

COUNCIL 16. 4. 2015

INFRASTRUCTURE, TRANSPORT AND ENVIRONMENT COMMITTEE
2. 4. 2015

**A meeting of the Infrastructure, Transport, and Environment Committee
 was held in the No. 1 Committee Room
 on 2 April 2015 at 8.31am.**

PRESENT: Councillor Phil Clearwater (Chairperson)
 Councillors Pauline Cotter (Deputy Chairperson), Vicki Buck and David East

APOLOGIES: Councillor Tim Scandrett for the entire meeting. Councillor David East left the meeting at 9.06am and returned at 11.35am, and was absent for items 1, 2, 3, 7, 8 and part of items 9 and 11.

The Committee reports that:

PART A - MATTERS REQUIRING A COUNCIL DECISION

1. AN ACCESSIBLE CITY – FIRST PHASE TRANSPORT PROJECTS: HOSPITAL CORNER STAGE 2 (FINAL LAYOUT), DURHAM STREET / CAMBRIDGE TERRACE (SECTIONS) AND MANCHESTER STREET (SECTIONS)

		Contact	Contact Details
Executive Leadership Team Member responsible:	Chief Planning Officer	N	
Officer responsible:	Transport and Research Unit Manager	Yes	8407
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1. PURPOSE AND ORIGIN OF REPORT

- 1.1 This report seeks a recommendation from the Infrastructure, Transport and Environment Committee that the Council approves consultation on the draft concept designs for three *An Accessible City* First Phase Transport Projects: TP1b - Hospital Corner Stage 2 (final layout), including sections of Hagley Avenue, St Asaph Street, Tuam Street and Antigua Street; TP3 - Durham Street / Cambridge Terrace – from Kilmore Street to Tuam Street, and TP4 - Manchester Street – from Kilmore Street to Lichfield Street.

- 1.2 The report arises from the following Council resolutions on 22 May 2014:

(26.1) Support the proposed changes to the First Phase programme of An Accessible City transport projects as outlined in the report to the Earthquake Recovery Committee of the Whole and within the original cost sharing Agreement between Council and the Crown.

(26.3) Approve public and stakeholder engagement over the design concepts for the amended First Phase programme of Accessible City projects identified in this report, other than for Transport Project 4 - Manchester Street.

- 1.3 The Council meeting on 11 September 2014 noted that:

25.1.2 It is proposed that a further briefing to Councillors will be undertaken on Transport Project 3 (Cambridge / Durham) and Transport Project 4 (Manchester Street) prior to any consultation starting.

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25.1.3 Significant aspects of the proposed concept designs for Transport Projects implement An Accessible City and the Council's provision for the works in the Three Year Plan and the Annual Plan, and that the scope of reasonably practicable options available for these works is limited as a result of the Council's obligations under the Canterbury Earthquake Recovery Act and the provisions in the Recovery Plan.

- 1.4 Development of concept designs for the three projects considered by this report, and initial engagement with key stakeholder groups, has been led by the Canterbury Earthquake Recovery Authority (CERA), supported by the Council. Previous First Phase *An Accessible City* transport projects – 1a (Hospital Corner: Stage 1 early works), 5 (Hagley / Moorhouse Corner), 9 (Tuam Street), 10 (Lichfield Street) and 11 (Colombo Street) - were led by the Council, working closely with CERA.

Significance and engagement

- 1.5 The decision to be made is not of high significance. The proposed changes are part of the transformation of the Central City travel network designed to make better use of public spaces for all transport choices. While that proposed transformation is of high significance as it will affect a significant proportion of Christchurch residents who drive, walk, cycle, or travel on buses to and within the inner city, the report is only seeking approval to consult (not implement) the proposed changes. Also, as outlined below the proposed changes to the transport network have been foreshadowed in other decisions and documents.
- 1.6 The Central City Recovery Plan provides for key components of the proposed changes, also key elements of the three projects, such as the creation and direction of one-way and two-way streets and the creation of new bus only lanes on Manchester and Tuam Streets, were gazetted by the Minister for Canterbury Earthquake Recovery on 11 December 2014. Using section 27 of the Canterbury Earthquake Recovery Act the Minister amended the Christchurch City Council Traffic and Parking Bylaw 2008 and the Christchurch City Council Speed Limits Bylaw 2010. Previous Council decisions have also already determined key parts of the transformation.
- 1.7 Accordingly, the decisions sought here are not of high significance as they relate to consultation on implementation of detail of the changes. Feedback is proposed to be sought on the detail of changes to the road corridor layouts and some aspects of traffic operations for each of these three schemes in accordance with section 76 of the Local Government Act 2002. These changes affect matters such as parking, intersection layouts and associated operational changes, cycle and pedestrian facilities and servicing access to local businesses.
- 1.8 Wide ranging consultation with affected property and business owners, citywide residents' groups and other key stakeholders, including emergency services and those with mobility and vision impairments, is planned. This will be supported by various forms of media coverage and signage to reflect the high significance of the three projects. The concept / consultation plans for each project can be viewed in **Attachment 1**.
- 1.9 All stakeholder feedback will be considered before the consultation concept plans are reviewed and presented along with an analysis of that feedback to the Infrastructure, Transport and Environment Committee, and subsequently the Council, for approval.

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2. EXECUTIVE SUMMARY

- 2.1 The Council considered a report on *An Accessible City* – Revised First Phase Transport Projects at its meeting on 22 May 2014. The purpose of that report was to revise the first phase transport projects so they better aligned with early key anchor projects, particularly the opening of the new Bus Interchange in mid 2015, and to secure approval to begin consultation on these projects.
- 2.2 Some components of the proposed changes contained in this report are outlined in the Christchurch Central Recovery Plan, in particular the *An Accessible City* section, including the creation of the East Frame and eastwards widening of a section of Manchester Street between Armagh and Lichfield Streets to create a bus priority boulevard. Also, *An Accessible City* contained matters such as the intended traffic direction on Tuam Street, the placement of the Hospital Corner and Manchester Street super stops and the new two-way traffic operation on a section of Durham Street between Lichfield and Tuam Streets. A number of these matters were later confirmed by the Minister under section 27 of the Canterbury Earthquake Recovery Act in the gazetted changes to the Council's relevant traffic, parking and speed limit Bylaws. However, the detail of the streetworks and transport network changes (for example, alterations to car parking and access arrangements, and changes to intersection traffic signals) are not.
- 2.3 This report outlines the details of the proposed streetworks and associated traffic network changes for consultation for the following First Phase Transport Projects: 1B (Hospital Corner – Stage 2 final layout), 3 (Durham Street / Cambridge Terrace – Kilmore to Tuam streets) and 4 (Manchester Street - Kilmore to Lichfield streets).

3. COMMENT

- 3.1 In May 2014 the Council approved the revised *An Accessible City* First Phase Transport Projects. **Attachment 2** outlines the general location of the proposed projects and key changes to the programme approved at that time. On 7 August the Council's former Earthquake Recovery Committee of the Whole endorsed details of the consultation for Transport Projects 1a (Hospital Corner: Stage 1 early works) and 5 (Hagley / Moorhouse Corner) - and on 11 September endorsed details of the consultation for Transport Projects 9 (Tuam Street), 10 (Lichfield Street) and 11 (Colombo Street). This report focuses on three of the remaining five transport projects to complete the First Phase Transport programme. All of the Transport Projects have been developed from *An Accessible City*, which is the transport chapter of the Recovery Plan. Decisions on transport matters in the Central City cannot be inconsistent with *An Accessible City*, and therefore components of the proposed concept designs that are the subject of this report have been directed by that document and the Recovery Plan itself, and later confirmed and gazetted by the Minister through section 27 of the Canterbury Earthquake Recovery Act.
- 3.2 Specifically the Minister, using section 27 of the Canterbury Earthquake Recovery Act to amend the Christchurch City Council Traffic and Parking Bylaw 2008 and the Christchurch City Council Speed Limits Bylaw 2010, confirmed and gazetted the following in December 2014:
- Tuam Street one-way west to east with a westbound bus lane from Antigua Street to Hagley Avenue
 - Lichfield Street from Oxford Terrace to Fitzgerald Avenue to convert from one-way to two-way
 - Oxford Terrace one-way from Riccarton Avenue to Manchester Street (eastbound between Riccarton Avenue and Antigua Street), with shared zones, permitting continued access by cyclists and local access vehicles.

