Scrub Road Extension Project History

- Due to increase in land development in Carindale and Mansfield existing transport network experiencing reduce levels of service.
- Scrub Road extension included in Carindale/Carina Local Plan in 1997.
- As development occurs sometimes deficiencies in the road network may occur .
- Council may be responsible for completion of deficiencies.
- E.g. Scrub Road, Greendale Way and others.

Project History Cont.

- Need to complete missing link and complete north south road network.
- Developer corridor acquired through Development Application.
- Remaining land under private ownership - COC.

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Project Needs & Benefits

- Complete North South missing link from Carindale to Mansfield.
- Avoid travel on congested Arterial Routes for local trips.
- Provide improved green transport (cycle and public transport) networks.
- Improve safety for motorists, cyclists, and pedestrians.
- Safe and efficient road network

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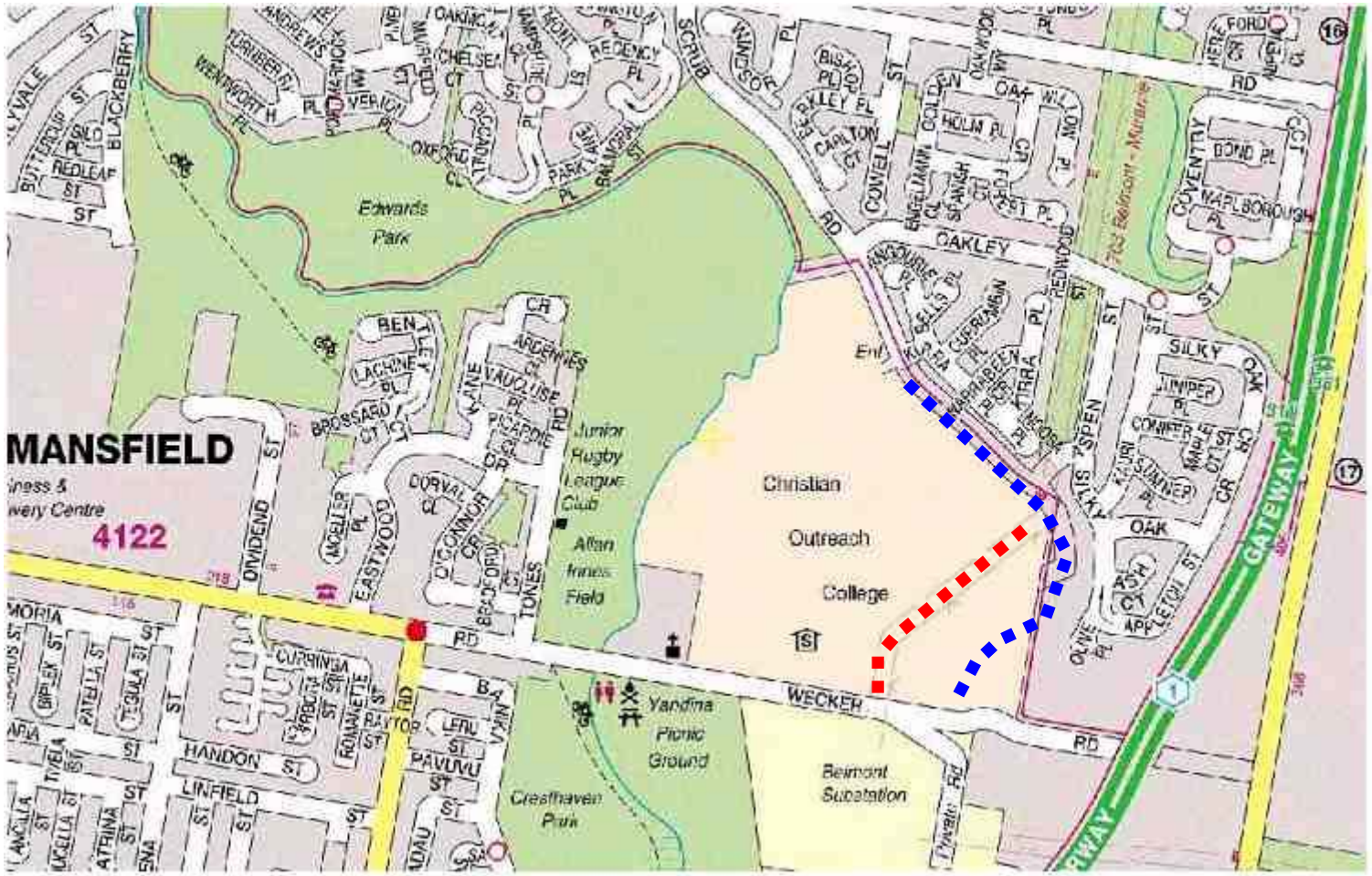
Feasible Options for missing link



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Feasible Options for missing link

