3. CAPITAL WORKS

3.1 Addressing pedestrian crowding

Develop a tool to assess and identify current and future crowding and develop measures to address these locations through a range of interventions.

Objective

To reduce pedestrian crowding through targeted actions at intersections, pedestrian crossings and footpaths.

To develop and adopt appropriate crowding standards for Melbourne to ensure footpaths are not subject to overcrowding now or in the future, including those under investigation for a pedestrian street hierarchy.

Issues

No guidance is available on what level of crowding is optimal in different environments.

In general higher crowding levels can be tolerated in the approach to busy public transport interchanges during peaks, however there is a limit to this tolerable level of crowding. Lower levels of crowding are appropriate in shopping areas and locations where people want to stand, be stationary or wander.

As pedestrian numbers have grown, pedestrians have been increasingly affected by a range of footpath obstructions, including infrastructure, construction, street furniture and both motorcycle and bicycle parking. Both motorcycle and bicycle use is growing in the City of Melbourne and allocating space for parking for these modes must be addressed with consideration of the needs of pedestrians.

Crowding standards and guidelines

The City of Melbourne can specify maximum numbers of people ideal for specific locations using various types of spaces to ensure that whether walking or waiting, people are comfortable and safe. Crowding standards and guidelines vary depending on locations; there are different crowding standards for places where people move along footpaths and where they wait at intersections.

Crowding standards are useful in maintaining pedestrian comfort when designing infrastructure (such as footpaths), managing street operations (such as signal timing) or placing street furniture.

London has a maximum pedestrian comfort level of 11 people per minute per metre of footpath width in mid-block locations (Atkins for TfL, 2010, p. 13). As an interim measure, the City of Melbourne will adopt Transport for London standards (which differ based on land use context and are shown in Appendix 6).

Further research will assess whether these are appropriate standards for Melbourne, develop crowding standards and pedestrian comfort levels for crossings and provide guidance on how to achieve these.

Crowding standards and guidelines can be used by City of Melbourne when designing infrastructure such as street upgrades as well as when reviewing proposals by developers that will have an impact on the pedestrian network in the public realm.

Implementation

- Develop a council tool to assess crowding in high pedestrian activity areas and develop measures to address overcrowding through a range of interventions.
- Identify current and future overcrowded areas and develop plans to address overcrowding in these locations.
- Plan future capital works in consideration of a crowding standard, taking into account likely future growth in pedestrian numbers.
- Identify current and future locations where footpath obstructions reduce the pedestrian comfort level below acceptable levels and take action to address this including relocation, education, regulation or enforcement.

