



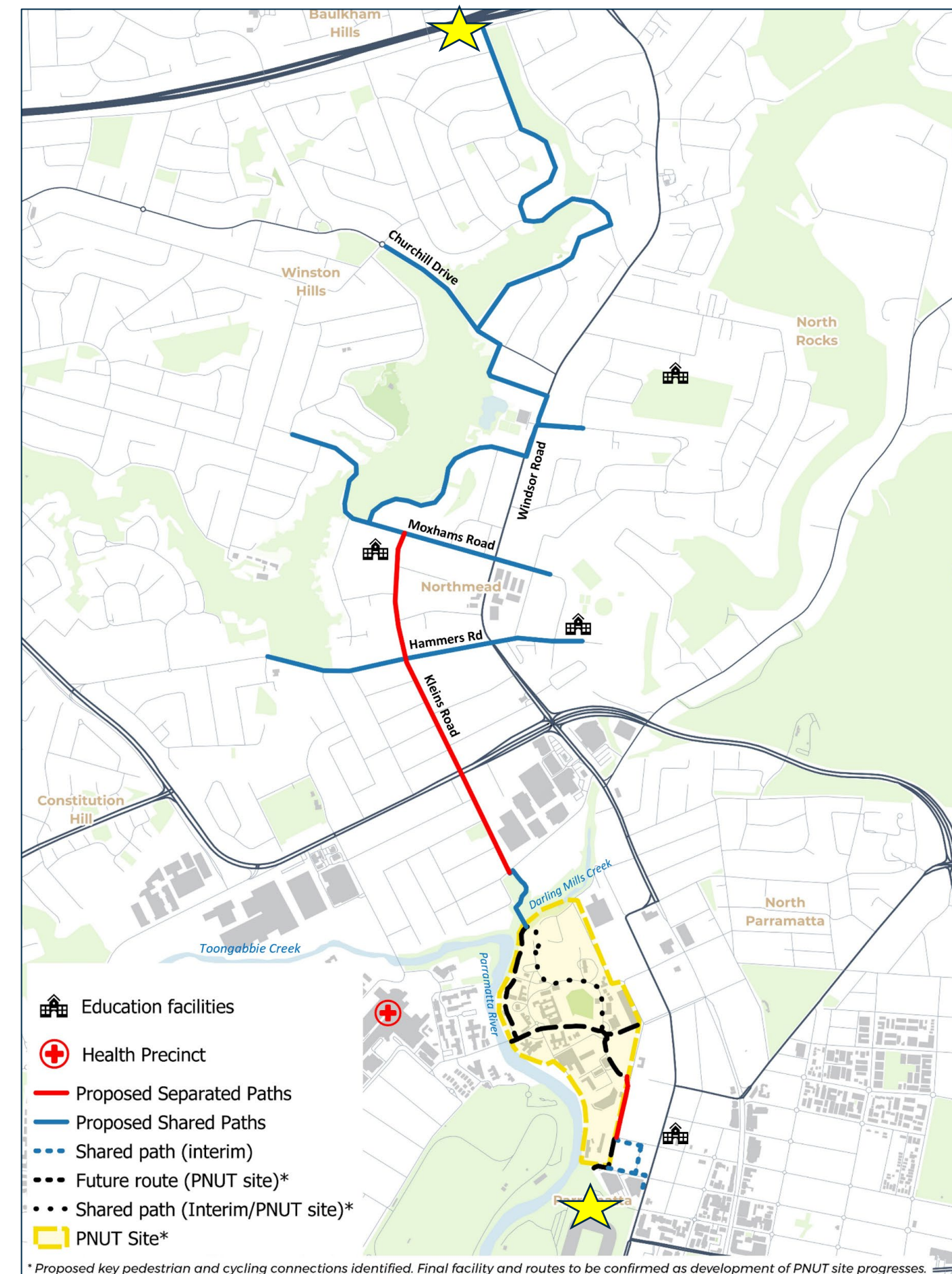
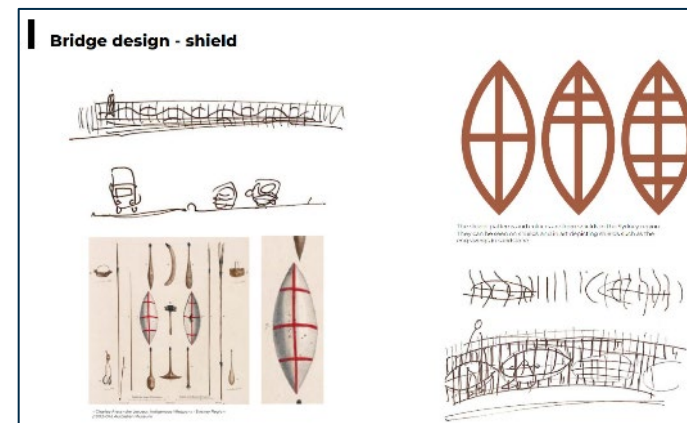
# **Kleins Road**

## **Pedestrian and Cyclist Corridor Study Community Information Package**



# Scope

- Funded by TfNSW - "space testing" feasibility.
- First stage in a potential multi-year delivery program.
- 3km main corridor along Kleins Road that will have higher user numbers:
  - Moxhams to Parramatta Stadium.
  - New pedestrian and cyclist bridge over Darling Mills Creek.
  - New paths through Parramatta North site.
- Supporting network of connecting shared paths to local streets, bridges to the west and traffic signals over Windsor Road to the east.
- Comprehensive traffic counts and parking surveys completed along the length.
- Pilot project within Council in working with the Dharug Panel and Designing with Country, particularly the bridge crossing.



