

# TRUenergy COMMUNITY LIAISON GROUP

## MEETING MINUTES DECEMBER 2008

MEETING	TALLAWARRA COMMUNITY LIAISON GROUP MEETING		MEETING NUMBER	7/2008
HELD AT	TRUENERGY TALLAWARRA SITE, WOLLONGONG		DATE	17 DECEMBER 2008
PROJECT	TALLAWARRA			
ATTENDEES	John Osseweyer Doug Prosser Chris Brandis Tony Gardiner Anthony Savenkov Graham Dowers John McIntyre Lloyd Townsend Lucy Greig Brendan Blakeley	NSW Scouts Association Lake Illawarra Authority Illawarra Bird Observers Club Concerned Residents of East Dapto TRUenergy TRUenergy TRUenergy TRUenergy Elton Consulting (Note-taker) Elton Consulting (Facilitator)		
APOLOGIES	Cheryl Lappin Graham Towers Rita Webb Rhonda Warner Jill Merrin William Dove Andrew Knowlson Jon Bridge	Shellharbour Council Department of Planning Dapto Chamber of Commerce Resident Healthy Cities Illawarra Department of Environment and Conservation Duck Creek Catchment Group Wollongong Council		
DISTRIBUTION	To all invitees			

ITEM NO.	DESCRIPTION	ACTION	DATE
1.0	<b>Welcome &amp; Introductions – Brendan Blakeley, Elton Consulting</b>		
	<p><i>The meeting commenced at 4.45pm. Brendan welcomed those present. Apologies were received from Graham Towers, Jill Merrin, William Dove and Rhonda Warner. Additional apologies were received following the meeting as listed above.</i></p> <p><i>The minutes of the previous meeting were accepted without amendment. Adoption of the minutes was moved by Doug Prosser and seconded by John Osseweyer.</i></p>		
2.0	<b>Power Station Works Update and Site Maintenance Update – Lloyd Townsend and Graham Dowers, TRUenergy</b>		
	<p><b>Site Maintenance Update</b></p> <p>Lloyd Townsend made the following key points:-</p> <p><u>Lands Management</u></p> <ul style="list-style-type: none"> <li>As the meeting was held at the asbestos repository site, Lloyd took the opportunity to re-explain its construction, its content, and the participation of the regulator and auditor in the compliance process. TRUenergy is open to suggestions for suitable future uses of the repository site.</li> <li>Vegetation improvement works continue along Yallah Bay Road as part of the Community Volunteers Australia (CVA) partnership with TRUenergy.</li> <li>Landscaping around the new power station is well underway. 3,400 trees have</li> </ul>		

