janmccredie urbandesign
email: urbanlady1@hotmail.com ph:0439601400

Ku-ring-gai Municipal Council

SEPP 65 Assessment Revised 14-10-12

DA: 1444B-1454 Pacific Highway Turramurra

Urban Design Comments

This report evaluates the revised design proposal for 1444B-1454 Pacific Highway in terms of the ten SEPP 65 Principles.

The DA submission is an iteration based on previous proposals and pre DA meetings. The drawings have been amended and are dated 20th August 2012

janmccredie urbandesign
email: urbanlady1@hotmail.com ph:0439601400

The Content

Description of the Proposal

SEPP 65 Criteria

Principle No 1: Context
- Density, height and form
- the precinct
- street and block pattern
- the spatial system
- the subdivision pattern
- relationship with the street
- the natural features

Principle No 2: Scale
- the form and spatial system
- the resolution of the form : proportions / modulation and articulation

Principle No 3: Built Form

Principle No 4: Density

Principle No 5: Resource, Energy and Water Efficiency

Principle No 6: Landscape
- retain and reveal the natural features
- the relationship between the ground floor and the ground plane
- the relationship of the interior and exterior spaces
- plant species

Principle No 7: Amenity
- entrances
- circulation
- communal open space
- the apartment design
- private open space

Principle No 8: Safety and Security

Principle No 9: Social Dimensions

Principle No 10: Aesthetics
- the relationship of the building form to the site
- the relationship of the building form to other buildings
- the resolution of the building form

Conclusion

Recommendation

janmccredie urbandesign
email: urbanlady1@hotmail.com ph:0439601400

Description of the Proposal

The proposal is for two residential flat buildings to be located on an amalgamated site at 1444B-1454 Pacific Highway The buildings contain 123 apartments with 164 car spaces including 32 visitor spaces; 45 bicycle spaces and storage.

The Architects are: Mackenzie Architects

The Landscape Architects are: Arterra Design Pty Ltd

Architectural Drawings:

DA Issue Date 20-08-12

201- 217 REV A ; 101; 301 Rev A ; 401-403 Rev A

Landscape Drawings

L2-SD-01 -L2 –SD-09 Rev A and
Ar 2-01-02 Rev A

Compliance

The proposal is to comply with the following Council Codes and Planning Instruments:

- Ku-ring-gai Planning Scheme Ordinance [KPSO]
- Ku-ring-gai Multi Unit Housing Development Control Plan No 55 – Railway / Pacific Highway Corridor and St Ives Centre
- State Environmental Planning Policy No. 65 Design Quality of Residential Development
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The Site

The site is located at 1444B-1454 Pacific Highway Turramurra. The area is 9211.4 metres squared It has been reduced in area from the original DA to accommodate 133.5 metres squared for a deceleration lane from the Pacific Highway as required by the RMS; access handles and land dedicated to the adjoining allotment to ensure that it had sufficient area as a development site. This adjacent site is now not isolated.

The site slopes very steeply, approximately 33 metres, from the Pacific Highway on the North / Eastern boundary to a bushland gully on the South / Western boundary. The site has a su8bstantial community of remanent Blue Gum High Forest [BGHF]. Although the site area is large only a relatively small portion is suitable for development .The combination of slope, bushland gully and the BGHF are constraints which make it a difficult site in terms of resolving all the issues related to locating apartment buildings with basement car parking and providing access These site constraints conflict to some degree with the planning controls. In particular the maximum allowable density, the height control and the amount of car parking required.

The density, while not particularly high, combined with the height of approximately 5-6 storeys and the slope result in buildings with large footprints. The car parking control dictates relatively high levels of car parking. This is probably reasonable for the locality but difficult to achieve on such a delicate site without excessive amounts of excavation.

The Turramurra Town Centre and rail station is located less than 400 metres to the south.

Figure 1 – Locality map

The Proposal

The current proposal is for 123 units The FSR is 1.11. The maximum allowable is 1.3:1.
The apartments are located in two buildings. The buildings are 5-6 storeys. One building steps down the site on the North / Western side It has four entry points and is described as Buildings A-D and one is a located on the South / Eastern side of the site described as Building E. The BGHF is largely located on the North /East portion of the site and the gully on the South.

Previously an elevated pedestrian access walkway was proposed from the Pacific Highway straight through the site and parallel to Building A-D. This has now been replaced with an Inclinator, a pedestrian path and stairs following the slope of the land. A 6 metre wide car access also parallels Building A–D and the pedestrian walkway. This car access introduces a series of ramps to link the various levels of car parking from the upper levels to the lower levels.

Building A-D is approximately 97 metres long. It is 21 metres at the street frontage but reduces in width to approximately 18 metes for most of its length. Building A has been widened across its front section for all for its full height i.e. 5 floors above the ground. Part of the lower level on the South / East side of Building D is cut away to allow for the tree roots.

Building E has been improved by being reconfigured in a more regular in shape. There is a break in the building for light and ventilation at the centre on the Southern facade. This indentation also provides a pedestrian entrance. Part of the lower level on the North/ East side is cut away to allow for the tree roots.

janmccredie urbandesign
email: urbanlady1@hotmail.com ph:0439601400

SEPP 65 Criteria Assessment

PRINCIPLE NO. 1: CONTEXT

Good design responds and contributes to its context. Context can be defined as the key natural and built features of the area.