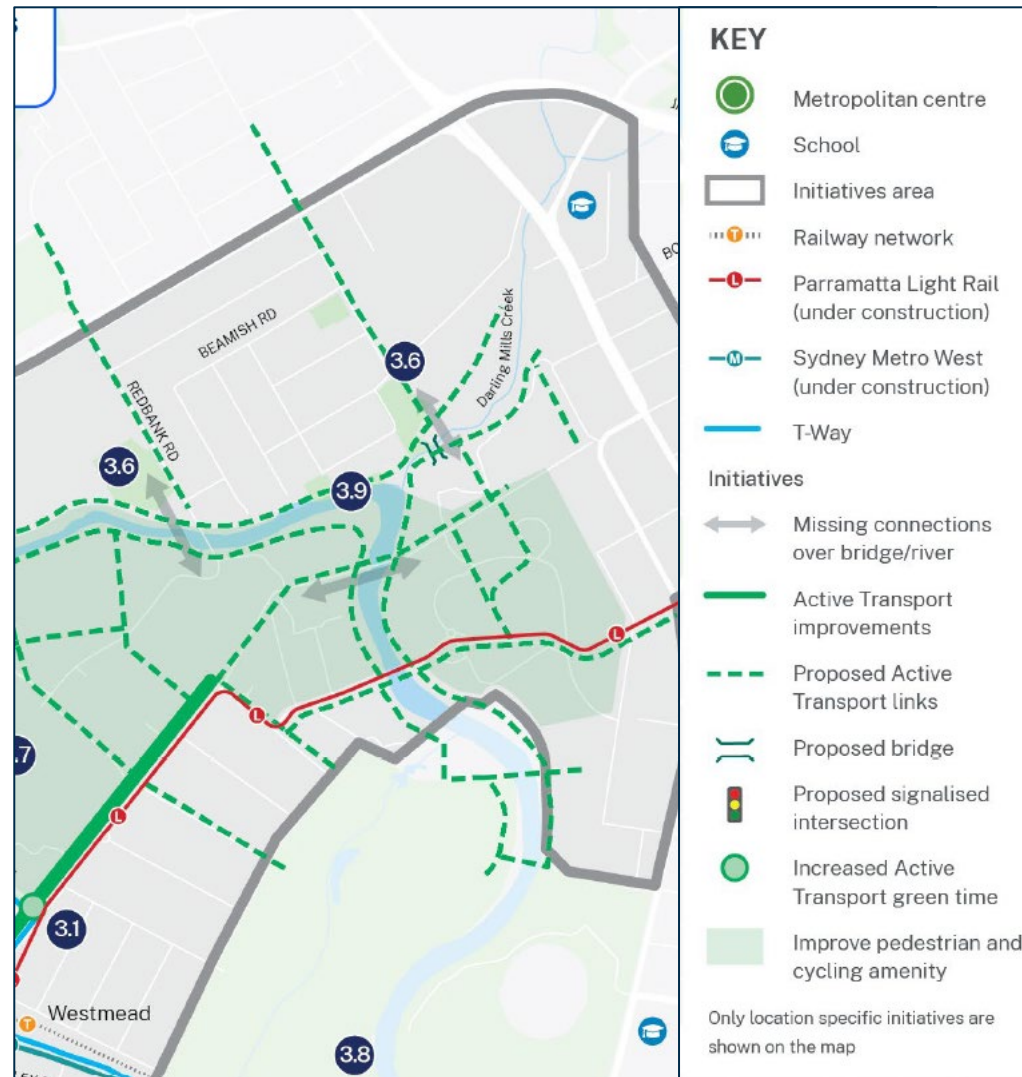
**Background**



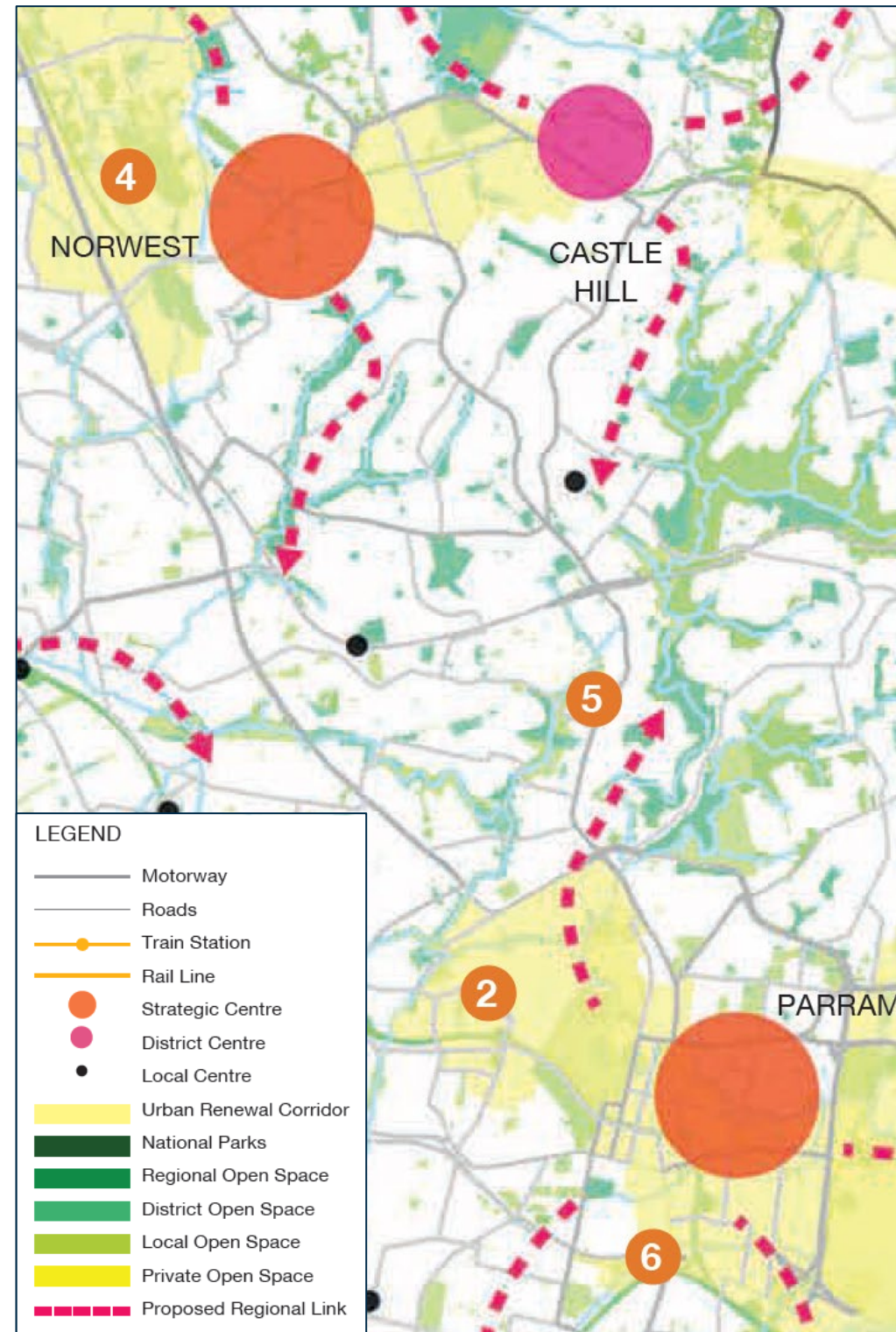


# Strategic Context – NSW Government

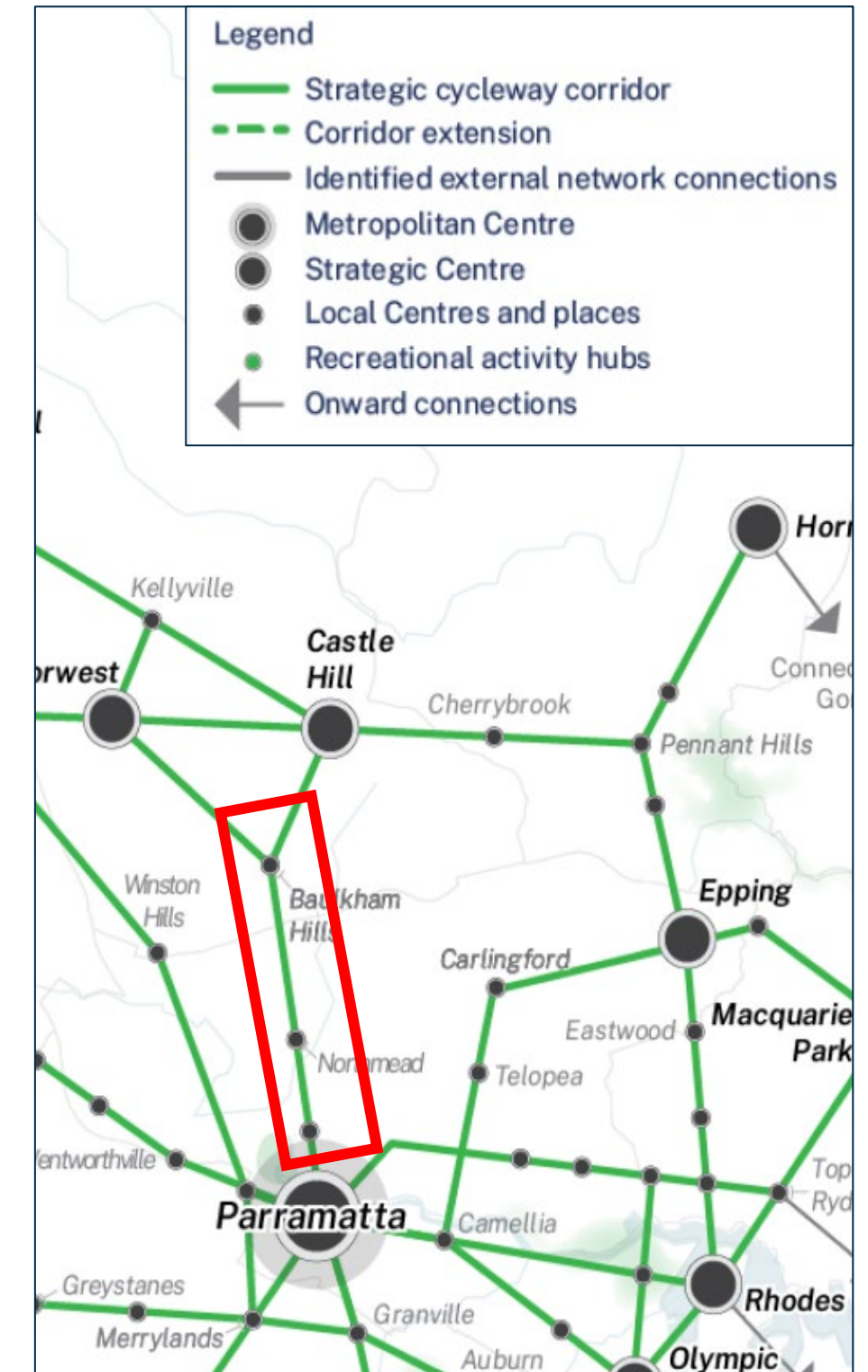
Westmead planning



Regional Green Grid



Strategic Cycleways Corridors

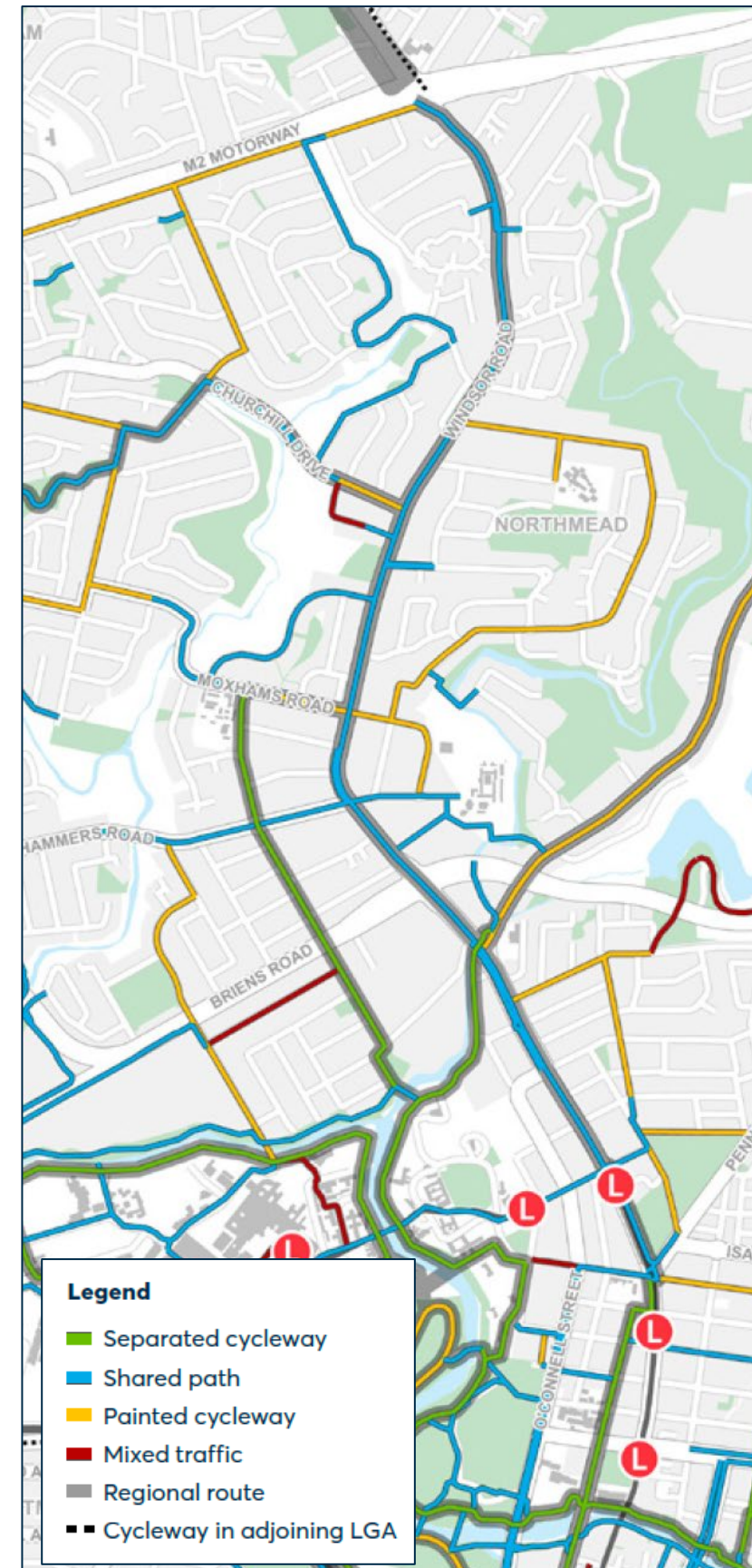




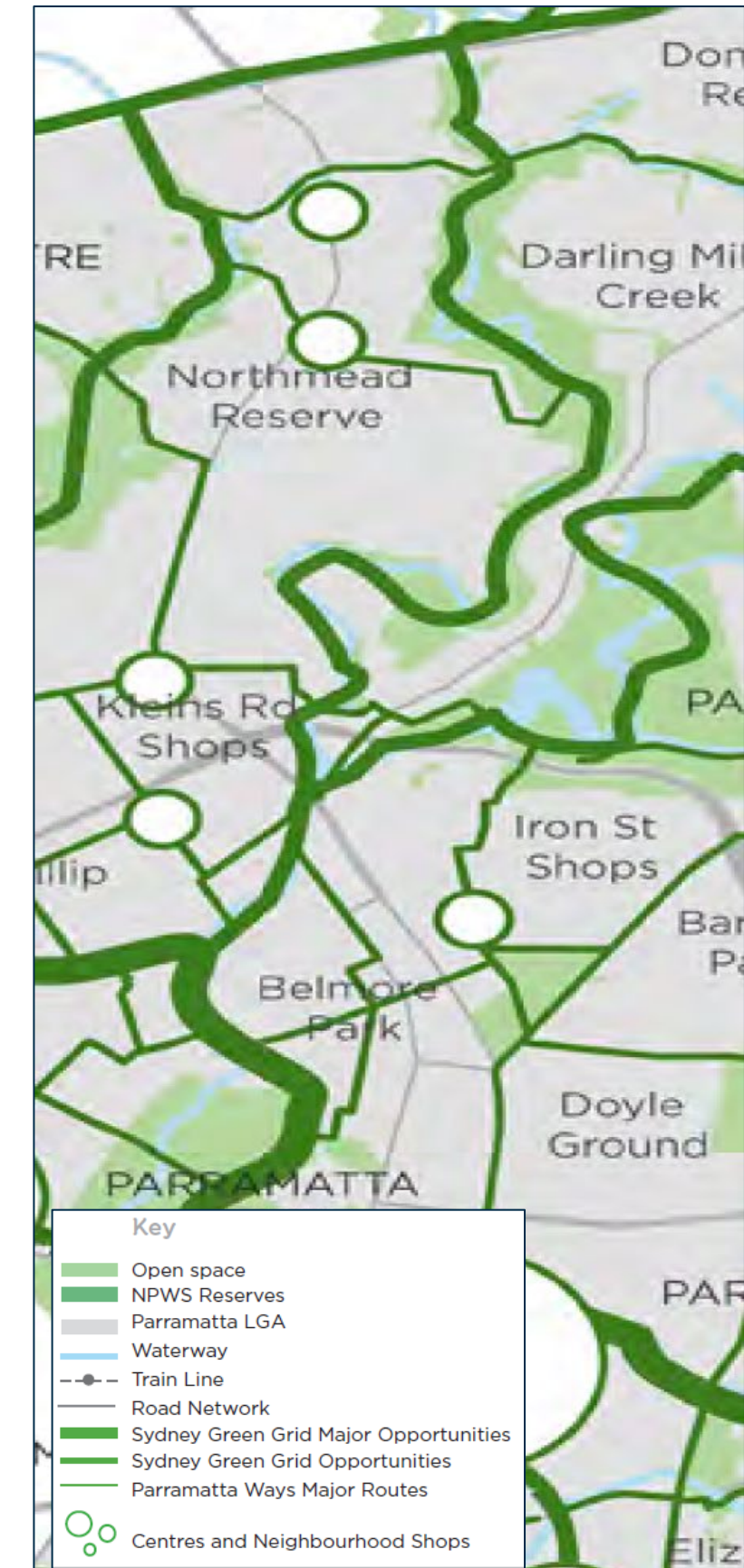
# Strategic Context - Local

- Parramatta Valley Cycleway Masterplan 2005.
- Draft Bike Plan 2024 and Parramatta Ways.
- Windsor Road is incrementally delivering bus priority and a shared path.
- As an alternative to Windsor Road, Kleins Road provides:
  - Higher amenity (lower traffic, more trees).
  - Opportunity for separated pedestrians and cyclists.
  - Connects directly to Northmead Primary and local shops.
  - Will catalyse access into PNUT and the future university campus / health precinct.
  - New link into the Parramatta River paths and Westmead.

## Draft Bike Plan 2024



## Parramatta Ways



# Corridor Study





# Parameters

- Must meet TfNSW objectives, Austroads guidance and Australian Standards.
- Separate pedestrians and cyclists where possible on the main alignment.
- Where possible retain parking spaces where they are used by the community, especially at centres of activity.
- Retain existing trees where possible and identify opportunities for new trees.
- Minimise kerb, utilities and stormwater adjustments.
- Retain existing traffic circulation where possible.
- Increase permeability to, and across Windsor Road and waterways.
- Be a net positive contributor to the public domain.
- Retain heavy vehicle access south of Cumberland Highway.
- Propose mutually beneficial and self-reinforcing Local Area Traffic Management solutions.
- Work collaboratively with Government Property and other stakeholders and align with existing State led Precinct Planning.

# Concept Plans





# Parramatta North

## Government Property / Deerubbin Land Council

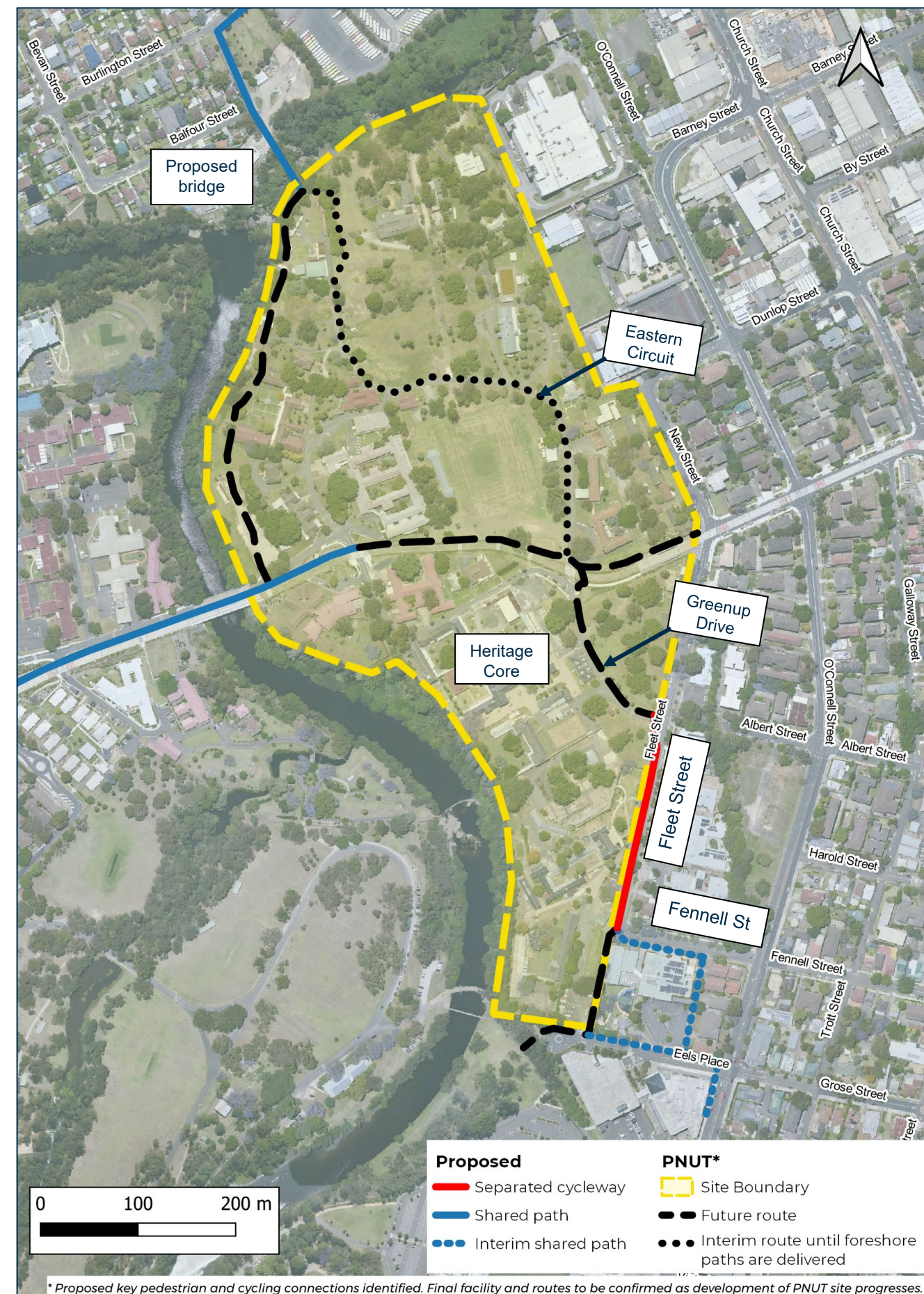
- Existing controls and DCP from previous re-zoning.
- Unknown timing of new vision.
- Unknown development timing.