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- Durham Street South to remain one-way but with a two-way section between Lichfield Street and Tuam Street
- Cambridge Terrace one-way in a westerly direction from Kilmore Street to Manchester Street
- St Asaph Street one-way in a westerly direction from Madras Street to Hagley Avenue
- Worcester Street (Manchester Street to Madras Street) to become a shared zone
- Cashel Street (Manchester Street to Madras Street) to become a shared zone
- A new street between Lichfield Street and Gloucester Street (through the East Frame) to be a shared zone
- Bus-only lanes to be created on Manchester Street between Armagh Street and Lichfield Street, and Tuam Street between Hagley Avenue and Antigua Street
- Creation of a Central City maximum 30 kilometres per hour speed zone.

Transport Project 1B - Hospital Corner Stage 2 (final layout)

- 3.3 This is the second stage of changes and the final layout proposal for the transport network and streetscape alterations around Hospital Corner. It includes finalising works associated with the new eastbound one-way layout on Tuam Street, from Oxford Terrace to just east of Durham Street South, and the complementary one-way westbound St Asaph Street route. The proposals also affect sections of Hagley Avenue, Antigua Street and Montreal Street. Stage 1A works began in late 2014 to support the opening of the Bus Interchange in mid 2015 and the current development of Te Papa Ōtākaro / Avon River Precinct. At the time of writing, the majority of those key network routing changes in this area had been implemented. While, as outlined below, this project does propose to remove a number of existing street trees and on-street carparking spaces it also proposes significant new landscaping, enhanced pedestrian and active travel infrastructure. It will also enable the new bus super stop on a widened section of Tuam Street between Hagley Avenue and Antigua Street. It is proposed to brief councillors on the design of the bus stop shelters when the draft concept designs have been completed. The project will also create new and improved cycle and pedestrian facilities on those local streets including Tuam, St Asaph and Antigua Streets, along with Hagley Avenue and the Tuam Street intersections with Montreal and Durham Streets.

- 3.4 The following key features are proposed in each block:

Tuam Street

- Hagley to Antigua: as the western gateway into the proposed slow core, bus stops are provided either side of this widened section of Tuam Street to form a new bus super stop. Two general traffic lanes will be provided eastbound, one 'contraflow' bus lane westbound separated by a tree planted median strip with wide footpaths on both sides. This southern section of Tuam Street westbound between Antigua Street and Hagley Avenue is intended for exclusive bus use but will, however, remain accessible to westbound emergency service vehicles.

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- The combined proposals for this section of Tuam Street will involve the removal of 21 existing trees shown on the consultation plans. A detailed arborist's report, which will be circulated separately to elected members because of its size, indicates that two notable English oak trees (CCC ID 3296 and 3297) will need to be removed on the northern side of Tuam Street to make way for the super stop. Tree 3297 requires removal to accommodate the super stop but 3296 needs to be removed as it would be unstable following the removal of tree 3297. These trees are currently on Canterbury District Health Board (CDHB) land but land purchase for the super stop will result in tree 3297 being on road reserve. Both trees are classified as being in 'fair' overall condition. In addition to these, a group of nine pin oaks located on the northern side require removal. They too are classified as being in 'fair' overall condition. Ten trees are to be removed on the southern side of Tuam Street to make way for the super stop. Nine of the 10 trees affected by the proposal are protected by the conditions of a prior subdivision resource consent. These trees range from 'good' (5) to 'fair' (4) overall condition.
- The nearby section of Oxford Terrace in Te Papa Ōtākaro / Avon River Precinct will be available for local pedestrian and cycle movements together with some limited parking and servicing arrangements to frontage land uses. These details for Oxford Terrace will be addressed later in scheme designs for that section of Te Papa Ōtākaro / Avon River Precinct, which are not the subject of this consultation.
- Antigua to Durham: two eastbound general traffic lanes with a short section of dedicated bus lane, on-street parking and loading on the south side (primarily short stay), a new separated one-way cycle lane eastbound on the north side of the street. The proposals include additional broad-leaved lime trees (*Tilia platyphyllos*), with the plans showing the removal of some existing trees adjacent to the super stop. Other trees are also expected to be affected by the proposed adjacent Health Precinct developments. There will be further landscaping and footpath upgrades.

Montreal Street:

- Two general northbound traffic lanes at mid-block locations with an additional turning lane south of Tuam Street, new crossing facilities for pedestrians and cyclists, together with general traffic access arrangements to accommodate crossing and access activity associated with Te Papa Ōtākaro / Avon River Precinct (a separate project) at Oxford Terrace. On-road cycle lanes on the western side.

Antigua Street

- Oxford to Tuam: one traffic lane in each direction with a short left turn lane to Tuam Street, P5 parking on the west side for future outpatient pick up and drop off, a shared path on the west side connected to Te Papa Ōtākaro / Avon River Precinct turning circle on Oxford Terrace, additional street trees and local footpath upgrades. Avon River Precinct works beyond the proposed small roundabout at Antigua / Oxford Terrace are not part of this project.
- Tuam Street to St Asaph Street: one traffic lane in each direction separated by a raised median, right turn lane to St Asaph Street, northbound bus only left turn lane onto Tuam Street, new shared pedestrian and cycle path on the east side, no parking throughout. Footpath enhancements.

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St Asaph Street

- Antigua Street to Hagley Avenue: two traffic lanes westbound, a new shared cycle / pedestrian path on the south side (across the frontage of the proposed Metro Sports Facility) linking to the signalled crossing of Hagley Avenue and the new Hagley Park cycle / pedestrian shared path (delivered under TP5). Additional street trees, landscaping and footpath upgrades, with the proposed removal of three existing small street trees, two of them in poor health. A further tulip tree, outside Hagley College, is currently being assessed as its health is marginal, according to the arborist.
- Crossing facilities for cyclists and pedestrians across St Asaph Street, will be considered further in order to link the proposed Metro Sports facility and South Frame/ Health Precinct with the local cycle and pedestrian network and Te Papa Ōtākaro / Avon River Precinct. These will be detailed at a later date as part of those local precinct and anchor project developments.

Hagley Avenue

- St Asaph Street to Tuam Street: two traffic lanes northbound (to approach Riccarton Avenue), with an additional right turn lane onto Tuam Street. One lane southbound, flush median strip, and some minor tree planting enhancements adjacent to the St Asaph Street intersection.

On Street Parking Effects

- The above proposed streetworks, tree planting and landscaping enhancements require the proposed removal of 114 existing on-street parking spaces. The remaining on-street parking is proposed to be prioritised for short stay parking, servicing, loading and disabled spaces.

Transport Project 3 – Durham Street / Cambridge Terrace

- 3.5 This Transport Project looks to renew both Cambridge Terrace and Durham Street between Kilmore Street and Tuam Street. Durham Street is currently one-way southbound and forms part of the western north / south one way pair of main distributor streets with Montreal Street. The project intends to retain the majority of Durham Street as a one-way southbound road with two traffic lanes. The only section that will significantly differ in traffic network functionality is the part of Durham Street between Tuam Street and Lichfield Street / Oxford Terrace, where a new two-way section of street is proposed to allow a single northbound traffic lane to access Lichfield Street and the proposed parking buildings to be located there. The new northbound lane will also permit servicing access to be maintained to Oxford Terrace premises between Durham Street South and Montreal Street for traffic approaching from the south and west. Limited road widening is required for this section of Durham Street and the additional land for this has been acquired from the new adjacent Justice and Emergency Services Precinct.
- 3.6 Eighty existing on-street parking spaces will need to be removed to enable improved facilities for pedestrians and cyclists and improved landscaping with passive stormwater treatment on the corridor. As with the other *An Accessible City* transport projects, the design seeks to minimise these losses as much as possible. Effects on on-street parking availability and servicing capability to local land uses will be made clear through the consultation drawings and stakeholder briefings.