The Requirement

To ensure that a development responds to its context it needs to:

- *Be an appropriate density, height and form*
- *Be considered as part of the overall precinct / street not as an individual stand-alone building*
- *Ensure that the street and block pattern relates to the density, height and form*
- *Set up a positive spatial system with appropriate spacing between buildings within the site and with the neighbouring development*
- *Reflect the existing and / or proposed subdivision pattern*
- *Relate to the street*
- *Reveal the natural features. In this case, the fall in the land and vegetation*

The Response

Density, Height and Form

Be an appropriate density, height and form

Density

The FSR of the development is 1.11:1 FSR. This is slightly less than the allowable FSR of 1.3:1.0. The density has been reduced from the previous proposal of FSR 1.22:1.0. The density reflects the controls, the site however has numerous constraints and it would appear in this proposal that the density is still too great for the site. This is due to the steepness of the site, the limited area on which buildings can be located, the difficulty of locating and accessing car parking; the extent of the gully and the need to protect the BGHF

Height

The height of Building A-D has been reduced from 7 storeys. Buildings A-D are 5-6 storeys and E has been reduced to 6 storeys on both its Northern and Southern sides. These heights bring them more into line with the planning controls. Building A-D however has 9 steps in the upper levels over the length of the building. The height:

- is similar to apartment blocks in the area and the height limit of 5 storeys
- is greater than the LEP requirement for the height limit of 13.4 metres to perimeter ceiling height not including the top floor. Building D is 3 metres out of the ground on the South East corner.
- relates to the size of the footprints of the buildings however in the context of the sloping site Building A-D is still too large in plan and bulky in appearance.
- has the potential to create spaces between the buildings that are well proportioned subject to the resolution of the ground plane, a reduction in size of Building A-D or a division into 2 smaller buildings and the alignment of the stepping at the upper levels. The excessive stepping in profile and in the plan on the upper levels of Building A-D currently ensures that the potential is not fulfilled and that it reads as an " object " building rather than a building that can relate to building E and form a composition with a defined space between them.

- will not provide a clear roof-line against the sky other than from the street. Given the slope of the site, buildings on this site will not have the capacity to block off views of any future adjacent building This aspect of the design is now exacerbated by the number of steps in Building A-D

The height control under the LEP establishes a line parallel with the slope of the site. If this is used as a guide for the development the steepness of this control line is so great that the development has to be stepped multiple times. This is inevitably produces a visually dominant form. Because of this some relaxation of height controls is required to produce a more acceptable urban form. The introduction of buildings with much smaller footprints and increased height may have produced a superior result on a steep site like this one however this would be considerably outside the Ku-ring-gai LEP and it would breach the objective of maintaining the canopy tree line.

Form

The overall allowed FSR is organised into two buildings. Building A -D is located at right angles to the Pacific Highway along the North / Western Boundary. It has a 10 metre street set back and a 6 metre side set back. It is approximately 21 metres from the rear boundary. Building E is parallel to the Pacific Highway and at right angles to Buildings A-D. The distance between them is 12 metres. Building E is approximately 45 metres from the rear boundary and 9 metres from the side boundary.

Building A-D is 97 metres long. It is 21 metres wide at the street frontage and 18 metres wide for the rest of its length. The wider section extends over the driveway entry. Building A-D has four entry points One directly from the Pacific Highway to building A and three from the pedestrian path and / or the inclinator or the car park. Building E is a rectangle with an indentation on the Southern side. It is approximately 33 metres wide and 25 metres in depth including the terraces.

The two buildings are located on the site in appropriate positions. Their location enables:

- a substantial proportion of the BGHF to be retained .There are still issues related to the root systems of the trees under Building D and Building E and the impact of these buildings on the tree canopies and vice versa.
- the bushland gully to be retained;
- the water flow across the site can be accommodated and the proposed development does not create a dam;
- the buildings to be aligned parallel with the street frontage and neighbouring buildings existing and proposed. This relates partially to the set back requirements and the regular subdivision boundaries.

The aspects of the form of the buildings that have not been successfully resolved are the:

- quality and impact of the pedestrian and car access through the site and into the buildings
- unbroken length of building A-D and the need for 9 steps in the sectional profile.
- extension of Building A over the driveway.
- the relationship of some of the ground floor apartments to the ground plane, driveway and inclinator.

Access

The site is complex and the issue of access has never been adequately resolved. The solution needs to resolve:

- Pedestrian access that can enable a majority of owners and visitors to access their apartments by foot/ lift etc The pathway from the lowest level to the street climbs approximately 9 flights of conventional floor to floor storeys. At least 50% of the units are 4-5 conventional floor to floor storeys below the street level. There is only one inclinator and there is no information on time capacity, frequency, noise .etc .
- Pedestrian access that relates the exterior pedestrian path to the foyers and placement of lifts.
- Car and pedestrian access which is clear, not dominant and does not impact negatively on the lower level apartments.

Length of Building A-D.

Building A-D will have a massive appearance due to its length of 97 metres and the number of "steps" at the top level [9]. This is exacerbated by the plan of some of these levels. Rather than one simple step multiple changes in plan direction have been introduced. This may be an attempt to comply with the upper level set backs in the KMC controls but on this building form it is inappropriate and adds to the visual bulk.

At a pre DA meeting it was suggested that Building A-D could be split into two with a courtyard between A-B and D-C . This courtyard space could then relate to Building E. It would create a pleasant outlook for the Southern side of Building B, the Northern side of Building C and the Western side of Building E

Building A-D is not a street edge building. Along the street edge the length of buildings is less of a factor than when buildings are set in a landscape. Along a street a building presents with limited viewpoints so the buildings emphasise the space. The building is less dominant. On this site however the building is viewed in the round and because of this the length becomes a factor. The length of building A-D is not appropriate in the current form. A more acceptable form may be able to be achieved if this building was organised into two buildings as outlined above.

Width of Building A

The extended wide frontage to Building A does not relate to the building as a whole. The additional width at the Pacific Highway Frontage is acceptable in terms of the frontage to the Pacific Highway and it provides a partial cut off to the view of the length of the driveway from the street but the underside of this extension creates a large, ugly under-croft area which will be highly visible from the street and from the entrance path. It also confuses what is a relatively simple linear form of the rest of Building A-D.

The relationship of the apartments to the ground plane.

