

CH₂ Setting a new world standard in green building design

Design snap shot 10: Transport

Summary

Introduction

This snap shot discusses the transport initiatives taken for Council House 2 (CH2). The summary outlines the reason why the transport initiatives were created, the benefits and the final outcome.



Figure 1. Supporting bicycle travel (City of Melbourne)

Drivers and objectives

The main driver was to reduce dependence on cars, as they produce greenhouse gas emissions and noise pollution, cause traffic congestion, and contain high embodied energy (ie. a lot of energy is required to manufacture one).

One of the overall aims for the building at the design stage was to make a zero greenhouse gas emission building in the future. In the shorter term the Council wants to reduce emissions by 80%. Although the emissions from transport used by building occupants is not directly related to the development, the Council felt that it would be inconsistent with the principles behind the building if users were not encouraged and supported to seek more sustainable forms of transport.

Benefits

- Reduced greenhouse gas emissions from car pollution
- Improved fitness of staff who cycle or walk
- Reduced cost of infrastructure maintenance
- A visible role model for the public
- Increased viability of public transport (with more users)
- Support for car parking at the present, while allowing for conversion to net lettable area in the future

Outcomes

The following were designed into the building:

- Bicycle facilities: shower and changing facilities; secure bicycle spaces for 10% staff with visitor spaces near the front of the building; and secure bike lockers.
- Space for 22 cars of which 25% are dedicated for small cars and one disabled car.
- Design of car park is flexible with high ceilings, natural light, removable ramps and flat floors. It can be converted to other use in the future such as office spaces.

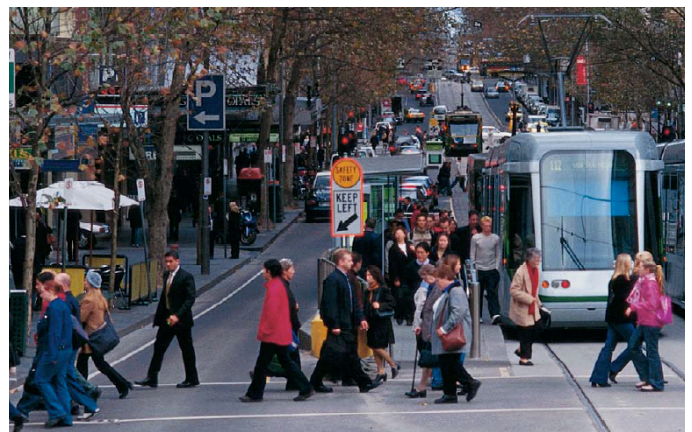


Figure 2. Over 10 tram lines run within 50m of CH2. (City of Melbourne)

Lessons

Current political needs and perceptions can be placed alongside future and environmentally preferable building priorities, and can be successfully incorporated into building design.

Collocation of bike parking facilities is crucial to encouraging active use of bicycles. That will ensure safe storing of bicycles, easy access to lockers and showers within easy proximity and in a prominent location not hidden away in the leftover corners of the building.

More detail

Background – council objectives

An influence on the planning of transport strategies for CH2 has been the 2003-2006 Council Transport Program. The following objectives from City Plan 2010 have been applied to shape the program outcomes :

- Increase opportunities for City visitation by continually enhancing all transport modes, particularly public transport.
- Provide for an efficient and integrated road freight system that reduces negative environmental effects on residential and public areas.
- Improve the quality and design of pedestrian access within the City.
- Ensure the city's pedestrian and transport infrastructure connects and links key sites, places and activities, including Docklands and Port Melbourne, with the Central City.
- Improve the bicycle network and facilities within the City.
- Develop a coordinated, accessible and integrated water transport system.
- Augment the availability of affordable short-term car parking in the City.
- Facilitate accessible transport options for people with a disability.

Current figures on staff travel habits, taken from the 2003 City of Melbourne staff travel results, are shown below.

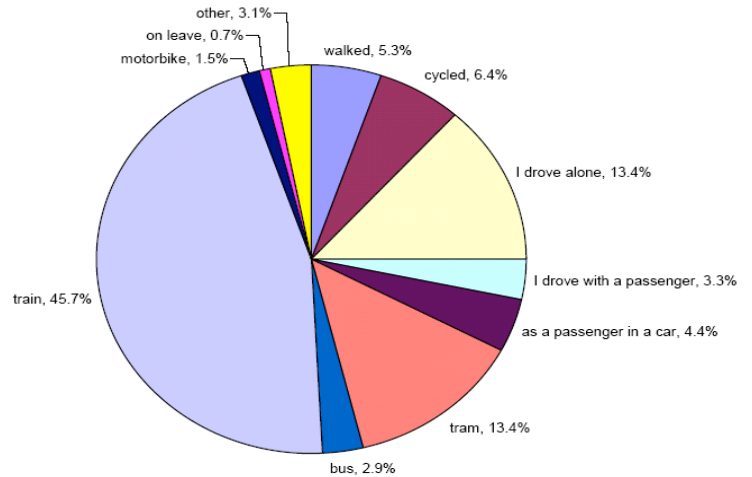


Figure 3. 2003 City of Melbourne staff travel survey (CoM)