- Developer corridor
- Part Developer corridor and Powerlink easement corridor

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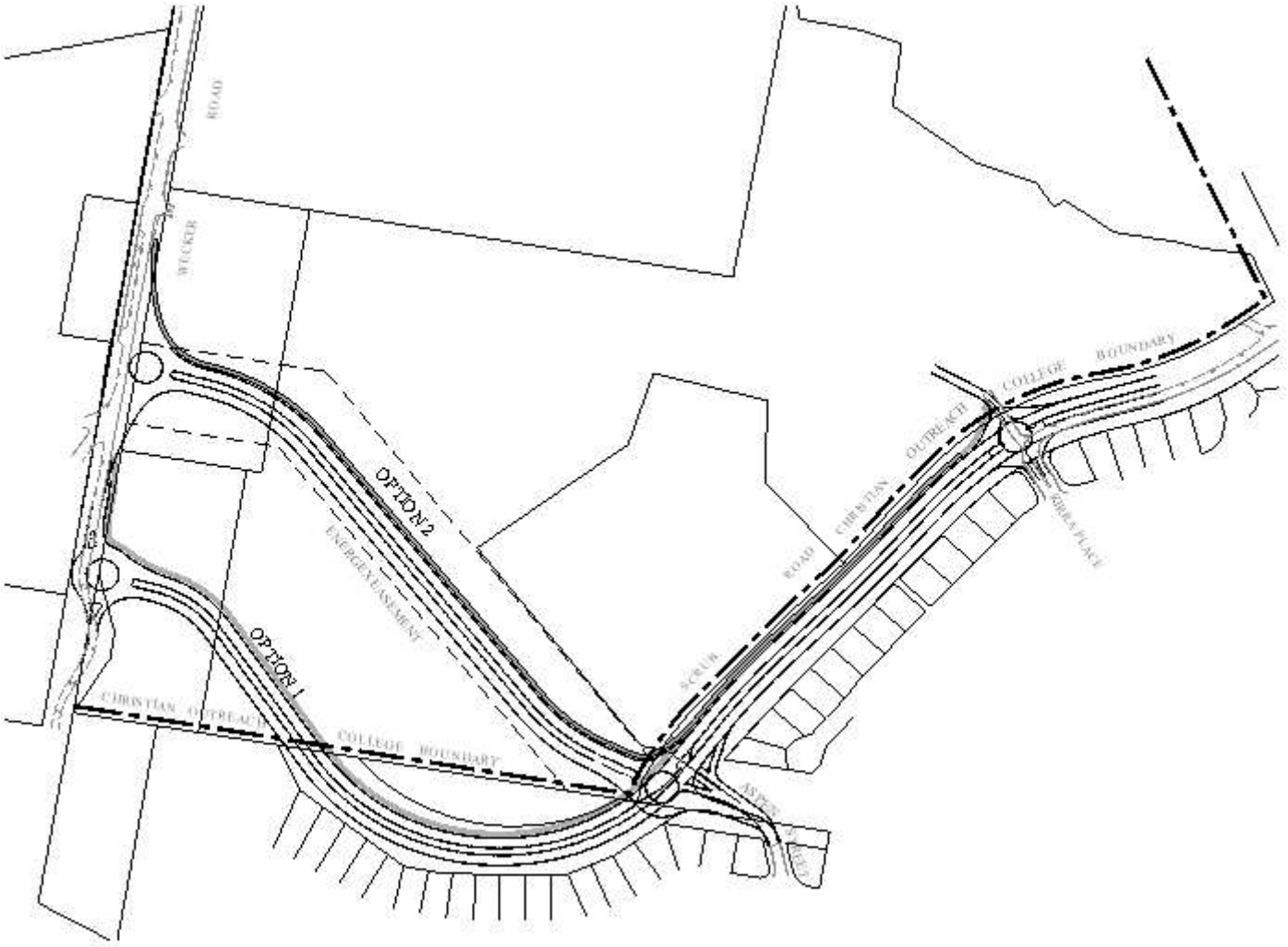
Options Considered for missing link



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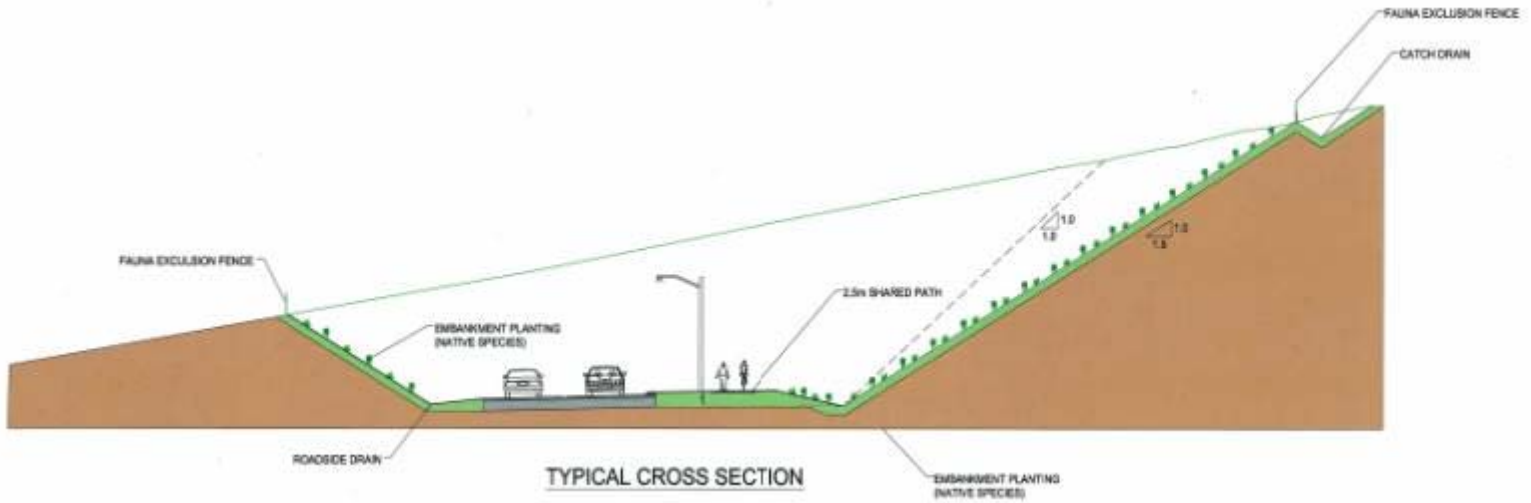
Comparison of options

Option 1 (Developer corridor)

- Continues along established developer corridor.
- Final portion to be resumed from COC.
- Steep terrain - major earthworks, retaining required to 25m.
- Wecker Road Culverts require significant realignment at inlet.
- Loss of well developed Fauna habitat - remeadiation works required.

