SUPPLEMENTARY ANALYSIS

AMENDMENT C308
urban design analysis
preferred pedestrian connection locations

CITY OF MELBOURNE

methodology: data source, definitions and method of calculation

DATA SOURCE

1. City of Melbourne's GIS Property Base data (accessed February 2019)
2. City of Melbourne's Local Liveability Study (LLS) 2015
3. Location of pedestrian connections built since 2014 based on City of Melbourne's Development Activity Monitor (accessed February 2019) and Approved Application Drawings
4. City of Melbourne's GIS Street Segment data (accessed February 2019)
5. City of Melbourne's Places for People Study (P4P) 2015

STREET BLOCK (C308 DEFINITION)

One or a cluster of properties that are bounded by streets and main streets, but excludes laneways and other tertiary connections.

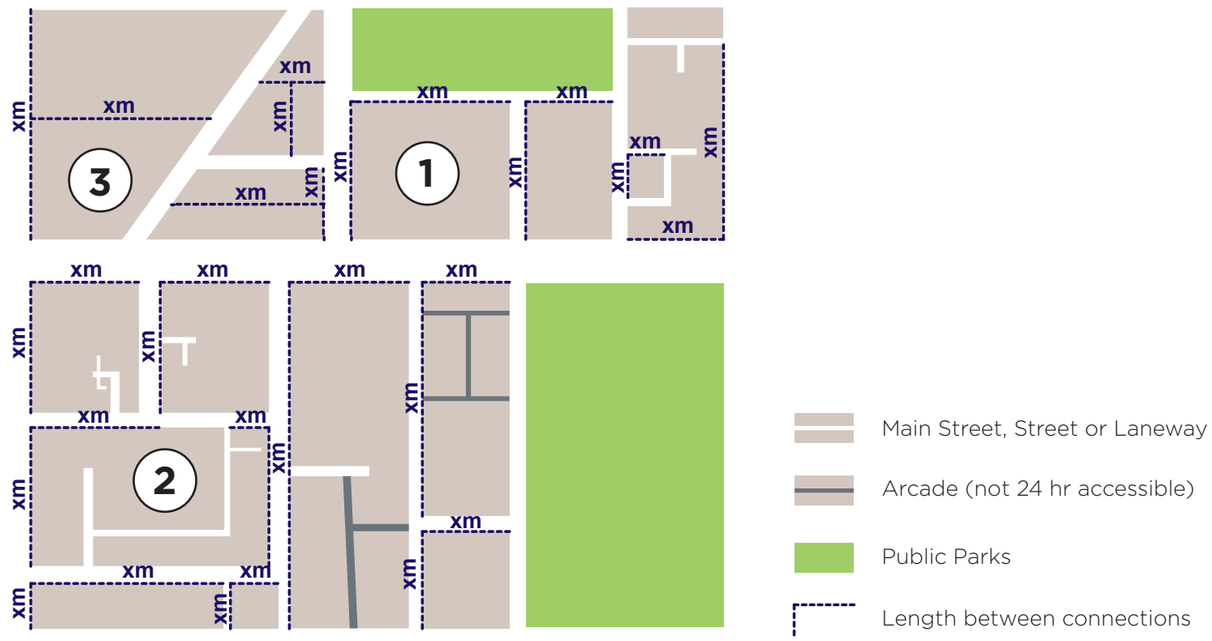
NOTE:

1. In order to calculate the average distance between connections, only two sides of each street block are utilised. A more precise figure would be generated by measuring the distance between connections on all sides of the block however this would distort the spatial outcome on irregular blocks and not reflect the preferred location for a new connection.
2. Street blocks with major parks are excluded from the calculation.

