

SEPP 65 DESIGN VERIFICATION STATEMENT

SEPP 65 DESIGN VERIFICATION STATEMENT

PROJECT: Proposed Mixed Use Development
Lot 4 Woodward Crescent and
90 Cartwright Avenue and
Woodward Crescent and
Miller

CLIENT: JEA Holdings (Australia) Pty Ltd
Suite 2, Level 1
9 Waterloo Road
Macquarie Park NSW 2113

DATE: 2nd December, 2014

ARCHITECTS: architex

Level 3
7K Parkes and Wigram Streets
Parramatta NSW 2150
Telephone : 9633 5888

CONTENTS

1.0 INTRODUCTION

2.0 SITE ANALYSIS

3.0 DESIGN STATEMENT

4.0 SEPP 65 DESIGN STATEMENT

- 4.1 Context
- 4.2 Scale
- 4.3 Built Form
- 4.4 Density
- 4.5 Resources, Energy and Water Efficiency
- 4.6 Landscaping
- 4.7 Amenity
- 4.8 Safety and Security
- 4.9 Social Dimensions
- 4.10 Aesthetics

5.0 APPENDICES

- A – Pre-DA Minutes
- B – Design Review Panel Minutes
- C – Schedule of Finishes
- D – Waste Management Plan
- E – Schedule of Units

1.0 INTRODUCTION

On behalf of our clients and developer of the project above, we hereby submit the following State Environmental Planning Policy No. 65 (SEPP65) Design Verification Statement for the proposed mixed-use development, comprising of retail suites and residential apartments, on the site known as 90 Cartwright Avenue (Lot 2 in DP 219028) and (Lot 4 in DP 219028) Woodward Crescent, Miller.

This SEPP65 Design Statement forms part of the Development Application for a mixed-use development comprising of the following components :-

- Demolition of the existing car parking area and relocation of the Telstra Tower and communications equipment;
- Construction of two (2) retail areas;
- Construction of one-hundred and forty-five (145) residential apartments as “shop-top housing”;
- Construction of at-grade public car parking for 162 vehicles;
- Construction of two (2) basement car parking levels for 218 residential and retail staff car spaces;
- Associated landscaping and external works;
- Strata Title on construction of the project.

The Development Application comprises of the following information :-

- Detailed survey of the subject site;
- Architectural drawings;
- Waste Management Plan;
- Schedule of Finishes;
- Storm water, erosion control and OSD drawings;
- Landscape plans;
- Statement of Environmental Effects;
- Traffic Report;
- Acoustic Report;
- BASIX and ABSA Certificates;
- Access and Adaptable Housing Report;
- Quantity Surveyor’s Estimate of Construction;
- Photomontages.

This SEPP65 Design Statement provides :-

- An introduction to the project;
- A Site Analysis;
- A Design Statement;
- An assessment on compliance with the ten design principles contained in State Environmental Planning Policy Number 65.

2.0 SITE ANALYSIS

Understanding the site conditions and character of a site is the first step in the design process. Site analysis is the process of identifying and recording the dominant features and elements of the site and surrounding locality. Through this process, combined with an understanding of the future character of the area, the range of design options and issues will emerge, to be addressed in the design process.

Relevant considerations in any site analysis include the site’s topography, orientation and microclimate, existing structures and vegetation, views, access, drainage and services, and any other special site features.

The site accommodates an existing shopping centre and child care centre accommodating a range of retail premises, including Woolworths, Aldi and specialty shops on a site totalling 25,908.10 square metres.

This development is located on the existing car parking area that serves the shopping centre.

A Pre-DA Lodgement Meeting was held with Liverpool City Council on the 12th February, 2014, a copy is attached in Appendix "A" at the end of this report.

A Design Review Panel Meeting was held with Council on the 1st May, a copy is attached in Appendix "B" at the end of this report.

The subject site is currently zoned **B2 – Local Centre** under the "**Liverpool Local Environmental Plan 2008**" (LEP). The potential development of the site is set out in "**Liverpool Development Control Plan 2008**" (DCP).

2.1 Site Dimensions

The subject site is generally an irregular rectangle in shape with four (4) street frontages and excludes two (2) properties :-

- Green Valley Hotel and
- The property in Woodward Crescent, adjacent to the service laneway.

The total site area is 25,908.10 square metres.

The site comprises of the following allotments of land :-

- | | | |
|-------------------------------|--------------|------------------|
| • 90 Cartwright Avenue | Lot 2 | DP 219028 |
| • Woodward Crescent | Lot 4 | DP 219028 |

The accompanying survey, illustrates the existing allotments comprising the subject site, together with the property descriptions, areas and existing site levels, to Australian Height Datum (AHD).

2.2 Current uses

The subject site has been developed for as the Miller Central Shopping Centre, with a range of commercial and retail activities established therein.

A substantial area of land accommodates an at-grade car parking area that serves the shopping centre.

2.3 Adjoining Development

The site is bounded on four (4) sides by roadway and remains detached from the adjoining residential developments.

Recent developments have been proposed on several properties within the precinct, under the new planning controls set out in the LEP and DCP provisions.

2.4 Existing Road Network

The road network bounding the subject site consists of the Cartwright Avenue frontage to the north and Woodward Crescent creating the frontages to the east, south and west.

Further information on the existing and proposed road network may be found in the accompanying Traffic Report.

2.5 Topography

The topography of the site is generally sloping with an elevated south-western corner of Existing Level (EL) EL26.00 falling towards the north-eastern corner to EL23.50.

The site falls 2.50 metres to the south over a distance of 120 metres, generating a gradient of over two (2) per cent.

2.6 Services

Consultation with relevant utility supply authorities, Sydney Water, Energy Australia, Telstra, Australian Postal Services and AGL, has been made prior to the commencement of the development process. The electricity supply and telecommunications services are readily available to the site without restrictions.

The supply of water and sewerage services has also been investigated. All services are available to the site and reticulation of water and sewerage will be provided in accordance with the requirements of Sydney Water.

The existing services have been surveyed and located in the street frontages and include an existing Telecommunications tower and equipment on the corner of Woodward Crescent and Cartwright Avenue, grated storm-water drains, sewer manholes, water stop valves, hydrant and electricity pillar.

The telecommunications tower and equipment will be relocated to the roof level of the development.

2.7 Existing Vegetation

The accompanying survey plan, illustrates the existing site topography and the location of the any existing trees and vegetation located thereon and adjacent to the site.

There is no vegetation on the site to be retained.

2.8 Micro Climates

The site has an orientation to north for the width of the northern street boundary, approximately 106 metres. The exposure to north will allow a number of the retail and residential units to be orientated to north, providing solar access to living areas positioned along the northern side of the development.

The exposure to east and west will also provide a substantial secondary exposure to daylight but will require solar protection to avoid adverse sunlight penetration during the summer months into the residential segments of the development.

There is no impact on rural land, extractive resources or water supply catchment areas by the development of the site. The site is almost fully occupied by industrial development with associated car parking areas. The allotment is surrounded by low-rise residential development.

The subject site is not identified as containing any ecological communities that would cause the Threatened Species Conservation Act to be transgressed. There is no disturbance to any existing fauna or flora if the development is restricted to the current site area. The subject site is not affected by land-slip, subsidence, soil erosion or degradation, or any other related soil conservation factors.

2.9 Location of Existing Features

The accompanying site plan illustrates the location of the existing buildings and associated structures. The existing buildings accommodate a number of one-storey retail and commercial buildings with associated at-grade car-parking facilities.

2.10 Views

The available views from the site are generally along the existing street boundaries of the site. Due to the topography of the site there is an elevated view to be developed or maintained over the proposed at-grade car parking and retail level to form an elevated podium. The predominance of the existing low-rise development in the precinct will result in a huge opportunity for vistas in any significant direction.

2.11 Over-shadowing

The potential over-shadowing of the site by adjoining development is not significant due to the isolation of the site by the four (4) street frontages and orientation to the north, east and west, allowing a degree of solar access throughout the day.

2.12 Public Transport

Miller is well served by public transport with bus services and connections to major centres, such as the Liverpool Central Business District.

2.13 Privacy

The adjacent retail, commercial and residential developments will constitute a minor source of noise and visual privacy for the potential residents of the subject site. An issue such as privacy may be considered and accounted for by site planning and providing the residential component of the development with adequate screening from adjoining future developments.

Privacy is an issue, which requires maximum attention in order to safeguard the amenity of the residents in the proposed development.

The proposed development should consider the impact on the residential segments of the development to ensure that living areas and balconies are significantly protected from any adverse intrusion from adjoining commercial developments and airborne noise transmission.

It would therefore be essential to ensure that private open spaces are protected from direct visual intrusion and noise transmission. In any residential development, it is critical that emphasis is placed on visual and acoustic privacy.

The direct orientation of living areas or private outdoor recreation areas to the boundaries of the site, or street frontages will ensure a degree of separation is provided and direct confrontation between buildings is avoided.

Large private open spaces, indented into the building, with appropriate screening devices and solar controls should be created to provide the resident with control over the potential visual or acoustic disturbance. These open spaces should be positioned along the northern façade where possible.

2.14 Walls on the boundary

There is no significant development located along the southern or western sides of the site, where an adjoining wall is located or may cause a concern in construction. The southern and western side boundaries adjoin other commercial buildings, which are located approximately one (1) metre or more from the boundary.

2.15 Difference in levels

The southern and western side boundaries will be the only common boundaries shared with an adjoining development in proximity to the proposed development. The natural ground level of the existing developments is at the same level as the subject site. There is therefore no significant difference in levels between the development site and adjoining properties.

Any significant differences in natural ground levels between the subject site and adjacent properties at the common boundary should be normally treated with special consideration by minimising any changes to the existing natural ground levels along the common boundary.

2.16 Views and solar access

The development of the subject site should be designed to ensure that the proposed scale of the development in the precinct is considered and sympathetically accommodated to ensure a context of scale, bulk and height.

The proposed setbacks, height of development, extent of external walls and amenity along the common boundary should be considered in the design to provide consideration of this fact.

The bulk of the development, height of the proposed building, setbacks from the common boundary and degree of over-looking and over-shadowing will be significant issues for the impact of the project on the adjoining developments to the subject site.

2.17 Major trees on adjoining sites

The site analysis submitted indicates there are no significant trees on the adjoining sites, which are not illustrated in the survey plan. The location of the existing trees is reflected in the survey plan.

2.18 Street frontage features

The existing street frontages have been surveyed in detail and illustrated in the accompanying survey. The significant street services and features have been noted and illustrated in the survey.