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- 3.7 The project is adjacent to Te Papa Ōtākaro / Avon River Precinct, the Park of Remembrance, the Justice and Emergency Services Precinct and the historic Canterbury Provincial Council Buildings. Design proposals have paid particular attention to ensure sympathetic visual and physical links to these significant places and the plans have been carefully integrated so these important projects are co-ordinated. Particular care has been taken to minimise the impact on mature tree specimens located along the corridor. Three trees (at 280 Durham Street North (1) and 26 Lichfield Street (2)) will require removal to accommodate these works and are shown on the consultation plans. Two additional trees (293 Durham Street North and 1/93 Cambridge Terrace) may have to be removed if excavation of existing kerb and channel destabilises them. The arborist in his report has noted that the two trees may be using the kerb and channel to support their structural roots. New trees will be planted throughout the corridor and the indicative locations for these (subject to detailed design) are shown on the concept plans.
- 3.8 The Cambridge Terrace / Durham Street corridor has a number of large mature trees along its eastern side. While the works don't require their removal, seven trees will need specific design to protect the area around their roots and a further 27 trees will require care during construction to avoid unnecessary compaction of the root zone.
- 3.9 In relation to the project there are the following key features in each block:
- Kilmore to Armagh: two southbound traffic lanes (with additional turning lanes at the intersection), on-street parking, on-road cycleway on the east side, and footpaths. Some new street trees.
 - Armagh to Gloucester two southbound traffic lanes (with additional turning lane at the intersection), a four metre wide shared pedestrian / cycle path on the east side outside the Provincial Council Buildings, and a standard footpath on the west side. A P10 parking space is also proposed adjacent to the Provincial Council Buildings to support activities there on reopening. New mobility impaired and short stay parking is provided on the nearby Armagh Street approach. Some new street trees, with the proposed removal of one existing tree at the Gloucester Street intersection.
 - Gloucester to Worcester: two southbound traffic lanes (with an additional turning lane at the intersection), a new four metre wide shared pedestrian / cycle path on the east side, on-street parking on the west side and footpath enhancements. Some new street trees and landscaping – mainly on the east side. Worcester to Cashel: two southbound traffic lanes mid block (with turning lanes at intersections), a new four metre wide shared cycle / pedestrian path on the east side, on-street parking on the west side and footpath enhancements. Some new street trees on both sides of the street.
 - Cashel to Lichfield: two southbound traffic lanes (with an additional left turn lane at the intersection with Lichfield Street), on road southbound cycle lane (south of Cashel Street, where the separated facility meets with the Avon River Precinct routes from the west), a new signalised crossing point mid block to connect to Te Papa Ōtākaro / Avon River Precinct.
 - Lichfield to Tuam: two southbound traffic lanes (with an additional left turn lane at the intersection with Tuam Street), a new single northbound lane (to provide access to the new Retail Precinct accessed via Lichfield Street, and Oxford Terrace premises to the west), on-road southbound cycle lane, footpath enhancements and a new pedestrian crossing south of the Lichfield Street intersection. Southbound left turn only exit availability from the adjacent Oxford Terrace to Lichfield Street. Removal of two existing street trees at the corner of Lichfield Street and Durham Street South.

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- A loading zone is provided for the Justice and Emergency Services Precinct.
 - The section of Oxford Street that intersects with Lichfield Street on its north side, adjacent to the intersection with Durham Street South, is a shared zone and has a left turn only exit on Lichfield Street, eastbound.
- 3.10 The new cycle facilities to be constructed along Durham Street for the majority of the length of this scheme connect to the planned cycle facilities on Tuam Street along the river from Hospital Corner and the planned Te Papa Ōtākaro / Avon River Precinct cycleway.

Transport Project 4 – Manchester Street (Kilmore Street to Lichfield Street)

- 3.11 This project seeks to establish Manchester Street as a tree-lined boulevard, with priority for buses and high quality public spaces, along with vehicle access to local properties. To create a well planted boulevard streetscape, and ensure room for buses and pedestrians, Manchester Street will be widened by 9 metres (to 29 metres) between Armagh and Lichfield streets, in conjunction with the adjacent new East Frame development.
- 3.12 Manchester Street is designed primarily in traffic terms to ensure north – south bus movements are prioritised and can therefore provide a reliable and efficient service to and from the new Interchange (located south of Lichfield Street), and secondly to accommodate local traffic movements within a substantially enhanced tree-lined street.
- 3.13 The design is based on *An Accessible City's* road use hierarchy, whereby general traffic from the Avenues and eastern side of the Central City uses the main distributor streets of Madras Street or Barbadoes Street, and the east-west distributors of Gloucester Street and Hereford Street, to access destinations in the City Centre.
- 3.14 Turning movements on Manchester Street are retained at the intersections with the local distributor streets of Gloucester, Hereford and Lichfield (west), but restricted at other intersections to prioritise public transport and make the most efficient use of the transport network. These proposed turning restrictions are made clear on the consultation plans and accompanying public consultation booklet. The proposals also entail the removal of 51 existing on street parking spaces throughout the corridor, with the remaining proposed spaces prioritised for short stay parking, loading, servicing and disabled parking needs.
- 3.15 The proposed scheme design uses traffic signal controls at a number of the intersections and adjacent to the new bus super stop to ensure northbound and southbound buses have priority. This is to ensure the targeted levels of service for bus services (primarily corridor journey times and predictability) are achieved. Modelling has shown that for projected traffic and bus volumes at 2031, the proposals offer a good level of bus priority.
- 3.16 The concept plans importantly seek to achieve a significantly enhanced landscaped and tree-lined 'boulevard', which also includes much improved public transport amenity through a new bus super stop facility either side of Worcester Street. The design does not include continuous specific on road cycle facilities within the widened road section, as it is proposed that the nearby East Frame will provide for north – south cyclists in a traffic free environment, along with Colombo Street through both protected lanes and slow shared space street sections in the heart of the central city. The concept design does, however include a wide shared pedestrian and cycle path on the eastern side of the street for local access needs.

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- 3.17 The concept design development has explored the possibility of further restrictions of general traffic access along sections of Manchester Street. However, this could result in more vehicles using sensitive streets such as Colombo Street or the laneways within the East Frame. It would also reduce the total number of people travelling on Manchester Street providing passive surveillance and therefore a safer environment. The design presented for consultation delivers the 'boulevard' concept of a greener streetscape for all users and provides the desired priority for bus operations.
- 3.18 As a result of the above considerations, the proposed scheme does not create 'bus only' sections of Manchester Street. Monitoring of bus service efficiency will be undertaken on the corridor in association with Environment Canterbury (ECan) to ensure the envisaged bus priority and efficiency is achieved.
- 3.19 To accommodate the proposed road layout, 14 trees will require removal as shown on the consultation plan. Seven of these are existing street trees and a further seven are on land acquired by the Christchurch Central Development Unit to widen Manchester Street. These trees are all classified as being in 'fair' to 'poor' overall condition. A further two trees (245 and 221 Manchester Street) may require removal as the arborist thinks they may be dependent on the existing kerb and channel for structural support. Both trees are classified as being in 'poor' overall condition. In addition, two notable trees that are part of the Edmonds Poplars Avenue will require specific design for construction works to avoid damage. A further six trees will require care to avoid compaction during construction.
- 3.20 In relation to the project the following key features are proposed in each block of Manchester Street:
- Kilmore to Cambridge: within the existing road space, one traffic lane in each direction, new street trees on the westside, on-street parking primarily on the west side, retention of on-road cycle lanes in each direction and 3 metre wide footpaths (pre – existing).
 - Cambridge to Armagh: within the existing road space, one traffic lane in each direction with four metre wide footpaths, a link at the Armagh Street intersection to the major cycle route in the East Frame, a pedestrian refuge to connect with the proposed Margaret Mahy Family Playground. Intersection arrangements with Cambridge Terrace permitting continuity east – west of the new Avon River key cycle route and the intended one-way operation westbound of Cambridge Terrace associated with separate Te Papa Ōtākaro / Avon River Precinct project.
 - Armagh to Gloucester: within a widened road corridor, one traffic lane in each direction plus a dedicated bus only lane for south-bound buses, on-street parking on the west side only, three rows of new street trees, five metre wide enhanced footpaths and a shared local access pedestrian / cycle path on the eastern side of the street. Twelve trees will be removed in this block on the eastern side.

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- Gloucester to Hereford: Within a widened road corridor, new southbound bus super stop on the eastern side of the street (north of Worcester), with its twin north bound stop located south of Worcester Street on the western side. The location of the new bus stops and enclosed waiting areas is staggered to allow sufficient width for traffic lanes along with wider footpaths. The canopy structures themselves are currently subject to ongoing architectural design, and so the consultation drawings and literature will show an artist's impression of the likely form of the proposed structures only. Councillors will be separately briefed on the design of the shelters when the draft concept designs are completed. CERA representatives have been in discussion with property owners on the west side of Manchester Street between Worcester Street and Hereford Street about access to their properties. A general traffic lane in each direction with traffic signal controls, which will give buses priority as they leave the super stop. Limited on-street parking is proposed on the opposite side to the super stops, with wide footpaths and new tulip trees (*Liriodendron tulipifera*) throughout the section of corridor. One tree will be removed on the corner of Gloucester and Manchester Streets.
- Hereford to Lichfield: within a widened road corridor, one traffic lane and a dedicated bus lane (centrally located) in each direction, on-street parking on both sides, a widened footpath on the eastern side to accommodate a shared pedestrian / cycle path for local access needs), and three rows of new street trees. One tree will be removed on the corner of Cashel and Manchester Streets. Priority bus movements to and from Lichfield Street (where the northern access to the new bus interchange is located), with retention of general traffic access to and from Lichfield Street to support access from the north to the new retail precinct parking facilities. Provision of a new narrow divided (kerbed) central median for the majority of the street section in order to ensure bus priority, resulting in access to High Street and individual frontage premises on the western side of the corridor being restricted to left in / left out only. The existing Bedford Row access and the temporary parking area there will be affected by future provisions of the East Frame.

