

# Peter MacCallum Cancer Centre

## Potential uses and associated yields

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## Introduction

tessellate<sup>a+d</sup> was engaged to identify potential architectural design constraints and opportunities for the former Peter MacCallum Cancer Centre site and its adjacent context. This required the identification of potential site uses which were then tested against the constraints to ascertain appropriate yields.

Situated in East Melbourne on the city fringe, the site is afforded views of the City, St Patrick's Cathedral, Fitzroy Gardens, Treasury Gardens and beyond to the Kings Domain and the Royal Botanic Gardens. It was established that the site is a 'high value' site, commercially suited to high-end hotel, residential / apartments or Commercial offices.

To test the potential uses, tessellate<sup>a+d</sup> designed a series of building forms that were use-specific to assess the potential yield and contextual suitability of the various proposals.

Through this series of modelling tests, tessellate<sup>a+d</sup> identified what was considered an appropriate level of development allowing for flexibility and best practice principles. Standard development, construction and design principles in combination with best practice principles were used.

Yield analyses have been provided for each building form. Net lettable areas (NLA 's) were based on a percentage of the Gross Floor Areas (GFA 's) with no basement or carparking levels calculated.

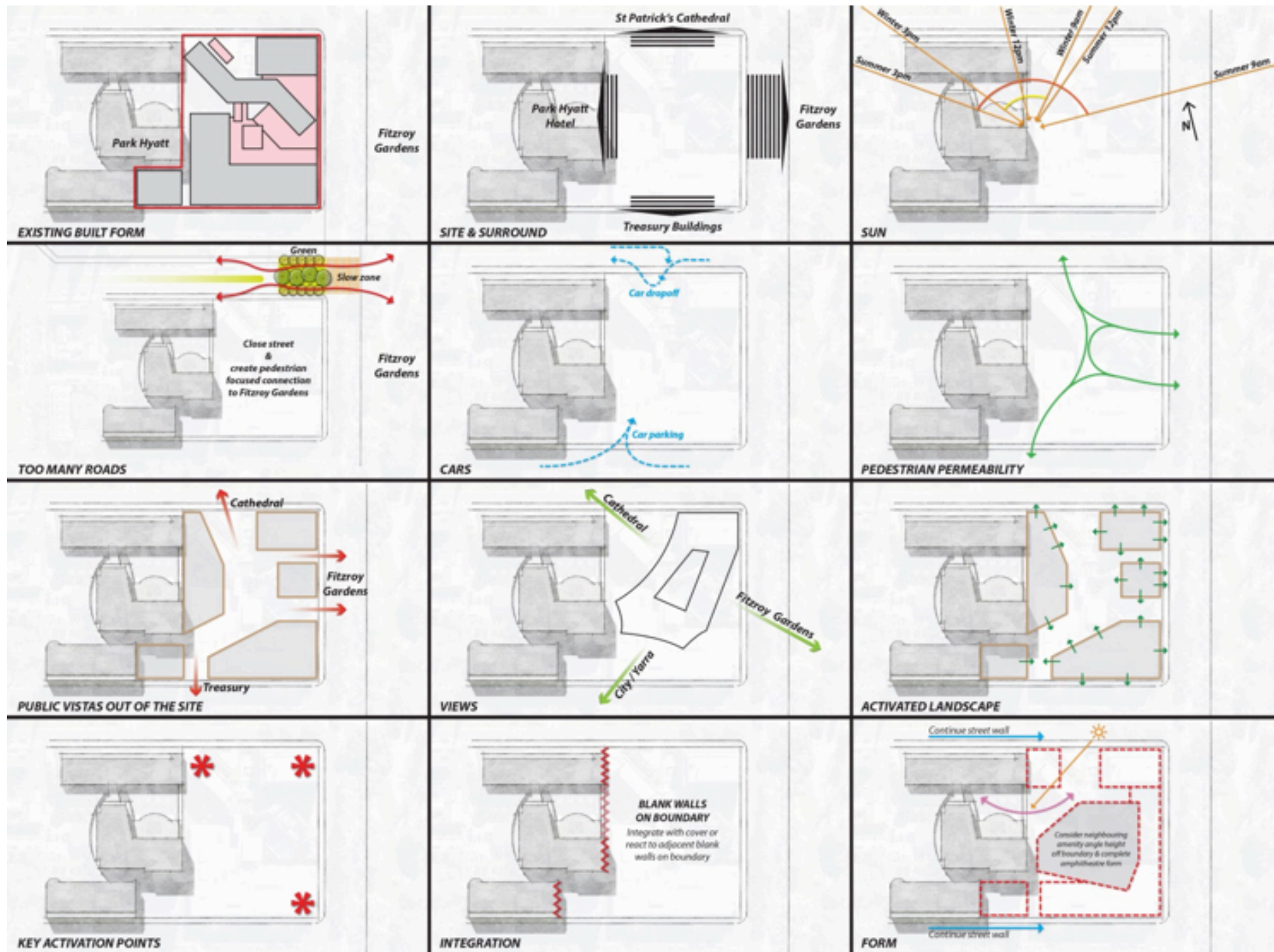
The building forms did not include any basement levels. It was assumed that car parking and plant (where feasible) would be below ground.

