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30 March 2012

Mr Jahangir Alam
Planning Officer
Department of Planning
Major Project Assessment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Alam,

**Re: City East Zone Substation Project - Stage 2A(ii) Revised
Application No. 11_0092**

Reference is made to the City East Zone Substation Project being Major Project Application Number 11_0092 prepared on behalf of Ausgrid which is currently on public exhibition (the proposed City East Zone Substation (CEZS) and the Integrated Commercial Tower project is herein referred to as the "Project").

We are the registered proprietor of Lot1 DP59871 and Lot 2 DP217112 being the commercial office property located at 44 - 48 Hunter Street, Sydney, which shares a common wall, boundary and driveway with the Project.

44-48 Hunter Street, Sydney is a 17 storey office building with a ground floor retail tenant, 13 levels of commercial tenants, 2 basement levels offering storage and parking and a rooftop which contains the majority of the plant and machinery. At present, our property is at 100% occupancy.

I kindly request that our concerns raised in this submission with respect to the above application be considered by the Department of Planning and that we and the Department of Planning be provided with further information before the application is determined or that our concerns be addressed by way of conditions to any approval granted in respect of the application.

1. Structure

Our primary concerns are as follows:

- (a) **Ground Movement:** Given the likeliness of lateral ground movements throughout the excavation period, we note that there is little discussion within the Environmental Assessment ("EA") with regards to this issue. We require more information with detailed analyses on the predicted outcomes through the use of explicit language and plans rather than generalised statements using undefined words which are likely to give rise to ambiguity and disputes.

The Risk Assessment provided in Appendix E of the EA is silent on lateral movements, on the need for lateral support of the basement excavation faces and on risks associated with inadequate support. It is also silent on the risk arising from major temporary support having

to be provided during excavation. We request confirmation that permanent support for such ground loading will be transferred to the Project's concrete structure within the basement, as permanent rockbolts or anchors are not allowed beneath our property. We also submit that trial pits be dug to identify whether any underpinning is required under our property and if required, they should be carried out in a safe manner prior to the commencement of bulk excavation works and pursuant to an agreed licence arrangement if required.

We also request the use, at the proponent's cost, of monitoring points in key locations throughout our building to detect lateral ground movement and be measured to 1mm accuracy at agreed intervals throughout the demolition, excavation and construction periods.

- (b) Settlement:** The Risk Assessment does list "Settlement" as a risk element but the Indicative Management Measures are generalised statements. An expert review conducted by Mr. Philip Pells of Pells Consulting states that "in our opinion the Indicative Management Measures are motherhood statements, and our previous review of this issue gives us no confidence that the risks have been appropriately addressed". The expert review conducted by Mr Mike Haysler of Hyder Consulting advises that "there is the risk of damage to less ductile structural elements such as rigid masonry walls and potential cracking of concrete elements and we recommend that the effect of settlement on 48 Hunter Street be confirmed by structural analysis when the anticipated settlements are agreed".

As there is an obvious risk of damage to the structure of our property and less ductile structural elements, including masonry walls and the potential cracking of concrete elements due to settlement, we submit that the predicted effect of ground movements and settlement be confirmed and reported to us following further examination, research and structural analysis and before any work is undertaken.

We request that at the proponent's cost, regular detailed dilapidation inspections at agreed intervals be conducted during the demolition, excavation, construction and completion of the Project.

- (c) Future Development Potential of 44-48 Hunter Street, Sydney:** We note that it is likely that rock bolting under our property will be required to stabilise the rock face during excavation. The application, however, does not provide all details in respect of any rock bolting required.

We seek confirmation that on completion of the construction works there should be nothing left in or under our property that in any way affects future excavation or in any way limits the future redevelopment potential of our site. This would also include restrictions put on the loading of our site of any potential new building, due to the deep excavation of the Project.

2. Electrical Services & Electro-Magnetic

The Aurecon EMF Report contained within the EA suggests and has raised concerns regarding possible high levels of EMR along the southern substation wall of the Project, which shares a boundary with our property.

The report advises that the substation's contribution to the magnetic fields in occupied spaces in adjacent buildings is expected to be generally less than 20mG under ultimate (85th percentile) loading conditions however, it is predicted that at times there will be localised peaks of up to 50mG along our boundary wall, which is in the vicinity of the capacitor bank risers.

