
Figure 16


Figure 19


Figure 17


Figure 20


Figure 18


Figure 21

Figure 22

Case Studies

La Rambla, Barcelona, Spain

La Rambla is an iconic pedestrianised street in Barcelona. Stretching for 1.2km, it changes character along its length. It has open-air cafes lining its sides, market stalls along the centre of the street, and pedestrian seating.

Although the street meanders and changes width, consistent elements including the avenue of plane trees, street wall buildings of relatively consistent height, and paving patterns, create a strong sense of continuity.

The street is closed to vehicular traffic and is well used by pedestrians. A metro line runs beneath La Rambla providing public transport connections along its length.

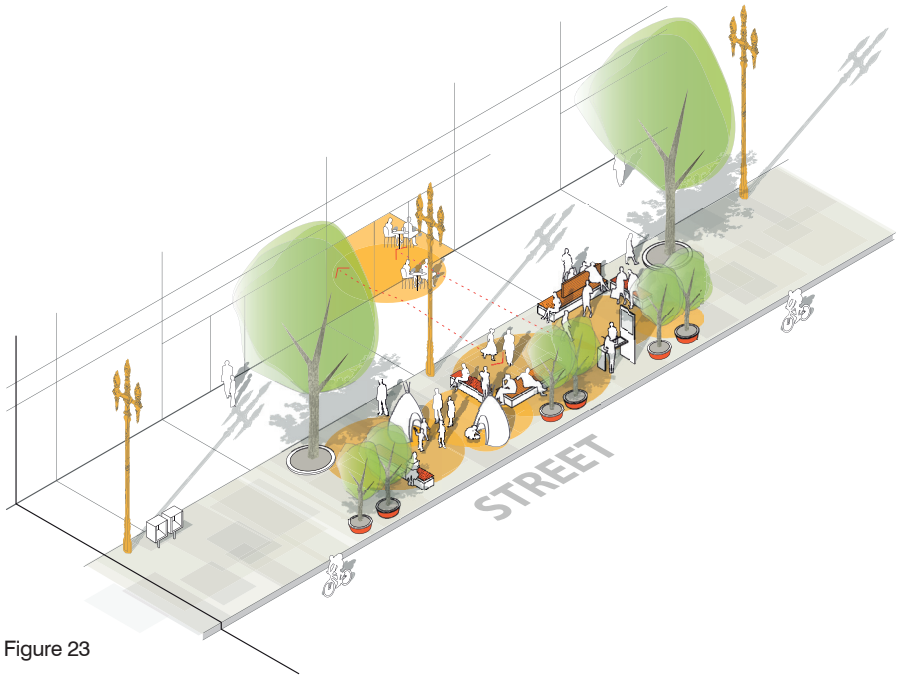

Figure 23

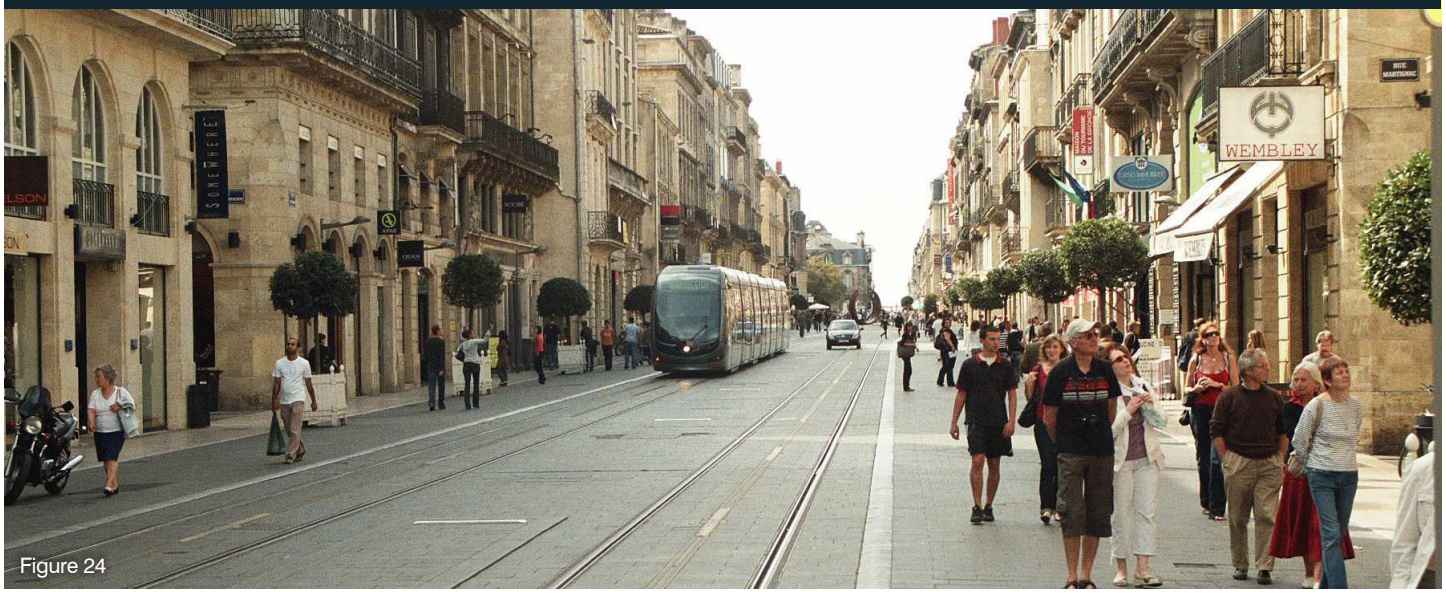

Figure 24

Market Street, San Francisco, USA

Market Street is San Francisco's premier street and most important destination. It is set to become a more attractive place for people to visit, promenade and linger. With issues similar to George Street, Market Street is an important transport corridor as well as a pedestrian spine through the city. The project aims to improve the street and adjacent public plazas so that they support a greater number, and a more diverse range of social, cultural, and economic activities.

