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16 September 2009

Director General
NSW Department of Planning
23-33 Bridge St, Sydney 2000

ATTENTION: TOM MITHEN

Dear Sir

RE: SENIORS LIVING PROPOSAL 216 - 222 MAIN RD, TOUKLEY

MP 08_0113 Preferred Project Report

In response to your letter dated 20 August 2009 please find attached the following:

- Revised architectural plans for the proposal;
- Revised statement of commitments for the proposal;
- Table 1 addressing DoP key issues letter;
- Table 2 and 3 addressing Wyong Council issues and proposed conditions;
- Table 4 addressing public submissions;
- Table 5 addressing public authority submissions;.
- Letter from an Acoustic Consultant verifying that adequate noise controls can be built into the proposal with details to be confirmed by an appropriate study; and .
- Letter from a Civil Engineer confirming that that proposed excavation management will be sufficient to protect adjoining properties.

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Summary of preferred project

The building retains the essential design features and appearance apart from the views from Rowland Terrace. The floor plan of units at the eastern end has been reconfigured.

The proposal now complies fully with the built form guidelines proposed by Wyong Council for the site. The proposal is now a maximum of 4 residential storeys to the lake and 2 residential storeys to Rowland Terrace. The reconfiguration has reduced the number of units from 53 to 50. Overshadowing of the park and the adjoining dwelling has been reduced accordingly.

The underground car park is now set back 1 metre from the front boundary to provide a larger deep soil zone. The setback has been achieved with no reduction in parking. The area of hard surface adjoining Main Rd has been decreased to improve the streetscape amenity of the building.

Off Rowland Terrace the setback to the dwelling to the north has been increased to 6 metres to further protect privacy. From the park and from the adjoining dwelling to the east the Rowland Terrace section of the proposal will now appear to be a single storey.

Other wise the proposal remains as exhibited.

DoP Key Issues

The DoP key issues for the project were detailed in the letter of 20 August. Briefly, these issues have been addressed as follows:

Bulk height and scale

- The third level to Rowland Terrace has been removed including the stairwell to provide a more residential appearance, see revised architectural plans.
- The fifth level facing the lake has been removed, see architectural plans.

Streetscape

- Area of hard surface has been reduced see architectural plans
- Basement parking footprint has been reduced and is now 1 metre off the Main Rd boundary, see revised architectural plans.

Internal amenity

- A section showing the cross ventilation is provided with the plans.

Materials/finishes

- The privacy screens between the balconies are now shown on the revised elevations, see architectural plans.
- The glazing appeared dark but will be untinted and transparent glass is proposed, see revised elevations.
- A light palette of natural tones is as shown on the building view provided with the plans.
- Details of the electrical substation and stairwell are now highlighted on the elevations.

The matters raised in submissions have been dealt in more detail in the attached tables. Where technical responses are required they have been prepared by appropriately qualified and experienced persons. The architectural and design responses have been prepared by the project architects. The civil engineering and acoustic responses have been prepared by engineers. General responses have been prepared by the project planner. Matters relating to groundwater, acid sulphate soils and climate change have also been prepared by the project planner who also has environmental science and natural resources management qualifications and experience.

Should any further information be required please contact the undersigned.

Yours sincerely
ADW Johnson Pty Ltd (Hunter Office)

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Draft Statement of Commitments - September 2009

Toukley Seniors Living Proposal
216 - 222 Main Rd, Toukley

1 INTRODUCTION

In accordance with the Director General Environmental Assessment Requirements, the applicant is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures for the project.

2 Summary Of Commitments Contained Within Environmental Assessment Report

Construction Management –the development will occur in accordance with the construction management plan for the site.

Environmental Management Plan – An EMP will be prepared for the site incorporating all relevant condtions of approval and providing for the protection of adjoining, park, foreshore and lake areas, protection of the amenity of nearby dwellings and vegetation on adjoining sites. The EMP will allocate responsibilities for project and environmental compliance and provide detail of monitoring and reporting processes.

Water Management –the proposal will implement a water sensitive urban design approach to the site, providing, erosion and sediment controls, acid sulphate soils management and groundwater management.

Flooding – minimum floor levels are proposed that address potential climate change implications with capacity for future adaptation to increased flood risk should this occur.

Services and Waste Management – adequate provision for infrastructure and for domestic waste management, has been made

Seniors services - will be available consistent with the location in the Toukley town centre, the design of the building including pool, gym and visiting service provider rooms

Noise during construction will be addressed by the Construction Management Plan and Environmental Management Plan

Sustainable Development –compliance with sustainable development requirements such as SEPP 65, BASIX, Section J BCA and water sensitive urban design principles is integrated into the design

Indigenous Heritage – no issues have been identified that require a commitment to ongoing consultation and involvement with the Aboriginal community

Commencement of works - works will not commence until all required management plans and approvals are in place, neighbours will be notified of likely commencement dates.

3 Detailed Draft Commitments

Impact / Issue	Nature of Potential Impact	Mitigation Measures
3.1 Compliance with applicable planning requirements	Project non compliance with relevant standards and approvals	The project will comply with the conditions of approval. No departures from the conditions will occur without appropriate prior approval. An Environmental Management Plan will be prepared for the site incorporating all mitigation measures and conditions of approval.
3.2 Adjoining property and vegetation	Damage from site excavation	Piling will be installed on the perimeter of the excavation to protect the stability of adjoining properties and vegetation .
3.3 Built Form	Amenity and visual effects on adjoining land	The built form of the development will be as shown on the approved project plans by way of building heights, and the general arrangement of buildings and setbacks.
3.4 Flooding/Climate Change	Unacceptable increase in risk of inundation of habitable floor areas.	The development will proceed with floor levels 40cm above the current flood planning level. Flood risk will increase as a result of climate change but not significantly before 2100. There is the opportunity for future adaptive flood mitigation measures if required.
3.5 Dewatering	Pollution of Lake Budgewoi	Appropriate licenses under the POEO act will be obtained if disposal of groundwater is required. Monitoring of water quality and disposal will occur in accordance with license and approval conditions. A bore license under the WMA 2000 will be obtained. A license under the PoEO Act will be obtained
3.6 Water Quality	Possibility of increased levels of nutrients and contaminants in stormwater run off and of groundwater contamination.	The proposed development will incorporate water quality and sediment control measures as generally outlined in the civil engineering report.

