

# **ANNEXURE 3**

## **Summary of NSW ADG Compliance Issues arising from BHI Assessment**

**prepared by  
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**Akuna Street, Terralong Street  
and Shoalhaven Street, Kiama**

## SUMMARY OF NSW ADG COMPLIANCE ISSUES ARISING FROM BHI ASSESSMENT

### Akuna Street, Terralong Street and Shoalhaven Street, Kiama

<b>NSW ADG Guideline</b>	<b>BHI Review</b>	<b>Applicant's Response</b>	<b>Comments</b>
<b>3B Orientation</b> 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development  3B-2 Overshadowing of neighbouring properties is minimised during mid-winter	<p>The access from Akuna Street to the significantly lowered commercial forecourt and residential units is exceedingly complex and separates the commercial frontages from the streetscape. Greater than 6m street setbacks to Akuna Street result in a streetscape that is ill-defined. Solar access diagrams not provided.</p> <p>Above maximum height plane which increases shadow impact</p>	<p>Primary living and balcony areas of the majority of apartments are oriented to north, north east and north west and are articulated to respond to streetscape.</p> <p>Rear setback ma</p>	<p>Refer Section 5.6.1 of Report.</p> <p>The shadow diagrams that support the development application demonstrate the proposal will not lead to excessive overshadowing of neighbouring properties having regard to the provisions of Section 4A of the ADG.</p>
<b>3C Public Domain Interface</b> 3C-1 Transition between private and public domain is achieved without compromising safety and security	<p>The transition between private and public is not clear, with convoluted lower entry points into residential and commercial removed from the streetscape. Safety and security is compromised by having the public domain significantly below street level on Akuna Street, with reduced visibility from the streetscape.</p>	<p>Currently there is no footpath and the property boundary extends to the kerb, resulting in pedestrians having to walk within the street reserve. The proposal would increase safety by providing a dedicated pedestrian forecourt to all the shop fronts along Akuna Street.</p> <p>Retaining walls are located between the forecourt and the street boundary to make up the level difference that exists between the forecourt and the road. The level difference is greatest at the laneway but reduces towards Shoalhaven Street, Refer drawing A- 207 for details.</p>	<p>Refer Section 5.6.1 of Report. The Akuna Street pedestrian forecourt is located significantly below street level and will provide reduced visibility from the street minimising passive surveillance of this area.</p>

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3C-1 continued		Also note that a new footpath is shown on the landscape and site plans along the street frontage of Block D&E. This footpath connects across the lane into the forecourt mentioned above.	
3C-2 Amenity of the public domain is retained and enhanced	Despite offering new landscaping, significant trees on Akuna Street are being removed.  A significant portion of the public domain is located within basements with limited light/ventilation.  Removal of the forecourt from the street frontage results in public domain with limited light/ventilation.	Refer to Section 5.6.5.1 of this SEE.	Refer to Section 5.6.5.1 of Report.   Refer Section 5.6.1 of Report.
<b>3D Communal and Public Open Space</b>			
3D-1 Communal open space is consolidated, well designed, easily identifiable and useable area	647sqm of communal open space is provided for residents, which is less than 35% of that required by the ADG. Given the limited scale of the communal open space, it would be expected that the quality of this space would be higher. The provided communal open space is largely paved, with minimal planting in raised planter boxes.	The communal space has been designed by Ochre Landscape Architects. The drawings would indicate a mixture of elements not only paving. These include planter beds, water features and decking. The spaces are located between buildings and orientated to the north. ADM Architects have prepared 3d shadow analysis that confirms that more than 50% of the communal space receives 2 hours of sun mid-winter in accordance with ADG requirements.	Refer Section 5.6.1 of Report. The communal open space for residential tower D and E is not easily identifiable, and does not provide equitable access from common circulation areas.
3D-2 Communal open space can be used for a range of activities	The communal space can also act as thoroughfares for residential access, so will unlikely be suitable as space for communal activities.		Refer Section 5.6.1 of Report.