The design proposes introducing 'streetlife hubs', areas for street furnishings, sidewalk greening, stormwater infiltration zones and cultural activities where the width of the street permits.

Bordeaux, France

Light rail runs through the centre of Bordeaux, along both pedestrianised and vehicular streets. The system is wire-free with the power source underground, resulting in an uncluttered public domain strongly defined by its built edges.

High quality detailing defines this system. Both paving and stop design present a streamlined, minimal approach, allowing the architecture and pedestrian activities to dominate.


Figure 25

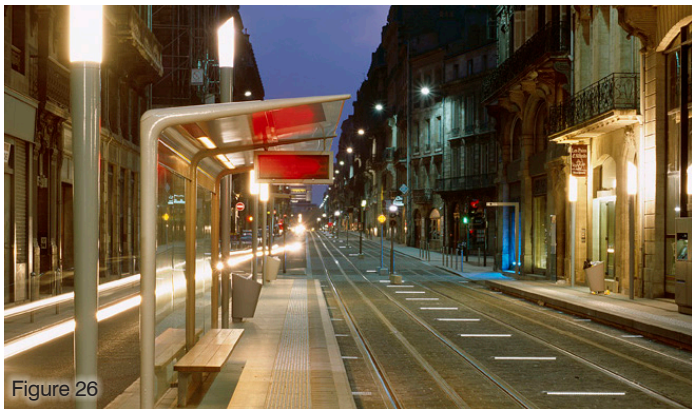
Figure 26

2.3 Fixed elements

To provide a high level of pedestrian amenity a range of fixed elements will be located in the George Street public domain. These elements include trees, seating, bins, bubblers, and smartpoles incorporating lighting, signs (regulatory and wayfinding), and tram infrastructure.

The George Street Concept Design outlines the strategy for fixed elements, and the City's preferred design layout is included in the Development Agreement between the City and NSW Government.

The principles that underpin the design layout for fixed elements within George Street are outlined below, as they relate to:

- Trees;
- Furniture; and
- Smartpoles.

Design recommendations

- 1.2m clearance should be provided between fixed elements to ensure safety and universal access.