Crowding at intersections

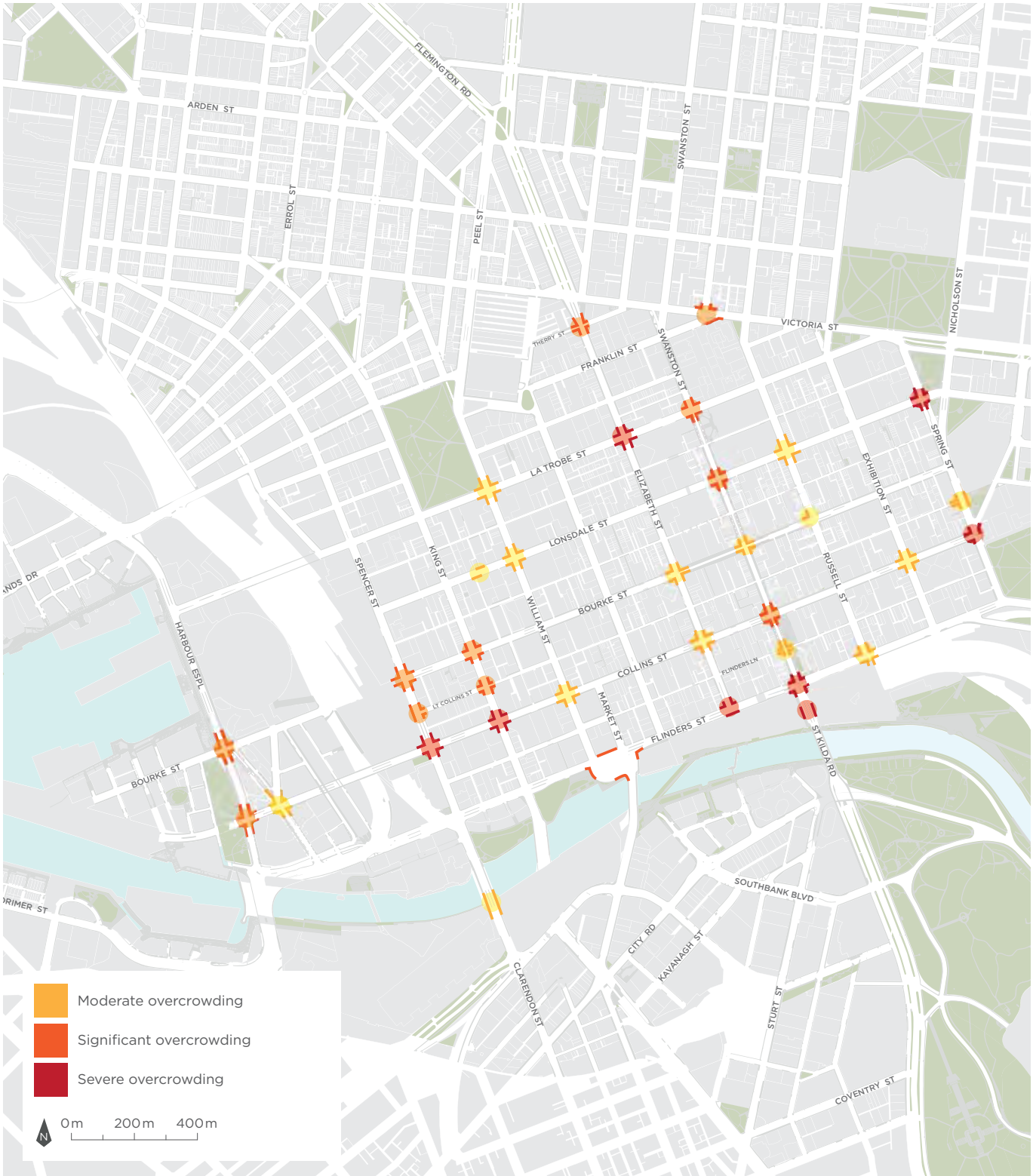

Figure 25: Estimated existing crowding on footpaths at intersections at peak times

3. CAPITAL WORKS

3.2 Pedestrian crossings at intersections

Progressively widen, de-clutter, extend and protect pedestrian crossings through engineering, enforcement and design interventions.

Objective

Reduce crowding on and around pedestrian crossings.

Issues

Intersections can be crowded places where movement intensifies as people come together at safe crossing points. Crowding on corners makes it difficult for pedestrians heading for one crossing to get through the crowd waiting for the perpendicular crossing.

Given central city growth projections, more space and other improvements to the pedestrian network will be needed to avoid overcrowding.

In the Hoddle Grid, most older crosswalks in the central area are about three metres wide.

Wider crosswalks can reduce the problem of pedestrian crowding at intersections. They also minimise conflict between opposing pedestrians as they cross the road.

At some places where new tram stops have been constructed, crosswalks have been widened to cater for increased tram passenger volumes. The new pedestrian crossing at Elizabeth Street is more than eight metres wide. At other places the crosswalks are still quite narrow.

Generally, crosswalks should be made four metres wide across the central city and eight metres wide at busy tram stops or where pedestrian crowding is a problem. To provide for future increases in pedestrian numbers, it is worthwhile implementing wider crosswalks whenever opportunities arise with the installation of new tram stops or when road works are carried out.

Building out kerbs at intersections can shorten crossing distances and increase walk times. This can lead to improved traffic signal timings. Additional footpath space is more comfortable for waiting pedestrians and will help to reduce crowding at busy intersections.

Where pedestrian crowding is a problem now or in the future, the area near the crosswalk should be as clear as possible. This is important so that pedestrians with a visual disability do not walk into furniture. It also provides more space to avoid crowding. The clear area should be the full extension of the crosswalk lines, not just the area adjacent to the kerb ramp.

Implementation

- Progressively widen crosswalks within the Hoddle Grid that are less than four metres wide.
- Relocate footpath furniture and other infrastructure away from corners at busy intersections.
- Build kerb outstands at Hoddle Grid intersections where there is space to do so.

Blocked crossings and intersections

Vehicles blocking crossings and intersections because of queuing along a road add to pedestrian crowding and frustration while also causing operational delays to the tram network in certain locations. This is more significant for eastbound traffic in the pm peak.

Signs placed warning drivers to ‘Keep Intersection Clear’ are not effective and merely add to sign clutter. The road rules are quite clear that drivers must not block intersections or crossings.

Certain things can be done in terms of traffic engineering, signal timings and other techniques to minimise drivers blocking intersections or crossings, depending on the location. Enforcement, media coverage and traffic signal adjustments can deliver improvements to pedestrian and public transport movement in the most affected locations.