Impact / Issue	Nature of Potential Impact	Mitigation Measures
	Possibility of disturbance of Acid Sulphate Soils	An Acid Sulphate Soils Management Plan will be prepared should further soils investigation identify that potential acid sulphate soils are to be excavated .
3.7 Acoustic	Potential noise impact on neighbours. Potential noise impact form the hotel	Controls over hours of work and construction will apply to limit the effects of noise. Detailed measures will be included in the EMP via the CMP. An acoustic report will be obtained to determine if additional architectural measures are required to meet sleep disturbance critieria. The internal noise amenity criteria specified by the RTA will be used to determine appropriate appropriate construction measures. The applicable noise critieria are: Habitable rooms 45dB(a) Leq (15 hr) Habitable rooms 40dB(A) Leq(9hr) Sleeping rooms 35dB(A) Leq(9hr)
3.8 Ecologically Sustainable design and water management	Long term cumulative environmental impacts.	The SEPP Basix recommendations and requirements for the building will be implemented. The development will be consistent with ESD and water sensitive urban design measures.
3.9 Erosion & Sedimentation	Soil erosion through construction process and resultant sedimentation of lake.	Erosion and sedimentation control measures as detailed in the EA will be implemented as part of the project under the Project Application Construction Management Plan and EMP. Landscaping of site will be implemented in accordance with submitted plans.
3.10 Toukley Gardens Park	Loss of recreational amenity	Landscaping and building setbacks as proposed will be implemented to protect recreational amenity of the park and increase casual surveillance.
3.11 Landscaping	Loss of visual amenity	The proposed landscape works will be implemented consistent with plans and managed to provide visual and recreational amenity for the development and adjoining park.
3.12 Crime Prevention	Inadequate personal security and safety for residents.	The recommendations of the Crime Risk Assessment Report will be implemented in full.
3.13 Section 94 Contributions	Demand on local community facilities and services	Prior to commencement of construction the proponent will enter into a Voluntary Planning Agreement with Wyong Shire Council to the value of the Contributions that would be required under the Toukley Section 94 Contributions Plan and Shirewide Contributions Plan. Suitable local projects for funding will be as agreed with Wyong Shire Council.

3.14 Site infrastructure and services	Environmental and amenity impacts	The proposal will be serviced to the levels required for residential development.
3.15 Waste Management	Environmental impact	Construction waste will be managed in accordance with the construction management plan. Domestic waste will be collected by Council Contractor in accordance with waste management plan. Soil excavated form the site will be disposed of in accordance with PoEO Act requirements.
3.16 Aquatic and foreshore areas	Loss of aquatic and foreshore habitat / ecology	The property boundary will be clearly identified to ensure works don not encroach on this area. Erosion and sediment controls will be implemented prior to any earth works.
3.17 Hazard Management	Unnecessary emergencies for residents and the community	No significant hazards apply for the expected lifetime of the building. Provision can be made for future adaptive flood management
3.18 Roads, Vehicle Access and Parking	Traffic and amenity conflicts	Traffic management, access and parking will be implemented as detailed in the Traffic assessment for the proposal.
3.19 Seniors service needs	Lack of appropriate services	The onsite services and design, and management and management will ensure that ongoing needs are addressed
3.20 Dilapidation report	Damage to public and private property	A dilapidation reporting system will be implanted for the development to ensure that any damage to other property arising from the works is repaired
3.21 Fencing	Costs to neighbours	Any new fencing or repairs that arise from the works will be at the developers expense.
3.22	Unnecessary noise and amenity complaints	New residents will be provided with information about noise controls and complaints procedures so that they are aware of the local noise environment and responsibilities for noise management.

TOUKLEY SENIORS LIVING PROPOSAL
216 – 222 MAIN RD, TOUKLEY

TABLE 1

RESPONSE TO DOP KEY ISSUES LETTER DATED 20/8/2009

Issue	**Response**
Bulk height scale	Revised architectural plans have been prepared for an amended design as follows: The third level has been removed from the eastern end of the building adjoining Rowland Terrace so it is a maximum of 2 storeys and the building setback 6m from the northern side boundary similar to the, now removed, level 3 footprint. The fifth level apartment of the central pod has been removed, and the lift lobby and apartment northern façade is clear glass to provide a light weight appearance.
Streetscape	The amount of hard surface in the front setback to Main Road has been reduced as shown on the revised plans and the area of deep soil planting subsequently increased. The separate entry and exit have been retained as this is the safest way of allowing vehicles access to and from the site without affecting the traffic from on Main Road or creating blind spots or requiring hazardous manoeuvring. The provision of a pick up and drop off point at the entrance is essential to the everyday functioning of the facility. This zone provides a lay by for community buses, and ambulances etc which where previously accommodated in the proposed medical parking bay, now removed. The hardstand area is to be enlivened with coloured and textured finish to give a more natural surface complementary to the paved courtyard areas.

