

Federation Square

Architecture: Lab architecture studio (Aus & UK) with Bates Smart (Aus)
Landscape Architecture: Karres en Brands (Netherlands)
Melbourne, Australia
prepared by Katherine Wimble and Julia Lindgren



An evening concert on the Federation Square plaza.
Photo credit: Bates Smart

In 1996, the Federation Square Management Pty Ltd, the State Government of Victoria, and the City of Melbourne held an international design competition for a new civic square capable of accommodating up to 20,000 people in an open-air amphitheater on a 38,000 m² (9.4 acre) block to be built above the Jolimont railyards. The site was to support a broad range of civic, cultural and commercial activities, responding to the vitality and openness of daily life.

In addition to a number of shops, bars, cafés and restaurants, the site would also house:

- The Australian Centre for the Moving Image (ACMI)
- The Ian Potter Centre: National Gallery of Victoria, Australia
- The BMW Edge Amphitheatre
- Headquarters of the Special Broadcasting Service (SBS) (public television)
- Australian Racing Museum and Hall of Fame
- National Design Centre
- The Melbourne Tourist Information Centre

The site was completed in 2002 with a total budget of \$440 million, entirely publicly funded. It is colloquially known as “Fed Square.”



Above: Federation Square plan. Image from: www.karresenbrands.nl

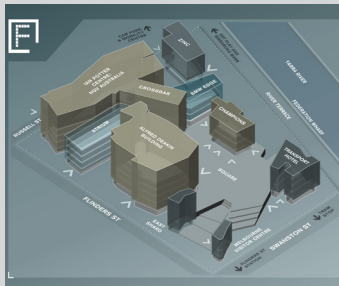


Site Context

Federation Square occupies a site roughly the size of an entire city block, bounded by the busy arterial streets Swanston, Flinders, and Russell to the west, north, and east respectively and by the Yarra River to the south.

The site as a connector

- Link between the city's historical central district and surrounding landscapes:
 - Birrarung Marr Park
 - River Terrace
 - Southbank district
 - Melbourne Park
- Located adjacent to Flinders Street Station, the 'Hub' of Melbourne's metropolitan train service loop. All trains begin and end their journey here.
- "New civic gateway," transition into the city
- First large public square or gathering place in Melbourne, bringing people together



Above: Melbourne city precinct map. Image from: www.visit-victoria.com



Right: Aerial photograph showing Federation Square's location along the Yarra River. Image from: <http://www.bcl.com.au/Melbourne/views/m001.htm>



Federation Square

Left: Site as it looked prior to construction. Image from: www.federationsquare.com.au.

Below: Site as it looked during the early 19th century. Image from: www.federationsquare.com.

History

- Up until 1870 the land later occupied by the railway yards was occupied by 3 groups of aboriginal peoples, comprised of 5 language groups. The location along the Yarra river was ideal for fresh drinking water, bathing, food, and transport.
- After Europeans began to settle the area in 1838 land began to be subdivided. Plots located to the east of Flinders Street were auctioned off to private parties and the land situated between the Yarra River, Swanston Street and Flinders were zoned for public uses.
- Discovery of gold in the area led to an influx of people. Between the years 1851 and 1842 the population in the area tripled. New public amenities were needed including an area for morgue.
- In 1871 the first public morgue in the area was completed along the Yarra River near the future site of the Princes Bridge and adjacent to the city's registrar's office. This central location meant that unpleasant fragrances and sites permeated the everyday life of all local residents.
- 1888 a new Princes Bridge was opened to "make a truly noble approach" into the city and by 1990 the site was officially known as the Melbourne's gateway. The bridge connected the land north of the river with the land south. Ferries were no longer needed to cross the Yarra. Today the Princes Bridge is considered one of the most important 19th century bridges in Australia.
- The future area of Federation Square was always designated "sacred" due to the surrounding significant buildings of St Paul's Cathedral and Young and Jackson's Hotel.
- Due to public complaints the morgue was shut down in 1883 and plans for a railroad station began.
- The growth of railway infrastructure fed Melbourne's suburban expansion. The station located at Princes Bridge was the terminus of Melbourne's Windsor and Brighton lines which later got moved to Flinders Street station at its completion in 1910.
- Beginning in the early 1920's the city recognized the potential of developing the land above the traintracks at Flinders Street Station. Proposals for parking lots, parks, office blocks, civic plazas and terraces were all submitted to the city but none were developed.
- Development of Federation Square began as part of the Jolimont Rail Yard rationalisation project (1990) that reduced the railway lines running parallel to the Yarra River from a total of 53 lines to 12 (made possible by advances in railway technologies).
- International design competition was held to create a new center of cultural activities (1996)



"A distribution of meeting places, desire lines, and accumulating memories."