2.19 Built-form of adjacent development

The adjacent development is generally of a one-storey retail and commercial character with a variety of architectural styles. Generally, the low-scale buildings have been constructed in the 1970's and 1980's. These buildings have very little architectural merit.

2.20 Heritage Features

The subject site and proposed development is not located in proximity to any heritage, historical or archaeological site.

2.21 Local facilities

The site is located on an isolated site formed by two roadways, Cartwright Avenue and Woodward Crescent.

The site has been established as a neighbourhood shopping centre for many years. Recently, improvements, renovations and additions have been undertaken by the applicant to improve the amenity and aesthetics of the centre. The introduction of a residential component is a key element in the development of the centre for the future.

This represents the first major stage in the revitalisation of the centre and creation of a major shopping and entertainment centre for the community.

The nearby city centre of Liverpool also provides a range of services including a major retail and commercial outlet in Westfield Shopping Centre, entertainment centre, sporting facilities, major restaurants along the mall precinct and a multitude of medical and professional services.

Public transport is a major asset to the city centre with a network of rail and bus routes providing connections to all areas of the Sydney Metropolitan area.

2.22 Public open space

The subject site has access to a number of open spaces and recreation facilities within walking distance from the site.

2.23 Sources of noise nuisance

The subject site is not exposed to any significant traffic noise adjoining the site.

3.0 DESIGN STATEMENT

This Design Statement encompasses several areas. The first section of the design statement is a general statement on the urban design aspects, responding to the site analysis and constraints of the site parameters.

3.1 Urban Design

Urban design must recognise the creation of a sustainable urban environment where there is a balance between what the community needs are, what the community can afford and also sustain, in the long-term, preservation of our environment.

Urban design must address the concerns not only of sustaining the physical environment, but also the economic, financial and social environment.

The urban design of the project has been developed in response to the assessment of a number of site characteristics and design parameters, which have been determined by the site analysis and evaluation of the existing environment.

Urban planning issues may include:-

- 3.1.1 The fulfilment of ecologically sustainable development (ESD) principles relies heavily on the optimum orientation of the proposed building on the site;
- 3.1.2. The bulk and scale of the proposed development should complement the existing character of the neighbourhood and site;
- 3.1.3. Street alignments of buildings and setbacks are important elements, which need to be reinforced if harmony is to prevail, and contrasted with, if a focal point or prominence is preferred;
- 3.1.4. Building heights and building forms have additional significance in the urban design of the project;
- 3.1.5. Building heights and building locations should minimise the degree of over-shadowing onto adjoining properties and attempt to reduce the potential impact and loss of sunlight of adjoining properties.

The urban design process commenced with an assessment of the site characteristics and an analysis of the inherent features of the site as well as the adjoining development.

The site analysis evaluated the topography of the site, orientation, aspect, prevailing winds, adjoining structures, existing landscape and vegetation, streetscape, location of the amenities and services to the site, heights of existing buildings and location of adjoining windows overlooking the site.

The urban design of the development is a direct result of the planning controls provided by the following :-

- Liverpool Local Environmental Plan 2008 (LEP);
- Liverpool Development Control Plan 2008 (DCP);
- State Environmental Planning Policy 65 (SEPP65);
- Residential Flat Design Code (RFDC).

The Statement of Environmental Effects submitted to Council will assess the relevant planning controls, development standards and zoning objectives applicable to the site.

3.2 Design Intent

The objectives in our design may be summarised as follows :-

- To design an “urban” building for an urban context which will promote and reinforce the future fabric and future built form of the Miller Shopping Centre known as “Miller Central”;
- To consider and be sensitive to the context into which the development is placed with particular attention to the adjacent developments;
- To provide a project which achieves design excellence and will establish a high architectural standard, improved amenity and facilities for the community.

The proposed Development Application proposes the following :-

- Demolition of the existing car parking area and relocation of the Telstra Tower and communications equipment;
- Two (2) Retail area totalling 426.90 square metres;
- 145 residential apartments or “shop-top housing” above the retail and car parking area to form a podium level;
- Construction of at-grade public car parking for 162 vehicles;
- Construction of two (2) basement car parking levels for 157 residential car spaces, 35 visitor spaces and 26 retail staff spaces;
- Associated landscaping and external works;
- Strata Title on construction of the project.

The proposed “shop-top housing” proposes the following residential accommodation :-

- Twenty-six (26) one-bedroom units (60 to 64 sqm net floor area);
- One-hundred and seven (107) two-bedroom units (80 to 91 sqm net floor area);
- Twelve (12) three-bedroom units (90 to 95 sqm net floor area).

The proposed calculations include the following :-

Site Area	25,908.10 sqm	
Building Area	18,634.00 sqm	(71.9%)
Gross Floor Area	13,511.90 sqm	
Floor Space Ratio	0.968:1	(1.7:1 FSR)
Building Height	28.10 metres	(21 metres - DCP)
Residential Yield	26 x one-bed	(18%)
	107 x two-bed	(74%)
	12 x three-bed	(8%)
Total	145 residential units	

4.0 STATE ENVIRONMENTAL PLANNING POLICY NUMBER 65

The State Environmental Planning Policy Number 65 (SEPP65) has recently been adopted and gazetted. The objectives are to improve the design quality of residential flat development in New South Wales to ensure :-

- (a) sustainable housing in social and environmental terms, and
- (ii) provide a long-term asset to the neighbourhood, and
- (iii) achieve the urban planning policies for regional and local contexts.

A development application must, in accordance with Clause 24, be accompanied by a design verification from a qualified designer, registered as an architect in accordance with the Architects Act, 1921.

As the registered architect and director of Ryleton Pty Ltd, trading as **architex**, designing the project and preparing the documentation for the development application, on behalf of our clients, I, Robert Del Pizzo (NSW Board of Architects Reg. No. 3972) hereby verify that :-

- (a) I have been involved in the design of the project, and
- (b) That the design quality principles set out in Part 2 of the SEPP65 policy have been achieved.

The general approach to design is linked to the site analysis and the formulation of a design, which responds to :-

- the site and its locality;
- integrates with the existing landscape or urban context;
- integrates the topography;
- respects the established built form of the future precinct;
- recognises the social culture of the future town centre;
- addresses the streetscape and proposed road network, and
- adopts the general planning principles applicable to the site.

The proposed development capitalises on the unique location in the Miller Central shopping centre. The project provides an opportunity to locate residential "shop-top housing" accommodation above a new retail and public car parking area at the edge of an established shopping centre.

The design was assisted by the comments presented at the Design Review Panel Assessment held on the 1st May, 2014.

The Panel recommended the following in their summary :-

- Maximise the height of Block A and minimise the degree of over-shadowing to the communal open space;
- Reduce the number and width of driveway crossings along Cartwright Avenue;
- Maximise pedestrian amenity and activity along Cartwright Avenue;
- Provide residential lobbies with direct access to the street frontages and entrance stairs to the communal open space from street level;
- Minimise the degree of over-shadowing of the communal open space area on the podium;
- Incorporate open lift lobbies with windows that overlook the communal open space on the podium level;
- Create a penthouse treatment to units on Level 7 of Block B to minimise scale and visual impacts.

These recommendations have been integrated into the design and will be highlighted in the following summary of the ten design principles.

The ten (10) design policies or principles are outlined as follows :-

4.1 Context

Context is the assessment of the key, natural and built forms of an area surrounding the site.

Good design, which responds to the context of the site, will integrate the desirable elements of a location's character and utilise them to contribute to the quality, identity and integrity of the existing built form.

The Panel confirmed that the project offered a unique opportunity to create a catalyst for the remodelling of the Miller shopping centre, together with the surrounding R4 – High Density Residential zone. The development will contribute to the formation of a vibrant main street along Cartwright Avenue and create a “gateway” structure that identifies the Miller town centre.

The site is unique and offers an opportunity to improve the amenity of the area and increase the facilities available to the general public. In this context the following elements are proposed :-

- **Reduce the number and width of driveway crossings along Cartwright Avenue**

The design removes the current entry and exit driveways to the at-grade car parking area, which are located in the centre of the site frontage to Cartwright Avenue. The vehicular access to the at-grade communal parking is now available at one location along Cartwright Avenue, where an existing loading bay is established. The other vehicular entry from Woodward Crescent will be designated as exit only.

This will create only one crossing where pedestrians need to recognise any traffic across the street frontage. The area will be paved to highlight the priority pedestrians will have and will connect the new development with the existing centre to the west.

- **Maximise pedestrian amenity and activity along Cartwright Avenue**

The removal of the entry and exit driveways from Cartwright Avenue improves the streetscape and allows a wider area to be dedicated to retail activities and pedestrian areas.

A large plaza area at street level will provide seating areas, garden areas and an access stairway and lift from street level to the pedestrian podium above the car parking level.

The podium level has been lowered by reducing the original height proposed in the public car parking area. Garbage collection, storage of bins and loading/unloading areas will now be located where the existing loading bay is established. This reduces the height required in the car parking level and consequently lowers the height of the podium above street level.

The podium is therefore more accessible to the public and will provide a large open space area with planter-boxes, pathways seating areas and barbeque areas where residents can share with guests.

The podium provides a large open space area connecting all lobby areas and provides a communal open space feature for all the residents to overlook, providing passive surveillance and security to public areas.

- **Provide residential lobbies with direct access to the street frontages and entrance stairs to the communal open space from street level**

While residential lobbies do not extend to the street level deliberately, they do connect with the podium level and provide the direct connection desired between public open spaces and the residential accommodation.

The connection to the street level was not considered viable and detracted from the retail precinct areas and car parking areas.

5.2 Scale

The general approach to design is linked to the assessment of bulk and scale, which will complement the future character and desired streetscape of the shopping centre and surrounding development. The appropriate scale of a development is determined by an assessment of the existing and future character of the area.

The impact of the proposed scale of the development, however, can be manipulated and lessened by acknowledging the established built form and providing a degree of association or design to link elements of the building with established elements of the built forms.

The proposed development slightly exceeds the designated height control of twenty-one (21) metres, but complies with the recommended setbacks and floor space ratio controls. The Design Panel recommended that the height of Block A could be considered to exceed the height control, in an effort to reduce the degree of over-shadowing on the communal open space and to generate a “gateway structure”.

- **Maximise the height of Block A and minimise the degree of over-shadowing to the communal open space**

The proposed height of the development above natural ground level varies due to the topography of the site sloping 2.5 metres from one corner to the other. Block A has a parapet height of RL51.60 and is 28.1 metres above street level at RL23.50.

Block B has a parapet height of RL48.60 but the natural ground level is RL26.00, generating a height of only 22.60 metres.