The report later recommends that a review be conducted by Ausgrid on the design configurations to ensure that all reasonable and practical measures, including the relevant techniques outlined in AS2067, are considered and adopted to reduce the high levels of EMR predicted to an acceptable level, along our boundary wall.

We request that a condition be imposed on the development that EMR exposure levels to our property not exceed 40mG under ultimate (85th percentile) loading conditions.

3. Mechanical Services

There are existing mechanical services located in the basement, on the rooftop and also mounted externally on the ventilation wells of our property which shares a boundary with the proposed project.

There is insufficient detail in the application to determine how the mechanical services which service our building will be protected either during and post construction. Our concerns include:

- (a) **Existing Air Conditioning Units, Sheet Metal Ductwork and Ventilation Wells:** There are air conditioning units and sheet metal ductwork mounted externally and run vertically along the side of our 2 ventilation wells and in the basement of the shared boundary, which would require adequate protection from debris and dust.

We request that further consideration be given and planning be undertaken by Ausgrid and that we are provided with a detailed plan on how our services will be protected.

Confirmation is also requested from Ausgrid that the design of the completed project will not obstruct the two ventilation wells at any time and in any way.

- (b) **Existing Air Conditioning Units, Outside Air Intakes, Exhaust Air Discharges and Cooling Tower:** There are existing air conditioning units, outside air intakes, exhaust air discharges and a cooling tower located on the roof of our building. These will require protection from dust and debris during the demolition, excavation and construction phases. Furthermore, any exhaust air discharges that are to be installed as part of the project, would need to be a sufficient distance away from any of the above services as required under Australian Standard 1668.2:1991. The direction of the discharges and the effects of wind, adjacent structures and other factors need to be taken into account as well. There is no evidence in the application that these issues have been properly considered.

We submit that consideration be given to the location of any outside air intakes for the Project to ensure that any intakes are sufficiently distanced from any of our current exhaust discharges including our cooling tower to prevent any contamination occurring.

The information contained in the EA does not clearly state the location of all the mechanical services plant for the project, which may have undue impact on the mechanical services of our building. We request confirmation and evidence that any air discharges and outside air intakes from the project have been designed to be compliant with Australian Standard 1668.2:1991 and will not directly or indirectly adversely affect our property or its occupants.

4. Acoustic & Vibration Review

Appendix M of the EA highlight the acoustic and vibration risks and provide recommendations regarding the possible mitigation measures, which are separated between the construction and operational stages below:

(a) Construction Assessment (Wilkinson Murray Report)

- (i) The report advises that the acoustic and vibration review for Stage A(i) has been conducted separately. We request a copy of the acoustic and vibration report for Stage A(i) as it involves the demolition of the existing building which will have an obvious impact on our building in terms of noise and vibration. We request the right to comment further on this issue after the opportunity to review this report.
- (ii) The construction hours suggested in section 2.1.6 of the report refer to the City of Sydney suggested construction hours however we request that the construction hours prescribed in Table 4.1 of Interim Construction Noise Guidelines 2009, Department of Environment and Climate Change are adopted.

Also we request a schedule from Ausgrid defining the expected project schedule detailing construction activities so the expected exceedances can be associated with a particular time period, which will provide us with adequate notice to advise our staff and tenants.

- (iii) We request that two vibration monitoring points are provided within our property at Ausgrid's expense - one point close to the foundations of our property and the other within a higher level of our property. These monitoring points should have both warning and halt alarms working simultaneously to apply to the following specified performance criteria below:

Type	Location	Operator Warning	Operator Halt Level
Human Comfort	Office (e.g – L3)	0.56mm/s PV	1.1mm/s PV
Building Damage	Basement/Foundation	15mm/s PV	20mm/s PV

- (iv) With regards to Section 6 of the Wilkinson Murray report, clarification is requested in respect of the construction duration. Table 2-1 (page 4) provides an estimated duration, however there is no clear correlation with the different construction scenarios defined in Section 6 and thus, it is not clear for how long each construction scenarios will occur, which is a crucial and critical issue considering that it will define for how long the noise and vibration exceedances may happen. We also need clarification as to what level (height in metres from the ground) the color map in the Construction Noise Table in 6.1 was produced.

