SMEC

Member of the Surbana Jurong Group

SMEC INTERNAL REF. 30013098

Summary Report

Mayfield Precinct Cycleways – Feasibility Assessment

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1. Introduction

SMEC have prepared a Feasibility Assessment for the Mayfield Precinct Cycleways Project. The purpose of this project is to develop safer cycling facilities in the Mayfield area and to connect cycleways to regional routes.

This project will be completed in in three stages: Stage 1 – a Feasibility Assessment; Stage 2 - the preparation of traffic studies; and Stage 3 - the preparation of the concept design.

This document is a summary of the Stage 1 - Feasibility Assessment report.

2. Project goal and themes

A project goal was developed to align with City of Newcastle's cycling strategy document titled "On Our Bikes, A plan for safe and connected cycling in Newcastle".

The objective of this project is to create connected cycleways, determine if they are safe, ensure they are made from low stress streets and principal routes. These objectives were used to develop a project goal that is specific, measurable, attainable, realistic and timebound:

"By 2024, Mayfield will have a safe, connected cycling network of principal routes and low stress streets. Riding and walking will be the natural choices for short trips, for all members of our community."

This goal was broken down into a series of four themes, which are listed below.

Theme 1 – Improve Safety and Comfort: Design and implement new cycle routes that are separated from motorised traffic or achieve a low speed, low traffic volume environment. Where possible, we will allow dedicated space for both cyclists and pedestrians.

Theme 2 – Connect and Improve the Network: Establish a bike network that provides safe, convenient connections between our centres, key attractors and homes. We will implement a principal bike network, designed in accordance with the Safe System approach, supplemented by key connectors, scenic routes and low speed, low volume local traffic areas.

Theme 3 – Support People to Ride: Understand and address the challenges and enablers of more riding in Newcastle. We will raise community awareness of the benefits of riding and provide information about cycling in Newcastle and safe routes. Our network of safe routes will be supported by clear wayfinding and convenient parking and facilities.

Theme 4 – Facilitate active transport centres: Prioritise space for walking and riding in the City Centre, local areas and neighbourhood centres to encourage a shift to walking and cycling for short trips.

3. Considerations and barriers

A connected cycleway system should consider where people want to cycle to and from, related to key attractions and nodes in and around Mayfield. Key attractions for cyclists in the Mayfield region are the University of Newcastle to the west, and the Tighes Hill TAFE, Newcastle City CBD and beaches to the east. Key attractions and nodes are shown in Figure 5-1, overleaf.

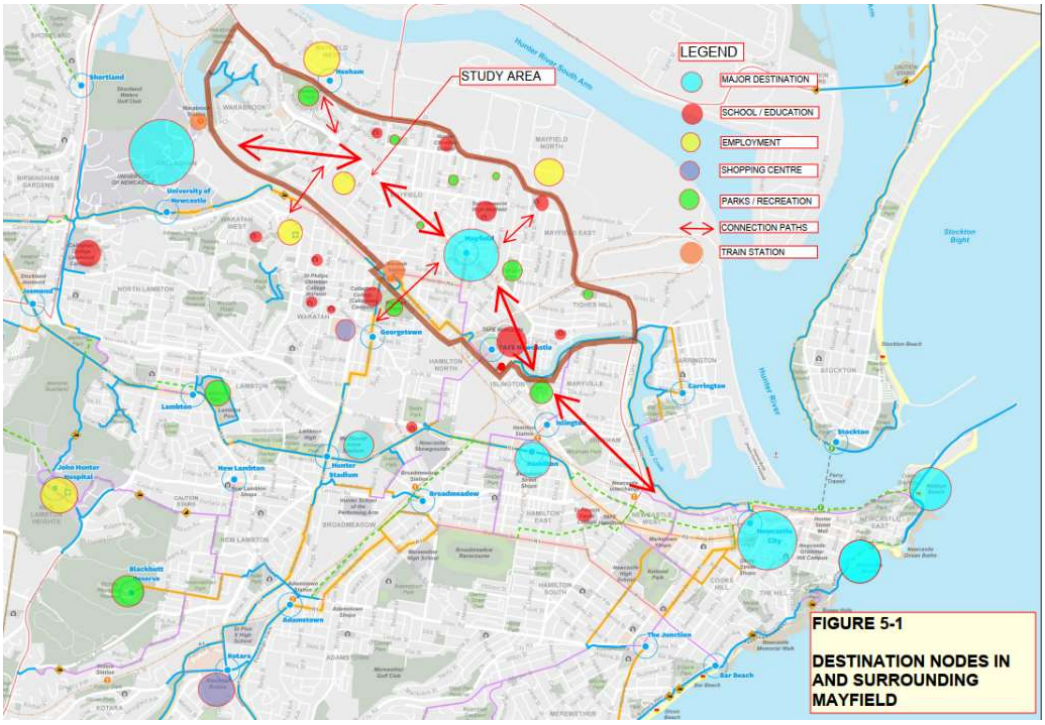

Figure 5-1: *Destination nodes in and around Mayfield*

An assessment of barriers inhibiting cycling in the area was also undertaken. These are listed below and shown in Figure 5-2.