	The parking levels have been reduced to provide the addition deep soil landscape zone along the main road frontage. The landscaping selected for these areas has to comply with the RTA requirements for sight lines and visibility. The stairwell has a low masonry wall to the street frontage matching these to the courtyard behind. This wall will incorporate signage for the development as indicated on the elevations. The substation is a standard kiosk installation to be provided by the authority.
Internal amenity	All access corridors, including the corridor surrounding the courtyard, are naturally ventilated and have glazed weather screening to provide residents with outlooks into the landscaped courtyards and the adjacent park, streets and the lake. Seventy eight percent of apartments have direct natural cross ventilation exceeding the guidelines of the Residential Flat design Code. The remaining 22% of apartments gain cross ventilation through the naturally ventilated access corridors via high light louvres over the entry.
Materials / finishes	The elevations and sections were graphically simplified in the application in order to present the bulk and form of the building clearly. The photomontages have the colours and finishes represented more accurately related to the surrounding buildings and setting. The screens, finishes and colours are now illustrated in more detail on the drawings. The elevations and sections have been amended to show the role of these screening elements in providing privacy and enlivening the facades. All glazing is standard clear, with no film or tints. The proposed colour palette is natural light tones with white balcony projections creating depth in the elevation.

	This simple light palette is enlivened with natural timber screens and vibrantly coloured privacy blades and upper level soffits. The stairwell has a low masonry wall to the street frontage matching these to the courtyard behind. This wall will incorporate identify signage for the development as indicated on the elevations. The substation is a standard kiosk installation to be provided by the authority.

TABLE 2

RESPONSE TO SUBMISSIONS BY WYONG COUNCIL

Issue	Position	Response
1 Climate change		The DECC submission did not mention climate change and indicated that there was no further departmental interest in the proposal.
	Potential inundation by sea level rise after 41 years - "the building still has the potential to be inundated by sea level rise within the proposed 60 year life span"	After 41 years the lake standing water level will be approximately 0.41 metres, the minimum floor level will be 3.1 metres. After 60 years the lake level will be 0.6 metres the floor level will be 3.1 metres. Inundation from sea level rise is not an issue. The Council submission states that the FPL (flood planning level) will increase to 3.1 m AHD by 2050 and to 3.6 metres by 2100 but this is not Council policy. The Toukley climate change assessment relies on the Lake Macquarie sea level rise policy which while not wholly comparable provides a sound methodology on which to assess risk. For Lake Macquarie the standard 0.5 metre freeboard has been made up of • uncertainty in flood estimates 0.2 m. • wave run up 0.1 metre and • climate change uncertainty 0.2 metres. Once the recently adopted sea level rise standards are taken into account the freeboard requirement drops to 0.3 metres.
	Wave run up	There will be increasing flood risk caused by potential sea level rise. Under the DECC draft guidelines the issue is the management of the risk associated with sea level rise. The Toukley EAR puts a case that the increasing risk is both acceptable and secondly manageable. The proposal will

	Increased storm intensities	not require any significant emergency response. Addressed through freeboard allowance of 0.3 metres
	Climate change impacts on groundwater	The proposal design allows for adequate water management. There is as yet no modelling to indicate what, if any effect, changes to rainfall intensity will have on flood levels in the Tuggerah Lakes system. What is clear for the Lake system is that flood storage behaviour means that rainfall increases will not produce equivalent rises in flood levels. For Lake Macquarie a 30% increase in rainfall produces an estimated 0.18m metre rise (or less than 10% increase) in the 100 ARI flood event. The best available estimates of extreme rainfall change for the Hunter Central Rivers to 2070 as modelled by CSIRO is minus 7% to plus 10%. (Table 1 Practical Consideration of Climate Change DECC 2007) There is adequate capacity for adaptive management on the site, e.g. flood proofing and minor levees, should the flood risk estimates change during the life of the building. Site geotechnical investigation found water in bands of clayey sand at approx 4.0 m AHD under the upper areas of the site and at approx 0.3 m AHD on the lower areas. There is no geotechnical evidence of a significant local aquifer (see bore logs in EAR) or groundwater emergence zones on the site or adjoining properties. There is no significant extractable water resource and no evidence of groundwater dependant ecosystems. No significant effects on are likely to arise from climate change effects on groundwater.

2	Height SEPP height Limit for 2(a) zone Impact on views	The draft Toukley Strategy provides for 3 storeys to Main Rd and 3 storeys on the southern (upper) side of Rowland Terrace. This was one of the considerations that led to the agreed built form. The proposal has been modified to remove the 5th residential storey. Units have been removed from the design to increase the 2 storey grading down to Rowland Terrace. All units fronting Rowland Terrace achieve the SEPP SL 2 storey and 8 metres height requirements. The building will not be visible from Osborne Park. The building is compatible with White Sails and Beachcomber as there is visual consistency between the three buildings provided by the strong horizontal elements and consistencies of roofline height, scale and bulk. The bulk of the proposed development has been broken into 4 elements facing the water and with the stepped form provides a comfortable transition to the Rowland Terrace residential building.
3	Architectural form	The design creates a considered transition between the existing multi-level developments to the west and the residential scale to the east. The proposed materials, finishes, landscaping and vegetation have been selected to integrate the development with the coastal environment with an emphasis on natural textures, colours and finishes.
4 Redesign	Scale, mass and form	Redesign to accommodate the Council submission has been undertaken, see revised architectural plans and updated SoC 3.1
5 Special site	Diligent and sensitive consideration of environmental factors	The scope of relevant matters as set out the DGRs has been addressed in the EAR.