We have not included car parking as it is a commercial consideration rather than a requirement, meaning that every different entity that might develop the site would choose the number of cars they wanted to supply dependent on their own commercial and sustainability values, not as a set ratio.

Once the preferred building envelope was determined for the site then another design response model based upon a mix of uses, but predominately residential, was prepared that established a development potential and gross floor area for the site.







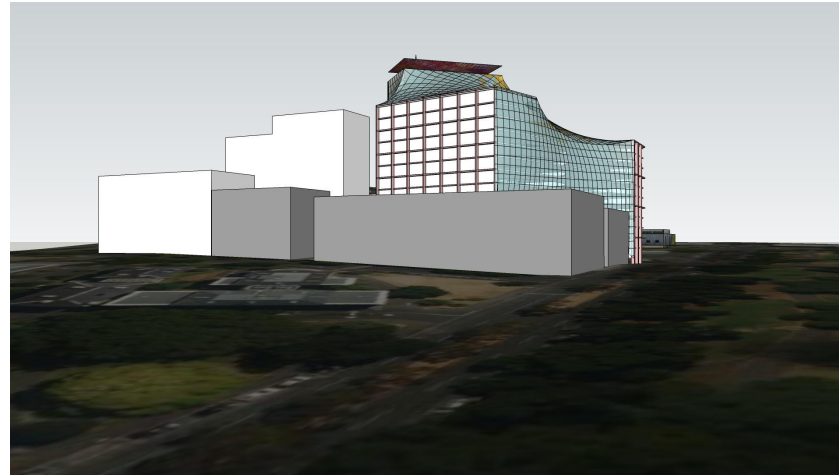
## Hotel

As hotel rooms are generally occupied for shorter periods of time, good solar access to rooms does not have the same priority as it does when designing for residential use. Rooms with views have a higher value. With the advantage of multiple marketable views, the site is well suited to hotel usage as each particular view adds both commercial value to the individual rooms and defines a diverse range of marketable wings to the building with view branded suites – Cathedral View/Garden View/City View etc.

By focusing on maximizing rooms with views as a priority over solar orientation, the result is a larger perimeter of building form than might suit an office building which creates the opportunity for a large central atrium drawing light into the centre of the building. This results in a space for circulation and cascading internal landscaping and a range of social spaces falling to the hotel reception and foyer at ground level.

The hotel scheme allows for deeper floor plates at lower levels to accommodate complimentary uses such as conference and venue spaces, kitchen and servicing. It was also envisioned that a mix of luxury showrooms would be a complimentary commercial use for some of the ground floor street frontages.

Floor to floor heights are generally 3m, with 4m at ground level. Floor plate widths vary depending on orientation.