. More information is required through both buildings to show the relationship to the ground and the driveway, the pedestrian path and inclinator of those apartments that are below or level with these elements or structure. Cross sections are also required on the North/ Western Side of Building A-D to show the relationship of those apartments that are located at the lowest levels showing their relationship with the ground. it appears that some of these apartments are partly subterranean

The Precinct

- *Be considered as part of the overall precinct / street not as stand-alone buildings*

The site complies with the objectives of the Ku-ring-gai Planning Scheme Ordinance (PSO) It is close to Turramurra Town Centre and bus services. The area was rezoned under the Ku-ring-gai Local Environmental Plan 194 and there are blocks of apartments of similar size to the proposal already constructed or under construction generally along the Pacific Highway.

The proposal reflects the PSO and DCP in terms of the zoning objectives for the site in terms of uses. It does not reflect the desired urban form. The DCP envisages 4-5 storey apartment buildings with underground car parking located in a landscape garden setting. Having said that all the apartment buildings in Ku ring gai will be seen against neighbouring buildings and never in isolation so it is critical that their form enables a sympathetic relationship of one apartment building to another.

The buildings proposed on this site are located in the landscape. The size and shape of Building A-D however is too great for it to read as companion building to Building E or its neighbours Building A-D and E should relate to each other, the existing neighbouring buildings and any future buildings. It is important that a positive spatial system is created between all buildings in plan and in section. When the building forms are regular the natural features of the precinct are more dominant.

Street and Block Pattern

- *Ensure that the street and block pattern relates to the density, height and form*

The Requirement

When an area is undergoing change the street and block pattern must relate to the density, height and form. This may mean that the street and block pattern needs to be altered to suit the new typology or the typology altered to suit the existing pattern. Generally higher density requires a finer grain street and block pattern.

The Response

The development is located in a street and block pattern that is large and reflects the bushland topography, detached dwelling development and the very large lots that previously predominated in the area.

There is no opportunity or reason to introduce additional streets because of the topography, gully and bush. There is also no opportunity to introduce additional pedestrian pathways other than the proposed one to the Pacific Highway. The street and block pattern cannot be reconfigured to suit the new denser typology.

The Spatial System

- *Set up a positive spatial system with appropriate spacing between buildings*

The Requirement

The spatial system in an urban area consists of both public and private spaces. It comprises the street network; front; side and rear set- backs and how those spaces link to internal communal courtyards/ spaces and to neighbouring buildings. In urban areas the spacing between buildings is as important as the resolution of the architecture and the higher the density of an area the greater the importance of the spatial system.

The spatial system must be considered in terms of the ground plane; the dimensions in plan and section; the shape of the space in plan and section and the level of definition of the spaces. The spaces around any new buildings will change as a result of a new building typology, the new set-backs and the amalgamation which has created a new subdivision pattern.

In order to minimise the impact of large buildings even if they are in a landscaped setting, they need to relate to each other by the creation of a series of positive spaces. Plans and sections that

are relatively simple; have straight and not curvilinear walls are more likely to achieve a successful outcome.

The use of simple flat and / or skillion roofs also can assist in making a building less of an "object" building. Where a hipped roof is used on a building with a large footprint over 2 storeys in height, the building reads more as an "object" building. It is very difficult and in fact almost impossible, to create a successful relationship between one "object" building and another at this density and proximity.

The Response

Within the site

The proposed development is conceived as two separate buildings. The basic plan shapes of Buildings A-D and E subject to the comments on their form above do have the potential to create a very dynamic positive spatial system between them. The heights of the buildings are generally acceptable, but the amount of stepping is not acceptable. The spatial relationship can be improved with a further reduction in the amount of development and redesign of the present proposal to reduce the impact of Building A-D

With the adjoining sites

The plan form of the proposed Buildings A-D and E provide the potential for "positive" spaces to be created with adjoining development on the North/ Western adjacent site and with any future development to the South-East

The Subdivision Pattern

- *Reflect the existing and / or proposed subdivision pattern*

The Requirement

Reflecting the spacing and building pattern of an earlier subdivision with the introduction of a new typology can be a key way of integrating new development into an area. This can be achieved through the organisation of the form; footprint and spacing of new buildings.

A further consideration and KMC requirement is that adjacent sites subject to the same zoning and / or a zoning that permits changes to the built form, are not isolated.

The Response

The site at 1444-1454B the Pacific Highway is an amalgamation of 6 existing lots. Two lots face the Pacific Highway. The traditional pattern of development in this precinct was a front garden; relatively small side set- backs and a large rear set back. Over time some of these rear yards have been subdivided into battle-axe allotments with single storey dwellings.

The amalgamated site is regular in shape in that it has parallel side boundaries. It has a relatively narrow frontage to the Pacific Highway, is wider at the rear and is very deep, dropping back to a gully. The shape of the site is suitable for apartment buildings. Apartment buildings are usually regular in footprint and require a certain site width. The 33metre fall across the site however constrains development and makes it difficult to reflect the traditional subdivision pattern other than in the alignment and set back from the gully. The proposed development does reflect the original development pattern in that it locates buildings to align with the Pacific Highway and be parallel to the side boundaries and is set back from the gully.

The proposal also identifies two parts of the development site to be amalgamated with No 1446 Pacific Highway. This 269.2 metres sq provides the adjacent site with sufficient minimum area to develop.

Relationship with the Street

- *Relate to the street*

The Requirement

The relationship with the street is important from two perspectives, firstly in terms of the view from the street to the building but also in the provision of a street and public address for the buildings.

The relationship between the buildings and the ground in all buildings is critical in achieving a satisfactory interface between the public and private areas. This relationship is more critical in urban areas where buildings are hard to the street edge and less critical in a landscaped setting however buildings in the landscape still need to address this relationship and should not appear as if they can be sited anywhere.