Option 1- potential retaining wall/slope stabilisation



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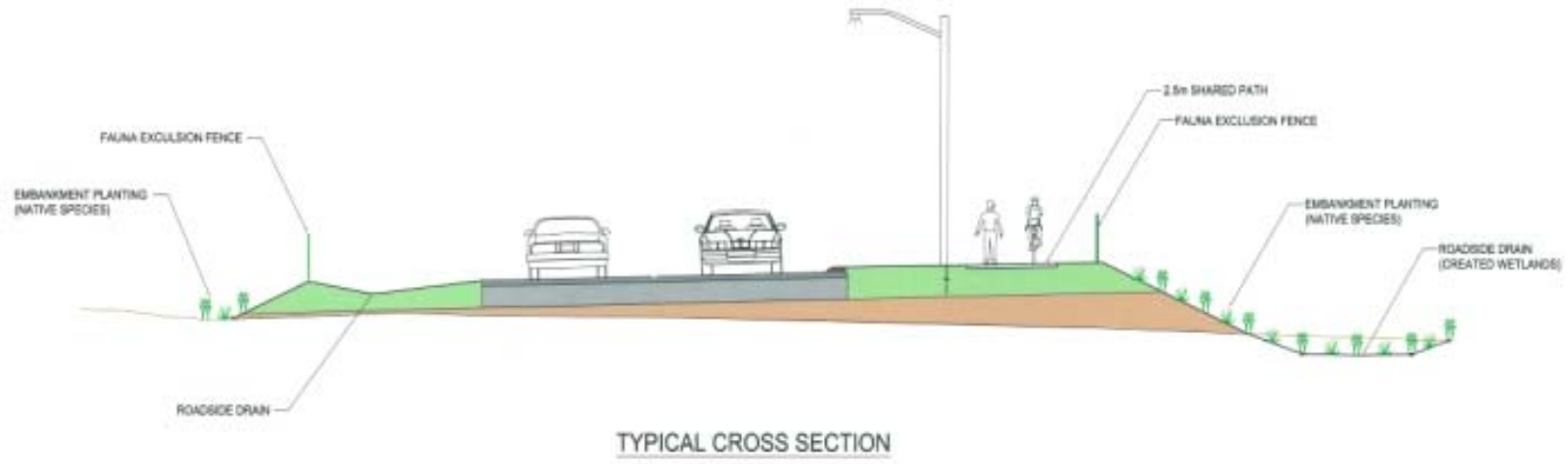
Comparison of options

Option 2 (Preferred Option)

- Continues partly along established developer corridor.
- Final (easement) portion to be resumed from COC.
- Additional roundabout required at aspen Street.
- Bridge required to cross wetland at Wecker Road.
- Least Environmental impact – immature habitat.

Option 2 (preferred option)



TYPICAL CROSS SECTION

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Option Selection

- Both Options cost neutral
- Option 1 – Environmental scar on landscape due to steep cuttings/embankment.
- Option 2 – Least Environmental impact on Flora and Fauna.
- Option 2 – Preferred Option – approved by Civic cabinet, subject to further consultation.

Current Situation
Three-Point Plan

- $1 Million on School Safety upgrades to
  - * Mansfield State High School
  - * Mansfield State School
  - * Christian Outreach Centre
- Greendale Way Connection
- Further consultation on Scrub Road Extension

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Traffic Engineering

•Provide an overview of the traffic engineering analysis methodology
•Outcomes of the analysis

Data Analysed

- Traffic Volumes
- Pedestrian Volumes
- Cyclist Volumes
- Future Network Proposals

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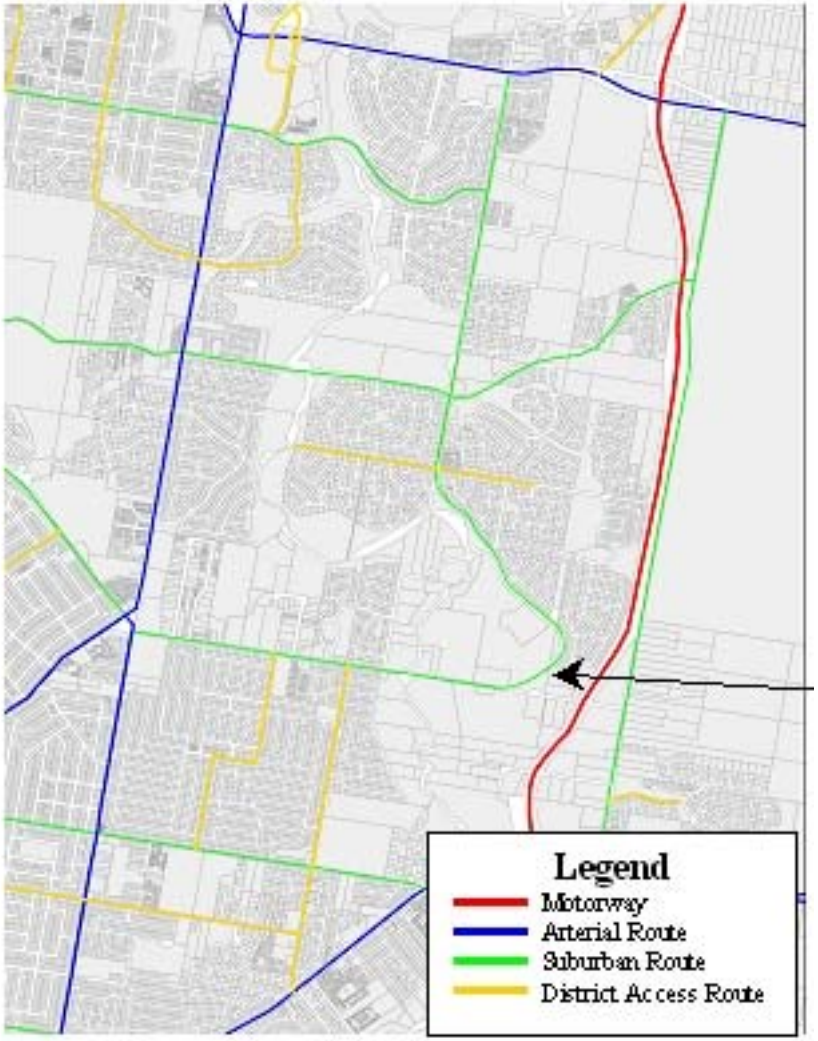
Proposed Road Hierarchy