Consideration of Alternatives

- 3.21 As noted in section 3.2, the framework within which the draft concept designs for the Transport projects have been developed has been set by *An Accessible City* and the subsequent section 27 announcement by the Minister for Canterbury Earthquake Recovery which has further directed changes to Council traffic, parking and speed limit bylaws under section 27 of the Canterbury Earthquake Recovery Act. Therefore, components of the concept designs (the key public transport routes and bus only lanes, the location of the super stops, the creation of a boulevard on Manchester Street, traffic operational arrangements establishing one and two-way streets and shared zones (within the new Te Papa Ōtākaro / Avon River Precinct and East Frame) and the new low speed zone, are established by the Minister's directions for changes to the bylaws. However, the detail of these changes for each of these three schemes (eg amendments to on-street car parking and service vehicle access, changes to traffic signals and intersection layouts and associated traffic movements, the creation of new cycleways and shared path facilities) are not. While alternatives were considered in accordance with best practice and relevant statutory requirements, this was undertaken within the context of *An Accessible City*, the Recovery Plan and those bylaw amendments. The primary options that have been considered in preparing these concept designs are summarised in **Attachment 3**.

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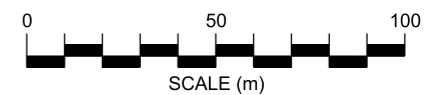
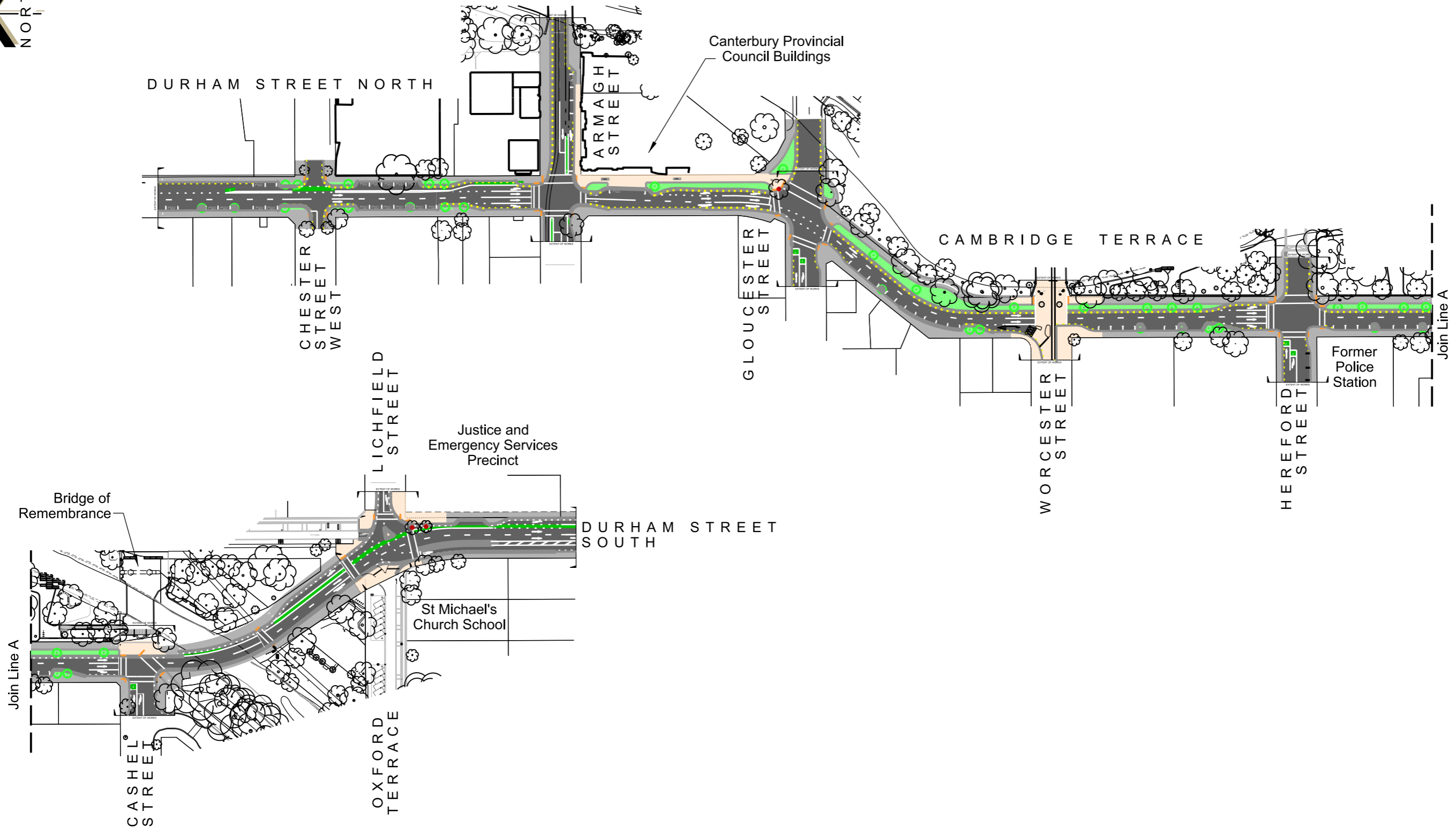
4. FINANCIAL IMPLICATIONS

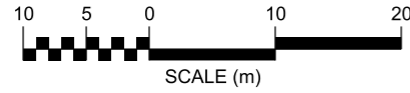
- 4.1 There are no additional financial implications that stem from approving public engagement on the three transport projects. The costs of the proposed projects form part of the Cost Share Agreement between Council and the Crown and the schemes featuring in this report were part of an approved *An Accessible City* First Phase programme of projects approved by the Council at its meeting on 22 May 2014. The schemes are provided for in Council's Three Year Plan and Annual Plan.
- 4.2 The three projects are funded from the total \$72 million funding agreement between the Council, CERA and the New Zealand Transport Agency. The indicative cost for TP1b (Hospital Corner) is \$14 million, TP3 Durham Street / Cambridge Terrace \$14 million and TP4 Manchester Street is \$15.5 million – a total of approximately \$43.5 million.

5. STAFF AND COMMITTEE RECOMMENDATION

That the Council:

- 5.1 Receive the report and notes that significant aspects of the proposed concept designs for the three Transport Projects considered by this report for consultation implement An Accessible City, the Minister's for Canterbury Earthquake Recovery's changes to the bylaws and the Council's provision for the works in the Three Year Plan and the Annual Plan. Therefore the scope of reasonably practicable options available for these works is limited as a result of the Council's obligations under the Canterbury Earthquake Recovery Act and the provisions in the Recovery Plan.
- 5.2 Approve consultation on the concept plans for:
- TP1b - Hospital Corner Stage 2 (final layout) including sections of Hagley Avenue, St Asaph Street, Tuam Street and Antigua Street.
 - TP3 - Durham Street / Cambridge Terrace – from Kilmore Street to Tuam Street.
 - TP4 - Manchester Street – from Kilmore Street to Lichfield Street.





