

16<sup>th</sup> June 2021  
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**Design Verification Statement**  
**Mixed Use Residential Development; 164-170 Croatia Avenue, Edmondson Park**

**Introduction**

This statement is provided pursuant to the requirements of Clause 50 of the Environmental Planning and Assessment Regulation 2000. It verifies that I, Tony Owen an architect registered under the Architects Act 1921, designed the building subject to this statement (referred to as 164-170 Croatia Avenue, Edmondson Park) and that I am of the opinion the building satisfies the design quality principles of Schedule 1 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65), and is consistent with the objectives in Parts 3 and 4 of the Apartment Design Guide as discussed below.

This submission follows a previous meeting with council and the Design Excellence Panel in July 2020, August 2020 and March 2021, December 2020 and subsequent request for information in April 2021. A stage 1 concept DA was lodged on January 12, 2021. This DA has been under assessment. Council have given feedback on a number of occasions as has the Design Excellence Panel, principally in April 2021. Following this liaison the Concept DA has been amended to address these concerns. This DA is consistent with the design in the final version of the Concept DA. Whilst not yet approved, we believe that the CDA now has the support of council and we are sufficiently confident that it will not require further change, to allow lodgement of the full DA.

The site is located within the Edmondson Park precinct of the South West Priority Growth Area. It is located to the North East of the Edmondson Park Train Station within the Liverpool LGA and is currently undeveloped vacant land. The proposal consists of 7 buildings and 674 units. It also contains ground floor retail and commercial space, basement parking and extensive public spaces. The site forms apt of the Master plan prepared by Landcom, who own the adjoining land to the West. It includes large areas of land in the Northern portion of the site which are zoned RE-1, which will become public recreation spaces and includes the realigned creek and detention ponds being designed and completed by council.

**Statutory Context**

The site is Regulated by State Environmental Planning Policy (State Significant Precincts) 2005, and Liverpool LEP 2008 and Edmondson Park South Development Control Plan 2012. The site has been designed according to the principles which have been established by the Landcom Master Plan Edmondson South Precinct.

It comprises multiple zones: B4 - Mixed Use pursuant to the State Environmental Planning Policy (State Significant Precincts) 2005 Appendix 16 Edmondson Park South Site; and SP2 – Infrastructure, RE1 - Public Recreation and R1 - General Residential, pursuant to the LEP 2008.

The southern portion of the lots are located within the planned Edmondson Park Town Centre and are zoned B4 Mixed Use under the *State Environmental Planning Policy (State Significant Sites) 2005* (SSP SEPP). The northern portion of the lots are predominantly zoned RE1 Public Recreation and SP2 Infrastructure (Local Road) under the *Liverpool Local Environmental Plan 2008*, and is proposed to be acquired by Council for the purposes of realigning the creek, creating a stormwater detention system as well as public recreation.

## **Master Plan and Adjoining Development Controls**

The Edmondson South Concept Plan was approved in 2011 with a dwelling yield of 3,200 dwellings and up to 45,000 sqm of retail/commercial floor space. Along with the Landcom Town Centre North Design Guidelines, this plan establishes the overall geometry for the precinct, road hierarchy and overall approach. Whilst the Concept Plan relates to the adjoining Landcom site, there is a close relationship between the 2 sites and in designing for our site we have adopted or incorporated many of the principles and planning from the adjoining site. An application to amend the Concept Plan has been lodged to increase the height to 50m with a landmark 67m tower.

In addition a large precinct is being developed by Fraser Property. Known as Ed Central. This site was subject to a Planning Proposal which was approved for a modification to the concept plan was approved increasing the maximum allowable height from 30m to 67.4m. The total floor space potential was unchanged. Large areas of this site have now been completed.

## **The 9 Design Quality Principles of Schedule 1 SEPP 65**

### **Principle 1: Context and Neighbourhood Character**

The site has a total area of 42,919m<sup>2</sup>. However, as portions of the site are zoned RE-1, the developable area is 30,289m<sup>2</sup>. is currently undeveloped and consists of areas of grassland. Northern portions of the site are zoned RE1 and will form of a larger parkland including portions of the Landcom site. These areas contain Maxwells Creek. This creek is being realigned as part of the MP and water detention plan and it forms the basis of the crescent shaped geometry of the surrounding green spaces.

The site is located within the Edmondson Park precinct of South West Priority Growth Area. It is located to the north east of the Edmondson Park Train Station within the Liverpool LGA, and is currently undeveloped vacant land. The site is bounded by Soldiers Parade to the west and Croatia Avenue to the north. A new crescent road which is a continuation of Macdonald Road divides the site and defines the area south of it as developable area. It directly adjoins the Ed Central development by Frasers which contains a large shopping centre and associated amenities.

