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EnergyAustralia

Stage 2A(i) of the Sydney CityGrid Project

Submissions Response and Preferred Project Report

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INFRASTRUCTURE | MINING & INDUSTRY | DEFENCE | PROPERTY & BUILDINGS | ENVIRONMENT

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1. Introduction

1.1 Background

EnergyAustralia developed the Sydney CityGrid Project as an integrated program of works to upgrade critical electricity infrastructure in Sydney's central business district (CBD). The Sydney CityGrid Project is comprised of a number of discrete but interrelated components, one of which involves construction of a new City East Zone Substation.

Concept Approval for the Sydney CityGrid Project was granted by the Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 20 September 2009. The Concept Approval requires further environmental assessment prior to commencement of various stages of the Sydney CityGrid Project, including the City East Zone Substation. As a result, Project Approval is now required to allow construction of the City East Zone Substation to commence.

The City East Zone Substation is an essential component of the overall Sydney CityGrid Project and EnergyAustralia is seeking Project Approval under Part 3A of the EP&A Act in the following stages:

- Stage 2A(i) – involves demolition of the existing building at the site, 33 Bligh Street (known as Kindersley House); and
- Stage 2A(ii) – involves basement excavation, 150 m tunnel section under Bligh Street and construction and operation of the City East Zone Substation and the associated commercial tower located above the substation.

An Environmental Assessment for Stage 2A(i) of the City East Zone Substation was exhibited by the Department of Planning between 22 July 2010 – 23 August 2010.

1.2 Purpose of this report

During exhibition of the Environmental Assessment, the community and other stakeholders were invited to make submissions to the Department of Planning and a total of 13 submissions were received.

The purpose of this report is to address the requirements of Section 75H(6) of the EP&A Act as requested by the Director-General by:

- Responding to the issues raised in submissions received during exhibition of the Environmental Assessment;
- Providing a Preferred Project Report that outlines proposed changes to the project described in the Environmental Assessment; and
- Finalising the draft Statement of Commitments that was provided in the Environmental Assessment.

This Submissions Response and Preferred Project Report should be read in conjunction with the Environmental Assessment.

1.3 Overview of the project

The primary objective of the Stage 2A(i) works is to initiate the redevelopment of 33 Bligh Street to facilitate construction of the City East Zone Substation. This involves demolition of the existing buildings.

Approval to excavate the basement and 150 m tunnel section under Bligh Street, and construct and operate the substation and integrated commercial tower building would be sought as part of a separate Project Application, referred to as Stage 2A(ii). Stage 2A(i) would support the implementation of, and bring forward the completion date for, Stage 2A(ii).

1.4 Change to the project following exhibition of the Environmental Assessment

Stage 2A(i) of the City East Zone Substation was described in Chapter 6 of the Environmental Assessment. In addition to the works outlined in Section 1.3, Stage 2A(i) included:

- Excavation of the basement for the City East Zone Substation, construction of a 150 m long tunnel under Bligh Street, and construction of the bridging structure over the proposed tunnels for the CBD Metro Stage 1, if required; and
- An indicative building envelope for the City East Zone Substation and associated commercial tower. The building envelope was intended to be refined during development of the design as part of Stage 2A(ii).

Since exhibition of the Environmental Assessment, Stage 2A(i) has been changed such that approval is only sought to undertake site preparation works and demolish existing buildings on the site (refer to Section 2.2). The effect of this change is that approval is no longer sought as part of Stage 2A(i) for a building envelope for the substation and integrated commercial tower building, or to excavate the basement and 150 m long tunnel section. Approval for the basement excavation, 150 m long tunnel section, and City East Zone Substation and associated commercial tower would be sought as part of Stage 2A(ii) (refer to Section 4).

As stated in Section 2.2.1 of the Environmental Assessment for Stage 2A(i), the City of Sydney granted consent to demolish the buildings on the site as part of a previous development application.

1.5 Approvals process

The Sydney CityGrid Project requires approval under Part 3A of the EP&A Act and the Minister for Planning is the approval authority. The Minister for Planning granted the following approvals under Part 3A of the EP&A Act for the Sydney CityGrid Project on 20 September 2009:

- Concept Approval for the Sydney CityGrid Project; and
- Project Approval for Stage 1 which relates to works at the Belmore Park Zone Substation site.

The Concept Approval specified that additional environmental assessment is required to obtain Project Approval for those components of the project that comprise Stage 2 of the Sydney CityGrid Project, including the City East Zone Substation.

EnergyAustralia prepared an Environmental Assessment for Stage 2A(i) of the City East Zone Substation that was publicly exhibited by the Department of Planning between 22 July 2010 and 23 August 2010. A total of 13 submissions were received during the exhibition period and the Director-General required that EnergyAustralia respond to issues raised in the submissions in accordance with Section 75H6 of the EP&A Act . This document details EnergyAustralia's response to the submissions.

The Department of Planning will evaluate the Environmental Assessment and this Submissions Response and Preferred Project Report giving consideration to the issues raised in submissions received during the exhibition period.

EnergyAustralia may proceed with the project if it is approved under Part 3A of the EP&A Act.

1.6 Structure of this report

This Submissions Response and Preferred Project Report is structured as follows:

- **Section 1:** provides an introduction and background to this report;
- **Section 2:** provides an overview of the project that is described in the Environmental Assessment;
- **Section 3:** describes the modification to the Concept Approval that was granted following exhibition of the Environmental Assessment;
- **Chapter 4:** provides the Preferred Project Report that details changes to the project that have been developed since exhibition of the Environmental Assessment;
- **Chapter 5:** provides responses to the issues raised in submissions received during the exhibition period;
- **Chapter 6:** provides the final Statement of Commitments that have been revised to reflect changes to the project and address issues raised in submissions, if necessary; and
- **Chapter 7:** concludes the report.

2. Overview of the project described in the Environmental Assessment

2.1 Staged approval of the City East Zone Substation

During the next decade, EnergyAustralia must replace critical electrical infrastructure within the Sydney CBD that is due for retirement and to comply with new licence requirements for operation of substations and transmission feeders. This licence requirement specifies that all city zone substations and transmission feeders must achieve an 'n-2' capacity which means that they must be able to supply the full electricity demand with any two transformers or feeders out of service.

EnergyAustralia has developed an integrated strategy to construct new infrastructure or refurbish existing infrastructure, while maintaining sufficient spare capacity to ensure an ongoing and reliable electricity supply. This strategy is referred to as the Sydney CityGrid Project.

Stage 2A of the Sydney CityGrid Project, known as the City East Zone Substation, is an essential component of the overall Sydney CityGrid Project and EnergyAustralia is seeking Project Approval for the substation under Part 3A of the EP&A Act in the following stages:

- Stage 2A(i) – involves demolition of the existing building at the site 33 Bligh Street (known as Kindersley House) (refer to Figure 2-1), and subsurface construction works; and
- Stage 2A(ii) – involves construction and operation of the City East Zone Substation and the associated commercial tower located above the substation. This involves detailed consideration of the built form of the development at the site.

The objective of the staged approach to the approval of the City East Zone Substation and integrated commercial tower building is to allow the Stage 2A(i) works to proceed while the final design details for Stage 2A(ii) are being refined and subsequently approved.

This staged approach to construction of the City East Zone Substation is possible because there is a high degree of certainty regarding the design requirements of the components that form Stage 2A(i) and these have been designed to ensure that there is minimal impact on Stage 2A(ii). The only element of the Stage 2A(i) works that could potentially influence or constrain the design of the substation and tower during Stage 2A(ii) relates to the foundation structure over the tunnels for the proposed CBD Metro Stage 1. The Environmental Assessment included a building envelope and proposed stratum subdivision to demonstrate that Stage 2A(i) has been developed with sufficient flexibility to accommodate future development as part of Stage 2A(ii), inclusive of the possible presence of constraints such as the CBD Metro Stage 1.

Currently, it is assumed that the Metro corridor will need to be protected as required by State Environmental Planning Policy (Infrastructure) (ISEPP) and a bridging structure is required over the tunnel alignment. The design of the bridging structure has been

developed with sufficient flexibility to minimise potential constraints on the design of the substation and integrated commercial tower building in Stage 2A(ii) and will be the subject of a separate agreement with Transport NSW.

Figure 2-1 Location map for the City East Zone Substation

2.2 Physical works undertaken as part of Stage 2A(i)

Chapter 6 of the Environmental Assessment states that the primary objective of Stage 2A(i) is to obtain approval to demolish the existing buildings at 33 Bligh Street and undertake subsurface works to facilitate construction of the City East Zone Substation. Reference should be made to Section 6.2 of the Environmental Assessment for a

detailed description of these works which, in summary, involve the following main construction stages:

- Site preparation;
- Demolition of the existing buildings at 33 Bligh Street, Sydney;
- Bulk excavation for the substation basement;
- Excavation and construction of a shaft and a 150 m section of tunnel beneath Bligh Street to the intersection of Bent Street and Bligh Street where it will interface with the City East Cable Tunnel. The City East Cable Tunnel is known as Stage 2D of the Sydney CityGrid Project and is subject to a separate Environmental Assessment; and
- Construction of a bridging structure over the alignment of the tunnels for the proposed CBD Metro Stage 1, if required.

2.3 Building envelope

The secondary objective of Stage 2A(i), as described in Chapter 6 of the Environmental Assessment, was to obtain approval for a building envelope for the subsequent development of the site that includes the substation and a commercial tower building above the substation. The building envelope is detailed in Section 6.3 of the Environmental Assessment and reflects that the City East Zone Substation would be located in the basement and podium levels, while the commercial building component would be a tower above the podium. The purpose of the podium would be to distinguish between the two components of the integrated development. The substation podium would have a height of approximately 48 m above O'Connell Street and 42 m above Bligh Street. The commercial tower would have a height of about 128.5 m above Bligh Street.

The building envelope was developed to address the following constraints relating to development of a substation at the site:

- The transformer bays in the substation require vehicle access at street level from O'Connell Street;
- Based on the area required for the five transformers and associated ancillary plant and equipment within the substation, there is limited space to provide active frontages to Bligh or O'Connell Streets that accommodate retail or commercial space; and
- The tunnel corridor for CBD Metro Stage 1 passes beneath the site. The City East Zone Substation Project must be undertaken such that it does not preclude the future viability of the CBD Metro Stage 1. This requirement limits the depth of excavation that is able to be undertaken for the City East Zone Substation Project.

Design of the substation and integrated commercial tower building will be undertaken during Stage 2A(ii) and involve a design review process (inclusive of an invited competitive design alternatives process in consultation with City of Sydney Council) that meets the requirements of MCoA 3.2. The outcomes of the design review process

would be documented in an Environmental Assessment submitted as part of an application for Project Approval for Stage 2A(ii).

During the design review process for Stage 2A(ii), EnergyAustralia would investigate all reasonable and feasible opportunities to refine the substation design to attempt to provide a ground level building line that is set back from the property boundary along the Bligh Street frontage and is generally consistent with the setback of the adjacent former NSW Club House (the Lowy Institute). This process would consider alternative internal layouts for equipment within the substation, however it would not consider options that compromise the operational requirements or the functional role of the substation as part of the overall Sydney CityGrid Project, or unreasonably impact or constrain the development of the commercial tower component.

EnergyAustralia has entered into an agreement with Investa Property Group (Investa) for joint development of the site. EnergyAustralia is responsible for development of the City East Zone Substation and Investa is responsible for development of the commercial tower building above the substation. The design of the substation and commercial tower building would be coordinated to ensure the two buildings function as an integrated development.

It is intended that construction of the substation and integrated commercial tower building would occur as a single phase such that there is little or no delay between completion of the substation and commencement of the commercial tower building. One of the primary objectives of this integrated development is to ensure that the continuous operation and maintenance of the substation is unimpeded by the commercial tower. To accommodate this requirement, the substation will be designed to enable it to be constructed and operated independently of the commercial tower.

3. Modification of the Concept Approval

3.1 Details of the modification

MCoA 3.2 was modified following exhibition of the Environmental Assessment to clarify the requirements of the design review process and the type of project to which it applies. The effect of the modification is to require that the design review process include an invited competitive design alternative process for project applications that seek approval for a building envelope or built form. MCoA 3.2, as amended, states that:

Pursuant to section 75P(1)(a) of the Environmental Planning and Assessment Act 1979, the following environmental assessment requirements apply with respect to any project application for Stage 2A and/or Stage 2B, in addition to the requirements listed under condition 3.1:

a) a design review process for the proposed City East Zone Substation (Stage 2A) and Dalley Street Zone Substation (Stage 2B) shall form part of the Environmental Assessment. The outcome of this design review process shall be provided in the Environmental Assessment. This design review process shall be based on the principles of the design review competition of the Sydney Local Environmental Plan 2005, and include consultation with Council; and

b) this requirement only applies to project applications that seek approval for a building envelope(s) or built form and does not apply to project applications that include development for the purpose of early works, demolition, excavation or site preparation.

3.2 Objectives of the modification and impact on Stage 2A(i)

A design process will not be carried out for Stage 2A(i). EnergyAustralia's application to seek building envelope approval has been deleted from the scope of works as it is now limited to early works, such as site preparation and demolition of the existing buildings.