The additional floor level added to Block A enabled the building footprint to be reduced at the corner, allowing a greater area of open between Block A and Block B. The podium generated a larger space with more intensive landscaped areas and community and public amenities.

Therefore, with the majority of the development compliant with the planning controls and development standards, it is concluded that the scale of the development is in accordance with the anticipated future architectural character of the area.

5.3 Built form

The assessment of the built form is an analysis of the building alignments, proportions, building character and building elements of the surrounding development. The appropriate built form defines the public domain and contributes to the streetscape. The built form of development can be an extension of the previous design principles of context and scale of development.

The proposed development is considered to have an appropriate relationship to the future built form of the surrounding development by associating the planned building heights, proportions, setbacks and design elements with the planning controls proposed for the developments on the adjacent sites.

The design is generally in accordance with the building envelope requirements of current DCP and LEP planning controls and development standards, with the exception of height only.

It is considered that the recommendations of the Design Panel had the objectives of achieving a “gateway structure” by reducing the footprint of Block A to form a visual focus at the corner of the site, providing a sense of visual impact at this location.

5.4 Density

The approach to the design of a residential development is linked to the overall density of acceptable development and the appropriateness of that development in the context into which the development is being proposed.

The appropriate density of development must be sustainable and consistent with the existing and future character of the area or future density, especially in areas undergoing a transitional phase of development.

The density is controlled by the Building Height Map, contained in the DCP and LEP planning guidelines and noted as a maximum of twenty-one (21) metres. The development seeks a concession on the height but complies with the development standards and is not considered to be an over-development of the site.

5.5 Resource, Energy and Water Efficiency

The concept of ecologically sustainable development is defined as "...using, conserving and enhancing the community's resources so that ecological processes, on which life depends are maintained and the total quality of life, now and in the future, can be increased".

Therefore, the fulfilment of energy efficiency is based upon these ESD principles, which rely heavily on the optimum use of land, water and energy resources.

The design will incorporate these ESD principles by incorporating energy and water saving devices, which will insure that residents and occupants of the development will positively contribute to the conservation of these valuable resources.

Energy efficiency will incorporate solar control devices to efficiently control the sunlight and daylight penetration into the residential areas. The design of the dwellings will incorporate energy efficiency principles and construction to maintain a high rating.

Water efficiency is now a major concern and systems are installed into developments, including the collection of available rainwater for irrigation and distribution within the building for car washing.

5.6 Landscaping

The objectives of landscaping are to ensure that the proposed landscaping treatments integrate with and enhance the setting of the building, both indoors and outdoors.

Landscape design should also be integrated into the proposed design and contribute to the energy efficiency and performance of the building, thereby contributing and providing a sustainable living environment.

The landscape component in the design clearly addresses these objectives. The proposed landscaping comprises of the following features :-

- A communal open space area, functioning as a public open space area for the community to use for outdoor dining and barbecue activities;
- Garden areas to link ground floor levels within the site and to generate a sense of space for residents and visitors within the property;
- Amenities and facilities for all to enjoy.

The accompanying Landscape Plan will illustrate the proposed features of the design.

5.7 Amenity

The amenity of a residential development is a composition of the physical, spatial and environmental qualities, which combined provide a desirable standard of living conditions.

Appropriate room dimensions, configurations, spatial flow, access to sunlight, natural ventilation, cross-ventilation, visual and acoustic privacy, storage space, indoor and outdoor entertainment and recreation spaces, energy efficiency, views, accessibility and aesthetics are all relevant aspects of the amenity of the development.

The amenity issues are outlined in previous sections of the Design Statement and may be listed as follows :-

- Integration of accessibility for those with physical disabilities or visual impairments in accordance with AS1428;
- Adaptable housing accommodation in accordance with AS4299;
- Access and amenities for all residents, visitors and tenants to comply with the Disability Discrimination Act 1992;
- Affordable housing provisions by maintaining a high percentage of smaller one-bedroom units to ensure that accommodation for the lower-income market is available within the development;
- Integration of “best practice” design standards to ensure appropriate floor areas, ceiling heights, spatial flow, solar access, natural ventilation and privacy is achieved.

5.8 Safety and Security

The safety and security is vital to both internal and external aspects of the development. The design should integrate the surveillance of public and communal open spaces to ensure vigilant exposure of these areas, while maintaining privacy to residents and the public domain.

Design should avoid dark and non-visible areas, maximise internal privacy, activity along street frontages, provide clear and safe access points, separate pedestrian and vehicular traffic, provide quality public and open spaces that cater for the desired recreational uses.

Illumination at night should be an inherent aspect of any design to ensure safe access and security at night, providing a clear definition between public and private spaces.

These aspects are considered in accordance with the **Crime Prevention Through Environmental Design (CPTED)** principles.

The four principles of CPTED considered in the design are :-

- **Surveillance**
- **Access/Egress Control**
- **Territorial Reinforcement**
- **Space Management**

5.9 Social Dimensions

Social dimensions would include lifestyles, affordability, accessibility and living standards. Good design would provide housing to meet the social demands of the community. The proposed development will offer a range of residential “shop-top housing” accommodation in a centralised location in the centre of the Miller shopping precinct.

The affordability of such residential accommodation is based upon the construction of efficient developments, which maximise the returns for the expenditure invested.

5.10 Aesthetics

Quality in aesthetics is a composition of the appropriate building elements, textures, materials and colours to reflect the use, internal design and structure of the development. The aesthetics are addressed in the proposed design section of this Design Statement.

The proposed development will seek to appeal to the general public by achieving a high standard of architectural design, detailing and construction finishes in materials and textures. The accompanying photomontages and Schedule of Finishes will illustrate the high standard of the architectural design and aesthetics proposed.

The following table is a summary of the RFDC guidelines :-

DESCRIPTION	RECOMMENDATION	PROPOSAL	COMPLIANCE
Building height	LEP sets out a maximum height of 21 metres	Maximum Height is 28.1 and 22.6 metres	Non-compliance Clause 4.6 Variation is sought
Building depth	RFDC Dual aspect – 10-18 metres Single aspect – 8 metres	Building Depth is 19.6 metres	Non-compliance but units maintain solar access and natural ventilation despite the depth being over 18 metres
Apartment width	4 metres minimum	8.0 metres minimum width	Complies
Building separation	24 metres – habitable 18 metres – hab to non-habitable 12 metres – non-habitable	18 metres – habitable minimum to 20.8 metres maximum between Block A and Block B	Units are dual aspect and are provide with privacy screens and alternative aspects
Setbacks	Front Setback Zero lot alignment	Front Setback Variable due to the splayed nature of the front boundary	Complies
	Side Zero setback	Side 5.0 metres minimum 7.6 metres maximum	Complies
	Rear Zero setback	Rear 6.0 metres	Complies
Floor Space Ratio	Precinct Plan FSR of 1.70:1	Proposed FSR is 0.968:1	Complies
Orientation	Maximum orientation to north	North – 70 units (48%) East – 36 units (25%) West – 39 units (27%)	Complies
Pedestrian access	20% of units to be accessible AS1428	145 units (100%) are accessible with lift access to all units	Complies
Adaptable housing	10% of units to be adaptable AS4299	18 units (13%) are adaptable to AS4299	Complies
Vehicular access	Separate from pedestrian Security garage door Driveway AS2890.1	Yes Yes 6.1 metres	Complies
Apartment layouts	Studio – 40 sqm One-bed – 50 sqm Two-bed – 70 sqm Three-bed – 95 sqm	Studio – NA One-bed – 60 to 64 sqm Two-bed – 80 to 91 sqm Three-bed – 95 sqm	Complies Complies Complies
Private open space	2 metres minimum depth 10 sqm minimum area	2.4 metres minimum depth 12.0 sqm minimum total area	Complies
Ceiling heights	3.3 and 2.7 metres	2.7 metres	Complies
Storage space	One-bed – 6 cum Two-bed – 8 cum Three-bed – 10 cum	One-bed – 6 cum Two-bed – 8 cum Three-bed – 10 cum	Complies
Southern units	10% maximum	0 units (00%)	Complies
Cross-ventilation	60% cross-ventilated (87 of 145 units minimum)	67% cross-ventilated (97 units)	Complies
Kitchens	25% on external walls (36 units minimum)	22% on external walls (32 units)	Minor Non-compliance
Energy Efficiency	40 points minimum BASIX	Over 40 points (BASIX)	Complies

Concluding Statement

As the registered architect and director of Ryleton Pty Ltd, trading as **architex**, and submitting the development application on behalf of our clients, I hereby verify I have designed the project, and have considered and generally achieved the objectives contained in the ten design quality principles set out in Part 2 of the SEPP65 policy.

Yours faithfully,

architex

Robert Del Pizzo

Associate of the Australian Institute of Architects
NSW Board of Architects Member No. 3972
QLD Board of Architects Member No. 3761

APPENDIX “A” - PRE-DA LODGEMENT MEETING MINUTES

Our Ref: PL-7/2014
Contact: Brendon Clendenning
Phone: 9821 7748

25 February 2014

JEA HOLDINGS (AUST) PTY LTD
PO BOX 313,
BAULKHAM HILLS NSW 1755

Dear Sir/Madam,

ADDRESS: 90 Cartwright Avenue, Miller (Lot 4 DP 219028, Lot 2 DP 219028,
Lot 2 DP 545358)

DESCRIPTION: Pre-DA lodgement meeting: proposal seeking shop top housing
over shopping centre, carpark plus basement parking.

I refer to the pre-development application (DA) meeting held on Wednesday 12 February 2014 with Council Officers regarding the abovementioned proposal at the site.

Please find enclosed the additional comments made by Council officers based on the concept plans submitted and discussions held at the pre-DA meeting.

A set of DA documents including a Matrix listing the information that is required to be lodged with the DA is also enclosed.

The DA will not be accepted for lodgement unless all the required information is submitted.

The pre-DA meeting is only a preliminary review of the concept development and the comments provided, written or otherwise must not be considered as assessment of your proposal nor can you assume Council's support of your proposal as full assessment and determination can only be made following lodgement and full assessment of the application.

The advice provided in no way fetters the discretion of Council in the assessment and determination of any future application for the site. In particular other issues not identified in the advice may emerge during the consideration of the complete application.

The comments from the meeting are provided over the page.

If you do not understand this letter/application, please ring the Telephone Interpreter Service (131 450) and ask them to contact Council (1300 362 170). Office hours are 8.30 am to 5.00 pm, Monday to Friday.