The site is close to Ingleburn North Public School to the south and under the Edmondson Park Mater Plan a new primary/high school will be located directly west of the site. The Mater Plan also makes provision of large areas for a future regional park directly east and west of the site.

The site adjoins 2 large development sites; being the Frasers Ed Square project and the Landcom site. Both of these proposals involve similar scale developments including high density apartment buildings up to 20 storeys and large retail centres. These developments establish a new character for the area. The proposal is consistent with this context. In developing this design, we have considered the scale and configuration of the proposed adjoining developments and incorporated potential impacts including overlooking and overshadowing, streetscape etc, both in terms of impacts to and from adjoining projects.

### **Principle 2: Bulk and Scale**

#### **Design Principles**

The Master plan has been generated based on a set of principles. Many of these principles are continued from the adjoining Landcom site. The street grid maintains the street layout as set out in the diagrams in the SEPP and DCP as well as the geometry and envelopes established in the master plan. In addition a Pre-DA meeting occurred in August 2020. At that time the MP was presented to a generally favorable response. The final MP has been amended according to the feedback from that meeting and reflects the direction and consensus from this meeting.

The design maintains the road network from the LEP and Landcom MPs. This continues the street pattern established in the precinct. The developable site is bounded by Soldiers Parade to the west and

the crescent shaped road which is a continuation of Macdonald Road to the north. A new east west local road will run through the site as a continuation of the Buchan Avenue alignment and a new north south local road will link these 2 roads. This will be a shared pedestrian roadway. In addition, a pattern of through-site-links and cycle ways creates a strong permeability within the site. This maximises linkages to the station. A large portion of the ground floor is given over to the retail space to service and activate the precinct. This retail is concentrated closest to the station along the main access routes. This includes along Soldiers Parade and the local east/west road closest to the station. Portions of the ground floor have retail to activate the main east/west through site link. The roads have been designed based on the DCP standards as well as those outlined in the Landcom Master Plan. This includes provision for cycle ways, parking and vegetation. These dimensions have been established in the stage 1 concept DA.

### **Building Envelopes and Massing**

The design of the built form and building envelopes takes its lead from the adjoining site as follows:

- The urban design approach consists of envelopes designed to reinforce the street grid.
- We have proposed envelopes which have the same general length depth as the the Landcom site. This will create a continuity on Urban Design and character.
- Buildings oriented north/south to maximise sun.
- Central green spaces oriented to maximise solar exposure.
- Permeability with through site links and circulation axes.
- Compliance with ADG setbacks and separations.
- We have proposed a 4 storey podium through out with a 2m-3m setback above L4.
- We originally proposed a 4m street setback consistent with the adjoining MP, however, subsequent DEP comments resulted in this being increased to 4.5m.
- Building length has been limited to a maximum of 60m. In cases where buildings are long significant recessed zones are located along all long facades to articulate the facades and reduce apparent length.
- Building depths are determined by ADG controls.

### **Bulk and Scale and 'Height Sculpting'**

- The scheme proposes mixed use residential buildings ranging from 4 to 8 storeys.
- The controls allow for a 24m height limit.
- Both large adjoining sites were the subject to planning proposals which increased the heights from 7 to 16-20 storeys. One of these PP's was approved, the other is in the final stages of approval.
- The scheme does not rely on a PP as it is generally consistent with the current controls. An 8 storey tower is only slightly higher than the controls, and much lower than the context of 16-20 storey adjoining towers. It is noted that this variance was supported by council staff at the pre-DA meeting and subsequent DEP meetings.
- The adjoining Landcom master plan establishes a context for the built form. This master plan includes envelopes which define the street grid and streetscape with buildings oriented north/south to maximise sun. This MP establishes a 4 storey podium with taller towers above with a setback. It also proposes a 3m street setback.

Whilst the maximum height of the design is 8 storeys, the building heights are varied to provide variety of streetscape. We have used 'solar sculpting' to determine the changes in massing. This involves creating an active 3-D model and determining the building heights based on minimizing the overshadowing of neighbouring buildings both within the development and on other sites. This results in variation in height and a maximizing of solar access. See solar sculpting diagrams.

### **Principle 3: Built Form - Master Plan**

## **Orientation**

Like the adjoining MP, the building envelopes are oriented North/South. This ensures that units will receive the maximum solar amenity. In addition, it creates a series of North/South communal green spaces between the buildings and maximises the amount of sun to these spaces.

