| RFDC Ref. | Item description | Rule of Thumb | Better Design Practice | Notes | Proposal Complies |
|---|---|---|---|---|---|
| | Maximise heights in habitable rooms by stacking wet areas from floor to floor. This ensures that services and their bulkheads are located above a bathroom or store rather than habitable spaces. | | • | | ✓ |
| | Promote use of ceiling fans for cooling and heat distribution. | | • | To be considered in next stage dependent on marketing feedback. | - |
| | **Facilitate better access to natural light by using ceiling heights which:** | | | | |
| | Promote use of taller windows, highlight windows and fan lights. | | • | | ✓ |
| | Enable the effectiveness of light shelves in enhancing daylight distribution into deep interiors. | | • | Horizontal shading fins are provided which will have a dual purpose in also performing as a light shelf. Refer to facade details in design report. | ✓ |
| | Design ceiling heights which promote building flexibility over time for a range of other uses, including retail or commercial, where appropriate. | | • | | N/A |
| | Coordinate internal ceiling heights and slab levels with external height requirements and key datum lines. | | • | | ✓ |
| | Count double height spaces with mezzanines as two storeys. | | • | | N/A |
| | Cross check ceiling heights with building height controls to ensure compatibility of dimensions, especially where multiple uses are proposed. | | • | | ✓ |
| | **Recommended minimum FFL - FCL heights:** | | | | |
| | Residential building in mixed-use area 3.3m ground and first floor to promote future use flexibility. | • | | 5100mm floor to floor height to ground level (lobby and mixed use retail), with 3200mm height to first floor which is residential. | ✓ |
| | **In residential flats or other residential floor of mixed use buildings:** | | | | |
| | 2.7m habitable rooms, 2.4 non-habitable preferred, 2.25m permitted. | • | | | ✓ |
| | Two storey units 2.4m min. for second storey if 50% or more of the apartment has 2.7m min. heights. | • | | | N/A |
| | Two storey units with two storey void space, 2.4m min. ceiling heights | • | | | N/A |
| | Attic spaces 1.5m min wall height at edge of room with 30degree min. ceiling slope. | • | | | N/A |
| | Developments which seek to vary the recommended ceiling heights must demonstrate that apartments will receive satisfactory daylight. | • | | | N/A |
| **s3 p75** | **Flexibility** | | | | |
| | Provide robust building configurations, which utilise multiple entries and circulation cores, especially in larger buildings over 15m long. | | • | | ✓ |
| | Thin building cross sections, which are suitable for residential or commercial uses. | | • | | N/A |
| | A mix of apartment types. | | • | | ✓ |
| | Higher ceilings in particular on ground floor and first floor | | • | | ✓ |
| | Separate entries for ground floor level and upper levels. | | • | No apartments are located on the ground floor. | N/A |
| | Sliding and/or movable wall systems. | | • | Sliding wall systems are proposed to most storage areas. | ✓ |
| | **Provide apartment layouts, which accommodate the changing use of rooms. Design solutions may include:** | | | | |
| | Windows in all habitable rooms and the maximum number of non-habitable rooms. | | • | | ✓ |
| | Adequate room sizes and open-plan apartments, which provide a variety of furniture layout opportunities. | | • | | ✓ |
| | Dual master-bedroom apartments, which can support two independent adults living together or a live/work situation. | | • | Not deemed suitable for intended client / market. | ✗ |
| | Utilise structural systems, which support a degree of furniture change in building use or configuration. Design solutions may include: | | | | |
| | A structural grid, which accommodates car parking dimensions, retail commercial and residential uses vertically throughout the building. | | • | | ✓ |
| | The alignment of structural walls, columns and services cores between floor levels. | | • | | ✓ |
| | The minimisation of internal structural walls. | | • | | ✓ |
| | Higher floor to floor dimensions on the ground floor and possibly the first floor. | | • | | ✓ |
| | **Promote accessibility by ensuring:** | | | | |
| | The number of accessible and visitable apartments is optimised. | | • | | ✓ |
| | Adequate pedestrian mobility and access is provided. | | • | | ✓ |
| **s3 p77** | **Ground floor apartments** | | | | |
| | Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site. | • | | No residential apartments are located on the ground floor. | N/A |
| | Provide ground floor apartments with access to private open space, preferably as a terrace or garden. | • | | | N/A |
| **s3 p79** | **Internal circulation** | | | | |
| | **Increase amenity and safety in circulation spaces by:** | | | | |
| | Providing generous corridor widths and ceiling heights, particularly in lobbies, outside lifts and apartment entry doors. | | • | | ✓ |
| | Providing appropriate levels of lighting, including the use of natural daylight, where possible. | | • | | ✓ |
| | Minimising corridor lengths to give short, clear sight lines. | | • | | ✓ |
| | Avoiding tight corners. | | • | The floorplate geometry results in some tight corners however these are architecturally expressed as circulation nodes which are wider than typical corridor areas, receive natural light and ventilation, and contain rounded wall finishes to facilitate smooth circulation. | ✓ |
| | Providing legible signage noting apartment numbers, common areas and general directional finding. | | • | Assumed | ✓ |