ARABIC

إذا لم تستطع فهم هذا الطلب ،الرجاء الاتصال بخدمة الترجمة الهاتفية على رقم 131 450 واسألهم أن يتصلوا بالبلدية على رقم 1300 362 170 .دوام ساعات العمل هي من الساعة 8.30 صباحًا إلى 5.00 بعد الظهر من الاثنين إلى الجمعة .

CHINESE

如您看不懂此信/申請書，請打電話給「電話翻譯服務台」(131 450)，請他們聯絡市政廳(市政廳電話1300 362 170)。市政廳辦公時間：星期一至星期五，上午八時三十分至下午五時。

CROATIAN

Ako ne razumijete ovo pismo/aplikaciju, molimo nazovite Službu prevodilaca i tumača (Translating and Interpreting Service - na broj 131 450) i zamolite ih da nazovu Općinu (na 1300 362 170). Radno vrijeme je od 8.30 ujutro do 5.00 popodne, od ponedjeljka do petka.

GERMAN

Wenn Sie diesen Brief/Antrag nicht verstehen können, rufen Sie bitte den Telefon Dolmetscher Dienst (Telephone Interpreter Service) (131 450) an und lassen Sie sich vom Personal mit dem Gemeinderat (Council) in Verbindung setzen (1300 362 170). Geschäftsstunden sind von 8:30 bis 17:00 Uhr, montags bis freitags.

GREEK

Αν δεν καταλαβαίνετε αυτή την επιστολή/αίτηση, σας παρακαλούμε να τηλεφωνήσετε στην Τηλεφωνική Υπηρεσία Διερμηνέων (131 450) και να τους ζητήσετε να επικοινωνήσουν με το Δημοτικό Συμβούλιο (1300 362 170). Τα γραφεία του είναι ανοιχτά από τις 8.30π.μ. μέχρι τις 5.00μ.μ. από Δευτέρα μέχρι και Παρασκευή.

HINDI

अगर आप इस पत्र/आवेदन को पढ़कर समझ नहीं पा रहे हैं तो कृपया टेलीफोन संवाद सहायक सेवा (131 450) को फोन करें और उनसे संपर्कित (1300 362 170) से संपर्क करने को कहें। कार्यालय का समय सोमवार से शुक्रवार तक प्रातः ८:३० बजे से सायं ५:०० तक है।

ITALIAN

Se non comprendi questa lettera/questo modulo di domanda, telefona al Servizio traduzioni e interpreti al numero 131 450 chiedendo di essere messo in contatto con il Comune (telefono 1300 362 170). Orario d'ufficio: ore 8.30 -17.00, dal lunedì al venerdì.

KHMER

បើលោកអ្នកមិនយល់ពីអត្ថន័យឬក៏ប្រតិបត្តិទេស សូមទូរស័ព្ទទៅសេវាបកប្រែភាសាខ្មែរទូរស័ព្ទ (លេខ 131 450) ហើយស្នើសុំឲ្យគេទាក់ទងសាលាក្រុង (លេខ 1300 362 170)។ ពេលម៉ោងធ្វើការគឺម៉ោង ៨ កន្លះព្រឹកដល់ម៉ោង ៥ ល្ងាច ពីថ្ងៃច័ន្ទដល់ថ្ងៃសុក្រ

MACEDONIAN

Ako ne go razbirate ova pismo/aplikacija, ve molime da se javite vo Telefonската преведувачка служба на 131 450 и замолете ги да стапат во контакт со Општината на 1300 362 170. Работното време е од 8.30 часот наутро до 5.00 часот попладне од понеделник до петок.

MALTESE

Jekk ma tifhimx din l-ittra/applikazzjoni, jekk joghgbok ċempel lis-Servizz ta' l-Interpretu bit-Telefon (131 450) u itlobhom jikkuntattjaw il-Kunsill (1300 362 170). Il-hinijiet ta' l-Ufficju huma mit-8.30a.m. sal-5.00p.m., mit-Tnejn sal-Gimgha.

POLISH

Jeśli nie rozumiesz treści niniejszego pisma/podania, zadzwoń do Telefonicznego Biura Tłumaczy (Telephone Interpreter Service) pod numer 131 450 i poproś o telefoniczne skontaktowanie się z Radą Miejską pod numerem 1300 362 170. Godziny urzędowania: 08.30-17.00 od poniedziałku do piątku.

SERBIAN

Ako ne razumete ovo pismo/aplikaciju, molimo vas da nazovete Telefonsku prevodilačku službu (131 450) i zamolite ih da kontaktiraju Opštinu (1300 362 170). Radno vreme je od 8.30 ujutro do 5.00 popodne, od ponedeljka do petka.

SPANISH

Si Ud. no entiende esta carta/solicitud, por favor llame al Servicio Telefónico de Intérpretes (131 450) y pídales que llamen a la Municipalidad (Council) al 1300 362 170. Las horas de oficina son de 8:30 am a 5:00 pm, de lunes a viernes.

TURKISH

Bu mektubu veya müracaatı anlayamazsanız, lütfen Telefon Tercüme Servisi'ne (131 450) telefon ederek Belediye ile (1300 362 170) ilişkiye geçmelerini isteyiniz. Çalışma saatleri Pazartesi - Cuma günleri arasında sabah saat 8:30 ile akşam 5:00 arasındır.

VIETNAMESE

Nếu không hiểu thư/dơn này, xin Quý Vị gọi cho Telephone Interpreter Service (Dịch Vụ Thông Dịch Qua Điện Thoại), số 131 450, và nhờ họ liên lạc với Council (Hội Đồng), số 1300 362 170. Giờ làm việc là 8 giờ 30 sáng đến 5 giờ 00 chiều, Thứ Hai đến Thứ Sáu

**Development Assessment Pre-Lodgement Meeting Notes
Wednesday 12 February 2014**

Liverpool Local Environmental Plan (LLEP), 2008 matters

- The site is zoned B2 Local Centre pursuant to the Liverpool Local Environmental Plan (LLEP), 2008. The zoning and permissibility of the proposal is to be addressed in accordance with the LLEP. **The application is required to clearly address how the proposal is consistent with the objectives of the zone.** The proposal can be described as commercial premises, shop top housing and/or residential flat building. Each of these land uses is permissible with consent. Despite permissibility, the development must be brought into better alignment with the zone objectives.
- The applicant is required to review the LLEP and ensure that the DA addresses all relevant clauses, development standards and provisions. **The DA is to address the LLEP in writing and demonstrate full compliance.** A Table of Compliance should be provided within the Statement of Environmental Effects (SEE) which presents the proposal against all applicable provisions of the LLEP.
- Clause 4.3 of the LLEP relating to *height of buildings* prescribes the maximum height of buildings is permitted to be 21m. **Section and elevation plans must be submitted** which identify the LLEP height limit affecting the site as a dotted line, and illustrate the height of the proposed and existing building. The natural ground levels, finished floor levels and roof level are to be identified to AHD. Note that building height refers to the height of the building above the existing ground level. Any request to vary this height restriction must be properly address in accordance with the criteria of **Clause 4.6 of the LLEP.** However please note that it is unlikely that a non-compliance will be supported.
- Clause 4.4 of the LLEP relating to *floor space ratio* prescribes the maximum floor space ratio **(FSR) for the site as 1.7:1.** In order to demonstrate that FSR is accurately calculated, the DA must be accompanied by a schedule that addresses the inclusions and exclusions to floor space ratio, as prescribed in Clause 4.5 and the LLEP's definition of gross floor area.
- The concept plans indicate the proposal does not comply with FSR. The applicant should clearly **demonstrate how FSR has been calculated,** ensuring that the method of calculation is in accordance with the relevant clauses and definitions of the LLEP, including but not limited to Clause 4.5 of the LLEP.
- I note that at the meeting, the project manager indicated to Council that FSR complies when taking into account the area of the separate lots comprising Miller Shopping Centre, which is currently under the allowable FSR. Please be aware that the objectives of **Clause 4.5 prevent the inclusion in the site area of an area that has no significant development being carried out on it.** On the basis that no redevelopment of the Miller Shopping Centre is proposed under the application, you are advised of the need to significantly reduce the FSR in order to **comply with the maximum 1.7:1.** Please review the provisions of Clause 4.5 carefully.

- Clause 7.16 of the LLEP precludes any building on land in the B2 zone being used at the ground floor of the building for the purposes of residential accommodation. This clause also requires the building to have at least one entrance and at least one other door or window on the front of the building facing a street other than a service lane. Careful consideration should be given to this clause as the objectives of are to provide active uses at street level and restrict residential accommodation at the ground floor. The concept plan does not achieve the objectives of this Clause and does not strictly comply with the Clause. Further details is required in relation to the Memorandum of Transfer, which requires the car parking to be retained for the public.
- Further to the above point, the concept plan should be redesigned to address the objectives of the zone and Clause 7.16 of the LLEP by increasing commercial floor area especially at the ground floor. Any loss of car parking must be reinstated by the provision of additional parking via an alternative solution.
- Consent will not be granted to a home office on the ground floor, as depicted in the concept plans, as this is a residential use and contravenes the provisions of the LLEP.
- The LLEP aims to promote a high standard of urban design that responds appropriately to the existing or desired future character of areas. In this regard, you are advised that the proposal will be referred to a Design Review Panel (DRP) for consideration. An additional pre-DA may be sought to obtain design advice from the DRP. Based on the limited information provided with this application, and the absence of comments from the DRP, no design recommendations are provided within this advice.

Planning issues

- The redevelopment of the site should be part of a broader design strategy which accounts for the redevelopment of the entire commercial precinct given the major landholding in the same ownership. The DA should be accompanied by a design strategy. For further detail, please refer to the LDCP Part 6.
- Council has received funding to prepare a Masterplan for this precinct. It is recommended that the developer continue to consult with Council and have input into the preparation of the Masterplan. Please be advised that Council's assessment of the DA would need to consider whether the proposal is consistent with Council's Masterplan.
- The redevelopment concepts should continue to be prepared in consultation with the community given the strategic importance of the site (heart of Miller and the only commercial precinct).
- Any Voluntary Planning Agreement (VPA) that the developer seeks to enter into with Council, in order to provide public benefits as a result of the development, should be first outlined within a Letter of Offer outlining the details of the offer.
- The parking arrangement somewhat problematic and less than ideal. The connection between the proposed development and car parking to the existing Miller

shopping centre needs to be reconsidered. The visibility of the car parking and the pedestrian amenity should be improved. Design documentation should assist in clearly showing these elements.