## **Exposure to green space**

The layout has been conceived to maximise the amount of green spaces and also maximise the outlook of all units towards greenspace. This includes:

- Creation of North/South greenspaces with maximum exposure to the North/South buildings (Bldg A,B,C,D).
- Orienting the eastern buildings (E,F) to maximise outlook to the green reserve to the north and east.
- Provision of green space between buildings B,D and E,F.
- Creation of greenspace between buildings G,H and the adjoining potential buildings south of the site.

## **Permeability**

The site is located close to the station and surrounded by other developments. Accordingly, the plan has been designed to maximise permeability within the site and maximise connectivity to adjoining sites. This has been achieved as follows:

- Creation of an East/West crescent shaped pedestrian link which would continue the paths established on the Landcom site which links together various communal green spaces.
- Provision of a North/South link between Bldgs A,B,C,D and G,H. This link would connect the areas north of the site with the station to the south.
- Provision of a linkage at ground level through Bldg E connecting the site to the RE-1 reserve.

## **Diversity and Precincts**

The site has been divided into 4 precincts according to the blocks generally containing 2 buildings each. It is intended that each precinct is designed differently to give each precinct a unique character and create diversity. TOP have done this to great effect on recent projects including the Caste Hill Showgrounds development, see attached.

## **Principle 3: Built Form - Buildings**

### **Building A, B**

Buildings A,B are sister buildings which define the northern portion of the north south plaza. These are linear buildings oriented to allow solar amenity to both sides of the building for maximum exposure. The buildings contain a deep recess on the long façade to reduce the apparent length. Each unit in this building are angled slightly to improve the solar orientation. These 'sun-catcher' units define the jagged profile. These modules are expressed in brick to create a modulated interesting expression. The southern portions are 8 storeys and the northern wings drop down to 7 storeys towards the park. A rood terrace is located on L7 of both buildings for resident amenity which contains extensive pergolas containing solar panels for shade. The lower 4 storeys form a podium with a setback at L4. The upper levels are clad in a lighter brick, so the building gets lighter as you go up. The central corridors have windows at each end for natural light. The masonry 'sun-catcher' modules define large pleasant balconies. The east and west facades contain large areas of glass with deep recesses and overhangs for shading. The north façade contains glazing to maximise views to the park. The southern façade is more solid for privacy as it adjoins buildings C,D.

The ground floor of buildings A,B contain a central corridor which runs the length of the building. There is an entry from the street to the north and east/west link to the south, as well as a central entry off the

grand plaza. This provides clear and direct entry and orientation. This provides numerous direct access points to open space. Brick entry canopies clearly define the entry points. The basement is accessed from a ramp on the western perimeter with a green buffer to the adjoining site. The buildings share a 2 storey basement parking with a central deep soil zone beneath the grand plaza. Loading is from the basement. At ground level low masonry planters and timber fencing provides an interface with the public domain.

### **Buildings C,D**

Buildings C,D are also a pair of linear buildings which define the southern portion of the north south plaza. These linear buildings are oriented north/south to allow solar amenity to both sides of the building for maximum exposure. The buildings also contain a deep recess on the long façade to reduce the apparent length. They are also clad in masonry, but have a different character to A,B. They are "I-Shaped" buildings with a toe that defines the southern end of the plaza. They have a setback at L4 forming a podium. These buildings have an undulating pitched roof creating a sculptural composition. These roof area contain areas of roof terrace within the pitched volumes. The massing steps down from 8 storeys at the north to 6 and 7 storeys at the south. This massing is determined by 'solar sculpting' to minimize shadowing of the plaza and buildings to the south. The facades are deeply modelled to provide solar protection. This is continued at ground level as a masonry colonnade. This colonnade defines the retail interface at the base of the buildings and articulate the streetscape. The framed podium expression also contains timber screens which further articulate the facades. The typical floors have central corridors have windows at each end for natural light.

The ground floor of building C contains extensive retail/commercial space articulated by a 2m colonnade. This creates a retail plaza area within the central plaza. The main lobby is accessed off the street. A secondary lobby to the south is accessed off the central plaza. This building contains a centrally located community room on ground which serves the whole development. The ground floor of building D contains retail/commercial space at the southern end. The basement is accessed via a ramp at the northern end which is contained within the mass of the building to minimize impact. The northern core is accessed from the north/south shared street, and the southern core is accessed off the main east/west link. The buildings share a 2 level basement containing loading facilities with a central deep soil zone beneath the grand plaza. The ground level at the south west corner of Bldg C experiences a large level change due to the fall in the street. As such portions of this level are below natural ground and contain plant area. Areas of steppes are used to terrace the ground level to provide level active retail terraces and maximise the progression of space and pedestrian routes.

Like Bldg A,B the brick work gets lighter as it gets higher. Whilst the buildings share a similar expression, building C is clad in 2 tones of brown bricks, and Bldg D in 2 tones of grey bricks to give a distinct expression.

