



**Department of  
Primary Industries  
Catchments & Lands**

Mr David Farmer  
General Manager  
Wollongong City Council  
Locked Bag 8821  
Wollongong DC  
NSW 2520

5'O'keefe Ave  
Nowra NSW 2541  
[Mark.Edwards@lands.nsw.gov.au](mailto:Mark.Edwards@lands.nsw.gov.au)  
ph:4428 9101  
fax: 4421 2172  
[www.lands.nsw.gov.au](http://www.lands.nsw.gov.au)

Attention: Mr Farmer directly.

Date 28-8-2012

Our Ref: 10/06864  
Your Refs: ESP-100.01.04  
Z11/247674

Dear Mr Farmer

**Re: Proposed Helensburgh, Otford and Stanwell Tops 7(d) lands rezoning.**

Thankyou for the opportunity to comment on the *Draft Planning Proposal for the 7(D) Lands at Helensburgh, Otford and Stanwell Tops*. Crown Lands extends its appreciation of this submission being received by Council. As the holder of over 365ha of land within the planning proposal area, Crown Lands has significant assets which are affected by the proposal.

Crown Lands support or accept the proposed zoning of over 88% of its affected estate and object to the zoning of the remaining 12% as E2 or RE1, given the physical use and social potential of those land parcels.

Council's Final Report on Submissions states that Crown Lands support sections of the proposal for the Princes Highway West of F6 Precinct contrary to Crown Lands correspondence (Our refs: DOC10/43954 of 21 July 2010, and DOC11/140383 of 24 November 2011).

Crown Lands request that Council table the following comments for specific consideration by Council. In relation to the proposed zoning of Crown lands, Crown lands require the following:

**1. Princes Highway West of F6 precinct:**

Lot 99 DP 752054 is predominantly cleared and grazed and is managed with the freehold land to its south as a rural holding. Lot 7320 DP 1168914 west of the F6 contains a large cleared area which is used and maintained as a trotting track.

In the *Draft Review of 7(d) lands at Helensburgh Otford and Stanwell Tops (2009)*, these parcels are proposed as RU2 Rural landscape. This was supported in the Crown submission dated 21 July 2010. This was not translated into the Final Report on Submissions which states "The Land and Property Management Authority supported the Crown Land being zoned E2 Environmental Conservation" which is factually incorrect.

Crown Lands object to these Crown Lots being zoned E2 as it does not reflect the physical attributes of all of the land. The distribution of RU2 and E2 zoning proposed in the Draft Review is supported by Crown Lands. A compromise position of an E3 zoning of the Crown land would be acceptable.


## 2. Addition to Walker Street Precinct

Although not included in the scope of the 7(D) Lands review, Council has chosen to include an amendment that "Council endorse the existing draft Planning Proposal for [various parcels and] rezones Lot 672 DP 752033 (Crown Land) from SP1 Cemetery to RE1 Public Recreation".

Crown Lands notes that adjacent lands are zoned or proposed to be zoned as SP1 (existing cemetery), R1, R2, and RU2. The zoning of the Crown Land as RE1 is incongruous with the surrounding zonings, regardless of the previous zoning of 6(a) Open Space.

The Helensburgh Cemetery is within the Sydney Greater Metropolitan Area which has been assessed by the Crown Cemeteries Advisory Committee, including community involvement and Local Government representation. All Crown cemeteries in this area reported a shortage of burial space for the long term.

Based on current usage patterns and population projections, it is estimated that over 245,000 gravesites will be required by 2020 and this is more than a third of the current gravesites available.

The current Helensburgh Cemetery area at Lot 9068 DP 93064 currently has >5yrs burial space available. The adjoining Lot 672 DP 752033 may be required for a future cemetery area and should retain the zoning of SP1.

Despite the long term shortage of cemetery space, should Wollongong City Council choose to zone Lot 672 DP 752033 as RE1 for Public Recreation, Crown Lands will consider this as Councils concurrence to its reservation under the *Crown Lands Act* 1989 as a reservation for the purpose of Public Recreation, with its care control and management devolving upon Council.

Crown Lands look forward to your timely response.

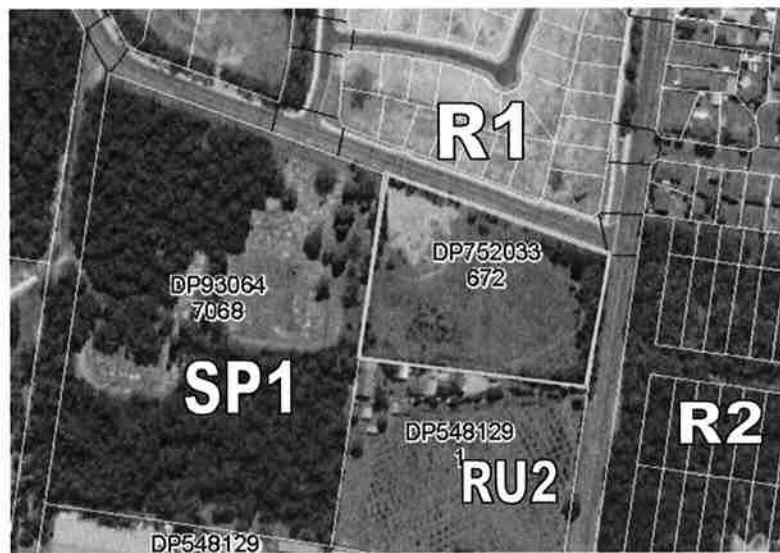
Yours Sincerely



09.10.2012  
Mark Edwards  
Group Leader  
South Coast




Forty two hectares of under-scrubbed, cleared and disturbed Crown land in the West of F6 precinct, capable of, and suitable for RU2 zoning, and currently used as Rural Use land.