6 Pool	Sewer manhole location	The pool has been relocated see revised architectural plans.
7 Basix	Plan amendments	A copy of the set of Basix endorsed plans was provided as part of the EAR.
8 ASS	Further assessment needed	An approval can be conditioned accordingly, the site geotechnical logs indicate that the only potential problem for the site is pool excavation, see updated Soc 3.6 .
9 Hotel noise	Acoustic screening needed	The proposal will not rely on licence compliance from the Beachcomber hotel to achieive a satisfactory level of acoustic amenity. Specialist acoustic advice has been obtained that confirms that satisfactory noise levels within apartments can be achieved with appropriate glazing. See updated SoC 3.7 and attached report.
10 Amenity	Units 2-03 and 2-04 have bedrooms and private open space areas facing main Rd	Both of these units have their visual and acoustic amenity protected by the court yard walls which provide a visual and acoustic barrier. The living rooms of both units open onto landscaped side court yards.
11 Flexible zone provisions	Clause 13 SEPP 71 applies	There is no issue as although Clause 13 of SEPP 71 applies the flexible zone boundary provisions of Wyong LEP are not relied on. SEPP Housing for seniors operates by permitting seniors development it does not operate by extending adjoining zonings.
12 Foreshore building line	Unacceptable structures forward of the building line	The building walls are all behind the 20 metre line. The balconies protrude into the area in front of the 20 metre foreshore building line. There are very few sites along the Toukley foreshore where the building line is achieved, Council has repeatedly varied the building line on a site by site basis. The White Sails has structures 10m forward of the building line.
13 Climate change and sustainability	Inadequate information	The inadequacies are not specified. Relevant matters are addressed elsewhere in the responses, see 1 above.
14 Ground water study	Need for ground water study.	The geotechnical information provided indicates that there are no significant groundwater issues.

		While there may be a need to dewater the site during construction there is no evidence of a substantial ground water resource.
	Draw down quality	No groundwater extraction is proposed, however disposal of water in excavated soil may be needed.
	Mounding potential	No mounding is likely as no aquifer recharge is proposed, very minor mounding might occur where construction impedes flows but normal under slab drainage will prevent any adverse effects.
	ASS Water quality Impacts	The proposal will not adversely affect groundwater quality, an ASS management plan will be prepared if necessary. Impacts unlikely based on the findings of the site geotechnical report.
15 Main Rd setback	Amenity and landscaping	The design has been modified to increase the area for deep soil landscaping at the Main Rd frontage see revised architectural plans and updated SoC 3.3.
16 Over shadowing	Park and adjoining dwelling	Revised shadow diagrams have been provided showing the reduced extent of shadowing resulting from the removal of a storey from the Rowland Terrace frontage. The combination of existing trees and 1.8 metre high screen fencing to the park suggests that there will be no additional shadow areas in the park although the intensity of shadowing may be increased by the proposed building during the winter solstice. The land occupied by the adjoining dwelling would not be affected by winter solstice shadow until after 1:00 pm in the afternoon.
17 Excavated material disposal	Need to ensure appropriate disposal procedures are followed.	Disposal of excavated material is regulated by PoEO Act requirements. See updated SoC 3.15.
18 CPTD	Security Multiple entries relative to location	The matters listed are already covered by the design and CPTED report in EAR. There are only 2 entry locations. The main entry is off Main Road and a secondary entry of

	near Beachcomber Hotel	Rowland Terrace. All entries will be secured. There will be no access though the site to the hotel. See updated SoC 3.12
19 Materials	Reflectivity	The northern orientation of the building and the generous eaves and balcony overhangs will result in very little direct sunlight on glass surfaces.
20 Sub terrain units	Unacceptable	These units are not sub terrain as they are above proposed ground levels. The units listed have adequate amenity by way of natural lighting and outlook. G01 and G02 both have north aspect and lake views. 108 and 109 are above the level of Rowland Terrace and have abundant access to natural light and ventilation as both units have dual frontages one of which is Rowland terrace.
21 Pipe damage	Construction impacts	See updated SoC 3.20 regarding repair of damage
22 Sewer mains	Structural loading protection	The pool has been relocated see 6.
23 Mains inspection	Damage protection	See 21 above
24 Manhole	Adjustment costs	See 21 above
25 Sewer access	Compliance with Council policy	Apply condition of approval
26 Connection costs		Apply condition of approval
27 Contributions	Payment in accordance with DSP 6	Apply condition of approval
28 Tree protection	Requirements specified	See proposed Wyong Council Conditions 31 to 37
29 Tree protection	Construction requirements	See 28 above, the site is already fenced as required along the boundary with the park .
30		

Tree planting	Additional street tree planting	The RTA requirement is no street tree planting in front of the development. Apply condition of approval for planting to the park
31 Tree retention	Numbering of retained trees	Apply condition of approval
32 Tree size and source		Apply condition of approval
33 Groundwater	Ground water impacts not discussed	Mitigation & approval measures proposed in EAR section, see also previous comments under 1 above
34 Erosion & sediment control	Controls needed	Plans provided as part of application see EAR and updated SoC 3.9
35 Stormwater	Over land flow paths onsite	The only overland flows will be from landscaped areas.
	Details of overland flows into basements	Adequate drainage is proposed see civil engineering plans, apply condition approval for submission of required additional detail
	Outlet design details	Will be part of CC documentation, apply condition of approval
	Water quality	A GPT and oil separator for stormwater are proposed as part of the proposal - see civil engineering plans Councils proposed condition 69 adresses these issues.
36 Water reuse	Maximize water reuse	The proposal complies with the water reuse requirements of SEPP Basix
37 Roads issues	Traffic conflicts	Main Rd issues have been addressed the satisfaction of the RTA ,a median is to be installed to minimize conflicts
	Traffic speed signs and speed limit	Signs will be to RTA requirements, enforcement of speed limits is a local police responsibility

	enforcement	
	Turning paths	The turning paths comply with the relevant Australian standard and Council requirements.
	Access grades	The grades comply with the relevant Australian Standard
	Priority at entrance	A give way sign will award priority to cars on the ramp leaving the site.
	Widen basement ramp	The ramp as proposed complies with the relevant Australian Standard
	Sight distance affected by street trees	The street trees will be deleted in accordance with the RTA requirements.
	Main Rd pedestrians	Pedestrian conflict is unlikely to be an issue.
	Reversing in drive way	The acess/egress arragements do not require reversing ointhe driveway s
	Non compliance east carpark ramp	The ramp has been designed to AS/NZ 2890.1 See also Council proposed condition 78.
38 Structural issues	Protection of adjoining property	Structural protection of adjoining properties is to be provided via perimeter piling as shown on civil engineering plans. Under the revised architectural plans the excavation will be further back form the footpath.
39 carparking		All matters relating to car parking are addressed in the Traffic report in the EAR
	Mirrors at 90 degree bends	Mirrors will be installed - apply condition of approval.
	Pier locations re disabled parking	The disabled spaces comply with the relevant standards
	Relocate disabled parking closer to lift	The disabled spaces comply with relevant standards
	Doors opening onto	The design has been amended to create a movement lobby that avoids doors opening into

