Independent Expert Witness Urban Design Evidence Presentation

International and national local examples of quality outcomes in urban renewal areas

Prepared on behalf of City of Melbourne
Fishermans Bend Planning Review Panel

Prepared by
Koos de Keijzer
M.Arch, AIA
Local and international examples
5.6 Other Examples

5.6.1 Ashmore Precinct - Sydney, Australia

5.6.2 Docklands - Amsterdam, Netherlands

5.6.3 Mirador Apartments - Madrid, Spain
5.6.1 Ashmore Precinct - Sydney, Australia
5.6.1 Ashmore Precinct - Sydney, Australia

City of Sydney DCP, Section 5, Specific Areas
DCP Ashmore Page 130

Figure 5.129
Ashmore Height in Storeys

Key:
- Proposed Boundary
- Proposed Street Blocks
- Design Excellence
- Building Envelopes
- Proposed Open Space
- Existing Open Space
- Green Link - Pedestrian / Cycle

Heights in Storeys:
- 2 Storeys
- 3 Storeys
- 4 Storeys
- 5 Storeys
- 6 Storeys
- 7 Storeys
- 8 Storeys
- Existing

Proposed Street Blocks
Proposed Open Space
Existing Open Space
Green Link - Pedestrian / Cycle

McPherson Park
Carters Park
Existing Precinct Boundary

McPherson Park
Carters Park

COULSON STREET
NASSAU LANE
EVE STREET
MACDONALD STREET
(NEW STREET)
ASHMORE STREET
MITCHELL ROAD
BINNING STREET
GEORGE STREET
BELMONT STREET
LAWRENCE STREET
MADDOX STREET
VICTORIA STREET
FOUNDRY STREET
ZENITH STREET
PEARL STREET
BRIDGE STREET
COPPERSMITH LANE
HADFIELDS STREET
ALPHA ST
KOOKA WALK
GODDARD STREET
METTERS STREET
STOVEMAKER LANE

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approved envelope study

Whilst the initial analysis indicated a complying development may be possible on the stage 1 DA envelope it also indicated that achieving the bonus FSR with the preferred client plan typology was impossible, additional frontage was needed in the development envelope. In response to these constraints we developed options 2, 3 and 4.

option 1 - stage Ida envelope

The hybrid eblock form was generated by pushing the east-west building to full height and creating two central courtyards similar to erko building adjacent. Solar studies revealed the sites north-south depth was insufficient to achieve the desired outcome. The buildings form was in contradiction to councils desire to have a street wall on Macdonald St and low height building to the north.

option 2 - e block

Forming the building into three north-south fingers achieved the additional frontage whilst respecting the desire to have 3 levels from on the pedestrian spine. However it resulted in the Macdonald St building becoming unacceptably long and the lack of active frontage on the northern pedestrian spine. The plan form also revealed 3 knuckles that became problematic to plan out.

option 3 - hybrid

preferred option 4 - perimeter block

Forming the building into two L shaped forms, broken once on north and again to the south, created the active frontage needed to the north and reduced the building length on the south. Creating one central courtyard running east-west enhances the solar access and maximises the building frontage to the northern aspect. The result is a plan type with only 2 knuckles one of which is only over 3 levels. The separation between buildings across the courtyard is approximately 16.5m (12 to balconies) and 9 meters between buildings.
the articulated facade

1. Resultant form derived from plan studies.

2. Setback top floor, introduce stoops and human scale to street edges.

3. Slots to provide breaks in built form, reduces scale and allows light and air deep into the building.

4. Celebrate corner and introduce subtle local reference, parapets and tunnels.
Analysis - DCP
• Internalised courtyard with significant overlooking and overshadowing issues.
• The mapping of pedestrian routes questioned the location of the thought site link with majority of the foot traffic heading to the pedestrian crossing at Mitchell Road.
• The through site link also created a view across Sydney Park road to the substation building on the opposite side of the road.

Response
• Introduce major community open space to the north to replace builtform.
• Kink building off Sydney Park Road to reduce perceived length.