AVERAGE DISTANCE BETWEEN CONNECTIONS

This measurement seeks to determine the level of permeability within a street block by determining the average distance between pedestrian connections. For the calculations of permeability within a street block, laneways and arcades (open 24 hours) were included, however subways and arcades that close after business hours were excluded. The method adopted is as follows:

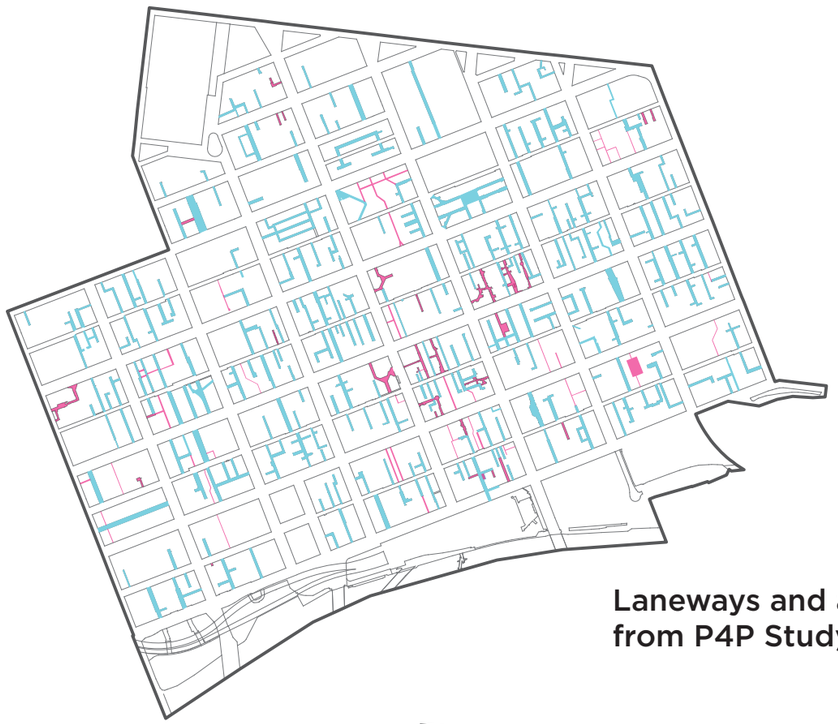
1. The distance between connections for one side running north-south and another running east-west was measured.
2. Where street blocks are irregular, the most representative side was manually selected,
3. For irregular street blocks a new line was created to determine a typical distance that would represent the 'centre' of this frontage.
4. The average distance along both orientations was then calculated. Each edge between connections was visualised with different colours according to its respective average distance between connections, i.e. <=100m, 100-200m and >=200m.