| RFDC Ref. | Item description | Rule of Thumb | Better Design Practice | Notes | Proposal Complies |
|---|---|---|---|---|---|
| | Providing adequate ventilation. | | • | | ✓ |
| | Support better apartment building layouts by designing buildings with multiple cores which: Increase the number of entries along a street; Increase the number of vertical circulation points; Give more articulation to the façade; Limiting the number of units off a circulation core on a single level. | | • | To reduce floorplate area and minimise perceptions of building bulk, an efficient central core typology has been proposed. | N/A |
| | Articulate longer corridors. Design solutions may include: Utilising a series of foyer areas; Providing windows along or at the end of a corridor. | | • | | ✓ |
| | Minimise maintenance and maintain durability by using robust materials in common circulation areas. | | • | Assumed | ✓ |
| | In general where units are located off a double loaded corridor the number of units accessible from a single core should be limited to 8. Exceptions may be allowed: For adaptive reuse of buildings; Where developments can demonstrate the achievement of the desired streetscape character and entry response; Where developments can demonstrate a high level of amenity for common lobbies, corridors and units, (cross over, dual aspect apartments). | • | | Corridors are generally single loaded. Where corridors are double loaded, the maximum number of apartments located off each corridor is 2. | ✓ |
| **s3 p80** | **Mixed Use** | | | | |
| | Choose a mix of uses that complement and reinforce the character, economics and function of the local area. | | • | | ✓ |
| | Choose compatible mix of uses. | | • | | ✓ |
| | **Consider building depth and form in relation to each use's requirements for servicing and amenity. The compatibility of various uses can be addressed by utilising:** | | | | |
| | Flexible building layouts, which promote variable tenancies or uses. | • | | | ✓ |
| | Optimal floor to ceiling heights. | • | | | ✓ |
| | Optimal building depths, such as 10-18m for residential and smaller commercial uses. | • | | To maximise tower efficiency and reduce building bulk, a central core typology has been adopted which results in a greater building depth. The deepest area of the floorplate however is occupied by the core, with common area circulation corridors receiving excellent levels of amenity through natural light, ventilation and views. | ✗ |
| | Extra care where larger footprint commercial spaces are integrated with residential uses. | • | | | N/A |
| | **Design legible circulation systems, which ensure the safety of users by:** | | | | |
| | Isolating commercial service requirements, such as loading docks, from residential access, servicing needs and primary outlook. | • | | | ✓ |
| | Locating clearly demarcated residential entries directly from the public street. | • | | | N/A |
| | Clearly distinguishing commercial and residential entries and vertical access points. The coming and going of strangers can lead to security issues, especially for the residential component. | • | | | ✓ |
| | Providing secure entry to all entrances into private areas including car parks and internal courtyards. | | • | | ✓ |
| | Providing safe pedestrian routes through the site, where required. | | • | | ✓ |
| | **Ensure the building positively contributes to the public domain and streetscape by:** | | | | |
| | Fronting onto major streets with active uses. | | • | The proposal fronts onto the major street via a community park and a childcare centre. | ✓ |
| | Avoiding the use of blank walls at the ground level. | | • | | ✓ |
| | **Address acoustic requirements for each use by:** | | | | |
| | Separate residential uses, where possible, from ground floor leisure or retail uses by utilising an intermediate quiet-use barrier, such as offices. | | • | Site zoning permits residential use only. | N/A |
| | Design for acoustic privacy from the beginning of the project to ensure that future services, such as air conditioning, do not cause acoustic problems later. | | • | | ✓ |
| | Recognising the ownership/lease patterns and separating requirements for purposes of BCA for considerations. | | • | | N/A |
| s3 p82 | Storage | | | | |
| | **Locate storage conveniently for apartments. Options include providing:** | | | | |
| | At least 50% of required storage within each apartment and accessible from either the hall or living area. Storage is best provided as cupboards accessible from entries and hallways and/or from under internal stairs. | | • | | ✓ |
| | Dedicated storage rooms on each floor which can be leased by residents as required. | | • | Sufficient storage provided in basement and dwellings. | ✗ |
| | Dedicated and / or leasible storage in internal or basement car parks. Leasing storage provides choice and minimises the impact of storage on housing affordability. | | • | Lockable storage cages provided in basement. | ✓ |
| | Provide storage, which is suitable for the needs of residents in the local area and able to accommodate larger items such as sporting equipment (skiing, golf, surfing etc.) and bicycles. | | • | | ✓ |
| | Ensure that storage separated from apartments is secure for individual use. | | • | | ✓ |
| | **Where basement storage is provided:** | | | | |
| | Ensure that it does not compromise natural ventilation in car parks or create potential conflicts with fire regulations. | | • | | ✓ |
| | Exclude it from FSR calculations | | • | | ✓ |
| | Consider providing additional storage in smaller apartments in the form of built-in cupboards to promote a more efficient use of small spaces | | • | | ✓ |
| | In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: Studio apartments 6m3; 1-bedroom apartment 6m3; 2-bedroom apartment 8m3; 3-bedroom apartment 10m3. | • | | | ✓ |
| | BUILDING AMENITY | | | | |
| s3 p83 | Acoustic Privacy | | | | |