Typical Road Classification Volumes

Motorway: 100000 vpd

Arterial Route: >35000 vpd

Suburban Route: 15000 - 35000 vpd

District Access: 3000 - 15000 vpd

Proposed Scrub Rd Extension

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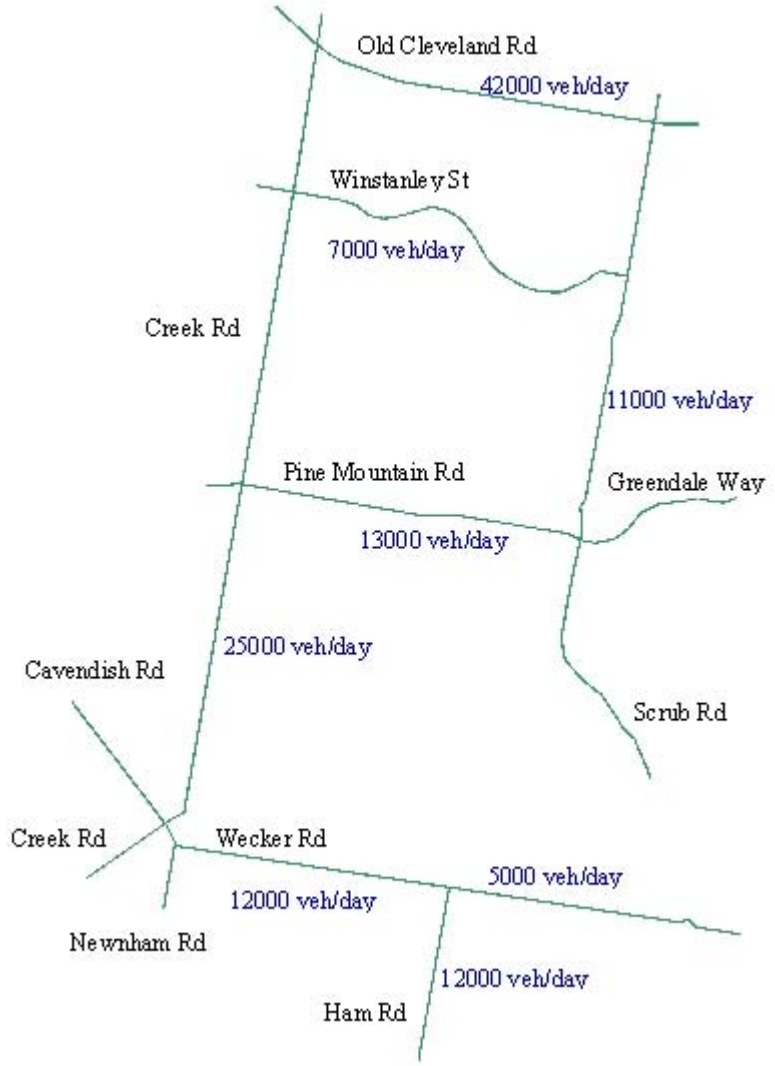
Current Traffic Volumes

- Old Cleveland Rd - 42,000 vpd
- Creek Rd - 25,000 vpd
- Pine Mountain Rd - 13,000 vpd
- Wecker Rd - 12,000 vpd
- Ham Rd - 12,000 vpd
- Scrub Rd - 11,000 vpd



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Process

Network Analysis

- Strategic Model (EMME/2) used to determine forecast traffic demands (BSTM - Brisbane Strategic Transport Model)
- Future year assumptions
  - Gateway Duplication
  - Greendale Way Connection

Intersection Assessment

- Detailed intersection assessment (SIDRA) for the AM and PM peak hours
  - Creek Rd / Wecker Rd Intersection
  - Newnham Rd / Wecker Rd Intersection
  - Ham Rd / Wecker Rd Intersection
  - Ham Rd / Broadwater Rd Intersection

Network Analysis

- Day of opening - daily traffic volume changes

Road	2006 Existing	Scrub Rd Extension Day of Opening*	Percentage Change
Old Cleveland Rd	42000 veh/day	43000 vpd	2%
Creek Rd	25000 veh/day	24000 vpd	-4%
Pine Mountain Rd	13000 veh/day	11000 vpd	-15%
Wecker Rd	12000 veh/day	12000 vpd	0%
Ham Rd	12000 veh/day	13000 vpd	8%
Scrub Rd (north of Greendale Way)	11000 veh/day	9000 vpd	-18%
Scrub Rd (proposed link)	-	7000 vpd	

* Note: Demand is based on a 2008 year of opening

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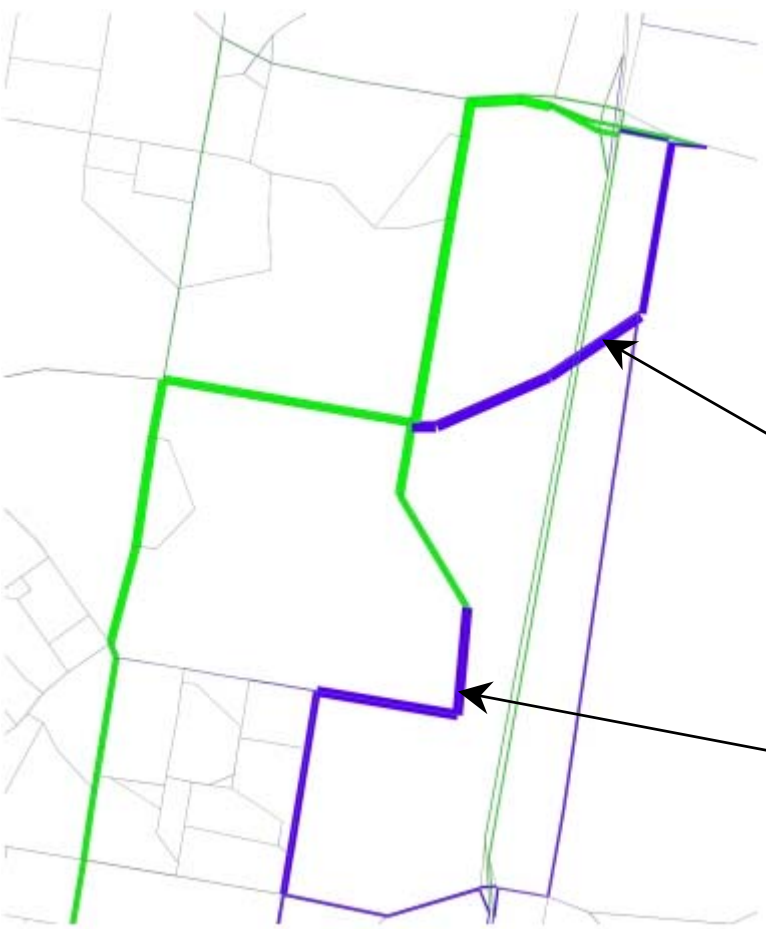
Network Analysis
Traffic Patterns



