

16 August 2010

Mr Neville Osborne
Manager - Water and Energy, Infrastructure Projects
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Mr Osborne,

Re: Stage 2A (i) City East Zone Substation Project (MP10_0071)

Thank you for your letter of 15 July 2010 about the proposed City East Zone Substation project. Sydney Water has reviewed the proposal and provides the following comments for the Department's consideration.

Sydney Water existing infrastructure

Sydney Water's letter to Energy Australia on 22 June 2010 (attachment one) indicates that the proposed works impacts on Sydney Water critical water and wastewater mains, and the State heritage listed Bennelong Stormwater Channel. Energy Australia will need to meet the requirements outlined in attachment one to ensure that the structural integrity of these assets is not compromised at any stage of the development.

Energy Australia will need to provide more detailed structural assessments at the concept and design stages of the project for Sydney Water's approval, including:

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

Conditions of Approval

Consistent with Energy Australia's Statement of Commitments, Sydney Water asks 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".

Sydney Water Servicing

Following development approval, Energy Australia 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 proposed development.

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 get a Section 73 Certificate and manage the servicing aspects of the development. Details are available on Sydney Water's website at www.sydneywater.com.au.

Works deed

Prior to any work being done Energy Australia may need to enter into a works deed with Sydney Water to minimise the risks to Sydney Water's critical assets. The terms of the deed may include specific requirements for the points below, and will depend on the final Concept Plan. Sydney Water will provide specific details of the works deed with the developer applies to Sydney Water for building plan approval.

As part of the agreement they will 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 will 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 by the developer
- facilitating a risk workshop to determine potential risks associated with the final concept plan.
- bearing all costs in carrying out design and construction works.

Sydney Water e-planning

Any statutory or strategic planning documents for review by Sydney Water should be forwarded to Sydney Water's 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.

This email should be used for:

- Section 62 consultations under the *Environmental Planning and Assessment Act 1979*
- Consultations where Sydney Water is an adjoining land owner to a proposed development
- Major Project applications under Part 3A of the *Environmental Planning and Assessment Act 1979*
- Consultations and referrals required under any environmental planning instrument
- Draft LEPs, SEPPs or other planning controls such as DCPs
- Any proposed development or rezoning within a 400 metre radius of a Sydney Water sewage treatment plant
- Planning Strategies
- Any proposed planning reforms or other general planning or development enquiries.

If you need further information please contact Cassie Loughlin on 8849 5243 or email cassandra.loughlin@sydneywater.com.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A Miller', with a horizontal line underneath.

Adrian Miller
Manager, Urban Growth Strategy and Planning

22 June 2010

Gareth Evans
Senior Area Development Manager CBD & Sydney East
Energy Australia
GPO Box 4009
Sydney NSW 2001

Re: City East Cable Tunnel

Dear Mr Evans

Thank you for your letter of 4 May 2010 about the City East Cable Tunnel (CECT). Sydney Water has reviewed the Concept CECT alignment drawings and provides the following comments for your consideration.

City East Zone Substation at Bligh Street

The proposed substation design shows development to RL -13.55 at 20-26 O'Connell Street. This lot is located adjacent to Sydney Water water and wastewater mains and the State heritage listed Bennelong Stormwater Channel. It is possible that excavation of the bedrock at the substation site may change the existing rock stress regime acting around the pipeline and that it could also create unfavourable vibrations causing damage to the pipeline.

The integrity of the ground/rock support in the vicinity of these drainage lines needs to be maintained at all times during construction. Any rock bolting must avoid interference with the drainage lines and their trench or tunnel installation. Dilapidation assessments will be required prior to, and at the completion of construction. Condition monitoring may be required during construction.

Construction of the Substation/Building/Cable Risers must be carried out in a manner that does not compromise Sydney Water's ability to maintain, renew, replace or appropriately enlarge the drainage lines. Works are not permitted within the 3 metre curtilage around each drainage line, without the appropriate level of heritage approval.

To assess the impact of the proposed substation on the water and wastewater mains, and the stormwater channel, Sydney Water stormwater assets need to be accurately shown on the final drawings for detailed assessment, and geotechnical information needs to be provided.

William Street/Yurong Street

It appears that the top of the CECT could be relatively close to several Sydney Water drainage lines of unknown depth in this area. Although it is expected that there is sufficient vertical clearance between the top of the tunnel and these drainage lines, the drainage lines should be accurately shown on the final drawings and geotechnical information provided for more detailed assessment.

Little Albion Street Area/CECT Extension

Sydney Water understands that this tunnel extension is proposed to be tunnelled/excavated by roadheader, with excavated tunnel dimensions being about 3.6 metres wide and 4.5 metres high, with rock bolts 3 metres long. Although the Sydney Water stormwater drainage lines in the area are not likely to be interfered with by the proposed works, these drainage lines should be accurately shown on the final drawings and geotechnical information provided for a more detailed assessment.

Reservoir Street Crossing and Future Sydney Water Relief Sewer

Sydney Water has sewer works planned along Reservoir Street, Surry Hills. The planned works include a 3 metre diameter relief sewer tunnel on a grade. Any change in the tunnels elevation would be limited.

At the point where the tunnel passes beneath the proposed CECT there is currently only 2.6 metres of separation. At this point the CECT is on a -3% grade. Sydney Water would prefer the grade of the CECT be reduced until after the tunnel had passed Reservoir Street. This would increase the separation distance between the two tunnels to over 6 metres.

As the ground conditions at this location, and the support requirements are currently unknown a larger separation distance between the two tunnels would be beneficial.

Busby's Bore, Oxford Street

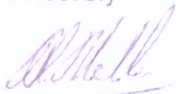
Drawing No. 208313 indicates the invert level of Busby's Bore to be 24.99 metres AHD. However, Sydney Water records indicate the invert level is about 31.6 metres AHD.

Leakage from Sydney Water assets

The CECT crosses, and runs parallel to Sydney Water wastewater assets. As such there is the potential for leakage to occur from Sydney Water's wastewater systems into the underlying CECT.

If you need further information please contact Cassie Loughlin on 8849 5243 or cassandra.loughlin@sydneywater.com.au.

Yours sincerely



Adrian Miller
Manager, Urban Growth Strategy and Planning