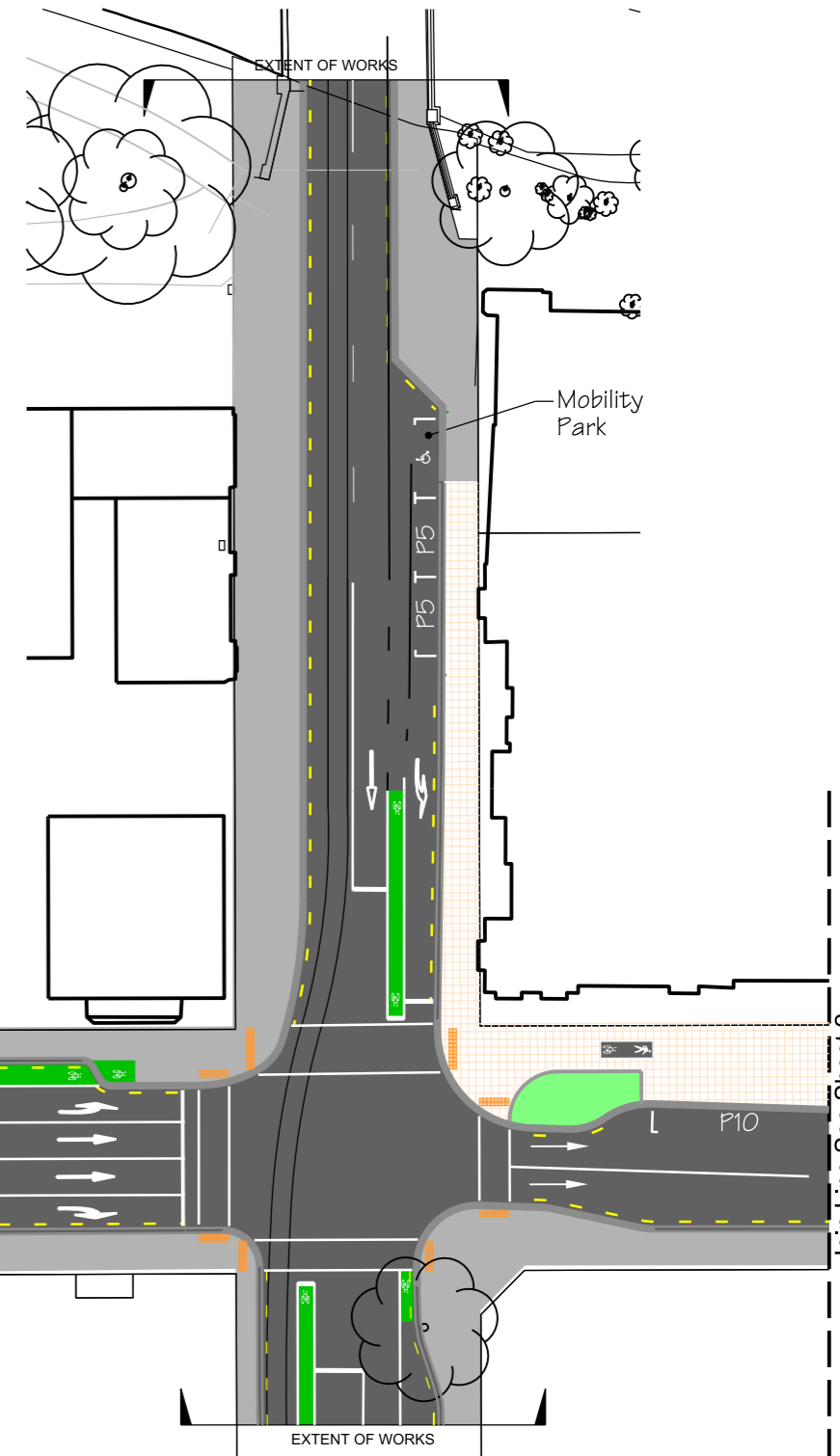
KEY	
	Existing Kerb
	Proposed Kerb
	Landscape Area
	Patterned Surface
	Tactile Pavers
	Existing Tree
	Proposed Tree
	Parking P\$ P60 - Unless otherwise stated

D U R H A M

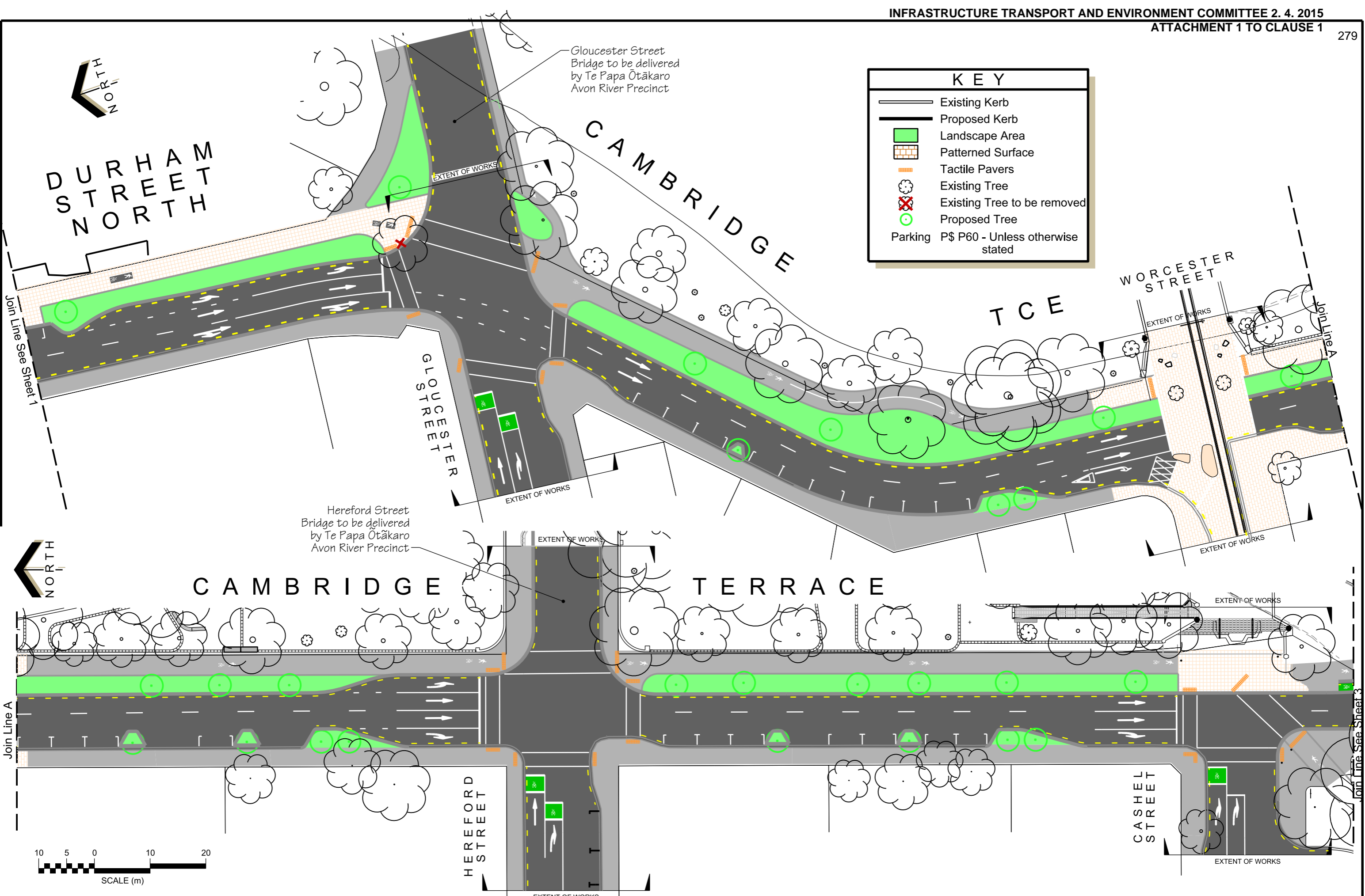
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C H E S T E R
S T R E E T
W E S T