- *To ensure that a building and / or group of buildings has a positive impact at the interface with a street they need to:*
- *Have a clear level and generous relationship between the ground floor and the ground plane*
- *Have entrances and / or openings / balconies facing the street or have clearly visible entries*
- *Place vertical blade walls so that don't create the appearance of a "solid wall" when the building is viewed obliquely along the street*
- *Organise balconies so that all balconies do not all sit proud of the façade. This creates the appearance of a "solid wall" when the building is viewed from the street. This can be achieved with fully recessed or partially recessed balconies*
- *Have all plumbing concealed including drainage from balconies*

The Response

Relationship between the buildings and the ground plane

The site is very steep so that the proposal has to deal with large differences in levels. The resolution of the buildings and the ground plane is not always satisfactory. The outlook in some apartments appears to be compromised by being too much below natural ground level. This occurs in the North /Western side of Building A-D. In other places apartments are compromised because they face directly to the driveway ramps and retaining walls; the inclinator; walkways and sides of planter boxes. The pedestrian walkway and inclinator parallels the driveway and the associated retaining walls related to these structures have an impact on some of the lower apartments in each block. The impact of headlights and noise need to be assessed as well as the outlook issues. This relationship occurs on the East / South side of Building A-D and the North/ West side of Building E. Drawings need to clarify these relationships. The driveway, pedestrian walkway, inclinator and the buildings should be designed in an integrated way with the buildings and entrance levels.

On the North/ West side of Building A-D the proposal attempts to create a base for the buildings by using the level changes levels within the buildings to relate to the ground plane and courtyards externally. These courtyard areas however are relatively narrow considering the height of the buildings. In terms of creating a base for the building some of these courtyards would be better extended to the boundary. This does however conflict with the requirement of KMC to have site boundary planting.

There may be opportunities to extend some of the courtyard areas adjacent to the buildings into platforms with retaining walls between them so that the buildings are more "grounded." This has the potential to integrate the buildings with the site in a more convincing way. Another option is the introduction of the central courtyard between A-B and C-D extending back to E. A larger space here would assist in "grounding" the buildings and break up the size of Building A-D.

Interface with the Street

Entrances

Walkways

There is an access way into Building A from The Pacific Highway. It is not direct but has a slight bend to negotiate a pathway past the mailboxes. It appears in the drawings that it could be reconfigured on a straight alignment.

The pedestrian access to the Buildings B,C, D and E is via the walkway or inclinator. The pathway from the Pacific Highway to the walkway and top inclinator stop is also not direct. It is bent around the Hydrant and Booster. The pathway should be redesigned so that it is direct, generous, and clearly visible from the street.

Car Ramps and Driveway

The slip lane as required by the RMS is an unfortunate introduction. it disrupts the line and alignment of the Pacific Highway, creates a greater impact of cars on the site and on the footpath along the Pacific highway .

A right angle alignment to the street is the least visually dominant entrance for a driveway but in this case the actual driveway will be dominant because of the long view down the driveway and the under-croft of Building A

Building Form

Building A is 6 storeys on the Pacific Highway frontage. It is set back approximately 10 metres from the street and is aligned to the Highway. The lowest level of Building A is approximately 1 metre below street level however the upper levels provide an interface with the street. There are windows, balconies etc overlooking the street. The building will therefore provide:

- An aligned edge to the Highway frontage.
- A clear roof profile against the sky when Building A is viewed either from along the street or from the opposite side of the street. This will ensure that the overall appearance of mass of the buildings from the Pacific Highway is minimised.
- Surveillance of the Pacific Highway.

Oblique Views

There are no patterns of blade walls to dominate the view from along the street. The architectural resolution of the Building A however has a " framing" element. This is unnecessary and will add to the visual dominance of the building when viewed obliquely along the street by blocking off views of the windows and balconies.

Also the slip lane and under-croft will be dominant in the oblique view from the street

Balconies

The balconies are semi recessed and there will not be a dominating view of their underside from the street.

There are no details as to the plumbing resolution. Council can require the services to be concealed by a conditioned.

The Natural Features

The response to the natural features of any proposal depends on the ability of that building and / or group of buildings to:

- Reveal the site and not to obliterate it.
- Ensure that the natural features of site are enhanced as important elements

The Requirement

To do this, buildings need to:

- *Be designed so that they are not "object" buildings but are buildings that define a spatial system. In this way the spaces created around them and with adjacent buildings are "positive" spaces in which the shape of the land is understood and the other natural features are key elements.*
- *Create internal spaces and elevation designs that address the external spaces including the street. This ensures that the street and other spaces read as important places.*
- *Ensure that the ground level of the building sits appropriately on the ground plane. This can be done in a range of ways including relating internal / external levels with platforms and / or walls, creating open spaces that relate to the footprint and height of the building and / or setting the building to " hover " over the land.*

The Response

The natural features on the site are striking and they include the slope of the site, the gully and the BGHF.

The general location of the buildings is satisfactory in relation to the natural setting however the proposed buildings would enable a better reading of the natural features if they were resolved architecturally as simple "space defining" buildings so that the spaces around them were more structured. Building A-D needs to be reduced in size and complexity, and the detailed design better resolved so that the spatial relationships can be improved to better reveal the site.

PRINCIPLE NO. 2: SCALE

Good design provides an appropriate scale in terms of bulk and height that suits the scale of the street and the surrounding buildings.

The Requirement

The scale of a building is directly related to the actual size, how the building is the sited, the form and the aesthetics.

Successful resolution of the scale of a building is complex and needs to be resolved in two ways. Firstly, the resolution of the mass of building into a particular form; and secondly, the resolution of that form into architecture. It is not a linear process but an iterative design process.

Firstly, buildings need to be resolved at the larger scale as a balance between building form and the spatial system of the precinct / city. In this context the design deals with the shape of the building; footprint; height of the building relative to its typology and together with the spatial system around it including the street. This is where the overall mass is organised into a particular building form.

Secondly, buildings need to be resolved in how that form is further proportioned. This is the result of the modulation and articulation in the design resolution and deals with the depth in the walls; the plan shape; placement of openings; organisation of balconies; blade walls; use of materials; and roof form.

Buildings of a similar size may appear to be very different in scale due to the way that they are proportioned. Too much modulation and articulation will make a building appear more dominant as will too little articulation.