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	<p>already been planted in zone B. Tree guards have been used to minimise rabbit damage.</p> <ul style="list-style-type: none"> <li>• Illawarra Vocational Services continues to be engaged to maintain road verges and grassed areas around the site.</li> <li>• The development permit has been received for the security building.</li> <li>• Two more vehicles recently illegally dumped on Tallawarra Lands have been removed.</li> <li>• Some shooters have recently entered the site without permission, along with their hunting animals. The local Police have been very responsive regarding this issue.</li> <li>• The new footbridge has been installed across the inlet canal. This will help separate future pedestrian and cycle traffic from vehicle traffic. It also has a screen to help protect fish and other objects from entering the inlet canal.</li> <li>• A weather station has been installed near the sewage treatment plant. This is part of the air quality monitoring programme required under the operating licence.</li> </ul> <p><b>Power Station Works Update</b></p> <p><u>Power station progress</u></p> <ul style="list-style-type: none"> <li>▪ The Stage A power station is in 'reliability run' stage prior to commercial operation.</li> <li>▪ Power output is better than expected.</li> <li>▪ Testing indicates ready compliance with the air and noise design requirements.</li> <li>▪ As anticipated, there are no visible stack emissions.</li> <li>▪ Some technical issues during commissioning.</li> </ul> <p><u>Questions and discussion</u></p> <ul style="list-style-type: none"> <li>• Tony Gardner: Where did the contaminated soil come from? How much contaminated soil was moved?</li> <li>• TRUenergy: From the former power station. For instance, the foundations of the former power station site had been levelled when it was purchased by TRUenergy and as the former foundations were not usable, they had to be cleared. There were also conduits that carried electrical cables which had to be broken up and cleared. The asbestos was 'bonded' asbestos rather than loose fibrous asbestos. The area excavated to contain the contaminated materials was between three and 11 metres deep in parts. The independent auditor and DECC auditor have been involved throughout the process.</li> <li>• Doug Prosser: Will the new bridge be treated to slow rusting due to the salty conditions?</li> <li>• Lloyd Townsend: It will be finished with epoxy paint.</li> <li>• Doug Prosser: Why is the electricity output capacity of new Tallawarra power station greater than its specifications?</li> <li>• Graham Dowers: A number of changes were made to enhance the efficiency of the power station during its development. As a result, the actual power output will be greater under specific conditions. For instance, the gas turbine works better on cold days than predicted by the initial modelling. This results in an electricity output range</li> </ul>		
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	<p>of 420-450 MW.</p> <ul style="list-style-type: none"> <li>• Doug Prosser: Is the Stage A power station currently feeding electricity into the grid?</li> <li>• John McIntyre: Yes.</li> <li>• Chris Brandis: We were down by the bridge yesterday. Although we could hear the freeway, we could not hear the power station.</li> <li>• John Osseweyer: This particular area may potentially be useful as a camping area for our regional Scout group, and perhaps other Scout groups also.</li> </ul>		
<b>3.0</b>	<b>Stage B Update – Graham Dowers, TRUenergy</b>		
	<p>Graham Dowers made the following key points:-</p> <ul style="list-style-type: none"> <li>• The Environmental Assessment has been revised to reflect the feedback received in the Adequacy Review process, and will be submitted to the Department of Planning in the coming days. Formal exhibition is anticipated to occur in early 2009.</li> <li>• The Community Information Session held recently (on Wednesday 10 December 2008) included information on the Stage B project such as greenhouse emissions and contamination issues.</li> <li>• Doug Prosser: Has TRUenergy made a decision about the specific type of plant?</li> <li>• Graham Dowers: That commercial decision has not yet been made.</li> </ul>		
<b>4.0</b>	<b>Tallawarra Lands Update – Anthony Savenkov, TRUenergy</b>		
	<ul style="list-style-type: none"> <li>• The Wollongong City Council Draft Wollongong LEP 2009 is now on public exhibition. Formal submissions can be made to Council over next three months, closing 13 March 2009. Further information can be found at: <a href="http://www.wollongong.nsw.gov.au/haveyoursay/draftlep2009.asp">www.wollongong.nsw.gov.au/haveyoursay/draftlep2009.asp</a> TRUenergy encourages all interested parties to review the LEP documentation and make submissions. Council can be contacted for a CD containing the relevant information about the LEP.</li> <li>• Key steps made in the statutory planning process so far:- <ul style="list-style-type: none"> <li>○ 2005 – Council resolved to revise the LEP for Tallawarra Lands.</li> <li>○ 2006 – Local Environmental Study was undertaken to determine the best potential uses for the site.</li> <li>○ 2007 – Council reviewed and adopted the LES, considering it in preparing its LEP.</li> <li>○ 2008 – Formal public exhibition.</li> </ul> <p><u>Next key step:-</u></p> <ul style="list-style-type: none"> <li>○ The development planning, application and assessment process, as outlined at the previous Community Liaison Group meeting (in October 2008).</li> </ul> </li> <li>• At the recent Community Information Session a number of information boards were displayed relating to Tallawarra Lands, and a variety of specialist experts were present to discuss the project with interested members of the community. The information boards included Council's draft LEP 2009 zoning map (for Tallawarra),</li> </ul>		