The preferred project in Section 4 of this report details *inter alia* the removal of the building envelope and how EnergyAustralia would fulfil its commitments to meet design excellence.

Removing the building envelope from Stage 2A(i) does not alter the primary aim, objective or function of this stage of the project, which focuses on undertaking preparatory works to reduce the timeframe to deliver the City East Zone Substation and integrated commercial tower building.

The objective of the invited competitive design alternatives process is to:

- Encourage high quality and innovative design through the use of a competitive design process; and

- Achieve development that individually and collectively contributes to the architectural and overall urban design quality of the city.

Five competitors were invited to participate in the competitive design alternatives process in late 2010 and the process will be concluded in 2011. The brief for the competitive process was reviewed and endorsed by the City of Sydney Council prior to its distribution to competition entrants. The competitors were allowed a minimum of 28 days to prepare their entries.

The design alternatives were prepared by different architectural firms with demonstrated experience in the design of high quality buildings and responded to a common brief. Each alternative provide at a minimum, an indicative design solution for the site, with sufficient detail to demonstrate that it is a feasible development option and achieves design excellence. The designs were required to detail how the minimum performance requirements for the City East Zone Substation and integrated commercial tower building have been addressed.

The brief for the invited competitive design alternatives process for Stage 2A(ii) of the City East Zone Substation included the following design objectives:

1. Stimulate imaginative architectural and urban design proposals that achieve design excellence in the resolution of:
   - Urban form
   - Spatial relationships to other towers
   - Response to context
   - Activation of street frontages
   - Architectural design
   - Use of materials
   - Provide a distinctive architectural contribution to the area and the City skyline.
2. Improve the quality and significance of the public domain of the site and Richard Johnson Square;
3. Conserve and respect existing heritage items and archaeological items and streetscapes within and adjacent to the site;
4. Provide a high level of pedestrian amenity, with street level activation through public artwork in both O'Connell and Bligh Streets or other appropriate activity and connection to Richard Johnson Square;
5. Ensure that the design proposals are compatible with other approved developments and the city's planning framework;
6. Have regard to construction methodology (ie. buildability and staging); and
7. Have regard to the budget.

The competition entries are being evaluated by an assessment panel made up of six members representing the City of Sydney, Government Architect, Investa and EnergyAustralia.

The preferred design arising from the invited competitive design alternatives process would be detailed in the Environmental Assessment for Stage 2A(ii).

EnergyAustralia would provide information to the community and neighbouring stakeholders in relation to the preferred design following completion of the invited competitive design alternatives process, to ensure they are briefed in relation to the design controls required by specialist infrastructure such as the City East Zone Substation.

4. Preferred project

4.1 Change to the project described in the Environmental Assessment

EnergyAustralia propose to change the project described in the Environmental Assessment in response to the modification to MCoA 3.2 (refer to Section 3). This change involves seeking approval for the following aspects of the City East Zone Substation as part of Stage 2A(ii), rather than Stage 2A(i):

- Excavation of the basement for the City East Zone Substation, construction of a 150 m long tunnel under Bligh Street, and construction of the bridging structure over the proposed tunnels for the CBD Metro Stage 1, if required; and
- The design of the City East Zone Substation and associated commercial tower.

The effect of these changes is that Stage 2A(i) would be limited to site preparation and demolition of the existing buildings on the site. The City of Sydney granted consent to demolish the existing buildings on the site as part of a previous development application.

These changes are described in the following sections.

4.2 Elements associated with bulk excavation

Section 6.2 of the Environmental Assessment described a range of preliminary construction activities that are required to facilitate construction of the City East Zone Substation, including:

- Site establishment;
- Demolition of Kindersley House;
- Bulk excavation of the substation basement;
- 150 m long tunnel under Bligh Street and associated shaft; and
- Bridging structure over the tunnels for the proposed CBD Metro Stage 1.

Stage 2A(i) has been refined and approval is now sought only for the site preparation works, including site establishment, demolition of Kindersley House and associated ancillary activities. Approval for the remaining construction activities described in Section 6.2 of the Environmental Assessment would be sought as part of Stage 2A(ii).

4.3 The design of the City East Zone Substation and associated commercial tower

As described in Section 2.3, the building envelope of the substation and commercial tower building was included in the Environmental Assessment to demonstrate that the design of Stage 2A(i) had been developed to accommodate constraints associated with development of this infrastructure at the site. Section 6.3 of the Environmental Assessment indicated that the final design of the substation and integrated commercial

tower building would be undertaken during Stage 2A(ii) and would involve a design review process to address the requirements of MCoA 3.2.

Although the design of the substation and integrated commercial tower building would be undertaken during Stage 2A(ii), submissions raised issues associated with the following aspects of the building envelope:

- Lack of activation to both Bligh Street and O'Connell Street frontages;
- Internal layout of the substation;
- Height of the substation podium;
- Through site access;
- Façade treatment; and
- Setbacks from the Bligh and O'Connell Street property boundaries.

As detailed in Section 3, MCoA 3.2 has been modified since exhibition of the Environmental Assessment to clarify that the design review process is required to be implemented for project applications that seek approval for building envelopes or built forms, however it is not required for project applications that include development for the purpose of preliminary works, demolition, excavation, site preparation and similar preliminary activities.

The building envelope has been removed from Stage 2A(i) in response to the modification of MCoA 3.2. This change has been made to address concerns that approval of the building envelope as part of Stage 2A(i) would preclude incorporation of positive outcomes from the design review process during Stage 2A(ii). The effect of this change is that:

- Stage 2A(i) would be limited to site preparation and demolition of the existing buildings that is required to facilitate construction of the City East Zone Substation; and
- All aspects relating to the design and construction of the substation and integrated commercial tower building and 150 m long tunnel section would be addressed during Stage 2A(ii). This would involve a design review process in accordance with MCoA 3.2, as modified. This design review process would consider issues associated with the building envelope, as well as detailed design aspects of the substation and integrated commercial tower building, such as internal layouts and articulation.

As detailed in Section 3.2, removing the building envelope from Stage 2A(i) does not alter the aim, objective, or function of this stage of the project which focuses on undertaking preparatory works to reduce the timeframe to deliver the City East Zone Substation and commercial tower building as part of the Sydney CityGrid Project. EnergyAustralia remains committed to developing an integrated facility at the site.

4.4 Potential environmental impacts

The refinements to the project described in Sections 4.2 and 4.3 effectively reduces the scope of the physical works undertaken as part of Stage 2A(i) to facilitate

construction of the City East Zone Substation. The potential environmental impacts of the works that now constitute Stage 2(i) have been assessed in the Environmental Assessment and additional investigations are not required. Relative to the project assessed in the Environmental Assessment, Stage 2A(i) would:

- Have reduced noise and vibration impacts as bulk excavation for the substation basement and excavation of a stub tunnel would not be undertaken as part of this stage of the project; and
- Have reduced truck movements as spoil from the bulk excavation of the substation basement and stub tunnel would not be generated as part of this stage of the project.

The Statement of Commitments (refer to Section 6) has been revised to remove reference to approval of bulk excavation, the stub tunnel, bridging structure over the CBD Metro Stage 1, or the building envelope being part of Stage 2A(i).

EnergyAustralia consulted with the Department of Planning regarding the changes to Stage 2A(i) and the following sections address issues raised by the Department relating to noise and vibration, and traffic and transport.

4.4.1 Noise and vibration

Noise and vibration impacts are assessed in Chapter 9 of the Environmental Assessment. The largest noise and vibration impacts were associated with the use of heavy rock breakers during bulk excavation for the substation basement, and operation of the road header to excavate the stub tunnel. These activities are no longer proposed as part of Stage 2A(i).

Section 9.2 of the Environmental Assessment indicates that noise levels during demolition and general construction works are predicted to comply with the construction noise criterion.

Section 9.2.2 of the Environmental Assessment indicates that the main items of equipment that have the potential to generate substantial levels of vibration were rock breakers involved in rock excavation and a road header to conduct tunnelling activities under Bligh Street. Vibration impacts associated with demolition were not assessed quantitatively because this activity would have low levels of vibration relative to excavation of the basement and 150 m long tunnel section.

Vibration during demolition is likely to be associated with plant and machinery used to remove structural components of the existing buildings on the site, such as foundations. Vibration would be comparatively low relative to that assessed in the Environmental Assessment.

Potential noise and vibration impacts would be managed by implementing the measures described in the Statement of Commitments. This focuses on development of a construction noise and vibration management plan as part of the construction environmental management plan (CEMP).

4.4.2 Traffic and transport

Impacts on the traffic and transport network are assessed in Section 13 of the Environmental Assessment. The peak traffic impact was predicted to occur during bulk excavation of the substation basement as this activity would require approximately 192 heavy vehicle movements per day to remove spoil from the site. Bulk excavation of the substation basement is no longer proposed as part of Stage 2A(i).

The main impact on the transport network due to Stage 2A(i) would be related to the need for trucks to remove demolition waste from the site and Table 13.1 indicates that there are anticipated to be approximately 90 truck trips per day. This increase in vehicle movements is unlikely to have substantial impact on operation of the road network.

The reduction in the scope of Stage 2A(i) would not alter the temporary changes to traffic conditions in the immediate vicinity of the site that are assessed in Section 13.2.1. As such, work zones would still be required along Bligh and O'Connell Streets, there would be a temporary loss of kerbside parking to provide access to the construction site, and there would be temporary impacts on pedestrians and cyclists.

Potential environmental impacts would be managed by implementing the measures described in the Statement of Commitments. This focuses on development of a construction traffic management plan as part of the CEMP.

4.5 Potential impacts on the sequencing of Stage 2A(i) and Stage 2A(ii)

EnergyAustralia consulted with the Department of Planning and the City of Sydney, regarding the changes to the project. The Department of Planning requested advice as to whether this change is likely to result in the site being inactive for an extended period of time between completion of Stage 2A(i) and commencement of Stage 2A(ii).

Stage 2A(i) is scheduled to commence in mid 2011 and would take approximately six months to complete. While these works are underway, approval would be sought for Stage 2A(ii). It is intended that construction of the substation and integrated commercial tower building would proceed as soon as Stage 2A(i) is complete and the change to the project would not alter the sequence or schedule of construction activities. On this basis, construction would move sequentially and seamlessly from Stage 2A(i) to Stage 2A(ii) to ensure that the site is not inactive for an extended period of time.

This seamless process is fundamental to EnergyAustralia's ability to meet the overall objectives of the Sydney CityGrid Project, in particular in achieving the n-2 licence requirement.

5. Consideration of issues raised in submissions

5.1 Overview

The Environmental Assessment was exhibited by the Department of Planning from 22 July 2010 to 23 August 2010. The community and other stakeholders were invited to make submissions to the Department of Planning during this time. A total of 13 submissions were received during the exhibition period and issues raised are addressed in the following section of this report.

Many of the issues raised in the submissions relate to the building envelope or detailed design of the substation and integrated commercial tower building. As discussed in Section 4, the building envelope is no longer part of Stage 2A(i) and all issues associated with the design of the substation and integrated commercial tower building would be addressed when approval is sought for Stage 2A(ii).

The following section summarises and addresses issues that were raised in submissions. Detailed responses are not provided to issues relating bulk excavation, the building envelope, or detailed design of the substation and integrated commercial tower building as approval for these elements is not sought in Stage 2A(i) and these would be addressed during Stage 2A(ii).

5.2 NSW Office of Water

5.2.1 Issue 1 Groundwater management

The NSW Office of Water (NOW) advised that additional information, including pumping volumes, flow rates and water quality is required to determine whether a licence is required under the *Water Act 1912*.

NOW noted that the draft Statement of Commitments requires that a Water Quality Management Sub-Plan be prepared as part of the Construction Environmental Management Plan (CEMP). NOW requested that it be provided with a copy of this sub-plan and the results of geotechnical and groundwater investigations regardless of whether a licence under Part 5 of the *Water Act 1912* is considered necessary.

NOW recommended that the following be included in the Statement of Commitments relating to soil and water:

- The Proponent shall provide the NSW Office of Water with a copy of the Water Quality management Sub-Plan and results.
- The Proponent shall provide the NSW Office of Water with a copy of the results of geotechnical investigations and analysis relating to groundwater.

Response

This issue primarily relates to the potential for groundwater to seep into excavations for the basement of the substation and the stub tunnel that are no longer part of Stage

2A(i). Nevertheless, there is the potential for water to accumulate in the void that will remain following demolition of the existing buildings.

As outlined in Section 15.3 of the Environmental Assessment, a Water Quality Sub-Plan would be prepared as part of the CEMP. The Statement of Commitment relating to this Sub-Plan has been amended to reflect that it would include the following information requested by NOW:

- It would be prepared in consultation with NOW;
- Estimated pumping volumes, flow rates and water quality would be included to enable NOW to determine whether a licence is required under Part 5 of the *Water Act 1912*;
- Details regarding geotechnical investigations and analysis relating to groundwater would be included.

It is considered that these amendments to the Statement of Commitments address the intent of NOW's submission.

5.3 NSW Heritage Branch

5.3.1 Issue 1 Heritage

The NSW Heritage Branch of the Department of Planning concurs with the assessment of archaeological potential and impacts associated with the project that are described in the Environmental Assessment. The likelihood of intact archaeology at the site is minimal.