	disabled space	parking spaces, see revised architectural plans
40 Lighting		No adverse effects likely at residential levels of illumination. Apply condition of approval
41 Earthworks	Erosion & sediment controls Protection of adjoining properties	As proposed in EAR refer to drawings in Appendix 0 and Exhibition plans set Piling as proposed in EAR Appendix O and
42 Construction access & parking	Construction parking No Access to Main Rd	There is a largely unused public carpark 300 metres from the site in Varalla St. that will be utilized No restrictions are required by the RTA.
43 Easements & 88b	Maintenance of WQ facility	Apply condition of approval requiring adequate monitoring and maintenance of the GPT an oil separator
44 VPA	Contributions consultation and amounts	Apply condition of approval

TABLE 3

WYONG COUNCIL PROPOSED APPROVAL CONDITIONS

The conditions are generally acceptable except as detailed below.

condition proposed by Council	**issue**	**response**
1 to 6		Accepted
7	Double glazing	Double glazing not required see attached acoustic report and updated SoC 3.7
8 to 21		Accepted
22 Contributions	Payable prior to issue of construction certificate	Not accepted see updated SoC 3.13 Contributions should be payable prior to issue of strata subdivision certificate or as otherwise agreed in a Voluntary Planning Agreement with Council.
23 to 55		Accepted
56	Building line compliance	The building will be located in accordance with the approved plans, further prohibition on building and structures is not necessary
57 Roads	Peel St intersection	Upgrading or contribution not required by RTA submission – delete requirement Apply conditions as specified in RTA submission A paved footpath is not required in Rowland Terrace or Peel St as pedestrian access will be available along Main Rd
58 to 69		Accepted
70	Groundwater study	Not required - delete condition
72 to 84		Accepted
Contributions	Credits	Credit equivalent to 5 DU lots has been offered by Council Lot 2 and 3 was occupied by 7 x 1 and 2 bedroom units. Lot 4 was a 4 bedroom house,

		the battleaxe Lot 2, was a 3 bedroom house and Lot 91 Rowland Terrace is a 5 bedroom house. Credits based on prior site use should be 8.06 DU and the contribution amount reduced accordingly

TABLE 4

RESPONSE TO PUBLIC SUBMISSIONS

1 traffic and parking	
Traffic congestion and parking problems in Rowland Terrace	The Traffic Study did not identify any problems. Traffic increases are well with in the capacity of the local street. The parking provided within the development is in excess of both resident and visitor parking requirements
There will be a lack of on-street parking n Rowland Terrace due to the increase in… visitors….	See above. Some visitors may park in Rowland Terrace but this is unlikely to cause a problem
Turning area on Main Rd contrary to Councils DCP	Main Rd is controlled by the RTA and the proposed arrangements have been accepted by them
There will be an increase in the number of traffic accidents especially at the Peel St, Main Rd intersection	The problem is not related to the proposal, The problem will eventually be solved by installation of traffic signals by the RTA.
The additional traffic…. will change quiet character and result in adverse noise impacts	There will be an increase in traffic and noise but the levels but the amenity criteria for residential streets will still be achieved.
2 building height / visual impact	
The properties in Rowland Terrace have been purchased on the assumption that they adjoin a low density residential zone	Under the Central Coast Regional Strategy the area is part of the Toukley Town centre that is proposed for higher density development. The draft Toukley Planning Strategy also provides for higher density development in the area. The height to Rowland Terrace has been further reduced by design changes.
The proposed buildings are excessive in height and do not comply with planning controls	The building height is based on agreed built form principles derived from the strategic planning policy for the site and Toukley town centre
There will be an adverse visual impact due to the abrupt change in height / scale	The 3rd storey has been removed from the Rowland Terrace end of the building and when viewed from Rowland Terrace there is no abrupt change in height. The building, as amended, will appear lower than some of the existing dwellings.

	The scale is acceptable for a precinct in transition. The building while certainly larger in scale is still clearly residential and will not look out of place.
The height restriction should be a maximum of two storeys along Rowland Terrace.	The amended height is now two storeys to Rowland Terrace.
Construction impacts	
The drive way to No. 19 will be blocked during construction	The construction traffic will be managed to avoid blocking driveways.
Adverse structural impacts on the retaining wall at no 19	A dilapidation report will be prepared for all adjoining properties and the road before construction commences. Should any damage occur there will be a record on which to assess damage. A civil engineer has prepared the design and has confirmed that the proposed site management is adequate (see attached letter).
Potential for landslip and drainage problems to no 19 during construction	The closest excavation will go to No 19 is 3 metres and is generally over 5 metres. The location of cut and the placement of sediment fences and drainage controls should prevent any drainage problems to No 19
Rowland Terrace truck damage	The constructor will be responsible for fixing any road damage caused by construction see updated SoC 3.20
Adverse effects on structural stability of adjoining houses	Damage to adjoining buildings is highly unlikely but any adverse effects will be the responsibility of the constructor and will be monitored via dilapidation reporting see updated SoC 3.20
Stormwater management	Adequate, drainage erosion and sedimentation controls are proposed and are covered by proposed Council conditiosn of approval and the updated Soc 3.9
4 Amenity	
Adverse privacy impacts on the bedrooms at the rear of no 19	The height has been reduced by one storey and the setbacks increased. Views of the windows will be screened by fences and vegetation on the development site.
Increase in population density will have adverse effect of character of area	It is highly unlikely that the additional residents would result in a significant adverse effect.
5 Boundary treatment	
Boundary fence costs to No 19	Any fencing costs will be borne by the developer see updated Soc 3.21.