Trees

The George Street Tree Species Investigation Report (Arterra, October 2012) provides the background to the selection of *Zelkova serrata 'Green Vase'* as the recommended street tree for George Street. This species meets the spatial requirements for planting in the confined space of the street corridor. It is unique in the CBD and will help create and define this iconic street.

The design envisages a regular spacing of trees along the length of George Street. As investigations have continued, underground constraints such as services and transport as well as ground level constraints including light rail stops, building entries and driveway crossings have required a change in approach to street tree layout.

To provide maximum pedestrian amenity it is proposed to plant trees in tightly spaced pairs wherever possible. This will to provide concentrated shade and maximise canopy spread along a street with limited planting opportunities. The location of trees within the street section also responds to the clearance zone required for light rail movement.

Design recommendations

Zelkova serrata 'green vase' street trees are to be used along George Street.

Trees are to be planted in a consistent alignment, with tree pits located in the tree zone on either side of the light rail DKE.

Trees are to be planted in tightly spaced pairs (6.75m spacing), located generally as shown in the City of Sydney layout attached to the George Street Development Agreement.

In the pedestrianised area, trees are to be located clear of vehicular crossings, pedestrian desire-lines such as light rail stops, through-site links and major building entries.

Figure 27

Furniture

High quality, elegant street furniture will add to the pedestrian experience of George Street and create a public domain that will stand the test of time. The City of Sydney has adopted a new range of public domain furniture to improve the functionality of city streets and spaces. George Street will be the one of the first installations of the City's new suite of public domain furniture, included in the 2013 Sydney Streets Code.

For maximum useability, public domain furniture needs to be sensitively located in the flex-zone. This will ensure adequate space is available for pedestrians to stop and rest and will provide pedestrian safety and equitable access.

Fixed furniture elements include:

- seats;
- bins;
- bubblers;
- bike storage;
- bollards; and
- tree guards.

Design recommendations

- Locate furniture within the flex-zone, clear of the pedestrian movement corridor, light rail DKE and tree zone, see layout attached to the George Street Development Agreement.
- Seating should be oriented to face north and south (if single sided), allowing people to gather in the flex-zone clear of light rail and pedestrian movement.
- Furniture is to be located clear of pedestrian desire-lines such as through-site links and major building entries.

Smartpoles

Smartpoles provide the opportunity to integrate many necessary functions into the one element, greatly reducing clutter in the public domain.

In George Street, there is a requirement for:

- street lighting;
- pedestrian lighting;
- light rail catenary support;
- signage; and
- fixings for banners, floral displays, event lighting and decorations.

A new smartpole 'kit of parts' has been designed for George Street to ensure that the one pole can do all that is required of it.

To minimise clutter within the public domain, smartpoles will be aligned with street trees to create a consistent corridor of vertical elements along the length of the street, visually reinforcing the edge of the light rail movement corridor.

Design recommendations

- Smartpoles are to be consistently aligned with the centre of tree pits and located within the 1.35m tree zone on either side of the light rail DKE.
- A curated and selective approach to elements such as banners (where able to be integrated) and floral displays is recommended.
- Event lighting and other special lighting is to be consistent with the George Street Lighting Masterplan.