Implementation

- Work with Victoria Police to direct and inform enforcement activities in the City of Melbourne to achieve the transport and safety objectives of the City of Melbourne Transport Strategy 2012, Road Safety Plan 2013-17 and the Walking Plan.
- Work with Victoria Police, VicRoads and PTV to prevent vehicles from blocking intersections and crossings. This will include investigation of potential use of vehicle detector loops connected to traffic signals at certain intersections to prevent vehicles from blocking intersections.
- Assess the feasibility of trialling departure side detector loops at Elizabeth and Flinders streets to prevent queuing of southbound traffic on Flinders Street from blocking the intersection.

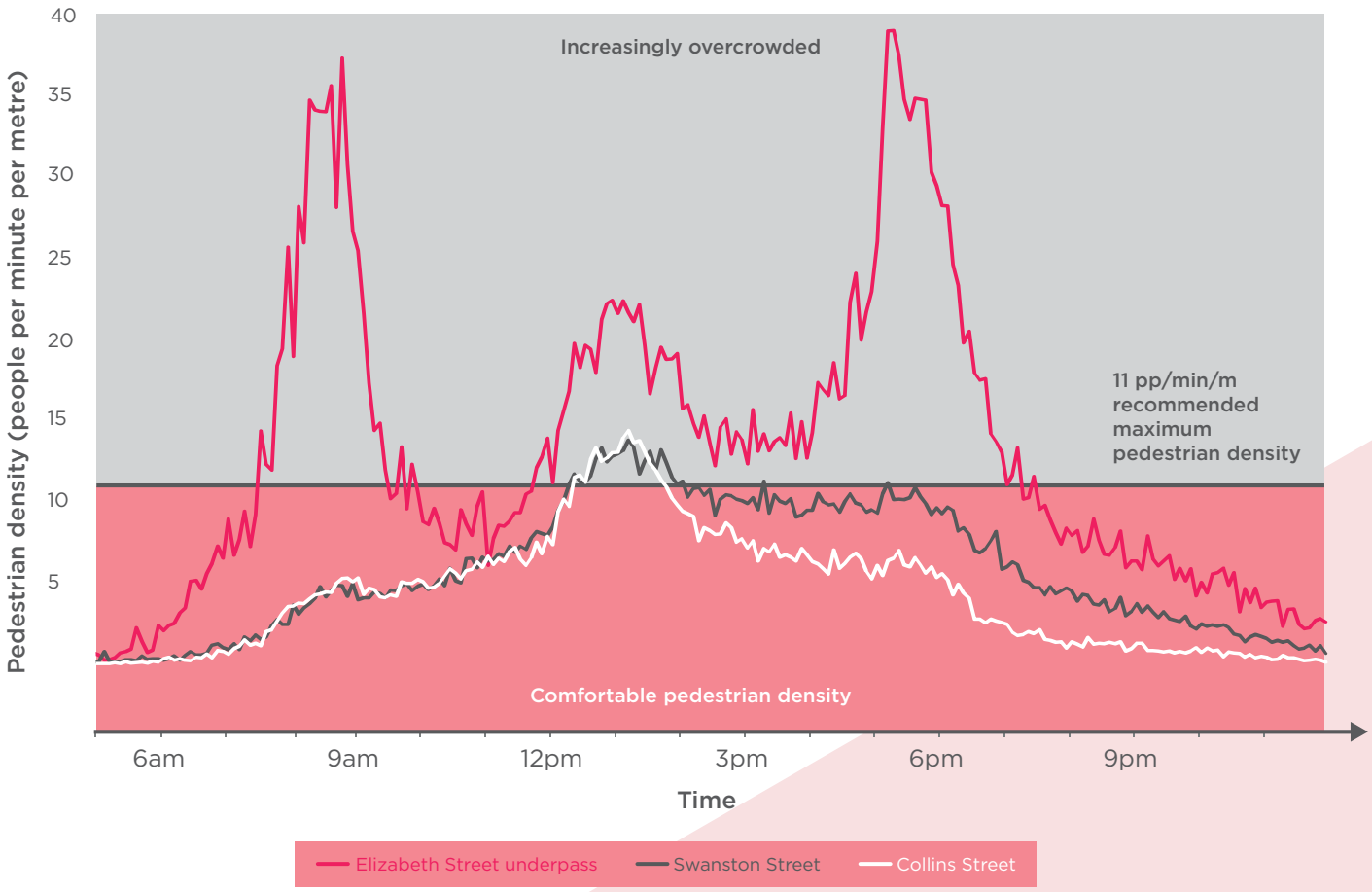

Figure 26: Counted pedestrian volumes on central city footpaths on an average Tuesday, September 2012

3. CAPITAL WORKS

3.3 Master plans

Ensure master plans and precinct plans deliver an enhanced pedestrian network consistent with the principles of the Walking Plan.