Effect on views of boundary treatments	The existing situation of no fencing on the lower areas of the site near the foreshore will continue
Which trees will be removed adjacent to No 19?	The trees be retained and the trees to be planted are as shown on the landscape plan. The grove of trees on the boundary and near the foreshore open space of No 19 will be retained.
Height of retaining wall at the end of the proposed pathways near the Lake should be provided as not to impede views	Walls will have top level of 0.95 m AHD which is below the ground level of the adjoining property
Will steps on boundary with No 19 be removed	No final decision has been made, if the steps are removed a fence or rail will be required for safety reasons, the issue will be resolved via detailed construction plans.
6 Future use and occupation of proposal	
Assurance on over 55 development	This requirement will be enforced by a condition of approval with enforcement the responsibility of the body corporate
Hotel noise complaints	There should be no restrictions on the making of complaints, it is the responsibility of the hotel to manage noise and to demonstrate compliance with licence requirements as necessary.
No sound proofing details or acoustic report provided	The proposal has been reviewed by an Acoustic Engineer who has confirmed that that an adequate internal noise environment for units adjoining the hotel and road can be achieved with appropriate glazing. See updated SoC 3.7
Details of restrictions on possible future objections on the title of future lots owners	No restrictions can or should be placed on the ability of future occupants to make complaints or objections. However, potential purchasers will be made aware that street noise is not a hotel responsibility. See updated SoC 3.22
7 Other	
Adverse heritage impact through demolition of “Rowlands” house	The dwelling is not a listed heritage item, opportunity for local history interpretation will remain through the street name.
Need to address rising water levels /flooding especially on pool	Climate change issues including rising water levels have been assessed, the pool is well above the expected sea level sea rise and won’t be significantly affected by temporary flooding.

TABLE 5

RESPONSE TO PUBLIC AUTHORITY SUBMISSIONS

Roads and Traffic Authority

Issue / requirement	**Response**
Left in left out access	Accepted
Central concrete median	Accepted
Street lighting	Accepted
Indentation of kerb and gutter as required	Accepted
Pedestrian pathways in Rowland Terrace or Direct pedestrian access to Main Rd from all parts of the building	All units will have pedestrian access through the building to Main Rd
No stopping signs across full frontage of development	Accepted
No Main Rd parking	Parking in excess of residential requirements is part of the proposal Construction parking will be directed to nearby public parking areas
Stormwater	The nominated requirements will be complied with via design and engineering plans
Required works at no cost to RTA	Accepted the developer will fund the works
Agreement with RTA for works approval, occupancy, RTA fees, maintenance fees and a financial guarantee required	Accepted
Internal noise objectives for habitable rooms	Accepted, the construction will include materials to provide an acceptable internal acoustic environment, the appropriate materials will be determined via an acoustic assessment.
	The updated SoC 3.19 makes provision for implementing the RTA requirements

Department of Environment and Climate Change

Stop work if human remains found	Accepted see Wyong Council proposed condition no 1

Site registration if Aboriginal cultural evidence found	Accepted

Department of Water and Energy

Approval for rock mattress under Crown Lands Act	The matter is under discussion with the Land and Property Management Office, Maitland. Apply condition of approval requiring that either the rock mattress be licenced under Section 6 of the Crown Lands Act or be relocated onto the subject land.
Bore licence under WMA 1912 for dewatering	Accepted - see updated Soc 3.5
Approval for Discharge of groundwater under POEO Act.	Accepted - see updated Soc 3.5
Licence for existing bores	Contact has been made with the Hunter Office of Water and arrangements made for licencing the bores and providing the Department with the geotechnical bore logs for the site.

REVERB ACOUSTICS
Noise and Vibration Consultants

Our Ref: 09-1406-L2 10 September 2009

Sterlings Pty Ltd Ph. (02) 4963 4922

Attention: Mr Terry Roche email: rtroche@sterlings.com.au
mob: 0418 495 741

PRELIMINARY ACOUSTIC INVESTIGATION
TOUKLEY SENIORS LIVING – 222 MAIN ROAD, TOUKLEY

1 INTRODUCTION

This letter was requested by Sterlings Pty Ltd in support of and to accompany a Project Application to Department of Planning (DoP), for the proposed Toukley Seniors Living, 222 Main Road, Toukley. Once the design of the development has been finalised a complete noise impact assessment should be prepared in support of the Application. The letter report will provide general guidelines with regard to acoustic modifications, which must be incorporated into the design, to effectively isolate sensitive spaces from external noise generated by road traffic on Main Road (cars, buses, trucks, etc) and patrons leaving the nearby Beachcomber Hotel (particularly at closing time).

2 ASSESSMENT CRITERIA

2.1 Road Traffic

Department of Planning's (DoP's) *"Development near Rail Corridors and Busy Roads - Interim Guidelines*" (released in December 2008) provides screening tests for developments near busy roads or rail corridors. Reference to Figure 3.4(a) of the Guideline indicates that a traffic noise assessment is required for residential developments within 20 metres of an arterial road that have an AADT greater than 1500 vehicles. The Roads and Traffic Authority (RTA) publication, "Traffic Volume Data for Hunter Region 2004", indicates that Main Road is expected to have an AADT of approximately 23,000 vehicles projected to the year 2019. Therefore, a road traffic noise assessment is required for the proposed development.