### **Building E**

Buildings E and F form a family of buildings. They are defined by their location along the crescent road and overlook the park to the north. They also define the park located to their west. However, they have quite different form and expression.

Building E is a curved form with a recessed zone in the middle to reduce its apparent length. It also has a toe to the south. This toe contains further commercial space at ground and L1. The building has a setback at L4 to define a podium massing. The bldg is 8 storeys to the north and progressively steps down to the south. This solar-sculpting minimizes shading to Bldg F and the central park. The stepping creates a series of large roof terraces which are communal space terraces. These have extensive shade pergolas with solar panels.

The ground plane has a thru-site link in the middle of the building. This creates additional connectivity between the RE-1 reserve and the central park. A central corridor connects through the entire ground floor. The main northern core entry is off the north/south shared street as well as the thru-site link. The southern core entry is off the crescent road and the through site link. A commercial space addresses the central park. The façade has a horizontal expression consisting of bands of white metal cladding and

glass balustrades. This forms a curvilinear undulating patterning on the façade which reflects the undulations of the creek. Vertical bands of horizontal louvres are provided for extra solar protection. Bldg E shares a basement with Bldg F.

### **Building F**

Building F also reflects the curve of the creek and crescent road. It is an 'L-shaped' building which defines the southern edge of the central park. Like Bldg E, it steps down from 8 storeys in the north to 6 storeys in the south to minimize overshadowing. It also has a setback at L4 to form a podium. The stepping forms a series of roof terraces; some of which are communal and some are private terraces. These have extensive shade pergolas with solar panels.

The basement is accessed from a ramp within the mass of Bldg F at the north. The basement contains loading facilities. The main eastern core entry is off the crescent road and the western core is entered off the north/south shared road. The units facing north and west front onto the central park. The typical floors have a central corridor with openings at each end for light and ventilation. There is a large recess in the centre of the massing to minimize apparent length.

The façade is patterned with a modular precast portal frame. These frames with curved edges create a soft modular expression which responds to the curves of the building. It is further articulated with sliding timber screens. The modules are darker at the bottom and lighter at the top. The entries are articulated using canopy elements in a similar curved portal form.

### **Building G,H**

Building G, H also form a close family of buildings. They share a similar but not the same expression. Building G defines the street edge of Soldiers Parade. Building H defines the southern edge of the east/west local road. The 2 wings define a communal space within this triangular site. The shared basement is accessed via a ramp within the massing of Bldg. H in the north/east corner of the lot. The ground floor of both buildings contains retail as it is close to the station and the design seeks to maximise retail closer to the station. The area between the buildings forms a pedestrian laneway/arcade which is activated by retail on both sides. This creates a variety of spatial character within the precinct. The ground floor retail on the northern façade of Bldgs G,H address a retail plaza area. This space is defined by planting to create a series of sunlit outdoor dining spaces. A glass awning provides shelter and acoustic protection for the units above whilst allowing sun to the north facing retail terrace. Similarly an awning is located on the west side of Bldg G. The levels rise sharply on Soldiers Parade at the south west corner of Bldg G. Stair ways are used to create a continuity and transition along this route. As the green space is south of the building it will receive more limited sunlight giving it a different character to other open spaces in the precinct. Through the concept DA process other options were explored including locating this space north of Bldg H. However, as this space would be in front of the building line it would become an extension to the retail plaza rather than a private communal space, and in discussions with council and the panel, this option was not preferred.

The main lobby of Bldg G is located off the central arcade bearing the street. It is marked by a covered way which is shaded by both buildings. Similarly the entry and core to Bldg H is accessed off this lane. Bldg G has a central corridor open at each end for light and ventilation. Both buildings have a setback at L4 to create a podium to reinforce the streetscape. A recessed slot is provided mid-building to provide additional through circulation and light for additional ventilation to units. The roof contains a roof terrace with large areas of pergolas which are inlaid with solar panels.

Building H also has a central corridor with openings at each end. The curved eastern stair is expressed in the massing of the façade. The building is opened up at this point to allow greater ventilation to the units in this area. The building is setback to the west above L4 to increase the separation with Bldg G. Where the buildings are in close proximity, there are no windows to either building to maintain ADG separation. Bldg G is 8 storeys whilst Bldg H is 6 storeys. This creates a modulation between the 2 buildings. In addition it reduces potential overshadowing to any potential building south of the site. The roof also has a large roof terrace. The curved pergola structure forms a feature which defines the massing and façade.