New Greendale Way Extension

Proposed Scrub Rd Extension

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Intersection Analysis
Ham Rd / Wecker Rd

- Signal controlled intersection
- All movements are controlled (no free turns) to control demand on Ham Rd
- No change to road layout
- Some minor signal phase changes
- Existing performance of intersection is expected to be maintained

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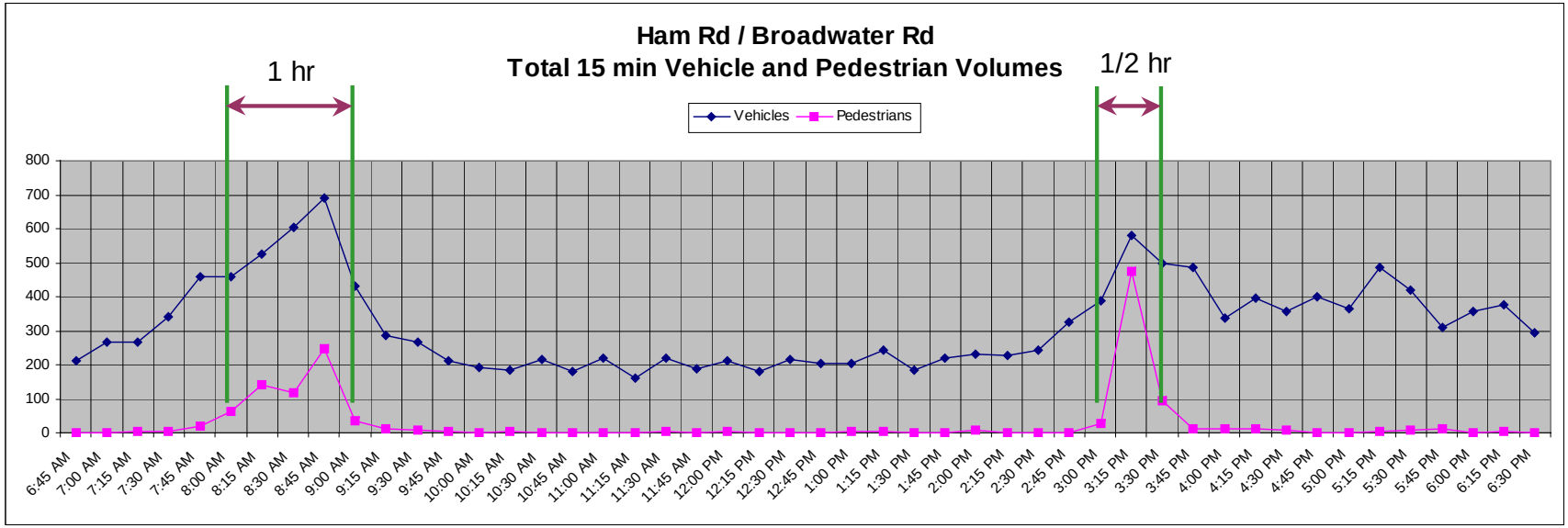
Intersection Analysis
Ham Rd / Broadwater Rd



- Pedestrian and vehicle movement interaction during the school peak hours
- Relatively low pedestrian demand outside of the school peaks
- Propose to remove the left-turn slip lane from Broadwater Rd into Ham Rd to improve pedestrian safety

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Intersection Analysis
Newnham Rd / Wecker Rd
Creek Rd / Cavendish Rd / Newnham Rd

- Proposed Scrub Rd is expected to reduce the traffic demand on the Newnham Rd corridor.

- This is expected to extend the life of of the Newnham Rd / Wecker Rd intersection by approximately 5 years.