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3D-4 Public open space, where provided, responds to the existing pattern and uses of the neighbourhood	The public thoroughfares through the site are enclosed in a basement with compromised amenity and safety issues, with no precedent in the existing pattern and uses of the neighbourhood		Public access from retail arcade servicing ground floor retail premises.
<b>3E Deep Soil Zones</b> 3E-1 Deep soil zones are suitable for healthy plant and tree growth, improve residential amenity and promote management of water and air quality	The planter beds, in order to replace the deep soil requirements on the site, would require a minimum of 7% coverage of the site, resulting in 539sqm of planting with minimum 6m dimensions. Only a small fraction of this has been provided.	No deep soil zone is provided due to Town Centre/Business zone context and 100% site coverage for retail commercial premises.  Substantial planter beds are provided at residential podium level to achieve water infiltration outcomes.	Section 3E recognises that achieving this design criteria may not be possible where: <ul style="list-style-type: none"> <li>• The location and building typology have limited or no space for deep soil at ground level (eg. CBDs, constrained sites, high density areas, or in centres);</li> <li>• There is 100% site coverage or non-residential uses at ground level.</li> </ul> The ADG therefore recognises that it is difficult to achieve deep soil zones for development sites such as the subject site. The ADG does require in these circumstances that acceptable stormwater management be achieved. Stormwater management is addressed in Section 5.6.5.2 of this report.
<b>3G Pedestrian Access and Entries</b> 3G-1 Building entries and pedestrian access connects to and addresses the items public domain	Building entries are significantly below street level. Reduced visibility from the streetscape to building entries causes safety concerns.		Refer Section 5.6.1 of Report.

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3G-2 Access, entries and pathways are accessible and easy to identify	Lowered entry points from the streetscape increase entry complexity and reduces accessibility and visibility.		Refer Section 5.6.1 of Report.
3G-3 Pedestrian links through developments provide access to streets and connect destinations	<p>The pedestrian link from Shoalhaven Street to Akuna Street and Terralong Street is a stairway into the retail basement with no clear pedestrian pathway through it. This is a safety hazard and not suitable for a pedestrian thoroughfare.</p> <p>The pedestrian link from Akuna Street to Terralong Street is through a basement with a 1.5m wide pathway between a 41m blank wall and car parking. This is not suitable from a pedestrian amenity, safety or functionality point of view for what is meant to be a significant pedestrian thoroughfare.</p> <p>Pedestrian access from Terralong Street comprises a poorly delineated pedestrian pathway which leads to a retail arcade completely enclosed by a delivery truck driveway above. This is a dark, unpleasant space without natural sunlight or ventilation.</p>	Refer Section 5.6.1 of this Report.	Refer Section 5.6.1 of Report.
<b>3J Bicycle and Car Parking</b>  3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas			Car parking satisfies Council's requirements. Refer Section 5.3.1.2 of Report.

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3J-2 Parking and facilities are provided for other modes of transport	To be shown on plan.	The following bike parking has been added to the documents: <b><u>Residential</u></b> (drawing A-104) TOTAL = 42 spaces <b><u>Commercial</u></b> (drawing A-102) TOTAL = 8 spaces <b><u>Retail</u></b> TOTAL = 20 spaces	Bike parking satisfies Council requirements as shown on plan.
3J-3 Car park design and access is safe and secure	The basement car parking level is a labyrinth of blind aisles – this can simply be mitigated by removing some car parking spaces to promote clearer circulation paths in a looped arrangement.		Basement parking layout has been modified and now satisfies Council requirements.
<b>4A Solar and Daylight Access</b>			
4A-1 Optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	Solar Access diagram to be provided	ADM have indicated a “red dot” on each plan deemed to receive 3 hours of sun. The number of units achieving solar access exceeds the minimum. 3d analysis drawings are now also provided. Refer drawing A-405 and A-406.	Refer Section 5.6.3.2 of Report. Following a review of solar access diagrams prepared by the Applicant it is my view that the proposal does not provide adequate sunlight to living rooms and private balconies for a sufficient number of residential apartments.
4A-2 Daylight access is maximised where sunlight is limited	Some units do not have direct sunlight access as per the ADG compliance summary.		Refer Section 5.6.3.2 of Report.
4A-3 Design incorporates shading and glare control, particularly for warmer months	Window sun hoods are not evident on the drawings provided.		Modified plans show sun hoods.