The RTA has suggested that the following criteria should apply for the proposed development:

All habitable rooms other than sleeping rooms	45dB(A),Leq(15hr) and 40dB(A),Leq(9hr)
Sleeping rooms	35dB(A),Leq(9hr)

The above criteria are in general agreement with the criteria contained in the Department of Environment, Climate Change and Water's (DECCW's) Environmental Criteria for Road Traffic Noise (ECRTN) for new developments near arterial roads, and have been adopted for assessment purposes.

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2.2 Short-Term Noise Events (Patrons leaving the Beachcomber Hotel)

Section 2.4.5 of the DECCW's Noise Guide for Local Government and Chapter 19-3 of their Environmental Noise Control Manual (ENCM) state *"the L1 level of any specific noise source should not exceed the background noise level (L90) by more than 15dB(A) when measured outside the bedroom window"*. This criterion is applied to residential situations between the hours of 10.00pm and 7.00am where a receptor's sleep may be interrupted by noise. It is applied in this case to residents likely to receive noise from patrons passing the development after they leave the nearby Beachcomber Hotel. To establish the sleep arousal criterion, background noise level measurements will be required at the site as part of a more detailed noise impact assessment.

3 PRELIMINARY ANALYSIS

3.1 Road Traffic

The AADT for the year 2019 was applied to our computer programme, based on the DECCW and RTA approved CORTN Method of Traffic Noise Prediction, and noise levels were calculated to the exposed facades of the residence. Table 1 shows the computer modelling parameters that were used in our assessment for the year 2019.

Table 1: Computer Modelling Parameters - AADT 2019

Description	Parameter
Traffic Flow Rate (AADT) - near lane/far lane	11490
Average Vehicle Speed (km/hr)	50-60
% Road Gradient near/far lane	0
% Heavy Vehicles	5
Ground Type	Variable
Angle of View (degrees)	65-135

Equivalent continuous noise levels were calculated for each traffic lane separately on the basis that the noise source (i.e. the traffic) was located in approximately the centre of the respective lane. In particular, this gives an accurate estimation of the location of bus and truck exhausts which are generally located on the right hand side, being approximately at the same point for both traffic directions. Our calculations have been modified to compensate for the differing acoustic centres of cars and heavy vehicles, by modelling each separately and logarithmically adding received noise levels.

Following is a sample calculation detailing the procedure followed in order to calculate required glazing for a typical bedroom closest to main Road on Level 2 of the proposed development. The traffic noise level at the outer face of the glazing is calculated as follows:

Table 2: Sample Calculation - Traffic Impact at Nearest Bedroom Window

		Octave band Sound Pressure Levels, dB(A)							
Propagation calculation	**dB(A)**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
Facade traffic noise, Leq	64	49	56	54	56	59	57	55	34
Architectural shielding		0	0	0	0	0	0	0	0
Directivity Correction		0	0	0	0	0	0	0	0
Traffic noise at window	64	49	56	54	56	59	57	55	34

As the criterion for the Bedroom is 35dB(A), the required traffic noise reduction is *TNR* = 64-35 = 29dB(A). The traffic noise attenuation, *TNA*, required of the glazing is calculated according to the equation given in Clause 3.4.2.6 of AS 3671,

$$TNA = TNR + 10\log_{10}[(S/S_f) \times 3/h \times 2T_{60} \times C] \qquad \textit{equation 1}$$

where S = Surface area of glazing = $2m^2$
S_f = Surface area of floor = $12\ m^2$
h = Ceiling height, assumed to be 2.4m
T_{60} = Reverberation time, s
C = No. of components = 2 (wall, window)

Assuming that the room is acoustically average (neither too 'live' nor too 'dead') equation 9.26 in *Noise and Vibration Control*, L.L. Beranek, 1971, gives a reverberation time of 0.96s. Consequently, the value of 1.0s was used in equation 1.

Using the values listed above gives
TNA = 25dB(A) for the windows

Substituting this value into the equation given in Clause 3.4.3.1 of AS3671 gives
Rw = *TNA* + 6 ≈ 31

Based on the above calculations, the window in the Bedroom must have a tested Rw31 rating. Based on laboratory performance data they would typically consist of a single-glaze laminated glass window with Q-Lon seals fitted at sliders.

3.2 Short-Term Noise Events (Patrons leaving the Beachcomber Hotel)

Noise levels produced by patrons leaving the nearby Beachcomber Hotel at closing time has the potential to interrupt the sleep of occupants within apartments. Typical noise produced by patrons congregating on the footpath and leaving entertainment venues has been sourced from our library of technical data. This library has been accumulated from measurements taken in many similar situations in the Newcastle CBD in the vicinity of Nite Clubs, and allows theoretical predictions of future noise impacts at each receiver and recommendations concerning noise control measures to be incorporated in the design of the site.

Our measurements were taken over a representative time period to include all aspects of the noise, including the cumulative impact of several people talking with a loud voice simultaneously. Sound measurements enable the acoustic sound power (dB re 1pW) to be calculated. The sound power level is then theoretically propagated to exposed facades and propagated through each building element to determine the internal noise level. Comparison of the predicted noise levels and the allowable level are then compared to give the noise impact.

An estimated worst-case situation was modelled with a group of 10-15 patrons gathered on the street near the development. The sources were placed at varying locations on the pavement ranging from 10-30 metres from nearest apartments. Based on the above scenario a peak noise level of 68-70dB(A) has been predicted at more exposed apartments, which is expected to exceed the sleep arousal criterion. Windows are typically the acoustic weak spot and standard 3-4mm glass will only achieve 10-15dB attenuation if the window frames are fully sealed into the parent wall, therefore, where appropriate, thicker glazing will be required.

Windows facing Main Road will require laminated glass and acoustic seals at sliders, which typically attenuates 25dB or more at speech frequency (500Hz-1kHz), depending on the thickness and orientation of the glazing. So, based on an exterior noise level of 70dB from people passing the development, noise within the apartment is not expected to exceed the sleep arousal criterion.