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	<p>and the Tallawarra Lands Structure Plan.</p> <p>There were a range of issues discussed at the Community Information Session. These are summarised in the in the latest Tallawarra Community Update (Issue 10 of December 2008).</p> <p>This was the third in a series of community information and feedback sessions voluntarily hosted by TRUenergy, and an important component of the various stakeholder consultation initiatives undertaken by TRUenergy for its Tallawarra projects.</p> <p>The Chair distributed a document outlining responses to questions received from the "Concerned Residents of East Dapto" group (see Attachment A of this document).</p> <p><u>Questions and discussion</u></p> <ul style="list-style-type: none"> <li>• Tony Gardner: How many people attended the Community Information Session?</li> <li>• TRUenergy: We are pleased that about 20 people attended to learn about the three TRUenergy projects at Tallawarra and share with us their feedback.</li> <li>• Doug Prosser: Is there a date for Alstom to vacate the site?</li> <li>• TRUenergy: This process is underway and is anticipated to be completed in the next few weeks.</li> </ul>		
<b>6.0</b>	<b>Discussion and next steps – Brendan Blakeley, Elton Consulting</b>		
	<ul style="list-style-type: none"> <li>• The Chair thanked all participants for their continued participation in CLG meetings and invited any comments on the format and frequency of Community Liaison Group meetings and suggestions for improvement.</li> <li>• Doug Prosser: Do you plan to continue the Community Liaison Group next year?</li> <li>• TRUenergy: Yes, it is an important mechanism for providing project information and obtaining stakeholder input.</li> <li>• Chris Brandis: The frequency of the meetings could be reviewed to reflect planned progress on the site / issues arising.</li> <li>• John Osseweyer suggested that TRUenergy could operate tours of the power station for the Scouts and other interested groups.</li> <li>• John Osseweyer presented TRUenergy with the scout national scarf to recognise the Scouts' long standing association with the project.</li> <li>• TRUenergy thanked members of the Tallawarra Community Liaison Group for their continued interest in the project, and Elton Consulting for its work on the various consultation activities undertaken on behalf of TRUenergy in 2008.</li> <li>• The Chair wished all Community Liaison Group members a happy and safe holiday season.</li> </ul> <p>Participants were invited to view the information boards which were presented at the recent Community Information Session Number 3 (re-displayed at the Community Liaison Group meeting).</p> <p>Participants were provided electronic copies of the Tallawarra Lands Structure Plan</p>		

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	report (which is also available on TRUenergy's Tallawarra project website).		
<b>7.0</b>	<b>Close – Next meeting</b>		
	NEXT REGULAR MEETING: <b>4.30 pm Wednesday 18 February 2009, onsite.</b>		
If you have any questions in relation to these minutes please contact Brendan Blakeley at Elton Consulting. Tel: 02 9387 2600 Fax: 02 9387 2557 Email: <a href="mailto:brendan@elton.com.au">brendan@elton.com.au</a>			

### Attachments:

Attachment A – TRUenergy response to questions raised by “Concerned Residents of East Dapto” group.

## Responses to recent questions submitted by "Concerned Residents of East Dapto".

Email from Tony Gardiner received 25 October 2008.

### Questions regarding Local Environmental Study bushfire assessment

Question: "Page 5: *Dwelling construction requires assessment under section 79BA of the EP&A act*. Has this process been commenced?"

Numerous specialist studies were undertaken for the Tallawarra Lands Local Environmental Study in order to address the requirements specified by the Department of Planning. These studies were reviewed by government experts. The Tallawarra Lands Local Environmental Study was adopted by Wollongong Council in 2007.

One of these studies was the Tallawarra Lands Bushfire Assessment (Eco-Logical, October 2006). It assessed potential bushfire hazards and bushfire related planning requirements for the site.

It identified a generally low level of bushfire hazard across the site, due principally to the gentle slopes of Tallawarra Land, and the lack of native vegetation.

As well as considering the planning requirements relating to the rezoning, the report also helpfully outlines the legislative requirements relating to potential future stages of the development, including development consents. It is in this context that the report refers to Section 79BA of the New South Wales Environmental Planning & Assessment Act 1979.

The Tallawarra Lands project has complied with the relevant planning controls and will continue to do so in potential future stages.

Question: "Is there a desire to reduce APZ widths from what is specified in PBP 2001?"

Asset protection zones ("APZ's") are important for fire safety. They provide a defensible space between a fire hazard (e.g. vegetation) and an asset (e.g. building). TRUenergy has not made any application to reduce APZ widths, nor is this suggested by the report.

We have already undertaken a preliminary assessment of the Structure Plan against asset protection zone requirements and applicable construction standards relating to fire safety according to Planning for Bushfire Protection (Rural Fire Service, 2006). This process has included valuable input from both the Rural Fire Service and NSW Fire Brigade.

We are pleased that the Structure Plan is considered by experts as a good design from a bushfire perspective, and note that most of the APZ requirements are provided for within the preliminary road design incorporated into the Structure Plan.

Question: "Page 6: Where was bushfire dealt with in LES?"

The bushfire assessment was one of the core studies undertaken for the Tallawarra Lands Local Environmental Study. In the Local Environmental Study report, it is dealt with in Section 5.12.

Question/comment: "Page 9: Bushfire hazard analysis needs to be in colour."