The actual height and overall size of a building are in large part dictated by the planning controls and the shape of the site. How the resulting form is further proportioned will contribute to the impact of the buildings in the landscape setting; their relationship to neighbouring buildings and the requirements and quality of the interiors

The apparent scale of the building depends on:

The Form

- *The actual size of the building, height and footprint.*
- *The shape of the building in plan and section*
- *The relationship of the building to the ground plane*
- *The shape, proportions and definition of the space that is left over around the building and between that building and other buildings.*

The Proportions

- *The shape of the building in plan and section*
- *The way in which the building form is organised into a particular combination of vertical and horizontal elements.*
- *The way in which the form is further articulated by the location and design of openings; balconies; screens; blade walls and other elements.*

The Response

The controls envisage apartment buildings with underground car parking located in a landscape garden setting however the complexity of the topography and the limited area of site which is suitable for development puts severe constraints on the amount of development.

In the current proposal Building A-D is too long and too steeped in profile for the setting. In this respect it will not be in keeping with future development proposed for adjacent properties. Furthermore the additional width in Building A at the street frontage does not assist the spatial clarity.

Both buildings have hipped roofs concealed behind parapets Simple flat / skillion roofs would enable the buildings to better relate to one another and adjacent development in a way so one building does not stand out one from another

The proposed A-D Building Is compromised by the:

- Additional width at the Pacific Highway frontage
- The excessive length

- The number of steps in section
- The complexity of the plan shape on the upper levels where the roof terraces are located

The scale of both buildings would be improved by removal of the "framing" elements and a façade design which relates both to the interior layouts and the overall mass of the buildings.

Proportions: Modulation and Articulation

The Requirement

How the form is proportioned further determines the impact of the building. The proportions of a building are created by the combination of the form and plan shape; the modulation and articulation and the selection of materials.

Modulation usually refers to the changes in the depth of the wall.

Articulation usually refers to the way in which elements are detailed

Appropriate proportioning can mean that the "apparent" bulk of a building is reduced. The external walls need to be articulated and modulated so that the buildings appear well proportioned, too much modulation and the buildings will appear larger in size, too little and the buildings will appear larger

Elevations on larger buildings need to be divided into horizontal and vertical patterns at the scale of the whole elevation and then further divided within that larger format. Above 3 storeys it is not enough simply to repeat the plan for the height of the building. Horizontal elements should be balanced by vertical elements. As a guide 1/3 / 2/3 proportions can work effectively over the total elevation.

As a simple guide for commercial/hotel/residential buildings of up to 6 – 8 storeys, delineation and articulation of the ground floor including possibly the first floor and top floor is usually essential and in buildings with larger footprints additional elements of vertical delineation are necessary.

Because most buildings are viewed obliquely along the street particularly in urban areas, it is essential that there is modulation and articulation in the external walls. Modulation and articulation provide the depth in the elevation as well as contributing to how the building is proportioned. Modulation and articulation provide shadow lines and rhythm when viewed along the street. This provides the street with a sense of scale and rhythm together with points of points of visual interest.

All external walls need "depth". Where buildings have external walls that are without "depth", the same mass of building can appear much greater because there is nothing to create a sense of scale in the façade or nothing to relate the building to the street.

Depth makes an important contribution to the apparent scale of a building as it eliminates the potential "flatness" of the facade without contorted articulation. It provides shadow lines and strengthens the relationship between the building and the outside. Depth in a wall is achieved by the actual thickness of the wall; where the openings are located in that depth i.e. on the outer face or inner face or centre. The use of panels of different materials, glazing to the underside of the ceiling and location of windows on the internal skin all assist in this modulation.

Various elements are used to establish the proportions of a building. The elements that can assist in proportioning the buildings are the:

- *Indentations and shape in plan and/or section;*

- *Organisation of building parts by differentiation; top floor and / or ground floor; double storey height definition; ground and first floor ; top floor/s; the arrangement of the vertical circulation*
- *Climatic response / louvers / horizontal projections/ green walls/ water catchment*
- *Thickness of the external wall*
- *Solids and voids*
- *Blade walls, party walls; pilasters*
- *Entrances balconies; verandas and canopies,*
- *"Hole in wall" windows related to panels of glazing*
- *Window sills and reveals; door reveals;*
- *Materials: texture; scale; application*

The elements however should have meaning within the context of the development. They should not be "add-ons" to the elevations. They should result from the organisation of the internal uses and rooms, the use of materials, the orientation etc.

The Response

The detailed architectural resolution of the proposed buildings does not result in well scale buildings .The proportioning relies on the plan format and framing elements. It does not use the manipulation of solids and voids to create coherent panels of different materials and / or grouping of glazed elements so that panels are off set by some "hole in the wall" openings. Painted "frames" are used throughout the buildings without relevance to the proportion of the panels they are "framing" or the proportions of the "framing" element itself.

The buildings require the overall mass to be organized into the larger scale horizontal and vertical elements. When this is satisfactorily resolved the smaller elements windows / balconies can be organised within the larger framework.

In Building A-D part of the visual dominance is a result of the massing as previously outlined, however the design of the façades is also a contributory factor. In Building A-D the use of the zinc cladding continuing the roof terrace edge along into the building facade is good however it is not applied consistently. In Building E-F this is used more effectively.

In both buildings the negative impacts of the facade design is primarily the result of:

- The "framing " elements. The framing elements are used arbitrarily. In Buildings A-D they do not relate to the four buildings, the interior plan or the steps in the building section. The proportions of these elements are not consistent. They vary from small to large; and vertical to horizontal. Building A-B has two small vertical attached framing elements; Buildings B-C and Building C-D have large separate horizontal framing elements; Building D has one small vertical framing element. The framing elements are used in an even more arbitrary way in Building E. They are totally unnecessary and do not serve any purpose. They confuse rather than clarify the proportions.
- The way in which the window elements are extrapolated in an identical way up the building.
- The use of only glazed balustrades. Different balustrade types can be use very effectively to improve the proportions of buildings. They can also address privacy issues. For example where the balustrades are located on the balconies of the lower units partially solid balustrades can assist in screening residents from the public walkways Grouping of balustrades through their particular treatment and linking some to the central vertical element on the Northern face of Building E would be a simple and effective way of improving the proportions.