Response
• Change the location and scale of through site link enabling the northern Huntley street building to be lowered reducing overshadowing and increasing solar access.

Response
• As a result of further testing and detailed floor planning the team was able to remove the northern mass completely.
• Trees along Huntley Street are kept.

Response
• Permeate the ground plane.
• Links to match desire routes through the site.

Response
• Create legible green public corridors through the building.
• Green wraps up into and over the building.

Response
• Break the larger building at these public corridors into smaller communities.
• Smaller communities are better communities.
5.6.2 Amsterdam Docklands

Figure 21

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5.6.2 Amsterdam Docklands

**Density Comparison table**

<table>
<thead>
<tr>
<th></th>
<th>Piraeus</th>
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<tbody>
<tr>
<td><strong>Net Density</strong></td>
<td>221</td>
</tr>
<tr>
<td>(dwellings per hectare)</td>
<td></td>
</tr>
<tr>
<td>&quot;The ratio of the number of dwellings to the area of land they occupy (precinct or a block), including internal public streets and half of the width of adjoining streets that provide access to the dwellings.&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>Site Density</strong></td>
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</tr>
<tr>
<td>(dwellings per hectare)</td>
<td></td>
</tr>
<tr>
<td>&quot;The ratio of the number of dwellings to the area of the site they occupy.&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>Habitable Rooms</strong></td>
<td>-</td>
</tr>
<tr>
<td>(habitable rooms per hectare)</td>
<td></td>
</tr>
<tr>
<td><strong>Floor / Space Ratio</strong></td>
<td>4.65:1</td>
</tr>
<tr>
<td>&quot;The floor space ratio of buildings on a site is the ratio of the gross floor area of all buildings within the site, to the site area.&quot;</td>
<td></td>
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<tr>
<td><strong>Footprint (%)</strong></td>
<td>69%</td>
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<td></td>
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<tr>
<td><strong>Rise (Storeys)</strong></td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Site Area</strong></td>
<td>10550m²</td>
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</table>

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5.6.2 Amsterdam Docklands

MVRDV, Due case al Borneo Sporenburg, Amsterdam (2000)

Figure 23

Figure 24

Figure 25
5.6.2 Amsterdam Docklands

**THE BLOCK**

**BUILDINGS**

Housing + Self build + Solids commercial + Private homes + Floating homes

**HOUSE**

+ SHED + WATER + LAND

**Commercial**
often located in the ground floors of buildings

**Private**

**Architect**

**Values of housing 2009:**

Spaarndammerbuurt
IJburg
IJplein
Borneo and Sporenburg
Westerdok
KSNM & Java
Studio Houthavens

**Case Study**

Project coordinators:
XML Architects

Project team:
Güley Alagöz
Polina Plotkina

Self build

Solids commercial

Mould use

SHED

WATER

LAND

**Resident population and housing in IJburg with all Amsterdam**

**Social rent**
will be rented to middle-class incomes

**Homes**

% homes

- 0-4 years
- 65 years
- %families

**Distribution of housing**

% 0-4 years % 65 years %families

- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100

- %

Amsterdam IJburg

IJburg population

> 5,000 inhabitants.

**Comparison of population and housing in IJburg with all Amsterdam area.**

* On IJburg nearly half (48.3%) of households have a family with children.

* That is the highest proportion of all combinations in the Amsterdam area.

* The proportion of very young children aged 0-4 years by 17% is still very high on IJburg and much higher than in other new areas.

* Given the high proportion of homes, one might think that IJburg a ‘white area’ would be.

* The proportion of non-western immigrants is IJburg (32%) was virtually identical to the city average (34%).