(Rendell, p. 139)

Concept

- The designers used the political concept of federation:

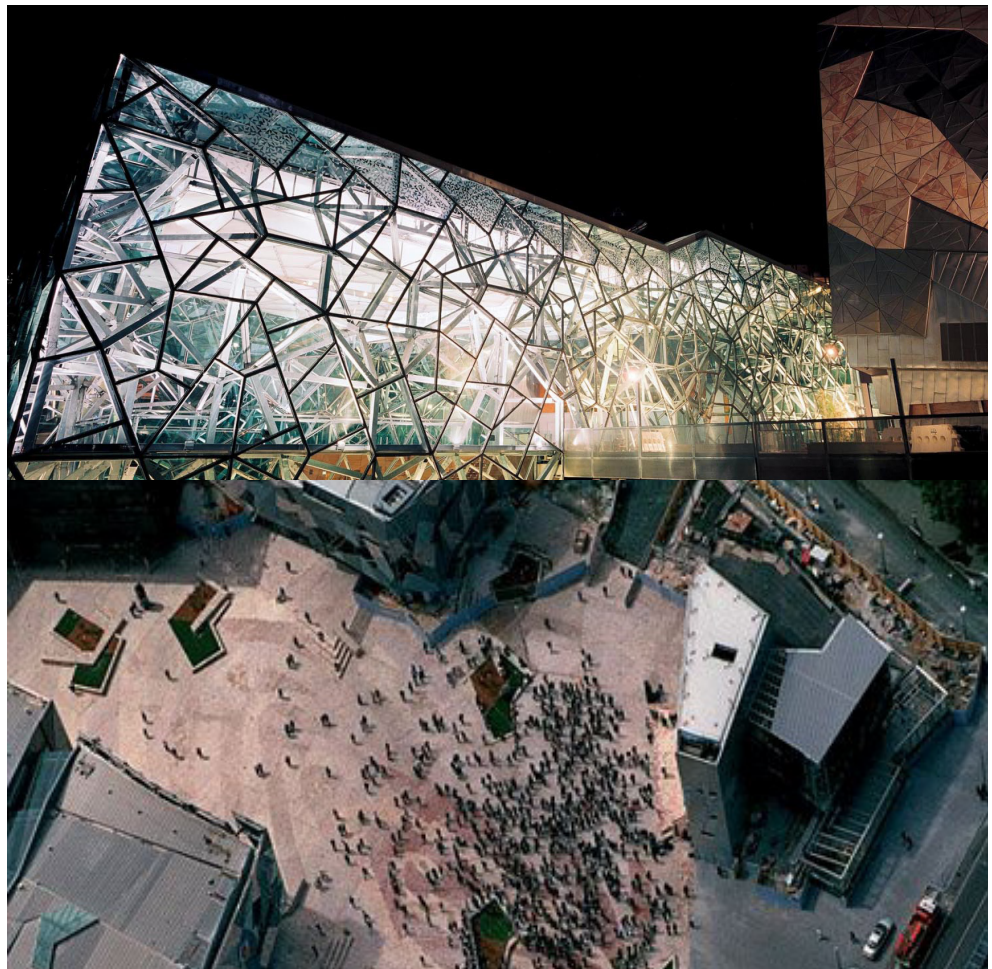
"a league of parts rather than central authority"

in an ordering system the designers call

"Tectonic Aggregation"