| RFDC Ref. | Item description | Rule of Thumb | Better Design Practice | Notes | Proposal Complies |
|---|---|---|---|---|---|
| s3 p84 | Daylight Access | | | | |
| | Living rooms and private open spaces for at least 70% of apartments in a development should receive a min. 3 hours direct sunlight between 9am and 3pm in mid winter. In dense urban areas min. 2 hours may be acceptable | • | | 68% of residential apartments achieve 3 hours of solar access between 9am and 4pm on 22nd June. 78% of residential apartments achieve 2 hours of solar access between 9am and 4pm on 22nd June. Refer to planning and design report for further detail. | - |
| | Limit the number of single-aspect apartments with a southerly aspect to a maximum of 10% of total units. | • | | 0% of apartments have a south facing orientation. 21% of apartments have a south eastern orientation which achieve excellent amenity through prime city skyline views. 8 communal spaces are provided at various levels throughout the building with a variety of orientations, many of which achieve 3 hours solar access on 22nd June. | ✘ |
| s3 p86 | Natural Ventilation | | | | |
| | Building depths which support natural ventilation typically range from 10-18m. | • | | 60% of residential units achieve crossflow ventilation despite a floorplate which varies in depth. | - |
| | 60% of residential units should be naturally cross ventilated. | • | | 60% of residential units achieve crossflow ventilation. Refer to crossflow ventilation section of design report. | ✓ |
| | 25% of kitchens should have access to natural ventilation. | • | | 31% of kitchens receive access to natural crossflow ventilation. | ✓ |
| | BUILDING FORM | | | | |
| s3 p88 | Awnings and Signage | | | | |
| s3 p89 | Facades | | | | |
| s3 p91 | Roof Design | | | | |
| | BUILDING PERFORMANCE | | | | |
| s3 p93 | Energy Efficiency | | | | |
| | **Incorporate passive solar design techniques to optimise heat storage in winter and heat transfer in summer by:** | | | | |
| | Maximising thermal mass in floor & walls in northern rooms. | | • | Internal wall finish to be determined. All floors are concrete slab construction. Floor finishes to bedrooms are carpet to provide acoustic separation and thermal insulation. Stone floor finish to living areas is to be offered as an option to purchasers. | - |
| | Hard floor finishes instead of carpet | | • | As above | - |
| | Limiting number of single aspect apartments with southerly aspect to max 10%. | | • | 0% of apartments have a south facing orientation. 21% of apartments have a south eastern orientation which achieve excellent amenity through prime city skyline views. 8 communal spaces are provided at various levels throughout the building with a variety of orientations, many of which achieve 3 hours solar access on 22nd June. | ✘ |
| | Insulating roof/ceiling to R2.0, external walls to R1.0 and floor including separation from basement parking to R1.0. | | • | | ✓ |
| | **Improve control of mechanical space heating & cooling by:** | | | | |
| | Designing apartments so that entries open into lobbies or vestibules and are isolated from living areas by doorways. | | • | Not deemed acceptable to market. | ✘ |
| | Provide or plan for future installation of photovoltaic panels. | | • | | ✓ |
| | Improve efficiency of hot water systems | | • | | ✓ |
| | Reduce reliance on artificial lighting | | • | | ✓ |
| | Maximise the efficiency of household appliances | | • | Refer to Basix report. | ✓ |
| s3 p95 | Maintenance | | | | |
| s3 p96 | Waste Management | | | | |
| | Provide every dwelling with a waste cupboard or temporary storage area of sufficient size to hold a single days waste and enable source separation. | | • | | ✓ |
| | Incorporate on-site composting, where possible in self contained units on balconies as part of the shared site facilities | | • | Green waste bin area provided in basement. | - |
| | Supply waste management plan with DA | • | | | ✓ |
| s3 p97 | Water Conservation | | | | |
| N/A | Accessible Parking | | | | |
| | Car parking space or garage min. area 6.0m x 3.8m | | | Out of date standard referenced by SEPP65. | - |
| | Roof to car parking space | | | | ✓ |
| | Internal clearance of garage or carport 2.5 min. | | | | ✓ |