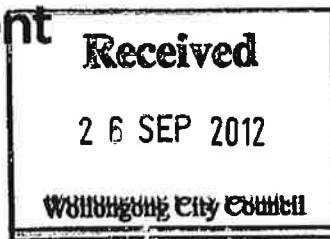


Lot 672 DP752033, being suitable for Cemetery purposes,  
Also showing surrounding zoning.


212/173856



**Office of  
Environment  
& Heritage**



Our reference: DOC12/34161  
Contact: Thomas Williams 9995 6861

Mr David Farmer  
General Manager  
Wollongong City Council  
Locked Bag 8821  
Wollongong NSW 2500

Dear Mr Farmer

Thank you for the opportunity to comment on the draft Planning Proposal to rezone land at Helensburgh, Otford and Stanwell Tops, currently zoned E3 Environmental Management and previously zoned 7(d) Hacking River Environmental Protection, to a variety of zones.

The Office of Environment and Heritage supports the Planning Proposal's initiative to zone lands E2 Environment Conservation. The lands identified, by Wollongong City Council, to be zoned E2 will provide a significant contribution to recognition of landscapes that provide valuable habitats for threatened and regionally significant fauna and flora and towards establishment of biodiversity corridors between the Royal National Park, Garrawarra State Conservation Area, Illawarra Escarpment State Conservation Area, Woronora catchment and Heathcote National Park.

The benefits of connectivity between protected areas include such valuable contributions as facilitating the exchange of genetic material, provision of adequate feeding areas and breeding grounds and assisting migration. The establishment of biodiversity corridors between protected areas provides a significant contribution to climate change adaptation.

If you have any questions regarding this matter please contact Thomas Williams on 9995 6861.

Yours sincerely

*S. Harrison 25/09/12*

**SUSAN HARRISON**  
Manager Planning  
Conservation and Regulation, Metropolitan  
Office of Environment and Heritage

David Farmer  
General Manager  
Wollongong City Council  
Locked Bag 8821  
Wollongong DC NSW 2500

**Received**

- 9 OCT 2012

Wollongong City Council

Dear Mr Farmer

**Draft Planning Proposal for Former 7(D) Land At Helensburg,  
Otford, Stanwell Tops (Your reference ESP-100.01.040)**

I am writing in response to Council's letters Z12/91871 and Z12/131168 (file ESP-100.01.040) dated 3 August 2012 inviting comment of the subject draft Planning Proposal.

As occupier of land and land owner in the Wollongong LGA, the NSW Ministry of Health appreciates the opportunity to comment on the Draft Planning Proposal for Former 7(D) Land at Helensburg, Otford, Stanwell Tops. The Ministry has specific interest in the Garrawarra precinct site, which is managed and controlled by the South Eastern Sydney Local Health District and is in part owned by the Health Administration Corporation (HAC), with the remainder of the site comprising Crown Land (Reserve No. 41430 for Asylum & Hospital notified 27.2.1907).

I note the Garrawarra land within Council's proposal is:

- |                                    |   |
|------------------------------------|---|
| 1. Part Lot 2 DP 840501            | Garrawarra Centre & ancillary facilities<br>(HAC owned) |
| 2. Balance Lot 2 & Lot 3 DP 840501 | Bush land (HAC owned and Crown Land)                    |

On review of the draft documents and given SP2 Infrastructure will allow Health Services Facility, Seniors Housing, the proposed zoning for property 1 above is considered to be appropriate for the current and the foreseeable future use of that portion of the property.

I am concerned that the proposed zoning change for the land described in 2 above from E3 to E2 will not allow the opportunity for the Ministry or Government to consider any other uses of this land.

I therefore request that Council amend the Draft Proposal to zone the whole of Lot 2 to SP2 Infrastructure, and to expand the uses that are permissible with consent within the E2 Environmental Management zone in relation to the "Garrawarra" land to include:

- Health Services
- Aged care
- Community facilities; and
- Recreation facility (outdoor)

Acceptance of the amendments proposed above would allow the continued delivery of much needed health and health related services from the site and also provide a capacity to in the future consider other uses of part of the Garrawarra Centre, including appropriate expansion opportunity within the context of the entire site. It is acknowledged that the E2 land would not be subdivided and would need to remain in a single lot and any such permissible use with consent would be subject to compliance with the relevant bush fire and heritage codes.