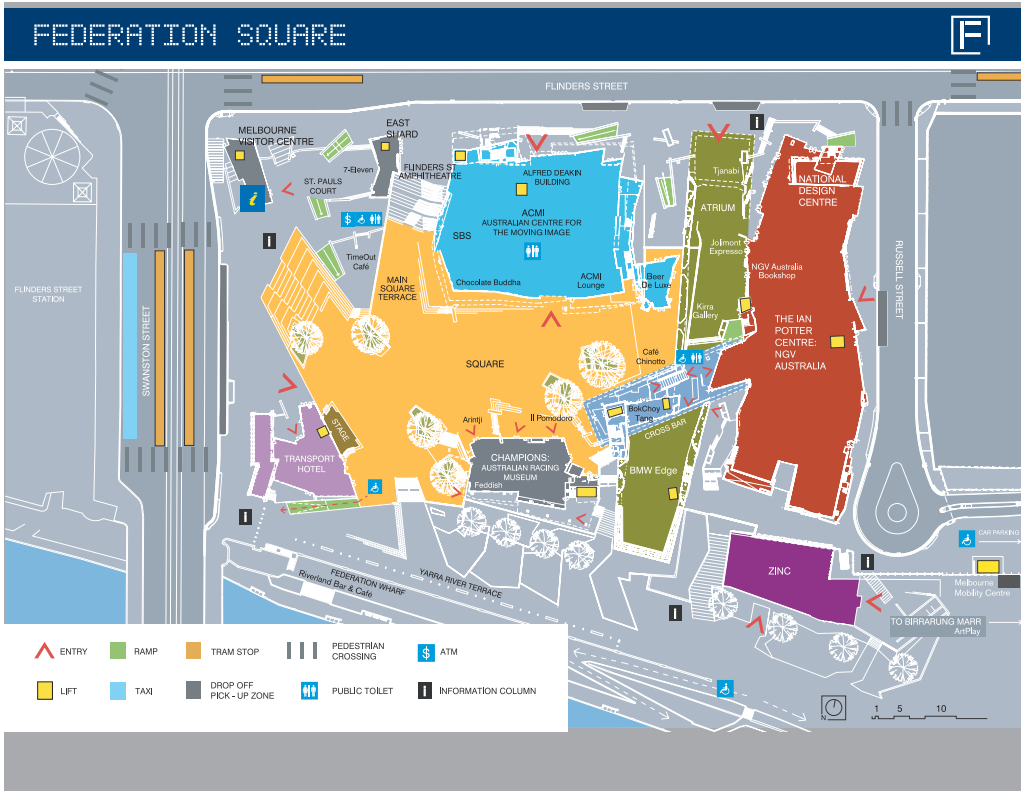
(a collection of crystalline structures grouped together and considered as a whole)

- They instilled the space with a sense of difference and coherence.
- The designers wanted to create a cultural and civic precinct based upon permeability and interaction referring to the "original" interactive nature of civic existence (the agora).
- The forms create "a network of animated, emotive and enlightening experiences." (<http://www.theage.com.au/articles/2002/10/23/1034561537857.html>)



Above right: The forms the designers call "tectonic aggregation." Image from Bates and Smart.

Below right: Aerial view of the plaza. Image from www.karresenbrands.nl.



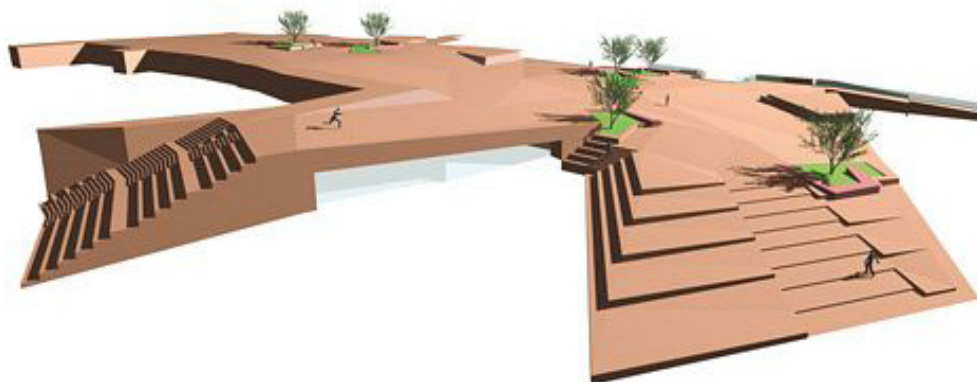
Federation Square

Left: plan of Federation Square
 Image: www.federationsquare.com.au

Site Design

The deck over the railways is supported by over 3,000 tonnes of steel beams, 1.4 km of concrete 'crash walls' and over 4,000 vibration-absorbing spring coils and rubber padding. It was designed to support sensitive uses, such as galleries, cinemas, and radio and television studios, which needed to be isolated from vibration and noise.

The site functions as a street-like space with varying uses. Federation Square's flexibility attracts a broad range of civic, cultural and commercial activities and the flow of the site creates a series of exciting and varied experiences that encourage public interactions and promote spontaneous activities.