# APPENDIX B
# APARTMENT AREA SCHEDULE

**Area Schedule**

| Level | Use | Car Spaces | Apartments | GFA (sqm) |
|---|---|---|---|---|
| Level 34 | Plant | | | |
| Level 33 | Residential | | 9 | 971 |
| Level 32 | Residential | | 9 | 971 |
| Level 31 | Residential | | 9 | 971 |
| Level 30 | Residential | | 9 | 971 |
| Level 29 | Residential | | 9 | 971 |
| Level 28 | Residential | | 9 | 971 |
| Level 27 | Residential | | 9 | 971 |
| Level 26 | Residential | | 9 | 971 |
| Level 25 | Residential | | 9 | 971 |
| Level 24 | Residential | | 12 | 965 |
| Level 23 | Residential | | 12 | 965 |
| Level 22 | Residential | | 12 | 965 |
| Level 21 | Residential | | 12 | 965 |
| Level 20 | Residential | | 12 | 965 |
| Level 19 | Residential | | 12 | 965 |
| Level 18 | Residential | | 12 | 965 |
| Level 17 | Residential | | 12 | 965 |
| Level 16 | Residential | | 12 | 965 |
| Level 15 | Residential | | 12 | 981 |
| Level 14 | Residential | | 12 | 981 |
| Level 13 | Residential | | 12 | 981 |
| Level 12 | Residential | | 12 | 981 |
| Level 11 | Residential | | 12 | 981 |
| Level 10 | Residential | | 12 | 981 |
| Level 09 | Residential | | 12 | 975 |
| Level 08 | Residential | | 12 | 975 |
| Level 07 | Residential | | 12 | 975 |
| Level 06 | Residential | | 12 | 975 |
| Level 05 | Residential | | 12 | 975 |
| Level 04 | Residential | | 12 | 975 |
| Level 03 | Residential | | 12 | 981 |
| Level 02 | Residential | | 12 | 981 |
| Level 01 | Residential | | 12 | 981 |
| Level 00 | Lobby / Retail / Public Domain | 10 | 0 | 364 |
| Level B1 | Basement Carparking | 146 | | 0 |
| Level B2 | Basement Carparking | 142 | | 0 |
| Level B3 | Basement Carparking | 184 | | 0 |
| **Total** | | **482** | **369** | **32467** |