We note that it is in colour.

Question: "Page 11: Who will maintain APZ's?"

This will be an important consideration at the stage of subdivision planning.

As the diagram below of the statutory planning process helps explain, the project is currently in the rezoning stage.

### Concept Feasibility Process

1998 - EIS prepared prior to the site being purchased by TRUenergy

2006 - LES - including community/ government agency consultation

### Rezoning Process

November 2008

DoP certify DWLEP 2009 for exhibition  
**WE ARE HERE**

March 2009

Exhibition of DWLEP 2009 concludes

August 2009

Finalisation and gazettal of LEP

### Development Application Process

September 2009

Finalise Masterplan to ensure consistency with LEP

October 2009

Part 3A of EP&A Act

- Stage 1 Environmental Assessment including lodgement of concurrent DA/VPA

November 2009

- Stage 2 DA/VPA exhibition and consultation

February 2010

- Stage 3 Assessment and determination including report by Director-General and decision by Minister for Planning

2010 onwards

Construction to proceed at Tallawarra Lands, in stages

Question: "Has a conservation management plan been commissioned? Who? When? Formulated?"

This will be considered in detail at the appropriate time, and after rezoning outcomes are known.

Conservation outcomes have been considered in the Tallawarra Lands Local Environmental Study. Its recommendations are reflected in the draft Wollongong Local Environmental Plan 2009.

In the mean time, on ongoing process of environmental maintenance is being undertaken, the highlights of which are regularly reported to the Tallawarra Community Liaison Group at the bimonthly meetings.

Question: "Page 13: Are perimeter roads and trails nominated in LEP?"

It is our understanding that potential perimeter road and trail design is not a function of the standard format Local Environmental Plan prescribed for NSW.

Please refer to the Tallawarra Lands Structure Plan, which includes a preliminary road layout. The Structure Plan report is available on the project website.

Question: "Who will maintain perimeter trails?"

This will be considered in detail at the appropriate time.

Question: "Do plans include a ring water mains system?"

Yes.

Question: "Who establishes and maintains any static water supply tanks?"

We look forward to considering this matter at the appropriate time.

Question/comment: "Page 14: *Electricity and gas supplies should be underground. Acid sulphate soil disturbance!*"

The presence of potential acid sulphate soils does not preclude the development. Development in areas of potential acid sulphate soils is normally undertaken to minimise disturbance of higher risk potential acid sulphate soil and according to an approved Acid Sulphate Management Plan.

Question: "Page 16: Is bushfire protection addressed in LEP?"

As the Wollongong Local Environmental Plan is a matter of Wollongong Council, we suggest you refer your question to them.

However, we note that bushfire protection was clearly addressed in the Tallawarra Lands Local Environmental Study, which formed the basis of the Tallawarra component of the draft Local Environmental Plan.

Question: "Was NSW Rural fire service consulted? Evidence?"

Yes, the Rural Fire Service is a key stakeholder, and we are grateful for their ongoing input into the Tallawarra projects.

Question: "Page 19: Is there a conservation or land use management plan or similar?"

It is appropriate that such a plan be prepared during the development application stage of the project, once the outcomes of Council's land rezoning process are clear, and in conjunction with various other management plans such as bushfire management, water, and so on.



## Email from Ken Davis, 6 October 2008

Questions: "At least one member of CRED has been approached by a telephone survey regarding housing on Tallawarra.....

1. Is a survey of residents being undertaken regarding housing or other land use for the Tallawarra Lands.
2. If so, who has commissioned the survey?
3. If so, what is the size of the sample survey?
4. If so, what are the questions being asked (including response options)?
5. If so, what are the geographic and demographic parameters of the survey?
6. If so, when and how will the results be released for public scrutiny?
7. If not, is TRU willing to collaborate with CRED and with Council to conduct such a survey to verify or discount assertions made in previous documents?"

TRUenergy conducts surveys of the communities in which it operates from time to time. These are a business tool used to assist them to formulate and refine a wide range of community engagement efforts and to better understand community awareness and perceptions of the company's operations. TRUenergy's policy is not to make details such as the one/s you have asked for public. Information will be released at the company's discretion.

## Letters from Tony Gardiner received 7 October 2008

Question: "What documentation has been provided to the Dept. of Planning?"

The Department of Planning has been extensively involved in the Tallawarra projects.

