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8th December 2010



Director, Major Infrastructure Assessment NSW Department of Planning GPO Box 39 Sydney NSW 2001 Department of Planning Received 1 0 DEC 2010 Scanning Room

Dear Sir or Madam

## Re: Sydney City Grid Project 08-0075 - Proposed City East Cable Tunnel Project

This submission has been prepared on behalf of Allianz Australia Insurance Limited (Allianz), the owners of 55 Clarence Street, Sydney in respect to the Sydney City Grid Project 08-0075. Spectrum Partners Pty Ltd is authorised to act on behalf of Allianz on this matter.

55 Clarence Street known as the "Powertel" building is located on the north-west corner of the intersection of Clarence and Margaret Streets. The site also has frontage to Kent Street to the west. The subject site is has an area of approximately 1,394sqm and the existing building has a total NLA of approximately 15,099sqm over 17 storeys.

We believe the subject property will be directly impacted upon by the City East Cable Tunnel Project. In summary, the key concerns with the project are contained in the attached letter from Hyder Consulting Pty Ltd and summarised as follows:

- 1. Noise and vibration during construction
- 2. Stress relief in rock and settlement
- 3. Effect on water table
- 4. Electromagnetic radiation and corrosion

## Conclusion

Given the proximity of the proposed works to 55 Clarence Street, the proposed City East Cable Tunnel Project has the potential for significant implications on:

the existing building;

• the on-going use of this building.

Whilst the documentation provided by the project proponents to date appears to be well researched and quite detailed regarding the broader project approach and planning Allianz believes that there is inadequate information provided for it to undertake detailed assessment of the nature and significance of the potential adverse impacts on 55 Clarence Street.

It is unclear whether there will be detailed investigations and assessments on properties such as 55 Clarence Street. It is therefore recommended that the Project Proponents consult directly with Allianz to further develop appropriate mitigation measures.

If you have any questions or wish to discuss further, please contact the undersigned on 02 92247722.

Yours sincerely,

David Mitchell Director Spectrum Partners Pty Ltd

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7<sup>th</sup> December 2010

David Mitchell Spectrum Partners Suite 1108, Level 11 109 Pitt Street SYDNEY NSW 2001 Ref AA002846-02

Dear David

### 55 Clarence - Potential Impacts of the Proposed City East Cable Tunnel Project

Further to your request we have reviewed the following documents from Energy Australia:

- 1 Letter to Resident/Buseness Manager
- 2 Community Newsletter 1 November 2010
- 3 Sydney City Grid Project Environmental Assessment for Stage 2D November 2010

From these documents we have determined the following information:

- The proposed cable tunnel is adjacent to the north-west corner of 55 Clarence Street.
- The tunnel is located approximately 22m below ground level.
- The proposed tunnel is 4m in diameter with 132kV and 33kV feeders.
- It is intended that the tunnel is fully lined and 'tanked'.

We consider that the proposed tunnel has the potential to affect the fabric of the building at 55 Clarence Street and its occupants and therefore the following issues need to be addressed:

#### Noise and Vibration during Construction

The vibration levels during construction should be kept within the DECC guidelines for offices.

A noise and vibration management plan, including the location of monitoring points, should be agreed prior to commencement of the construction of the tunnel.

A maximum allowable noise and vibration/acceleration levels should also be agreed with Energy Australia.

Dilapidation survey will allow damage to structure and finishes to be determined.

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## Stress Relief in Rock and Settlement

A detailed geotechnical investigation should be carried out with modelling to predict ground movements. We recommend that you have these assessments reviewed by a third party prior to construction.

The dilapidation survey should include all areas that can potentially be affected by the proposed construction works.

It would be possible for Hyder to make an assessment of the settlement or to review assessments made by Energy Australia's consultants.

#### Effect of Water Table

As the tunnel is proposed to be fully lined, it is unlikely to have a long term effect on the building. There is however a potential for lowering of the water table during construction if there are defects in the rock.

This risk should be assessed during the detailed geotechnical investigation. Lowering of the water table may have an effect on settlement, particularly of high level (shallow) footings and slabs on grade.

#### **Electromagnetic Radiation and Corrosion**

The rock surrounding the tunnel is likely to mitigate the potential effects of electromagnetic radiation on the building occupants. That said, the potential for corrosion of structural elements such as reinforcement in the building's foundations should be addressed.

As part of this assessment, readings of current situation should be taken and readings taken when the tunnel is operational and maximum radiation levels should be agreed

We trust the above meets your current requirements. Please contact the undersigned if you have any queries on this initial assessment.

We would be pleased to assist in your negotiations with Energy Australia.

Yours sincerely

Peter Johnsson Principal Engineer Facades / Diagnostic & Remedial