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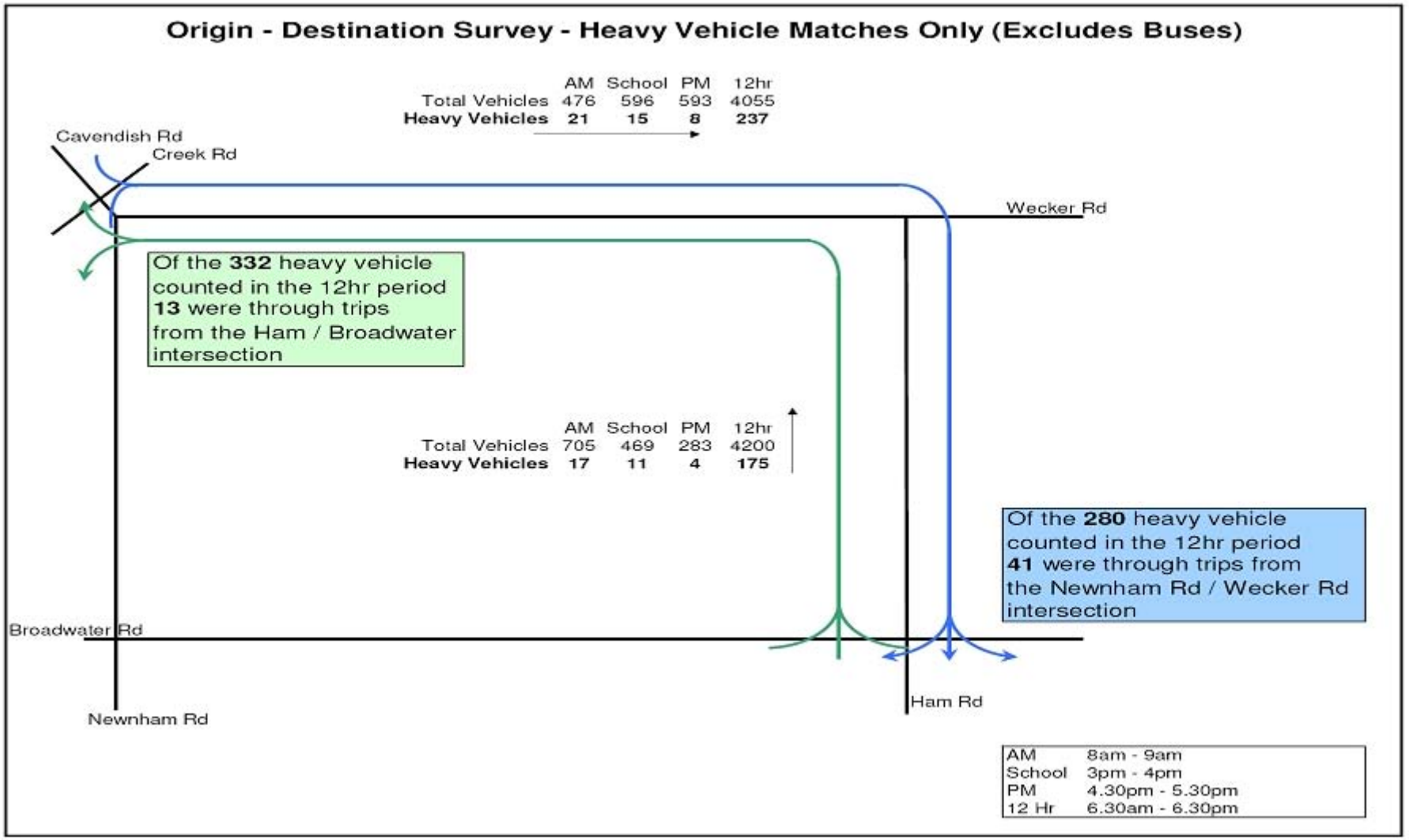
Freight Movement



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Engineering Design
Road Design Criteria

- One lane each way
- Design speed 60 km/hr – Posted
- 50 year flood immunity on Scrub Road
- 100 year flood immunity under bridge

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Proposed Alignment

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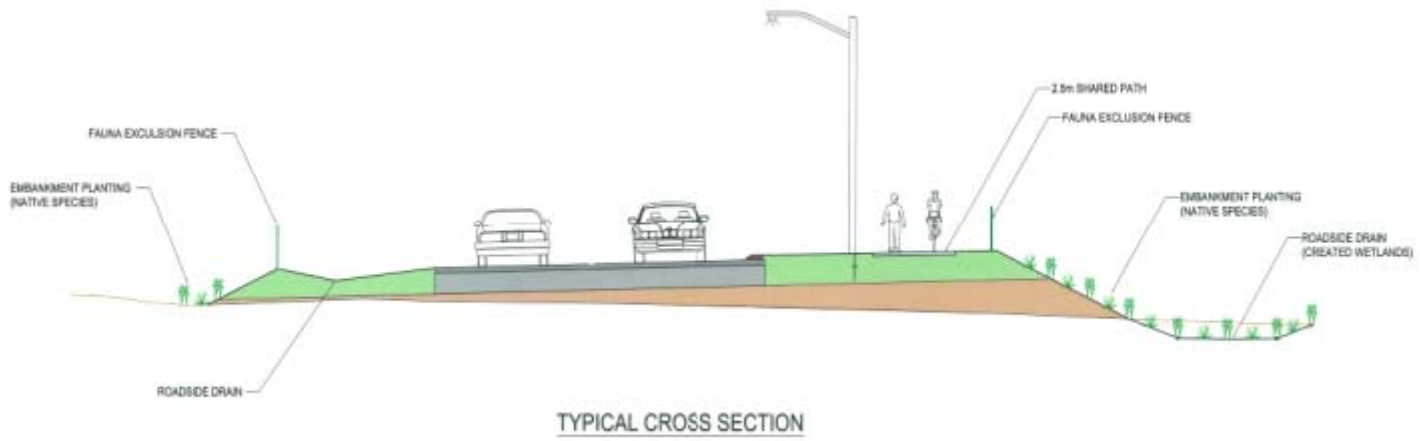
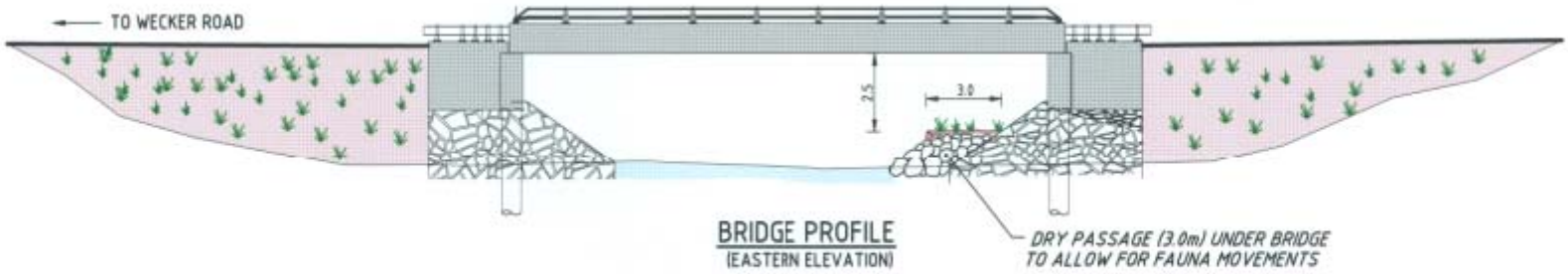
Typical mid- block cross section



TYPICAL CROSS SECTION

Bridge



BRIDGE PROFILE
(EASTERN ELEVATION)

DRY PASSAGE (3.0m) UNDER BRIDGE TO ALLOW FOR FAUNA MOVEMENTS

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Intersection Design Criteria

- One lane circulating roundabouts
- Design speed through roundabouts - 40 km/hr
- Low level landscaping to centre islands

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Pedestrians and Bicycles

- 2.5m wide shared path - entire length of new road
- Connection to existing pedestrian and bicycle networks
- Focus on safe school travel

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Bicycle and pedestrian network

SURROUNDING PEDESTRIAN AND BICYCLE NETWORKS

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Wecker Road Improvements

- Reconstruction to 12m wide pavement
- Coloured thresholds - SCHOOL ZONE
- Supervised school crossing with footpath connection to Bulimba Creek bridge
- On-street, short term parking provisions at school times
- Upgrade to current standards.