The Heritage Branch noted that the Statement of Commitments include provision for an archaeologist to inspect the residual ground surface once the basement slabs of the existing building have been removed to ensure that if any deep features, such as wells, survive that these can be recorded in accordance with Heritage Council Guidelines.

The Heritage Branch considers the views to and from the State Heritage Listed NSW Club Building (the Lowy Institute) to be of considerable significance. The design solution for the substation building is likely to adequately address the set back and view issues, however the statement of heritage impact (Appendix F of the Environmental Assessment) identified that:

- The O'Connell Street elevation required greater modulation than is apparent in the massing studies and could be achieved through the use of a variety of material, articulation and modulation of the podium. This would be considered during Stage 2A(ii) of the City East Zone Substation; and
- The south-eastern corner of Bligh Street is a critical corner and presentation to Richard Johnson Square and Hunter Street. During Stage 2A(ii), care should be taken in the articulation of this corner to the substation.

The Heritage Branch supports these comments and notes that the Statement of Commitments includes a design review process to be undertaken during Stage 2A(ii)

of the project. The Statement of Commitments is sufficient to manage the impacts of the project.

Response

The Heritage Branch's submission supports the findings of the Environmental Assessment relating to impacts on heritage and archaeology and indicates that the Statement of Commitments is sufficient to manage the impacts of the project.

5.4 City of Sydney

5.4.1 Issue 1 Design excellence

The City of Sydney noted that the Environmental Assessment proposes a 10% increase in the floor space ratio in accordance with Clause 10 of the Sydney LEP 2005. It states that although the Environmental Assessment argues that the provision of the additional power is a public benefit, design excellence in the built form and a contribution to the public domain should be factored in, such as a proposal for an integrated public area and upgrade of Richard Johnson Square.

Response

As discussed in Section 4.1, Stage 2A(i) no longer includes the building envelope. All issues associated with the design of the substation and integrated commercial tower building, such as a 10% increase in the floor space ratio, would be assessed during preparation of the Environmental Assessment for Stage 2A(ii). This would involve a design review process that includes an invited competitive design alternatives process as required by environmental assessment requirements in MCoA 3.2 (refer to Section 3). This process would aim to develop a design that achieves design excellence.

5.4.2 Issue 2 Streetscape and public domain interface

The City of Sydney acknowledged that the detailed design of the substation and integrated commercial tower building would occur in Stage 2A(ii) and be subject to a design review process, but noted concern over the lack of activation to both the Bligh Street and O'Connell Street frontages. The City of Sydney requests that further detail and articulation of the proposed façade treatment and street activation be heavily considered and explored in the subsequent Stage 2A(ii) project application and design review phase. This should investigate opportunities to integrate engaging public art on either or both the Bligh Street and O'Connell Street frontages, and also a creative approach to the possible upgrade of Richard Johnson Square.

Response

This issue relates to aspects of the detailed design of the substation and integrated commercial tower building that would be considered as part of the design review process implemented during Stage 2A(ii). EnergyAustralia has consulted with the City of Sydney and confirmed that this process would investigate opportunities to incorporate public art, provide an active street frontage, and upgrade Richard Johnson

Square. The process would not consider options that compromise the operational requirements or functional role of the substation as part of the overall Sydney CityGrid Project, or unreasonably impact or constrain the development of the commercial tower building.

The design objectives detailed in Section 3 would guide the invited competitive design alternatives process and specifically refer to improvements in the quality of the public domain and street level activation in the vicinity of the site.

5.4.3 Issue 3 Heritage

The City of Sydney notes that although the site is not located within a Special Area or identified heritage streetscape, the precinct is of significance due to the historic, aesthetic and social values related to the early colonial period of development and subsequent development through to the 20th century. The precinct comprises a high proportion of State significant heritage items that are listed in the Sydney LEP 2005 and State Heritage Register. The City of Sydney considers that the excessive height of the podium and the lack of street setback of the tower would erode the character of the precinct as established by existing heritage items.

The City of Sydney raised specific concerns relating to two adjacent heritage items; the former NSW Club Building (the Lowy Institute) and AFT House. It considered that the design of the substation and integrated commercial tower building should provide a sympathetic response in terms of the scale, massing, setbacks, façade articulation, proportioning and detailing to complement and reinforce the heritage qualities of the surrounding heritage items.

Response

As discussed in Section 4.1, Stage 2A(i) is limited to preparatory works to facilitate subsequent construction and operation of the substation and commercial tower. The issue outlined above relates to aspects of the detailed design of the substation and integrated commercial tower building that would be considered as part of the design review process implemented during Stage 2A(ii). Opportunities to provide a design solution that is sympathetic to the heritage significance of buildings in the vicinity of the site would be investigated during this process. This is reflected in the design objectives which relates to development of a design that conserves and respects existing heritage items and archaeological items and streetscapes within and adjacent to the site (refer to Section 3.2).

5.4.4 Issue 4 Traffic

The City of Sydney raised the following issues relating to traffic and access:

- The City of Sydney is to be the approval body for the Construction Traffic Management Plan;
- Truck routes must be included in the Construction Traffic Management Plan and must form part of the contract with, and be distributed to, all truck drivers;

- All vehicles must enter and exit the site in a forward direction. If a one off reversing movement is required, the applicant should seek an exemption to this condition from the City's Construction Regulations Unit;
- All Traffic Control Plans associated with the Construction Traffic Management Plan comply with the Australian Standards and RTA's Traffic Control and Work Sites Guidelines;
- The site must provide bicycle parking and end trip facilities to comply with the NSW Department of Planning Guidelines to Walking and Cycling. Estimations of the numbers of staff should be based on floor area calculations; and
- The Environmental Assessment shows two driveways along the O'Connell Street frontage, one for access/egress to the basement car park and another for access to the substation. The City requests EnergyAustralia provide details of why the driveways cannot be combined, as well as information outlining the likely frequency of use of the second driveway.

Response

The Construction Traffic Management Plan would form part of the CEMP submitted to the Director-General for approval. As such, the City of Sydney would not approve the Construction Traffic Management Plan.

The Statement of Commitments reflects that the Construction Traffic Management Plan would be prepared in consultation with the RTA and City of Sydney. To address the issues raised by the City of Sydney, the Statement of Commitments relating to the Construction Traffic Management Plan has been amended to:

- Refer to the need for heavy vehicle routes to be selected to minimise impacts on the road network and vehicle kilometres travelled and for these routes to be communicated to truck drivers. Where practicable, these routes would involve using arterial roads such as the Eastern Distributor in preference to city streets;
- Reflect that all vehicles must enter and exit in a forward direction, where practicable; and
- Confirm that all Traffic Control Plans associated with the Construction Traffic Management Plan comply with the Australian Standards and RTA's Traffic Control and Work Sites Guidelines.

The provision of bicycle parking facilities to comply with the NSW Department of Planning Guidelines to Walking and Cycling relates to an aspect of the design of the substation and integrated commercial tower building that forms part of Stage 2A(ii).

As discussed in Section 6.3.4 of the Environmental Assessment, separate vehicle access points are required for the substation and integrated commercial tower building because access to the substation must be restricted to authorised personnel only. This issue relates to the detailed design and would be addressed in further detail in Stage 2A(ii).

5.4.5 Issue 5 Alignment levels

The City of Sydney noted that the Stage 2A(i) Environment Assessment does not appear to seek approval to set floor levels although bulk excavation is proposed. It is assumed that the intention is for floor planning levels to be set during the Stage 2A(ii) Project Application.

Response

The floor planning levels relate to an aspect of the design of the substation and integrated commercial tower building that would be addressed during Stage 2A(ii).

5.4.6 Recommended development conditions

The City of Sydney provided text for conditions that were requested to be included in the approval. These are outlined below, along with EnergyAustralia's response.

Design modifications

The City of Sydney requested that a condition be imposed that require modifications to the design of the building which include:

- The provision of articulation at street level, with a minimum setback of 500 mm from O'Connell Street frontage;
- The use of compatible façade articulation, proportioning and detailing to compliment adjacent and surrounding heritage qualities;
- The integration of façade articulation through the incorporation of interpretive public art on both Bligh and O'Connell Street frontages;
- The incorporation of high quality materials in the construction of the facades of the podium on Bligh and O'Connell Streets to enhance the reference to the sandstone and trachyte stone in surrounding heritage buildings; and
- The pavement detail of the recessed entry on Bligh Street is to be Austral 'verde'.

Response

This requested condition relates to the design of the building and would be addressed during the detailed design assessment in Stage 2A(ii).

Schedule of conservation works

Demolition of existing buildings on the site would reveal the condition of the southern elevations of the former NSW Club Building (the Lowy Institute) and AFT House. Once excavation has been undertaken it would be difficult to ascertain the repairs required to the southern elevations of these buildings. The City of Sydney requested that, prior to the commencement of excavation works, a Schedule of Conservation Works is to be prepared identifying conservation works that are to be undertaken in conjunction with the approved works. The Schedule of Conservation Works must be prepared by a heritage architect and submitted to and approved by Council prior to release of the Construction Certificate.

Response

The intent of this condition has been addressed by amending the Statement of Commitments to reflect that a Schedule of Conservation Works would be prepared in consultation with the Heritage Branch of the Department of Planning.

Heritage interpretation strategy

It was requested that a condition be imposed requiring preparation of a brief heritage interpretation strategy of the site as it was the former offices of Walter Burley Griffin. It advises that the interpretation strategy must detail how information on the history and significance of the remaining fabric of the site would be provided for the public and make appropriate recommendations regarding the appropriate location and display.

Response

Non-indigenous heritage assessments undertaken for the Environmental Assessment indicate that Kindersley House does not have any heritage significance. As such, EnergyAustralia does not propose to prepare a heritage interpretation strategy for this building.

Photographic archival documentation

It was requested that a condition be imposed requiring archival photographic recording of the existing buildings at the site in accordance with the NSW Heritage Office guidelines titled 'Photographic Recording of Heritage Items using Film or Digital Capture'.

Response

As Kindersley House does not have any heritage significance, photographic archival recording would be limited to the facades of the NSW Club Building (the Lowy Institute) and AFT House that would be exposed following demolition of Kindersley House.

Archaeological monitoring

It was requested that a condition be imposed requiring the initial bulk excavation of the site and removal of the basement floor slab to be monitored by a suitably qualified archaeologist.

Response

Approval for bulk excavation is no longer sought as part of Stage 2A(i).

The request that the site be inspected by a suitably qualified archaeologist following removal of the basement floor slab is consistent with the mitigation measure detailed in Section 10.3 of the Environmental Assessment and Statement of Commitments (refer to Table 1).

Vehicle footway crossing

It was requested that a condition be imposed requiring that a separate application be made to Council for the construction of any proposed vehicle footway crossing or removal of any existing crossing.

Response

As detailed in Section 13.3 of the Environmental Assessment, a pedestrian management plan would be developed as part of the CEMP to minimise potential impacts on pedestrian and cyclist movements. This would detail specific measures to be implemented to minimise impacts on pedestrian safety during activities that occur on the footpaths adjacent to the Bligh and O'Connell Street frontages, as well as vehicle access and egress to the site. This plan would be prepared in consultation with the City of Sydney.

Public domain plan

It was requested that a condition be imposed requiring preparation of a Public Domain Plan as part of Stage 2A(ii).

Response

This issue relates to an aspect of the detailed design that would be addressed during Stage 2A(ii).

Temporary ground anchors, temporary shoring and permanent basement/retaining walls affecting road reserve

The City of Sydney indicated that for temporary shoring, a separate application under Section 138 of the *Roads Act 1993* must be lodged with Council.

It was requested that a number of reports and investigations be submitted and undertaken throughout the project including:

- Submission of a dilapidation report of adjoining structures and investigation of public utility services to the principal certifying authority and Council prior to the issue of a construction certificate;
- Evidence of a $10 million public liability insurance policy indemnifying the City of Sydney and a bank guarantee in accordance with the Council's fees and charges, if works are adjoining a public way;
- Survey of utility services and submission and approval of certified structural drawings and a geotechnical report to the principal certifying authority and Council;
- Prior to issue of the occupation certificate, the principal certifying authority must receive written and photographic confirmation that the restoration of the public way has been complete; and
- The bank guarantee maybe be released after the principal certifying authority certifies that all works as requested have been completed and that there is no remaining instability, damage or unevenness to the public domain as a result of the development.

Response

As EnergyAustralia is a public authority, consent is not required under Section 138 of the *Roads Act 1993* to undertake works within an unclassified road.

As indicated in the Statement of Commitments, dilapidation surveys would be undertaken of surrounding services and structures prior to and following completion of

construction. Damage attributed to the project would be rectified at EnergyAustralia's expense.

As a State owned corporation, EnergyAustralia does not propose to provide a public way bank guarantee. The intent of the requested conditions relating to bank guarantees would be achieved by including a condition in the MCoA that would be prepared in consultation with the Department of Planning. This condition would require that any damage to public areas attributed to the project is repaired by EnergyAustralia as part of the project.

Street tree protection

It was requested that a condition be imposed relating to measures to be implemented to protect street trees during construction.