Method of calculation of average distances between pedestrian connections

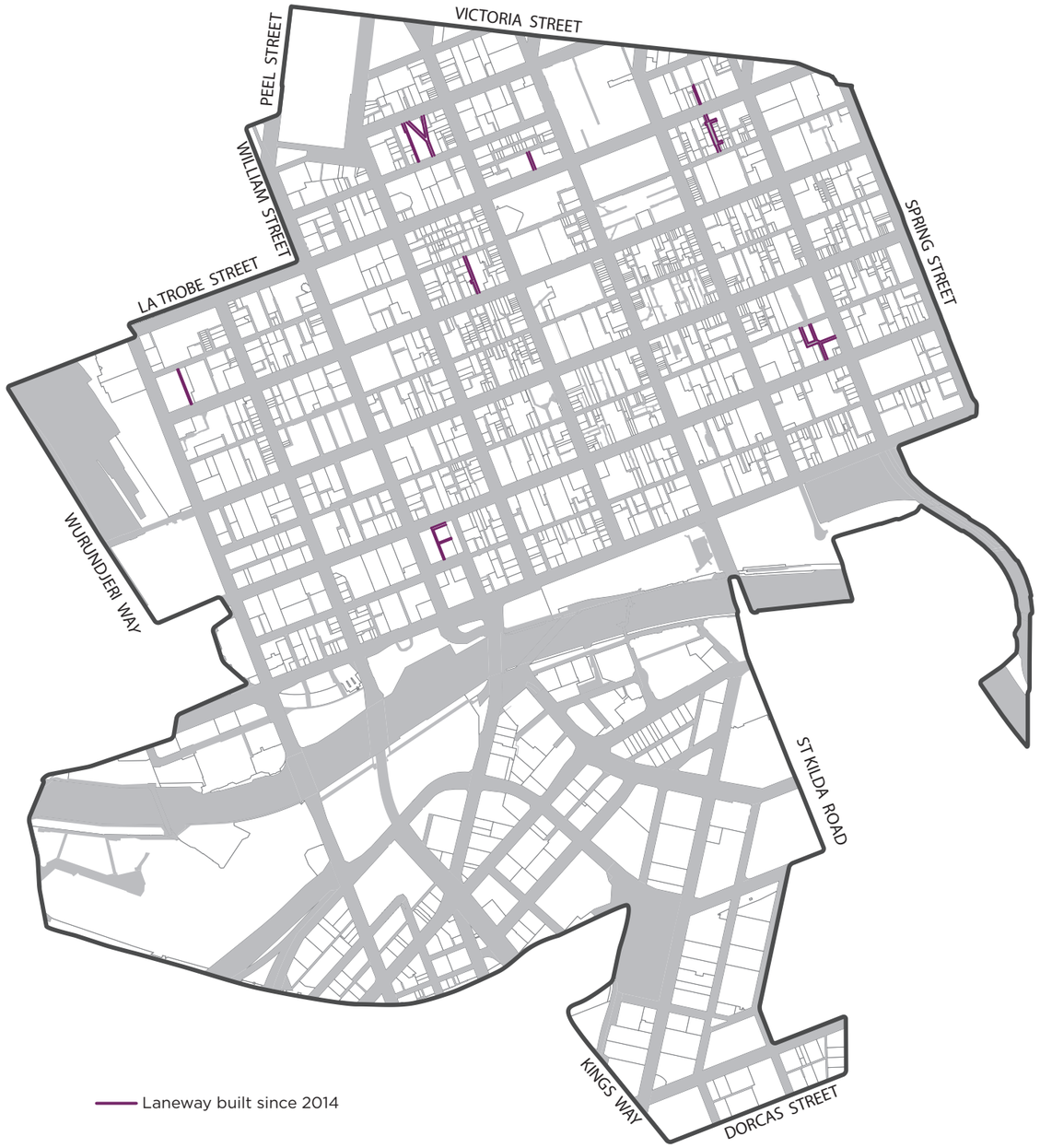
methodology: data update

Based on the P4P 2015 method and Data Source 1-4, the original LLS Average Block Length data was updated to reflect the new connections since 2014 and the C308 definition of Street Block.



Laneways and arcade locations from P4P Study 2015

Laneways and arcades built between P4P Study up to Feb 2019



Laneways built since P4P Study that changed previous permeability calculations

methodology: determining preferred pedestrian connection location

Where a distance between connections exceeded 100m, the adjacent street block edges were offset by 70m toward centre of block. The resulting shape suggests an area, within which at least one pedestrian connection is to be provided if the distance is between 100 and 200m (exclusive), or at least two pedestrian connections if the distance is equal to or greater than 200m in length.

Minor adjustments were made to reflect the existing street alignment and property boundary, based on Data Source 1 and 4.

Example of Street Blocks in the Central City

NOTE:

The suggested pedestrian connection locations in blue are indicative only. Due to the irregular shape of some large street blocks (in particular in Southbank), the resultant geometry of the pedestrian connection location does not necessarily reflect a preferred route. The alignment of final pedestrian connections would be determined through individual development proposals in negotiation with the City of Melbourne.

Street

Property Base Boundary

Min. One Pedestrian Connection where Current Average Distance Between Connections is 100-200m

Min. Two Pedestrian Connections where Current Average Distance Between Connections is >=200m