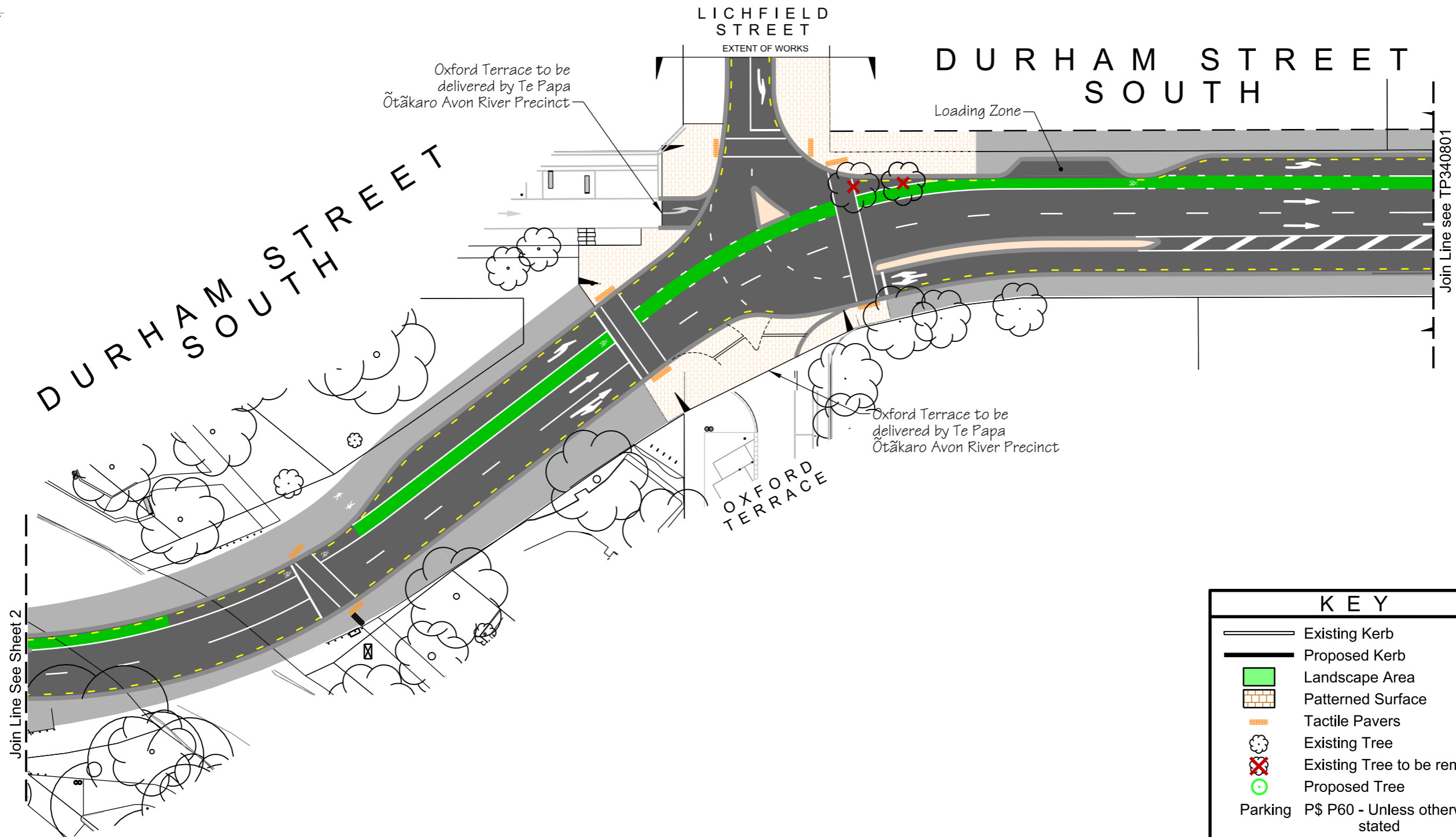
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S T R E E T



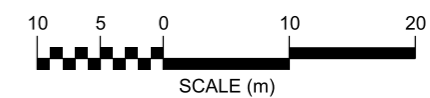
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© Copyright Christchurch City Council © Aerial Photography Copyright Terralink International Ltd 0



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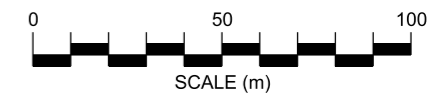
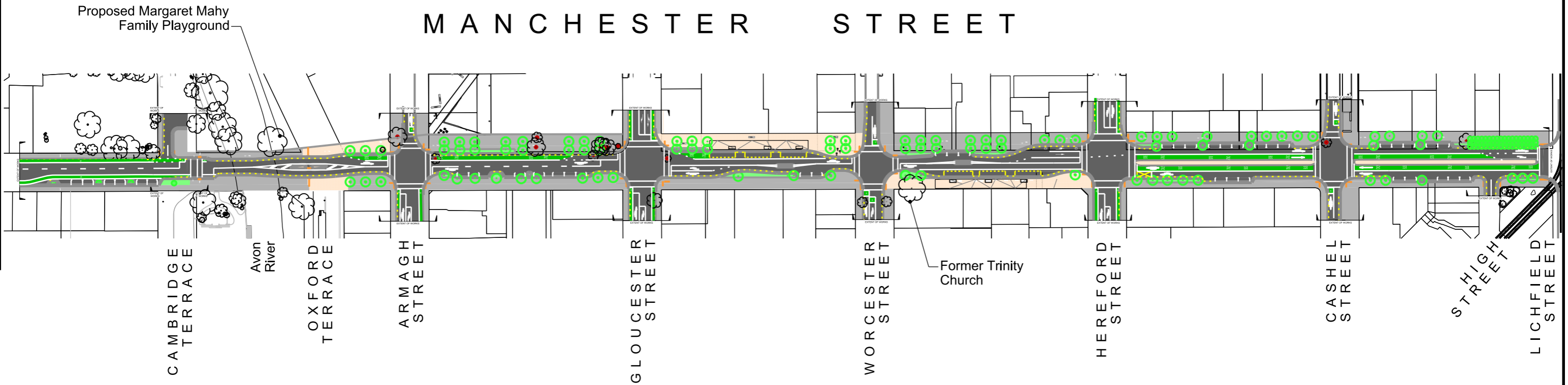


KEY	
	Existing Kerb
	Proposed Kerb
	Landscape Area
	Patterned Surface
	Tactile Pavers
	Existing Tree
	Existing Tree to be removed
	Proposed Tree
	Parking P\$ P60 - Unless otherwise stated

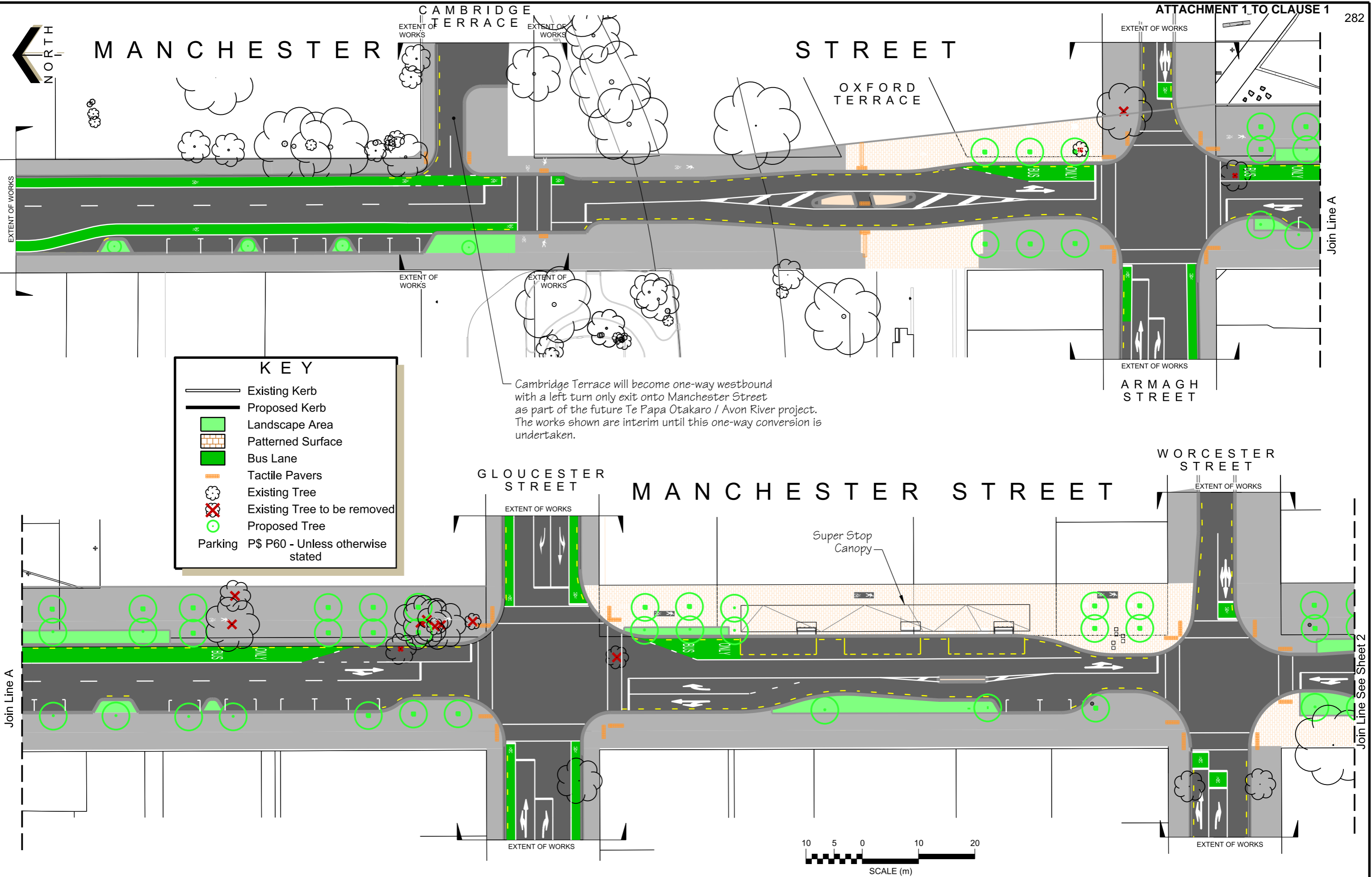


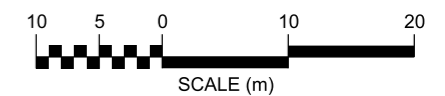


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The timing of construction will be co-ordinated with the development of private lots and Canterbury District Health Board Land