Response

As indicated in Section 6.2.1 of the Environmental Assessment, where there is a requirement for street trees to be removed, the contractor would implement reasonable and feasible measures to refine the construction method to minimise the number of trees to be removed. Any street trees removed would be replaced with advanced stock as part of Stage 2A(ii) and the species would be selected in consultation with the City of Sydney Council. The Statement of Commitments has been amended to reflect that the City of Sydney would be consulted regarding measures to be implemented to protect street trees.

Footpath damage bank guarantee

It was requested that a footpath damage bank guarantee be lodged with Council and submitted as an unconditional bank guarantee in favour of Council as security for repairing any damage to the public domain in the vicinity of the site.

Response

As a State Owned Corporation, EnergyAustralia does not propose to provide a footpath damage bank guarantee. The intent of the requested condition relating to provision of bank guarantee would be achieved by including a condition in the MCoA that would be prepared in consultation with the Department of Planning. This condition would require that any damage to footpaths attributed to the project is repaired by EnergyAustralia as part of the project.

Noise and vibration management

This requested condition detailed information that should be provided in a construction noise and vibration management plan.

Response

The Statement of Commitments indicates that a noise and vibration management plan would be included in the CEMP for the project and includes specific requirements similar to those listed by the City of Sydney. As such, it is considered that the intent of the condition requested by the City of Sydney has been addressed by the Statement of Commitments.

Traffic management

It was requested that a condition be imposed relating to a range of traffic issues that are to be addressed to ensure that potential impacts are appropriately managed during construction of the project.

Response

The intent of this condition is addressed in Section 13.3 of the Environmental Assessment which reflects that a construction traffic management plan would be prepared in consultation with RTA and the City of Sydney Council as part of the CEMP. This plan would include measures to manage potential impacts on the traffic and transport network. The requested condition also relates to the design and layout of access and parking facilities on the site and these matters would be addressed during Stage 2A(ii).

5.5 The Lowy Institute

5.5.1 Issue 1 Proposed splitting of the environmental assessment and determination of Stage 2A into two substages

The Lowy Institute noted that the Concept Plan Approval allows for the further assessment of each sub-stage (or combination of sub-stages) of the Sydney CityGrid Project as separate project applications but does not believe that the splitting of sub-stages into further components (such as Stage 2A(i)) is permitted. It is considered that Stage 2A(i) application fails to undertake the proper design process, consultations or environmental assessment required by the Concept Plan Approval. It attempts to establish a building envelope, subsurface foundational works and stratum subdivision of the substation and integrated commercial tower building without undertaking the correct and required environmental assessment process established within the Concept Plan approval. The process is considered to be flawed and unlawful.

Response

EnergyAustralia consulted with the Department of Planning regarding seeking approval for the City East Zone Substation in two stages. Section 75E(4) of the EP&A Act enables a project application to be submitted for part of a project. As such, the project application for Stage 2A(i) is considered to be lawful. EnergyAustralia will continue to seek Project Approval for Stage 2A as sub-stages 2A(i) and 2A(ii). Nothwithstanding this, a Section 75W modification to MCoA 3.2 has clarified the scope of sub-stages 2A(i) and 2A(ii).

5.5.2 Issue 2 Competitive design process

The principles of Sydney LEP 2005 require a competitive design process where a number of architects prepare concepts for the development for the site with the view of presenting the best design solution. The Lowy Institute is not aware of any competitive design review process that has been undertaken to alternate schemes with the current proposal. There has been no peer review or competitive design element within the

development of this significant site as per the statutory requirements of Sydney LEP 2005.

The design review process condition of the Concept Plan Approval requires consultation to be undertaken with Sydney City Council as part of any environmental assessment of a project application for any stage of the development. The Lowy Institute believes that Sydney City Council has required that a design competition process be undertaken for the City East Zone Substation but no such process has been initiated by EnergyAustralia.

Response

MCoA 3.2 was modified following exhibition of the Environmental Assessment and an invited competitive design alternatives process is required to be undertaken for project applications that seek approval for building envelopes or built form. Section 4 indicates that approval is not being sought for a building as part of Stage 2A(i) and that all aspects relating to the design of the substation and integrated commercial tower building would be addressed in Stage 2A(ii). This would include a design review process that incorporates an invited competitive design alternatives process. This process would achieve the aims of design excellence while maintaining the necessary design controls required by specialist infrastructure such as the substation. As discussed in Section 3.1 the City of Sydney Council would review and endorse the design brief prior to issue to the competition entrants.

5.5.3 Issue 3 Impact on heritage significance of the NSW Club Building

Design of the building envelope

The Lowy Institute raised concerns relating to adverse impacts on the heritage significance of the former NSW Club Building due to the building envelope described in Section 6.3 of the Environmental Assessment.

These concerns include:

- The proposed building envelope indicated within the current Stage 2A(i) application will provide a substantial built mass to the street frontage that will reinforce the substation as the 'solid' within the streetscape, will further dwarf the heritage listed public open space area and obscure view to the heritage listed Lowy Institute building from Bligh Street and Richard Johnson Square.
- The eight storey high vertical slot currently proposed adjacent to the Lowy Institute building is a tokenistic attempt to address heritage issues that will appear as a 'mass scar' in the built form along Bligh Street rather than enhance the quality and definition of public domain that integrates with Richard Johnson Square and complements the adjoining significant heritage building within the streetscape. It does not provide a through site link between Bligh and O'Connell Streets as it does not directly connect between the two streets and has no activity along its length.

- The current project application is inconsistent with the establishment planning principle of the Land and Environmental Court in respect to the consideration of building envelopes on sites adjacent to a heritage item.

Response

The project has been amended so the building envelope does not form part of Stage 2A(i) (refer to Section 4.1). The issues outlined above relate to aspects of the detailed design of the substation and integrated commercial tower building that would be considered as part of the design review process implemented during Stage 2A(ii). Opportunities to provide a design solution that is sympathetic to the heritage significance of buildings and pedestrian amenity in the vicinity of the site would be investigated during this process. This is reflected in the design objectives that would form part of the brief for the invited competitive design alternatives process (refer to Section 3).

Issue 4 Consultation with the Heritage Council of NSW

The Concept Approval requires that consultation with the Heritage Council of NSW be undertaken as part of any environmental assessment of a project application for any stage of the development. The Lowy Institute is not aware of any consultation that has been undertaken with the Heritage Council in respect to the building envelope proposed for the site.

Response

The Heritage Council of NSW provides advice on heritage matters to the Minister responsible for heritage in NSW. The Council receives advice and administrative support from the Heritage Branch of the Department of Planning.

As indicated in Section 4.2.5 of the Environmental Assessment, the Heritage Branch of the Department of Planning was consulted during preparation of the Environmental Assessment. Issues raised by the Heritage Branch were addressed during preparation of the Environmental Assessment.

The Heritage Branch provided a submission in response to exhibition of the Environmental Assessment. This submission supports the conclusions of the Environmental Assessment and states that the Statement of Commitments is considered sufficient to manage the impacts of the project.

Further consultation would be undertaken during Stage 2A(ii) regarding potential impacts on the heritage significance surrounding structures that may be associated with the design of the substation and commercial tower. This would include consideration of impacts on the former NSW Club Building (the Lowy Institute).

5.5.4 Issue 4 Internal design of the proposed substation

Internal design and alternative design solution

The Lowy Institute acknowledged that one of the key components of the building envelope relates to the proposal to establish five transformers at ground level with vehicle access from O'Connell Street. The conceptual floor plan provided in the

Environmental Assessment is based on the five transformers being in a line extending from the O'Connell Street frontage to the Bligh Street frontage.

The Lowy Institute suggest that alternative internal layouts should be investigated to enable appropriate setbacks from the Bligh and O'Connell Street frontages to be achieved. This would improve access arrangements and streetscape settings from both frontages and allow for a through site link.

The Lowy Institute request that prior to any further assessment of the current application or any consideration of a building envelope on the site that EnergyAustralia provide an alternate design solution that responds more appropriately to the significant planning constraints of the site.

Response

As discussed in Section 4.1, the project has been amended and the building envelope does not form part of Stage 2A(i). The issue outlined above relates to the design of the internal layout of the substation which is an aspect of the detailed design that would be considered during the design review process implemented for Stage 2A(ii).

During the design review process for Stage 2A(ii), EnergyAustralia would investigate reasonable and feasible opportunities to refine the substation design to attempt to provide a ground level building line that is set back from the property boundary along the Bligh Street frontage and is generally consistent with the setback of the adjacent former NSW Club House (the Lowy Institute). This process would consider alternative internal layouts for equipment within the substation, however it would not consider options that compromise the operational requirements or its functional role of the substation as part of the overall Sydney CityGrid Project, or unreasonably impact or constrain the development of the commercial tower component.

In terms of the basic transformer layout, there are numerous construction and operational constraints that must be factored in, for example, the size and configuration of the transformer bays. This is due to the need to accommodate transformer installation, cable access, ventilation risers, structural columns, lifts, transformer cooling pipes, equipment hatches, fires stairs and other services. Due to the constrained site, little additional space exists in the substation and car parking levels. The design of a substation is complex and must meet operational standards.

Considering the above imperatives and constraints, it is believed that the invited competitive design alternatives process and the design objectives discussed in Section 3.2 will address the issues raised by the Lowy Institute.

Alternative sites

The Lowy Institute noted that no information has been provided regarding other sites that were considered within the vicinity identified within the Concept Plan approval.

Response

As indicated in Section 3.5 of the Concept Environmental Assessment, the preferred location for the new City East Zone Substation is driven by the broader electricity network planning considerations and needs to be in the northern section of the CBD,

preferably within the vicinity of Phillip, Bent, Bligh and O'Connell Streets. The Concept Approval indicates that the City East Zone Substation is to be located within this area.

EnergyAustralia investigated potentially suitable available sites in this area for the purposes of establishing a substation and integrated commercial tower building. Sites of the required size and configuration are extremely limited, however 33 Bligh Street met EnergyAustralia's initial criteria and was considered suitable at the time of purchase. Subsequently, Sydney Metro's tunnel alignment moved to be located under the site and has been offered protection under the SEPP to maintain the proposed tunnel corridor. This has meant that there is a constraint on the depth of excavation able to be undertaken at the site.

5.5.5 Issue 5 Human health and electric and magnetic fields

The Concept Environmental Assessment states that "independent studies would be carried out on the electric and magnetic field impact for each element of the proposal". The Lowy Institute is not aware of any detailed study on the issue of electric and magnetic fields within this current application and believe that, prior to any further consideration of this project on this site, an appropriate independent study is undertaken and exhibited for public comment.

Response

The statement in the Concept Environmental Assessment that is referred to by the Lowy Institute relates to an assessment of the impact of electric and magnetic fields associated with electricity infrastructure installed as part of the Sydney CityGrid Project. As Stage 2A(i) does not include installation of any electricity infrastructure, an assessment was not required to be undertaken as part of the Environmental Assessment.

An assessment of electric and magnetic fields from the City East Zone Substation would be outlined in the Environmental Assessment for Stage 2A(ii). EnergyAustralia designs all its infrastructure to comply with national and international guidelines and standards on electric and magnetic fields.

5.5.6 Issue 6 Noise and vibration implications

Both the physical structure and the internal use of space within the Lowy Institute for International Policy is sensitive to noise and vibration associated with both the construction and operation of the proposed substation. It is considered that given the sensitivity of the structure and operations of the adjoining heritage building the most stringent best practice procedures should be implemented during the construction and operation of the project.

Response

EnergyAustralia recognise that construction of Stage 2A(i) has potential to result in noise and vibration impacts on surrounding sensitive receivers including the Lowy Institute.

Section 9.2 of the Environmental Assessment assessed the potential noise impacts of demolition and general construction works and concludes that the predicted noise levels comply with the evening and extended Saturday construction noise criterion.

Section 9.3 of the Environmental Assessment outlines management measures to be implemented to mitigate noise and vibration impacts and includes preparation of a noise and vibration management plan as part of the CEMP. The plan would detail the mitigation, monitoring and community liaison measures to be implemented and would be updated to incorporate additional measures that emerge as the project design evolves and work methodologies become better defined. It would identify all reasonable and feasible mitigation measures that would be implemented to manage noise and vibration impacts.

EnergyAustralia recognises it is important to ensure that the community surrounding the site is consulted during the development of the CEMP and kept informed during construction of the project. The Statement of Commitments reflects that a Community Information Plan would be prepared to address the requirements of MCoA 4.3 of the Concept Approval. This would include the community communications and consultation processes to be undertaken during Stage 2A(i) and would include specific consultation regarding issues such as noise, vibration, and traffic and access impacts.

The Community Information Plan would detail the community relations program to be implemented to consult with and inform the potentially affected community of progress of the works. Any anticipated substantive changes to noise and vibration emissions prior to critical stages of the works would be discussed. Close liaison would be maintained with communities and stakeholders surrounding the site, including the Lowy Institute, to understand operations and event programs and identify specific issues that need to be considered, such as respite during major functions.

Noise and vibration impacts associated with excavation of the basement, construction of the 150 m tunnel section, construction of the bridging structure over the tunnels for CBD Metro Stage 1, and operation of the substation and integrated commercial tower building would be assessed during Stage 2A(ii).