**IJburg//STATISTICS**

Built area:

16%

Floors in average:

2.2%

**IJburg//URBAN PLAN**

Alan Siu Lun Wu
Egor Goryachev
Borneo and Sporenburg

**VEHICULAR NETWORKS**

TRAM 10 / 26 20 MINS MAP

1600 Dutch Golden Age 1700 1800 Eastern Docklands, 1877 Docklands Expansion, 19th Century Borneo-Sporenburg, 1980s


RESIDENTIAL GREEN SPACE

SCHOOL

RESTAURANT

COMMERCIAL

+/- 7000 SQUARE METERS

100 HOUSING UNITS / HA

+/- 5387

NATIVE DUTCH

WESTERN IMMIGRANTS

NON - WESTERN IMMIGRANTS

60 FREEHOLD PARCELS

Architects among others

1996-2000

HEREN 5

Ed Bijman, Jan Klomp, Bas Lisker

1997-2000

KCAP

Han van der Born

1994-1998

SPORENBURG I

Willem Jan Neutelings, Michiel Riedijk

1994-1997

SPORENBURG II

Atelier Zeinstra van der Pol

1994-1999

PUBLIC SEMI-PRIVATE

PRIVATE

5% PUBLIC FACILITIES

13% GREEN SPACE

95% RESIDENTIAL

6.2 Amsterdam Docklands

Figure 26

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5.6.3 Mirador Apartments, Madrid, Spain
5.6.3 Mirador Apartments, Madrid, Spain

Part-Whole Relationships

Thresholds + Poreity

Access + Circulation

Light + Transparency
Different ways to achieve density
5.2.4 Different ways of Achieving Density

Metric Study

Figure 4

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5.2.5 Different ways of Achieving Density

Applicable Precedents

5.2.5.1 Brenac & Gonzalez, Paris

5.2.5.2 Kengo Kuma, Tokyo

5.2.5.3 ADH/Workstation, Tokyo

5.2.5.4 Baumschlager & Eberle, Vienna
5.2.5.1 Brenac & Gonzalez, Paris
5.2.5.2 Kengo Kuma, Tokyo
5.2.5.3 ADH/Workstation, Tokyo

**Density Data**

- **Residential Density**: 942 o/ha in Koto-Ku
- **Residential Density**: 103 o/ha in Shinonome
- **Residential Density**: 561 o/ha
- **Residential Density**: 12.451.966 (33.400.000, Tokyo-Yokohama)

**Planning and Development**

- **Total Units**: 434
- **Total Gross Floor Area**: 40.988 m²
- **Occupied Floor Area**: 37,563 m²
- **Vacant Floor Area**: 3,425 m²
- **Floor Area Ratio**: 3.87
- **Not Covered Area per Dwelling**: 23.12 m²
- **Dwellings per Ha**: 561
- **Residential Dwellings per Ha**: 942
- **Commercial Dwellings per Ha**: 42
- **Other Dwellings per Ha**: 5

**Economic Indicators**

- **Average Income**: 5.693 /km²
- **Share of Public**: 100%
- **Share of Private**: 0%
- **Rent**: 0%
- **Ownership**: 434%

**Housing Tenure**

- **Promotion**: Developer

**Publication Details**

- **Source**: Home.att.ne.jp/kiwi/adh, wstn-arch.com
- **Source**: Metro.tokyo.jp, 2004
- **Source**: Digital Earth Technology, 2006
- **Source**: Demographia.com, 2003
- **Source**: UBS.com, 2003
- **Source**: lavanguardia.es, 2005

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5.2.5.4 Baumschlager & Eberle, Vienna

Figure 8
Street Interface study
Street Interface Benchmark Study
Collingwood

D  Smith Street
E1  Oxford Street
E2  Oxford Street
F  Peel/Wellington Street

section line
D - Smith Street

**Smith Street**
Characterised by a contiguously activated street wall

**Likes**
- Fine-grain built form with contiguous 2-3 storey street wall
- Individual ownerships encourage diversity in retail offering and uses
- Road carriageway shared by cars and trams
- Clearway arrangement provides flexibility
- On street parking
- Not reliant on street trees

**Dislikes**
- Poor adaption of heritage façades, eg. elevated carpark behind neo-classical façade above supermarket
Street Interface Benchmark Study
Collingwood

| E1 - Oxford Street |

Oxford Street
A north-south street characterised by red brick warehouses and offices on both sides