If you have a particular concern or query for us, please specify in order that we may efficiently respond.

Question: "Have any documents been submitted to WCC since May 2007?"

Wollongong Council has been extensively involved in the Tallawarra projects.

If you have a particular concern or query for us, please specify in order that we may efficiently respond.

Question: "Does the flood study for Duck Creek allow for the impacts of climate change?"

Yes.

Question: "Has TRU completed or commissioned a flood risk study for the entire site? Is there a mitigation or adaptation plan for the entire site?"

To facilitate the preparation of a Local Environmental Study for Tallawarra Lands, a range of technical studies were undertaken by specialist experts. One of these was the flood study. The flood study was prepared with the cooperation of, and review by, flood experts from Wollongong City Council and the New South Wales Department of Natural Resources.

Duck Creek is the main creek passing through Tallawarra Lands. There are small creeks passing through other parts of the site. It is important that their flood characteristics also be appraised at the appropriate time.

A flood mitigation study was also undertaken to understand some of the options for mitigating potential flood constraints.

A preliminary study of water management and water sensitive urban design has also been carried out for Tallawarra Lands. An overview of the outcomes of this was presented at the February 2008 Community Liaison Group meeting.

Question: "How does TRU propose to deal with the inundation of the commercial/industrial lands as well as the effect of that inundation on the ash ponds consolidation?"

In relation to Tallawarra Lands, Council has carefully prepared its draft Local Environmental Plan to respond to potential flood risk. Expert analysis and modelling clearly shows that, even in "worst-case" flood scenarios, there is little flood risk impact on the potential employment zones of Tallawarra Lands. Additionally, expert flood mitigation modelling provides various options for modifying the land during the development process in order to further reduce potential flood risk.

Question: "A significant number of Preliminary Study Reports accompanied the Les and the draft LEP. Have any other more concise and accurate Study reports been commissioned and completed?"

Numerous specialist studies were undertaken for the Tallawarra Lands Local Environmental Study in order to address the requirements specified by the Department of Planning. These studies were reviewed by government experts. The Tallawarra Lands Local Environmental Study was adopted by Wollongong Council in 2007.

Rezoning is a preliminary stage in the development process. Accordingly, many of the reports undertaken to date are appropriately titled "preliminary", in the sense that it is envisaged that they will likely be preceded by more detailed assessments at the development application stage. Their preliminary nature has no bearing on their accuracy.

Questions: "There are a number of zoning changes from the draft LEP submitted May 2007 and the WCC DLEP. What is the justification for these changes? Is there any documentation supporting these changes? Did the changes go to the CLG for consultation?"

As the Wollongong Local Environmental Plan is a document of Wollongong Council, you may wish to refer your question to them.

That said, we note that Council has published both draft LEP's, and we note little fundamental difference between them. They are available on Council's website. Please note that Council's draft LEP 2009 is currently on formal public exhibition.

Question: "As we are currently playing catch up can we please have a copy of all the documents which accompanied the LES and the LEP?"

As the Wollongong Local Environmental Plan is a matter of Wollongong Council, we suggest you refer your question to them.

Questions: "How does TRU propose to consolidate the ash ponds? Is there a study report? What is the time frame for consolidation? What is the projection for consolidation and building?"

It is clear that there are potential rehabilitative benefits of consolidating parts of the redundant ash ponds. There are many options for such consolidation. A preferred approach will be determined at the appropriate time in the development process.

Question: "Is the Concept plan available for public or CLG perusal?"

A Concept Plan is a matter for the Development Application stage of the project, which follows the rezoning stage. In the mean time, we invite you to view the Tallawarra Structure Plan. The full Structure Plan report can be viewed at the project web site. It is similar to one presented to the Community Liaison Group by Cox Richardson in 2007.

Question: "Is there a Draft Concept Plan for the proposed lands development?"

[See the response immediately above.](#)

Question: "Referencing draft minutes August 2008 section 5.0 the structure plan that was presented to the CLG, can that documentation be made available at the October CLG?"

[The current Structure Plan is available on our project website.](#)

Question: "Email sent by Avalynne Wilby July 2008 requesting information about surveys. The questions included were: when was the last survey carried out; who was surveyed; the results of the survey; how many participants".