5.6 Sydney Water

5.6.1 Issue 1 Existing Sydney Water infrastructure

Sydney Water referred to a previous letter to EnergyAustralia that indicates further information is required to ensure that the project does not compromise the structural integrity of critical water and wastewater mains and the State heritage listed Bennelong Stormwater Channel.

Sydney Water advised that EnergyAustralia will need to provide more detailed structural assessments at the concept and design stages of the project for their approval, including:

- A plan and long section describing the location and level of Sydney Water's infrastructure in relation to the proposed City East Zone Substation basement excavation and stub tunnel works; and
- Geotechnical assessment of the potential vibration impacts of the construction works on Sydney Water's infrastructure and any proposed measures to mitigate these impacts.

Response

This issue primarily relates to the concerns that bulk excavation may impact on Sydney Water's existing assets, such as the Bennelong Stormwater Channel. Approval for excavation of the basement, construction 150 m long tunnel section, and construction of the bridging structure over the tunnels for Stage 1 of the CBD Metro is not sought as part of Stage 2A(i)

EnergyAustralia would continue to consult with Sydney Water during development of the project and this would involve providing more detailed structural assessments at the concept and design stages of the project for Sydney Water's approval. It is anticipated that the information requested by Sydney Water would be available in mid 2011.

5.6.2 Issue 2 Conditions of approval

Consistent with EnergyAustralia's Statement of Commitments, Sydney Water requested that the following be included as a condition of approval:

A detailed condition assessment (dilapidation survey) of the Bennelong Stormwater System must be carried out prior to construction commencement, and upon completion of construction works. The condition assessment should be undertaken by physical traverse between the nearest conduit manhole access points upstream and downstream of 33 Bligh Street. The condition assessment must include digital video capture. A copy of the condition assessment reports, and digital video information must be provided to Sydney Water's Stormwater Group.

Response

As outlined in the Statement of Commitments (refer to Table 1), dilapidation surveys of surrounding buildings, services and structures would be undertaken prior to and following completion of construction works. As this would include a dilapidation survey for the Bennelong Stormwater System, the Statement of Commitment is considered to adequately address this issue.

5.6.3 Issue 3 Sydney Water servicing

Following development approval, EnergyAustralia will need to apply to Sydney Water for building plan approval. This application will allow Sydney Water to identify any required controls, risk mitigation measures or works required to Sydney Water infrastructure as a result of the project.

Developers must fund any adjustments needed to Sydney Water infrastructure as a result of any development. The developer should engage a Water Servicing Coordinator to obtain a Section 73 Certificate and manage the servicing aspects of the project.

Response

As indicated in Section 4.2.3 of the Environmental Assessment, ongoing consultation would be undertaken with Sydney Water during development of the project to identify and obtain any approvals required. EnergyAustralia would fund any works that are required to Sydney Water assets as a result of the project and engage a Water Servicing Coordinator to obtain a Section 73 Certificate and manage the servicing aspects of the project.

5.6.4 Issue 4 Works deed

Prior to work commencing, EnergyAustralia may need to enter into a works deed with Sydney Water to minimise the risks to Sydney Water's critical assets. The term of the deed may include specific requirements for the points below, and would depend on the final Concept Plan. Sydney Water would provide specific details of the works deed when the application is submitted for building plan approval.

This agreement would need to consider:

- Vibration monitoring and the impacts on Sydney Water's assets;
- Effecting and maintaining the appropriate level of insurances such as public and products liability, and project specific professional indemnity to cover liability for breach of professional duty arising out of any negligence, whether in relation to errors in design, documentation, supervision, or other professional duties by the developer, the designer or the contractor. The level of insurance would depend on the potential risks associated with the final development;
- Preparation of an incident management plan, to the satisfaction of Sydney Water, to ensure that all events and incidents are adequately managed;
- Facilitating a risk workshop to determine potential risks associated with the final concept plan; and
- Bearing all costs in carrying out design and construction works.

Response

EnergyAustralia would continue to consult with Sydney Water during planning and implementation of Stage 2A(i) and this would determine whether a works deed is required.

5.6.5 Issue 5 Sydney Water e-planning

Sydney Water advised that any statutory or strategic planning documents that need to be reviewed by Sydney Water should be forwarded to Sydney Water Urban Growth Strategy team at urbangrowth@sydneywater.com.au. The use of this email will help

Sydney Water provide advice on planning projects in line with current planning reforms.

Response

EnergyAustralia notes that any further statutory or strategic planning documents should be submitted to this Sydney Water email address.

5.7 ACE Insurance Limited

5.7.1 Issue 1 Demolition

The Environmental Assessment suggests that the demolition technique proposed for the existing improvements to the subject site includes the use of the existing lift shaft as a discharge chute for demolished materials. This activity could cause noise and vibration disruption to nearby building occupants and we request clarification on how this disruption will be limited during normal working hours.

Response

Measures to manage noise and vibration during demolition would be included in the construction noise and vibration management plan. This would include breaking down items prior to them being placed at the bottom of the lift shaft and then removed from site.

5.7.2 Issue 2 Construction work hours

The submission notes that the general construction hours are relatively standard for the CBD and noise intensive works are proposed to be permissible during most hours of the day. ACE Insurance Limited does not believe this is acceptable and considers that works creating excessive noise and vibration should be limited to outside business hours.

Response

The proposed construction hours are consistent with those applied to other projects in the CBD and are supported by DECCW (refer to Section 5.11). As there are a number of receivers in the vicinity of the site that are sensitive to noise and vibration impacts, such as the Radisson Hotel, it is not considered appropriate to undertake noise intensive works outside the proposed construction hours.

As outlined in Chapter 9 of the Stage 2A(i) Environmental Assessment, demolition and construction noise levels are expected to comply with noise criterion. Mitigation measures would be implemented to ensure the noise is reduced where feasible and include preparation of a noise and vibration management plan and establishment of a community relations program as part of the CEMP. Further detail of these measures is outlined in Section 9.3 of the Environmental Assessment.

5.7.3 Issue 3 Structure

Structural integrity

Concern was raised regarding the structural integrity of the ACE Insurance Limited building. It was requested that EnergyAustralia monitor the impact of construction on this property throughout the demolition and construction phases, including the requirement to install movement detection equipment in the basement car park of 28-34 O'Connell Street.

Response

As detailed in the Statement of Commitments, EnergyAustralia would conduct dilapidation surveys to allow an assessment to be made of any impacts on structures that are attributed to the project. EnergyAustralia would undertake a dilapidation survey of the ACE building prior to construction and design engineers would review building plans and model predicted ground movements resulting from demolition. Based on this information, a monitoring plan would be established which would include survey targets and movement indicators on and within the ACE Insurance building.

A construction noise and vibration management plan would be prepared and include measures to monitor vibration impacts in surrounding buildings such as 28 – 34 O'Connell Street.

Schedule of Condition

The submission requested that a Schedule of Condition of the entire property at 28-34 O'Connell Street be prepared by an independent party at EnergyAustralia's cost and appended to an Adjoining Owner's Deed or similar binding document. The submission noted that the need for a "Dilapidation and basement survey of buildings potentially affected by building works" included in the Environmental Assessment and requested that this be a condition of approval.

Response

As detailed in the Statement of Commitments, EnergyAustralia would conduct dilapidation surveys to allow an assessment to be made of any impacts on structures that are attributed to the project.

Structural support

ACE Insurance Limited requested confirmation from EnergyAustralia that no structural support is required from the adjacent properties. If there is a requirement for underpinning, ground anchors or similar, ACE Insurance Limited would need to be involved in a review of all available documentation relating to this proposal and a third party consultant would be asked to review the proposal.

Feedback would then be provided to EnergyAustralia for incorporation into the proposed works and ACE reserves its right to object or make further submissions in relation to the proposed development, based of that review or new information. ACE proposes that the timeframes for review of any structural or aesthetic plans/specifications which could affect ACE's property be agreed within an Adjoining Owners Deed. ACE request that any third party review required by ACE be undertaken

at the cost of EnergyAustralia as the investigations are only required as a result of the proposed development.

Response

Investigations indicated that the existing buildings, Kindersley House, do not provide structural support to 28 – 34 O'Connell Street. As such, it can be removed without affecting this neighbouring property. Nevertheless, procedures would be implemented during demolition to ensure the structural integrity of adjacent buildings is not compromised.

Ground support measures such as rock bolting are likely to be required when excavating below adjacent property foundations in order to provide a stable excavation. Excavation below the existing basement at Kindersley House is not included in Stage 2A(i). EnergyAustralia would enter in to an agreement with the landowner in respect to the Stage 2A(i) works where there are identified impacts.

Issue 4 Easements

ACE Insurance's property currently includes an easement for access to the car park of the site for the City East Zone Substation which is currently accessed from O'Connell Street and for which the owners and occupiers of 26 O'Connell Street and others obtain the benefit. ACE Insurance seeks clarification of whether the easement for access to the car park of the site is still required to service Kindersley House as it appears to be reconfigured in the new development plans. If not, ACE Insurance Limited would formally seek agreement for this easement to be extinguished.

If the current access is not to be used, the submission requested clarification on how the current access shutter leading into Kindersley House is to be infilled/enclosed.

Response

EnergyAustralia intends to maintain this easement and during demolition appropriate barriers and scaffolding would be erected to cordon off the construction work. Further details regarding the design of the substation and commercial towers, including access, would be addressed during Stage 2A(ii).

5.7.4 Issue 5 Air quality

ACE Insurance Limited requested the opportunity to review and comment on the air quality assessment to be prepared prior to the commencement of works on the site.

Response

Section 14 of the Environmental Assessment assesses potential impacts on air quality and notes that a construction air quality management plan would be prepared as part of the CEMP. This CEMP would include measures to mitigate impacts on those land uses surrounding the site, such as ACE Insurance.

5.7.5 Issue 6 Crane movements

The Environmental Assessment does not make any reference to crane movements ACE Insurance Limited expect to occur over their property. EnergyAustralia should provide full details of the proposed crane oversail, such as the location of crane on the site, how it would be designed and supported, insurances in place to protect persons and property etc. This would need to be agreed with the adjoining owners prior to commencement of crane erection and should also be included in any Adjoining Owners deed that may be required.

Response

Details regarding crane movements over the site and adjoining properties would be detailed in the CEMP, including the location of the crane and how it would be designed and supported. At this stage it is envisaged that only mobile cranes would be used. These cranes would be located on the road for short periods of time only and would not slew over adjacent buildings. If a tower crane is required for demolition, it would not slew over adjacent buildings and permission to 'weathervane' (i.e. free-slew the jib overnight) would be sought. Any tower crane would be located in a position that minimises the need to slew over adjacent buildings.

Once details regarding crane movements are confirmed, EnergyAustralia would consult with affected landowners and develop an Adjoining Owners deed, if required.

5.7.6 Issue 7 Preliminary (phase 1) environmental assessment and potential detailed (phase 2) environmental assessment

Detailed environmental review of Kindersley House

ACE Insurance would expect a detailed environmental review of the Kindersley House site to be required and note that the Summary of Environmental Risk Analysis (Appendix E) calls for "contamination studies and management plans to be developed". ACE requests the right to review these reports prior to commencement of the redevelopment, noting that the EnergyAustralia would undertake any recommendations made within the report at their own cost.

Response

As indicated in Section 12.1.3 of the Environmental Assessment, a preliminary contamination assessment report by Urban Environmental Consultants Pty Ltd (May 2008) concludes that the site shows no indication of gross contamination other than asbestos containing materials used as backfill at one location. On this basis, during demolition of the basement, the asbestos containing materials would be segregated and disposed to landfill by a contractor that is a certified ASI licensed NSW Work Cover contractor in accordance with NSW Work Cover Guidelines and appropriate health and safety controls.

Issues associated with management of potential contamination would be detailed in the CEMP and would focus on ensuring that all waste material would be classified in accordance with the DECC (April 2008) *Waste Classification Guidelines* prior to offsite disposal or reuse/recycling.

Analysis and design details of substation

ACE Insurance request EnergyAustralia provide analysis and design details on the proposed containment of the substation plant and equipment and how any environmental risks will be controlled or mitigated on the property.

Response

This issue relates to an aspect of the detailed design of the substation that would be addressed in Stage 2A(ii).

5.7.7 Issue 8 Cleaning protocol

ACE Insurance believe that EnergyAustralia should commit to provide or otherwise fund any additional cleaning regimes to 28 O'Connell Street as reasonably required in order to maintain an acceptable standard of cleanliness during the redevelopment.

Response

As detailed in the Statement of Commitments, a CEMP would be prepared that would include a range of sub plans that would ensure that appropriate measures are implemented to minimise potential impacts on the surrounding environment including acceptable standards of cleanliness during construction. Specific measures would be included in the air quality management plan to minimise deposition of dust on adjoining buildings, such as ACE Insurance. As a result, a detailed cleaning regime for surrounding buildings is not proposed at this stage.

