PROPOSED MIXED-USE DEVELOPMENT at 3 ELLIS STREET CHATSWOOD NSW 2065

Assessment of the proposed residential component against Apartment Design Guide (NSW)

Table of Compliance Date: **10 May 2021**

Design criteria:	**Proposal**	**Compliance:**	**Comment / Remark**
Local character and context:	The subject site is located in a predominantly multi-storeys residential flat building The Chatswood CBD Planning and Urban Design Strategy to 2036 encompasses the subject site		Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning
Building envelope: • define the three dimensional form of buildings and wider neighbourhoods • inform decisions about appropriate density for a site and its context • define open spaces and landscape areas • test the other primary controls to ensure they are coordinated and achieve the desired outcome • demonstrate the future mass, scale and location of new development.	The proposed building consists of: - 2-storeys commercial podium - 11-storeys residential apartments to the south (Ellis Street) and 12-storeys apartment floor to the north (rear)		Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning
Building Height (HOB): Willoughby LEP 2012 HOB: 34m Chatswood CBD Strategy – max height control to the subject site: Southern corner (Ellis St): RL 124.00 Northern corner (rear): RL 144.00	The proposed HOB at: Southern corner (Ellis St): **39m** (**RL 134.00**) Northern corner (rear): 44m (RL 139.50)	Variation Sought	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning
Floor Space Ratio (FSR): Willoughby LEP 2012 FSR 1.7:1 Chatswood CBD Strategy FSR 2.5:1	The proposed FSR: Option 1 **4.5:1**	Variation Sought	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning

Building depth: 12m – 18m	The overall building depth: L2 – L9: 21m L10 – l12: 18m The apartments layout that meet the objectives and support the building depths	YES	Numerically exceed the recommended depth `for L2-L9 but all units have two aspects allowing all habitable rooms depth to be within 6m of windows
Building separation: Up to 4-storeys: 6-12m Up to 8-storeys: 9-18m 9-storeys & above: 12-24m	Proposed building separation: Northern side: L2-L9: 18m L10 & above: 19-21m Western side: L2-L12 & loft: 9m	Numerically NO Variation Sought	The proposed apartment layouts and windows location and types have been considered with respect to acoustic and visual privacy Refer to the Urban Design Report and Planning Proposal Report
Street setback: Should be consistent with existing setback patterns or setback that achieve the desired future character of the area	Proposed building setback: Ground & L1 Commercial: 2m Podium at L2: 0m L3 – L12 Residential: 3m	YES	Conform with Chatswood CBD Strategy – Key element 27 Street frontage heights and setbacks Refer to the Planning Proposal Report
Side and Rear setbacks: Objectives to achieve: - Access to daylight & outlook - Adequate privacy between neighbouring apartments - A rhythm of spaces between buildings that enhance the streetscape's character - Setbacks to maximise deep soil areas, retain existing landscaping and support mature vegetations - A transition between sites with different development controls such as height and land use	Proposed side and rear setbacks: Eastern side: L2-L9: 0 / 0.8-2.7m L10 & above: 1.5-2.7m Northern rear: L2-L9: 9m L10 & above: 10-12m Western side: L2-L12 & loft: 3m	Generally, Conform	Generally, meet the objectives of the design criteria. Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning

Site analysis:	Site analysis plan SK010-1 included in this submission	Yes	
Orientation: Objectives: Building types and layouts respond to the streetscape and site while optimising solar access within the development Overshadowing of neighbouring properties is minimised during mid-winter	The proposed building addresses the street with direct access and entries from the street level Living areas, private open spaces and communal open space orientated to the north to maximise solar access	YES	
Public domain interface: Objectives: Transition between private and public domain is achieved without compromising safety and security Amenity of the public domain is retained and enhanced	The proposed building with direct access at street level and maximise active street frontage that integrate with the street footpath and landscaping, Vehicular access is further setback and services area is located to the basement at the rear	YES	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning
Communal and public open space: - Min area 25% of the site area - Min 50% of the area achieve min 2 hours direct sunlight access during the winter solstice between 9am and 3pm	The proposed principal communal open space: - Have an area of 220m2 (27.2% of the site area) - Locate near ground level at the rear with northerly aspect with more than 50% of the communal open space achieve min 2 hours direct solar access during winter solstice between 9am and 3pm	YES	
Deep soil zones: Site area: 808.6m2 Minimum dimension: 3m Required 7% of the site area	Proposed deep soil zone: 105m2 representing 13% of the site area	YES	