The final layout will be determined as part of Te Papa Ōtākaro Avon River Precinct

Key Cycle and Pedestrian route. The design of this section is currently being discussed with the CDHB. The final layout will be determined later

Christchurch Hospital

Proposed Outpatient Facility

Metro Sports Facility

HAGLEY AVENUE

ST ASAPH STREET

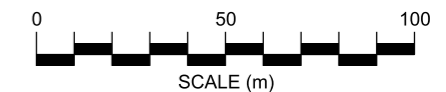
ANTIGUA STREET

TUAM

MONTREAL STREET

STREET

DURHEIM STREET





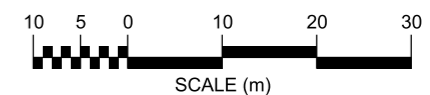
HAGLEY AVENUE

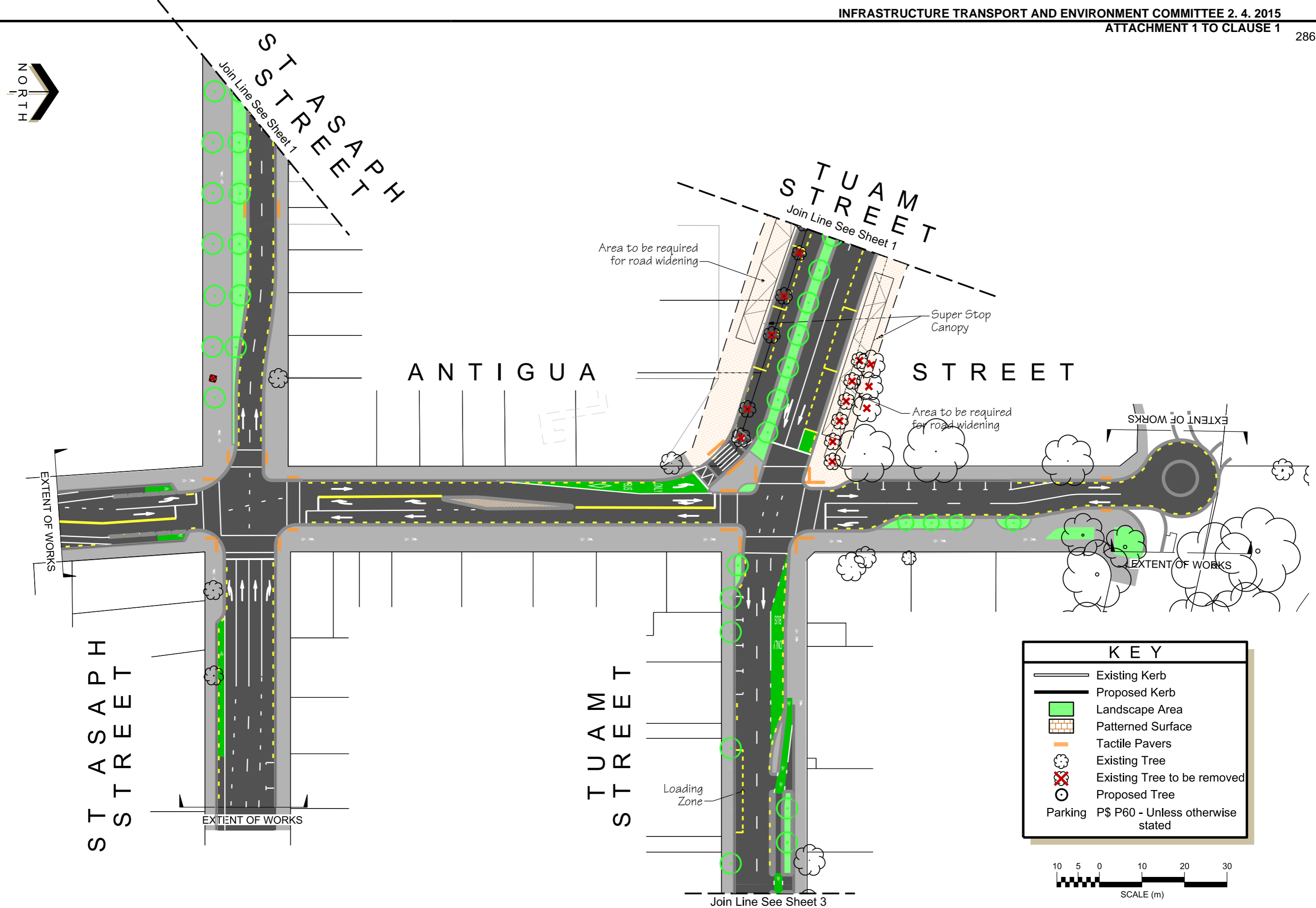
STURGEON STREET

ST ASAPH STREET

KEY

- Existing Kerb
- Proposed Kerb
- Landscape Area
- Patterned Surface
- Tactile Pavers
- Existing Tree
- Existing Tree to be removed
- Proposed Tree
- Parking P\$ P60 - Unless otherwise stated







KEY	
	Existing Kerb
	Proposed Kerb
	Landscape Area
	Patterned Surface
	Tactile Pavers
	Existing Tree
	Existing Tree to be removed
	Proposed Tree
	Parking P\$ P60 - Unless otherwise stated