- The railway line limits crossing opportunities for both cars and bikes and effectively forms the south-western boundary of Mayfield
- Industrial Drive is a busy arterial road and is only attractive to very experienced cyclists. It forms the north-eastern boundary of Mayfield
- Throsby Creek which lies just to the south of Mayfield
- Existing bridges that have not been designed to allow for cyclists.

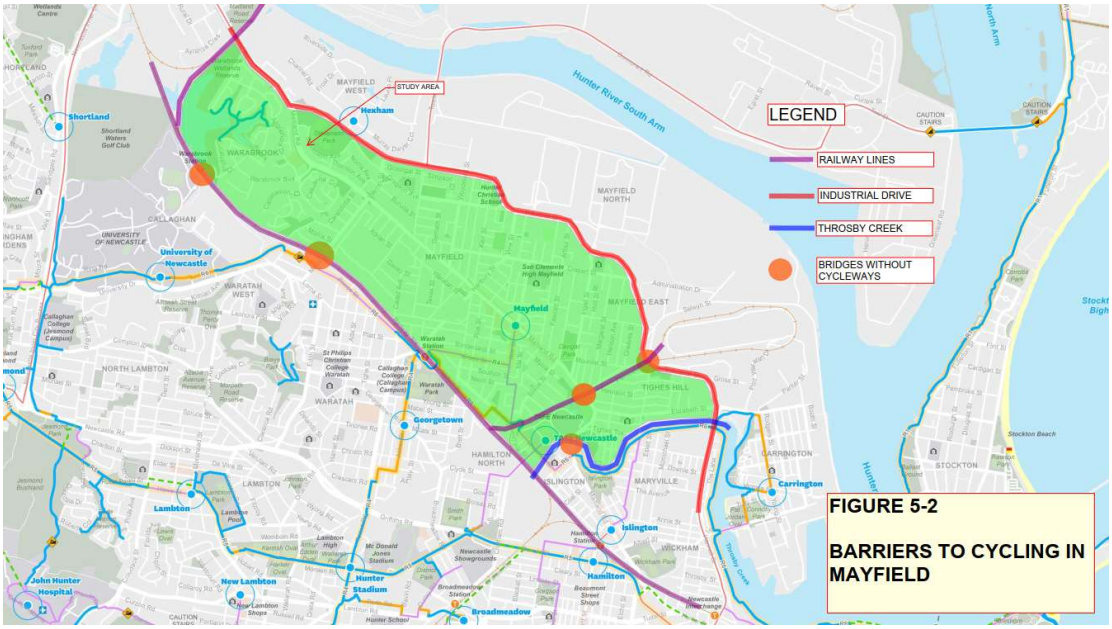

Figure 5-2: *Barriers to cycling in Mayfield*

Due to the presence of barriers, east–west routes are understood to be a priority and were determined first. North–south options can then be identified to connect to east–west priority routes.

4. Community and stakeholder engagement

The City of Newcastle undertook a comprehensive community consultation program aimed at informing the community, consulting with the community, identifying current issues, opportunities and constraints, targeting current and potential users to understand usage limitations, and involve key stakeholder user groups.

The communication activities provided included a dedicated webpage, flyers and onsite signage, a social media campaign, an e-newsletter, media coverage, and a general community survey were the community was encouraged to have their say (one survey for the general community; another for teachers, students and parents). Social pinpoint interactive mapping was also undertaken. This map included 34 paths that were selected and allowed the community to comment on individual routes and draw their own suggested routes, as well as identify concerns and things they liked. A total of 2,117 agree/disagree votes were made.

The feedback obtained from the community consultation program was used to inform part of the scoring criteria outlined in the following section.

5. Methodology

A review of the latest technical literature for cycleway design was undertaken and presented that the key design principles of a cycleway are recognised as being **safe, connected, direct, attractive and comfortable.**

A total of 38km worth of cycleway paths were reviewed as part of this study. Paths were combined in various ways to form routes. Routes, and intersections within the routes, were assessed using a point scoring system. Scores were based on the following:

- A Technical Score measured on an individual path (safety, comfort, attractiveness, impact on neighbours)
- A Technical Score measured on a combined path (directness, coherence)
- A Net Agreement Score based on community feedback received during the City of Newcastle's community consultation program.

Different path combinations for routes between the University and Islington Park were considered and ranked against each other. Eight different pathway combinations were reviewed and ranked. Three preferred east–west routes were then selected to proceed to the concept design (shown in red in Figure 9.2.5). These included a route that was primarily located on Maitland Road, a route located to the north of Maitland Road and a route to the south of Maitland Road.

Following the selection of east–west routes a series of north–south routes were reviewed. These paths were selected based on a need to be spaced at appropriate intervals and a need to provide connection between the selected east–west routes. Additional paths were also added to ensure that there was connection to residents in the northern parts of Mayfield, a connection through Mayfield West to Stevenson Park and connections from Islington Park to Wickham Park.