I have been advised by the LPMA that the Garrawarra Cemetery site (Lot 4 DP 840501), which is also proposed to be zoned E2, was transferred to Wollongong Council on the 1<sup>st</sup> October 1967. The zoning of that site is therefore a matter for Council; however I request Council confirm by return letter that Council has responsibility for the trusteeship, care, control and management of the cemetery.

I look forward to your favourable consideration of the requested amendments to Council's Draft Proposal. Should you require clarification please call Dennis Jenner, Senior Manager Asset Services on (02) 9382 7857.

Yours sincerely



Karen Crawshaw  
**Deputy Director-General**  
**Governance, Workforce and Corporate**

4.10.12



Mr David Farmer  
General Manager  
Wollongong City Council  
Locked Bag 8821  
WOLLONGONG DC NSW 2500

Via Email: [records@wollongong.nsw.gov.au](mailto:records@wollongong.nsw.gov.au)

Dear Mr Farmer

**Draft Planning Proposal for Former 7(D) Land at Helensburgh,  
Otford, Stanwell Tops (Your reference ESP-100.01.040)**

I am writing in response to Council's letters Z12/91871 (file ESP-100.01.040) dated 3 August 2012 inviting comment of the subject draft Planning Proposal.

As occupier of land in the Wollongong Local Government Area (LGA), the South Eastern Sydney Local Health District (SESLHD) appreciates the opportunity to comment on the Draft Planning Proposal for Former 7(D) Land at Helensburgh, Otford, Stanwell Tops. The Garrawarra precinct site is managed and controlled by the SESLHD and is in part owned by the Health Administration Corporation (HAC), with the remainder of the site comprising Crown Land (Reserve No. 41430 for Asylum and Hospital notified 27.2.1907).

I note the Garrawarra land within Council's proposal is:

- |                                      |   |
|--------------------------------------|---|
| 1. Part Lot 2 DP 840501              | Garrawarra Centre and ancillary facilities<br>(HAC owned) |
| 2. Balance Lot 2 and Lot 3 DP 840501 | Bush land (HAC owned and Crown Land)                      |

On review of the draft documents and given SP2 Infrastructure will allow Health Services Facility, Seniors Housing, the proposed zoning for property **1** above is considered to be appropriate for the current and the foreseeable future use of that portion of the property.

I am concerned that the proposed zoning change for the land described in **2** above from E3 to E2, will not allow the opportunity for the SESLHD or Government to consider any future alternative use of this land.

I therefore request that Council amend the Draft Proposal to zone the whole of Lot 2 to SP2 Infrastructure and to expand the uses that are permissible with consent within the E2 Environmental Management zone in relation to the 'Garrawarra' land to include:

- Health Services
- Aged care
- Community facilities; and
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Acceptance of the amendments proposed above would allow the continued delivery of much needed health and health related services from the site and also provide a capacity to, in the future, consider alternative use of part of the Garrawarra Centre, including appropriate expansion opportunity within the context of the entire site. It is acknowledged that the E2 land would not be subdivided and would need to remain in a single lot and any such permissible use with consent would be subject to compliance with the relevant bush fire and heritage codes.

I have been advised by the land and Property Management Authority (LPMA) that the Garrawarra Cemetery site (Lot 4 DP 840501), which is also proposed to be zoned E2, was transferred to Wollongong Council on 1 October 1967. The zoning of that site is therefore a matter for Council; however, I request Council confirm by return letter that Council has responsibility for the trusteeship, care, control and management of the cemetery.

I look forward to your favourable consideration of the requested amendments to Council's Draft Proposal. Should you have any further enquiries, please do not hesitate to contact Ms Jacqui Grossmith, A/Director, Business Development, SESLHD on 9382 7857.

Yours sincerely

A handwritten signature in black ink, appearing to read 'T Clout', with a large, sweeping flourish at the beginning.

**Terry Clout**  
**Chief Executive**

Date: 3 October 2012



Our Ref: STH12/00044  
Contact: Andrea Boes 4221 2771  
Your Ref: Z12/146873



**Transport**  
Roads & Maritime  
Services

The General Manager  
Wollongong City Council  
Locked Bag 8821  
Wollongong DC NSW 2500

Attention: David Green

**WOLLONGONG CITY COUNCIL – DRAFT PLANNING PROPOSAL – REZONING OF 7(D)  
LANDS AT HELENSBURGH, OTFORD & STANWELL TOPS**

Dear Sir

Reference is made to your letter dated 13 August 2012 regarding the subject draft planning proposal forwarded to Roads and Maritime Services (RMS) for consideration.

RMS has reviewed the submitted information and notes the Department of Planning & Infrastructure's determination dated 2 April 2012 that the planning proposal (PP\_2012\_WOLLG\_004\_00) should proceed subject to conditions, including consultation RMS. In this regard, RMS maintains its position as per our previous comments dated 18 November 2009.

RMS requests that any proposals on land with frontage to a classified road be referred to RMS for comment. If you have any questions please contact Andrea Boes on 4221 2771.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Brian Lefoe', written over a light blue horizontal line.