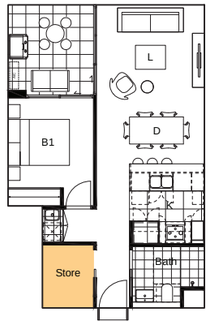
**Site 68 Sydney Olympic Park**
**Apartment Type Area Schedule**

| Type | Basement Storage Cage | Quantity | Internal Area (m2) | Balcony / W'garden (m2) | Min. storage required in apartment - SEPP65 (m3) | Min. Storage provided in Apartment - SEPP65 Measurement (m3) | Complies with SEPP65 requirements | Adaptable |
|---|---|---|---|---|---|---|---|---|
| 1A | Yes | 57 | 53 | 8 | 3.0 | 8.4 | Yes | |
| 1B | No | 33 | 61 | 9 | 6.0 | 6.1 | Yes | |
| 1C | Yes | 57 | 51 | 6 | 3.0 | 3.1 | Yes | Y - x26 no. |
| 1D | No | 24 | 56 | 6 | 6.0 | 6.2 | Yes | |
| | | | | | | | | |
| 2A | Yes | 57 | 78 | 11 | 4.0 | 10.3 | Yes | |
| 2B | No | 24 | 82 | 13 | 8.0 | 8.1 | Yes | |
| 2C | Yes | 24 | 85 | 15 | 4.0 | 4.0 | Yes | |
| 2D | Yes | 15 | 71 | 13 | 4.0 | 10.6 | Yes | |
| 2E | Yes | 24 | 80 | 15 | 4.0 | 9.0 | Yes | |
| 2F | Yes | 18 | 75 | 10 | 4.0 | 10.2 | Yes | |
| | | | | | | | | |
| 3A | Yes | 9 | 99 | 27 | 5.0 | 12.4 | Yes | Y - x9 no. |
| 3B | No | 9 | 116 | 17 | 10.0 | 10.3 | Yes | |
| 3C | Yes | 9 | 108 | 13 | 5.0 | 12.5 | Yes | |
| | | | | | | | | |
| 4A | Yes | 2 | 155 | 32 | 5.0 | 6.2 | Yes | Y - x2 no. |
| 4B | Yes | 7 | 155 | 32 | 5.0 | 6.2 | Yes | |
| **Total:** | | **369** | | | | | | **37** |

* Basement storage cages provided: 293
* Number of units achieving SEPP65 storage requirements: 369 (100%)
* SOPA storage requirements are equal to that required by the RDFC (SEPP 65)

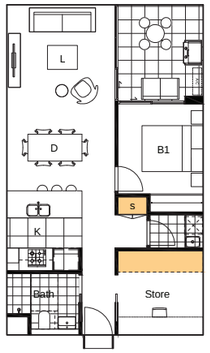
Storage plan per apartment type is located opposite.