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<b>4B Natural Ventilation</b> 4B-1 All habitable rooms are naturally ventilated 4B-2 Natural ventilation for single aspect apartments is maximised 4B-3 The number of apartments with natural cross ventilation is maximised	Refer to Compliance Summary Table REVISED for more information. Some apartments marked as cross-ventilated will likely not achieve cross-ventilation as per requirements of ADG.	ADM have indicated a "green dot" on each plan design deemed to be cross ventilating. The number of units achieves cross ventilation exceed the minimum.	Proposal complies with ventilation requirements.
<b>4C Ceiling Heights</b> 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building	With a 3m floor to floor height and an assumed 0.2m structural thickness, only 0.1m is allocated for ceiling space. A 3.3m minimum ground floor, floor to ceiling height should be provided at the street level	A 3.0m floor to floor allows for : <ul style="list-style-type: none"> <li>- 200mm slab.</li> <li>- 75mm ceiling cavity,</li> <li>- 10mm plasterboard</li> <li>- 15mm floor finish.</li> </ul> This is the consistent approach across all ADM projects. This is difficult to achieve provided the height constraints. Because the uses are likely small offices spaces rather than retail, a 2.4m finished ceiling height would be acceptable.	Ceiling height is considered adequate for intended use.

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<b>4D Apartment Size and Layout</b> 4D-1 Spatial arrangement and layout of apartments is functional, well organised and provides a high standard of amenity	Annotations of units' size on plans should be checked, as they do not correspond to the ADG compliance table in many cases. Some units' living spaces do not meet the minimum width dimensions (B206,B202). Bedrooms also undersized (D205,E201). Oversized storage rooms are provided in each apartment, which reduces the efficiency of layouts and increases building bulk. It is unclear how these rooms will function.	The matrix has been updated and corrected. Refer updated SEPP 65 report.	Plans modified and are now adequate.
<b>4E Private Open Space and Balconies</b> 4E-1 Primary private open space and balconies are appropriately sized 4E-4 Private open space and balcony design maximises safety	Private open spaces are not dimensioned. This information is required for a complete assessment. The units below street level have not demonstrated compliance with safety principles.	ADM Architects have prepared a dimensioned part typical plan for each unit block to demonstrate compliance. Refer drawing A-109	Plans modified and are now adequate.
<b>4G Storage</b> 4G-1 Adequate, well designed storage is provided in each apartment 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments	The storage in each apartment is oversized and its use appears ambiguous. Not nominated for individual apartments.	Due to space restrictions, it is not possible to allocate all the required storage within the carpark. Storage space to exceed the minimum requirements are therefore provided within all apartments as shown on plans. The areas are shown within the compliance matrix found in the SEPP 65 report.	Whilst storage mix between units and car park not consistent with ADG – proposal does provide more overall storage than required.



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<b>4I Noise and Pollution</b> 4I-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of the buildings	Acoustic isolation has not been demonstrated between the loading bay/truck driveway and apartments.	Acoustic response appended to this submission	Refer Section 5.6.3.1 of Report.
<b>4L Ground Floor Apartments</b> 4L-1 Street frontage activity is maximised where ground floor apartments are located  4L-2 Design of ground floor apartments delivers amenity and safety for residents	Akuna street apartments lowered below street level with no street activation.          Underground apartments lack amenity, and safety is not demonstrated.		Refer Section 5.6.1 of Report          Refer Section 5.6.1 of Report.
<b>4M Façades</b> 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	Finer scale articulation is not provided to the residential levels. A clear mixture of traditional materials is not evident in the design, with largely grey and white materials shown.  The built form does not respect the character of the local area, comprising a much greater scale of development without street activation, predominantly horizontal built form expression in contrast to the verticality of the Town Centre, and the building massing and	With respect to the ability of the development to meet Objectives 4M (Façades) of the Apartment Design Guide and the suggestion that finer scale articulation is not provided, we consider that this is a subjective comment and we provide the following in response: <ul style="list-style-type: none"> <li>The use of four defined buildings at the upper levels, separated by communal open space and/or the laneway ensures that the overall built form presents as smaller structures</li> </ul>	Refer Section 5.6.1 of Report. The development form does not sufficiently respect the traditional vertical built form of the Kiama town centre.