It should be acknowledged that assessment of sleep arousal need only be applied to dedicated bedrooms and compliance within recreational and transitory areas such as living rooms or entries is not required. In saying this, apartments in commercial districts are generally subjected to high noise levels for longer periods in the early evening and assessment within these rooms seems appropriate, given the situation. Furthermore, noise transfer between contiguous areas is more significant in open plan dwellings, typical of modern apartment design.

4 GENERAL RECOMMENDATIONS AND CONCLUSION

Similar calculations to those in the previous Section would need to be carried out for all building elements (windows, doors, walls, roof/ceiling, etc) and outdoor recreational areas to ensure the requirements of the DoP, RTA and DECCW are satisfied. Typical construction modifications that can be expected are detailed below. It should be noted however, that the of acoustic requirements for each habitable area will vary depending on the distance from Main Road, the size and orientation of each building element and the room use, etc. Therefore, as previously stated, a more thorough acoustic assessment must be prepared in support of the Construction Certificate:

Glazing – Windows/Doors
A glazing schedule should be prepared for all windows and doors near Main Road. Glass installed in window assemblies must comply with AS1288-2006. Materials, construction and installation of all windows are to comply with the requirements of AS2047-1999. Also see HB125-2007 for further information.

External Timber Doors
All doors should be minimum 30-40mm solid core timber, with the vertical sides and top of the door frames fitting neatly to provide close contact when doors are closed. Glazed sections to all doors must be minimum safety glass or laminated glass. Proprietary acoustic seals may be required on doors leading to sensitive areas.

Brickwork
The moisture content and composition of mortar must be in accordance with manufacturers' instructions. Refer also to AS3700 - 1998, Section 4. Perpends must have a full depth and width of mortar.

External Walls
Brick veneer or cavity brick construction is recommended. These wall systems will provide attenuation of the lower frequencies, typically around 100 to 500Hz, generated by heavy vehicles. (Ref: CSR Design Guide, Boral catalogues, James Hardy, etc, which are based on test reports and opinions supplied by the CSIRO acoustic laboratory, PKA Acoustics or other NATA registered laboratories)

All lightweight cladding (i.e. Colorbond, Weathertex, Weatherboards, etc) must be backed with fibre cement sheeting (Villaboard, Hardiflex) or construction plywood.

Roof

Roof construction should consist of sisalation or wire mesh laid down on roof trusses. This is to be completely covered with a 50mm foil faced building blanket hard under the roof sheeting (in situations where joists are at centres close enough to avoid excessive sagging of the blanket, the sisalation/wire mesh may be omitted). Close off eaves gaps with timber trimmers/noggings between trusses, followed by placement of roof sheeting (an alternative for steel framed construction is to provide 2 layers S3/R3 insulation in ceiling void, tightly packed at the building perimeter at 600mm width). Install an impervious ceiling of plasterboard at the specified thickness to all habitable rooms. To further assist in low frequency attenuation, all upper level ceiling voids should contain a layer of fibreglass or rockwool insulation. The insulation is to be installed in addition to, not in lieu of the building blanket. Specialised acoustic insulation is preferred, however dense thermal insulation (eg, S3/R3 polyester/fibreglass batts) will suffice and is much less expensive ($15/m^2 for Rockwool 350 and $6/m^2 for R3 batts). Generally, Councils now require new dwellings to achieve an adequate energy rating, which will usually only be achieved if thermal insulation is installed in the ceiling void, therefore, builders would be obliged to install insulation in any case.

We recommend that approval of the Project Application should proceed based on the current proposal, however once final design of the development is decided a complete noise impact assessment should be conducted following the assessment criteria outlined in this letter.

We assume this concludes our involvement in the project thus far. However, should you require further assistance, please contact the undersigned.

REVERB ACOUSTICS

Steve Brady A.A.A.S. M.A.S.A.
Principal Consultant

MICHAEL FITZGERALD
Consulting Engineers Pty Ltd ABN 73 075 676 854
Structural and Civil Engineers

Ref No 08.3401 10th September, 2009
Sterlings P/L
Project Managers
Attention Terry Roche

Dear Sir,

Re: Seniors Living Residential Development - 222 Main Rd., Toukley for Rustrum P/L

At your request we have undertaken a review to determine the impact of our proposed site works on the north east neighbouring property. The neighbouring property is located at 19 Rowland Terrace, Toukley.

Particularly, we will advise on the structural impact of our site works on the boundary concrete block retaining wall of 19 Rowland Terrace, Toukley.

Proposed Construction

The construction of the north east building at 222 Main Rd, Toukley will be as follows:-

1) The closest building to 19 Rowland Terrace has a basement finished floor level of RL 2.9m with an excavated site level of RL 2.5m. The site excavation for this building is approximately 4.5 metres from the boundary. This excavation is at or only notionally below the neighbours present yard ground level.

2) The existing boundary retaining wall is a concrete block retaining wall in good condition and presently supports an earth embankment over 2.5 metres high. This arrangement will remain as a site boundary condition.

3) The existing swimming pool on 222 Main Rd, presently located directly behind the boundary retaining wall will be removed before construction and not be replaced in this location. This will reduce the future lateral pressure on the existing retaining wall.

Impact on Existing Boundary Retaining Wall

The proposed building construction at 222 Main Rd., Toukley is remote from the property boundary of 19 Rowland Terrace, Toukley and outside the zone of influence of the existing boundary retaining wall.

Additionally, the lateral pressure on this retaining wall will be reduced due to the removal of the swimming pool.

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Conclusion

It is our opinion, the proposed construction at 222 Main Rd., Toukley will have no impact on the neighbouring property at 19 Rowland Terrace,Toukley.

Additionally, we advise there will be no adverse structural impact on the existing boundary retaining wall.

We trust the above clarifies the future situation and should you require any further information please do not hesitate to contact the undersigned.

Yours Faithfully,

Michael Fitzgerald
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