## Assumptions

- Eastern foreshore inaccessible adjacent to Heritage Core (for a concrete path).
- PLR shared path will be completed to the east in the future.
- 'Interim' public access will be required if the bridge over Darling Mills Creek proceeds ahead of development.
- Planned paths wholly within Government owned land.

## Proposal

- Interim route along Fennell / Northcote Lane / Eels Place until more direct through site link is delivered.
- Fleet Street is "end state" of separated cycleway, resolve drainage issues, footpath, one way northbound between Fennell and Greenup Drive, underground power lines, new public domain and trees.
- Eastern Circuit and Greenup Drive used by pedestrians and cyclists until foreshore paths are delivered.
- Interim route around SES site within Government Property lands.





# Fleet Street

## Constraints

- Heritage listed sandstone walls either side.
- Little or no functional public domain on the west.
- Two large trees western side.
- Parking is well used.

## Proposal

- New footpath, kerb and gutter on west.
- Underground powerlines to allow greater tree canopy.
- New street trees on west and east.
- Parking retained on west (except at two large trees).
- One way northbound between Fennell Street and Greenup Drive.

## Timing

- Shared path on southern side of Fennell St and contraflow on Northcott lane is short-term until link through Government Parramatta North site is delivered.





# Fleet Street

LEGEND	
<b>GENERAL</b>	
	EXISTING KERB EDGE
<b>PAVEMENT &amp; SURFACES</b>	
	STANDARD CONCRETE FOOTPATH
	BI-DIRECTIONAL CYCLEWAY
<b>PLANTING</b>	
	TURF TO MATCH EXISTING
	EXISTING TREE
	PROPOSED TREE
	REMOVED TREE
<b>LINE MARKING</b>	
	CYCLE PATH LINE MARKING
<b>FURNITURE &amp; FIXTURES</b>	
	BICYCLE RACK
	RUBBISH BIN
	BENCH SEAT
	RETAINING WALL
<b>CROSSINGS</b>	
	PEDESTRIAN AND BICYCLE PRIORITY CROSSING
	PEDESTRIAN PRIORITY CROSSING

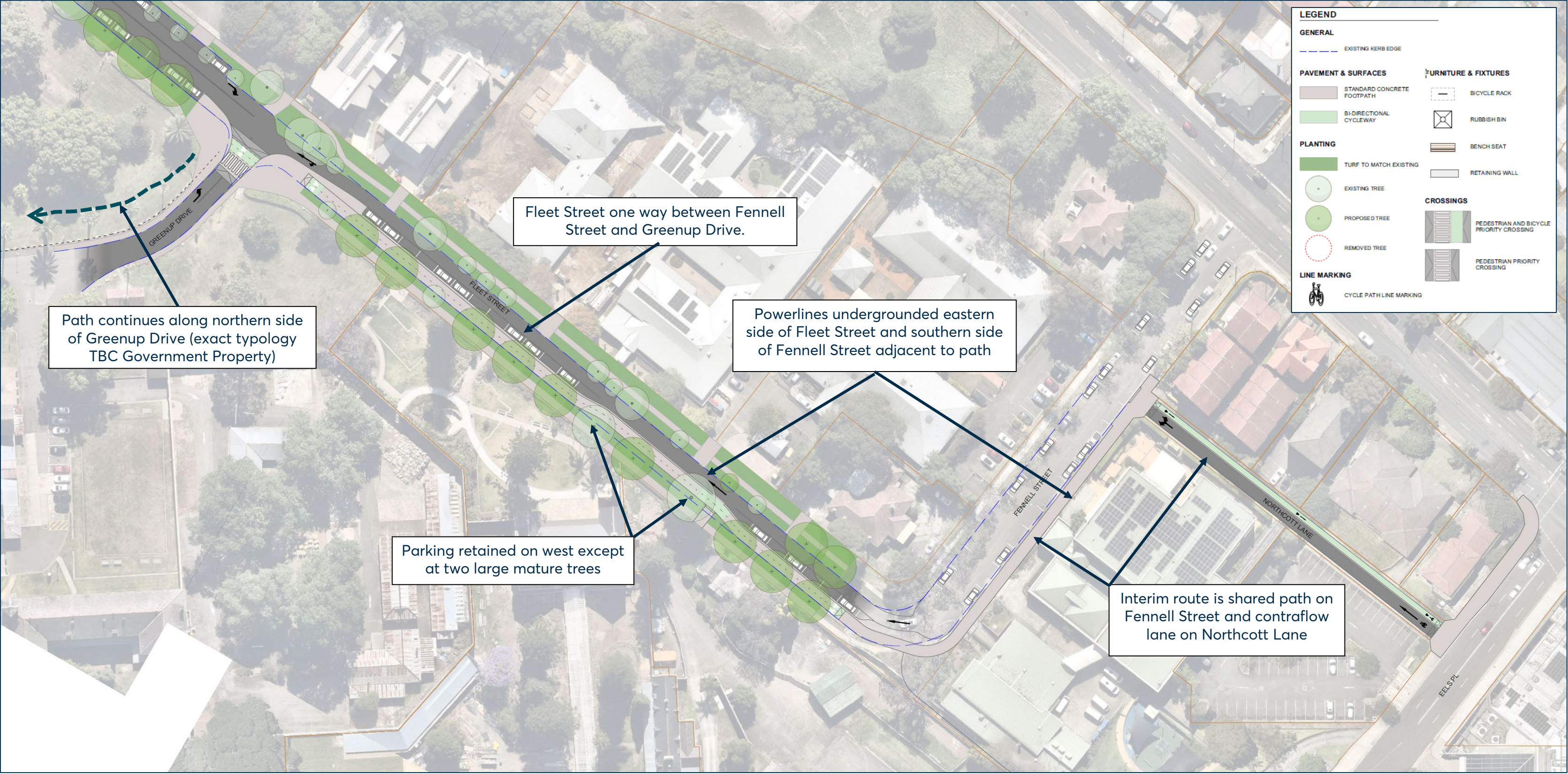
Fleet Street one way between Fennell Street and Greenup Drive.

Powerlines undergrounded eastern side of Fleet Street and southern side of Fennell Street adjacent to path

Path continues along northern side of Greenup Drive (exact typology TBC Government Property)

Parking retained on west except at two large mature trees

Interim route is shared path on Fennell Street and contraflow lane on Northcott Lane

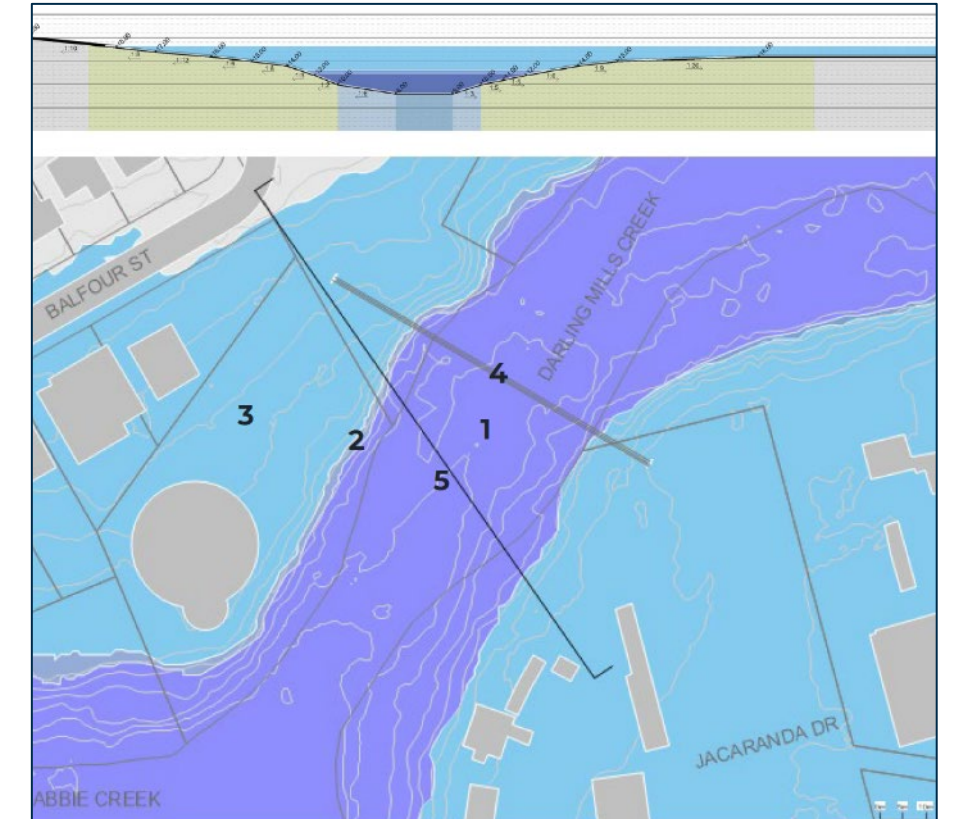
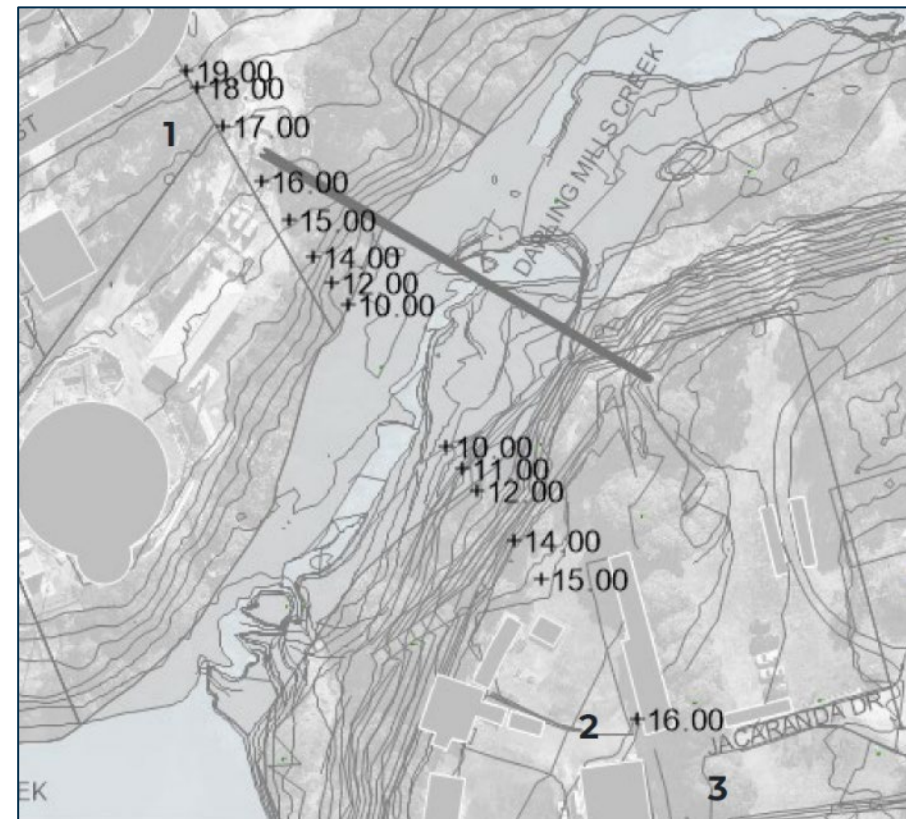
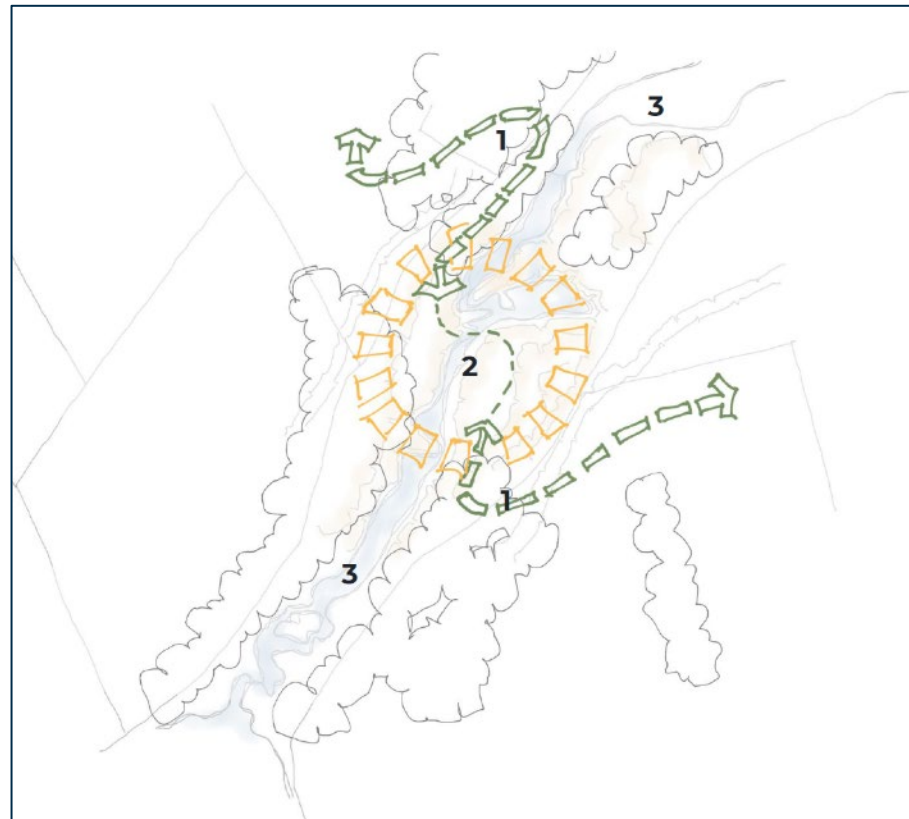
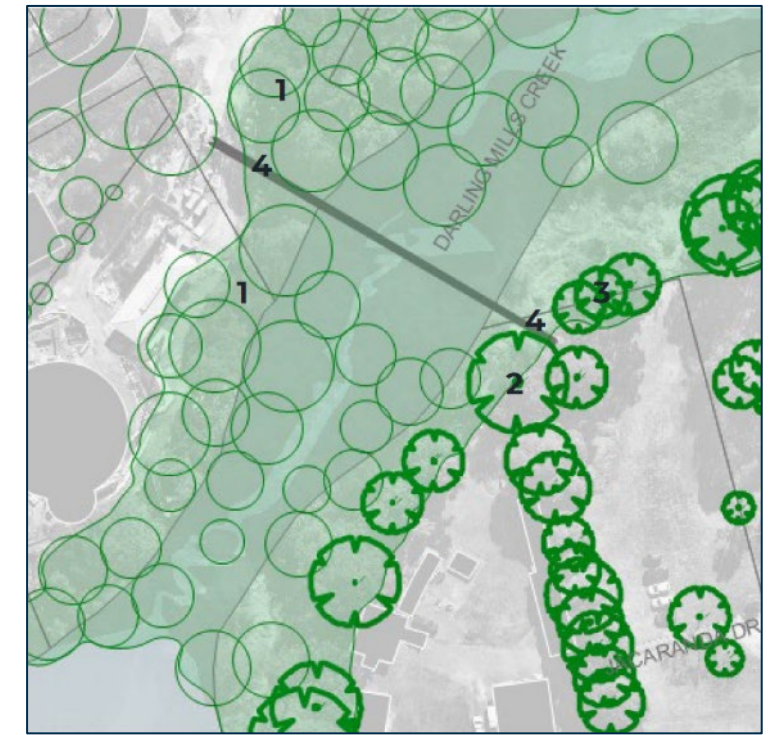
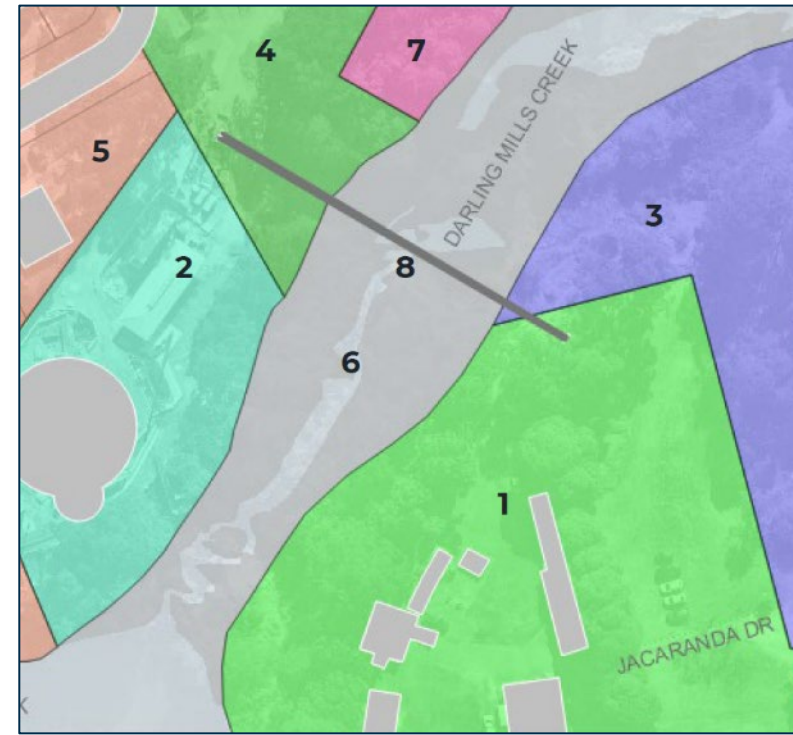