Visual privacy: H&B / NH Up to 12m (4-storeys): 6m / 3m Up to 25m (8-storeys): 9m / 4.5m Over 25m (9+ storeys): 6m / 12m	Generally, the proposed separation between windows of habitable rooms and balconies conform with the recommended separation distance	YES	Where the visual privacy distance are less, obscure glazing to windows, high sill window, off-setting window location and privacy screen are adopted to achieve visual privacy
Pedestrian access and entries: Objectives: Building entries and pedestrian access connects to and addresses the public domain Access, entries and pathways are accessible and easy to identify	Equitable mobility accessible entries can be clearly identified at street level and is visible from the public domain and communal space Well-lit and secured entry to residential lobby with audio / video intercom provision.	YES	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning
Vehicle access: Objectives: Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	Recessed vehicular entry / exit that does not dominate the streetscape. Security access door, safety mirror and traffic signal system are provided. Clear sight line is provided at the pedestrian and vehicular crossing	YES	Refer Traffic report prepared by TTPA
Bicycle, motorcycle and car parking: Willoughby DCP 2006 specifies: Bicycle parking: 1 / 12 apartments and 1 / 2500m2 commercial GFA Motorcycle parking: 1 / 25 car spaces Adopted Car parking rates: 1-Bed 0.5 CS x1 : 0.5 CS (1) 2-Bed 1 CS x18 : 18 CS 3-bed 1 CS x10 : 10 CS 4-bed 2 CS x1 : 2 CS Visitors: 0.1 CS X30 : 3 CS Commercial: 1 CS / 200m2	Each apartment is provided with a secured bicycle parking and a car space 3 car spaces and I bicycle space is allocated for the commercial component (GFA: 420m2) 4 shared motorcycle parking is provided The parking and circulation layout has been designed to comply with AS2890.1 The basement car park will be provided with efficient lighting complying with AS1680 and mechanical ventilation system complying with AS1668.2	YES	The subject site is located in Chatswood CBD Strategy area and within 150m to Chatswood Train Station Refer Traffic report prepared by TTPA The car parking includes 4 wheelchair accessible spaces and 7 potential adaptable parking spaces Adequate off-street car parking spaces are provided Additional bicycle parking can be provided if required

Solar and daylight access: Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid- winter A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	All apartments have minimum 2 hours direct sunlight between 9 am and 3 pm at mid- winter All habitable rooms will have window glazing area not less than 10% of the room area to receive natural light complying with NCC-BCA	YES	The subject site is located in Sydney Metropolitan area Most of the dwelling have principal living space with northerly aspect and enjoy the morning easterly sunlight The common hallways and lift lobbies have access to natural daylight
Natural ventilation: At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	All apartments have 2 aspects and a maximum depth of less than 12m All apartments are naturally cross ventilated All windows to habitable rooms will have opening not less than 5% of the room area for natural ventilation complying with NCC-BCA	YES	The common hallways and lift lobbies have access to natural ventilation
Ceiling heights: Habitable rooms: 2.7m Non-habitable: 2.4m	All apartments have been designed for 2.7m ceiling height to living areas and bedrooms; and a minimum ceiling height of 2.4m to kitchens, bathrooms and laundries	YES	