YIELD ANALYSIS HOTEL			
	GFA (m <sup>2</sup> )	NLA	KEYS
<b>HOTEL</b>	32,500	24,375	477
<b>COMMERCIAL AREA/ CONFERENCE FACILITIES</b>	20,800		
<b>TOTAL GFA</b>	53,300 m <sup>2</sup>		

AREAS EXCLUDE POTENTIAL BASEMENT GFA

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## Residential

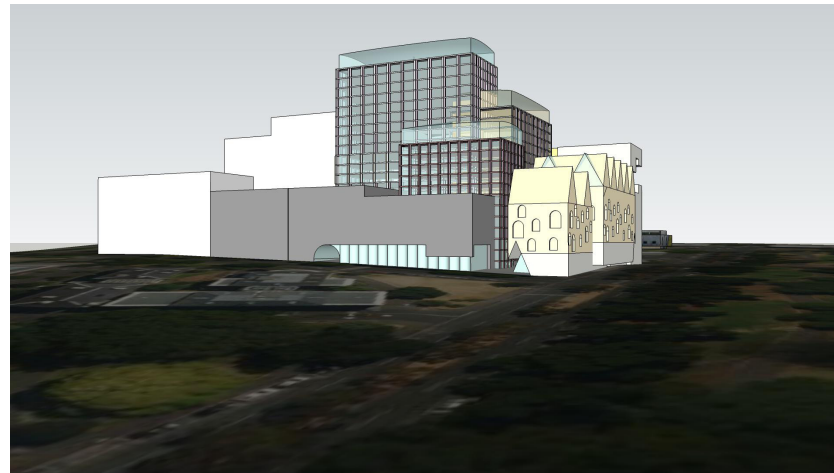
The residential mass revolved around maximising solar access to the majority of apartments and creating opportunities for a diverse mix including larger multi level apartment homes fronting Fitzroy Gardens.

Internal pedestrian streets (potentially private) were formed between buildings with a general rule of 10m between buildings. Whilst providing good space between built form and allowing light down to the ground level. This dimension also mimics Melbourne City's Secondary street widths (e.g. Lt Collins Street & Flinders Lane). The network of internal streets also provides multiple circulation options and potential for soft landscaping and commercial activation.

The site is broken into four buildings and incorporates the reuse of the existing 10 storey building on the corner of Lansdowne Street and Cathedral Place. Additionally, a 'place-holder' building becomes the main pedestrian entry into the site off Cathedral Place and marries in with and terminates the end of the existing streetscape. A lower building along Lansdowne Street houses the larger apartment homes with roof terraces. In the centre of the site a multifaceted tower caps the blank side of the existing Park Hyatt tower whilst attempting to maximize apartments with good solar access. The tower sits under the maximum height of 55-60m and cascades in height to reduce the mass of the building.

The lower levels of the tower fronting St Andrews Place are compromised in their Southern orientation and the potential depth of the floor plates. It is therefore proposed that a mix of commercial office space is better suited to this part of the site.

Floor to floor heights are generally 3m, with 4m at ground level. Floor plates are generally 20m deep and double loaded.



YIELD ANALYSIS RESIDENTIAL			
	GFA (m <sup>2</sup> )	NLA	DWELLINGS
RESIDENTIAL	40,943	34,801	497
COMMERCIAL/SHOWROOM/ CONFERENCE/RETAIL	15,570		
TOTAL GFA	56,513 m <sup>2</sup>		

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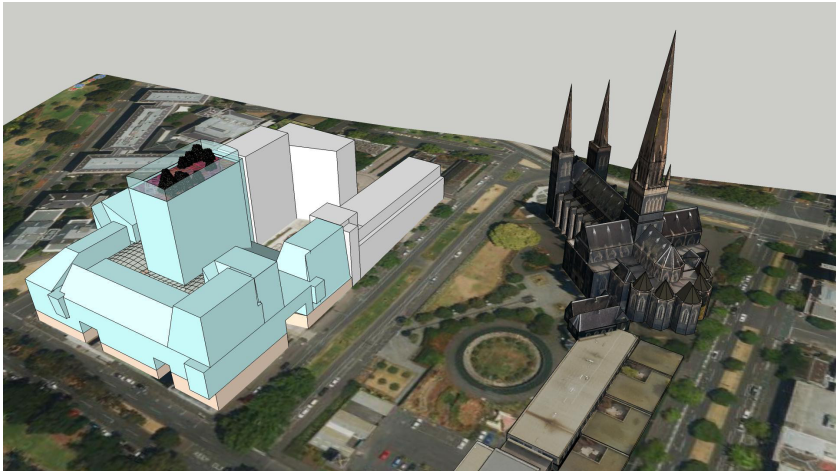
**Commercial Office**

It was deemed early in the evaluation that the site had more commercial value as a residential development and/or hotel due to its location.