05 OCT 2012

Brian Lefoe  
Road Safety and Traffic Manager  
Network Management, Southern Region

CC – The General Manager, Wollongong City Council (via email)

**Roads & Maritime Services**



212 / 182186

**Received**

10 OCT 2012

Wollongong City Council

The General Manager  
Wollongong City Council  
Locked Bag 8821  
Wollongong DC NSW 2500

4<sup>th</sup> October 2012

Dear Sir

**Re: Draft Planning Proposal for former 7(D) land at Helensburgh,  
Otford, Stanwell Tops.**

Thank-you for the opportunity to comment on the above planning proposal. Southern Rivers CMA has reviewed the document and details of our submission can be found below.

Catchment Management Authorities are approval authorities for clearing native vegetation under the *Native Vegetation Act 2003* (NV Act) and are responsible for implementing the objectives of the Act. These include:

- "to prevent broadscale clearing unless it improves or maintains environmental outcomes, and
- To protect native vegetation of high conservation value having regard to its contribution to such matters as water quality, biodiversity, or the prevention of salinity or land degradation".

Catchment Management Authorities are also responsible for development and implementation of Catchment Action Plans. The Southern Rivers Catchment Management Plan sets long term direction and a strategic framework for natural resource management activities and investment through a series of catchment and management targets.

Southern Rivers CMA has reviewed the planning proposal and generally supports the proposal. Southern Rivers CMA would like to offer the following specific comments:

1. The NV Act applies to the proposed land zonings, E2, E3, E4, RU1, RU2, RE2, and SP3.

Clearing that is not permitted clearing will require consent under the NV Act. Consent to clear is given through the negotiation of a Property Vegetation Plan (PVP). A PVP is negotiated with the land owner and the legal obligations of a PVP are the owner's commitment.

Southern Rivers Catchment Management Authority  
Level 1, 84 Crown Street, Wollongong NSW 2500 - PO Box 3095, Wollongong East NSW 2520  
Telephone: 02 4224 9700 Facsimile: 02 4224 9669 Website: [www.southern.cma.nsw.gov.au](http://www.southern.cma.nsw.gov.au)



The NVA incorporates an assessment methodology which aims to 'improve or maintain' environmental outcomes.

The environmental impact of the clearing is assessed using computerised tools. Assessments include Biometric (vegetation and landscape), threatened species (flora and fauna) and a land and soil capability. The environmental impact will either be:

- Acceptable with offset areas managed in perpetuity for environmental purposes therefore improving or maintaining environmental outcomes. or
- Unable to be offset due to the presence of, land forms, habitat, plant species or plant communities for which no loss is acceptable.

2. The NV Act does not apply to land zoned E1, R2, B6, and IN2.

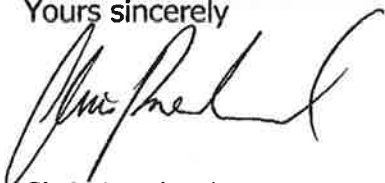
3. The NV Act may apply to land zoned SP2. A 'substantial character test' would need to be carried out by the CMA to determine if the Act applies.

4. Approval under the NV Act is not required to clear native vegetation in order to construct a single dwelling and associated Asset Protection Zone providing the applicant has development consent from Council. Clearing for ancillary structures (such as swimming pools, tennis courts etc.), and also hobby farming, underscrubbing, visual amenity, effluent systems that are outside the Asset Protection Zones etc. may require approval under NV Act.

5. Detail in Section C of the Planning Proposal- "Environmental, social and economic impact" is inadequate. In particular, the CMA is concerned that the Planning Proposal refers to the presence of the EEC, Southern Sydney Sheltered Forest in the subject area, however does not specify the location or extent of this EEC. Additionally, the proposed zoning for areas containing the EEC are not provided. The CMA generally considers that E2 is the most appropriate zoning for EECs.

If you wish to discuss this submission further, please contact Vanessa Allen on 42249705 or myself on 44294445.

Yours sincerely



Chris Presland  
Landscape Manager (Shoalhaven Illawarra)

212 / 173738

# Sutherland Shire COUNCIL



Ian Drinnan  
File Ref: GR/06/220921

25 September 2012



Mr David Green  
Land Use Planning Manager Wollongong City Council  
Locked Bag 8821  
WOLLONGONG DC NSW 2500

Received

26 SEP 2012

Wollongong City Council

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**Office Hours**

8.30am to 4.30pm  
Monday to Friday

Dear Mr Green

**Draft Planning Proposal for former 7(D) Land at Helensburgh, Otford, Stanwell Tops**  
[In response, please quote File Ref: GR/06/220921]

Thank you for the opportunity to comment on the Draft Planning Proposal to rezone the former 7(D) Land at Helensburgh, Otford and Stanwell Tops.

Sutherland Shire Council's interest in the rezoning of land at Helensburgh, Otford and Stanwell Tops is centred on maintaining the integrity of the Hacking River, its water quality, biodiversity and unique bushland corridors that extend into the Sutherland Shire's urban areas via the Royal National Park and are reinforced by Council's Green web strategy.