5.7.8 Issue 9 Hoardings and site access

Positioning of hoardings

ACE Insurance request further clarification on the positioning of the hoardings as it is imperative that a clear line of sight and clear access is maintained into the entrance of 28 O'Connell Street, the vehicular entrance to the basement car park which is utilised by ACE, its tenants of 44 Hunter Street, and also the entrance into the cafe within 28 O'Connell Street.

Response

The position of the hoardings would be detailed in the CEMP. These would be designed to ensure that lines of sight are sufficient to ensure that road and pedestrian safety is maintained. As indicated in the Statement of Commitments, a construction traffic management plan would be prepared in consultation with RTA and City of Sydney Council as part of the CEMP and would include measures to manage potential impacts on the traffic and transport network.

Timing of deliveries

ACE Insurance expect that deliveries and access to the site would be minimised to take place only within certain hours of the day, being prior to 7 am and after 7 pm to ensure that roads are not congested within the CBD. ACE Insurance request further advice on the timing of deliveries and access to the site and request that timeframes for delivery be included in any conditions of approval.

Response

Due to the nature of the works to be undertaken as part of Stage 2A(i) and proximity of the site to sensitive receivers such as the Radisson Hotel, it is not practical to limit the deliveries and access to the site to the working hours proposed by ACE Insurance. Construction is proposed to occur between 7am – 7pm Monday – Friday and 7 am – 5 pm on Saturdays, and deliveries would be scheduled to occur within these hours where possible. Oversize vehicle movements associated with the transport of equipment to the site would be likely to occur outside standard construction hours.

As indicated in the Statement of Commitments, a construction traffic management plan would be prepared in consultation with RTA and City of Sydney Council as part of the CEMP and would include measures to manage potential impacts on the traffic and transport network.

Access to property

ACE Insurance request that EnergyAustralia and their representatives give reasonable notice when seeking access to ACE's premises during the course of the project and strictly adhere to building management policy.

Response

In the event that EnergyAustralia requires access to private property, landholders would be contacted in accordance with the Community Information Plan and provided with adequate notice. EnergyAustralia and its contractors would adhere to building management policy when on private property.

5.7.9 Issue 10 Insurances

ACE Insurance would like to confirm that EnergyAustralia would be required to hold appropriate insurances for the development and that these would include works and public liability insurance at levels to ensure any damage to the new or existing properties would be adequately addressed.

Response

EnergyAustralia's contractors would obtain insurance cover that would be commensurate with the type of works being undertaken.

5.7.10Issue 11 Statutory controls – Statement of Compliance

ACE Insurance believes that the existing mid-block connection between O'Connell Street and Bligh Street which would be lost as part of the project should be retained to provide safe and convenient pedestrian access.

ACE Insurance believe the proposed separate vehicular access for EnergyAustralia and the commercial tower usage would disrupt existing pedestrian and vehicular movements along O'Connell Street and only one entrance point should be permitted.

Response

These issues relate to aspects of the design of the substation and integrated commercial tower building that would be addressed during the design review process that would be undertaken during Stage 2A(ii).

5.7.11 Issue 12 Building form

ACE Insurance note that the Environmental Assessment contains very little detail on the proposed fabric, finish and appearance to the external facades to the proposed substation, yet the bulk form of the substation (i.e. footprint, height and number of storeys) is detailed in the application. ACE Insurance believe that detailed design documents should be provided and reviewed to establish the attributes of the new property prior to a consent being issued.

Response

These issues relate to aspects of the design of the substation and integrated commercial tower building that would be addressed during the design review process that would be undertaken during Stage 2A(ii).

5.7.12 Issue 13 Notification period

ACE Insurance believe that the review of the Environmental Assessment and associated notification period would instigate further design details and revisions by EnergyAustralia. ACE Insurance requests the right to review any such submissions prior to lodgement with the Department of Planning.

Response

This Submissions Response and Preferred Project Report responds to issues raised in the submission provided by ACE Insurance. EnergyAustralia does not propose to provide this report to ACE Insurance for review prior to being submitted to the Department of Planning for assessment. Once submitted and accepted by the Department of Planning, a copy will be made available to ACE Insurance as well as being accessible from the Department of Planning's website.

EnergyAustralia would develop and implement a Community Information Plan during Stage 2A(i) of the City East Zone Substation. This plan would comply with the requirements of MCoA 4.3 of the Concept Approval and include consultation with potentially affected stakeholders, such as ACE Insurance.

5.8 Radisson Plaza Hotel

5.8.1 Issue 1 Noise and vibration

The Radisson Hotel raised the following issues relating to noise and vibration impacts:

- Guests staying Monday to Friday are generally corporate guests that are risen by 7 – 8am;

- The Hotel has a number of contracts with airlines. These organisations use the Hotel as it is fitted with double glazing which results in some of the quietest rooms in the city. These guests normally prefer the O'Connell Street side of the building and there is concern that they may be affected by noise and vibration even if they can be accommodated within the Pitt Street side of the building. The Hotel has invested significant time and money to cater for these contracts by installing double glazing, full block-out blinds and heavy drapes. The Hotel is concerned that impacts associated with construction of the project would result in the loss of these contracts;
- Weekend guests are generally leisure guests that have enjoyed a late night out on Friday night and predominantly sleep in to 10 – 11am on Saturday mornings. Construction noise such as jack hammers and trucks being loaded would have a direct impact on 78 rooms fronting O'Connell Street directly opposite the site. This would have immense impact on the operation and revenues of the Hotel for weekend guests that would normally stay two nights; and
- Noise factors are stated for the demolition and excavation, however noise would also be generated when loading rubble and waste materials into the trucks. The Environmental Assessment states that the demolition would be done from inside the building first but the Hotel is not clear on how and where the trucks would be loaded.

Response

As indicated in Section 9.2 of the Environmental Assessment, construction would generate noise and vibration and there is the potential for the noise goals to be exceeded at the Radisson Hotel. Section 9.2 of the Environmental Assessment reflects that noise levels during demolition and general construction works are predicted to comply with the construction noise criterion.

Section 9.3 of the Environmental Assessment outlines management measures that would be implemented to mitigate noise and vibration impacts and includes preparation of a noise and vibration management plan as part of the CEMP. The plan would detail the mitigation, monitoring and community liaison measures to be implemented and would be updated to incorporate any additional measures that emerge as the project design evolves and work methodologies become better defined. It would identify reasonable and feasible mitigation measures that would be implemented to manage noise and vibration impacts.

EnergyAustralia recognises it is important to ensure that the community surrounding the site is kept informed during construction of the project and that impacts are minimised where possible. The Statement of Commitments reflects that a Community Information Plan would be prepared to address the requirements of MCoA 4.3 of the Concept Approval. This would include the community communications and consultation processes to be undertaken during Stage 2A(i) and would include specific consultation regarding issues such as noise and vibration and traffic and access impacts.

The Community Information Plan would include a community relations program to be implemented to keep the potentially affected community informed of progress and advise of any anticipated substantive changes to noise and vibration emissions prior to critical stages of the works. Close liaison would be maintained with communities and stakeholders surrounding the site, including the Radisson Hotel, to identify specific issues that need to be considered.

Noise impacts associated with loading trucks would be minimised as this would occur within the site. Hoardings would be provided around the perimeter of the site and this would assist in reducing noise impacts on the Radisson Hotel.

5.8.2 Issue 2 Dust

The entry foyer to the Hotel is located on the O'Connell Street frontage, directly opposite the site. The Hotel is concerned that there is potential for dust to be generated when material is loaded into trucks and for this to blow on to guests entering the foyer.

The Hotel is also concerned about the impact of fine dust particles on the hotel's air intake system and cooling towers on roof level.

Response

Loading and unloading of trucks would be undertaken within the site. As the site would be surrounded by hoardings, potential impacts on the amenity of those entering the Radisson Hotel are considered to be minor.

Chapter 14 of the Stage 2A(i) Environmental Assessment addresses the potential impacts of dust during construction. Section 14.3 indicates that a construction air quality management plan would be developed and this would include mitigation measures to be implemented to minimise dust impacts. During development of these measures, consideration would be given to any measures that are required to specifically address the issues raised by the Radisson Hotel.

The Statement of Commitments has been amended to reflect that hoses will be used to suppress dust during any rock sawing or hammering that may be required during Stage 2A(i).

5.8.3 Issue 3 Traffic impacts

Short term parking restrictions apply along the O'Connell Street frontage adjacent to the Hotel foyer to allow guests to unload baggage from taxis, hire cars, rental cars etc. This also allows for valet parking into the hotel's basement parking and a number of leased parking spaces in other buildings including 28 – 34 O'Connell St. A taxi stand is located on O'Connell Street in the vicinity of the Hotel. The continued operation of the short term parking area and taxi stand are fundamental to the operation of the Hotel and assurances are required that they would continue to be available.

The Hotel requested a detailed explanation of the truck movements including confirmation and clarification of the hourly truck movements to and from the site, how the traffic management would be organised, and where the trucks would park and load.

The Hotel raised concerns regarding the continued operation of group arrival and pick up services adjacent to the foyer on O'Connell Street. There are approximately four group arrivals and pick ups each day and the Hotel requests that a solution be developed to allow these services to continue.

Response

The issues raised by the Radisson Hotel relate to detailed planning of measures to be implemented to manage impacts on traffic and the transport network. These issues would be addressed during development of the construction traffic management plan that would be prepared in consultation with RTA and City of Sydney as part of the CEMP (refer to Statement of Commitments).

As indicated in Section 13.2.1 of the Stage 2A(i) Environmental Assessment, the project would require short term changes to traffic arrangements along O'Connell Street. A work zone for construction vehicles would be required along the parking lane on the eastern side of O'Connell Street, however there are not proposed to be any changes to parking, buses or the taxi rank on the western side of O'Connell Street during the course of normal works. Partial and/or temporary road closures along O'Connell Street may be required during some stages of construction to enable heavy vehicle manoeuvres, such as oversize vehicles, and to accommodate construction procedures. Trucks would be loaded and unloaded within the site and would be under full traffic control at all times.

The Statement of Commitments has been amended to reflect that EnergyAustralia would consult with the Radisson Hotel during preparation of the construction traffic management plan. This would ensure that further discussion is undertaken to understand the Hotel's operational requirements and enable management measures to be developed to minimise traffic related issues that have the potential to impact on ongoing operation of the hotel. This would include measures to ensure that access to short term parking on the western side of O'Connell Street, the taxi stand, and group pick up and set down services are maintained.

5.9 Transport NSW

5.9.1 Issue 1 Impact on Sydney Metro Network Stage 1

Transport NSW confirmed that Sydney Metro had been in discussion with EnergyAustralia in regard to the interface between the CityGrid Project and Sydney Metro project. These discussions included a near complete interface deed which ensured the structural integrity of the CBD Metro Stage 1 at Kindersley House. The CBD-Metro Stage 1 project was approved by the Minister for Planning on 1 January 2010 and in February 2010 the NSW Government resolved to protect the Metro Corridor.

Transport NSW stated that there are concerns about the potential impacts of the project on the future construction, operation and maintenance of the CBD-Metro Stage 1, as the project is located adjacent and above the proposed alignment for the CBD-Metro Stage 1. The placing of any foundations, other structures and building loads in or near the proposed rail alignment may affect the practicability of the CBD-Metro Stage 1, its construction cost and the capacity to design it to meet metro railway operational needs.

Sydney Metro, EnergyAustralia and their respective technical advisers have explored the possibility of achieving an acceptable design solution that involves a bridging slab structure. In addition, there have been discussions between Transport NSW and EnergyAustralia about the technical issues that need to be addressed in the design, construction and maintenance of the project.

Transport NSW requested that the Department of Planning only approve the project subject to conditions that require EnergyAustralia to enter into an agreement with Transport NSW to ensure the project is designed, excavated and constructed in a manner that does not impact on the future structural integrity, operations or constructability of CBD-Metro Stage 1. Transport NSW requested that the following conditions be included in the approval:

1. The owners of the site of the approved development must enter into an Agreement with Transport NSW that addresses the potential impacts of the approved development on the Metro Line 1 corridor, prior to the issue of a construction certificate and the commencement of any excavation below the existing ground level.
2. The owners of the site of the approved development must:
    a) Allow in the design, construction and maintenance of the approved development for the future operations of metro railway tunnels in the vicinity of the approved development, especially in relation to noise, vibration, stray currents and electromagnetic fields.
    b) Prior to the issue of any occupancy certificate, provide Transport NSW with drawings, reports and other information related to the design, construction and maintenance of the approved development to allow Sydney Metro to fully understand the interaction between the approved development and the Metro Line 1.

Response

The issues identified by Transport NSW primarily relate to excavation of the basement and construction of the 150 m long tunnel section tunnel and approval for these works is no longer sought as part of Stage 2A(i). An agreement with Transport NSW is not required for Stage 2A(i) as it is limited to site preparation and demolition of the existing buildings at the site and would not involve excavation below the existing ground.

EnergyAustralia has consulted with Transport NSW and has no objection to the intent of the requested conditions of approval, as they relate to Stage 2A(ii). On this basis,

EnergyAustralia would continue to consult with Transport NSW and enter into an agreement for Stage 2A(ii).