# Bridge

## Inputs

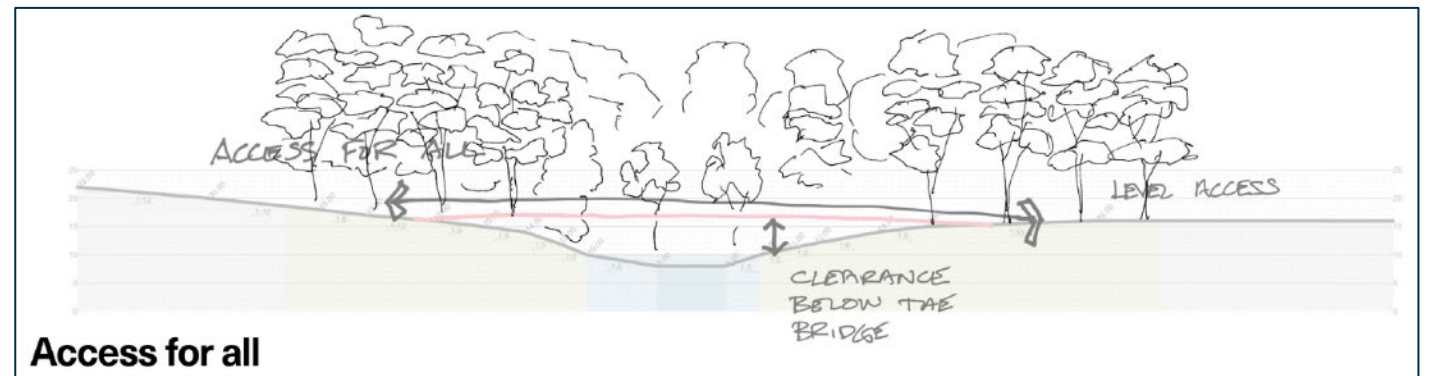
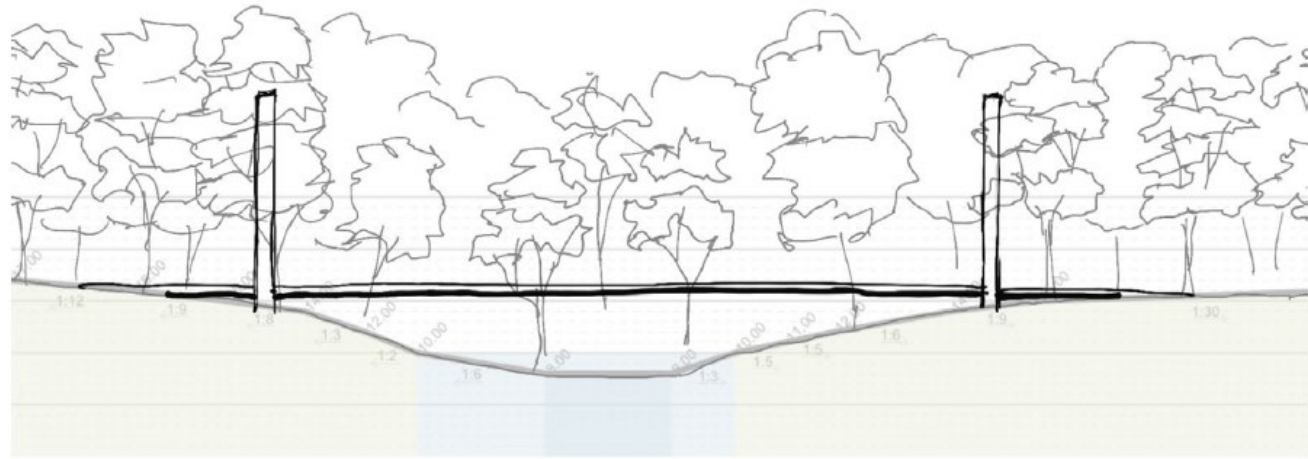
- Land ownership
- Designing with Country
- Ecology
- Topography
- Flooding
- Context and setting
- Design quality
- Views
- Power lines