The Hacking River is a Class P: Protected Waterway. It is a valuable natural asset that is vulnerable to sediment, nutrient and other pollutant inputs from urban, rural and industrial activity. The retention of the 7(d) Hacking River Environmental Protection zoning in the area after the 1994 Helensburgh Commission of Inquiry reflects the river's sensitivity and the importance of the Hacking's headwaters around Helensburgh, Otford and Stanwell Tops.

The 1994 Helensburgh Commission of Inquiry's recommendation that no further urban development be considered until various detailed short and long term studies are undertaken remains relevant, these studies include:

- Existing water quality, water quality impacts and environmental impacts
- Cumulative impacts of development
- Impacts of flora and fauna habitat loss
- Testing and proving water quality control mechanisms (pond/wetland proposals)
- Fauna Impact Statements of rare and endangered fauna, particularly assessing potential impacts on the Sooty Owl
- Analysis of impacts upon wildlife corridors from various land uses and buffer areas (especially urban development and bush fire reduction areas).

To date, however, only limited broad "desk top" assessments have been made to inform the rezoning process, which it is considered, do not provide sufficient information from which an informed decision about the future of the lands at Helensburgh, Otford and Stanwell Tops can be made with confidence. Therefore a prudent / precautionary approach to rezoning should be applied.

The rezoning of land at Helensburgh, Stanwell Tops and Otford will in some areas provide the opportunity to intensify and expand land use activity in the area. Where this is of particular concern is in the Herbert Creek, Gardiners Creek, Kellys / Gills Creek and Camp Creek catchments) where a number of the core issues persist:

- Very high erodibility of soils in the area (Pedon Consultants 1994) and potential heightened source of sediment into the headwater creeks;
- Removal of vegetation for urban and non urban activity contributing to erosion and high sediment input into the water catchment;
- Impact of increased sedimentation and pollution on vegetation, invertebrates and ecology of the catchment;
- Increased impact of predation of native animals by increased intrusion by dogs and cats;
- Increased opportunity and dispersion of weeds into highly vulnerable and threatened ecological communities;
- Increased pressure and disturbance of the natural environment from improved accessibility.

The proposed E2 and E3 zones will partially assist in addressing these core issues but to manage and limit the potential environmental risks across all zones it is suggested that as a minimum, an environmentally sensitive land layer for the area be developed. This layer should apply to all land in the catchment to complement the range of zonings proposed. The layer should reflect the degree of sensitivity of the area to vegetation removal, soil erosion, sedimentation, pollution inputs (urban, rural and industrial), dispersion of weeds and intrusion etc.

In conjunction with the provisions of the "Guidelines for riparian corridors on waterfront land" by the Department of Primary Industries - Office of Water, an environmental overlay would help to limit the potential impact of land use activity through buffer zones of 20m to 30m in the riparian corridors. Applying these guidelines would also mean that detention and water treatment measures for drainage / stormwater run off as well as the location of internal roads and other infrastructure are appropriate for each site.

The environmentally sensitive land layer should form part of any relevant development controls for the area and as a minimum provide an environmental safeguard against any adverse impacts associated with development in the Land Pooling, Lady Carington Estate South, Walker St, Frew Avenue and Kellys Falls precinct, Camp Creek, Gateway precinct, Gills Creek / F6 West and Wilsons Creek precincts.

Because of the potential intensification of land use activity and environmental sensitivity of the Land Pooling, Lady Carington South Estate, rear portion of the Knowslay Park lands and Camp Gully Creek, the E3 and E2 environmental zonings are considered appropriate for this area. The application of the E3 and E2 environmental zoning is supported on the following grounds:

- The land is sited in close proximity to the valley catchment of Gills / Kellys and Herbert Creeks;
- Development would increase erosion and sediment risk on highly erodible soils;
- Removal of vegetation for fire asset protection zones will further increase erosion susceptibility;
- The introduction of roads and hard surfaces will increase run-off intensity. Similarly perimeter roads concentrate runoff, exacerbating sediment impacts;
- Development will result in more likelihood of weeds entering bushland;

- Potential adverse cumulative impact on significant Illawarra Moist Forest Corridor and endangered ecological community "Southern Sydney sheltered forest",
- Illawarra Moist Forest corridor and transition zones are currently vital in supporting ecological diversity, providing a key refuge for movement of wildlife, particularly during fire events. This may be jeopardised by development;
- Residential development in such close proximity to pristine bushland is a threat to the integrity of the environment due to the increased likelihood of sediment, feral animals and weeds;
- Any development is dependent upon water quality devices, yet there is insufficient detail and analysis to demonstrate that such facilities will be adequate, particularly having regard to the area required to accommodate such facilities, their ongoing maintenance and associated impacts.

In conclusion, the rezoning of land at Helensburgh, Stanwell Tops and Otford has a long history and complexity compounded by its environmental sensitivity and lack of detailed studies. The potential cumulative impact on water quality and biodiversity in the upper Hacking River catchment from the rezoning of land and intensification of land use activity is potentially significant. There is a need therefore to adopt a precautionary approach to best manage these areas.