Average Distance Between Connections 100-200m

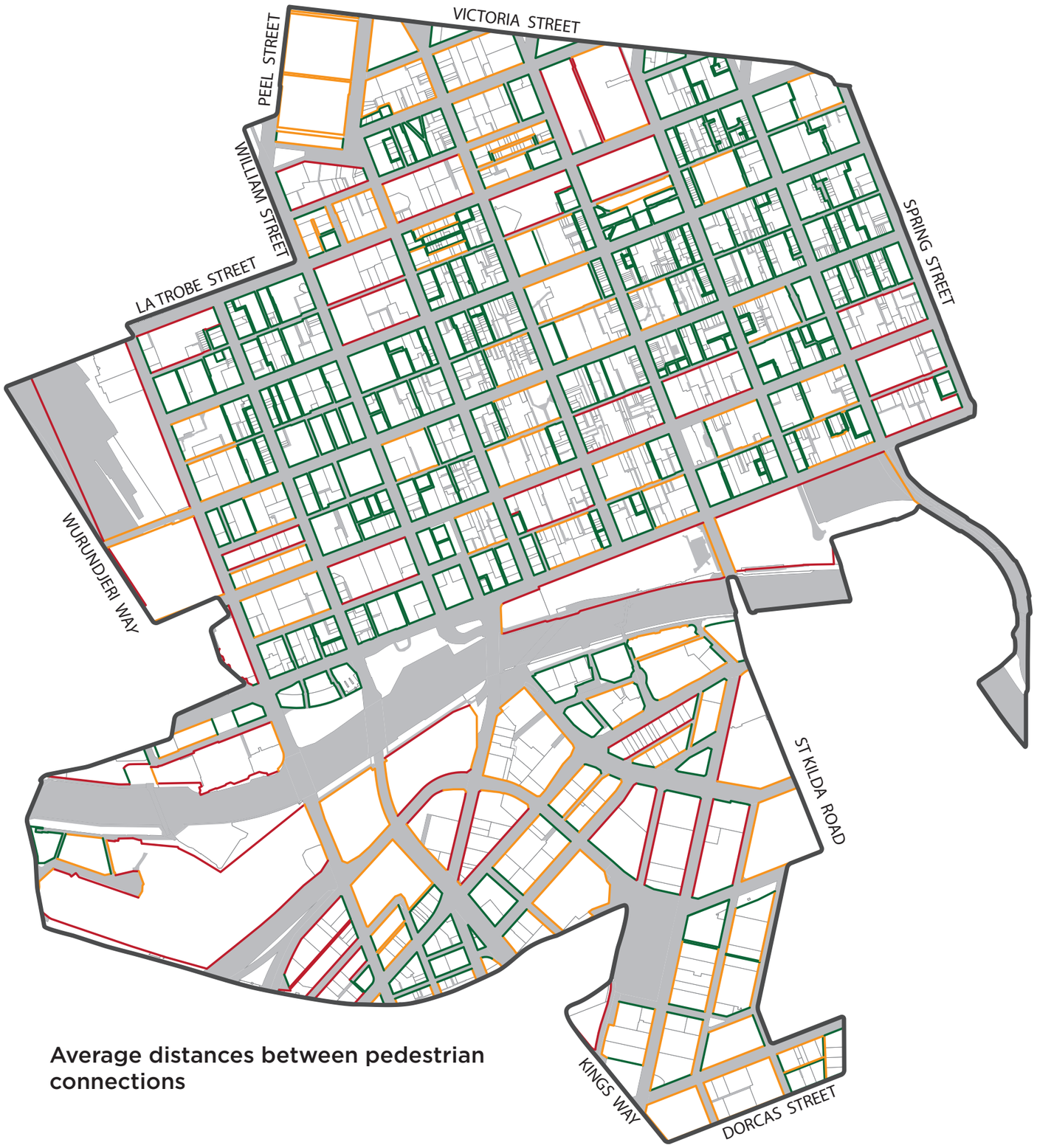
Average Distance Between Connections >=200m

Example of irregular Street Blocks in Southbank

methodology: excluding blocks with good permeability

This map applies the methodology of Street Block calculation overlaid with distances between pedestrian connections. Where a pedestrian connection has already increased the permeability of a street block, this is factored into the calculation of preferred locations. The map demonstrates a range of distances between connections, based on the established methodology.

Where the distance between connections is equal to or less than 100m these are highlighted in green, as they meet the preferred permeability within the Design Requirement. Accordingly properties with frontages highlighted in green are excluded from the subsequent analysis.



Average distances between pedestrian connections

Street

Property Base Boundary

<= 100 m

101 - 200m

>= 200 m

methodology: highlighting street blocks which do not meet the design requirement

The percentage of Street Blocks which do not currently meet the Design Requirement outlined for pedestrian connections are as follows:

CBD	Southbank	Total C308 Study
57 (out of 99)	**36 (out of 44)**	**93 (out of 143)**
58%	**82%**	**65%**

NOTE:

1. This includes blocks with civic buildings or major infrastrure

Street

Property Base Boundary

101-200 m

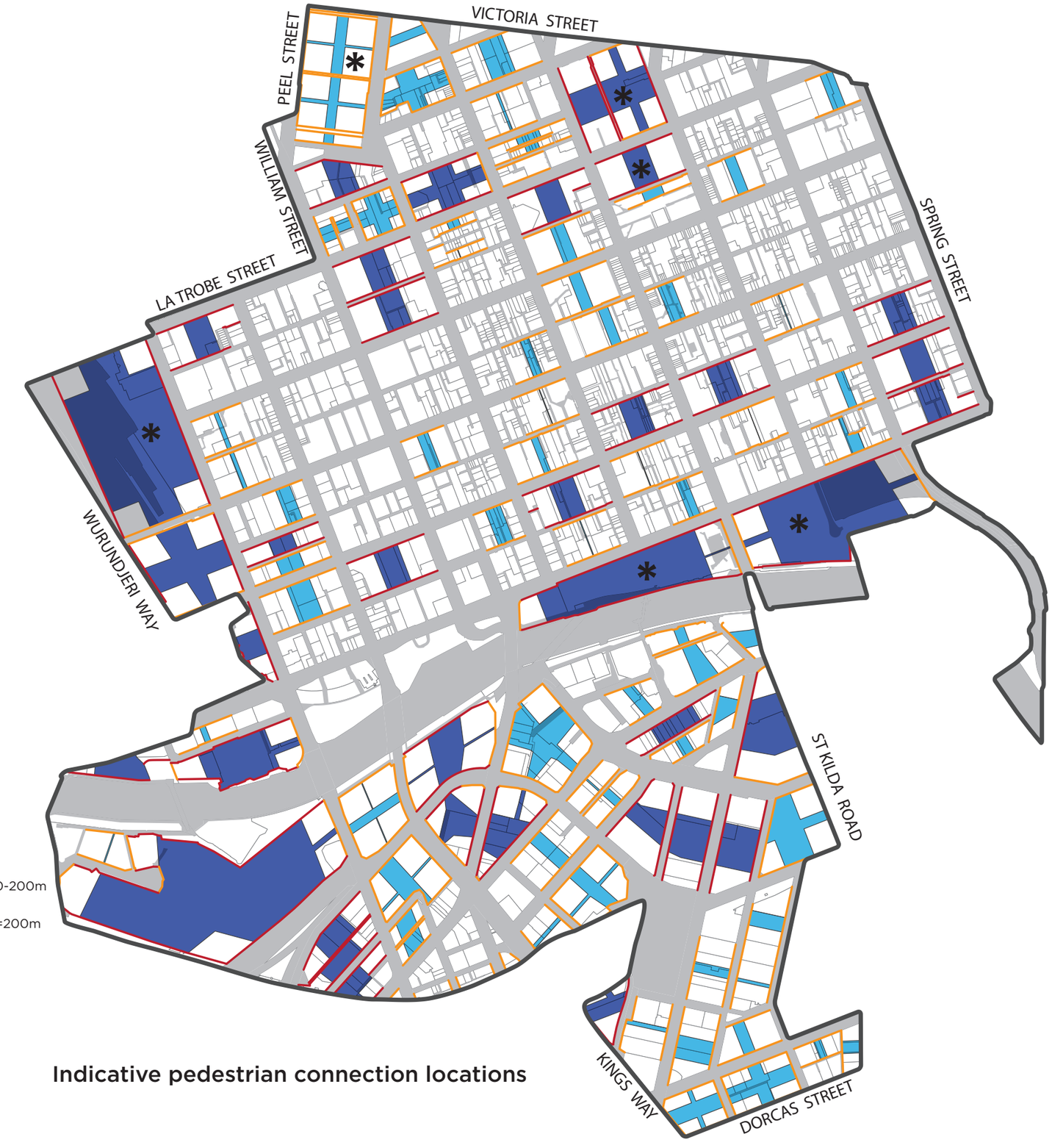
>= 200 m

Average distance between pedestrian connections of greater than 100m

indicative through block length location

Utilising the measurements within the proposed DDO1 Design Requirement, 93 street blocks do not currently meet the preferred permeability outcome.

The indicative locations of preferred through-block links are applied to correspond with block lengths which are between 100-200m in length, in addition to blocks longer than 200m in length.



Indicative pedestrian connection locations