## APPENDIX C: APARTMENT AREA SCHEDULE



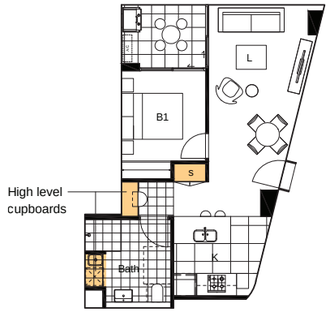

### Type 1A

| | |
|---|---|
| Storage volume provided within apartment: | 8.4m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (6.0 m³): | Yes |




### Type 1B

| | |
|---|---|
| Storage volume provided within apartment: | 6.12m³ |
| Storage cage provided in basement: | No |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (6.0 m³): | Yes |

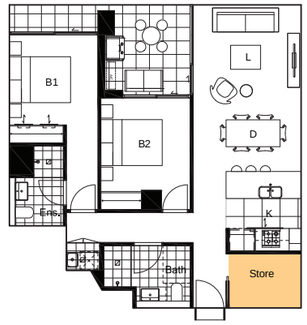



### Type 1C

| | |
|---|---|
| Storage volume provided within apartment: | 3.08m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (6.0 m³): | Yes |

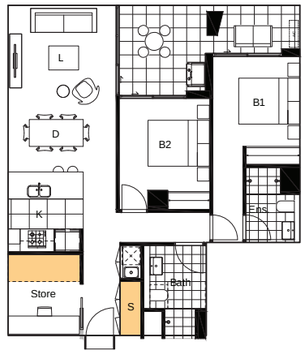

### Type 1D

| | |
|---|---|
| Storage volume provided within apartment: | 6.22m³ |
| Storage cage provided in basement: | No |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (6.0 m³): | Yes |



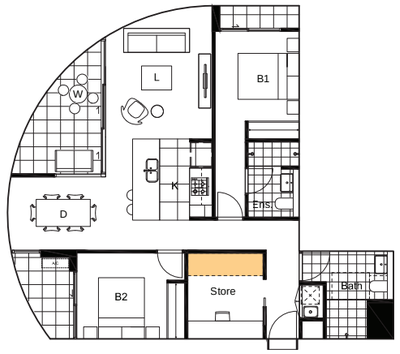

### Type 2A

| | |
|---|---|
| Storage volume provided within apartment: | 10.3m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |




### Type 2B

| | |
|---|---|
| Storage volume provided within apartment: | 8.12m³ |
| Storage cage provided in basement: | No |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |




### Type 2C

| | |
|---|---|
| Storage volume provided within apartment: | 4.02m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |


### Type 2D

| | |
|---|---|
| Storage volume provided within apartment: | 10.56m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |


### Type 2E

| | |
|---|---|
| Storage volume provided within apartment: | 9.0m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |


### Type 2F

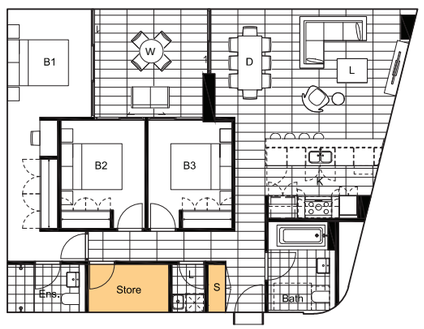
| | |
|---|---|
| Storage volume provided within apartment: | 10.22m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (8.0 m³): | Yes |


### Type 3A

| | |
|---|---|
| Storage volume provided within apartment: | 12.43m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (10.0 m³): | Yes |

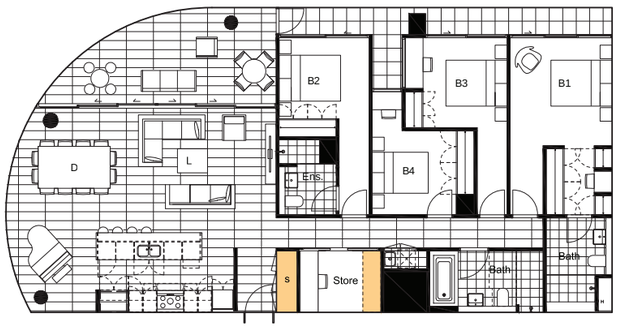

### Type 3B

| | |
|---|---|
| Storage volume provided within apartment: | 10.29m³ |
| Storage cage provided in basement: | No |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (10.0 m³): | Yes |