5.10 Anonymous on-line submission

5.10.1Issue 1 Visual impacts

An anonymous submission was received that objected to the visual impacts of the building envelope. It stated that the previous development proposed at the site would have brought life and light back to Richard Johnson Square, and indicated concern that the eight storey façade of the substation would have long term adverse impacts on Richard Johnson Square. The submission objected to the inactive street frontages in a location that is an important part of the CBD.

Response

As indicated in the Environmental Assessment, due to the global financial crisis and changes in market conditions, the previous development proposed for the site did not proceed.

The issues raised in this submission relate to the design of the substation and integrated commercial tower building and would be addressed during the design review process to be undertaken in Stage 2A(ii). This would include an invited competitive design alternatives process that addresses the design objectives in Section 3 and would aim to develop a design that achieves design excellence. The outcomes of the design review process would be documented in an Environmental Assessment submitted as part of an application for Project Approval for Stage 2A(ii).

5.11 NSW Department of Environment Climate Change and Water

5.11.1Issue 1 Noise and vibration

DECCW recommended the following conditions be included in the project approval.

1. The proponent must prepare and implement a detailed Construction Noise and Vibration Management Plan that includes but is not necessarily limited to;
    a) identification of the specific activities that will be carried out and associated noise sources at the premises,
    b) identification of all potentially affected sensitive receiver premises,
    c) quantification of the rating background noise level for sensitive receivers, as part of the Construction Noise and Vibration Management Plan, or as undertaken in the Environmental Assessment,
    d) the construction noise, ground-borne noise and vibration objectives outlined in these conditions of approval,

e) assessment of potential noise, ground-borne noise and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in these conditions of approval,

f) where the objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts,

g) description of management methods and procedures, and specific noise mitigation treatments that will be implemented to control noise and vibration during construction,

h) where the objectives cannot be met, additional measures including, but not necessarily limited to the following should be considered and implemented where practicable; reduced hours of construction, the provision of respite from noisy / vibration intensive activities, an acoustic enclosure over the excavation site, alternative excavation methods or other negotiated outcomes with the affected community,

i) where it is determined that the works cannot be undertaken in a manner that satisfies the construction noise and vibration objectives, a report justifying that the construction noise and vibration measures (including management measures) consistent with current best practice shall be submitted to the Director-General for approval prior to commencement of works,

j) procedures for notifying residents of construction activities that are likely to effect their noise and vibration amenity,

k) measures to monitor noise performance and respond to complaints.

2. All construction work at the premises, other than below ground tunnelling works and noise intensive activities such as rock breaking, may be conducted between 7am and 7pm Monday to Friday and between 7am and 5pm Saturdays and at no time on Sundays and public holidays. Below ground tunnelling works may be conducted 24 hours per day. Noise intensive activities such as rock breaking must be conducted between 9am and 12pm Monday to Saturday and between 2pm and 5pm Monday to Friday and at no time on Sundays and public holidays. Works outside these hours are not permitted except as explicitly specified below or in other conditions and include:

   a) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons;

   b) emergency work to avoid the loss of lives, damage to property and/or to prevent environmental harm;

   c) other works expressly approved by the Director-General.

3. The construction noise objective for the project is to manage noise from construction activities (as measured by a LAeq(15minute) descriptor) so it does not exceed the background LA90 noise level by more than 10 dB(A) for works during standard construction hours; and by more than 5 dB(A) for works outside standard

construction hours. Background noise levels are those identified in the Environmental Assessment or otherwise identified in the Construction Noise and Vibration Management Plan. Any activities that have the potential for noise emissions that exceed the objective must be identified and managed in accordance with the Construction Noise and Vibration Management Plan. The Proponent must implement all feasible and reasonable noise mitigation and management measures with the aim of achieving the construction noise objective. If the noise from a construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the NSW Industrial Noise Policy), 5dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise objective.

4. Vibration caused by construction and received at any sensitive receiver outside the proposal must be assessed against the guidelines contained in the DECC publication "Environmental Noise Management - Assessing Vibration: a technical guideline" and in accordance with the Construction Noise and Vibration Management Plan.
5. Regenerated noise from construction works must not exceed the following criteria as measured at the nearest sensitive receptor:
   a) 40 dB(A) between the hours of 6:00 pm and 10:00 pm; and
   b) 35 dB(A) between the hours of 10:00 pm and 7:00 am.

DECCW also recommend that the Department of Planning impose Construction Noise Management conditions such as conditions 31-35 in the 'Major Project Assessment: City West Cable Tunnel Director-General's Environmental Assessment Report Section 75I of the *Environmental Planning and Assessment Act 1979,* January 2007'.

Response

The conditions recommended by DECCW are consistent with the construction noise and vibration assessments undertaken during preparation of the Environmental Assessment. They are also consistent with the intent of the mitigation measures detailed in Section 9.3 of the Environmental Assessment and the Statement of Commitments. On this basis, EnergyAustralia does not object to the intent of the recommended conditions, however would seek to refine the text during negotiation of the MCoA with the Department of Planning.

5.12 RailCorp

5.12.1Issue 1 Noise and vibration

RailCorp confirmed that consultation has occurred with EnergyAustralia and that RailCorp's technical advisor, Halcrow, has undertaken technical reviews to assess potential impacts of the project on future rail corridors.

RailCorp requested that the approval include the following conditions to ensure their assets are protected:

- As part of the design of the Sydney CityGrid and prior to the commencement of construction, the Proponent must consult with RailCorp regarding the likely impacts of the Sydney CityGrid East Zone Substation on planned rail infrastructure.
- The Proponent must design, construct and maintain the CityGrid East Zone Substation so as not to interfere with the capacity to design, construct and operate planned rail infrastructure.
- Prior to commencement of any construction, the Proponent must enter into an agreement with RailCorp to ensure that the capacity to design, construct and operate planned rail infrastructure is not impeded.
- The Proponent must advise the Director-General of Planning of such an agreement as soon as practicable after an agreement has been reached.

Response

The issue raised by RailCorp is related to the potential for the stub tunnel from the City East Zone Substation to the CECT to impact on the corridor for the proposed Metro Pitt tunnels which also passes below Bligh Street. As stated in Section 4, approval for the stub tunnel would be sought as part of Stage 2A(ii), not Stage 2A(i).

As part of Stage 2A(ii), EnergyAustralia would continue to consult with RailCorp in relation to the proposed works beneath Bligh Street to confirm that the design of the proposed cable tunnel does not constrain RailCorp's future rail infrastructure.

5.13 NSW Industry & Investment

NSW Industry & Investment confirmed that they had been consulted and advised that there are no comments on the content of the Environmental Assessment.

5.14 Roads and Traffic Authority

5.14.1 Issue 1 Plan preparation

The RTA requested that the Construction Traffic Management Plan (CTMP) and a Traffic Control Plan (TCP) be prepared by a certified practitioner, in accordance with RTA's Traffic Control and Worksites Manual, and at the full cost to EnergyAustralia. The RTA requested that these plans be submitted to the Department of Planning, Council and the RTA for review prior to commencement of works.

Response

The Construction Traffic Management Plan and Traffic Control Plan would form part of the CEMP submitted to the Director-General of the Department of Planning for approval. The Statement of Commitments reflects that the Construction Traffic Management Plan would be prepared in consultation with the RTA and City of Sydney. Preparation of the CEMP would be at EnergyAustralia's cost.

5.14.2Issue 3 Road occupancy licence

The RTA requested that a Road Occupancy Licence be obtained from the Transport Management Centre for any works which may impact on the traffic flows along Bligh and O'Connell Streets as a result of the project.

Response

Ongoing consultation would be undertaken with the RTA during preparation of the CEMP and throughout construction. This would involve obtaining relevant approvals and licence requirements which may be required, including the Road Occupancy Licence.

5.14.3Approvals

The RTA noted that if works which require the use of cranes or other construction vehicles which occupy the road reserve, approval of Council and the NSW Police would be required under Section 186 of the Law Enforcement Power and Responsibilities Act.

Response

As outlined in Section 5.7.5, details regarding crane movements over the site and adjoining properties would be detailed in the CEMP, including the location of the crane and how it would be designed and supported. At this stage it is envisaged that only mobile cranes would be used. These cranes would be located on the road for short periods of time only and would not slew over adjacent buildings. If a tower crane is required for demolition, it would not slew over adjacent buildings and permission to 'weathervane' (i.e. free-slew the jib overnight) would be sought.

Once details regarding crane movements are confirmed, approval under Section 186 of the Law Enforcements Power and Responsibilities Act would be obtained, if required.

5.14.4Car park layout

The RTA requested that the layout of the proposed car parking areas associated with the subject development be in accordance with AS 2890.1 – 2004 and AS 2890.2 – 2002.

Response

Layout of the access and parking facilities associated with the project would form part of the detailed design process. These matters would be addressed during Stage 2A(ii).

5.14.5Public utilities

The RTA requested that EnergyAustralia be responsible for all public utility adjustments/relocation works necessitated by the project and as required by the various utility authorities and/or their agents.

Response

As identified in Chapter 4 of the Stage 2A(i) Environmental Assessment, ongoing consultation would be undertaken with relevant authorities during development of the project in relation to potential impact on existing facilities and services. EnergyAustralia would fund any works that are required to existing public utility services as a result of the project and obtain relevant approvals and certifications where required.

5.14.6Costs

The RTA requested that all works/regulatory signposting associated with the proposed development are to be at no cost to the RTA.

Response

Section 13.3 and the Statement of Commitments of the Stage 2A(i) Environmental Assessment outlines the use of signposting as a mitigation measure to minimise traffic impacts associated with the project. All signposting associated with the proposed development would be at EnergyAustralia's expense.

6. Statement of commitments

As required by MCoA 3.1c of the Concept Approval, EnergyAustralia provided project specific commitments for environmental mitigation, management and monitoring as part of the Stage 2A(i) Environmental Assessment. These commitments were presented in Table 17.1 and are consistent with the Statement of Commitments prepared for the Sydney CityGrid Concept Environmental Assessment. The draft Statement of Commitments has been reviewed and amended to address changes to the project since exhibition of the Environmental Assessment and issues raised in submissions. The final Statement of Commitments is provided in Table 1, and changes to the draft Statement of Commitments are displayed in blue.

The Statement of Commitments is additional to EnergyAustralia's obligations under the Concept Approval.

Table 1 Revised Statement of Commitments

Key issue	Commitment
Noise and vibration	Construction would generally be carried out during the following hours: ◗ Monday to Friday 7 am to 7 pm ◗ Saturdays 7 am to 5 pm ◗ No work on Sundays or Public Holidays Noise intensive activities such as use of rock breakers would be undertaken during the following hours: ◗ Monday to Saturday 9 am to 12 pm ◗ Monday to Friday 2 pm to 5 pm ◗ At no time on Sundays or Public Holidays Activities that may occur outside the standard construction hours include, but may not be limited to, oversize truck movements and deliveries of certain plant and equipment on an occasional basis. Works may also be undertaken outside these hours in the event of a direction from police or other relevant authority for safety reasons, or emergency work to avoid the loss of lives, property and/or to prevent environmental harm.
	A noise and vibration management sub-plan would be prepared as part of the CEMP and would: ◗ Identify potentially affected receivers in the immediate vicinity of the site, activities to be carried out, ancillary facilities, and associated sources of noise at each premises; ◗ Quantify the background noise level for the nearest sensitive receivers; ◗ Identity the construction noise, ground-borne noise and vibration objectives for the nearest sensitive receivers; ◗ Provide an assessment of potential and levels during construction against the objectives; ◗ Identify reasonable and feasible mitigation measures to reduce noise and vibration levels where the objectives would be exceeded; ◗ Describe noise and vibration management methods and procedures that would be implemented; ◗ Detail procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity; and ◗ Measures to monitor compliance with noise and vibration objectives and respond to complaints.
	The following general management measures would be included in the noise and vibration management sub-plan: ◗ Where feasible and practicable, only dampened and/or smaller rock hammers would be used; ◗ Where reasonable and feasible, plant and equipment such as excavators, cranes and trucks would be fitted with silencers, low noise mufflers (residential standard), and reversing alarms on vehicles would be replaced with silent measures; ◗ Where possible, plant would be located and orientated to direct noise away from sensitive receivers; ◗ Where possible, deliveries would be carried out within standard construction hours; ◗ Plant and equipment would be selected to minimise noise emission, in-so-far-as possible whilst maintaining efficiency of function. All plant and equipment would be maintained in good order; ◗ Mobile plant and trucks operating on site for a significant portion of the project would have reversing alarm noise emissions minimised in-so-far-as possible, recognising the need to maintain occupational safety; and ◗ Solid hoardings and/or site sheds would be erected on work site boundaries to function as noise barriers.