In Building A-D an additional negative impact is the result of the lack of clarity between the four buildings and the related steps. It is not possible to ”read” the four buildings as discrete but attached entities.

The selection of materials includes sandstone, brick, painted render, and zinc cladding on the upper levels. It is an appropriate palette, for the location and building typology. The bricks appear very light in the External Finishes Schedule. The bricks should be similar in colour to that used in the precinct. The materials can be maintained relatively easily.

PRINCIPLE NO. 3: BUILT FORM

Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and manipulation of building elements

The Requirement

As discussed under Scale an appropriate building form on any site needs to:

- *Address the street*
- *Create a positive spatial system. This is achieved by following the desired building alignment. The building alignment may vary from the existing in areas undergoing change and should create a "positive" spatial system with the street and between buildings.*
- *Create clear edges and a clear roof profile against the sky.*
- *Use the resolution of the plan, height and section to articulate the form into a series of well-proportioned elements that can be further organised by the smaller elements.*
- *Use openings; projections; balconies etc to further articulate the elements that create the overall outcome.*

The Response

The form of this development as two linear buildings is a strong idea, however the concept does not successfully resolves all the design issues. These have been outlined above and include the:

- Walkway and inclinator plan, section and relationships
- Driveway
- Length and profile of Building A-D

PRINCIPLENO. 4: DENSITY

Good design has a density appropriate for a site and its context in terms of floor space yields (or numbers of units or residents).

The Response

The proposal generally reflects the objectives for KMC in terms of the density for the location of the site. However all the built form and vegetation issues on the site are not resolved. The density is still too great for the site.

PRINCIPLE NO. 5: RESOURCE, ENERGY AND WATER EFFICIENCY

Good design makes efficient use of natural resources, energy, and water throughout its full life cycle including construction.

The Requirement

Buildings should meet the BASIX targets and extend these where possible. Buildings should minimise the use of natural resources by employing a range of measures. These include

- *Passive solar design / shading etc*
- *Maximising natural light*
- *Optimising cross ventilation*
- *Water reuse*
- *Using materials with low embodied energy*

The Response

82.0% of the apartments have 3 hours solar access to living areas on 21st June. All apartments have natural light to all habitable rooms and the depth of buildings is satisfactory. The apartments located in the centre of Building E at the lower levels are predominately South facing and will be fairly dark.

71% of apartments have cross ventilation.

A BASIX report accompanies the submission

Drought tolerant species have been selected for the landscaping.

There is no reference to ceiling fans and / or air conditioning. Ideally the development should provide an option to install ceiling fans.

PRINCIPLE NO. 6: LANDSCAPE

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both the residents and for the public domain.

The Requirement

To ensure that a development responds to its landscape context it needs to:

- *Retain, reveal and enhance the natural features. In this case, the fall in the land, the rocky outcrops , gully and the tree coverage.*
- *Have a relationship between the ground floor and the ground plane which enhances both .*
- *Integrate the interior and exterior of the building and design the buildings; planting; levels and open space into a cohesive whole.*
- *Use the appropriate plant species.*

The Response

Retain and Reveal the Natural Features

The natural features of the site are the steeply sloping topography, the rocky outcrops, the gully, the bush and the BGHF 80% of the trees in the BGHF are retained and a part of the site is left as natural bush. The issue of tree roots under Buildings E-F and D and the tree canopy impacts needs to be assessed by an arborist.
Many trees will be removed because they are in the proposed location of building footprints Some are large predominately exotic trees that would be situated close to the proposed buildings and their root zone would be adversely affected. The underground car parking and the size of the footprints of the buildings will result in dramatic changes to the topography. Effectively the whole of the North /Western side of the site will be demolished and regraded as will the area around Building E-F

The relationship between the ground floor and the ground plane

The ground plane is very steep. The proposed development attempts to integrate the buildings with the ground plane by stepping the buildings down the slope and using the walkway as the integrating element however as outlined above this has not been successfully resolved.

The Walkway and Inclinator

Pedestrian access to the lower levels of this site is inherently difficult. The vertical distance between the lowest levels of the buildings and the street is approximately 9 normal storeys. It is unlikely that many residents or visitors will be able to negotiate this level difference. The pedestrian walkway is paralleled by an inclinator and follows the slope of the site. Currently the issues with the walkway and inclinator which are not resolved are the:

- The capacity, frequency and effectiveness of the inclinator relative to the number of residents.
- The relationship of the walkway and inclinator to each other and the building entrances to Building E and C; and at the building entrance to Building D
- The dominance of views of the inclinator from the other side of the gully

Private Courtyards

The private open space is satisfactory in terms of size and access from the interior of the apartments. The lower level courtyards have privacy fences

Better connections between the site and the units could be achieved through the extension of the courtyards into the site on the west side of the site in the courtyards and private open spaces. Some of the proposed private open spaces at ground level on the West of Building A-D and the East of building E could extend to the boundary given the amount of bushland and open space. This would assist in integrating buildings both physically and functionally.

The Relationship of Interior and Exterior Spaces

The proposed development appears to link the internal and external courtyard and balcony spaces with full height windows. This is not clear. There is a big difference between “hole the wall” windows and floor to ceiling full width windows. The difference is obvious both internally and externally and the selected solution dramatically affects the scaling and proportioning of a building. The glazing needs to extend from floor to ceiling in the rooms facing the courtyards / open spaces This needs to be confirmed with the more detailed drawings.

Plant Species

The proposed plant palette represents an appropriate selection for the site.

PRINCIPLE NO. 7: AMENITY

Good design provides amenity through the physical, spatial and environmental quality of a development.