Objective

To focus master planning and precinct planning efforts in the City of Melbourne on areas which will experience significant future growth in walking to ensure designs cater for that growth.

Issues

Rapidly increasing numbers of pedestrians are putting stress on existing infrastructure.

Rationale

Master planning and precinct planning are the appropriate tools to ensure that the city is well-adapted to changing demands such as significant growth in pedestrian numbers, major new public transport infrastructure and significant land use development particularly in growth and urban renewal areas.

The construction of Melbourne Metro, delivery of changes to the tram network (including changes required by construction of Melbourne Metro) and planning for future patronage of these services provides the impetus for new master plans. Other reasons include the need to change the operation of streets, such as City Road in Southbank, which were previously bypass routes but now run through busy, central city areas. (Figure 29 identifies future master plan projects, and more detail about the context of these projects is included in Appendix 2).

Pedestrian Street Hierarchy

The Walking Plan establishes a Pedestrian Street Hierarchy to provide direction for the design and operation of streets. The hierarchy will be used to identify streets for short term investigation but will also be used in future development of Master Plans to ensure an enhanced pedestrian network consistent with the principles of the Walking Plan.

These plans will direct advanced streetscape designs and will lead to capital works delivery in accordance with the Streetscape Framework (2011).

Implementation

- Ensure master plans and precinct plans deliver an enhanced pedestrian network consistent with the principles of the Walking Plan.

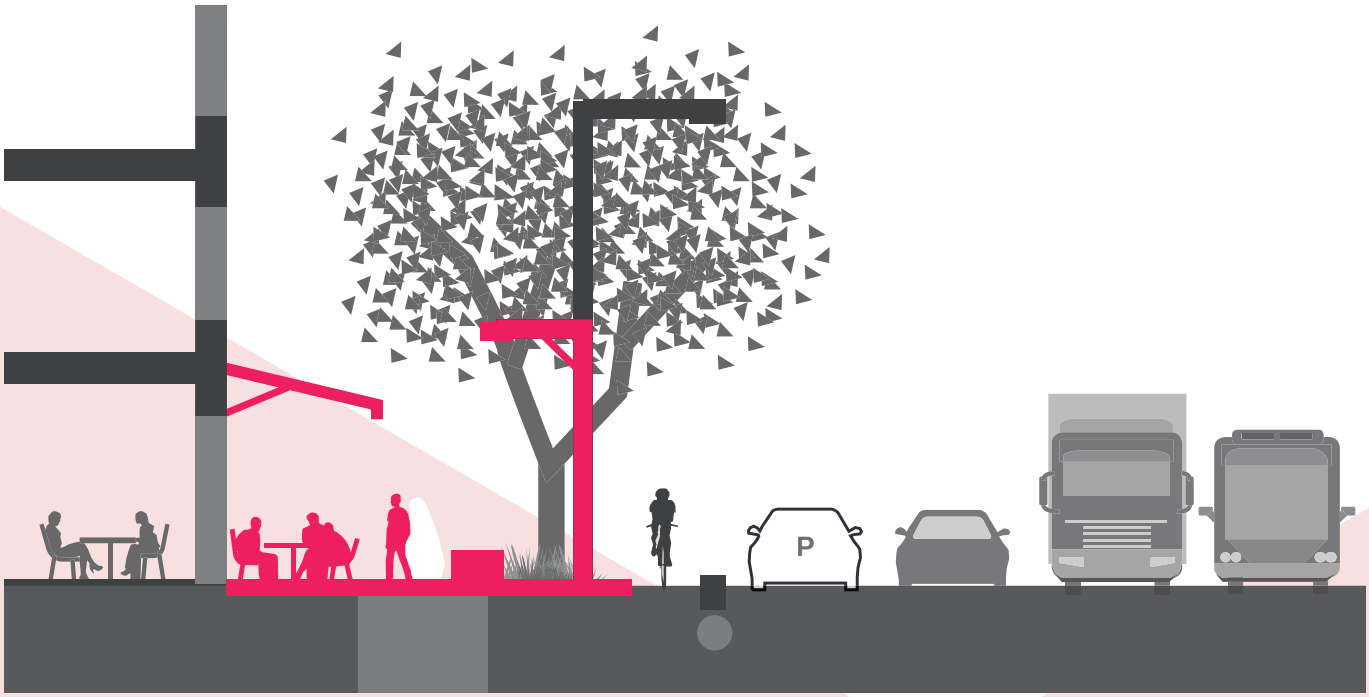

Figure 27: Road section produced as part of the development of the City Road Master Plan.
The pedestrian experience on City Road could be enhanced by providing a high level of accessibility, supporting on-street activities and requiring wider footpaths.