Although the proposed E2 and E3 environmental zonings in the environmentally sensitive areas of the upper Hacking catchment is a positive step, this needs to be, as a minimum, complemented by an environmentally sensitive land layer that will enable a more rigorous assessment of the potential impacts of land use development, help buffer their impacts, maintain high water quality outcomes and support the area's biodiversity.

If you wish to discuss any of the issues above please contact Ian Drinnan Principal Environmental Scientist on 9710 0547

Yours faithfully

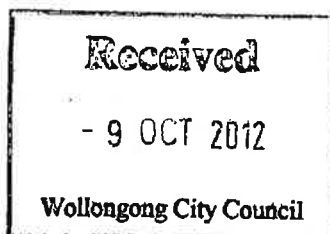


Ian Drinnan  
Principal Environmental Scientist  
Environmental Science and Policy Unit  
for J W Rayner  
General Manager

212 / 181653



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Email [info@sca.nsw.gov.au](mailto:info@sca.nsw.gov.au)  
Website [www.sca.nsw.gov.au](http://www.sca.nsw.gov.au)



Ref: D2012/94164

David Green,  
Land Use Planning Manager  
Wollongong City Council  
Post Locked Bag 8821  
Wollongong DC NSW 2500

Dear Mr Green,

**Draft Planning Proposal for former 7(D) land at Helensburgh, Otford, Stanwell Tops**

Thank you for your letter dated 13 August 2012 seeking comment from the Sydney Catchment Authority (SCA) on the draft Planning Proposal to rezone land at Helensburgh, Otford and Stanwell Tops. The SCA supports the outcomes in the planning proposal relevant to the Sydney Drinking Water Catchment and Special Areas.

The planning proposal encompasses small portions of land within the Sydney Drinking Water Catchment, some of which is owned by the SCA and is categorised as Special Areas Schedule 1 land under the *Sydney Water Catchment Management Act 1998*. These areas are subject to the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 (Drinking Water SEPP) and the local planning section 117 direction 5.2: Sydney Drinking Water Catchment.

The SCA provided comment on the 7(D) Lands Review in September 2009. The main issues raised by the SCA in its previous correspondence were the need to ensure the SCA owned lands within the catchment were correctly zoned E2 Environmental Conservation, and that any changes to planning outcomes within the drinking water catchment would still result in future development achieving a neutral or beneficial effect on water quality in accordance with the Drinking Water SEPP.

The SCA has reviewed the planning proposal and supports the outcomes proposed.

**Sydney Drinking Water Catchment Boundary**

The Helensburgh Final Review Option (August 2012) zoning map shows a boundary labelled Drinking Water Catchment REP1. The boundary is not correctly marked in some places. The attached map shows the drinking water catchment boundary under the Drinking Water SEPP 2011 (which would have been the same under REP 1). The SCA requests that Council adjusts any maps showing the drinking water catchment boundary to that shown in the attached. A GIS shapefile of the drinking water catchment boundary as per the Drinking Water SEPP 2011 can be obtained from the SCA if required.

**Garrawarra Precinct**

The SCA supports the proposed zoning of SCA and Crown Land within the drinking water catchment in the Garrawarra Precinct to E2 Environmental Conservation. This

is in accordance with the SCA's requested zoning for this land in its 2009 correspondence.

**Wilson's Creek Precinct**

The SCA supports the proposed zoning of land within the drinking water catchment in Wilsons Creek Precinct as E2 Environmental Conservation. This was the zone requested for this land by the SCA in its 2009 correspondence.

**F6 West Princes Highway**

The SCA supports the E2 zoning proposed for SCA and Crown land and part of the private land in the drinking water catchment.

If you have any queries on the above please contact Fran Kelly, Senior Land Use Planner, on 4724 2223.