- **A detailed site analysis** plan must be submitted with the DA prepared by a qualified designer to identify all site and surrounding features including types of surrounding uses, access points, openings, setbacks to boundaries, distance to other uses etc. The site analysis should determine the most appropriate development outcome for the site.
- **Detailed floor layout plans** to be submitted with the DA, if the uses of commercial tenancies are included in the DA.
- **Shadow diagrams** should be submitted to demonstrate that the proposed outdoor play area oriented to the south can achieve the minimum solar access requirements of LDCP which specifies sunlight to be available to 50% of the area for a minimum of 3 hours between 9am and 3pm on June 21. The diagrams should also confirm that adjoining development can achieve the minimum requirements stipulated in the LDCP. Consideration is required for any potential overshadowing to properties in the vicinity of the site, including residential areas, school playgrounds and parks.
- **A landscape plan** prepared by a qualified landscape architect is to be submitted with the DA which incorporates the minimum areas of landscaping along all site boundaries as required in LDCP. The plan is to provide a schedule detailing the number and type of plants to be used and should be prepared in accordance with the LDCP. It should also include details of fencing on all boundaries and elevations, both existing and proposed.

State Environmental Planning Policies (SEPPs)

- The applicant is required to review any State Environmental Planning Policies (SEPPs) and ensure that the DA addresses all relevant clauses, development standards and provisions. The DA is to address the SEPPs in writing and demonstrate full compliance. A Table of Compliance should be provided within the SEE which presents the proposal against all applicable provisions of SEPPs.
- SEPP (Infrastructure) is applicable to the development given the proposal is considered to be traffic generating development. As such, the following, but not limited to the following clauses of the SEPP must be addressed in the DA:
 - a. Clause 104 with respect to traffic generating development.
In this regard, in order to address the SEPP provisions, an acoustic report, air quality report and traffic report must be submitted with the DA.
- SEPP 55 Remediation of Land is applicable to the site and must be addressed by the DA. If the investigations result in findings that the site may be contaminated, a Site Contamination Investigation Report will be required to be submitted. Should this Report conclude that the site requires remediation, then a Remediation Action Plan will be required.
- The Greater Metropolitan Regional Environmental Plan (GMREP) No. 2 – Georges River Catchment is now a deemed SEPP and must be addressed.

- SEPP - (Building Sustainability Index: BASIX) 2004
- SEPP 65 Design Quality of Residential Flat Development – The proposal seeks residential flat buildings as defined within SEPP 65, and requires assessment pursuant to this policy. Clause 30(2) of SEPP 65 requires Council to take into consideration the publication *Residential Flat Design Code (a publication of the Department of Planning, September 2002)*. The provisions of SEPP 65 must be addressed and compliance demonstrated through adequate plans. Potential non-compliances or matters to be particularly considered / addressed include:
 - b. The Media Rooms of approximately 10m² are considered to constitute a bedroom. This may influence the dwelling mix and the parking requirements. Careful consideration should be given to ensure the proposal is accurate with respect to the amount of bedrooms within each unit.
 - c. Readily accessible storage areas are to be provided for each unit. Storage areas provided within the basement car parks should not interfere with the provision of parking and other services as outlined elsewhere within this correspondence.
 - d. Additional information required in relation to the provision of garbage areas.
 - e. The proposal does not provide adequate building separation to neighbouring sites or between the two residential towers.
 - f. Visual Privacy - adequate privacy mitigation measures are required where residences and their private open space are potentially overlooked – in this regard, there is potential for privacy conflicts between dwellings, particularly for dwellings which are not provided with adequate building setbacks. Further information is required.
 - g. Daylight Access – 70% of living rooms and private open space to apartments are required to receive 3 hours solar access. Solar access diagrams may be required to demonstrate compliance.
 - h. Detailed plans required demonstrating compliance with Facades requirements.
 - i. An explanation of the design in terms of the design quality principles set out in Part 2 of the SEPP;
 - j. Drawings of the proposed development in the context of surrounding development on all plans, elevations and sections.
 - k. Drawings of proposed landscaped area, including species selected and materials to be used, presented in the context of the proposed building or buildings, and the surrounding development and its context;
 - l. Photomontages of the proposed development in the context of development surrounding the site;

- m. A (physical) sample board of the proposed materials and colours of the development, including facades;
- n. A model of the proposal and that includes the context.
- o. Design to be prepared by a registered architect.
- p. A minimum of 25 percent of the open space area of a site should be a deep soil zone (i.e. soil depth in excess of 1.5m); more is desirable. However, as the site is within an urban area where there is no capacity for water infiltration, stormwater treatment measures must be integrated with the design of the residential flat building.

Liverpool Development Control Plan (LDCP), 2008 matters

- The applicant is required to review the Liverpool Development Control Plan (LDCP), 2008 to establish all parts of the LDCP that are applicable.
- The DA must demonstrate full compliance with the relevant parts of the LDCP and include a discussion in the SEE. A Table of Compliance should be provided within the SEE which presents the proposal against all applicable controls of the LDCP.
- In order for any LDCP variations to be considered by Council officers, written justification must be provided within the SEE that demonstrates why the variation is acceptable and how it provides a better development in spite of the variation. If the variation request is not accepted by Council staff, the development plans will be required to be amended to fully comply.
- It is noted that there are areas of concern from a Crime Prevention through Urban Design (CPTED) perspective. One area of concern is the pedestrian link from Cartwright Avenue through to the eastern shopping centre entrance. Careful consideration should be given to the treatment of this area and additional detail is required. Consideration of CPTED as it relates to the children's play area on Level 2 is also required.
- Please carefully ensure that all parts of the LDCP are thoroughly addressed; however the following parts are generally applicable:
 - Part 1 General Controls for all Development.
 - Part 6 Development in Business Areas.

Environmental issues and site constraints

- The site survey must identify the easements and restrictions affecting the site and ensure that there are no building encroachments over easements, or otherwise any violations to the terms of the easement.
- The terms of any 88B Instrument that may be applicable must also be clearly addressed.

- In circumstances where a proposal relates to more than one allotment, such as within the concept proposed, Council will require that the Lots to be consolidated. This would be imposed as a condition of consent, if consent was granted. This should not be taken to imply that Council will approve the application and is provided for your information only.

Stormwater drainage and engineering issues

- Stormwater drainage for the site must be in accordance with Council's Development Control Plan. A stormwater concept plan shall be submitted with the application.
- The stormwater concept plan shall be accompanied by a supporting report and calculations. Hydrological and hydraulic calculations of the pre developed site and post developed site are to be submitted. Including analysis to determine that there is sufficient capacity within the existing stormwater system at the location the development proposes to drain to.
- On site detention will not be required provided that there is no increase in impervious area, a supporting statement and calculations are to be submitted, to this effect.
- No retaining walls or filling is permitted for this development which will impede, divert or concentrate stormwater runoff passing through the site.
- Earthworks/retaining walls must comply with the LDCP.

Traffic and access issues

- The application shall be supported by a Traffic Report prepared by a suitably qualified Transport Engineer/Planner, particularly given the existing non-compliance at the site. This must give consideration to other recent yet to be completed approved development and account for vacant tenancies within the centre, in order to consider the traffic impacts of the proposal upon completion of the works.
- The DA should demonstrate how the quantity of parking spaces proposed would be adequate to meet the demands of the existing and proposed developments.
- The application must demonstrate that access, car parking and manoeuvring details comply with AS2890 Parts 1,2 & 6 and Council's Development Control Plan.
- The proposed development shall be designed to be serviced by a Medium Rigid Vehicle.
- The application shall be supported by turning paths in accordance with AS2890 clearly demonstrating satisfactory manoeuvring on-site and forward entry and exit to and from the public road.
- Analysis for required car parking should consider the provision of parking for the residential flat building, and parking to the shopping centre as two separate requirements.

- Consideration of traffic management proposals in Cartwright Avenue and Woodward Crescent must be provided.
- Stacked parking may only be provided where the parking spaces are allocated to the same unit and only for those units where multiple parking spaces are required.
- It has been recommended that the entry be incorporated into roundabout.
- Details of access for service vehicles to the site, and of deliveries for commercial properties must be provided.
- A Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements, impact on pedestrians and traffic control must be submitted.

Reports

- An environmental consultant must be engaged to prepare an air quality assessment and submit to Council a report that addresses the emissions of smoke, dust and pollution; and investigates the potential impact on the sensitive users of the centre as well as provide measures to mitigate any effects.
- An acoustic report will be required to be submitted as the site is directly opposite residential development and is adjacent to a classified road. Any noise mitigations measures recommended in the acoustic report are to be clearly shown on the architectural plans.
- The DA should clearly address all CPTED safer by design principles. An explanation of the development in terms of these principles should be included in the SEE. Subsequent to lodgement of the DA, the DA may be referred to the NSW Police for comments.

Other relevant issues

- A Quantity Surveyor's report is to be submitted to accurately identify:
 - The capital investment value (CIV) of the development, and
 - The estimated cost of construction works,in accordance with the definition in the Environmental Planning and Assessment (EP&A) Regulation, 2000.
- Submission of evidence of adequate arrangements for site services such as water, sewer, electricity, gas and telecommunications.

Information to be submitted with a Development Application

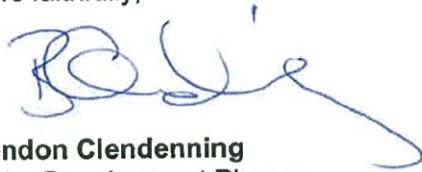
The following information is required to be submitted with the DA. Please refer to the attached DA submission matrix for further explanation and guidance.

Please be advised that the DA will not be accepted for lodgement unless all the required information is submitted.

- Identify the Capital Investment Value (CIV) and estimated cost of works,
- Statement of Environmental Effects (SEE) including S79C assessment and Table of Compliance against provisions of LLEP, DCP, SEPPS,
- Written justification of any variations to LLEP development standards in accordance with Clause 4.6 of the LLEP,
- Written justification of any variations to LDGP controls,
- Survey Plan (confirming no building encroachments to easements, if any),
- Architectural plans (site plan, floor plans, elevations and sections), ensuring that all survey details including boundaries and other site constraints are shown on the architectural plans),
- Site analysis,
- Shadow diagrams and shadow analysis of adjoining elevations,
- Coloured perspectives,
- Coloured schedule/Sample board of external building materials, colours and finishes,
- Landscaping plan prepared by a qualified Landscape Architect,
- Stormwater Drainage plan,
- Demolition plan and statement, clearly identifying all structures to be demolished.
- Strata subdivision plan if subdivision is sought;
- 1 x copy of notification plans reduced to A4 size (excluding residential floor plans),
- BCA and Accessibility Report,
- SEPP 65 Design Verification Statement,
- Waste Management Plan (for demolition, construction and on-going waste management),
- BASIX Certificates,
- Erosion and sediment control plan,
- Earthworks plan and cut/fill and retaining wall details,
- Sections depicting the relationship between proposed surface levels, floor levels, openings, type of opening, setbacks etc in comparison to the same elements on adjoining sites,
- Traffic and Parking Assessment,
- Acoustic Assessment,
- Site contamination investigation report,
- Essential services report,
- Spatially accurate 3D model,
- 2 x CD Roms containing electronic copies of all above documents accurately titled.
- 8 x copies of the above reports/plans. Plans are to be A1 size.
- 1 x A3 copy of plans.