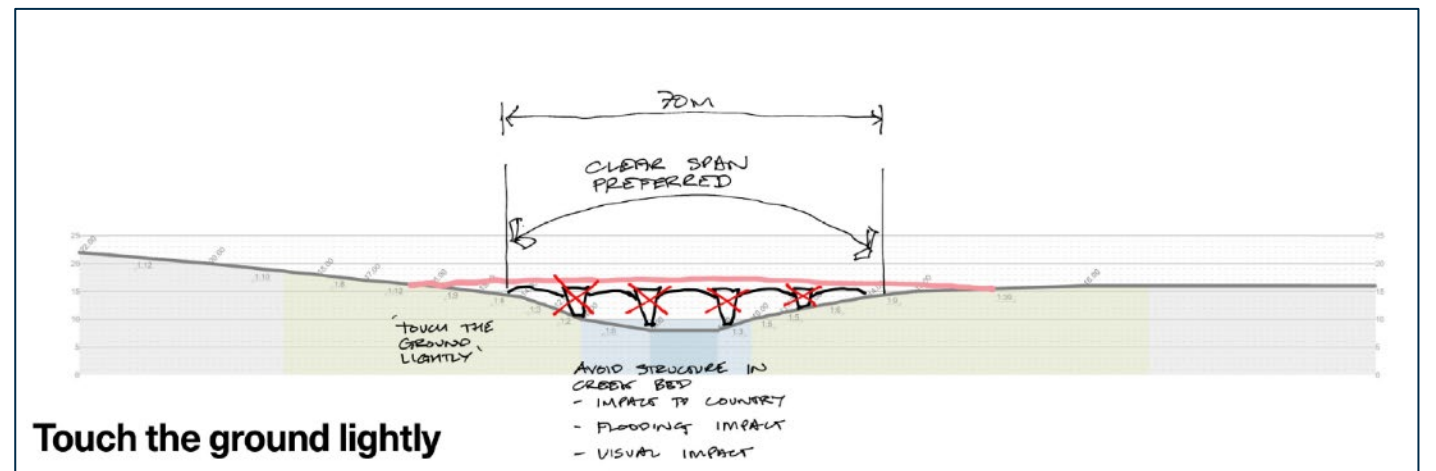


# Bridge Design Principles

## Recessive against the natural context

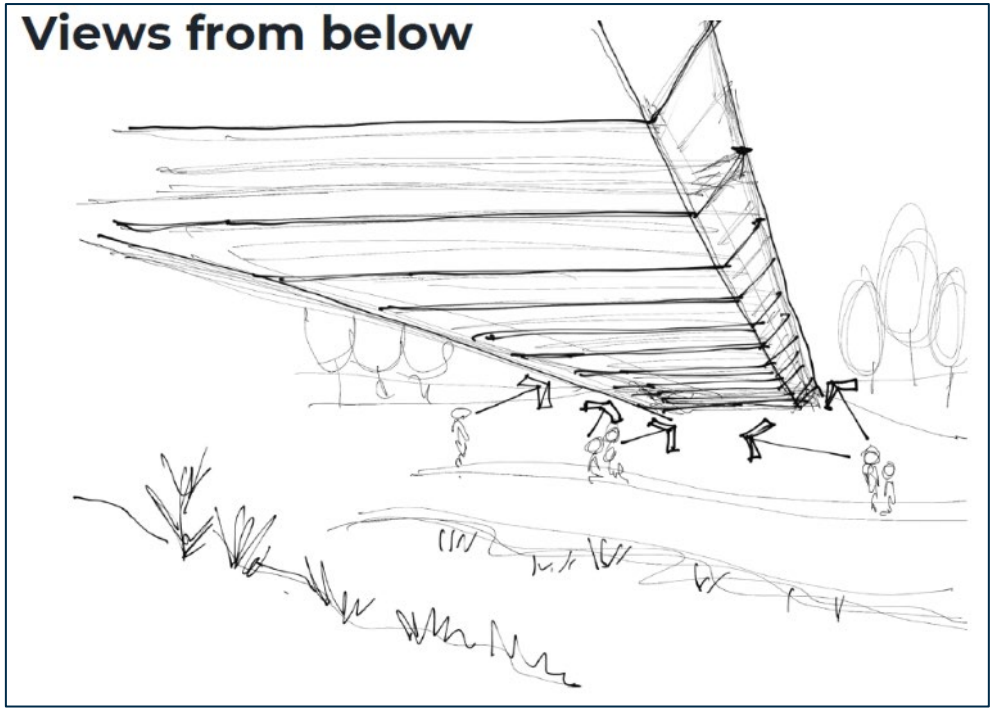


Access for all

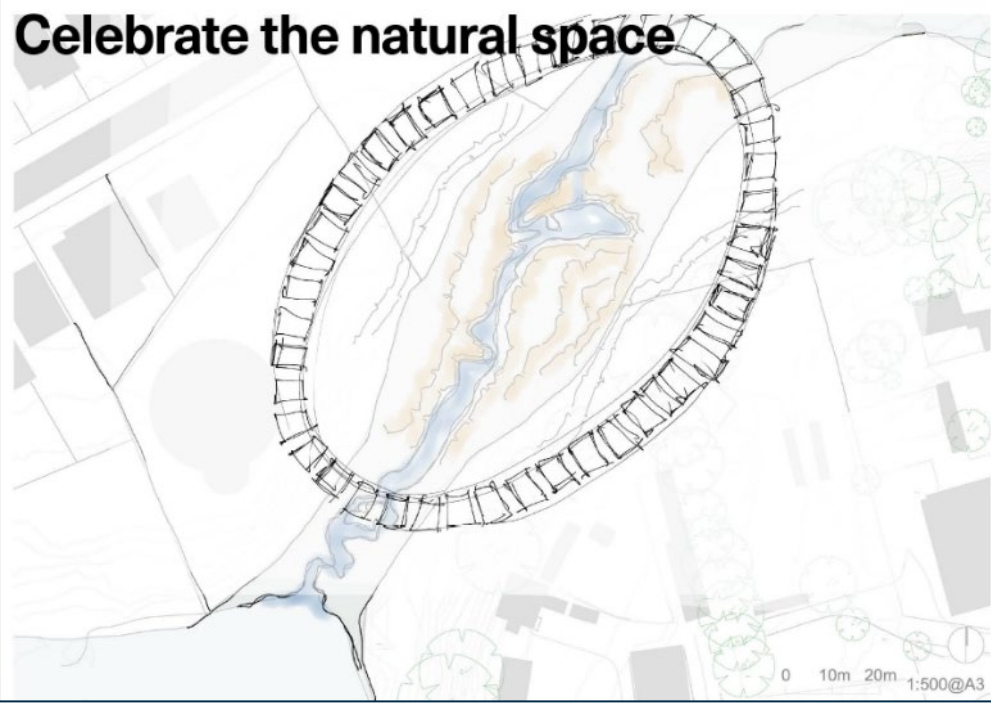


Touch the ground lightly

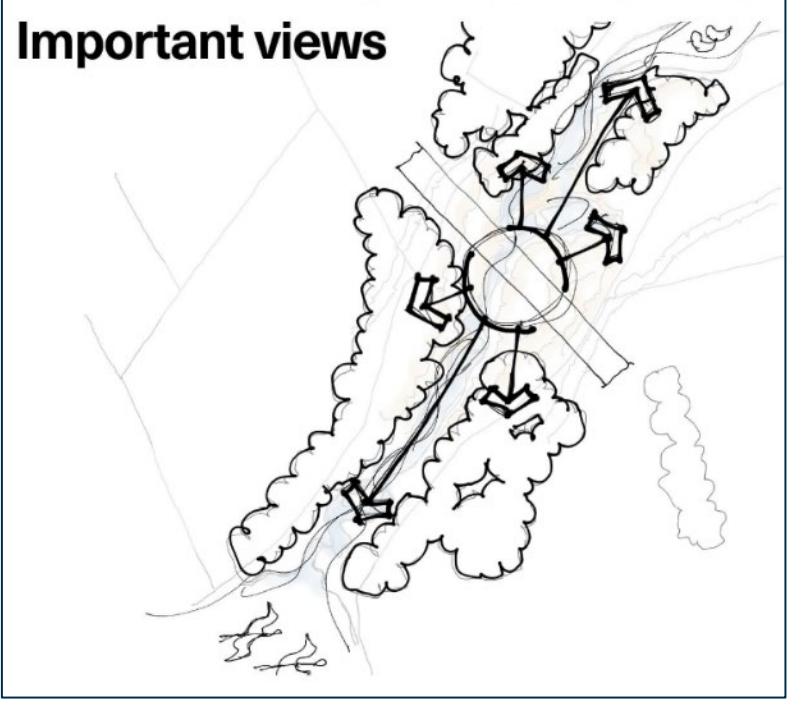
## Views from below



## Celebrate the natural space

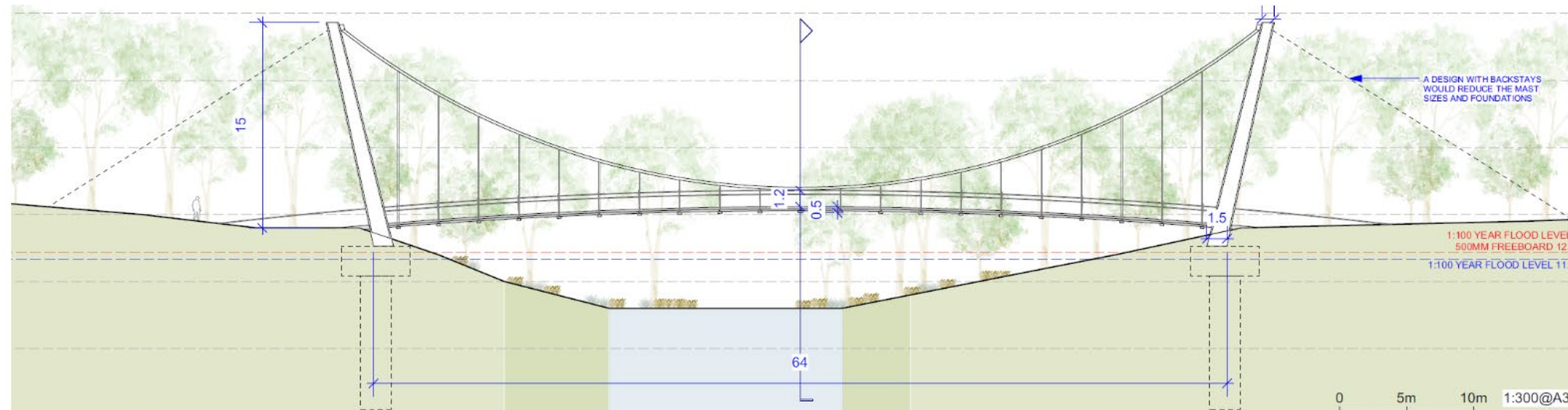


## Important views



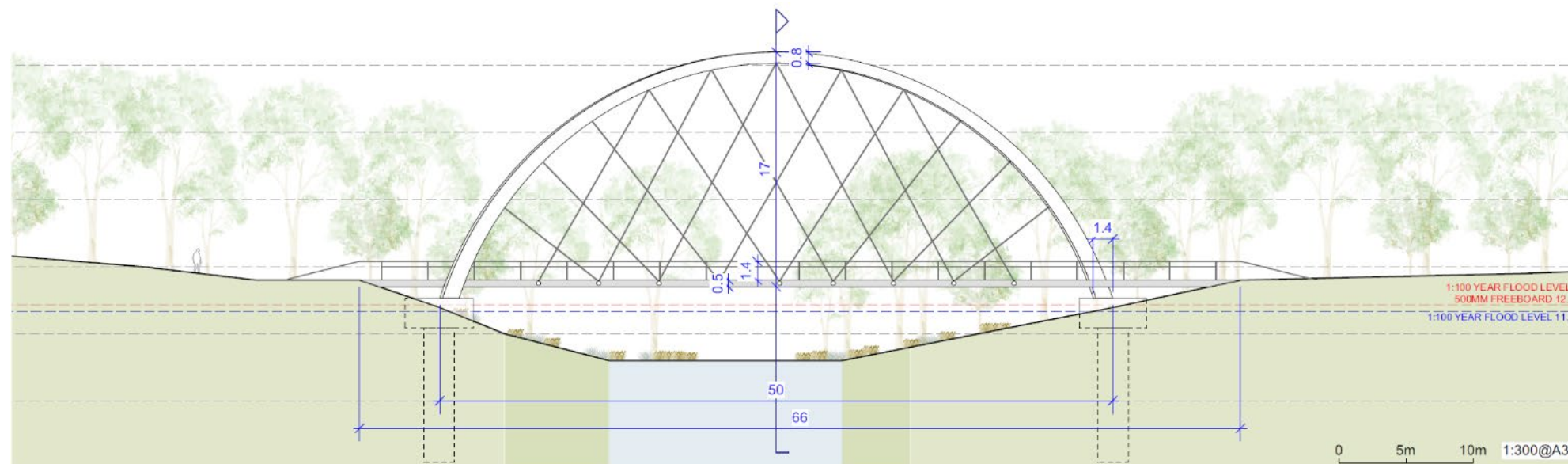


# Preferred Options



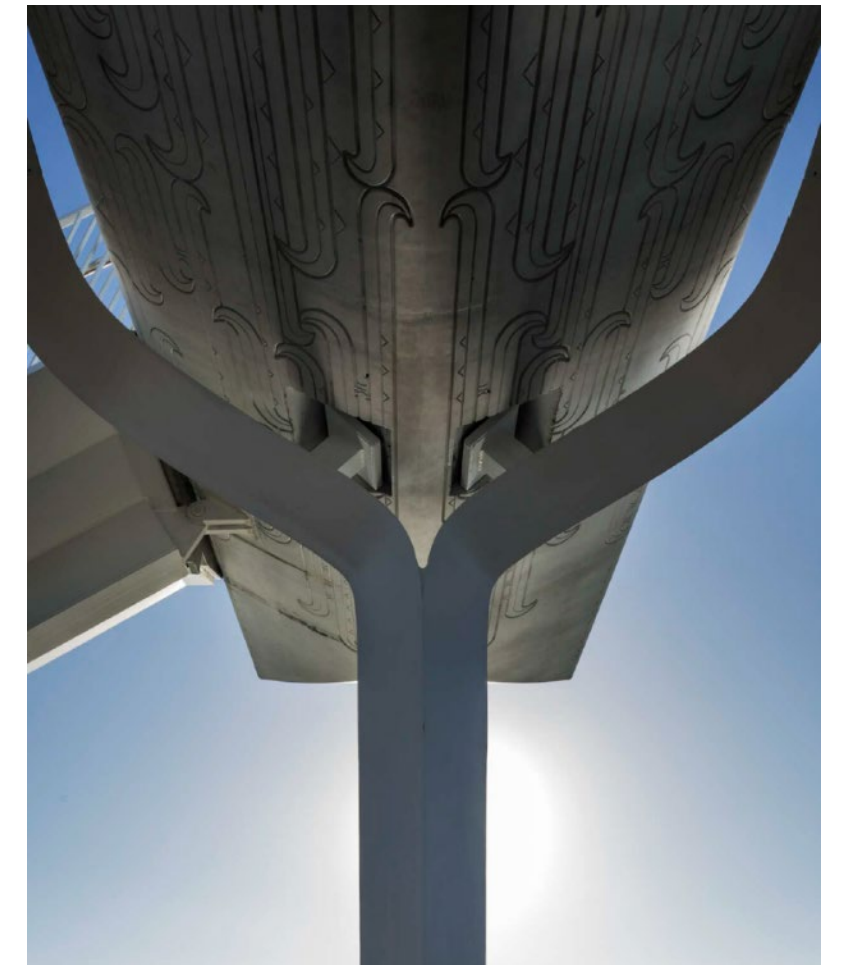


# Preferred Options





# Opportunities for cultural expression





# Burlington Memorial Park

## Park

- Largest open space in the area
- Very well used and loved dog park.
- Sydney Water have possessed for an extended period of time.

## Burlington Street

- Very narrow street
- Parking northern side only

## Balfour Street

- Very narrow street
- Parking both sides
- Very steep (would not meet DDA)

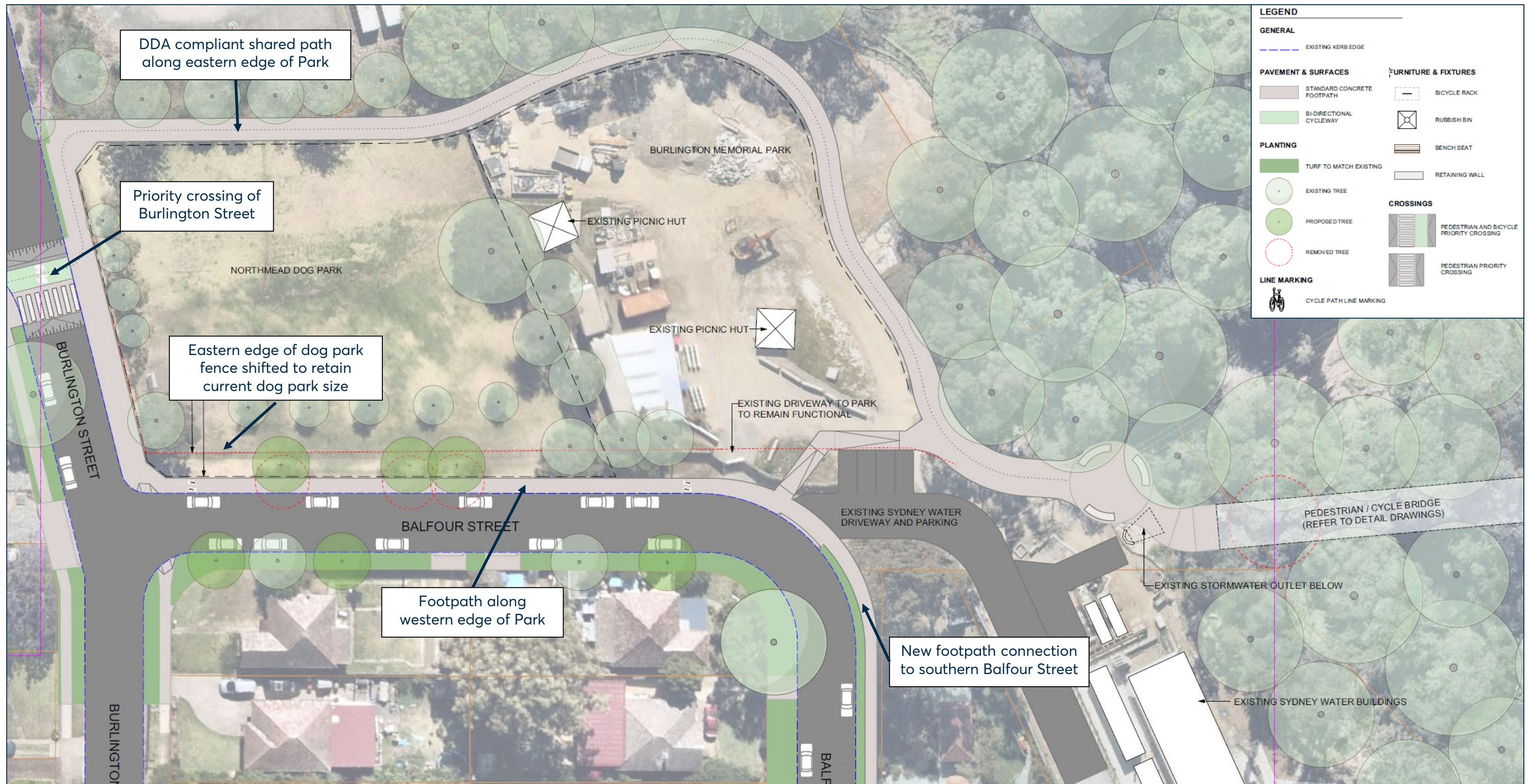
## Proposal

- Formalise eastern edge of park with DDA compliant 3m shared path.
- Footpath along northern edge of Burlington and eastern edge of Balfour to establish loop path.
- Shift northern and western fences of dog park to ensure no net loss of area.
- Additional trees as appropriate.
- Open Space consulted and supportive.





# Burlington Memorial Park



LEGEND	
<b>GENERAL</b>	
	EXISTING KERB EDGE
<b>PAVEMENT &amp; SURFACES</b>	
	STANDARD CONCRETE FOOTPATH
	BI-DIRECTIONAL CYCLEWAY
<b>PLANTING</b>	
	TURF TO MATCH EXISTING
	EXISTING TREE
	PROPOSED TREE
	REMOVED TREE
<b>FURNITURE &amp; FIXTURES</b>	
	BICYCLE RACK
	RUBBISH BIN
	BENCH SEAT
	RETAINING WALL
<b>CROSSINGS</b>	
	PEDESTRIAN AND BICYCLE PRIORITY CROSSING
	PEDESTRIAN PRIORITY CROSSING
<b>LINE MARKING</b>	
	CYCLE PATH LINE MARKING

DDA compliant shared path along eastern edge of Park

Priority crossing of Burlington Street

Eastern edge of dog park fence shifted to retain current dog park size

Footpath along western edge of Park

New footpath connection to southern Balfour Street

BURLINGTON MEMORIAL PARK

NORTHMEAD DOG PARK

EXISTING PICNIC HUT

EXISTING PICNIC HUT

EXISTING DRIVEWAY TO PARK TO REMAIN FUNCTIONAL

EXISTING SYDNEY WATER DRIVEWAY AND PARKING

PEDESTRIAN / CYCLE BRIDGE (REFER TO DETAIL DRAWINGS)

EXISTING STORMWATER OUTLET BELOW

EXISTING SYDNEY WATER BUILDINGS

BURLINGTON STREET

BALFOUR STREET

BURLINGTON

BALF



# Kleins Road - South

## Kleins Road

- TfNSW advised no new leg on east of lights.
- Pedestrian and cyclist upgrade focussed on the west.
- Exit for industrial vehicles and buses is at Cumberland Highway.
- Parking well utilised in the north, dissipates further south.
- Peak use 36/38 timed spaces between 5pm-8pm.
- 50% parking use is 5 hours or greater.
- Shops very well-functioning, but limited public domain opportunities due to power lines.