[This matter was addressed at the Tallawarra Community Liaison Group meeting of August 2008. Please refer to the minutes of that meeting which are available on the project website.](#)

Question: "Both Ken Davis and myself have requested to support the claim that 'the community values the scenic quality of the northern portion of the Tallawarra site, and would be accepting of residential development if it was kept to lower densities and the prominent ridgelines are maintained.' This acceptance apparently came from the 'original' community meetings at the Ribbonwood centre during 2006. I can only presume from my previous requests that no minutes of these meetings are in existence and therefore the above statement cannot be verified."

[TRUenergy has previously replied to you regarding this matter by letters dated 23 January 2008 and 12 May 2008, and to Mr Davis on 15 May 2008 and 17 July 2008.](#)

#### **Questions regarding Preliminary Environmental & Geotechnical Investigation Precinct 7 & Precinct 8 Tallawarra Site (of October 2006)**

Question: "Page 2: *Background information. Environmental review prepared by Environmental Investigation Services (ref. 20423FK July 2006)*

What is this report? What is in report? Copy?"

[It is an environmental contamination review carried out for the Tallawarra Lands Local Environmental Study. It compliments the significant other environmental contamination investigations and monitoring undertaken at Tallawarra. As the Local Environmental Study is a Council process, please refer requests for its documentation to Council.](#)

Question: "Page 3: *Field work method.* Field test locations were determined to achieve uniform site coverage in accessible areas. Accessible?"

[The sampling was undertaken by local geotechnical experts Douglas Partners, in accordance with their standard procedures outlined in the report. The samples were analysed by Envirolab, a laboratory accredited by NATA, Australia's national laboratory accreditation authority.](#)

[TRUenergy had no input in selection of test locations. They were selected to achieve uniform site coverage. We understand that "accessible" in this context relates to accessibility for penetration testing by the test rig. For instance, on page of that report, the author notes that "testing was attempted at Location 2, but since the test location was east of the embankment, refusal was encountered on weathered rock at 0.7 m".](#)

[Quality assurance / quality control procedures comprised an integral part to the contamination assessment and included both field and laboratory procedures.](#)

[All soil and water results were within the relevant government guidelines, including those relating to heavy metals, asbestos and polycyclic aromatic hydrocarbons. Increased testing coverage has also produced this result.](#)

Question: "Page 7: Laboratory testing When did this previous testing take place?"

As background information, the report cites the results of previous testing undertaken by the Electricity Commission of NSW, the former owners and operator of the site, referencing "Ash & Dust Properties – Electricity Commission of NSW (unpublished), Dec 1988".

Question: "What was the compaction density at the time of testing?"

We understand that the soil density is determined by extrapolation from the soil profile results, which are outlined in the report.

Question: "Page 13: Proposed development. Precinct 6 and 8 discussion was only preliminary. What further work has been is being or is planned to be undertaken and at what time?"

The work carried out on the site, including the studies undertaken, has complied with the relevant laws, regulations and standards, and continue to do so.

Comment: "Pages 14 – 17: Consolidation. The time to achieve a consolidation of 90% (not 100%) will take between 17 to 90 years."

The report considers base case scenarios, of which the case you refer to is one. The report then goes on to explain methods of accelerating settlement.

Please note that 90% consolidation target is an industry norm, and represents the end of primary consolidation.

Question: "What methods are to be used to consolidate settlement? What affect would local flooding have on consolidation times?"

The report outlines various consolidation options, which will be considered in more detail at the appropriate time.

Question: "Page 17: *As this report is only preliminary, once a preferred process has been determined, additional investigation and*

*analysis will be necessary.* What is progress on this additional investigation?"

The report outlines various consolidation options. At the appropriate time, these will be considered in more detail, and a preferred process or processes determined.

Question: "Page 19: *Liquefaction*: With a fault line at Robertson, what further work has been undertaken, is being undertaken, or is planned to be undertaken to mitigate the effects of liquefaction?"

Liquefaction is a condition whereby a soil will undergo continued deformation at a constant low residual stress or with low residual resistance, due to the build-up and maintenance of high pore water pressure. This reduces the effective confining pressure to a very low value leading to liquefaction or "flow", usually under cyclic loading such as resulting from an earthquake.

A supplementary geotechnical investigation was undertaken which included:

- additional subsurface investigation to better define the extent of the estuarine and alluvial sediments that underlie the ash dam part of the site;
- assessment of the behaviour of the ash deposit under cyclic (earthquake) loading and the potential for liquefaction occurring, pre and post densification of the ash;
- additional assessment of the consolidation characteristics of the ash deposit;
- additional sampling and contamination testing; and
- additional soil sampling and laboratory testing for acid sulphate soil assessment.