Please do not hesitate to contact the undersigned on **9821 7748** if you wish to discuss this matter further.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Brendon Clendenning', with a long, sweeping horizontal line extending to the right.

Brendon Clendenning
Senior Development Planner
Statutory Planning

APPENDIX “B” - DESIGN REVIEW PANEL ASSESSMENT REPORT

LIVERPOOL CITY COUNCIL

DESIGN REVIEW PANEL ASSESSMENT REPORT

DA No.	
DA Title and Location	Lots 2 and 4 DP 219028 and Lot 2 DP 545358 90 Cartwright Avenue Miller
Applicant	Jea Holdings (Australia) P / L
DA Planner	Venetin Aghostin
Date lodged with Council	16 April 2014
Applicant's designer confirmed as SEPP 65 compliant	Yes
Date of Design Review Panel review	1 May 2014
Pre-DA or DA consideration	Pre-DA
Panel members in attendance	Brett Newbold (chair) Jennifer Bautovich Jon Johannsen
Council representatives in attendance	Toni Averay, Acting Executive Director Carole Todd, Acting Group Manager Planning & Growth Venetin Aghostin, Team Leader Statutory Planning
Declaration of conflict of interest	nil

Introduction

The subject site is zoned *B2 Local Centre*, and is the largest single site within the Miller Town Centre. Principal development standards include a maximum building height of 21m and a maximum FSR of 1.7:1.

Prior to the meeting, Panel members reviewed pre-DA plans and visited the subject site.

The Panel meeting was attended by landowners and project architects.

Summary

The Panel recognises that mixed use redevelopment of the subject site has strategic potential to provide a catalyst for remodelling of the Miller town centre together with the surrounding R4 zone, and considers that the current development concept demonstrates a number of positive qualities.

However, in order to achieve strategic potential of the combined shopping centre properties which would achieve a vibrant main street along Cartwright Avenue that is bolstered by optimum floor space permitted by *Liverpool LEP 2008 (LLEP)*, the Panel recommends investigation of several design alternatives:

- To maximise permissible floor area, as well as creating a gateway structure that identifies the Miller town centre, while minimising overshadowing of proposed communal open space within the development: proposed residential Block A should be reconfigured to accommodate additional floor area and, possibly, additional height.
- To underpin the viability of proposed commercial tenancies along Cartwright Avenue and the corner with Woodward Crescent: vehicle access should be reconfigured to reduce the number and / or width of driveway crossings that are proposed along Cartwright Avenue.
- To maximise pedestrian amenity and activity along the Cartwright Avenue 'main street' frontage: shopfronts should be setback to accommodate a colonnaded frontage, and proposed garbage areas should be replaced by an additional retail unit.
- To maximise amenity and security of the proposed residential component, as well as contributing to pedestrian activity along the Cartwright Avenue frontage: at least two residential lobbies with direct access from street frontages should be provided, and entrance stairs which provide access from the street to the proposed communal open space should be redesigned as a stronger element of the Cartwright Avenue frontage.
- To enhance amenity of the residential component: the communal open space should be reconfigured to minimise overshadowing of primary recreation areas during midwinter, upper storey lift lobbies should incorporate windows that overlook the proposed communal open space, and apartments should be protected from visual or acoustic impacts of the neighbouring hotel and shopping centre.
- To minimise scale and visual impacts of proposed residential buildings: penthouse treatment of proposed level seven in Block B should be applied to all elevations in both buildings.

In order to expedite assessment of the final development application, design options which respond to all of these recommendations should be presented as soon as possible to the Panel for a further review before proceeding to final documentation of the DA. Design options also should respond to any master planning for the surrounding area which might be in progress.

The development proposal

The subject site is part of a larger holding which accommodates the existing Miller Central shopping centre. The proposed mixed development would replace ground level carparking for that centre which currently occupies an area of approximately 6,250m². However, total area of the shopping centre landholding (which includes the subject site) is estimated to be approximately 19,000m².

The proposed development comprises two residential buildings above a podium which contains a row of shops facing Cartwright Avenue and two levels of parking. Residential buildings comprise five and six residential levels, and accommodate a total of 124 dwellings that comprise a mix of one, two and three bedroom units. Proposed GFA exceeds the FSR which is permissible upon the existing carpark; however, combined GFA of the proposed development and the existing shopping centre building would be approximately 75% of the maximum permitted upon the combined sites.

Carparking comprises 154 spaces for shoppers in an above-ground level which would be screened by proposed shops and accessed from Cartwright Avenue, plus a basement level with 168 residents' spaces that would be accessed from Woodward Crescent.

Proposed buildings are broken into two or three distinct layers: the ground-floor podium which contains mezzanine shops or offices, plus five residential levels with an additional penthouse storey above Block B which is located next to the shopping centre building at the western end of the subject site. The proposed diversity of forms, elements and finishes is illustrated by the Cartwright Avenue elevation together with perspective views which were tabled during the DRP meeting.

Perspective views indicate general details of the external upgrade which is proposed for the shopping centre building. At this stage, details of that upgrade have not been provided.

Proposed landscape works include street trees and paved forecourts adjacent to the Cartwright Avenue footpath, plus plantings and furnishings within a communal open space for residents upon the proposed podium.

Comments

i Considerations for design excellence

In relation to the subject development application, the Panel notes that considerations for urban design quality are determined by:

- i. The *Liverpool LEP 2008 (LLEP)*:
 - Aims in clause 1.2;
 - Objectives for zone *B2 Local Centre*;
 - Objectives for height and FSR in clauses 4.3 and 4.4.
- ii. Part 6 of the *Liverpool DCP 2008 (LDGP)*:
 - Predominantly, objectives to revitalise and enhance centres.
- iii. In relation to the proposed residential component: *SEPP No 65* and the associated *Residential Flat Design Code*.

ii Context

The following contextual factors provide important considerations in relation to design quality:

- The proposed development must incorporate ground level carparking which currently services the Miller Central shopping centre.
- The subject site has a prominent corner location and its long boundary faces the primary 'main street' within the Miller town centre.
- The site adjoins the existing Miller Central shopping centre which has its main entrance and one service lane facing Cartwright Avenue, a service dock next to the western 'boundary' of the subject development, and a variety of roof top mechanical plant.
- Other developments which adjoin the proposed development include a two storey commercial building and a hotel which face Woodward Crescent.
- Nearby developments include an estate of three storey residential flat buildings in Woodward Avenue which is zoned *R4 High Density Residential* where principal development standards provide scope for future redevelopment (21m building height and FSR of 1.5:1).
- The Panel understands that the business zone and surrounding residential areas have been the subjects of master plan investigations over recent years.

iii Built form and aesthetics

The Panel's understanding of built form and exterior architecture has been assisted by 3-d views that were tabled during the DRP meeting. Overall, the Panel considers that the proposed development demonstrates a number of positive features:

- Residential floorspace has been broken into two distinct building masses which moderate scale and bulk of a substantial development: each building has an individual form and incorporates a diversity of exterior elements.
- Facades of each building also are broken into several elements that moderate scale by creating the appearance of attached buildings (as distinct from single homogenous structures).
- Three dimensional views confirm that facades are well-composed, with coherent proportions and arrangements of elements such as frames, blade walls and exposed balcony slabs which would minimise the visible extent of walls with sheer or blank faces.
- The 'extra storey' in Block B is treated as a 'penthouse verandah' which moderates scale by providing a recessive appearance.
- The retail podium displays an uncluttered architectural character with sheer curtain walls that extend from footpaths to the undersides of simple horizontal awnings that provide signature elements from street level vantage points.

The Panel understands that configuration of the proposed residential buildings has been guided by controls in the *LDCP*, together with the desire to minimise overshadowing of north-facing beer gardens next to the rear boundary of the neighbouring hotel development. However, the Panel has noted that configuration of the proposed development would result in extensive midwinter overshadowing of the proposed communal open space, that proposed buildings would exceed the *LLEP*'s maximum building height of 21m but that floor area of the proposed development combined and the existing shopping centre would be only 75% of the maximum which is permitted for the combined sites.

Having regard for these factors, and in light of the site's strategic potential to provide a catalyst for redevelopment of the surrounding R4 zone, the Panel recommends investigation of the following design alternatives:

- i. Reconfigure proposed Block A to incorporate an increased frontage along Woodward Crescent:
 - Primarily, in order to accommodate an amount of floor space across the combined shopping centre properties which meets the strategic target that is specified by clause 4.4 of the *LLEP*;
 - Secondly, to present building forms which would accentuate the street corner as a town centre gateway, while minimising overshadowing of the proposed communal open space;
 - Potentially, allowing building heights which marginally exceed limits that are specified by clause 4.3 of the *LLEP*, while satisfying objectives that are specified by the LEP in relation to building height and development in zone B2, but dependant upon a satisfactory variation request under clause 4.6 of the *LLEP*;
 - Accepting a degree of midwinter overshadowing for the hotel, noting that amenity impacts typically do not apply to commercial developments and that midwinter use of the hotel's outdoor areas is likely to be limited;
 - Maximising sunlight to proposed dwellings and the communal open space.
- ii. Extend the podium and communal open space across portion of the proposed carpark void:
 - Primarily, to accommodate the reconfigured Block A;
 - Complemented by design detailing which would manage visual impacts in relation to the neighbouring hotel.

The final development proposal should incorporate positive features which are evident in the current 3-d images, together with certain amendments to elements which are depicted by those images:

- iii. Architectural composition of all facades should display an equivalent quality to the proposed Cartwright Avenue frontage.
- iv. Penthouse treatment of level 7 in Block B should extend across the northern elevation which overlooks the proposed entrance stairs in order to moderate scale of a prominent facade.
- v. If the amendment of Block A results in additional storeys, scale and visual impacts should be moderated by applying the penthouse treatment of Block B to at least the top-most two storeys of Block A (across all elevations).
- vi. The proposed entrance stair from street level to the communal open space should be redesigned as a stronger element of the Cartwright Avenue frontage, for example as a series of landscaped terraces which step up from street level.

iv Pedestrian activity

The Panel considers that effective pedestrian networks are essential design quality considerations for all mixed developments in town centres. Effective networks include street footpaths and off-street routes through the commercial and residential components of each development.