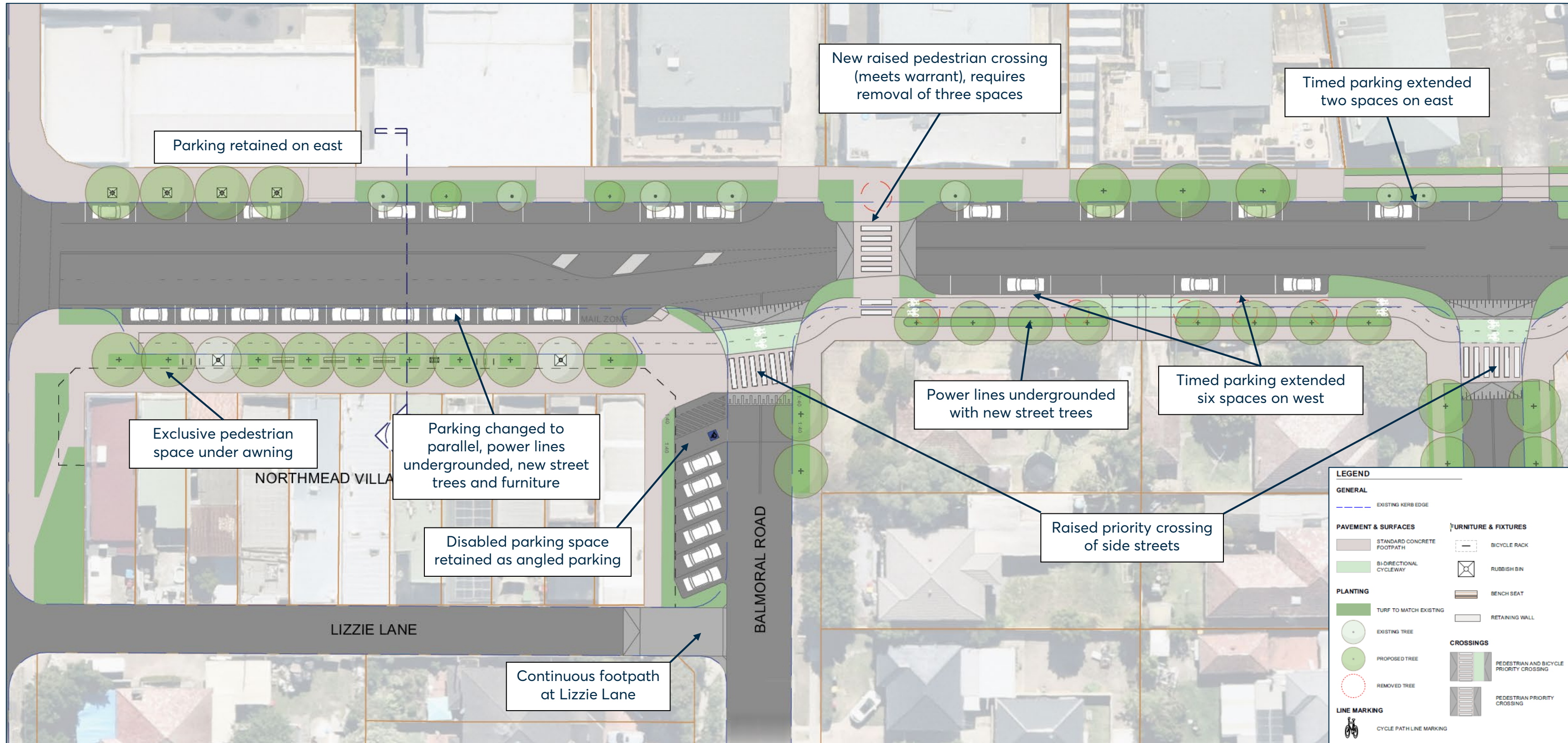
## Proposal

- Complete footpaths both sides.
- Priority crossings where warranted.
- Underground western power lines – new large trees.
- Parking retained both sides for 3 northern blocks.
- Extend timed parking 1 block south on west (additional 8 spaces).
- 6 space reduction at shops boy switching to parallel and introduction of crossing.
- Parking retained on east.
- New outdoor dining / benches / trees / lighting at shop frontage.



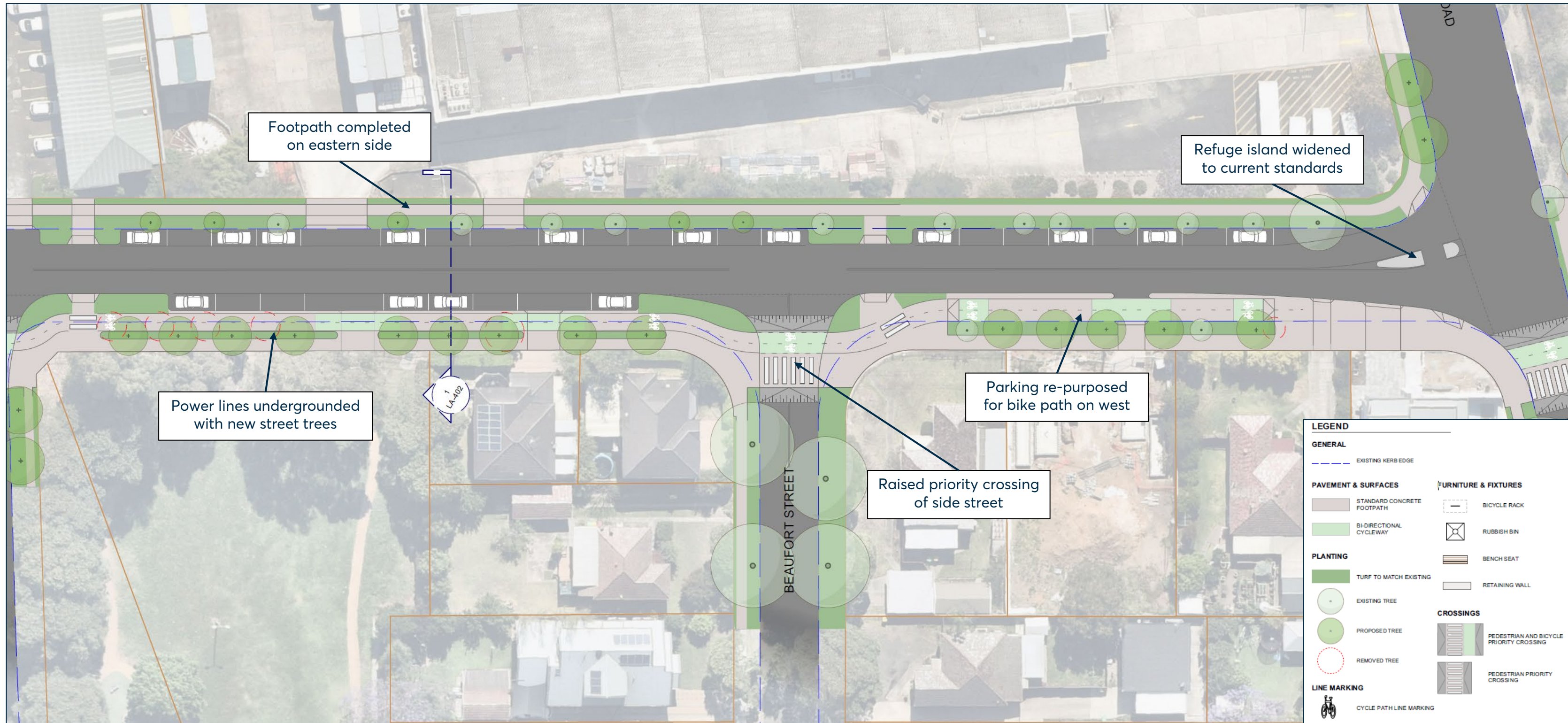


# Kleins Road – Highway to Beamish





# Kleins Road – Beamish to Burlington





# Northmead Public School

13 March 2024 – presentation by Schools Infrastructure on demountable replacement.

Currently targeting improved Active Transport to school – driven by health and congestion considerations

Current active travel to school – approx. 25%, but ¾ is still by car.

32% of current students live within 800m of the school, 77% within 1200m.

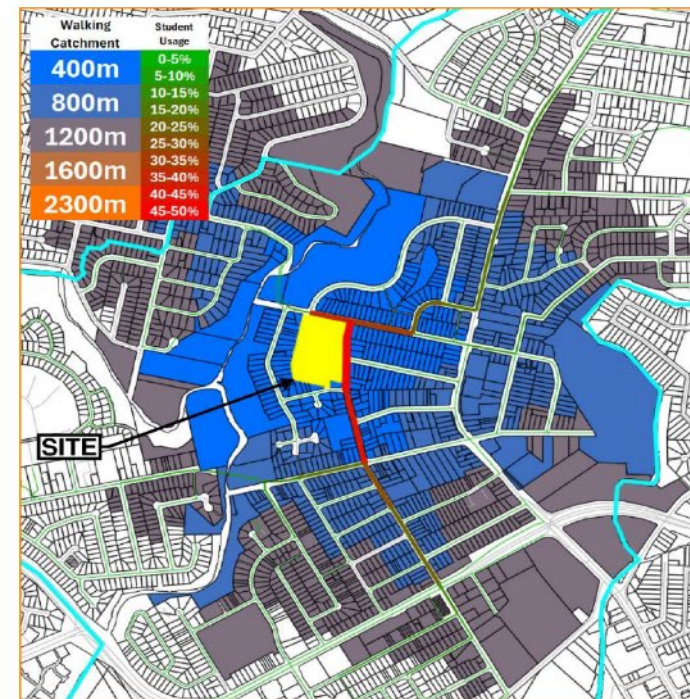
Network analysis conducted that provided Council with mapped data on the most important streets to target capacity and safety improvements.

## Existing Travel Mode Behaviour *(Students)*

Travel Mode	Morning Travel		Afternoon Travel	
	#	%	#	%
Walk	160	23%	167	24%
Cycle / Scooter	7	1%	7	1%
Bus	28	4%	56	8%
Car	502	72%	467	67%
<b>Total</b>	<b>697</b>	<b>100%</b>	<b>697</b>	<b>100%</b>

*Travel mode splits completed via online student Hands Up Survey & Staff Travel Mode Survey February, 2024*

## School Walking Catchment Analysis



Road Name	Potential No. Students Utilising Link
Kleins Road	232 students
Moxhams Road	232 students
Moss Street	47 students
Moir Avenue	140 students
Windsor Road	93 students
Hammers Road	70 students
Cumberland Highway (west)	70 students
Cumberland Highway (east)	23 students



# Northmead Public School

## Path network

- Excellent

## Crossings

- Opportunities to improve, particularly in proximity to the school.

## Increasing walk / ride to school

- Targeting 40%, stretch of 60%.
- Potential reduction in 110 AM / 250 PM parent driving trips at school time.

## Pedestrian Crossing Deficiency Assessment



No.	Pedestrian Crossing Deficiency	Student Reach
1	No pedestrian crossing at Thomas Street connecting to Kleins Road	178 Students
2	No pedestrian crossing at Moss Street along Kleins Road	160 Students
3	No pedestrian crossing at Lombard Street along Kleins Road	155 Students
4	No pedestrian crossing at Moir Avenue along Moxhams Road	105 Students
5	No pedestrian crossing at Moxhams Road & Kleins Road	116 students
6	No pedestrian crossing at Moss Street & Allambie Road	23 students
7	No pedestrian crossing at Kleins Road & Hammers Road	35 students

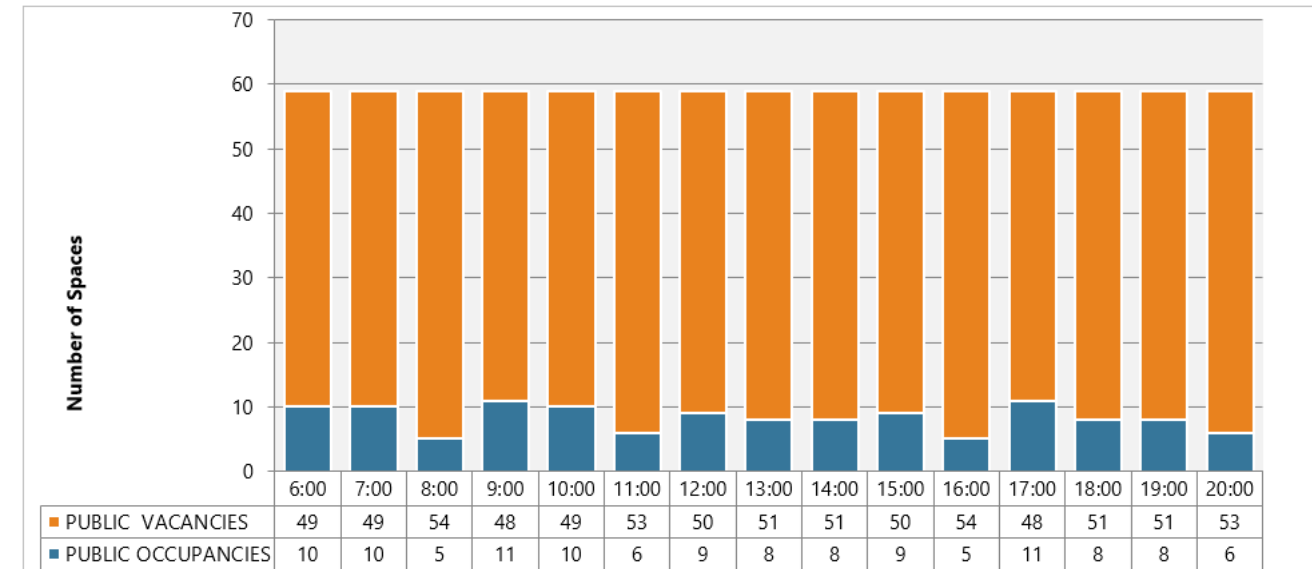
## Target Travel Mode Behaviour (Students)

Travel Mode	Existing		Moderate		Target	
	% Students	No. Students	% Students	No. Students	% Students	No. Students
Walk	23%	160	35%	243	50%	349
Cycle / Scooter	1%	7	5%	35	10%	70
Bus	4%	28	10%	70	15%	105
Car	72%	502	50%	349	25%	174
<b>Total</b>	<b>100%</b>	<b>697</b>	<b>100%</b>	<b>697</b>	<b>100%</b>	<b>697</b>

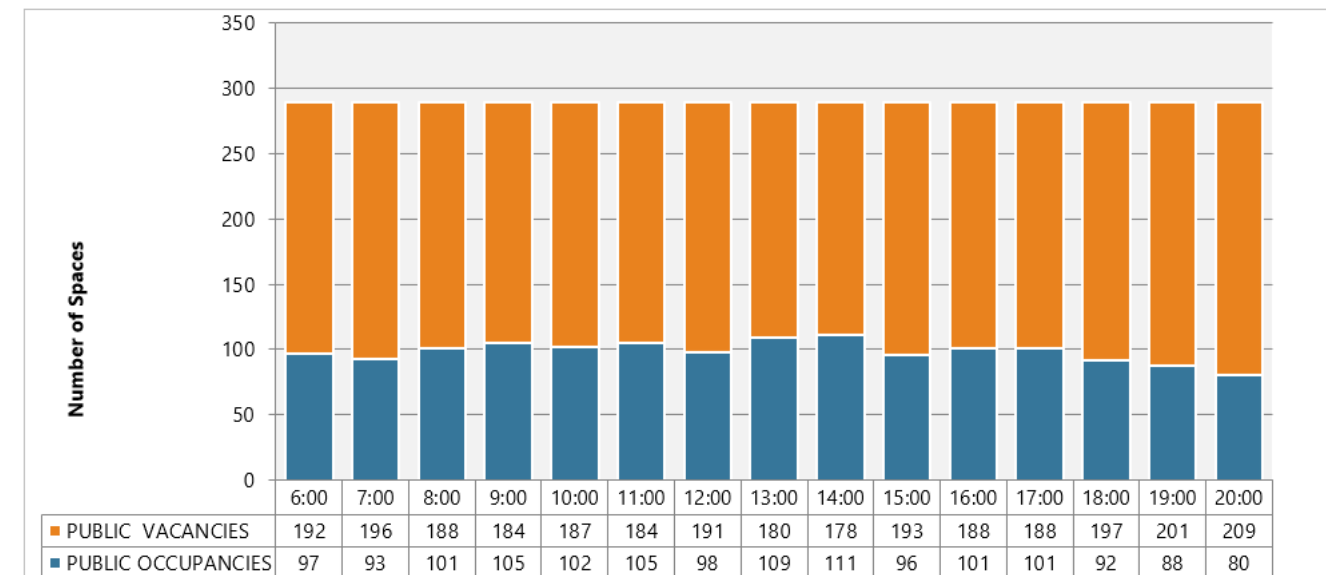


# Kleins Road - Middle

- Large number of vehicles avoiding Windsor Road in the peak hours.
  - Southbound and northbound in AM, northbound in PM.
- Hammers Road roundabout
  - Full rebuild with priority crossings on all sides.
  - Slows speeds but still retains all movements.
- Bike path proposed on west – because of Cumberland Highway crossing.
- Priority crossings of all side streets on west.
- Priority crossing warranted over Kleins Road north of Northmead Ave
- 59 available parking spaces.
- Peak use of 11 spaces @ 9am.
- Proposing to re-purpose 31 spaces on west.
- 289 available spaces on block either side, peak use 111 at 2pm.