### Type 3C

| | |
|---|---|
| Storage volume provided within apartment: | 12.53m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (10.0 m³): | Yes |




### Type 4A / B

| | |
|---|---|
| Storage volume provided within apartment: | 6.24m³ |
| Storage cage provided in basement: | Yes - 4m³ |
| Total storage volume compliant with SEPP 65 / SOPA guidelines (10.0 m³): | Yes |

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**STORAGE PLANS UPDATED 27.01.2015**

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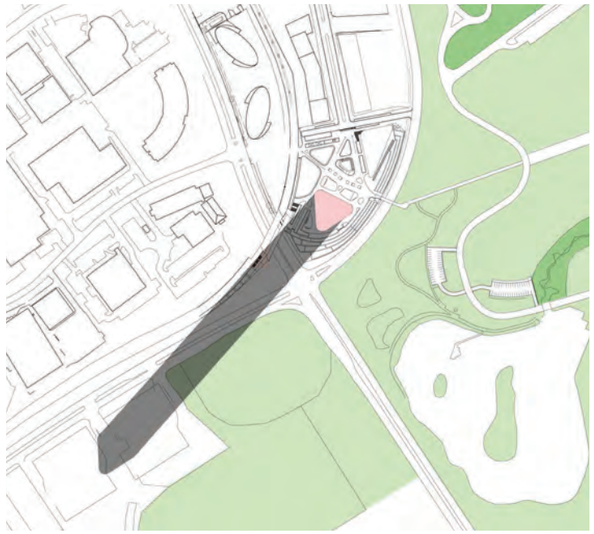
# APPENDIX C

# SHADOW STUDIES

**22 JUNE**



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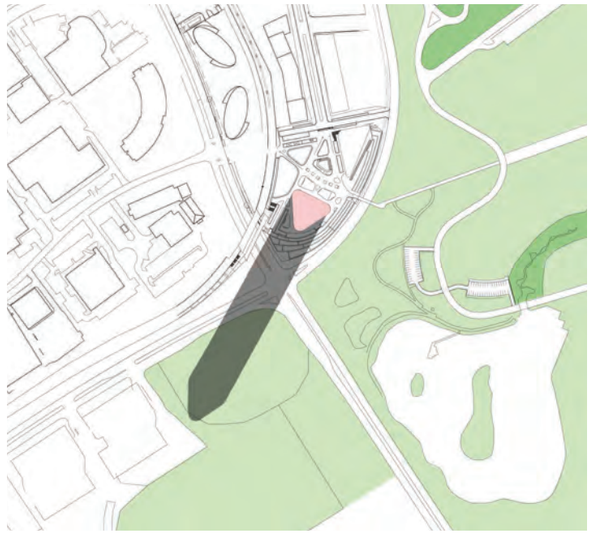

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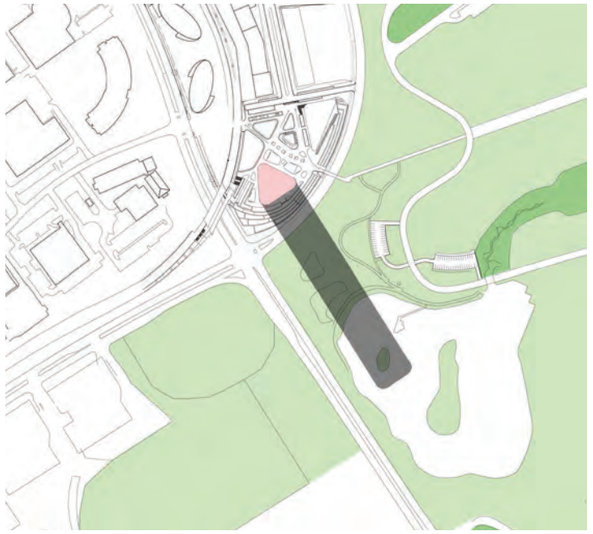