Likes
- Consistently undulating street wall of 3-5 storey built form present an almost 1:1 ratio of street wall to street width
- New developments that respect the scale and materiality of the old warehouse buildings

Dislikes
- Dominant nature of carparking
- Lack of tree canopy
- Multiple wide driveway crossovers
Oxford Street

A north-south street characterised by red brick warehouses and offices on both sides

Likes

- Consistently undulating street wall of 3-5 storey built form present an almost 1:1 ratio of street wall to street width
- New developments that respect the scale and materiality of the old warehouse buildings

Dislikes

- Dominant nature of carparking
- Lack of tree canopy
- Multiple wide driveway crossovers
Wellington Street

Likes
- Contiguous, but undulating street wall
- Prominent buildings marking key street corners
- True mixed use street with activated retail and building entries
- Dedicated bicycle lanes on both sides

Dislikes
- Lack of consistent tree planting
- Large number of driveway crossovers on the street
Docklands Drive
Docklands (Doepel Way)
Docklands (Bourke St)
section line
Docklands Drive
Wide street characterised by coherent tree planting and tram lines.

Likes
- Wide road reserve shared by tramway, bicycle paths and cars encourage slower traffic
- Activated frontages and generous pedestrian footpath provide opportunities for retail spillout
- Low streetwall height of about 12m, with towers set back at least 10m
- An east-west street with non-contiguous built form on both sides of the street encourage sunlight penetration to the street and footpath

Dislikes
- Poor, inconsistent paving on footpaths
- Non-contiguous awnings discourage stationary pedestrian activities due to wind effects
**Doepel Way**
Contiguous, short, north-south streets that has views towards Victoria Harbour

**Likes**
- Trees on both sides of the street provide pleasant landscape canopy which frame the view
- On street parking
- Generally slow, and low traffic movements

**Dislikes**
- Generally used for service vehicle access and car access to elevated carparking
- Poor activation from podium carparking (generally screened by public art)
Street Interface Benchmark Study
Docklands

C - Bourke St

Bourke St
The extension of Bourke Street into Docklands has a similar character to other main streets in the central city

Likes
- Generous landscaping and tree canopy
- On-street parking
- Approx. 1:1 ratio of street wall to street width
- Generous tower setbacks on the northern side of the street ranges from 20-40m reduces effects of shadows cast by tower form onto the public realm

Dislikes
- 90 degree median parking unsafe for cyclists and passing cars
Proposed Fishermans Bend building height and street wall controls

DDO67

Figure 2.2: Amendments to the Infrastructure delivery plan for Lorimer in the Fishermans Bend draft Framework
Figure 2.3: Mandatory proposed street wall height controls for Lorimer (DDO67)

1. Lorimer Street
2. Ingles Street
3. Boundary Street
4. 12m wide road
5. Rogers Street West
6. Turner Street

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Proposed Fishermans Bend building height and street wall controls
DDO67
Proposed Fishermans Bend building height and street wall controls

DDO67

Figure 2.5: Preferred building height controls (discretionary) for Lorimer (DDO67)
Proposed building height and street wall controls

DDO67

1 Lorimer Street (30m wide)

Lorimer Street
30m
Setback
5m
3 Storey Townhouse

30m
8m

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Proposed building height and street wall controls

DDO67

2 Ingles Street (30m wide)
Proposed building height and street wall controls
DDO67

Boundary Street (30m wide)
Proposed building height and street wall controls

Setback

- 15.4m (preferred)
- 5m

Maximum 10 Storeys

Road width

- 12m

Setback

- 5m

--- mandatory max 23m streetwall

--- 23m (mandatory)

12m wide road
Proposed building height and street wall controls

DDO67

5. Rogers Street West (22m wide)
Proposed building height and street wall controls

Turner Street - Scenario A (PARK)

Maximum 24 Storeys

- 15.4m (preferred)
- 23m (mandatory)
- Unlimited

Lot boundary

mandatory max 23m streetwall

PARK

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6 Turner Street - Scenario B (road)
Claremont St