The Panel recognises that the proposed development satisfies strategic requirements for town centre development by providing a band of commercial tenancies between the prominent street corner and the Miller Central shopping centre. However, the band of proposed shops would be interrupted by four driveways (including the existing shopping centre service lane) which are likely to compromise pedestrian safety and amenity of this strategically-important frontage to Cartwright Avenue, and as a consequence, to undermine commercial viability of the proposed commercial tenancies.

Therefore, the Panel recommends further investigation of the following design alternatives:

- i. To maximise visibility of shopfronts and accommodate street front activity: shopfronts should have a consistent alignment which matches windows of proposed units 4 and 8, and an undercroft or colonnade should be provided along the full frontage to Cartwright Avenue.
- ii. To minimise the number of vehicle crossing points: the proposed service exit at the north-western corner should be relocated or deleted entirely, with access for garbage trucks provided via the adjoining shopping centre service lane or through the shoppers' carpark (noting that the proposed carpark provides high clearance).
- iii. To maximise retail and pedestrian activity along the Cartwright Avenue 'main street': in conjunction with deletion or relocation of proposed garbage collection access, relocate the proposed garbage room to accommodate the westwards extension of proposed shop-frontages from retail unit 9 to the north-western corner of the proposed development.
- iv. To encourage optimum pedestrian activity along the Cartwright Avenue frontage: in conjunction with relocation of the service exit and extension of shop frontages at the development's north-western corner, the proposed north-western forecourt should be redesigned to provide a visually-apparent extension of the upgraded entrance to Miller Central, with consistent a design treatment highlighting connections between the shopping centre entrance and the recommended colonnade, and incorporating a paved threshold across the existing service laneway to emphasise pedestrian priority together with relocation of the proposed basement egress stairs in order to eliminate visual obstructions.
- v. To minimise disruption of the Cartwright Avenue retail frontage: driveways to the proposed shoppers' carpark should be reconfigured:
 - Preferably, by reconfiguring vehicle circulation with a one-way entrance from Cartwright Avenue allowing a reduced driveway width facing the main street, and with one-way exit via the service lane to Woodward Crescent;
 - Alternatively, and in conjunction with extension of the Cartwright Avenue shop-frontage (per recommendation i), relocate the two-way driveway in a westerly direction with retail units 6 and 7 moved eastwards to consolidate pedestrian-potential of the shallow unit 5.

The Panel considers that dedicated pedestrian pathways are highly desirable within the shoppers' carpark, and are necessary to provide effective access to the eastern entrance of Miller Central. However, design amendments to the proposed perimeter pathway are recommended in order to improve the amenity of that entrance, as well as to address safety and security concerns:

- vi. Relocate proposed perimeter access pathways in order to provide clear sight lines and safe pedestrian paths through the body of the shoppers' carpark (rather than

along the carpark perimeter), and redesign the shopping centre entrance to provide an attractive destination for those relocated pathways.

- vii. As a primary element in the relocation of proposed access pathways, realign the proposed east-west pathway from the southern edge of the site to a central position within the shoppers' carpark (for example, as a defined pedestrian path between back-to-back parking bays) which also would provide a direct link from the proposed eastern residential lobby to the shopping centre's eastern entrance.
- viii. Provide after-hours security for the shoppers' carpark via a secured perimeter of fences, gates and driveway shutters which are designed to complement exterior architecture of the proposed development.

With regard to pedestrian routes through the proposed residential component, the Panel notes that the proposed communal courtyard would operate as a pedestrian transfer zone between street entrances and apartment lobbies. This would consolidate pedestrian routes, and consequently would have positive impacts in relation to residential security and potential to stimulate social interaction between future residents.

However, amenity of the proposed development would be compromised by the limited nature of access which is proposed from street-level up to the communal open space and to apartment lobbies. The current development concept provides direct street-level access from the eastern-most lobby, and stair access to the podium is via a three-flight open stair. The following amendments are recommended:

- ix. To maximise visible pedestrian activity facing Cartwright Avenue as well as to enhance amenity of the residential component: stairway access from the street to the communal open space should be redesigned as a more-prominent feature of the development which would complement architectural design of the proposed buildings as well as incorporating landscape features which downplay the actual vertical rise from street level: for example, a series of stepped landscaped terraces.
- x. Also to maximise visible pedestrian activity along Cartwright Avenue and enhance residential amenity: the majority - if not all - residential lobbies should have a direct connection to the street frontage which allows convenient access to shops and transport.

v Residential amenity

The Panel considers that residential layouts generally meet accepted standards of design quality which are specified by *SEPP No 65* and the associated *Residential Flat Design Code*.

Any amendments to floorplans which occur as a result of the Panel's preceding recommendations should demonstrate satisfactory responses to relevant guidelines in the *Flat Code*, in particular sunlight, ventilation, privacy and dimensions.

Also, a number of relatively minor amendments should be incorporated by revised floor plans:

- i. To enhance indoor amenity, as well as contributing to the security of communal areas and potential for social interaction between residents: upper storey lobbies should have windows which allow overlooking of the communal open space.
- ii. To minimise visual and acoustic impacts of delivery docks which adjoin the proposed development: the existing shopping centre service yard which adjoins the western 'boundary' of the subject site should be roofed by a pergola that is covered with vines

or translucent sheeting, and garbage should be contained within an enclosed storage room rather than outdoor skips.

- iii. To minimise acoustic impacts for proposed dwellings: dwellings on proposed level two which face the shopping centre or the neighbouring hotel should be protected by acoustic screens that are integrated with landscaping along the outer edges of proposed private courtyards, primarily to provide acoustic protection from mechanical plant but also to prevent 'land-use conflict' which is likely due to noise from patrons using the hotel's outdoor areas.

APPENDIX “C” - SCHEDULE OF FINISHES

APPENDIX “D” - WASTE MANAGEMENT PLAN

The Development Application is supported by a Waste Management Plan, (WMP), which outlines the procedures to be undertaken during the demolition stage of the development (Stage 1) and the construction phase of the project (Stage 2).

The proposed waste collection after occupation is outlined in Stage 3 of the construction phase.

Stage 1 – Demolition Phase

The development proposes to demolish the existing at grade car parking and relocate the telecommunications tower.

Generally, the area will be stripped in stages with all products removed by the specialist sub-contractors and traders in second-hand building materials and products.

Stage 2 – Construction Phase

The development proposes to adopt the following construction system :-

- Reinforced concrete slabs, beams and columns structure;
- Light-weight infill wall construction;
- Light-weight cladding system;
- Concrete roof slab with metal roofing elements;
- Aluminium framed windows and sliding doors;
- Internal light-weight steel wall frames and plasterboard cladding.

Appropriate erosion control and sedimentation control measures will be implemented with “shake-down” areas and dust-control measures applied.

STAGE 2 CONSTRUCTION STAGE

CONSTRUCTION				
MATERIALS	DESTINATION	RE-USE	RECYCLING	DISPOSAL
Description	Estimated Volume	On-Site Use	Contractor	Off-site Use
Bulk Excavation	1,500 cum soil 18,500 cum clay 1, 550 cum rock		Delta Group Excavation &Demolition 83 Bourke Road Alexandria	Landfill site at Mulgoa Road Penrith
Detail Excavation	50 cum soil 175 cum clay 50 cum rock		Delta Group Excavation &Demolition 83 Bourke Road	Landfill site at Mulgoa Road Penrith
Brickwork	1,000 bricks	Clean and stockpile required bricks for re- use on site	Has-a-bin Waste Industries	Provides skip and collection Recycles collected waste material
Concrete material	5 cum	Use as filling material and road base where required	Delta Group Excavation &Demolition 83 Bourke Road Alexandria	Landfill site at Mulgoa Road Penrith
Timber joists, studs, rafters, beams and flooring boards	20 linm	Clean of nails and stockpile for use	Recycled and Reclaimed Wood Products 88-90 Lilyfield Road Rozelle	Recycled and Reclaimed Materials are stockpiled and resold
Metal pipes, metal balustrades, gutters and downpipes	1 cum		Metalcorp Steel 13 Boundary Road Northmead	Recycled Scrap Metal
Plasterboard wall and ceiling sheets	10 cum		Jarmax Pty Ltd P.O. Box 70 Padstow NSW 2212	Will collect plasterboard and deliver to CSR Plasterboard for recycling
Wall and Floor Tiling Waste Materials	5 cum		Has-a-bin Waste Industries	Provides skip and collection Recycles collected waste material
PVC Products	Various		Has-a-bin Waste Industries	Provides skip and collection Recycles collected waste material
Recyclable Products Cardboard, Paper, Glass, Plastic and Aluminium	Unknown quantity		Has-a-bin Waste Industries	Provides skip and collection Recycles collected waste material
Miscellaneous Products	1,100 cum		Has-a-bin Waste Industries	Provides skip and collection Recycles collected waste material

Stage 3 - Occupation Phase

The proposed waste management on completion of the development for one-hundred and forty-five (145) residential units and shall comprise of the incorporation of a network of waste garbage and recyclable garbage areas, located within the basement level of the development.

A systemized collection of the bins, by the caretaker, shall allow these bins to be positioned in the main loading bay area, located of the street level of Cartwright Avenue, with convenient access for the garbage trucks to enter and exit after collection.

Bins will then be returned by the caretaker to their respective positions.

