

31 March 2011

610.08304 Revised Development Wind Impact 20110331

Bancor Pty Ltd  
c/o Southern Cross Asset Pty Ltd  
Suite 501, 406 Pacific Highway  
ST LEONARDS NSW 2065

**Attention: Mr Peter Zervos**

Dear Peter

**6-16 Atchison Street, St Leonards, Development  
Wind Impact of REVISED Development**

SLR Consulting Australia Pty Ltd (formerly Heggies Pty Ltd) was previously engaged by Bancor Pty Ltd to conduct a wind impact assessment of the proposed redevelopment of 6-16 Atchison Street, St Leonards. The site is bounded by Atchison Street to the south, Atchison Lane to the north, an existing 3-storey development to the east and an existing 17-storey mixed-use development to the west.

The outcomes of this DA wind assessment report were documented in:

- Heggies Report 10-8304-R2, "6-16 Atchison Street, St Leonards, Proposed Residential Tower, Environmental Wind Tunnel Test" (June 2010)

Windbreak mitigation recommendations were made in the above report to assist in achieving the appropriate wind comfort criteria throughout the year. Since that time, the development design has undergone refinement, with the main change being a decrease of five floors (and 15 m in height) but with the same overall planform shape for the remaining floors and some internal layout modifications.

We have carried out a review of the changes in geometry to the development and the previously proposed windbreak mitigation recommendations and provide an updated wind assessment for the project.

If any further information is required, do not hesitate to call me on (02) 9428 8100 or (0421) 915 597.

Yours sincerely



PETER GEORGIU

Director

( Call at any time on 0421 915 597 )

## 1 JUNE 2010 WIND ASSESSMENT OF PROPOSED DEVELOPMENT

SLR Consulting Australia Pty Ltd (formerly Heggies Pty Ltd) was previously engaged by Bancor Pty Ltd to conduct a wind impact assessment of the proposed redevelopment of 6-16 Atchison Street, St Leonards.

The site is bounded by Atchison Street to the south, Atchison Lane to the north, an existing 3-storey development to the east and an existing 17-storey mixed-use development to the west.

The outcomes of this DA wind assessment report were documented in:

- Heggies Report 10-8304-R2, *"6-16 Atchison Street, St Leonards, Proposed Residential Tower, Environmental Wind Tunnel Test"* (June 2010)

In the above study, a "Baseline" configuration was tested, representing the proposed development with *no windbreak features* such as trees, planting, etc. Windbreak features were then added to test their efficacy in ameliorating potential adverse wind conditions.

The following points summarise the key recommendations from the previous assessment:

- There is potential for localised areas both at ground level and upper level to experience wind gusts exceeding criteria relevant to comfort conditions, eg walking (relevant to footpath areas), strolling, sitting, outdoor dining (relevant to the Outdoor Café), etc.
- Locations on Atchison Street, at the end of the courtyard, experience higher wind speeds due to the northerly and southerly wind funnelling through the courtyards and in between buildings and then impacting these locations
- The Outdoor Café itself also attracts higher winds due to funnelling in between the proposed development and the adjacent building, in this instance especially for north and southwest wind directions.
- Finally, the roof level of the development will be exposed to potentially high winds of a mostly horizontal nature, requiring mostly vertical windbreak elements if it is foreseen to have a roof garden.

The June 2010 report noted that windbreak elements had already been proposed for the development such as the enclosing of apartment balconies and the large undercroft for the Café and adjacent Sitting Area.

Some additional windbreak features were recommended as a result of above wind tunnel tests, including:

- Additional landscaping for street footpath and internal lane areas, including some dense landscaping along the north and south perimeters of the courtyards.
- 2 metre high vertical windbreaks and horizontal canopies to the roof area if it was envisaged that this area was going to have a roof garden.

## 2 CHANGES TO THE PROPOSED DEVELOPMENT

Since the time of the DA Stage wind assessment, design changes have been made to the development. These are summarised in **Table 1**.

**Table 1 Design Changes to Proposed Development**

	June 2010 Geometry	March 2011 Geometry	Change
Total Floor Height	33 Storeys	28 storeys	5 storeys SHORTER
Ground Floor Landscaping	essentially the same significant landscaping		NO change
Lobby, Entries, Café	essentially the same floor plan footprint and layout		NO change
Hotel Levels	Levels 2-5 essentially the same floor plan footprint changes in internal layout on Level 2		NO EXTERNAL change
Residential Levels	Levels 6-33	Levels 6-28 same floor plan footprint some changes to internal layout	5 levels LESS (same floor plan footprint )
Roof	essentially the same floor plan and layout NO Roof Garden		NO change ( no roof garden )

As can be seen in **Table 1**, the building has essentially retained the same planform footprint but has reduced in size by 5 storeys (~15 m).

On this basis, the following can be concluded:

- The previously identified adverse conditions will remain as before, eg the channelling of winds between the proposed development and adjacent buildings for northerly and southerly winds.
- The magnitude of the previously identified adverse conditions will be no greater and, in all likelihood, decrease, compared to the previous building geometry.
- No public access areas have been identified at roof level and hence, the previous recommendation for consideration of windbreaks is no required (unless they are included for structural reasons, eg sheltering of the proposed solar panels to be located on the north half of the roof).

The previous recommendations for ground level landscaping remain as before and are shown in **Figure 1** with the revised Ground Floor plan.

It is expected that wind mitigation recommendations will be reviewed and further refined (ie specific dimensions for landscaping, any vertical screening, etc) during the detailed design stage of the development (following development approval) to ensure that wind comfort goals are achieved.

**Figure 1 Ground Level Windbreak Recommendations**

