and 60% warm/dark	Base colour - Warm grey/ mauve Aggregate - Dark grey
Pat	ttern	Mix of stretcher bond pattern, and stack bond pattern	Stretcher bond

Pathway

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	Material 1	Material 2
Location	Landscape Zone (areas for street furniture, signage, bus stops, rest spaces)	Footway Zone
Material	Engineered concrete paver (small, long rectangular size)	Engineered concrete paver (large rectangular size)
Colours	Base colour - Mid-grey Aggregate - Mix warm and white	Base colour - Mid-grey Aggregate - Mix warm and white
Pattern	Stack bond	Stretcher bond

Shared Zone Street | Furniture

Locations
Maximum 50m intervals under shade trees and smart poles.
Maximum 200m intervals with at least one water bottle refilling station along total extent of Shared Zone Street, located close to major pedestrian crossing or mid-block.
Pair of regular waste bin and recycling bin at maximum 200m intervals.
Maximum 200m intervals.
Bollards to the extent of the shared zone crossing at maximum 1.5m intervals.
Where there are no other barriers to stop vehicles from entering public plazas (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.



5.10 TYPOLOGY G | PARK STREET

The following design guidance applies to Park Streets within *Mill Central* and *Mill Green*. Park Streets facilitate vehicles accessing parks or car parks, driving through parks, and pedestrians casually crossing. Fauna movement needs to be considered for Park Streets in *Mill Green*.

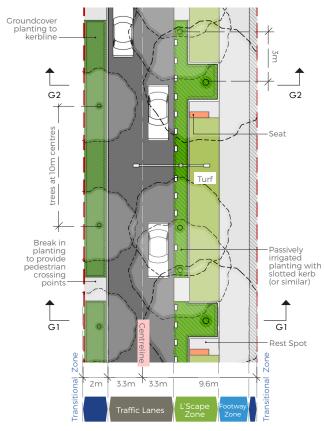


Figure 21: Park Street Typical Plan

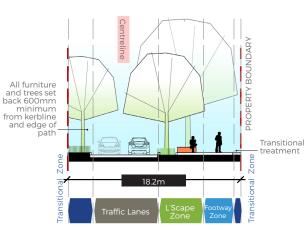


Figure 22a: Park Street Typical Section G1

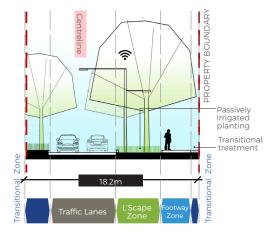


Figure 22b: Park Street Typical Section G2

Park Street | Softscape

Trees and planting are to be arranged informally and planted in planting beds, or if adjacent grass, located in mulch with concrete edges. The trees will shade 30% of the landscape and footway zones at full maturity.

Park Street | Hardscape

Plain grey, broomed finished.

Slotted kerb along extent of street.

Park Street | Furniture

Furniture	Locations
Seats	Maximum 200m.
Bollards	Where there are no other barriers to stop vehicles from entering parks (eg. trees and signs) bollards are placed on the boundary of the verge and the park at maximum 1.5m intervals.
	Dellarda ta planting hada hatwaan aar anaasa, dua

Bollards to planting beds between car spaces, due to flush kerbs.

26

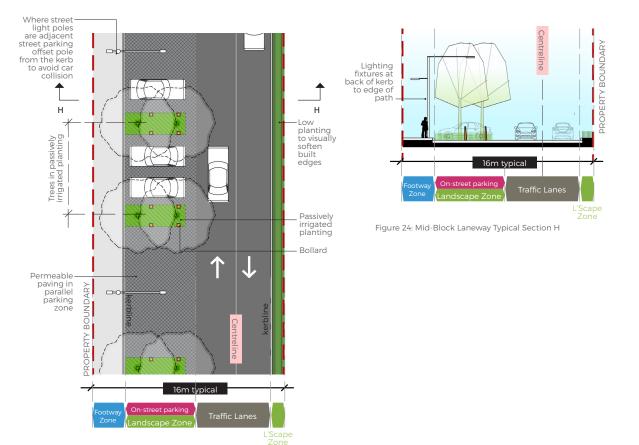
5.11 TYPOLOGY H | MID-BLOCK LANEWAY

Figure 23: Mid-Block Laneway Typical Plan

The following design guidance applies to Mid-block Laneways in Mill Central.

Mid-block Laneways facilitate vehicles accessing lots, other laneways, and car parking areas. They may support on-street car parking where required, passively irrigated planting and street trees. Pedestrian movement is limited to the dominant side of the street.

Mid-block Laneways may be dedicated road reserves or located on publicly accessible private land. Where part of a cycle network, a "Cycle Street" treatment should be considered.