T U A M S T R E E T

M O N T R E A L S T R E E T

OXFORD
TERRACE

OXFORD
TERRACE

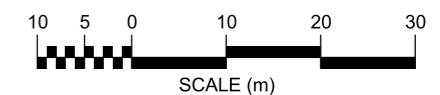
Te Papa Ōtākaro
Avon River Precinct

CAMBRIDGE
TERRACE

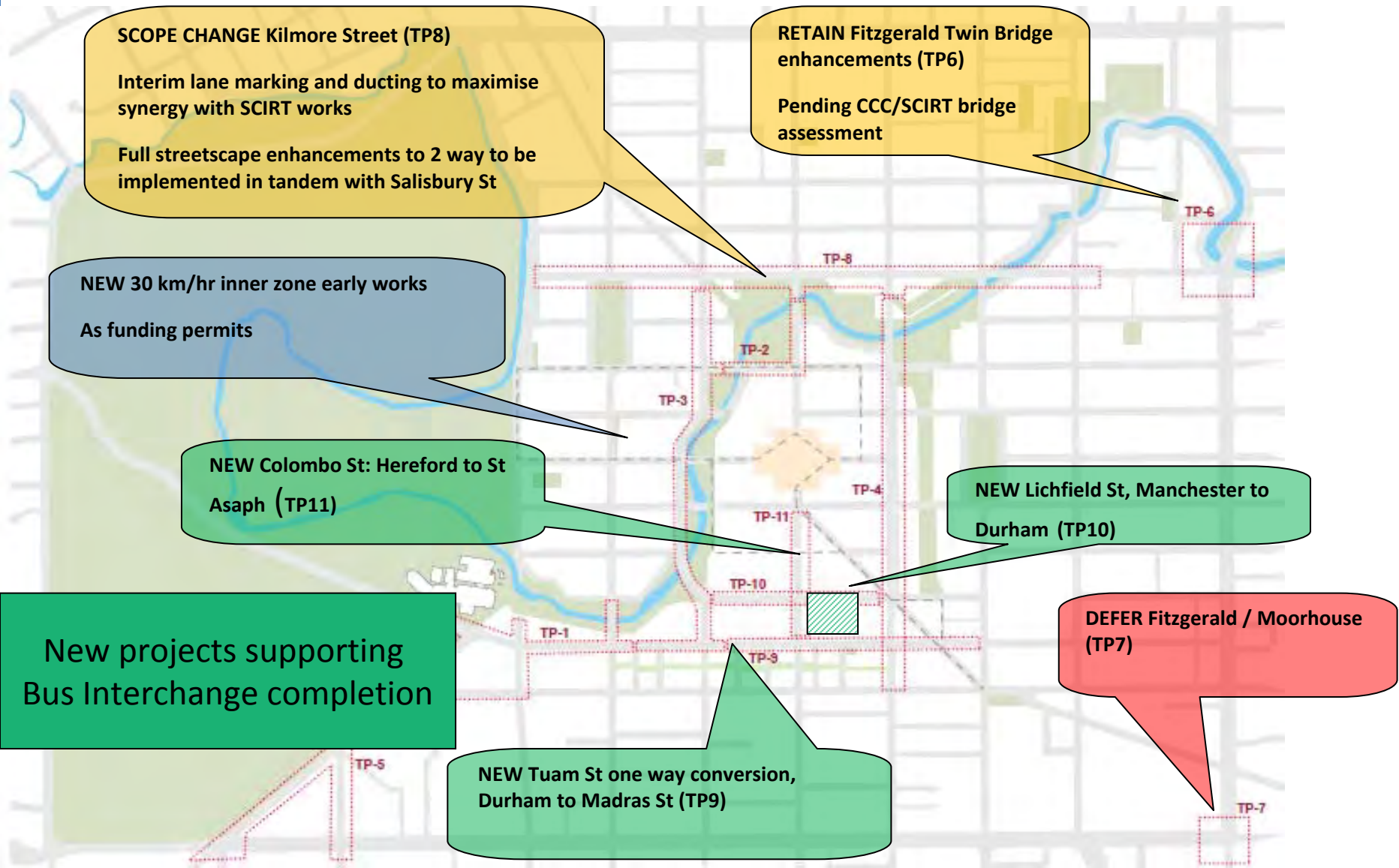
T U A M
S T R E E T

DURHAM
STREET
SOUTH
Join Line see TP340601

Loading
Zone



Revised AAC First Phase Programme (as May 2014)



ATTACHMENT 3: CONCEPT DESIGN OPTIONS CONSIDERED FOR HOSPITAL CORNER STAGE 2 (FINAL LAYOUT), DURHAM STREET / CAMBRIDGE TERRACE AND MANCHESTER STREET

The options considered for each Transport Project are outlined in the table below.

Transport Project	Key matters to conform to Central City Recovery Plan and AAC	Primary options considered
TP1b Hospital Corner Stage 2 final layout	<ul style="list-style-type: none"> • Conformity with / further enhancement of TP1a works. • Tuam Street becomes one-way distributor street eastbound between Hagley Ave and Durham Street (South) • Bus routing around Hospital Corner as shown in AAC road user hierarchy • Creation of a bus super stop on Tuam Street between Hagley Ave and Antigua Street • Tripling of public transport use by 2041. • Establishment of key cycle routes. • Provide efficient and reliable main distributor routes, with posted speed limit of 30 km/h in the central zone, including provision for heavy commercial use. Introduce low speed (30 km/h zone) along Tuam, Antigua and Montreal Streets (Hagley Ave and St Asaph Streets will remain 50 km/h.) • Significantly improve the amenity and streetscape quality through intensification of street tree planting and other measures. • Ensure continued bus operations within and on the routes through the project area. 	<ul style="list-style-type: none"> • Options were considered around the placement of the separated cycle facility on the north or south side of Tuam Street (including conformity with proposals for TP9 Tuam Street). Various options were developed for the design of the facility including protected intersection treatments for cyclists. • Options for more street trees on Tuam Street were considered in balance with the separated cycle path and parking. The proposed design is considered the best solution. • A number of options were considered for provision of cycle and pedestrian facilities along St Asaph including: separated cycle (one-way) and pedestrian paths; separated cycle (two-way) and pedestrian paths and the shared path (4m wide). Particular consideration was given to the interaction between each of the facilities and the two car parks on Antigua Street between Tuam Street and St Asaph Street, as well as developments along St Asaph Street. The option put forward is considered to best balance all the project objectives. • Separated and on-road cycle facilities were considered along Montreal Street to provide an opportunity for street trees. The current design is considered to provide consistency to the users. • Consideration was given to a left turn into Montreal Street from Oxford Terrace. The option put forward is considered the best option (least confusion for drivers)

Transport Project	Key matters to conform to Central City Recovery Plan and AAC	Primary options considered
		<ul style="list-style-type: none"> • The design of the super stop considered various options for land purchase on either side to minimise service conflicts and minimise impact on the adjacent hospital precinct developments. Possibilities to integrate the design with the hospital developments were also considered. • Options were developed for access to the planned outpatient facility on the current St Andrews Square site, via Antigua Street, including the current design allowing a clockwise connection back to Hagley Avenue and an anticlockwise connection. • Options were considered for the lane configuration in Hagley Avenue between St Asaph Street and Tuam Street to accommodate trees. Service conflicts, and geometric requirements prevented some options being progressed.
TP3 Durham /Cambridge	<ul style="list-style-type: none"> • Provide efficient and reliable main distributor routes, with posted speed limit of 30 km/h in central zone, including provision for heavy commercial use. • Significantly improve the amenity and streetscape quality through intensification of street tree planting and integration with Te Papa Ōtākaro / Avon River Precinct project. • Provide urban design and streetscape treatments to enhance the accessibility and amenity of the Canterbury Provincial Chambers buildings. • Integrate and complement the key cycle routes adjacent. 	<p>Options were developed for specific components of this project. These included:</p> <ul style="list-style-type: none"> • Options for trees outside the Provincial Chambers were considered with a need to maintain visibility of the chambers to the streetscape resulting in low level landscaping being preferred. The footpath materials have been chosen to be sympathetic to the construction of the building. A drop off (loading bay) has been provided along Durham Street for future events, and additional loading bays along Armagh Street. • Options were considered for the configuration of cycle and pedestrian facilities along Durham / Cambridge including; protected intersections; separated cycle (two-way) and pedestrian paths and the proposed shared path. At Armagh Street options were considered for the location of the cycle facility including both the north side and south side of the street.

Transport Project	Key matters to conform to Central City Recovery Plan and AAC	Primary options considered
	<ul style="list-style-type: none"> • Ensure continued bus and tram operations across Durham / Cambridge. 	<ul style="list-style-type: none"> • Options were considered for the integration with Te Papa Ōtākaro / Avon River Precinct project and agreement of where the limits of each project start and finish. Various options were considered at the Oxford Terrace / Lichfield Street intersection where pedestrians, cyclists and vehicular traffic all converge. The design provides also provides for bus access to St. Michael's School. • Specific options were developed and analysed for the intersection lane configurations and approaches to the key intersections. • Options were developed that maximised on-street parking, trees and provision for cyclists and pedestrians. The final scheme is considered the most balanced solution.
<ul style="list-style-type: none"> • TP4 Manchester Street Boulevard 	<ul style="list-style-type: none"> • Provide a reliable, efficient, safe, dedicated public transport spine and Superstop facility. • Provide an attractive and inviting public realm for all users based on a distinctive boulevard streetscape typology that encourages activity and investment in adjoining mixed use and East Frame residential properties. • Improves the human scale through the formation of a boulevard of trees and associated hard/soft landscaping. • Provide a comfortable, inviting environment for business, residents, visitors that encourages street life. • Provide full integration with proposed East Frame 	<ul style="list-style-type: none"> • This concept design considered and follows the streetscape philosophy of AAC. The principal departure in concept design is moving to a three "avenue" tree lined boulevard (from 4). • The AAC and Public Realm Network Plans provided two options for Manchester Street, PRNP options 1 and 2, showing three and four lines of trees respectively. These options would result in serious, costly, and significant underground services clashes. • A series of options were further developed and tested that provided for street trees (3 rows), minimised impact of existing access ways, avoided significant service clashes, provided a level of bus priority and created a high amenity public realm to encourage redevelopment of both frontages. Options included providing for local access only for general vehicle traffic along Manchester Street by creating a cul-de-sac for general traffic at the location of the super stop but allowing buses to progress through the super stop. • A number of options were developed for the placement of the

Transport Project	Key matters to conform to Central City Recovery Plan and AAC	Primary options considered
		<p>super stop within the corridor, including locating the northbound and southbound stops directly opposite each other and staggering them, to accommodate existing vehicle crossovers.</p> <ul style="list-style-type: none"> • • Options have been developed for the super stop including the extent of paving and integration of the canopies with the adjacent buildings and side streets.