The results stated that:

- 15% of staff live within cycling distance of work. These staff currently drive, carpool or catch public transport to work. Encouraging staff to commute by active modes of transport such as walking or cycling can improve overall staff fitness, leading to positive outcomes for both staff and employer.
- This has the potential to be incorporated into a workplace “Work/Life Balance” policy.

Positive feedback to the Council policy to encourage public transport and cycling has been received:

After driving to work for some 8 yrs I thought it would be difficult to change to public transport. It's been the opposite. It is stress free and gives me the chance to catch up on a lot of reading. **Anonymous staff member**

Providing adequate, comfortable showering and changing facilities, in conjunction with undercover bicycle parking, is a good method for encouraging those living within cycling distance to start cycling.

Key elements of the transport initiative

Car Parking

22 car parking spaces have been provided to the basement car park area. This is more than 50% less than the local planning allowances, but replaces the parking lost by taking up the Tivoli car park. In line with Green Star recommendations, 25% of parking spaces will be specifically designed for small cars – 2.3m wide x 5.0m long.

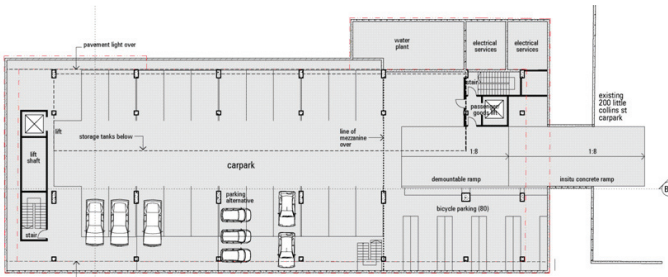


Figure 4. Preliminary car parking lay out with ramp (DesignInc Melb)

Cycling Facilities

Cycling facilities including secure bicycle spaces, lockers, showers and changing facilities have been provided for 10% of building staff (70+ bicycle parks). Security of bicycles will be enhanced by CCTV surveillance. There is also visitor bicycle parking near the front entrance. Bicycle storage occurs on the north and south walls, storing an estimated 70 bicycles.

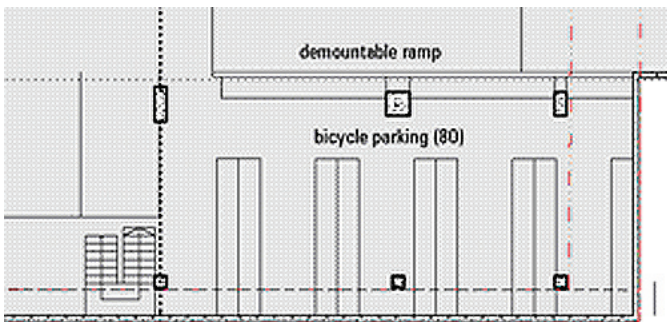


Figure 5 – Planned bicycle parking (DesignInc Melb)

The car & bike park

The design and development of the car park demonstrates the long term vision of the Council. It was not possible to build the new building without considering the number of car parks needed. Currently, many people use cars, and to encourage the use of the CBD and meet the Council's objectives 22 car parks were required. The project team looked into the future, where cars may not be as central to Melbournian transport and developed a design, that could be easily retrofitted into lettable area.

We've got a car park, not something we wanted, because if you're talking about an environmental building, you don't want a car park but... that was politically driven and that's a reality. But we've designed a car park which is flat floored, has removal ramps, natural light, high ceilings and... therefore the ability to change over to other types of usage
Rob Lewis, Project Superintendent, City of Melbourne

Public Transport

The city centre location means that there are numerous tram and train services within the vicinity of the building.

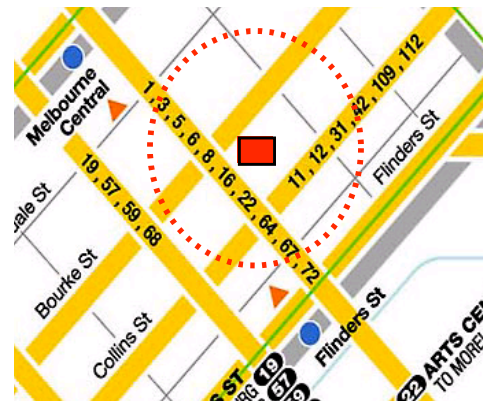


Figure 6. Trams passing within 50m of CH2