City of Newcastle staff then completed an independent review of the proposed routes, scores and ranking and provided feedback which was incorporated into the final proposed routes. This included feedback that proposed prioritised connections that are part of the current cycling plan, that link to train stations, and are separate from busy main roads (where possible).

6. Outcomes

The Feasibility Assessment resulted in 29.5km of cycleways selected to form the Mayfield Precinct Cycleways. This includes a combination of quietways, shared paths, bicycle paths, existing shared paths and bridges, and are shown in the figure below. SMEC recommends that this network proceed to concept design phase.

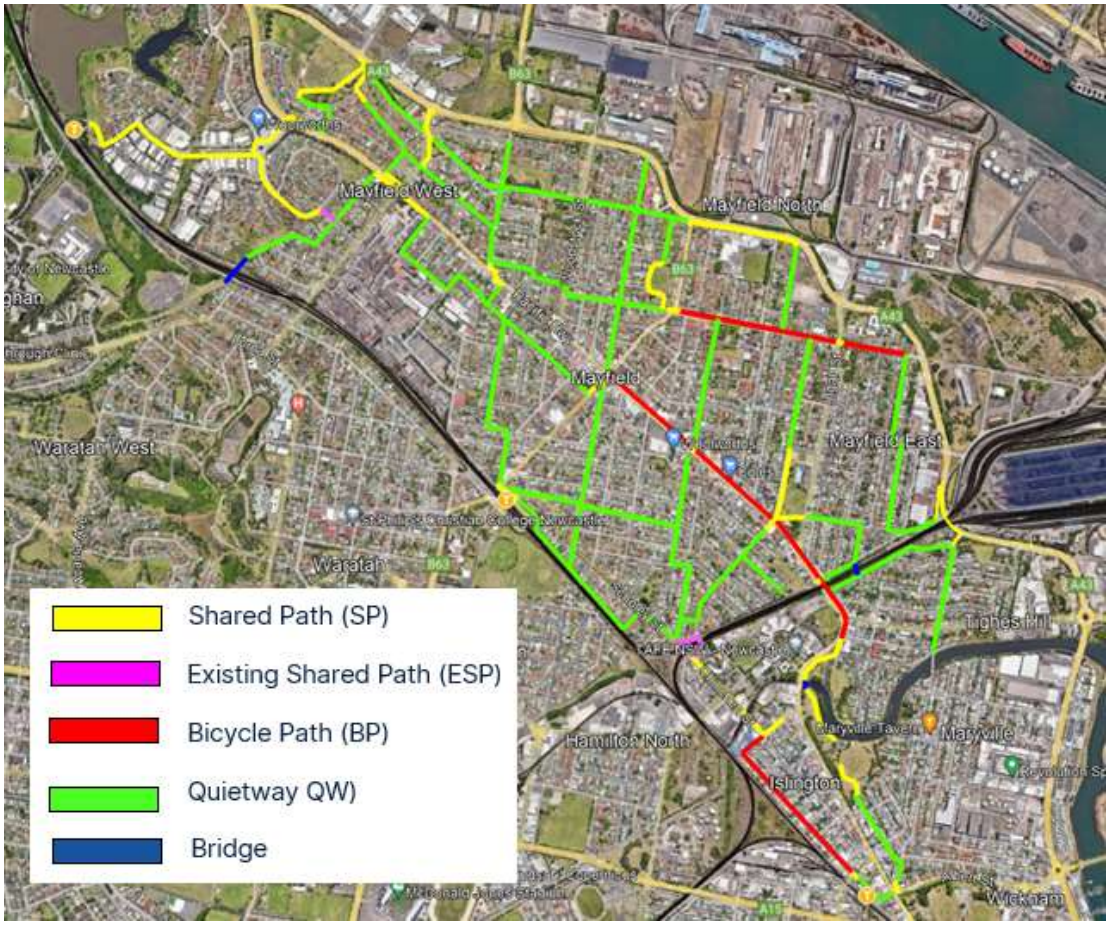

Figure 9-2-5: *Completed cycleway network*

The study systematically reviewed potential cycleway routes that could be implemented for Mayfield. The study includes a Bicycle Path proposed to be constructed along Maitland Road. This Bicycle Path scored highly on a technical level and from a community engagement score. Maitland Road generally contains two travel lanes in each direction and parking on one or both sides of the road.

The new Bicycle Path would be constructed within the existing carriageway and therefore one travel lane is likely to be removed. The impact of removing a travelling lane will need to be reviewed to see what impact it will have on the performance of the road both from a lane capacity and the level of performance of the signalised intersections.

7. Next steps

SMEC has proposed a five-stage roll-out of the new cycleway strategy, that focusses on the installation of the highest-ranking cycleways first, to provide central corridors for cyclists as quickly as possible.

The study also recommended that a detailed traffic study be undertaken to review the impact of works on Maitland road, and that further community consultation be undertaken following completion of the traffic study.