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4M-1 <i>continued</i>	streetscape interface does not adequately respond to the topography of the site.	<p>with viewing corridors between. This provides an upper scale of building which is reflective of the scale of commercial buildings in Terralong Street.</p> <ul style="list-style-type: none"> <li>The buildings contain articulation in form, material, and colours evidenced in: <ul style="list-style-type: none"> <li>The defined base, particularly when viewed from Terralong Street, established through the use of darker colours to emphasise the lower level commercial space.</li> <li>The emphasis which is placed on vertical sections within the building achieved through the framing of select windows of widows and balconies, with a darker wall colour used in the framed vertical sections.</li> <li>Varied balcony treatments at different levels though the buildings including both solid balustrade and glass handrails.</li> <li>The use of face brickwork for that section of the building which fronts Terralong Street, which is set against a backdrop of zinc cladding.</li> <li>The use of a relatively neutral colour scheme at the upper level of the building which provides opportunity for each element (such as roof overhangs and balconies) to maintain its individual prominence.</li> </ul> </li> </ul>	

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<b>4O Landscape Design</b> 4O-1 Landscape design is viable and sustainable  4O-2 Landscape design contributes to the streetscape and amenity	Removal of significant trees to Akuna Street reduces streetscape amenity.		Refer Section 5.6.5.1 of Report
<b>4P Planting on Structures</b> 4P-3 To contribute to the quality and amenity of communal and public	The provided communal open space is largely paved, with minimal planting in raised planter boxes.	The communal space has been designed by Ochre Landscape Architects. The drawings would indicate a mixture of elements not only paving. These include planter beds, water features and decking.	Refer Section 5.6.1 of Report.
<b>4Q Universal Design</b> 4Q-2 A variety of apartments with adaptable designs are provided	The adaptable apartment layouts provide an onerous burden on those adapting them to amend layouts at high cost. In one case, an inaccessible ensuite is coupled with an accessible bedroom, potentially making it redundant. More suitable arrangements should be provided.	Refer letter from Howard Mutrie access consultant specifically addressing this matter.  The submission from Howard Mutrie dated 17 <sup>th</sup> October 2017 states:  <i>The proposed changes to the units is consistent with the intent of the adaptable housing standard and is in fact quite minimal. It needs to be considered that some time has elapsed since the Standard was written and at the time it was not envisaged it would be called up in DCPs as it now is in NSW. The approach endorsed by the NSW branch of the Association of Consultants in Access Australia is to allow more change to the design provided it is planned and does not require structural changes or impact adjoining units. As a member of the</i>	Refer Section 5.6.1 of Report.

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4Q-2 continued		Standards Committee responsible for writing the Standard I am satisfied that the proposed units meet the requirements of the Standard.	
<b>4S Mixed Use</b> 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement  4S-2 Residential floors are integrated within the development, safety and amenity is also maximised	<p>The building to the South-Western portion of the site does not provide business or retail premises to Akuna Street.</p> <p>The commercial tenancies provided to the South-Eastern portion of the site are not at ground level – they are technically a basement level greater than 3m below the street level in places – with greater than 6m street setbacks to Akuna Street and landscaping/awnings obscuring views to the frontage, ensuring that they are not seen from the street and are difficult to access. This will result in a street frontage which is challenging, if not impossible, to activate.</p> <p>Some apartments are provided below the street level.</p>		<p>Refer Section 5.1.9.3 of Report.</p> <p>Refer above.</p>
<b>4T Awnings and Signage</b> 4T-1 Awnings are well located and complement and integrate with the building design	Awnings are not readily evident on the drawings. Building overhangs to the commercial level below the Akuna Street frontage block views to these uses.	An awning/balcony is provided as shown on drawings A-207. Good sight lines to/from the shop fronts to Akuna Street remain possible.	Visibility to pedestrian forecourt along Akuna Street restricted.

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<b>4U Energy Efficiency</b> 4U-1 Development incorporates passive environmental design  4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	Evidence to be provided.  The lowest floor of residential units facing Akuna Street are sunken below street level. The plans are unclear, but it appears that the bedrooms of at least 4 apartments face a blank wall underground, which is not adequate to achieve cross ventilation, which will reduce the total number below ADG compliance.		Plans show compliance.
<b>4V Water Management and Conservation</b> 4V-2 Urban stormwater is treated on site before being discharged to receiving waters  4V-3 Flood management systems are integrated into site design			Site not flood liable.
<b>4W Waste Management</b> 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	All residential waste is concentrated in one room rather than being associated with each apartment block. There are no waste chutes, which means that residents must travel up to 80m through the basement with no discernible pedestrian pathway, causing safety concerns, to convey waste and recycling to the communal residential waste area.		Council's EHO supports waste management approach. However egress for service vehicles inadequate.