Likes
- Vista towards park
- North-south street

Dislikes
- One way traffic reduces permeability
- In shade most of the day due to tall built form on either side
- Few street trees
- Buildings feel too close together
- Most towers built on single-fronted lots, forcing service openings next to building entries
City Road

Likes
- Traces of historical buildings retained
- Vista to Eureka tower and CBD skyline
- Good solar penetration from the north onto the public realm

Dislikes
- Poor pedestrian environment due to heavy traffic
- Non consistent streetwall heights
- Lack of on-street planting
- New developments with elevated ground level interface with public realm poorly
Built form driving density
I agree with paragraph 27 of Mr Sheppard’s report where he says “in my view, the process for determining the appropriate scale of a development should start by designing a desired built form character for each area that balances amenity outcomes and provision for growth with estimates of the resulting floor area used to inform infrastructure planning. Mr Sheppard goes on to describe “the tail wagging the dog”. I believe much more work needs to be done to describe and design the future character of Fishermans Bend.

The built form needs to be considered in a design sense, precinct wide. What are the special streets? What are the interesting corners? The built form shouldn’t just be assessed on a site by site basis. Opposite parks and on special spaces the design logic should drive the controls.

In contradiction to Mr. Sheppard’s opinion, I would suggest that the FAR should decrease across the Lorimer precinct.
Tower Podium typology
On the subject of the tower on podium typology where Mr Sheppard has said “the horse has bolted”, with 27-30 towers on podiums in the planning system,

I agree with Professor Rob Adams noted in Mr Sheppard’s evidence “that he raises concerns about blank or otherwise inactive street edge facades, and a loss of fine grain pattern, with a consequence for the richness of uses.”

I am firmly of the opinion that the tower on podium model is problematic and will not result in quality outcomes. By tower on podium i am describing a residential tower that sits on a carpark podium which is sleeved by other uses.

Mr Sheppards evidence shows 2 examples tower on podiums that he considers good.
QV, Mr Sheppard’s first example is indeed a fine development. QV’s carparking is predominantly underground and in reality a series of towers built on a shopping centre. A number of laneways criss cross the site and it certainly adds to the city’s richness. It is not a tower on podium typology.
Mr Sheppards next example is 245 City Road. This is a Tower on podium project that has a small sleeve of supermarket edge lifted 1200 above the footpath, it is not well activated. Above the supermarket is some 5 floors of podium with a green feature. This adds very little to the street and in my opinion not a quality outcome. One just needs to look at the northern end of Elizabeth Street to see the damage done by towers on podiums to the streetscape.
Building separation
I disagree with Mr Sheppard's analysis on building separation and generally agree with the proposed DDO setbacks of

<table>
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<tr>
<th>Building height</th>
<th>Side &amp; rear setbacks</th>
<th>Tower separation</th>
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</thead>
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<tr>
<td>&lt;23</td>
<td>6m</td>
<td>12m</td>
</tr>
<tr>
<td>23-30</td>
<td>9m</td>
<td>18m</td>
</tr>
<tr>
<td>&gt;30</td>
<td>10m</td>
<td>20m</td>
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I submitted in my evidence that I prefer the NSW ADG 24 m set back above 30 metres from habitable room to habitable room.

Building separations are important for ensuring that the buildings are scaled to support the desired future character with spaces between the buildings. Separation also assists in providing residential amenity.
Key Corner
While sympathetic to Mr Sheppard’s comments about increased street wall heights on corners I believe with some of the large sites at Fisherman’s Bend this can be abused. Corners are important markers and can prove extra legibility. Mr Sheppard’s example is large building that in my opinion provides no more legibility and in reality will damage the street wall.
This document was prepared by Koos de Keijzer with assistance from Raymond Mah + Ivan Tan + Jinyang Wang from DKO Architecture. I have made all the enquiries that I believe are desirable and appropriate, and that no matters of significance which I regard as relevant have to my knowledge been withheld from the tribunal.