Left: model of decking system and plaza
 Image from www.karresenbrands.nl

Right: View of modular triangular grid pattern throughout Federation Square. Image from: www.arcspace.com

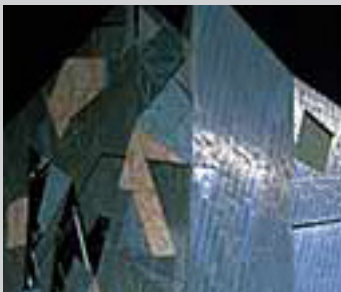
Buildings



Building Facades

The square's facade system allows for the individual buildings in Federal Square to be distinctly differentiated from each other while simultaneously maintaining an overall site coherence. The buildings are clad in three materials; sandstone, zinc, and glass which are arranged in a triangular pinwheel grid. The fractality of the system uses a single constant triangle that is further broken down into smaller units. The flexible lattice is applied to each building differently and responds to site conditions (orientation, views, environmental concerns, etc.) in unique ways.

Below: Variations in 'pinwheel' grid. Images from: www.arcspace.com



The site is characterized by:

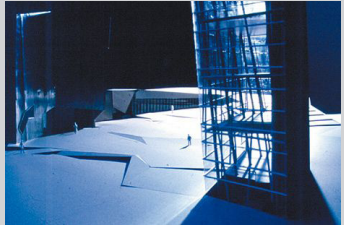
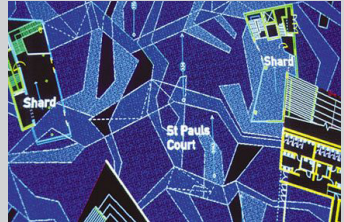
- Large irregularly shaped city square
- North facing plaza creating a sunny sheltered area for outdoor dining, street theatre and music
- Building complex along the Flinders Street frontage, providing gallery space, performance space and facilities for cafes
- Building complex above and over the Russell Street extension, to house the cinemedia/ centre multimedia facilities and offices
- Glass 'wintergarden' atrium slicing through the two major building complexes, complete with rainforest and desert greenhouses. It is a street-like space, five-stories high with glazed walls and roof that provides a covered walk, connecting the north end of the site with the Yarra River.



Federation Square

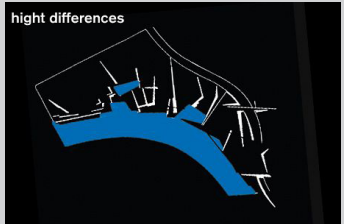
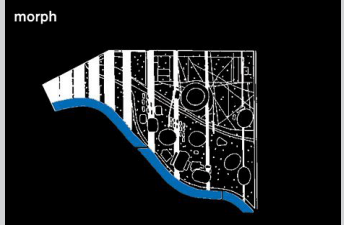
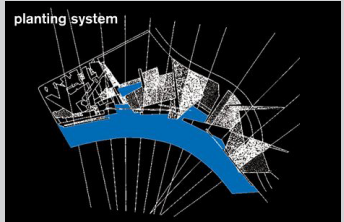
Left: Plaza looking north
Photo credit left: Lab architecture studio

All images below from www.karresenbrands.nl



The Plaza

- 470,000 ochre-coloured sandstone blocks from Western Australia
- design's geometry allows for a vast array of configurations and arrangements, from the largest scale public gathering of up to 15,000 people to intimate sites of relaxation and contemplation
- a series of individual spaces, each animated and anchored with outdoor cafes and restaurants
- subtly differentiating paving pattern across the entire plaza surface



The overall effect of the public plaza, with its moving ground plane, is a space that differentiates special "areas" on the ground: larger gathering areas versus more intimate spaces, creating spaces that can function for different purposes. The whole plaza balances the need for intimacy and security with openness without feeling too empty or deserted.



Right: A feeling of intimacy in a large plaza.

"Years of severe drought have changed attitudes."

Peter Ker, *The Age.com*, May 14, 2008

Right image and text from
www.federationsquare.
com.au



Water conservation

Fed Square Pty Ltd has implemented water saving initiatives including rainwater harvesting projects and installation of a system to filter and recycle water into cooling towers. These measures have reduced Fed Square's Water Consumption by 14% in 12 months (Feb 07 – Jan 08) equating to 13-14 million litres. Specifically, water measures implemented and completed during 2006 and 2007 include:

- Upgrading works to the Cooling Tower
- Installation of reverse osmosis filtration system to recycle discharged water back into the Cooling Towers.
- Working with Melbourne Water on improving the quality of storm water that discharges into the Yarra River, including the completion of the Car Park "rain garden" as a filtration project to improve stormwater quality entering the Yarra River.
- Installing 9 water tanks (capacity 40,000 litres) to collect stormwater runoff from the Square's main plaza to water the garden beds along River Terrace. This system also uses Class A recycled water.
- Installing 2 water tanks (capacity 9,000 litres) in the loading bay collecting stormwater from Russell Street to use for cleaning purposes.
- Installing flow restrictors to all public toilet hand basins.
- Planting water efficient vegetation including grass.
- Installing 11 waterless urinals.
- Installing AAA showerheads in 12 showers across the site.
- Installing water efficient sprinkler heads in gardens and rain sensors to stop sprinklers coming on (in accordance with current water restrictions current).
- Displaying water conservation messages daily on LED message wall.