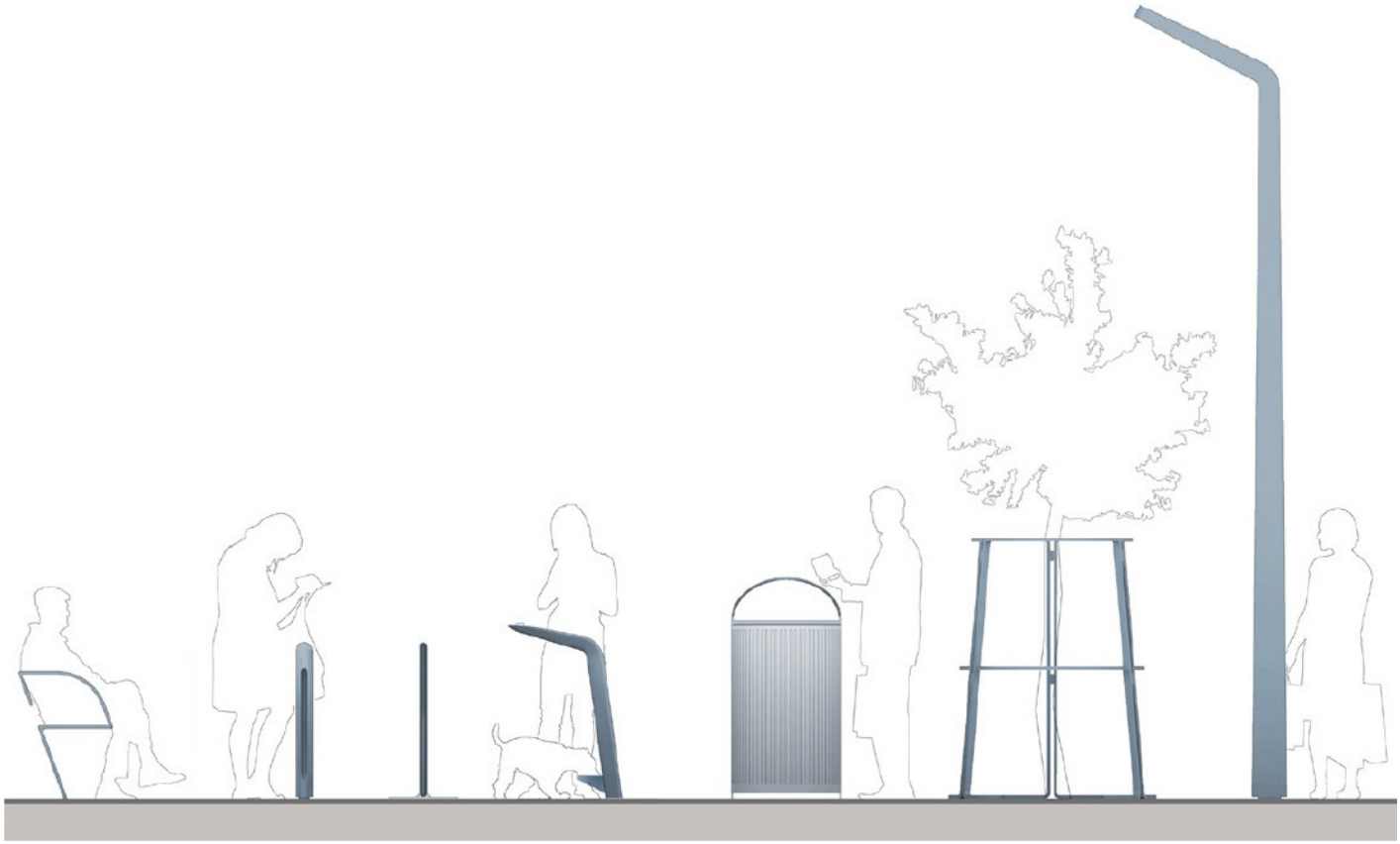

Figure 28 - City of Sydney Public Domain furniture

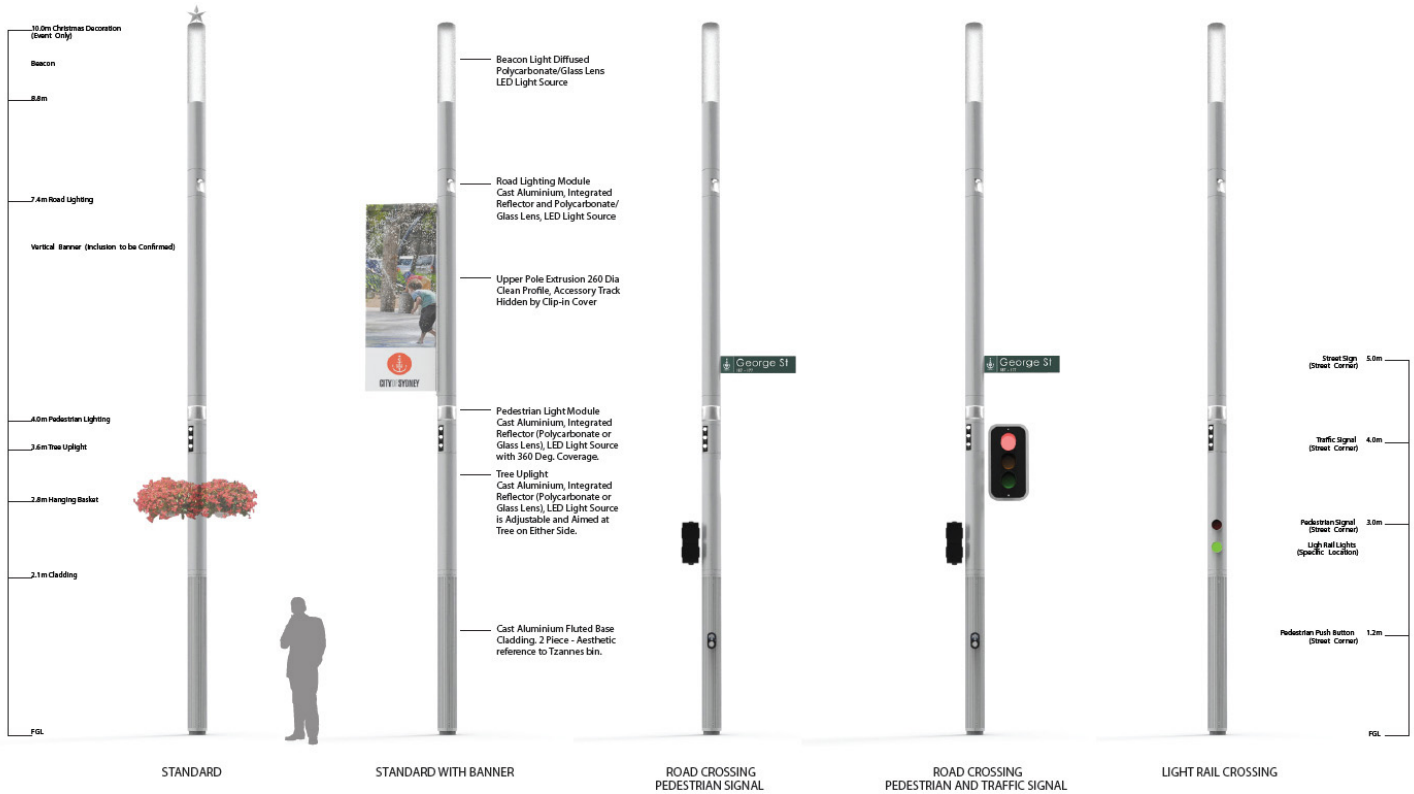

Figure 29 - George Street Smartpoles

2.4 Temporary elements

To create a great street, George Street needs to provide a legible and functional transport route for light rail. It also needs to be a generous and pleasant space for pedestrian movement. To ensure that these aims are able to successfully co-exist and not compete, a level of flexibiltiy is required in the public domain design.

Temporary elements can provide opportunities for people to stop, linger and spend time in the street, where space allows.

Temporary public domain elements may include:

- Moveable public furniture;
- Licenced outdoor dining;
- Street vending and display;
- Creative opportunities e.g. temporary art; and
- Entertainment and event infrastructure.

Designing for a high level of programmed active uses is not considered appropriate in the first instance following the completion of light rail. Rather, this strategy identifies locations where temporary elements could be sited to facilitate activity at particular times of day, subject to pedestrian numbers.

Pedestrian numbers in Central Sydney have seen a high level of growth over time. With the transformation of George Street we expect the new public domain will be well used by pedestrians. Pedestrian movement in George Street will be continuously monitored over time to evaluate the use of the space and identify further activation opportunites.

Design recommendations

Temporary elements in the activation zone in the block-by-block plans in Part 5 of this report may be considered if:

- The flex-zone has a minimum width of 3m;
- They are clear of vehicular crossings and intersections;
- There is no conflict with pedestrian movement flows such as major building entries and through-site links;
- They complement surrounding building uses; or
- They provide desirable activation beyond business hours, such as street vending.
- Elements proposed for the flex-zone must maintain a 1.2m clear accessible pathway between any fixed elements within the public domain.

Storage is required for movable furniture elements. Refer to Part 4 of this report for recommendations.