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Wecker Rd Improvements

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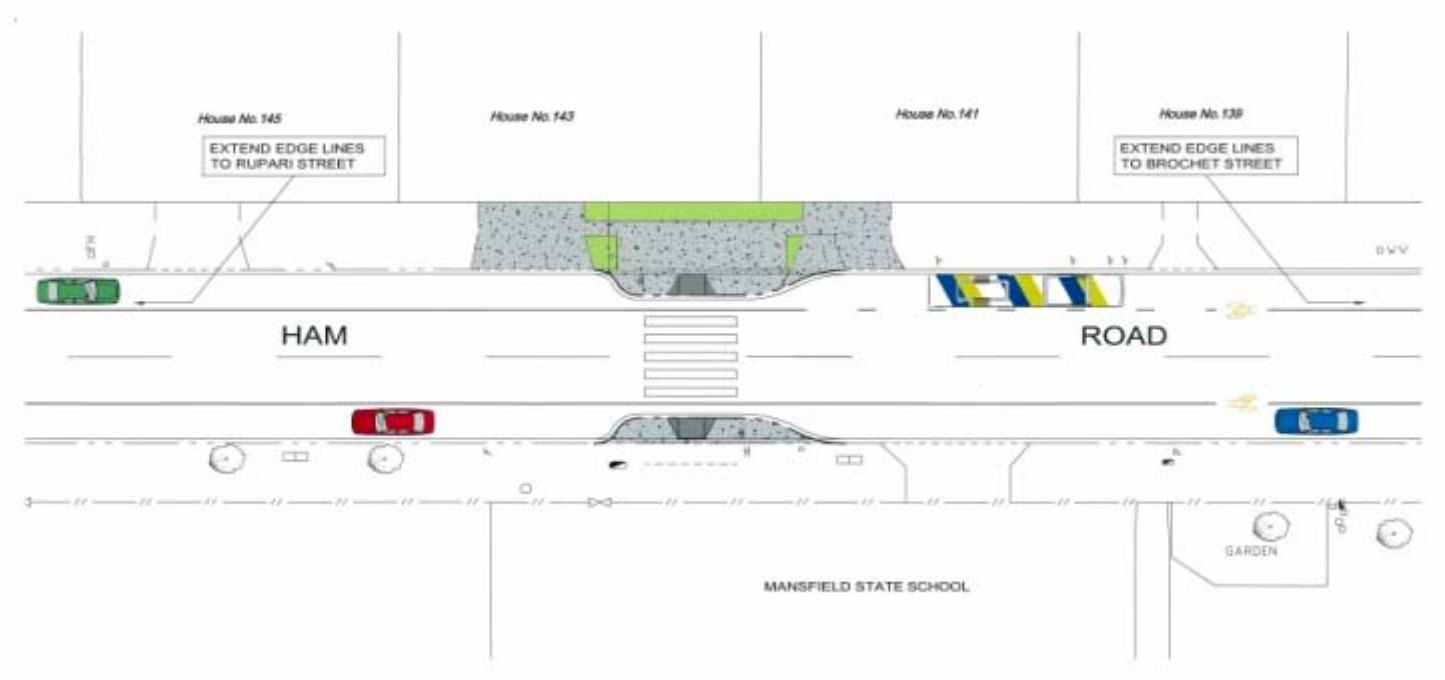
Ham Rd Improvements



- Footpath buildouts at existing school crossing
- Additional linemarkings through school zone
- Improvements to existing line-marking

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Ham Road / Broadwater Rd Intersection Improvements

- Remove uncontrolled left slip lane
- Footpath build-outs for increased pedestrian storage & Safety

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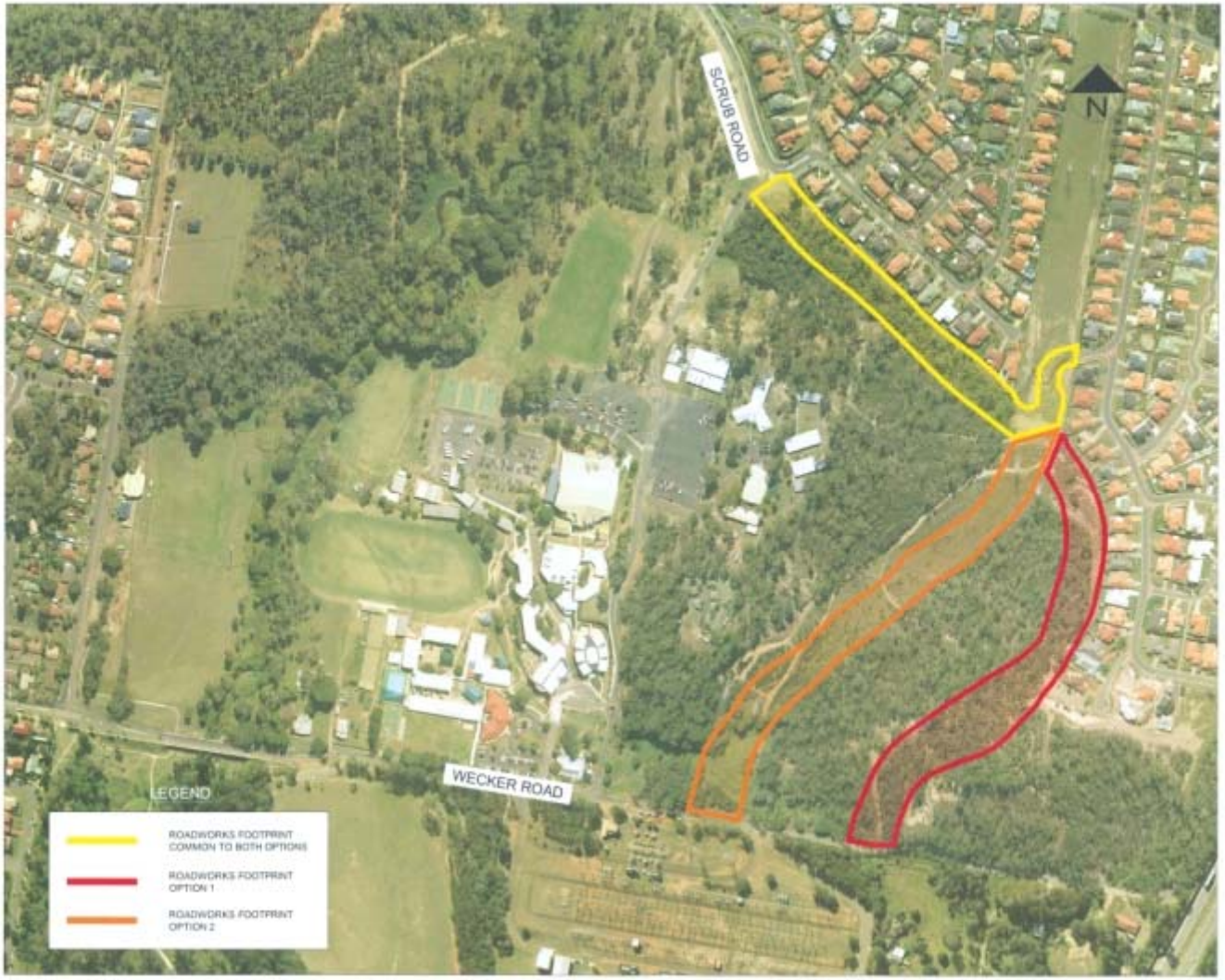
Environmental Project History