As the development progresses further work will be carried out as required.

Question: "Page 20: *Future investigation*. As outlined additional continuatious penetration testing detailed assessment of performance of ash deposit under cyclic loading additional contamination testing additional sampling and testing of alluvial sediments as potential for acid sulphate soils"

Please see response immediately above.

### **Questions regarding Preliminary Engineering Report on Siteworks and Infrastructure (Willana Associates, October 2006).**

Question: "Page 7: *Managing discharge to Downstream Waterways*. What measures are planned to reduce the volume and rate of stormwater runoff?"

An overview of the water management practices being considered for the site was presented to the Tallawarra Community Liaison Group in February 2008. You may wish to view the minutes of that meeting, which are available on the Tallawarra project website.

Question: "Page 9: *Ground conditions Development recommendations*. Has the detailed geotechnical investigations been completed, initiated and underway or yet to commence? Who, when?"

Detailed geotechnical investigations and earthworks plans are an important consideration for the land development process. However, it is not appropriate to undertake such an investigation at this stage.

Question: "Page 11: *Sub surface water*. Why was the geotechnical test pits not monitored for groundwater ingress? Particularly as one pit showed immediate groundwater seepage."

Groundwater seepage was observed in a single pit (5.7m). The report states that no free groundwater was observed in the remaining test pits. It is correct that they were not monitored on an ongoing basis for seepage, as this was not required for this particular study. As per standard practice, the pits were promptly backfilled.

Question/comment: "Page 13: *Structural ground conditions*. Precincts 6 & 8, 'Liquefaction can potentially addressed subject to further testing.' 'These preliminary results reveal the extent and nature of development is subject to further assessment.'"

We see nothing particularly notable or unusual about this. As with most land developments, there are parts of the initial state of the site that are better suited than others to development, and parts that require processes to ready them for development. The studies undertaken to date help us understand this, and help us plan the potential future development to deal with these issues.

Question: "Page 14: *Development recommendations*. Sewer, no service connection points are available. Will an integrated system be developed?"

Yes, subject to the relevant approvals, a potential development of Tallawarra Lands is likely to include a reticulated sewerage network. This will be confirmed during the development application phase.

Comment: "Page 16: Electricity, local network infrastructure inadequate to service site. Will have cost implications."

One benefit of the potential development of Tallawarra Lands is the investment and resulting improvement in infrastructure services.

Question/comment: "Page 18: *Development recommendations Road network. Despite changing travel patterns, the road network surrounding Tallawarra has limited capacity to absorb additional traffic generated by the site.*"

Site planning has included an assessment of the existing road network, and modelling of traffic flows, and consultation with traffic experts from the NSW Roads & Traffic Authority and Wollongong Council. The capacity of the surrounding road network will further taken into consideration in the detailed planning and design for the development application phase of the project, including consideration of opportunities for road network upgrade.

Question: "'Matching site residence status with employment opportunities will encourage 'self sufficiency' and maximize amount of internal site trips, alleviating effects to surrounding road network'. What is proportion of employment to residential lands and what "self sufficiency" is proposed to be achieved?"

The draft *Wollongong Local Environmental Plan 2009* proposes for Tallawarra Lands a balanced mix of employment, residential and environmental/recreation zoned land. These components compliment and support each-other.

For example, the inclusion of employment land increases the potential for local working opportunities. Aside from the general economic benefits this potentially brings the community, it also helps make Tallawarra and the surrounding neighbourhoods more liveable and sustainable. For instance, it reduces the need for commuting and private vehicle travel. It also provides residents the opportunity to progress through different life cycles within a single neighbourhood.

Question: "'Provide a suitable range of all services (education, retail, entertainment etc.) on-site to maximize the proportion of internal trips alleviating effects to surrounding road network'. WHAT IS THE TRU SOLUTION?"

We note that the zonings in the draft *Wollongong Local Environmental Plan 2009* provide for such uses, the details of which will be provided during the development applications phases of the project.

Question: "The LIA has plans for a continuous foreshore link around the Lake. Linkage thru Tallawarra lands is essential to complete this circuit. What are the plans?"

This outcome is consistent with TRUenergy's Vision for Tallawarra Lands and accommodated in the proposed zonings of *draft Wollongong Local Environmental Plan 2009*.