Key issue	Commitment
	A dilapidation survey would be undertaken of surrounding buildings, services and structures prior to commencement of construction. This would include inspecting surrounding heritage listed buildings to determine whether they are structurally sound, and if so, whether the vibration criteria for residential buildings should be applied to the heritage listed buildings. A post-construction dilapidation survey would also be undertaken. Any damage attributable to the project would be repaired at EnergyAustralia's expense.
Non-indigenous heritage	During excavation of the existing basement floor slab, the residual ground surface would be inspected by an archaeologist to identify the potential for the site to contain any items of non-indigenous heritage archaeological significance. Any items of non-indigenous heritage significance would be recorded by the archaeologist and managed in consultation with the Heritage Branch of the Department of Planning.
	Following completion of demolition, a Schedule of Conservation Works to be undertaken in conjunction with the approved works would be prepared by a heritage architect in consultation with the Heritage Branch of the Department of Planning. The schedule would detail conservation works designed to minimise further damage to fabric as well as to reinstate an appropriate level of finish, and would include specification notes.
	If construction planning indicates that subsurface works are required within Richard Johnson Square, further assessment would be undertaken by an appropriately qualified heritage consultant in consultation with the Heritage Branch of the Department of Planning. This would involve development of additional management measures to be implemented.
	If any unexpected historical relic(s) are encountered during the course of construction, all work likely to affect the relic(s) would cease immediately and the Heritage Branch of the Department of Planning would be notified in accordance with the *Heritage Act 1977*.
Indigenous heritage	If any unexpected Aboriginal object(s) are encountered during the course of construction, all work likely to affect the object(s) would cease immediately and the DECCW would be informed in accordance with Section 91 of the *National Parks and Wildlife Act 1974*. Consultation would also occur with the Metropolitan Local Aboriginal Land Council regarding an appropriate course of action.

Key issue	Commitment
Air quality	A construction air quality management plan would be prepared as part of the CEMP and would include the following measures to manage potential impacts on air quality: ◗ Manage and dispose of any hazardous materials such as asbestos in accordance with relevant guidelines, including Code of Practice for the Safe Removal of Asbestos (National Occupational Health and Safety Committee 2002) and Australian Standard AS-2601 1991 – Demolition of Structures; ◗ Exposed surface areas would be managed via dust mitigation measures; ◗ Wheels of all site plant and vehicles would be cleaned so that material with potential to generate dust is not spread on surrounding roads; ◗ Sealed roads around the construction site would be swept to remove deposited material with potential to generate dust, if necessary; ◗ Water would be used to suppress dust particles potentially generated during the erection of barriers, screens and other ancillary structures; ◗ Water may be used to suppress dust emissions during dry windy periods (as required); ◗ The height from which dust generating material is dropped would be minimised; ◗ Loaded trucks carrying spoil would be covered at all times; ◗ Cutting/grinding of materials on site would be kept to a minimum, but if necessary equipment and techniques to minimise dust would be used; ◗ Earthworks would be kept damp, as required, especially during dry weather; ◗ Spoil stockpiles would be damped as necessary; ◗ Hoses would be used to suppress dust during use of rock saws and rock hammers; ◗ Potentially dusty materials would be handled as little as possible; ◗ Construction plant and vehicles would be well maintained and regularly serviced. Visible smoke from plant would be avoided. Defective plant would not be used; ◗ Engines would be switched off when vehicles are not in use and refuelling areas would be away from areas of public access; and ◗ Where practicable and feasible, loading and unloading would take place within the site.
	The air quality management plan would also: ◗ Establish a protocol to handle dust complaints that includes recording, reporting and appropriate actions for expected types of complaints; ◗ Include a reactive management program detailing how and when operations are to be modified to minimise the potential for dust emissions, should emissions exceed the relevant criteria; and ◗ Address the monitoring, management and control of air pollutants including gaseous substances generated during construction.
Soil and water	A Water Quality Management Sub-Plan would be prepared as part of the CEMP for the project. The sub-plan would be prepared in accordance with 'Managing Urban Stormwater: Soils and Construction' (Volume 1, 4th Edition, the 'Blue Book', Landcom, 2004) and would detail specific measures to be implemented to manage soil, surface and groundwater impacts during construction. It would identify opportunities for on-site reuse of groundwater and surface water, and include a program to monitor the effectiveness of the sediment control system.
	The Water Quality Management Sub-Plan would be developed in consultation with DECCW to ensure the output from the treatment system is suitable for discharge to the stormwater system and the measures implemented would allow construction to comply with Section 120 of the POEO Act. It would detail the treatment process to be implemented and the associated monitoring program to verify that the treated water meets water quality objectives developed in accordance with guidelines developed by the Australian and New Zealand Environment and Conservation Council (ANZECC) and the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ).

Key issue	Commitment
	The NSW Office of Water (NOW) would be consulted during preparation of the Water Quality Management Sub-Plan and the following information would be provided to allow NOW to determine whether a license is required under Part 5 of the *Water Act 1912*; ◗ Estimated pumping volumes, flow rates and water quality data; and ◗ Details regarding geotechnical investigations and analysis relating to groundwater. NOW would be provided with a copy of the Water Quality Management Sub-Plan.
	Consultation with Sydney Water Corporation and/or the City of Sydney would be undertaken to determine whether there are any capacity limitations within the stormwater system that would influence the location of the connection for the water discharged from the treatment system.
Traffic and access	A construction traffic management plan would be prepared in consultation with RTA and City of Sydney Council as part of the CEMP and would include the following measures to manage potential impacts on the traffic and transport network: ◗ General signposting of Bligh Street and O'Connell Street in the immediate vicinity of the site with appropriate heavy vehicle and construction warning signs; ◗ The Radisson Hotel would be consulted to confirm traffic and access issues related to the Hotel's operational requirements, such as continued operation of short term parking on the western side of O'Connell Street, the taxi rank, and group pick up and set down services. Management measures would be developed to minimise traffic related issues that have the potential to impact on ongoing operation of the hotel; ◗ All traffic control plans would comply with AS1742.3: 2002 *Traffic Control Devices for Works on Roads* and the RTA's *Traffic Control at Work Sites*; ◗ Heavy vehicle routes would be selected to minimise impacts on the road network and vehicle kilometres travelled and these routes would be communicated to truck drivers. Where practicable, these routes would involve using arterial roads such as the Eastern Distributor in preference to city streets; ◗ Where possible, all vehicles must enter and exit the site in a forward direction; ◗ Development of a suitable vehicle detour route, if required during specific construction activities; ◗ Installation of specific warning signs and safety devices at entrances to the construction site to warn existing road users of entering and exiting construction traffic; ◗ Preparation of a pedestrian management plan that details measures to be implemented to minimise impacts on pedestrian movement and maintain pedestrian safety. Specific consideration would be given to activities undertaken within Richard Johnson Square, footpaths, emergency access points to adjacent buildings, vehicle access and egress to the site, and the need for protective gantries above footpaths; ◗ In addition to relevant Australian Standards and RTA guidelines, all traffic management would also conform to Workcover NSW "Code of Practice for Working Near Traffic and Mobile Plant"; ◗ Barriers approved by the RTA and/or City of Sydney Council would be provided between the construction sites and trafficable areas. Pedestrian and cycle diversions would be required during the works; ◗ Consult with Council regarding management measures to be implemented during works that would impact on Council controlled roads; ◗ Management of the transportation of construction materials to maximise vehicle loads to therefore minimise vehicle movements, where practicable; ◗ Inducting truck and vehicle operators on the requirements of the traffic management plan; and An event specific traffic management plan would be prepared if there are any special events in the CBD that would potentially be impacted by traffic movements associated with the project. The time and duration of these events would be clearly noted and construction delivery processes would be rearranged to cater to the affected days.

Key issue	Commitment
	Prior to the commencement of construction, dilapidation reports would be prepared for sections of Bligh, O'Connell and Hunter Streets in the vicinity of the site that are likely to be used by construction traffic. Any road/ footpath damage, aside from that resulting from normal wear and tear, would be repaired to the pre-existing standard at EnergyAustralia's cost.
	A community information and awareness program would be initiated prior to construction commencing and during the construction period to ensure that the local business establishments in the area are fully aware of the construction activities with particular regard to construction traffic accessing the site. The awareness program would identify communication protocols for community feedback on issues relating to construction vehicle driver behaviour and construction related matters.
	The RTA would be consulted to obtain a Road Occupancy Licence from the Transport Management Centre for any works which may impact on the traffic flows along Bligh and O'Connell Streets as a result of the project.
	If required, approval to operate cranes or other construction vehicles which occupy the road reserve, would be obtained.
Storage of dangerous goods	All dangerous goods (as defined by the Australian Dangerous Goods Code) and combustible liquids, would be stored and handled strictly in accordance with: ◗ All relevant Australian Standards; ◗ A minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and ◗ The DECC's *Environment Protection Manual Technical Bulletin Bunding and Spill Management*.
Spoil and waste management	A spoil and waste management sub-plan would be prepared as part of the CEMP and would identify how spoil and other waste material would be handled, stockpiled, reused and disposed. It would address the principles of the waste hierarchy and relevant health and safety as well as environmental legislation and would include measures such as: ◗ All waste would be managed in accordance with DECC's *Waste Classification Guideline* (2008); ◗ Arrangements to reduce the volume of materials being brought onto site such as packaging. In addition, required construction materials would be ordered in the correct quantities to minimise waste; ◗ Reuse or recycling of demolition and materials would be undertaken wherever practicable. Stockpile areas would be allocated for construction and demolition waste to allow separate stockpiling of recyclable and non-recyclable materials. In addition, colour coded and clearly marked containers for different recyclable materials would be provided; ◗ Records would be kept of all waste volumes and destinations; ◗ Sites for disposal of surplus waste would be selected according to the rate of development activity and the volumes of material generated elsewhere; ◗ Ongoing training would be provided for construction personnel to ensure correct sorting of waste and recyclable materials and promote the principles of the waste hierarchy. Waste minimisation and management would be included in tool box sessions and site management planning; and ◗ Any synthetic mineral fibres would be bagged or wrapped in plastic and handled in accordance with Worksafe Australia's *Synthetic Mineral Fibres – National Standard* and *National Code of Practice*.
Urban design	The contractor would implement reasonable and feasible measures to refine the construction method to minimise the number of street trees to be removed. Any removal or trimming of street trees would be undertaken by a qualified arborist (AFQ 2 or 3). The City of Sydney would be consulted regarding measures to be implemented to protect street trees that are retained. Any trees removed would be replaced with advanced stock as part of Stage 2A(ii) and the species would be selected in consultation with the City of Sydney Council.
Detailed design investigations	Prior to commencement of construction, property agreements would be developed between EnergyAustralia and owners of impacted neighbouring buildings.
Hazards and risks	EnergyAustralia would identify the services potentially affected by construction activities to determine requirements for diversion, protection and/or support.
	EnergyAustralia's contractors would prepare and implement construction safety sub plans to manage hazardous incidents and public safety during the construction of the project.

Key issue	Commitment
Consultation	A Community Information Plan would be prepared in accordance with the requirements of MCoA 4.3 of the Concept Approval. This would set out the community communications and consultation processes to be undertaken during Stage 2A(i) and would include specific consultation regarding issues such as: ◗ Noise and vibration; and ◗ Traffic and access.
Cumulative impacts	EnergyAustralia would endeavor to ensure that cumulative impacts can be avoided through precise management of projects and communication with other authorities. This would involve consultation with organizations constructing other projects in the immediate vicinity of the City East Zone Substation, such as No. 1 Bligh Street, to identify potential cumulative impacts and opportunities to minimize these impacts.

7. Conclusions

EnergyAustralia has reviewed the submissions received on the Environmental Assessment that formed part of the application for Project Approval for Stage 2A(i) of the City East Zone Substation. This Submissions Response and Preferred Project Report addresses the issues raised in submissions and describes a change to the project that is assessed in the Environmental Assessment.

Stage 2A(i) of the City East Zone Substation was described in Chapter 6 of the Environmental Assessment and involved:

- Demolition of the existing buildings at 33 Bligh Street, Sydney;
- Bulk excavation for the substation basement;
- Excavation and construction of a shaft and a 150 m section of tunnel beneath Bligh Street to the intersection of Bent Street and Bligh Street where it would interface with the City East Cable Tunnel Project;
- Construction of a bridging structure over the alignment of the stub tunnels for the CBD Metro Stage 1, if required; and
- A building envelope for the substation and integrated commercial tower building. This building envelope was to be refined during the design review process that would be implemented prior to seeking approval for the substation and integrated commercial tower building in Stage 2A(ii).

MCoA 3.2 was modified following exhibition of the Environmental Assessment and the design review process is required to include an invited competitive design alternatives process for project applications that seek approval for building envelopes or building works. Stage 2A(i) has been amended and approval is only sought for site preparation and demolition of the existing buildings on the site. The City of Sydney granted consent to demolish these buildings as part of a previous development application. The effect of this change is that:

- Stage 2A(i) would be limited to site preparation and demolition works that are required to facilitate construction of the City East Zone Substation; and
- Aspects relating to the design, construction and operation of the substation and integrated commercial tower building, construction of the 150 m tunnel section, and construction of the bridging structure over the tunnels for Stage 1 of the CBD Metro would be addressed during Stage 2A(ii). This would involve a design review process in accordance with MCoA 3.2.

The Statement of Commitments has been reviewed and amended to address issues raised in submissions (where required) and ensure that potential environmental impacts are appropriately managed.

The project would be constructed in accordance with a CEMP that would include a suite of sub-plans to address construction related issues raised in submissions.

While the project is likely to result in short term localised adverse construction impacts, on balance, it would lead to significant long-term benefits as part of the broader Sydney CityGrid Project. Based on this, the environmental impacts are considered to be justified.

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