- Initial route proposed (Option 1)
- Review of Environmental Factors (REF)
- Alternate route proposed and accepted
- Flora & Fauna (F&F) survey undertaken
- Integration of F&F report recommendations into design phase
- Review of F&F report and design by Biodiversity Assessment and Management (BAAM)

Proposed Corridor Footprints



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Considerations & Planning

- BCC Ecological Corridor Mapping
  - Bulimba Ck Connections - Riparian Corridor (BCC)
  - Bulimba Ck to Belmont Hills/Mt Petrie - Riparian Corridor (BCC)
  - Bulimba Ck Raptor Area - BCC City Wide Significance (BCC)
- BCC Regional Ecosystems (BCC)
- Whites Hill - Belmont Plan 2001 (BCC)
- Gateway Upgrade Project (State)
- Qld Herbarium Regional Ecosystems (State)
- Nature Conservation (Koala) Conservation Plan 2006 (State)

BCC Environmental Objectives

- Minimise fauna vehicle strike & ensure public safety
- Maintain existing fauna corridors and facilitate fauna movement
- Minimise disturbance/loss native vegetation
- Minimise the loss of habitat trees
- Minimise the disturbance/loss of wetland habitat
- Ensure revegetation is appropriate

Fauna Habitat/Movement Mitigating Measures

Gliders	Glider Poles
Possums	Fauna Fence, Bridge Underpass, Culvert & Furniture
Wallabies	Fauna Fence, Bridge Underpass, Culvert
Bandicoot	Fauna Fence, Bridge Underpass, Culvert
Koala	Fauna Fence, Bridge Underpass, Culvert & Furniture
Frogs	Wetland
Reptiles	Fauna Fence, Bridge Underpass, Culvert

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Mitigating Structures

- Fauna Fencing
  - fauna cannot climb over nor burrow under
  - direct fauna away from traffic
  - direct fauna towards crossing points
- Culvert
  - 2.4 x 1.8m
  - furniture (rails)
  - vegetated approaches
- Bridge Underpass
  - vegetated approaches
  - rock lined
- Glider Poles
  - three poles, free standing poles
  - refuge pipe

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Overview of Impacts

- Potential Long Term Impacts
  - Fauna Mortality
    - exclusion fence
    - structures
    - roadside vegetation
    - promote driver awareness
    - lighting every 50m (BAAM)

Overview of Impacts

- Potential Long Term Impacts
  - Habitat Isolation & Movement Barrier
    - structures (glider poles, culvert & bridge)
      - –vegetated approaches
      - –suitable groundcover
    - ropes on glider poles not feasible (BAAM)
    - supplementary culvert not feasible (BAAM)
    - second culvert adjacent to proposed culvert not feasible (BAAM)

Overview of Impacts

- Potential Long Term Impacts
  - Habitat Loss
    - construction of wetland
      - –wetland design advice (BAAM)
    - revegetation
      - –vegetation advice (BAAM)

Overview of Impacts

- Construction Associated Impacts
  - Loss of individual nesting sites
    - avoid mature hollow-bearing trees
    - install glider & bat nesting boxes
  - Fauna displacement stress
    - staging of vegetation clearance (where possible)
    - fauna spotter/catcher
    - nesting boxes recommended (BAAM)

Overview of Impacts

- Operation Impacts
  - Increased noise and light stress
    - shades or screens on street lighting
    - speed limits
    - ongoing independent monitoring program (BAAM)

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BAAM Review

Conclusions & Recommendations

- Proposed road does traverse local fauna habitats
- BCC Flora & Fauna survey undertaken and subsequent recommendations are of a high standard and recommendations are sound.
- “...impacts can be minimised and the future viability of the local fauna populations will not be unduly compromised”

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BAAM Review

- Additional Recommendations
  - flora and fauna issues to be addressed in an EMP
  - minimise loss of trees
  - fauna spotter on site during clearing
  - no equipment nor stockpiles to be stored within retained habitat area
  - 60km/h speed limit on Scrub Rd

The Way Forward

- From consultation to decision

- Community Forum

- Public Information Displays
  October 23, 25 & 27

- Community Survey
  Closes October 31

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- Survey Results to Project Team
  Early November
- Project Team reports to Council
  Late November
- Decision made by Council
- Newsletter to Community announcing Decision

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