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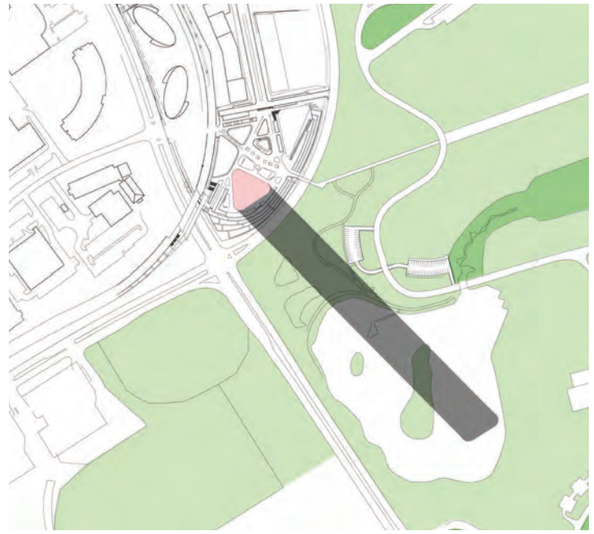

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# APPENDIX D

# MATERIALS SAMPLE BOARD

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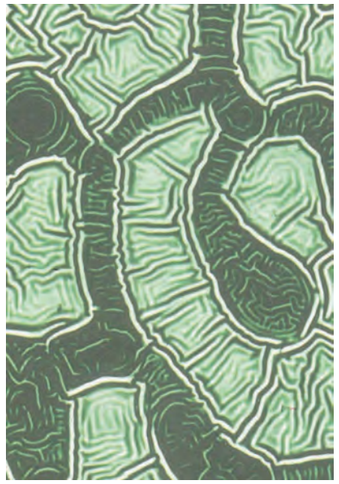
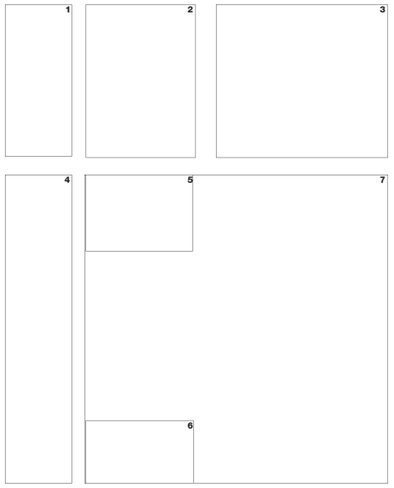
# MATERIALS SAMPLE BOARD








**PICTURED**

1. In-situ concrete with matt white paint finish.
2. Ceramic frit pattern / printed inter-layer glass panels clad on all walls of vertical slots. Pattern to be designed by recognized artist.
3. Terracotta spandrel panel, in natural eucalyptus inspired hues on all floors of the residential tower facade.
4. Recycled timber vertical slats as barrier and screens to ground floor bike storage and public walkway interfaces.
5. Satin Charcoal Grey anodized aluminium finish on all curtain wall and awning window mullions and frames; vertical slots horizontal louvres.
6. Anodized aluminium finish to all horizontal sunshade panels.
7. Double glazed curtain wall with green tint and low emissivity coating. (Glass size to be determined.)

**SOUTH FACADE**

**NORTH FACADE**


Revision Summary:

**NOT FOR CONSTRUCTION**

| Revision | Date | Description | Initial | Checked |
|---|---|---|---|---|
| 01 | 05.09.14 | For Information | KM | MLS |

Site 68
Sydney Olympic Park

Materials Sample Board

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|---|---|
| Scale | NTS |
| Drawn | Checked |
| Project No. | S11611 |
| Status | DA |
| Plot Date | 16/9/2014 2:56 PM |
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| Drawing No. | [Revision] |

DA08.01[01]

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