We request that clarification be provided for page 21 of Section 6 of this report, given that the header on page 21 shows a Version B, while the rest of the document shows a Version A.

The Wilkinson Murray report suggests temporary acoustic barriers will be required to be installed on site. Although the barriers suggested in the report will be sufficient for the ground level and level 1 of our property, alternative measures are required as the proposed noise mitigation measures won't be efficient or sufficient for level 2 and above. We request that Wilkinson Murray provide façade noise map results for our property, for proper evaluation of the effectiveness of the barriers.

- (v) We need clarification as to why the noise and vibration for the proposed underground tunnel has not been assessed upon our property, given that Figure 6.2 of the report clearly shows noise and vibration exceedances in the approximate area of our property. We also need clarification as to what level (height in metres from the ground) the color map in the Construction Noise Table in 6.1 was produced inclusive for the tunnelling noise.
- (vi) Depending on the duration of the regenerated noise levels from the Rockbreakers, we recommend to apply a ground borne noise vibration criterion for the office component, acknowledging that ground borne noise criteria is only applicable to residential premises after hours. We note that the regenerated graph in section 7.3 does not explain what methods have been used to get the vibration levels results nor at which levels of the Project are these vibration levels supposed to happen.
- (vii) We request that Ausgrid conduct and provide a Construction Noise and Vibration Management Plan (CNVMP) to us for our review and comment, before the commencement of construction works.

(b) Operational Assessment (ARUP Report)

- (i) In relation to Section 3.1 of the report, we require further clarification of whether the proposed new parking on Levels 3 & 4 will be underground, or if the car park will be open or enclosed in design.

- (ii) A detailed noise and vibration assessment is required for the transformers as it is likely they may have an adverse impact to their surroundings in terms of ground borne noise and vibration.

Given the proximity of the transformers to our boundary, we request that the extent of the assessment includes the propagation and regenerated noise at the nearest receivers including our property which we discuss in further detail below.

- (iii) Our property has not been defined as a potential commercial receiver and as such an assessment has not been conducted for our location. We request that our property be included as a receiver which will require an amended report from Arup defining the noise and vibration criteria for our property. If we are not selected as a receiver we recommend the following criteria in accordance with *AS/NZS 2107 (2000) Acoustics – Recommended design sound levels and reverberation times for building interiors* or internal noise levels ranging from 30dBA as satisfactory noise levels for boardrooms to a maximum of 45dBA for general office areas. The applicable criteria at the boundary of 48 Hunter Street, should be less than 65dBA at all times.
- (iv) With reference to section 7.1 - Transformer Noise and 7.2 – Transformer Vibration, we do not have information regarding the relative location of the transformers to the boundary wall. This information is necessary to establish the impact of the noise and vibration from the transformer.

With regards to the transformer vibration, a detailed vibration analysis is required to define the isolation pads and the slab attenuation system taking into the consideration the location of the receivers inside our property as requested in statement (c) above.

- (v) Part 8 of the Operational Assessment refers to the noise and vibration impacts from the mechanical and electrical plant and although the assessment lists a preliminary selection of plant, it does not provide noise and vibration data and states that the selection of plant and machinery has not yet been finalised. A detailed noise and vibration assessment needs to be conducted once the plant selection is finalised, to ensure the impact of the plant is accounted at the receiver(s) located at our property.

The questions, issues and areas of concern contained within this submission highlight the fact that the EA for this Project does not adequately address various direct and indirect impacts from the Project which would pose serious health and safety risks.

We respectfully submit that:

- i. we be given the opportunity to comment further on those items above in respect of which we have requested further information or clarification; and
- ii. the remaining concerns be taken into consideration by the Department of Planning prior to it granting any approval in respect of the application.

I would welcome the opportunity to discuss the contents of this letter further should you wish to do so. I would also be prepared to attend a tripartite conference with representatives of the proponent and the Department to discuss possible consent conditions designed to address our concerns.

Yours sincerely,

TELADO PTY. LIMITED



Michael Coombes
Director