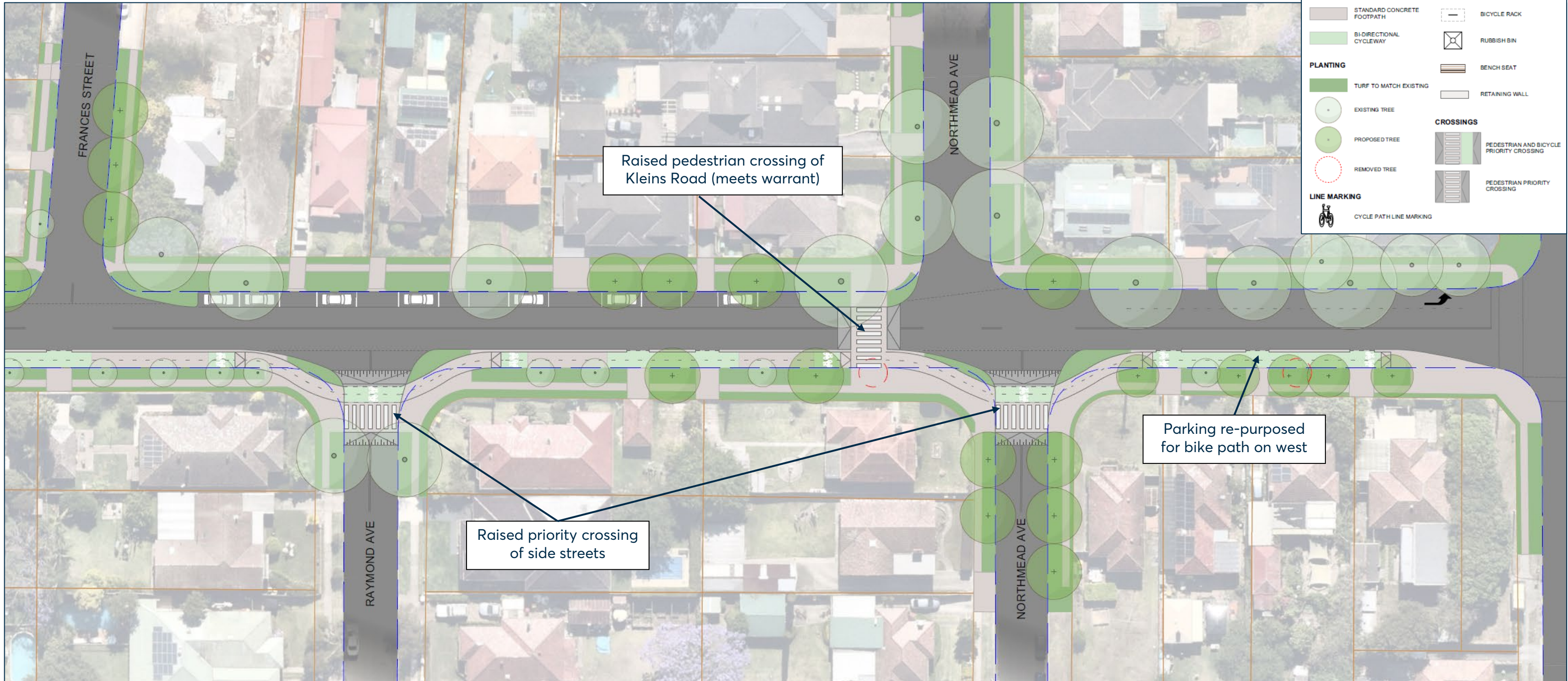
Kleins Road (Hammers to Cumberland)



Side Streets (Hammers to Cumberland)



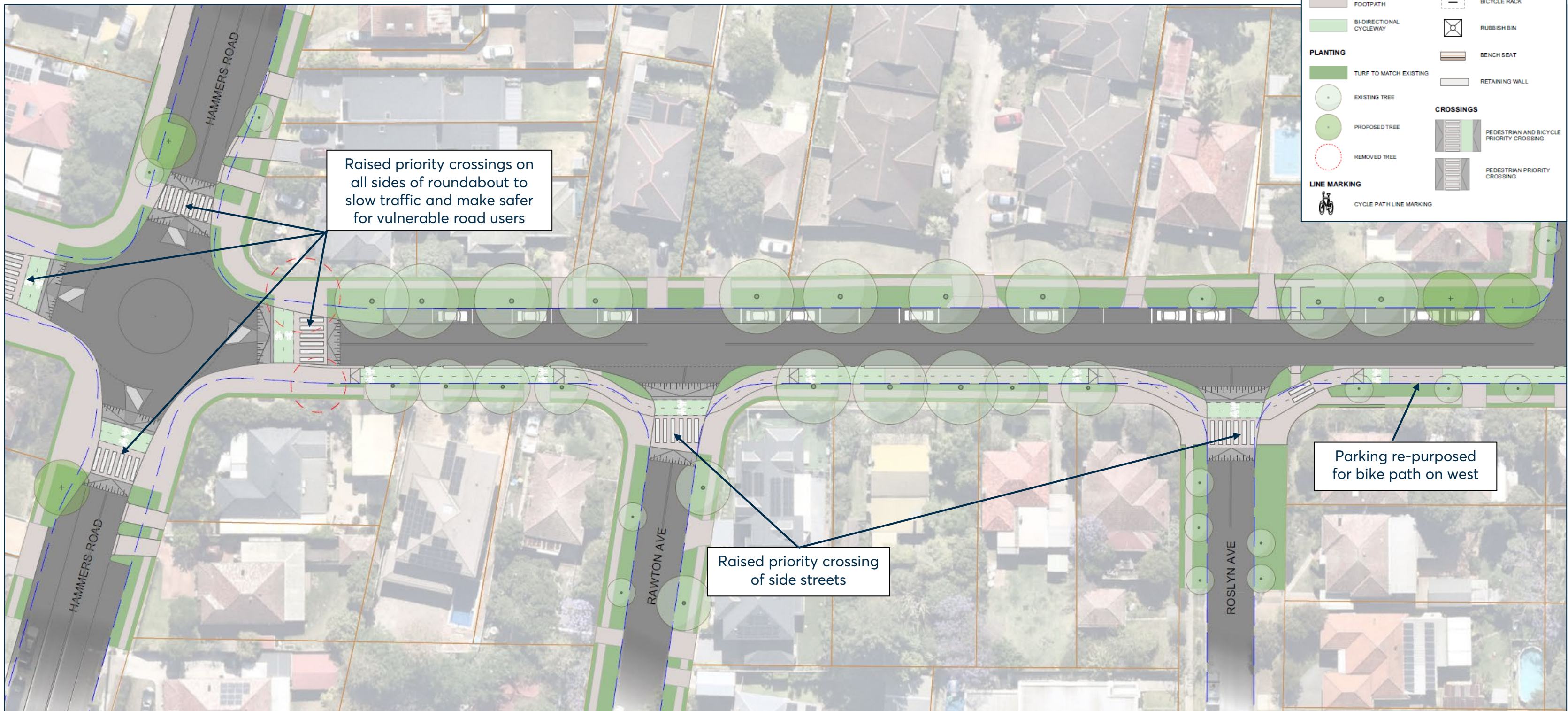
# Kleins Road – Middle (Highway)





# Kleins Road – Middle (Hammers)

LEGEND	
<b>GENERAL</b>	
	EXISTING KERB EDGE
<b>PAVEMENT &amp; SURFACES</b>	
	STANDARD CONCRETE FOOTPATH
	BI-DIRECTIONAL CYCLEWAY
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	TURF TO MATCH EXISTING
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<b>CROSSINGS</b>	
	PEDESTRIAN AND BICYCLE PRIORITY CROSSING
	PEDESTRIAN PRIORITY CROSSING



Raised priority crossings on all sides of roundabout to slow traffic and make safer for vulnerable road users

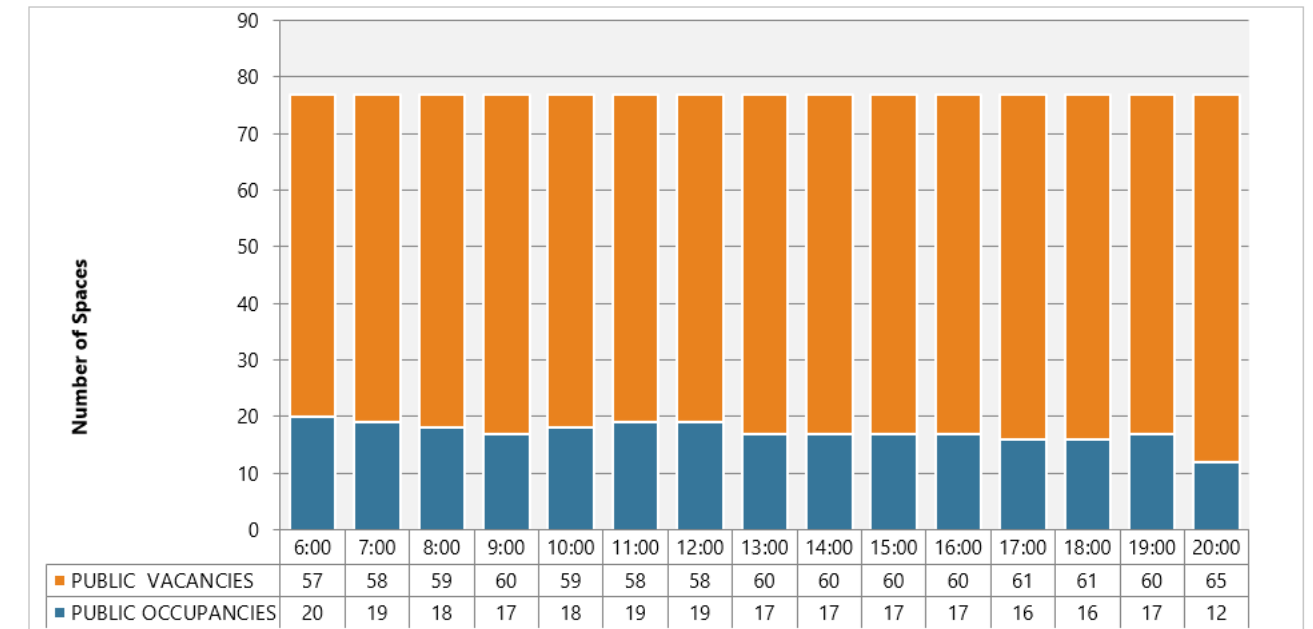
Parking re-purposed for bike path on west

Raised priority crossing of side streets

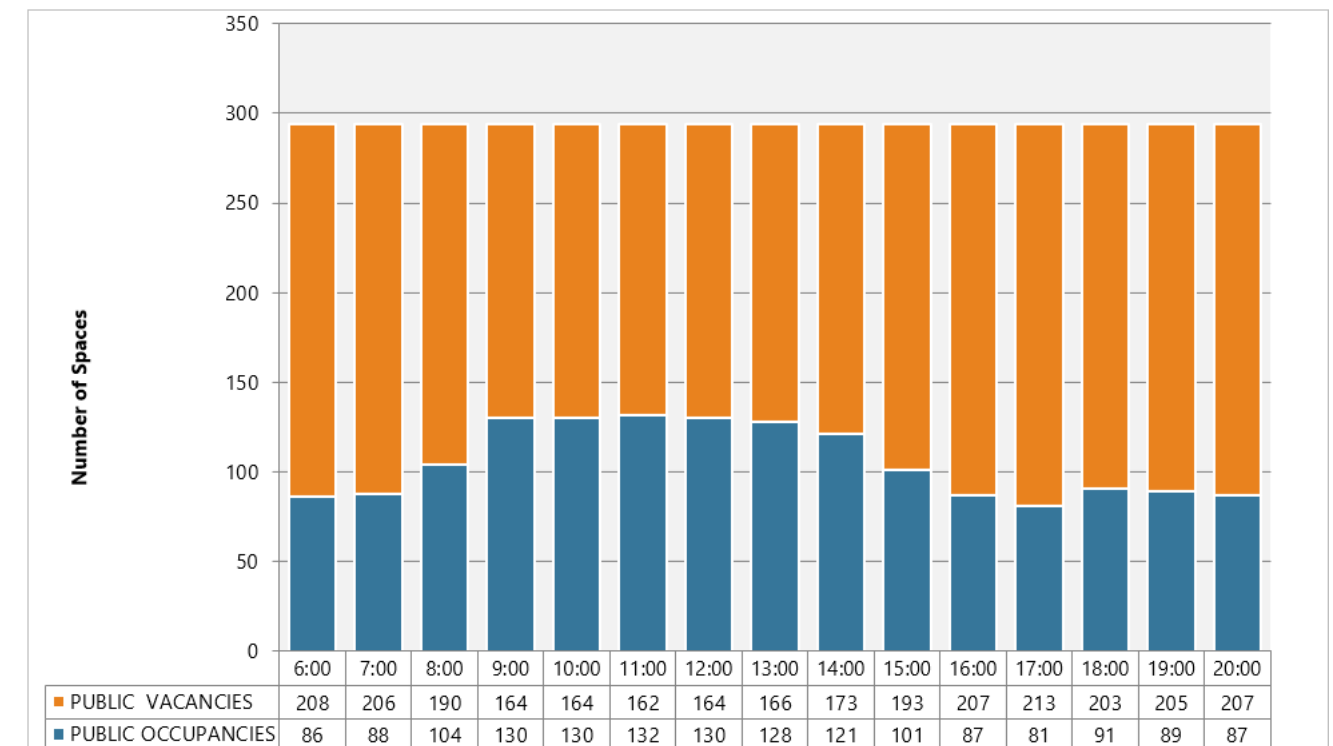


# Kleins Road - North

- Bike path on east to avoid school frontage, crosses back to western side just before Moxhams (to use existing crossings).
- Bus zones are for school special only.
- Crossings on all side streets (Moss is pedestrian only).
- 77 available spaces
- Peak of 20 @ 6am
- Proposing to re-purpose 33 spaces on east.
- Side streets have 294 spaces, peak use of 130 @ 9-12am.