Walking network issues and opportunities in urban renewal areas

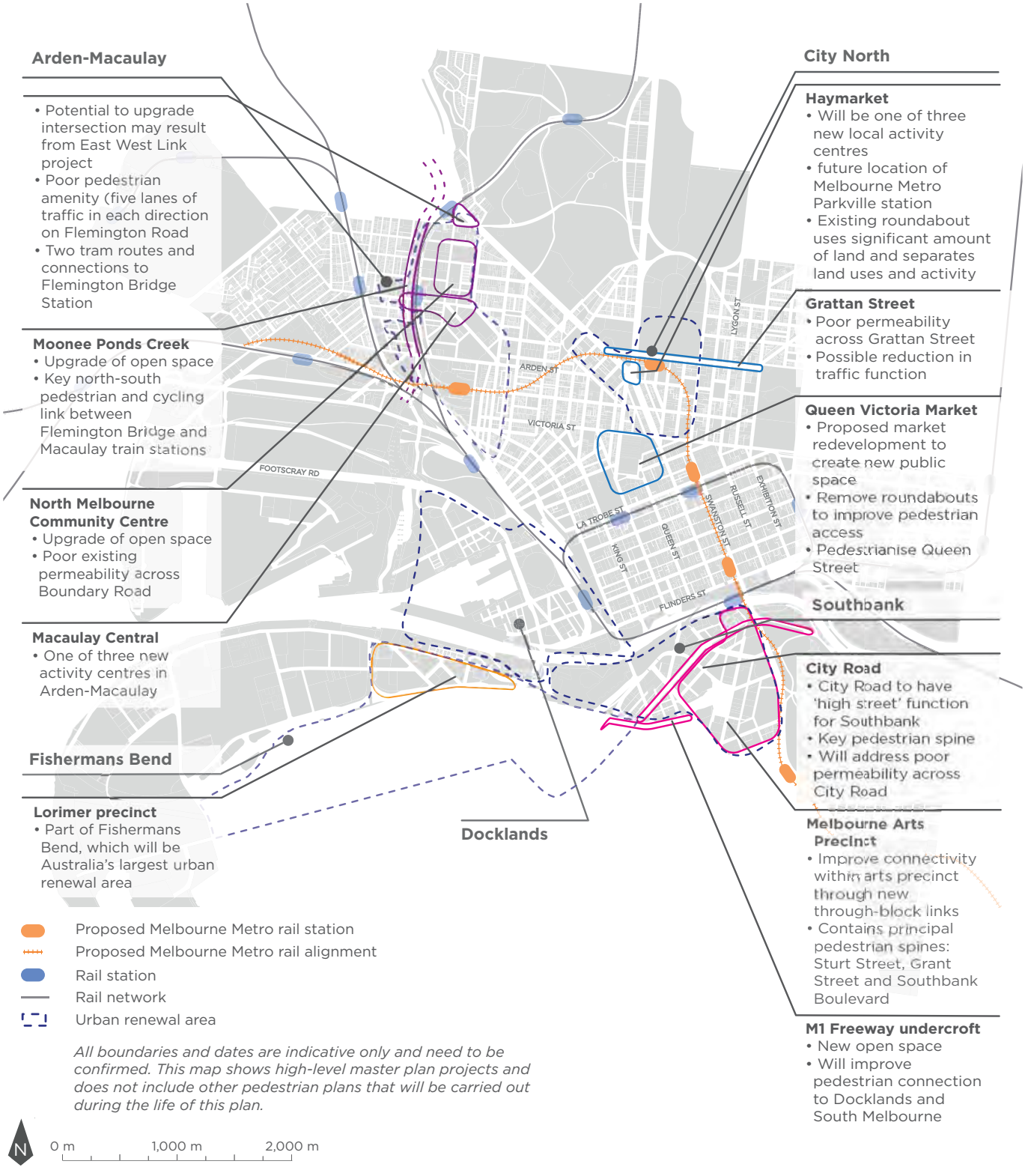

Figure 28: Walking network issues and opportunities in urban renewal areas