The Requirement

To ensure that an apartment building has a high level of amenity it needs to:

- *Provide clear safe visible places which create a sense of entry*
- *Provide good vertical and horizontal circulation throughout the buildings*
- *Have adequate useable communal open spaces*
- *Have apartments which:*

- *Have adequate light and sun*
- *Are the right size for the number of occupants*
- *Are well planned for circulation and furniture placement*
- *Have a good relationship between the exterior and the interior*
- *Have aural and visual privacy*
- *Have a pleasant outlook*
- *Have adequate useable private open space*
- *Meet the requirements re solar access; cross ventilation etc [see Resource Energy and Water Efficiency]*

The Response

Entrances

Pedestrian Circulation

All the entrance lobbies to C, B and D require turning at right angles from the entrance doors and pathway to the lift. The lobbies however are short and have natural light.
The entrance pathway to building E from the inclinator is also convoluted requiring the pedestrians to move up back and over the inclinator path.

Vehicle Circulation

There is one car entrance from the Pacific Highway The impact at the entrance to the site at the street is dominant due to the sip lane and the curved entrance ways.

The cars are located in basements under each building and accessed from a driveway that extends down the site. The circulation through the car park will be a very dominant element and at the moment this element has impacts on the lower units and a poor relationship with the walkway.
Given the nature of the site a better solution may be to locate the car parking at the top of the site in one multistorey basement. See previous comments.

Circulation within the Buildings

- Vertical circulation from the car park and throughout the building is legible and direct.
- Circulation from the walkway and inclinator is not direct. The lifts are located off to one side in Buildings C–D
- The corridors and lift are offset in Building E creating an unnecessary lack of legibility.

Communal Open Space

There are designated communal spaces around the buildings. These are at grade in bushland accessed by lightweight boardwalks. There is one roof terrace on Building E. There are ground level communal spaces on the South–West and South –East of the site. They are predominately passive spaces with limited overlooking from Building D and Building E. They are in keeping with the characteristics of the area and their discrete location however may enable them to be well used because they are not directly outside an apartment.

The Apartment Design

The quality of the apartments designs is mixed. Many are of sufficient size; adequately planned and with good light and private open space.

Study Areas/ Bedrooms

The internal planning needs to be considered in relation to the areas allocated as studies in Apartments C 18; E 05/ 11/13/18/20/25/27/34 and 38 These spaces 10 [8 % of 123 units] in total have no natural light but are sufficiently large to be used as a permanent bedroom. They are substandard in terms of permanent bedrooms are not I think a problem in terms of providing a visitor bedroom or requiring additional car parking. 9 of them are in North facing units.

Apartments A 18; B 02 and C01 have study areas but these either have external windows or are too small to be used as bedrooms.

The bedroom accommodation in C 13 should be replanned possibly with the reduction of the terrace area. The second bedroom in C 13 does not have adequate external light.

Storage

Most of the apartments have inadequate storage. Under SEPP 65 the requirement is for storage that is additional to normal wardrobes, TV tables, bookshelves and cupboards. Although some units have better solutions than others the area nominated as "storage" within the following units cannot be included as satisfying part of the general storage requirements. These are:

- Building A Units 01-19 excluding 12 and13
- Building B Units 01- 21 excluding 07
- Building C Units 01-22 excluding 01/03/13 and18
- Building D Units 01-19
- Building E Units 03/ 07/10/14/31/32/40

There are also storage areas within the car parking garages. On levels RL 161.41 and RL 167.41 some storage areas are nominated with the visitor car parking. It would seem sensible to allocate the storage with the allocated unit car spaces.

Size

The apartments generally have plans which contain sufficient floor space in terms of the number of bedrooms / number of residents

Circulation

Circulation within most apartments is generally satisfactory.

Interior / Exterior Relationships

Generally the relationships of external and internal areas are satisfactory in terms of the planning. It is not clear in the drawings whether the glazed doors and windows etc extend the full height and full width of the opening. It is critical that from the living areas the windows are not "hole in the wall " windows but rather full height, full width glazing. [as outlined above]

Some of the courtyards on North/ West side of Building A-D at the lower levels are well below ground level. Where this occurs the interiors may be dark and the benefits of the relationship of the interior and external spaces compromised.

Aural and Visual Privacy

The distances between apartment windows provide adequate visual privacy. The impact of the inclinator, walkway and the driveway appear to impinge on the privacy of some units and needs to be tested.

Outlook

Some apartments have an outlook to the street and front garden to the Pacific Highway. Some have a bush outlook and the upper levels will have district views. The separation distances are adequate.

As mentioned some of the lower level apartments in East / South Side of Building A-D and the North/ West side of Building E appear to look straight into retaining walls, the driveway and the underside of the walkway. This is unacceptable and the number of apartments affected and the level to which they are affected needs to be assessed in detail.

Private Open Space

All apartments have either roof terraces, balconies of about 10-12 square metres and / or courtyards. Most balconies are recessed or semi recessed thereby avoiding issues of overlooking.

The roof terraces provide generous outdoor areas for those related apartments and will probably function better as private gardens rather than communal spaces.

The balconies on the North/ West side of Building A-D are very deep. It is not clear how these apartments achieve the appropriate solar access It would be preferable to reduce the depth of the balconies and make them slightly wider particularly at the lower levels. Where they are deeper than they are wide the interior of the rooms that they adjoin may struggle to have adequate light.

As discussed those courtyards on the lower levels of the development need to be tested in terms of solar access, outlook and overlooking.

Some of the courtyard/ balcony areas to the ground floor apartments would offer better amenity to the apartments if the area to the boundary fence was included as courtyards - possibly split level, rather than as a strip of open space along the boundary. This provides an additional choice in terms of residents who want to have a more generous garden area. This approach would “ground” the buildings with the land in a more deliberate way rather than the tendency for the buildings to “float”. This is discussed above under the section relating to the relationship with the ground plane. This solution however should only be considered where there is no major impact on vegetation.