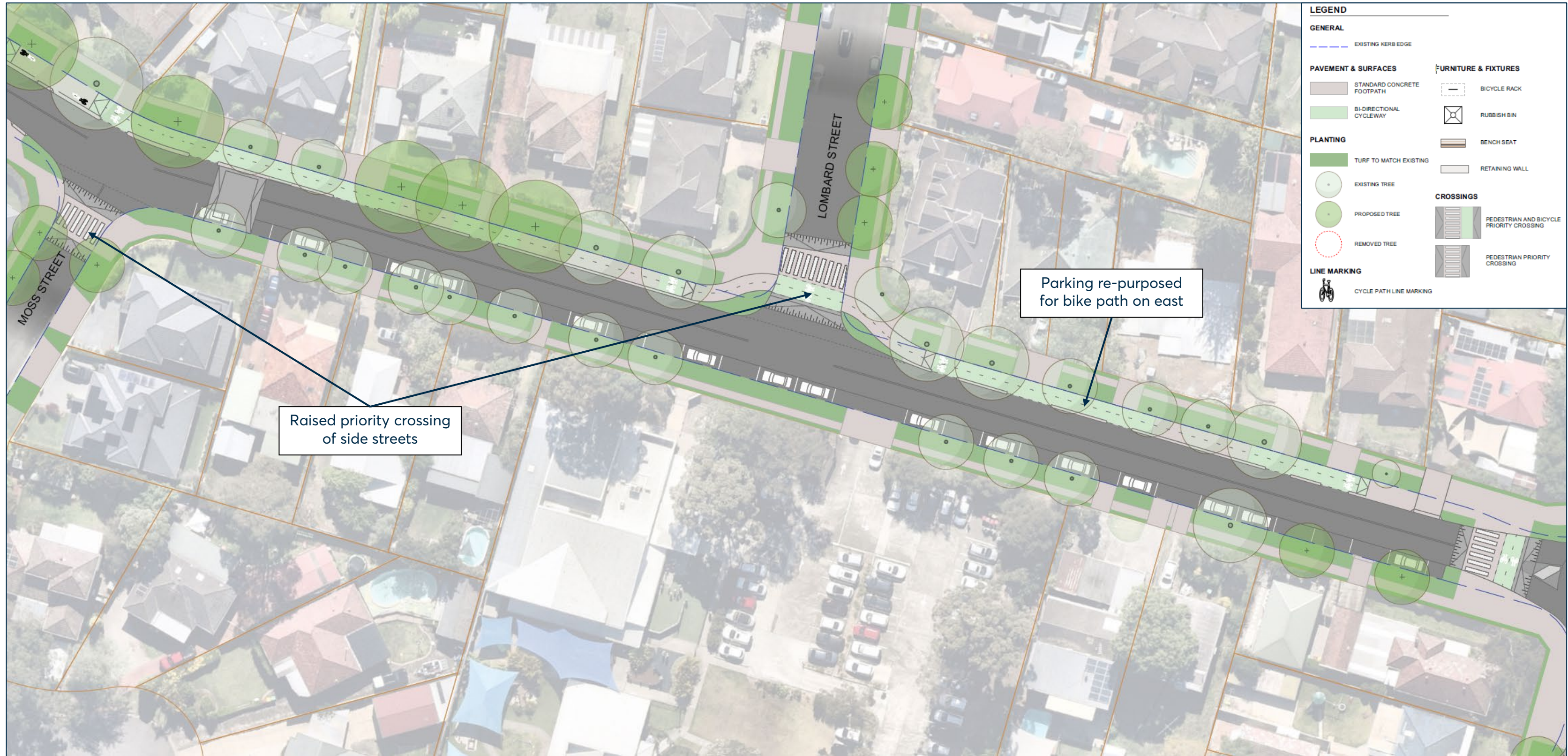
Kleins Road (Moxhams to Hammers)



Side Streets (Moxhams to Hammers)

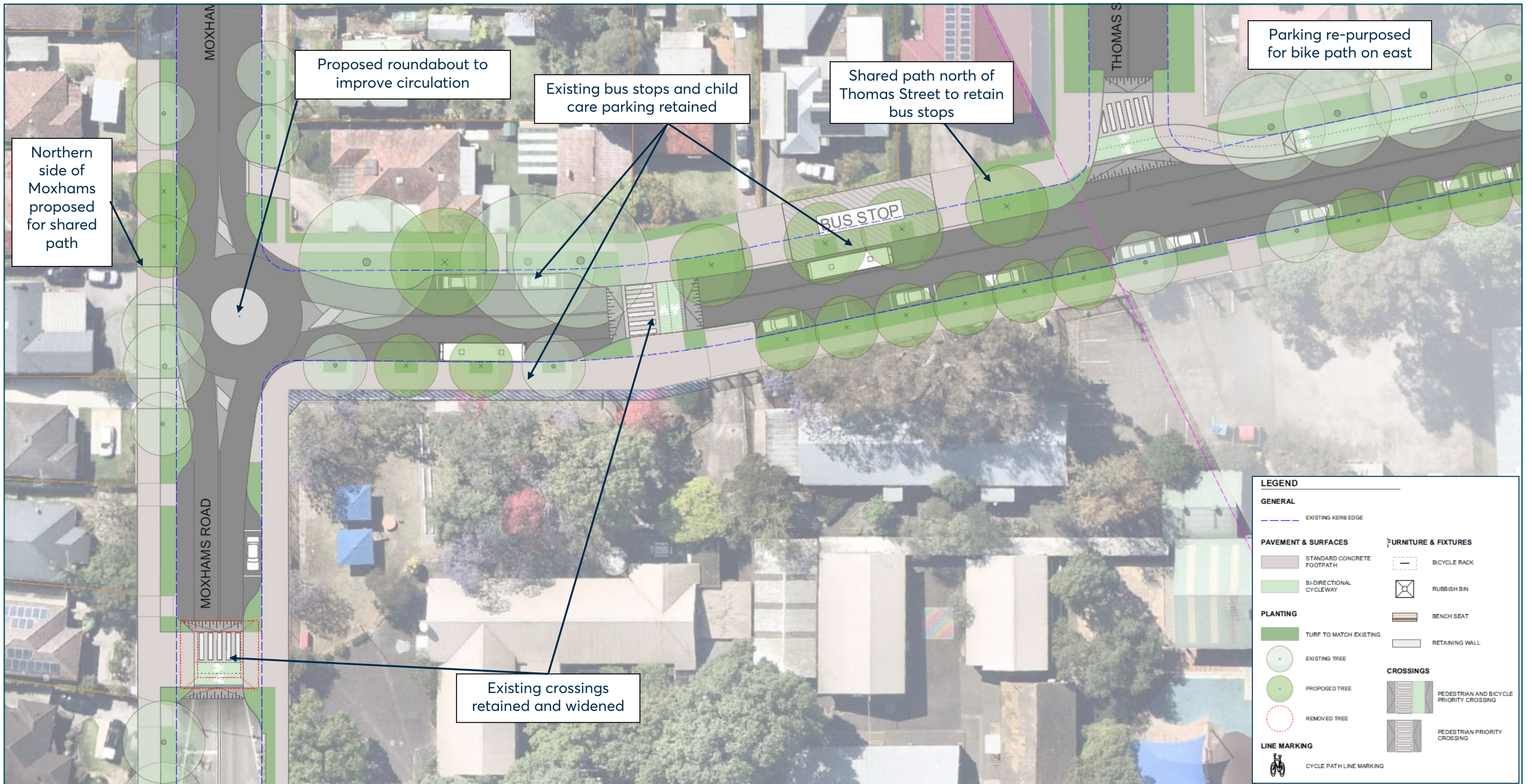


# Kleins Road – North (Hammers)





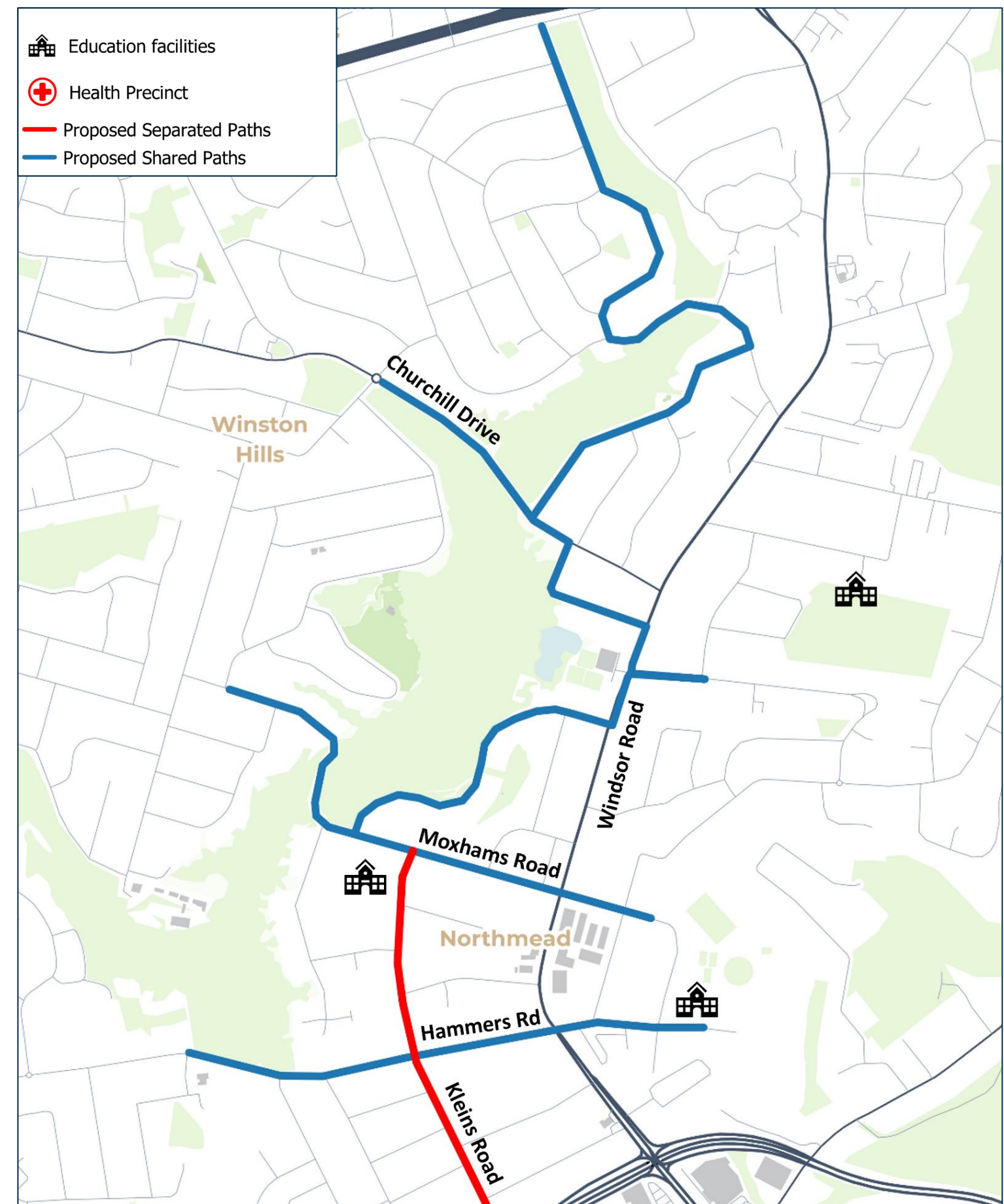
# Kleins Road – North (Moxhams)





# Shared Path Network

- Important supporting network to provide safe access to the main corridor.
- Lower volumes, therefore shared path is adequate.
- Proposed east-west streets based on access across creek, or traffic lights across Windsor Road.
- Proposed northern alignment selected based on minimum impact (majority forming an edge to a street on non-residential side).





# Whitehaven / Moxhams

## Whitehaven

- Majority is unformed edge of street, adequate width for a shared path.
- Natural Resources in principle support as it provides a boundary between the 'natural' and maintained.

## Moxhams

- West – southern side to minimise ecological impacts at creek
- East – northern side as less crossfall issues and no power poles.
- Will support any future advocacy for northern pedestrian leg at Windsor Road.
- Northern side of Fletcher is better connection to Northmead CAPA





# Ulandi / Churchill

## Churchill

- Provides new access on southern side (north has footpath) and improved access to park.

## Windsor / Ulandi / Anderson

- Southern side of Ulandi to minimise street crossings to Churchill.
- Widen cut-through.
- Western side of Windsor Road (no choice as bushland precludes access west).
- Short section of shared path on Anderson Street to closest side street to provide access for those east of Windsor Road, (may require short section of retaining wall).





# Yarrabee / Model Farms / Asquith

## Yarrabee

- Majority is unformed edge of street, adequate width for a shared path.
- Natural Resources in principle support as it formalises a boundary between the 'natural' and maintained.

## Model Farms

- Northern side preferred as bridge has very limited width at south – may impact bushland. Will require further detail design to confirm if travel lanes can be narrowed and widen existing footpath.

## Asquith

- Eastern side as least impact to driveways and forms edge to natural.





# Next Steps

- Report back to Council for decision to proceed, then subsequently Parramatta Traffic Committee for technical review.
- Apply for funding from TfNSW for detail design of the balance in stages.