The massing of the buildings are angular reflecting the triangular shaped site. However, this geometry is softened by the use of rounded edges and curves in the facades. The facades consist of painted concrete and louvres. This is articulated using large horizontal solid balconies counterpointed with areas of glass balconies. Diagonal elements dynamically break up this expression. The short ends of buildings are characterised by portal frames with rounded edges. Additional metal horizontal louvres add solar protection and further articulation. The result is a distinct composition which differs from the other buildings.

#### **Principle 4: Density**

- The proposal is consistent with the 2:1 floor space control.
- This is consistent with the adjoining sites which have a similar 2:1 or 2.5:1 density.
- The site is well served by amenities and services. It is located adjoining the Edmondson park rail station and is served by bus routes, bicycle tracks and adjoins a significant green reserve. The site is close to proposed shops as part of the Ed Square proposal and on site proposed retail.

The density is consistent with the controls and objectives for the site and the complies with controls including minimum unit sizes and FSR, at 2:1. The site is located next to new amenities such as the Ed Central shopping centre and schools and is within 200m of the new rail station. The additional yield will provide suitable, well designed housing for the area and contribute to making the community. The DA is fully compliant besides the minor height variance and represents a modest well balanced design of highest quality. It has no negative impacts on its surroundings including overshadowing.

#### **Principle 5: Sustainability**

The design has been developed including a number of proposed environmental initiatives. The client has engaged Cundall and Stantec to develop the sustainable principles and explore sustainable initiatives which will form part of the final proposal. See attached ESD report. Some of the initiatives already incorporated are as follows:

- Orientation of the building envelopes to maximise solar amenity to units and maximise solar exposure to the communal open spaces.
- Solar sculpting of the site, whereby the heights or building envelopes are determined by modelling the impacts of overshadowing of other buildings on the site and neighboring sites.
- Utilisation of the proposed stormwater detention park to the north of the site as part of a comprehensive sustainable approach to on site storm water.
- Maximisation of solar amenity and sun shading to minimise energy use in the development of façade solutions.
- Some of the initiative being developed for the proposal include:
  - End of journey cycle facilities on site.
  - Photo-voltaic cells on roofs and facades to minimize external energy use.
  - Use of shade structures along pedestrian circulation routes to increase cooling and enhance resident amenity.
  - Landscaping and tree planting to maximise shade.
  - Care share spaces and electric vehicle charging stations.
  - Appropriate planting of native species.
  - Use of passive solar design initiatives including building orientation, overhangs, screening etc.
  - Building façade planting.
  - Use of skylights to basement for light and ventilation.
  - Stormwater management and interface with riparian regeneration zone.
  - Use of sustainable construction materials
  - Community gardens
  - Extensive tree canopy to offset heat island effect.
  - Livability initiatives and Community programs including community message boards, active play and gathering spaces, digital wayfinding
  - Energy saving initiatives including smart lighting and switching, BMS etc.

- Installation of drip irrigation
- Rain water storage and re-use.
- Natural light to basement to reduce energy use for lighting.

### **Principle 6: Landscape**

The design has been conceived with an emphasis on the following:

- A fluid approach to the design of the central green spaces.
- A proposed pedestrian circulation 'crescent' to link this site with the Landcom site in a continuous pedestrian cycle pathway to maximise site permeability.
- The use of drought resistant native species selections.
- Use of shade structures along pedestrian circulation routes to increase cooling and enhance resident amenity.
- Landscaping and tree planting to maximise shade for cooling.
- The programming of functional spaces including BBQ areas, childrens playgrounds, sporting infrastructure, excersive areas etc to create diverse experiences and maximise resident amenity. See landscape report for detailed design response.
- The basements have been design to provide extensive deep soil. This includes large areas of deep soil in the centre of large green spaces and along circulation routes for the provision of mature trees. It also includes basements setback from boundaries to allow adequate deep soil for street trees. In addition, numerous planters are located above basements to provide deep soil for larger trees here as well.

The design consists of a range of different spaces and garden, each with a different character and function. Some of these spaces include:

#### **North South Central Space**

This space is defined by Bldgs; A,B,C,D. It contains the main north/south thru-site link. The winding path is defined by a series of earth berms which define communal spaces and create the separation between public and private space without requiring fencing. The path has a shade structure for cooling. The berms also contain skylights which provide natural light to the basement. Some parts of this space contains retail fronted plazas for further activation.

#### **East West Link**

A major east/west link is provided between Ab and CD and E and F. This linkage continues the E/W linkage established in the MP for the Landcom site. It connects into this link and adds to the permeability of the precinct. This link contains a covered pedestrian route to further increase shading.

#### **North South Shared Way**

The North/South road between Bldgs B and E has been designed as a paved shared zone. There is a landscaped zone on either side of the street containing seating areas defined by vegetation and intermittent parking.