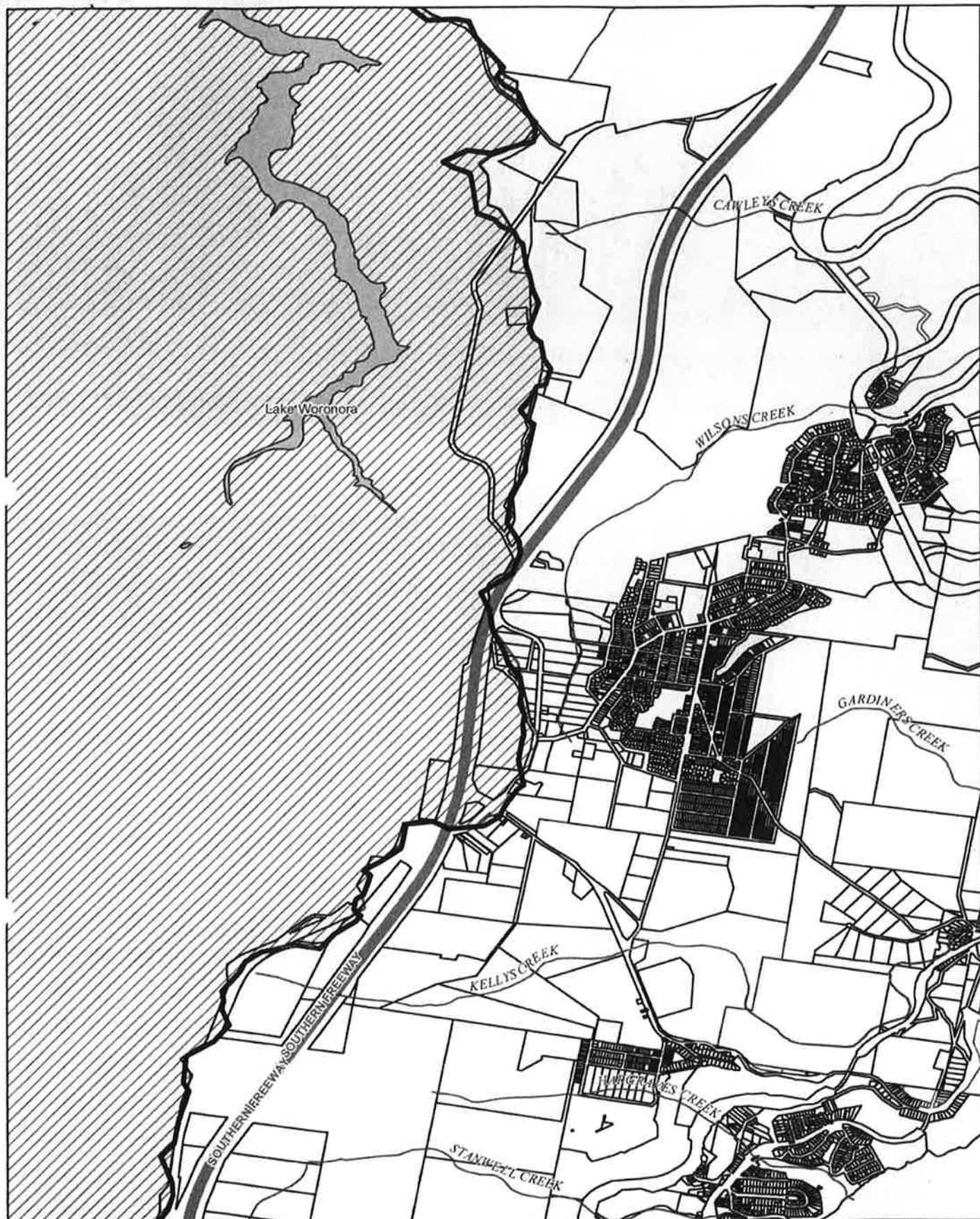
Yours sincerely







**GREG GREENE** 5/10/12  
**Team Leader, Land Use Planning**

Attachment: Map of Sydney Drinking Water Catchment Boundaries





## Sydney Drinking Water Catchment boundary - 7(D) lands Wollongong

-  Sydney Drinking Water Catchment Boundary (Drinking Water SEPP 2011)
-  Schedule 1 Special Area
-  SCA owned land
-  Water Storage (LPI)

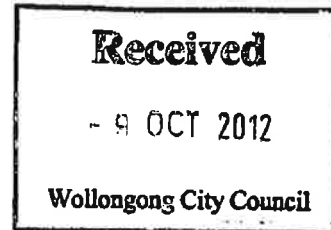


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4 October 2012

**ATTENTION: DAVID GREEN**

David Green  
Land Use Planning - Manager  
Wollongong City Council  
Locked Bag 8821  
WOLLONGONG NSW 2500



**Draft Planning Proposal – To Amended Wollongong LEP 2009 - Helensburgh, Otford and Stanwell Tops**

Dear Mr Green,

Thank you for your letter of 13 August 2012 requesting comment on the Draft Planning Proposal to rezone portions of land in the above suburbs. Sydney Water has reviewed the plan and provides the following comments for Council's consideration.

**Wastewater**

The proposed IN2 Light Industrial zone change, 159 – 173 Walker Street, Helensburgh will require a wastewater main extension. More detailed comments will be provided at the development stage.

**Sydney Water e-planning**

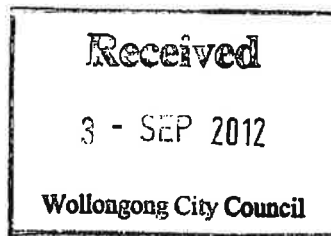
Sydney Water has an email address for planning authorities to submit planning documents for review. This email address is [urbangrowth@sydneywater.com.au](mailto:urbangrowth@sydneywater.com.au). This email should be used for:

If you require any further information, please contact Corrine Manyweathers of the Urban Growth Branch on 02 8849 4014 or e-mail [corrine.manyweathers@sydneywater.com.au](mailto:corrine.manyweathers@sydneywater.com.au).