PRINCIPLE NO. 8: SAFETY AND SECURITY

Good design optimises safety and security, both internal to the development and for the public domain

The Response

The basic principles of CPTED are evident in the proposal but the shape of the site and the organisation of the buildings results in many of the entrances being hidden from the street although they are overlooked in some areas by the adjacent buildings. A CPTED report accompanies the DA. The buildings are secure and have controlled access to basements and entrance doors. The landscape plans indicate adequate lighting.

PRINCIPLE NO. 9: SOCIAL DIMENSIONS

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability and access to social facilities.

The Requirement

The location of the precinct provides access to shops; services; bus routes and open space in a lovely part of Sydney however the overall notion of a walkable urban neighbourhood is not valid. Only the apartments in Building A have lift access and a walk to the street and shops.

The introduction of apartments and apartment buildings that are well designed provides the opportunity for people to buy at a more affordable level or to downsize from the larger houses and gardens in the surrounding suburbs. It also adds to the housing mix but apart from Building A the development is not suitable for residents without cars.

The Response

Apartment Mix

Of the 123 apartments approximately 39% [49] are 1 bedroom; 52%[65] are 2 bedroom. Only 5.69% [7] are 3 bedroom and 1.6% [2] are 4 bedroom. Although this is a slight increase on the number of larger apartments there is still a predominance of one and two bedroom apartments. In There is a reasonable range of apartment types in terms of the number of bedrooms, plan and section configuration; and the amount and type of open space.

The roof terraces are related to 2 of the 4 bedroom apartments; 5 of the 3 bedroom apartments; 5 of the 2 bedroom apartments and 3 of the 1bedroom apartments. It is appropriate to have a high percentage of the larger apartments with the roof terraces.

Adaptable Units

The proposal provides 13 apartments That meet the requirements of Category C of AS4299.. These 10% of units are distributed with 1 in Building A and 12 in Building E The access for pedestrians to Building E has to be negotiated via the inclinator and it is not straight forward The parking access to the lower levels is also not straight forward and involves long ramps and tight turns.

PRINCIPLE NO. 10: AESTHETICS

Quality aesthetics require the appropriate composition of building elements, texture, materials and colours and reflect the use, internal design and structure of the development.

The Requirement

Successful resolution of the aesthetics of a building addresses similar issues to scale and built form. All buildings need to be resolved in two ways.

Firstly, a building needs to be resolved at the larger scale as a balance between building form and the spatial system. This needs to reflect the context of the precinct / city. In this context it encompasses the shape; footprint; height of the building together with the spaces between and around the buildings.

Secondly, a building needs to be resolved in how the particular form is articulated. In the case of an apartment building it deals with the placement of openings; organisation of balconies; walls; use of materials; roof form etc.

To ensure that a development has a high level of aesthetics in relation to the level of massing and form it needs to:

- *Relate the buildings to the site dimensions; shape and topography.*
- *Relate the building form to the other buildings on the site and those in the precinct so that they create a positive spatial system.*

To ensure that a development has a high level of aesthetics at the detail level of proportioning it needs to:

- *Design the openings; projections and materials to relate in proportion to the overall massing and arrangement of the form.*
- *Organise the openings; projections and materials into a cohesive whole.*
- *Use materials that relate to the building typology and the precinct.*

The Response

Massing and Form

Building A-D and Building E should be designed to be complementary buildings spatially and in architectural detail . Where the topography of a site is complex the buildings need to be simple. The benefit of strong simple buildings is that the topography and beauty of the site can become dominant. When a site is clouded by overly articulated and complicated architecture the beauty of the site is lost.

The issues of massing and form have been addressed above.

In terms of the detail of the aesthetics the framing elements should be removed and the proportioning achieved by meaningful clustering of the elements that make up the façade. In this regard the overall mass should be first structured into the appropriate proportions related to the overall size of the building, the internal planning and the proposed materials. Within this structure the smaller elements organised. Even though there the buildings have parapets the roofs should be skillion or flat rather than a hipped.

Conclusion

The proposed development is for two residential flat buildings containing 123 apartments to be located at 1444-1454B The Pacific Highway Turramurra.

The current proposal still indicates that the permissible floor space cannot be achieved given the constraints of the site. Even with minor relaxations/ adjustments of the LEP and DCP controls for the site to address the topographical conditions the ability of the site to accommodate buildings with large footprints and car parking is limited.

The site has complex topography and natural features. Some of the issues raised in initial assessments have been addressed. However, other issues have not been addressed. These are:

Major Issues

The length and stepping of Building A-D. This relates to the amount of development on the site. A reduction in density would allow more issues to be solved. Building A-D is massive in appearance and the building needs to be broken into two or three buildings dependent on the final scheme. Although the KMC DCP suggests 60% of the roof area in the set backs for the upper level the set backs on this site need to be related to the overall height; the plan, the topography and the orientation. It is essential that the form of the buildings is simple and that the building/s are not ziggurat in shape.

The ability of the inclinator to provide adequate levels of service. Evidence is required of the frequency of service relative to the number of apartments; waiting times; weather protection and noise implications on adjacent units .

The relationship of both buildings to the car parking ramps; the pathway and the inclinator including the retaining walls. Evidence is required in terms of cross sections through the adjacent units that the apartments have good amenity.

The relationship of both buildings to the ground plane. Evidence is required in terms of cross sections through these ground floor units that the apartments have good amenity.

Location of the adaptable units where the access is easiest

Minor Issues

More careful proportioning relating material use and the organisation of openings to the overall massing including the removal of the unnecessary framing elements in both Buildings A-D and E and better use of balconies and balustrades to create a coherent aesthetic. The glazing needs to extend from floor to ceiling in the rooms facing the courtyards / open spaces.

Provision of appropriate storage and attention to other minor details raised in this report

Recommendation

The proposal should not be approved in its current form.

The density should be further reduced so that:

- the mass of building in Building A-D is reduced.
- the access issues can be addressed
- the relationship of the buildings to the ground plane and vegetation improved

This would enable a better resolution of the architecture in terms of scale, proportions and materials.