Apartment size and layout: Min internal area: Studio: 35m2 1-Bed: 50m2 2-Bed: 70m2 (+5m2 for additional bath) 3-Bed: 90m2 Open plan layout maximum depth: 8.1m Habitable room maximum depth: 6.75m Living room minimum width for: Studios & 1-Bed: 3.6m 2-Bed & 3-Bed+: 4m Bedrooms minimum dimension: 3m Master bedroom size: minimum 10m2	The proposed apartment sizes: 1-Bed: 65m2 2-Bed: 80+m2 (82-85m2) 3-Bed: 110+m2 (110 -148m2) 4-Bed: 200+m2 The apartments sizes exceed the minimum internal area and have been designed to accommodate some storage area within the apartment, for better access and circulation space and adaptable housing All bedrooms have minimum dimension 3m and master bedroom of 10+ m2 All living room have minimum width of 4m	YES	The proposed apartment size and layout incorporate Universal design principles and Livable Housing Design Guidelines – Silver Level to be more versatile and better meet the changing needs of the occupants (the 3-Bed units at L2-L9 have been designed for adaptable to the changing needs of the occupants) Where open plan layout of living space exceeding 8m depth, side windows area provided
Private open space and balconies: min area (m2) min depth (m) Studio: 6 - 1-Bed: 8 2 2-Bed: 10 2 3-Bed+: 12 2.4	All apartments have been designed with balconies / terraces of minimum depth of 2m and an area for: 1-Bed: +8m2 (10m2) 2-Bed: min 10m2 3-Bed: 18-20m2 4-Bed: Roof garden in excess of 60m2	YES	Most of the balconies and terraces have northerly aspects All balconies and terrace enjoy the morning easterly sunlight The apartment at L2 and L10 will have in excess of the proposed schedule area The top floor loft unit has access to a roof garden of 60+ m2
Common circulation and spaces: The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	The proposed number of apartments per floor served by the lift core is 3 The proposed number of lifts is 2 and serve a total number of apartments of 30 The lift lobbies and hallways have access to natural light and ventilation	YES	

Storage: Studio: 4m3 1-Bed: 6m3 2-Bed: 8m3 3-Bed+: 10m3 At least 50% of the required storage is to be located within the apartment	The proposed storage area / volume will be part within apartments (min 50%) and in the basement car park. The storage provided in the carpark will be secured and clearly allocated to the specific apartment	YES	Detail calculation and secured storage not located in apartments can be provided at DA
Acoustic privacy: Objectives: Noise transfer is minimised through the siting of buildings and building layout Noise impacts are mitigated within apartments through layout and acoustic treatments	The building separations generally meet the acoustic privacy distance recommended in the ADG Acoustic privacy can be provided through the appropriate building elements – insulated party walls and floors designed to comply with the NCC-BCA Part F5 and the appropriate glazing treatment to windows	Yes Will Comply	Refer Acoustic assessment prepared by Renzo Tonin & Assoc
Noise and pollution: Objectives: In noisy or hostile environment the impacts of external noise and pollution are minimised through the careful siting and layout of buildings Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	The proposed development will adopt appropriate glazing treatment to windows and sound insulated external walls and roof as recommended in the acoustic assessment prepared by Renzo Tonin & Associates addressing the noise pollution (rail noise and vibration)	Will Comply	The subject site is located near the North Shore railway corridor separated by the tapered site of 84-86 Albert Avenue and the 4.5m wide Frank Channon Walk running parallel to the railway line. Refer Acoustic assessment prepared by Renzo Tonin & Assoc

Apartment mix: A variety of apartment types is provided The apartment mix is appropriate to its topographic Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and types group households	The proposed residential component consists: 1 x 1-Bed apartment (3.3%) 18 x 2-Bed apartments (60%) 10 x 3-Bed apartments (33.3%) 1 x 4-Bed apartment (3.3%) Total number of 30 apartment The variety of apartment type and size have been designed to accommodate a range of household types supporting the needs of the local community	YES	The 3-Bed units at L2-L9 have been designed for adaptable to the changing needs of the occupants that provide a greater variety of dwelling types
Ground floor apartments:	The proposed development consists of only commercial component at Ground and L1 that	Not Applicable	Refer to Chatswood CBD Planning and Urban Design Strategy to 2036
Facades: Objectives: Building facades provide visual interest along the street while respecting the character of the local area Building functions are expressed by the facade	The building façade and well exposed east face are well articulated with a composition of varied building elements that defined the base podium, the middle body and the tower top of the building. The façade clearly express the commercial and residential component of the building functions in urban context	YES	Refer to GMU Urban Design Report for more elaborated design concept and description
Roof design: Objectives: Roof treatments are integrated into the building design and positively respond to the street. Opportunities to use roof space for residential accommodation and open space are maximised. Roof design incorporates sustainability features	The proposed building maximized the use of the roof space for residential roof top garden / terrace and incorporated a penthouse loft apartment at the top.	YES	Detail roof composition and design to be provided at DA