#### **The Common**

The space between Bldgs E and F forms a park known as 'The Common. . This area contains more free flowing spaces and contains more soft landscaping and turf. It contains a large childrens play ground which is defined for security.

#### **Arcade**

The space between Bldgs G,H creates a laneway space. This has a distinct character which is hard paved with retail either side. This is on contrast to other more open green spaces.

#### **Crescent Road and RE-1 Interface**

The built from has been designed to acknowledge the crescent form. Buildings E and F are designed as crescents to reinforce this geometry. Buildings A and B are oriented to maximise the exposure and



connectivity of the central green space to the reserve. North south orientation of building A B is designed to maximise the outlook of individual units to the reserve.

#### Retail Interface

The development contains a number of ground floor retail/commercial spaces each with a unique interface as follows:

- The ground floor retail on the northern façade of Bldgs G,H address a wide plaza area. This space is defined by planting to create a series of sunlit outdoor dining spaces. A glass awning provides shelter and acoustic protection for the units above.
- The western side of Bldg C and southern side of Bldg C,D contains retail. This retail adjoins a masonry colonnade to provide additional area. The colonnade along with an additional glass awning ensures solar access and acoustic privacy for the units above. This colonnade will create a unique and charming protected retail environment.

#### Principle 6: Amenity

The units have been designed to achieve ADG compliance including solar access and natural ventilation. See attached compliance table which addresses issue of amenity.

##### 1) Solar and Daylight Access

Performance Criteria: 70% of apartments in a building to receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter.

Performance: The combined development and each building individually is compliant as 77.6% of apartment living rooms or (523 of 674 units) would receive direct sun penetration for a minimum 2 hours per day between 9 am and 3pm. See solar diagrams.

Performance Criteria: A maximum of 15% of apartments in a building receive no sunlight between 9am and 3pm at mid-winter.

Performance: The building is compliant as 12.5% of the units will not receive direct sunlight in winter.

Performance Criteria: A window should be visible from all habitable rooms.

Performance: The building is compliant as a window is visible from all habitable rooms.

##### 2) Natural Ventilation

Performance Criteria: 60% of units should be naturally cross ventilated. The rear of single aspect unit kitchens/open plan layouts to be maximum of 8m from glazing.

Performance: The buildings are compliant as 65.6% or (442 of 674) units are naturally cross ventilated

Performance Criteria: The area of window openings should be at least 5% of floor area served.

Performance: The building is compliant as area of window openings is greater than 5% of floor area served.

##### 3) Ceiling heights

Performance Criteria: The minimum ceiling height for habitable areas is 2700mm.

Performance: The building is compliant as all units have 2700mm ceilings in habitable areas

Performance Criteria: The minimum ceiling height for retail/commercial areas is 3300mm.

Performance: The building is compliant as all retail/commercial areas have minimum 3300mm ceilings and in most areas far in excess of that.

4) Apartment Size and Layout

Performance Criteria: Apartments are required to have the following minimum internal areas: Studio 35sqm/1 Bedroom 50sqm/ 2 Bedroom 70sqm / 3 Bedrooms 90sqm.

Performance: The building is compliant as all units have the minimum required internal areas according to SEPP 65.

5) Apartment Depth

Performance Criteria: Whilst no control is given; preferred maximum internal building depth should be 18m-22m. Habitable room depths are limited to a maximum of 2.5 X the ceiling height. In open plan layout (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.

Performance: All buildings have been designed to achieve the above range of building depth.

Performance Criteria: Preferred maximum unit depth for single aspect units is 8m.

The building is compliant as the maximum unit depth for single aspect units is approx. 8m.

Performance: The buildings are generally compliant as the maximum units' depth is generally 8m. In the few exceptions, care is taken that the unit depth for habitable areas within the units does not exceed 8m that no habitable portion of the building exceeds 8m from glazing.

Performance Criteria: Preferred maximum distance of kitchen to glazing is approx. 8m.

Performance: The building is compliant as the maximum distance of kitchen to glazing is generally 8m.

6) Private Open Space and Balconies

Performance Criteria: 75% of units must have balconies, with primary balconies as follows: Studios 4sqm; 1 Bedroom 8sqm; 2 Bedroom 10sqm; 3 Bedroom 12sqm.

Performance: The building is compliant as all apartment balconies have the minimum required size.

Performance Criteria: The minimum depth of balconies is 2m for studios, 1 bed, 2 bed and 2.4m for 3 bed.

Performance: The building is compliant as all apartment balconies have the minimum required depth.

8) Common Circulation and Spaces

Performance Criteria: The maximum number of apartments off a circulation core on a single level is eight.