Two commercial office building forms were investigated as part of this study; the campus typology and the tower form. The campus typology is epitomized by the large financial institutional buildings occupying Melbourne Docklands and would essentially fill the site with atrium space providing light to the interior of the development. The second model is oriented around a lower level perimeter built form and tower in the centre of the site.

The latter scheme allows for more diversity of both office space and in uniquely identifiable tenancies and building addresses whilst providing best practice floor plate depths of 20m that maximize natural light into building. The campus model results in a more contiguous built form, typically associated with a singular tenant, often lacking the diversity of accommodating smaller tenancies within.

Floor to floor heights are generally 3.5m, with 4m at ground level. Floor plate depths are no more than 10m to the windows, or 20m overall.



YIELD ANALYSIS COMMERCIAL OFFICE
GFA (m²)
52,694 m²

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### Testing the DDO envelope

The DDO envelope, if developed to its maximum would create approximately 120,000sqm of gross floor area (above ground) or a floor area ration of 9:1 for the site.

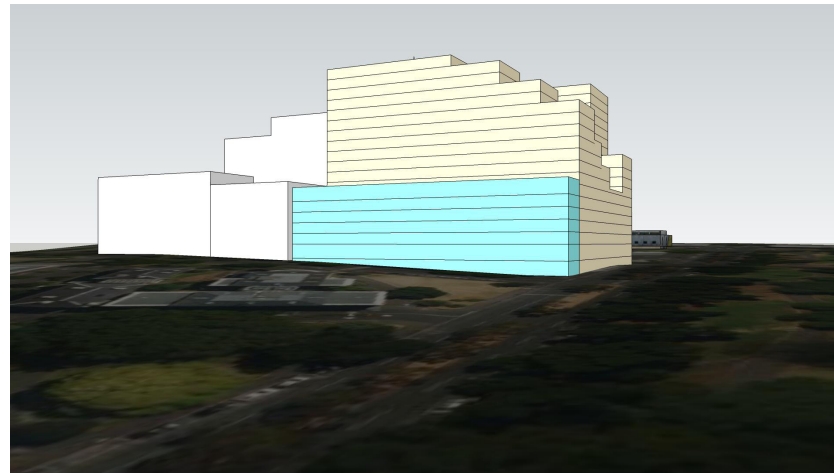
This could not be practically realised because on a site of this size it would not provide suffieince space between buildings, which is most likely to have a residential function in whole or in part.

The foregoing yield analyses created floor space areas of between approximately 52,000sqm to 57sqm which is a floor area ratio of approximately 6.5:1 to 7:1.

Using the design principles supporting the foreshadowed DDO, a composite project of primarily residential with some commercial / retail spaces was analyses and produced a yield of 72,990sqm which expressed as a floor area is 9:1.

The benchmark ratio for the recently introduced CBD height control is 18:1.

A yield based upon 9:1 floor area ratio would produce a collection of buildings that could readily meet the foreshadowed DDO height and setbacks controls as well as accommodating a range of candidate uses for the former Peter MacCullum site.



PROPOSED DDO YIELD ANALYSIS RESIDENTIAL			
	GFA (m <sup>2</sup> )	NLA	DWELLINGS
RESIDENTIAL	58,430	49,665	709
COMMERCIAL/SHOWROOM/ CONFERENCE/RETAIL	14,560		
TOTAL GFA	72,990 m <sup>2</sup>		

AREAS EXCLUDE POTENTIAL BASEMENT GFA

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