Mid-Block Laneway | Softscape

Trees and planting are complementary to the adjoining street typology.

It is desirable for the land-owner to provide automated, reticulated irrigation systems maintained by land-owner.

Mid-Block Laneway | Hardscape

Select pavements complementary to the connecting street or laneway typology.

Mid-Block Laneway | Furniture

Furniture	Locations
Seats	Acceptable.
Bike Racks	Acceptable.
Bollards	Bollards are incorporated into passively irrigated planting beds between car spaces, due to flush kerbs.



5.12 TYPOLOGY I | SERVICE LANEWAY

The following design guidance applies to Service Laneways in *Mill Central*.

Service Laneways are a movement corridor for service, delivery and emergency vehicles. Pedestrian and vehicular traffic will be separated by passively irrigated planting beds with slotted kerbs. Footway zone included on only one side of the street which is the dominant path of travel with fewer driveway crossovers to avoid conflict.

Service Laneways may be dedicated road reserves or located on publicly accessible private land.

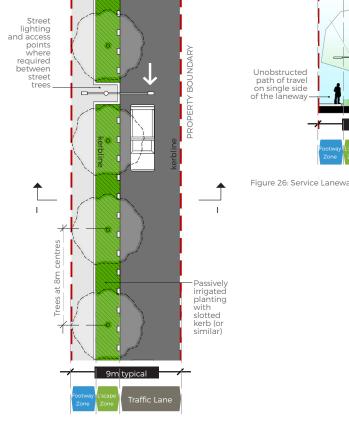


Figure 25: Service Laneway Typical Plan

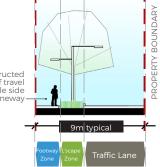


Figure 26: Service Laneway Typical Section I

Service Laneway | Softscape

Trees and planting are complementary to the adjoining street typology.

It is desirable for the land-owner to provide automated, reticulated irrigation systems maintained by land-owner.

Service Laneway | Hardscape

Select pavements complementary to the connecting street or laneway typology.

Service Laneway | Furniture

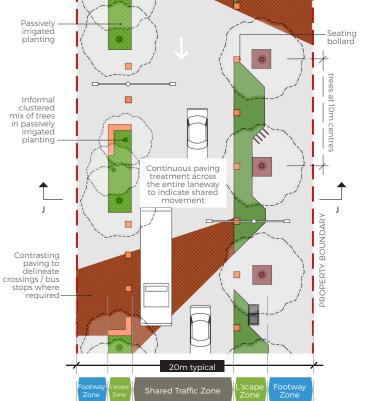
Furniture	Locations
Seats	Acceptable.
Bike Racks	Acceptable.
Bollards	Bollards are incorporated into passively irrigated planting beds, due to flush kerbs.

5.13 TYPOLOGY J | SHARED LANEWAY

The following design guidance applies to Shared Laneways in Mill Central.

Shared Laneways are an active movement thoroughfare. They are corridors for public buses, private vehicles, bicycles and pedestrians with flush kerbs signifying a full trafficable surface. Depending on the width, pedestrian-exclusive (footway) zones may be delineated by planting beds.

Shared Laneways may be dedicated road reserves or located on publicly accessible private land. Where part of a cycle network, a "Cycle Street" treatment should be considered.



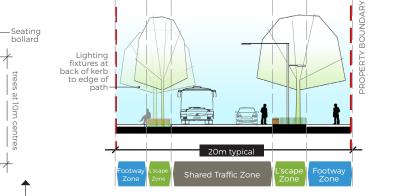


Figure 28: Shared Laneway Typical Section J

Shared Laneway | Softscape

Trees and planting are complementary to the adjoining street typology. The trees will shade 30% of the landscape and footway zones at full maturity.

It is desirable for the land-owner to provide automated, reticulated irrigation systems maintained by land-owner.

Shared Laneway | Hardscape

Select pavements complementary to the connecting street or laneway typology.

Shared Laneway | Furniture

Furniture	Locations
Seats	Acceptable.
Bike Racks	Acceptable.
Bins	Acceptable.
Bollards	In lieu of raised kerbs, seating bollards are used to indicate a separation between shared and pedestrian-exclusive zones.

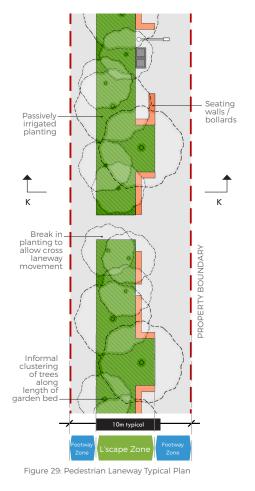
Figure 27: Shared Laneway Typical Plan

5.14 TYPOLOGY K | PEDESTRIAN LANEWAY

The following design guidance applies to Pedestrian Laneway in Mill Central.