Proposed Design Performance: The buildings are almost completely compliant, with some small exceptions, such as some floors of the south wing of Bldg E which contains 9 units, some floors of the east wing of Bldg F contain 9 units and compliant as, the maximum number of units and some floors of Bldg G contain 9 units.

9) Storage

Performance Criteria: The minimum requirements for storage are as following: Studio 4sqm/ 1 Bedroom 6sqm/ 2 Bedroom 8sqm/ 3 Bedroom 10sqm. And at least 50% of the required storage is to be located within the apartment.

Performance: All units have a minimum storage size and are compliant as they have the capability of providing the storage requirement with at least 50% of storage within the unit and 50% within the basement.

10) Ground Floor and Lobbies

Performance Criteria: Direct Access should be provided for ground floor apartments.

Performance: The building is compliant as direct Access is provided for ground floor apartments.

Performance Criteria: Retail or home office should be located along ground floor frontages.

Performance: The building is compliant as retail is located along ground floor frontages.

## **Principle 7: Safety**

A variety of security measures have been incorporated into the design of the apartment buildings. The main entry spaces are overlooked by the units above. The basement carpark is secure providing security for residents and visitors arriving by car. There is also good passive surveillance provided by the street front units and for the approach to main apartment entry lobby areas. The units and MP have been designed according to CPTED principles as follows:

### **Crime Prevention through Environmental Design (CPTED)**

#### **Principle 1: Natural Surveillance**

The design maximises opportunities for natural surveillance in the following ways:

- Building envelopes which reinforce the street grid and public spaces ensure maximum surveillance of public spaces.
- This also maximises clear sight lines from buildings to public space.
- The public spaces have been programed with a range of uses and activities including gyms, children's play areas, BBQ areas, retail terraces promenades which promote surveillance and ventilation.
- Entries are clearly located and identified. Additional work will be conducted at the DA stage to ensure entries are clearly marked.
- Landscaped areas have been designed to promote surveillance. This includes using the fall of the land and mounding to create level areas and provide secure separation between public and private areas whilst not obstructing surveillance. See landscape report.
- The use of gates and fences to separate public and private spaces including around the child care centre.
- Using shared zones such as the north south road to promote surveillance.

#### **Principle 2: Access Control**

The project includes large areas of open space and is permeable with a number of thru-site links. This has been designed to ensure suitable separation between publicly accessible, and private areas to promote safety as follows:

- Using landscaping elements such as berms and mounding to provide separation between public and private areas.
- Selectively using fencing to demark public links and private areas.
- Restricting access to sensitive areas such as the child care centre.
- Developing green zones, level changes and planters as a buffer between public space and private open space.
- Restricting access to internal areas or high-risk areas such as loading areas.
- Maximising signage, way finding and clarity of entry points.

#### **Principle 3: Territorial Reinforcement**

This principle relies on the users of spaces or areas feeling that they have some ownership of public space and therefore are more likely to gather and enjoy that space. The ownership of space increases the likelihood that people who witness crime in or adjacent to that space will respond by quickly reporting it or by attempting to prevent it. Territorial reinforcement can be achieved in the design of the development by:

- Using landscaping elements such as berms and mounding to provide separation between public and private areas to promote a sense of ownership.

#### Principle 4: Space Management

- Creating a 'cared for' image through proper maintenance regimes;
- Rapid repair of vandalism and graffiti, the replacement of burned out pedestrian and car park lighting and the removal or refurbishment of decayed physical elements;
- Using materials that reduce the opportunity for vandalism; and

#### **Principle 8: Social Dimensions**

The proposal will provide an increase in the residential housing available in the precinct. The buildings will contain 674 high quality apartments that are generous in size with generous open private and public spaces that will enrich the quality of the dwelling product currently available in the area. The proposal includes a suitable and diverse mix of unit types.

The units have been designed with generational flexibility in mind, with provision for studies, storage and flexibility. This includes:

- A housing mix which is consistent with DCP and ADG objectives to provide a suitable and diverse mix.
- Consideration of flexibility of design including how unit layouts can adapt to changing demographics.

All apartments are generous in size and include 1, 2 & 3 bedroom apartments. These will serve to provide accommodation for a wide mix of occupants including large families and retirees. All units have generous storage provisions both inside and outside of the apartment with a dedicated storage space located at basement level.

The site is located in the Edmondson Park town centre with easy access to public transport and a range of community facilities, schools, retail and services.

#### **Principle 9: Aesthetics**

The facades have been designed according to the principle of design diversity. The site has been divided into 4 precincts according to the blocks generally containing 2 buildings each. It is intended that each precinct is designed differently to give each precinct a unique character and create diversity. TOP have done this to great effect on recent projects including the Caste Hill Showgrounds development, see attached.