STAGE 3 - OCCUPATION STAGE

OCCUPATION				
MATERIALS	DESTINATION	RE-USE	RECYCLING	DISPOSAL
Description	Estimated Volume	On-Site Use	Contractor	Off-site Use
Waste products	145 x 80 litres per unit 11,600 litres 18 x 660 litre bins		Council's Contractor	Landfill Site
Recyclable Products	145 x 40 litres per unit 5,800 litres 24 x 240 litre bins		Council's Contractor	Recycling
Green Waste	1 x 240 litres bin		Council's Contractor	Recycle Waste
Commercial/Retail Waste	1 x 660 litre bin		Private contractor	Landfill

APPENDIX "E" - SCHEDULE OF UNITS - BLOCK A

UNIT NUMBER BLOCK A	Adaptable Unit	BED ROOMS	NET FLOOR AREA (sqm)	COURT/ BALCONY (sqm)	ORIENTED North, South, East or West	CROSS- VENTED Yes/ No	KITCHEN External Yes/No
1	Adaptable	1B	60.5	27.0	N + W - 2+	Y	N
2		2B	81.5	18.0	N + W - 2+	Y	N
3		2B	82.6	55.0	N - 4+	N	N
4		2B	83.1	32.0	N - 4+	Y	Y
5		2B	80.0	14.0	E - 2+	Y	N
6		2B	80.0	14.0	E - 2+	Y	N
7		3B	95.0	66.0	E - 2+	Y	N
8		3B	95.3	111.0	N + W - 2+	Y	N
9		2B	80.0	46.0	W - 2+	Y	N
10	Adaptable	1B	60.5	12.0	N + W - 2+	Y	N
11		2B	81.5	14.0	N + W - 2+	Y	N
12		2B	82.6	12.0	N - 4+	N	N
13		2B	83.1	20.0	N - 4+	Y	Y
14		2B	80.0	16.0	E - 2+	Y	N
15		2B	80.0	16.0	E - 2+	Y	N
16		3B	95.0	12.0	E - 2+	Y	N
17		3B	95.3	20.0	N + W - 2+	Y	N
18		2B	80.0	12.0	W - 2+	Y	N
19	Adaptable	1B	60.5	12.0	N + W - 2+	Y	N
20		2B	81.5	14.0	N + W - 2+	Y	N
21		2B	82.6	12.0	N - 4+	N	N
22		2B	83.1	20.0	N - 4+	Y	Y
23		2B	80.0	16.0	E - 2+	Y	N
24		2B	80.0	16.0	E - 2+	Y	N
25		3B	95.0	12.0	E - 2+	Y	N
26		3B	95.3	20.0	N + W - 2+	Y	N
27		2B	80.0	12.0	W - 2+	Y	N
28	Adaptable	1B	60.5	12.0	N + W - 2+	Y	N
29		2B	81.5	14.0	N + W - 2+	Y	N
30		2B	82.6	12.0	N - 4+	N	N
31		2B	83.1	20.0	N - 4+	Y	Y
32		2B	80.0	16.0	E - 2+	Y	N
33		2B	80.0	16.0	E - 2+	Y	N
34		3B	95.0	12.0	E - 2+	Y	N
35		3B	95.3	20.0	N + W - 2+	Y	N
36		2B	80.0	12.0	W - 2+	Y	N
37	Adaptable	1B	60.5	12.0	N + W - 2+	Y	N
38		2B	81.5	14.0	N + W - 2+	Y	N
39		2B	82.6	12.0	N - 4+	N	N
40		2B	83.1	20.0	N - 4+	Y	Y
41		2B	80.0	16.0	E - 2+	Y	N
42		2B	80.0	16.0	E - 2+	Y	N
43		3B	95.0	12.0	E - 2+	Y	N
44		3B	95.3	20.0	N + W - 2+	Y	N
45		2B	80.0	12.0	W - 2+	Y	N
TOTALS	5				North - 25 West - 5 East - 15	Cross - 40 Single - 5	Kitchens - 5

APPENDIX “E” - SCHEDULE OF UNITS - BLOCK A

UNIT NUMBER BLOCK A	Adaptable Unit	BED ROOMS	NET FLOOR AREA (sqm)	COURT/ BALCONY (sqm)	ORIENTED North, South, East or West	CROSS- VENTED Yes/ No	KITCHEN External Yes/No
46	Adaptable	1B	60.5	12.0	N + W - 2+	Y	Y
47		2B	81.5	14.0	N + W - 2+	Y	N
48		2B	82.6	12.0	N – 4+	N	N
49		2B	83.1	20.0	N – 4+	Y	Y
50		2B	80.0	16.0	E – 2+	Y	N
51		2B	80.0	16.0	E – 2+	Y	N
52		3B	95.0	12.0	E – 2+	Y	N
53		3B	95.3	20.0	N + W - 2+	Y	N
54		2B	80.0	12.0	W - 2+	Y	N
55	Adaptable	1B	60.5	12.0	N + W - 2+	Y	Y
56		2B	81.5	14.0	N + W - 2+	Y	N
57		2B	82.6	12.0	N – 4+	N	N
58		2B	83.1	20.0	N – 4+	Y	Y
59		2B	80.0	16.0	E – 2+	Y	N
60		2B	80.0	16.0	E – 2+	Y	N
61		2B	80.0	12.0	W - 2+	Y	N
TOTALS	16				North – 9 West – 2 East – 5	Cross – 14 Single – 2	Kitchens – 4

SCHEDULE OF UNITS - BLOCK B

UNIT NUMBER BLOCK B	Adaptable Unit	BED ROOMS	NET FLOOR AREA (sqm)	COURT/ BALCONY (sqm)	ORIENTED North, South, East or West	CROSS- VENTED Yes/ No	KITCHEN External Yes/No
62	Adaptable	1B	63.4	54.0	W - 2+	N	N
63		2B	85.2	67.0	N + W - 2+	Y	N
64		2B	85.3	24.0	N - 4+	N	N
65		1B	60.5	20.0	N - 4+	Y	N
66		1B	60.5	20.0	N - 4+	Y	N
67		2B	85.0	25.0	N - 4+	Y	Y
68		2B	85.0	43.0	N + E - 2+	Y	Y
69	Adaptable	1B	63.4	54.0	W - 2+	N	N
70		2B	85.2	67.0	N + W - 2+	Y	N
71		2B	85.3	24.0	N - 4+	N	N
72		1B	60.5	20.0	N - 4+	Y	N
73		1B	60.5	20.0	N - 4+	Y	N
74		2B	85.0	25.0	N - 4+	Y	Y
75		2B	85.0	43.0	N + E - 2+	Y	Y
76	Adaptable	1B	63.4	54.0	W - 2+	N	N
77		2B	85.2	67.0	N + W - 2+	Y	N
78		2B	85.3	24.0	N - 4+	N	N
79		1B	60.5	20.0	N - 4+	Y	N
80		1B	60.5	20.0	N - 4+	Y	N
81		2B	85.0	25.0	N - 4+	Y	Y
82		2B	85.0	43.0	N + E - 2+	Y	Y
83	Adaptable	1B	63.4	54.0	W - 2+	N	N
84		2B	85.2	67.0	N + W - 2+	Y	N
85		2B	85.3	24.0	N - 4+	N	N
86		1B	60.5	20.0	N - 4+	Y	N
87		1B	60.5	20.0	N - 4+	Y	N
88		2B	85.0	25.0	N - 4+	Y	Y
89		2B	85.0	43.0	N + E - 2+	Y	Y
90	Adaptable	1B	63.4	54.0	W - 2+	N	N
91		2B	85.2	67.0	N + W - 2+	Y	N
92		2B	85.3	24.0	N - 4+	N	N
93		1B	60.5	20.0	N - 4+	Y	N
94		1B	60.5	20.0	N - 4+	Y	N
95		2B	85.0	25.0	N - 4+	Y	Y
96		2B	85.0	43.0	N + E - 2+	Y	Y
97	Adaptable	1B	63.4	54.0	W - 2+	N	N
98		2B	85.2	67.0	N + W - 2+	Y	N
99		2B	85.3	24.0	N - 4+	N	N
100		1B	60.5	20.0	N - 4+	Y	N
101		1B	60.5	20.0	N - 4+	Y	N
102		2B	85.0	25.0	N - 4+	Y	Y
103		2B	85.0	43.0	N + E - 2+	Y	Y
TOTALS	42				North - 36 West - 6 East - 0	Cross - 30 Single - 12	Kitchens - 12

SCHEDULE OF UNITS - BLOCK B

UNIT NUMBER BLOCK B	Adaptable Unit	BED ROOMS	NET FLOOR AREA (sqm)	COURT/ BALCONY (sqm)	ORIENTED North, South, East or West	CROSS- VENTED Yes/ No	KITCHEN External Yes/No
104		2B	80.0	40.0	E - 2+	N	N
105		2B	85.0	138.0	E + S - 2+	Y	Y
106		2B	85.0	138.0	W + S - 2+	Y	Y
107		2B	85.0	57.0	W - 2+	N	N
108		2B	85.0	57.0	W - 2+	N	N
109		2B	91.0	57.0	W - 2+	N	N
110	Adaptable	1B	64.8	36.0	E - 2+	N	N
111		2B	80.0	16.0	E - 2+	N	N
112		2B	85.0	20.0	E + S - 2+	Y	Y
113		2B	85.0	20.0	W + S - 2+	Y	Y
114		2B	85.0	14.0	W - 2+	N	N
115		2B	85.0	14.0	W - 2+	N	N
116		2B	91.0	14.0	W - 2+	N	N
117	Adaptable	1B	64.8	12.0	E - 2+	N	N
118		2B	80.0	16.0	E - 2+	N	N
119		2B	85.0	20.0	E + S - 2+	Y	Y
120		2B	85.0	20.0	W + S - 2+	Y	Y
121		2B	85.0	14.0	W - 2+	N	N
122		2B	85.0	14.0	W - 2+	N	N
123		2B	91.0	14.0	W - 2+	N	N
124	Adaptable	1B	64.8	12.0	E - 2+	N	N
125		2B	80.0	16.0	E - 2+	N	N
126		2B	85.0	20.0	E + S - 2+	Y	Y
127		2B	85.0	20.0	W + S - 2+	Y	Y
128		2B	85.0	14.0	W - 2+	N	N
129		2B	85.0	14.0	W - 2+	N	N
130		2B	91.0	14.0	W - 2+	N	N
131	Adaptable	1B	64.8	12.0	E - 2+	N	N
132		2B	80.0	16.0	E - 2+	N	N
133		2B	85.0	20.0	E + S - 2+	Y	Y
134		2B	85.0	20.0	W + S - 2+	Y	Y
135		2B	85.0	14.0	W - 2+	N	N
136		2B	85.0	14.0	W - 2+	N	N
137		2B	91.0	14.0	W - 2+	N	N
138	Adaptable	1B	64.8	12.0	E - 2+	N	N
139		2B	80.0	16.0	E - 2+	N	N
140		2B	85.0	20.0	E + S - 2+	Y	Y
141		2B	85.0	20.0	W + S - 2+	Y	Y
142		2B	85.0	20.0	W - 2+	N	N
143		2B	85.0	20.0	W - 2+	N	N
144		2B	91.0	20.0	W - 2+	N	N
145	Adaptable	1B	64.8	12.0	E - 2+	N	N
TOTALS	6				North - 0 West - 24 East - 18	Cross - 12 Single - 30	Kitchens - 12