Landscape design: Objectives: Landscape design is viable and sustainable Landscape design contributes to the streetscape and amenity	The landscape design includes a communal landscaped open space of 220m2 (27.4% of the site area) It is located near ground at the rear with northerly aspect and accessible from L1 and the western side landscaped corridor that include a deep soil zone of 105m2 (13% of the site area) The landscape design incorporates native species and irrigation system that reduced water consumption and use collected rainwater The landscape design prepared by DEM meets the design objectives	YES	Refer to landscape plans prepared by DEM and Urban Design Report prepared by GMU
Planting on structures: Objectives: Appropriate soil profiles are provided in accordance with Table 5 Plant growth is optimised with appropriate selection and maintenance Planting on structures contributes to the quality and amenity of communal and public open spaces	The landscape design prepared by DEM meets the design objectives	YES	Refer to landscape plans prepared by DEM Details of planting on structures will be provided at DA

Universal design: Objectives: Universal design features are included in apartment design to promote flexible housing for all community members A variety of apartments with adaptable designs are provided Apartment layouts are flexible and accommodate a range of lifestyle needs	The proposed development provides in excess of 20% of the dwellings that are flexible for adaptable housing and incorporating the Livable Housing Guideline's silver level universal design features The 3-Bed units at L2-L9 have been designed for adaptable to the changing needs of the occupants that provide a greater variety of dwelling types	YES	Detail of the proposed apartment layout for adaptable housing will be provided at DA
Adaptive reuse:	The proposed development seeks to demolish the existing run down residential flat building	Not Applicable	
Mixed use: Objectives: Mixed use developments provide active street frontages that encourage pedestrian movement Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	The proposed mixed-use development comprises of a 2 levels commercial podium that and a residential main entry foyer at ground level to provide active frontage	YES	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning

Awnings and signage: Objectives: Awnings are well located and complement and integrate with the building design Signage responds to the context and desired streetscape character	The podium roof at Level 2 is extended to the street boundary. The 2 levels active commercial frontage and residential main entry is setback 2m from the boundary to provide a covered foyer that will interface well with the public domain paved footpath and landscape strip on Ellis Street	Will Comply	Refer to the Urban Design Report prepared by GMU and Planning Proposal Report prepared by Ingham Planning Awnings and signage detail design to be provided at DA
Energy efficiency: Objectives: Development incorporates passive environmental design Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer Adequate natural ventilation minimises the need for mechanical ventilation	The proposed building incorporates passive environmental and solar design to minimise energy consumption efficiency All apartments have 2 aspect incorporating natural cross ventilation Design for thermal comfort through the appropriate glazing treatment, insulated external walls and roof will be adopted Selected fittings and appliances that meet energy efficiency rating will be adopted	YES Will Comply	Refer Solar & daylight access and Natural ventilation design criteria mentioned earlier BASIX certificate and NCC-BCA Section J Compliance will be provided for the respective residential and commercial components at DA
Water management & conservation: Objectives: Potable water use is minimised Urban stormwater is treated on site before being discharged to receiving waters	The proposed building incorporates rainwater tank (RWT) for landscape use and irrigation Provision of deep soil zone for ground water recharge Selected sanitary fittings & fixtures and appliances that meet water efficiency rating will be adopted to minimise water consumption	YES Will Comply	A BASIX certificate will be provided at DA A Stormwater Management Plan incorporating On-Site Detention (OSD) will be included at DA

Waste management: Objectives: Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents Domestic waste is minimised by providing safe and convenient source separation and recycling	The proposed building incorporates a waste chute system in a waste room at every residential floor. Waste storage room and collection is located at basement (B1) and access for the waste collection vehicle is provided with a turntable to allow the vehicle to enter and exit the site in a forward direction Recycling waste bins will be provided at each residential floor and manage by a contracted caretaker. A separate waste room is provided for the commercial component All waste room will be mechanical ventilated complying with AS1668.2 to minimise odour issue	YES	A Waste Management Plan will be included at DA
Building maintenance: Objectives: Building design detail provides protection from weathering Systems and access enable ease of maintenance Material selection reduces ongoing maintenance costs	Building maintenance system, sun shading, weather shield will be incorporated and integrated into the building envelope and façade design Quality and durable materials and finishes selection with low maintenance criteria will be adopted	Will Comply	Detail design; Schedule of material and finishes will be included at DA