Given their arid climate, Australian city leaders need to be particularly sensitive about water use and handle it like the precious commodity that it is. The designers made some effort to recycle, reuse, and reduce the need for a certain amount of water on site, which is a good step towards resource self-sufficiency. However, especially in light of Australia's thinning ozone layer, we think the designers could have provided adequate shade in the form of vegetation, which would have reduced the heat island effect and detained more water on-site. Still, it looks like the plaza would be very pleasant in the evenings.



Federation Square

Left: People gathering to watch a soccer match. Image from www.federationsquare.com.au

Public Use/ Reactions

Statistics from October 2003:

- Federation Square's visitors are both locals and tourists, with over 1/2 of the visitors being Melbournians and 32% from other Australian states or overseas.
- 40% of visitors do not go to Federation Square for the cultural centers or museums but are drawn by other factors including the public square.
- Approximately 90% of people surveyed reported liking all, or at least parts, of Federation Square. -Federation Square- A Case Study in Architectural Design

"I wasn't surprised when the immediate response was shock, horror and talk of a monstrosity. I think a lot of Melbournians were a bit like that, with initial feelings that it wasn't the Melbourne they knew, moving toward feelings that maybe it was the Melbourne we were becoming."

-Kim Dovey, Professor of Architecture at Melbourne University

"There's plenty of room, plenty of space between people, and it's easy to see your friends coming. It works."

-Peter Davidson, Chief Architect of Federation Square

"Lab's civic space is an intriguing contemporary interpretation of the city square. It inflects towards the river and is differentiated in ways which accommodate the diversity of required activities and is appropriate as a public space for the late 20th century."

- "Fed Square: A Future About Shatters," *Architecture Australia*

"You have to get into Federation Square, physically, to appreciate it. The controversial design -- Melbournians either love it or hate it (I fall into the former category)."

- "Travel Guides, Melbourne," *The New York Times*

Critiques

The design of Federation Square has been criticized on the basis of lack of originality; some critics claim the the design looks too much like work of Daniel Libeskind. (<http://www.archmedia.com.au/aa/aaissue.php?issueid=199711&article=23&typeon=3>).

Others criticize a lack of formal variety: “The forms for each project were the same— all cranked rectangular extrusions deployed across the site with narrow spaces in between.” (<http://www.archmedia.com.au/aa/aaissue.php?issueid=199711&article=23&typeon=3>)

Experientially, the effect of being in the space may see “harsh and glare-y’ in the summer” and from the persepective of the average Melburian, may be overall “a bit elitist ... with the very upmarket restaurants and wine bars ... and art films” (<http://www.theage.com.au/news/arts/cheers-to-the-square/2006/06/27/1151174205434.html?page=2>).

Still, we feel that the overwhelming positive response from 90% of Melburians and its use by millions of visitors speaks to the design’s success. With that level of robustness, the designers must have gotten the big pieces right. Well-known budget problems and political changes that disrupted the entire construction phase would have eliminated many ammenties from the final design, which, had they been implemented, may have made the experience of being there more appealing.

Resources

<http://www.federationsquare.com.au/index.cfm?pageID=5>

<http://www.labarchitecture.com/>

<http://www.batessmart.com.au/pages/index.html>

http://www.karresenbrands.nl/_projects.php?id=20

<http://www.new.facebook.com/pages/Melbourne-Australia/Federation-Square/8149258774>

http://en.wikipedia.org/wiki/Federation_Square

http://www.pps.org/great_public_spaces/one?public_place_id=532

<http://www.theage.com.au/news/arts/cheers-to-the-square/2006/06/27/1151174205434.html>

Rendell, Jane. *Art and Architecture: A Place Between*, London : I. B. Tauris, 2006.

<http://www.theage.com.au/environment/water-issues/federation-square-installs-water-tanks-20080514-2e29.html>

<http://www.archmedia.com.au/aa/aaissue.php?issueid=199711&article=23&typeon=3>