Pedestrian Laneways are for pedestrian and cyclist use only and have no vehicular-traffic carrying capacity. The treatment appears as a continuous finish from boundary to boundary, with spatial definition provided by passively irrigated linear planting areas and seating walls. The lanes are shady and safe conduits for foot traffic with space for future temporary activation.

Pedestrian Laneways may be dedicated road reserves or located on publicly accessible private land.



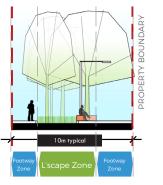


Figure 30: Pedestrian Laneway Typical Section K

Pedestrian Laneway | Softscape

Trees and planting are complementary to the adjoining street typology. The trees will shade 50% of the landscape and footway zones at full maturity.

It is desirable for the land-owner to provide automated, reticulated irrigation systems maintained by land-owner.

Pedestrian Laneway | Hardscape

Select pavements complementary to the connecting street or laneway typology.

Pedestrian Laneway | Furniture

Furniture	Locations
Seats	Acceptable.
Bike Racks	Acceptable.
Bins	Acceptable.



6. AT-GRADE CAR PARK GUIDE



Figure 29: Parallel Car Park Typical Plan



Figure 29a: Perpendicular Car Park Typical Plan (also applies to angular)

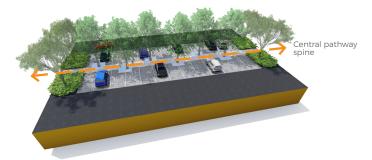


Figure 29b: Perpendicular Car Park with median Typical Plan (also applies to angular)

At-grade Car Parking Attributes

Table 5: At-grade Car Parking Attributes

Flooding	 Parking to be above 2% AEP (1 in 50 year ARI) event EV Charging to be above 1% AEP (1 in 100 year ARI) event
Smart Infrastructure	In all permanent at-grade car parks with more than 20 spaces, include:
	 CCTV EV Charging and Parking Management
Lighting	Pedestrian and vehicular lighting
Power for events	In all permanent at-grade car parks with more than 100 spaces provide power for markets and events
	One power location provided for 100 car parks, plus one extra for every 50 additional car spaces
	A power location includes: • 1x 10amp outlet • 1x 15amp outlet
Hardscape: Car spaces	For at-grade car parks with more than 30 car spaces - minimum 50% of car spaces vehicle grade porous surfaces
	Impervious surfaces are acceptable for driveways and roads
Softscape	 50% of car spaces experience full or partial shade from a tree (at full maturity) (approximately 1 shade tree is provided for every 3 car spaces) No koala food trees
Pathway Network	 Pedestrian pathways are provided adjacent to carpark/s Pedestrian crossings are provided to allow safe movement where appropriate Central pathway spine provided for car parks with more than 50 car spaces
Food Truck Space	Food truck spaces, with signage and linemarkings reserving the space are acceptable (refer Park typologies)
Wayfinding	Signage is provided in accordance with <i>Moreton Bay Regional Council Regional</i> Wayfinding Style Guide
Water Sensitive Urban Design (WSUD)	 For at-grade car parks with more than 20 car spaces without any roof: integrated gardens are provided that are maximum 20m² each and no more than 500mm deep, and are planted to look similar to gardens; and linear planted swales are provided
For suideness on drivery de	pairs refer to postion E Cuide and Crees Sections for the following

For guidance on driveway design refer to section **5.Guide and Cross Sections**, for the following typologies:

- Typology H Mid-block laneway
- Typology I Service Laneway
- Typology J Shared Laneway

rtist's Impression 4: Shared Street Typology - slow speed vehicular environment allowing pedestrians to cross

7. GLOSSARY

Unless defined below, or in the *Economic Development Act 2012*, or the *Development Scheme*, the *MBRC Planning Scheme* definitions apply to this guideline.

Development Scheme	The Mill at Moreton Bay Priority Development Area - Development Scheme (August 2017) - <u>https://www.dsdmip.qld.gov.au/edq/the-mill-at-moreton-bay.html</u>
Landmark	an object or feature within a street, park or development that is easily seen and recognised from a distance. Landmarks aid wayfinding, enabling someone to establish their location.
Mill Central	A Place within the <i>Development Scheme</i> . Refer to Map 2 and section 2.6.1 Place 1 - Mill Central.
Mill Green	A Place within the <i>Development Scheme</i> . Refer to Map 2 and section 2.6.5 Place 5 - Mill Green.



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