The precincts are as follows:

#### **Buildings A+B**

These buildings are very similar in terms of façade. They represent a distinct precinct. The buildings are oriented North/South to maximise solar access to as many units as possible and the central green space. To ensure maximum sun to the units the facades are angled slightly towards the sun. This creates a zig-zag appearance. This is enhanced by alternating the alignments on each level. These units become 'sun catcher' containers. This geometry is then rendered using face bricks. The bricks give a warmth which softens the strongly geometric façade and creates a warm human feel. The buildings have a set back after 4 floors to create a human scale. The podium levels are in a darker brick compared to the lighter

upper levels. The geometry is further articulated with timber louvred screens. The ground level is articulated using face brick planters and timber fencing. The overall result has a geometric richness yet has a cohesion and unity.

### **Buildings C+D**

These buildings are also similar, but have a variations on the theme. Like A + B, they are predominantly face brick to form a continuity of buildings that adjoin the central green spaces.

Like A+B they have a 4 storey podium in a darker brick, and lighter upper levels. The buildings have a pitched roof with numerous penetrations so the line between façade and roof is blurred. The lower levels have a more open expression. The ground and first floor form a colonnade. This reflects the significant retail and public space at ground. The upper podium levels continue this expression with a grid pattern. The levels above the podium have solid walls with punched windows to maximise the contrast to the podium. This reflects a mixture of traditional expression with a strongly sculptural approach. The massing cradles the public space and reinforces the streetscape. Louvres and screens all further richness to the faced and provide additional shade. The building massing steps down to minimize overshadowing of it neighbors. These level changes are reflected in the falls in the pitched roof.

### **Buildings E+F**

Buildings E + F respond strongly to their frontage to the creek and Re1 reserve. Their curves reflect the creek and the outlook. These buildings are less urban as they are further away from the station and the retail precinct. The buildings have a setback at L4. Whilst they reinforce the street grid and streetscape, they are conceived more as objects in the landscape.

Building E has a stepped massing to minimize overshadowing. This creates a terraced building with large areas of roof top tiered communal space. The building is further softened with curved corners. The facades are generally horizontal with bands of metal panels. The solid panels alternate with glass balustrades to overlay a further curved patterning. The result is a building which is both contemporary and fluid.

Building F has a similar stepped and curved geometry, yet has a different expression. As the building is curved, different parts of the façade receive different amounts of sun. We have used timber louvres as shading devices. These louvres gradually reduce as the façade curves to the south. The curved facades are articulated with pre-cast concrete portal frames. These frames have a soft curved shape but have a modular geometry. Like building E, it has a light expression. The result is a modular building which is also fluid and open.

### **Buildings G+H**

This precinct is close to the station and the ground floor has full retail. The 2 buildings create an arcade between them which accesses the central green space. The building responds to its triangular site and has an angular geometry. This is softened using curved edges and a light palette. The building is primarily white masonry, with elements of off form concrete and metal louvres. The facades are an ensemble of solid walls, open glass areas and more solid concrete balustrades. The composition alternated between solid and void creating a rhythm. Diagonal elements further articulate the facades. The result is 2 sculptures which are engaged in a conversation.

### **Variety and Diversity of Architectural Expression**

The design consists of 7 distinct buildings. These buildings form 4 separate zones each with a unique and distinct architectural character. The buildings have been deliberately designed with different facades and different architectural plan forms to maximise diversity as follows:

#### **Zone 1 – Building A + B**

- Facades are angled slightly towards the sun to create a zig-zag expression. This is achieved

using masonry materials.

Zone 2 – Building C + D

- Facades are primarily solid with punched windows. The rooves are pitched to create a more traditional expression.

Zone 3 – Building E + F

- Although quite different from each other, these buildings are curved to reflect the riparian corridor road. They use lighter materials and colours and curved forms to create a different, more horizontal expression.

Zone 4 – Building F + G

- These buildings have a painted rendered horizontal expression. They respond to the triangular shape of the site, resulting in a more angular expression.

Building entries have been suitably located such that this large and varied scheme provides a variety of entry experiences and streetscape experiences, these include:

- Some buildings are accessed directly off the street or shared zones, others are accessed of central green spaces or arcades between buildings.
- Buildings have been designed to ensure entries are suitably defined and articulated on each on building facade.

The overall effect is a series of distinct buildings which have certain characteristics in common. The different buildings create 4 precincts which reflect their unique context.

The result is a progressive design of a high quality which will enrich the area and provide a bench mark for the community.

Yours sincerely,

Tony Owen

**Tony Owen Architects**

Reg. No 7080

A handwritten signature in black ink, appearing to read 'Tony Owen', with a long, sweeping horizontal line extending to the right.