Yours sincerely,



Michael English,  
Acting/Manager, Growth Strategy



212 / 158315



**TransGrid**

**Land Assets and Facilities/Property Asset Management**

Telephone: (02) 9284 3015

Our reference: D2012/12027

Your reference: Z12/91871

ABN 19 622 755 774

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New South Wales 1235 Australia

Facsimile (02) 9284 3456

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Web <http://www.transgrid.com.au>

DX 1122 Sydney

30 August, 2012

Wollongong City Council  
Locked Bag 8821,  
**WOLLONGONG DC NSW 2500**

Dear Sir/Madam,

**Re: Draft Planning Proposal for former 7(d) Land at Helensburgh, Otford & Stanwell Tops**

On 3 August, 2012 Wollongong City Council notified TransGrid in respect of the abovementioned planning proposal, to which we make the following submission.

TransGrid has land holdings and infrastructure within the Wollongong Local Government Area that will be affected by the precinct changes proposed, in particular the following precincts in Helensburgh:

- "Garrawarra Hospital & Wilsons Creek Precinct"
- "Gills Creek Precinct West of F6 Precinct and Princes Hwy Precinct".

TransGrid is a State Owned Corporation responsible for the development, operation and maintenance of the high voltage transmission network across New South Wales. These functions are facilitated through transmission lines, substations and other related infrastructure including telecommunications facilities. In the normal course of TransGrid operations, activities undertaken include maintenance and upgrade of infrastructure, (e.g. transmission lines (TL's), substations and related telecommunications), vegetation and access track management and the strategic construction of new infrastructure to meet the growing and changing needs of the NSW people.

TransGrid has a number of transmission line easements running through the Wollongong LGA. An easement is a 'right of way' along a route of a transmission line and is required to enable TransGrid to access the line for inspections and maintenance purposes. The easement rights also enable TransGrid to control any activity that may pose a risk to the line or public safety. Please refer to the attached map for the indicative location of the TL affected by the subject planning proposal, particularly within the abovementioned precincts.

TransGrid's easements within the Gwydir Shire LGA are associated with the following TL:

<b>Transmission Line</b>	<b>From</b>	<b>To</b>	<b>Design Voltage</b>	<b>Operating Voltage</b>
11	Dapto 330kV	Sydney 330kV	330 kV	330 kV

TransGrid's existing transmission line easements within the Wollongong LGA form part of the State's electricity network and will be required indefinitely.

#### Easement Guidelines

TransGrid seeks that appropriate development controls are attached to any future development within the vicinity of TransGrid sites. To accommodate future infrastructure development; to ensure the access to and security of existing infrastructure and to ensure the safety of adjoining developments, it is recommended that TransGrid's guidelines for the management of activities and encroachments on easements are followed (see attached) when assessing proposed development applications in order to provide an appropriate buffer to existing infrastructure and appropriate width for the placement of additional infrastructure/lines. Safe working platforms around electricity transmission structures are also required – please refer to the attached illustrations of same.

The attached guidelines are not an exhaustive list and where there is any doubt concerning a particular activity within the easement, please do not hesitate to contact TransGrid for further advice.

Future development activity, including subdivisions, should be planned taking into account the recommendations documented in the report by The Right Honourable Harry Gibbs', titled '*Inquiry into Community Needs and High Voltage Transmission Line Development*', that being a policy of "prudent avoidance" in practical terms. This means designing Transmission Lines with regard for their capacity to produce magnetic fields and siting them having regard to their proximity to houses, schools, work sites and the like. Prudent avoidance should also apply to the planning of subdivisions and other land development.

#### Zoning of Infrastructure

It is also worth acknowledging the LEP practice note (PN 10-001), released by the NSW Department of Planning on 14 December 2010 which sets out the six principles for zoning infrastructure land in standard instrument LEPs (please see attachment). The new zoning approach provides greater flexibility and adaptive management of land used for the provision of infrastructure. It moves away from zoning infrastructure land as 'special use' or 'special purpose' zones.

Under the State Environmental Planning Policy (Infrastructure) 2007, utility distribution networks such as TransGrid are permitted to undertake infrastructure activities (e.g. electrical transmission lines) in all LEP zones, irrespective of the LEP zoning. TransGrid's activities are undertaken on a wide range of land uses, and it is considered essential that the development of electricity infrastructure is not prohibited in any zone.

### Comments

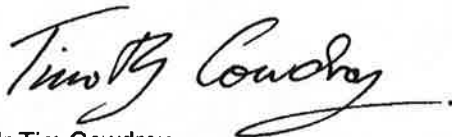
We would like Council to consider the following points when finalising the subject planning proposal:

- Ensure all TransGrid electrical easements are zoned in accordance with the appropriate adjacent land zone;
- Ensure that the development of electricity infrastructure is not prohibited in any zone.
- That land development prudently avoids TransGrid infrastructure and easements in accordance with the TransGrid guidelines for the management of activities and encroachments on easements (see attached).

TransGrid appreciates being given the opportunity to comment on the draft 7(d) land use planning proposal and we hope that Wollongong City Council will give consideration to the points outlined above. We look forward to maintaining a close working relationship with Wollongong City Council re further development within proximity of TransGrid's infrastructure.

Should you require any further information, please contact Tim Cowdroy on (02) 9284 3015 or [Timothy.Cowdroy@transgrid.com.au](mailto:Timothy.Cowdroy@transgrid.com.au).

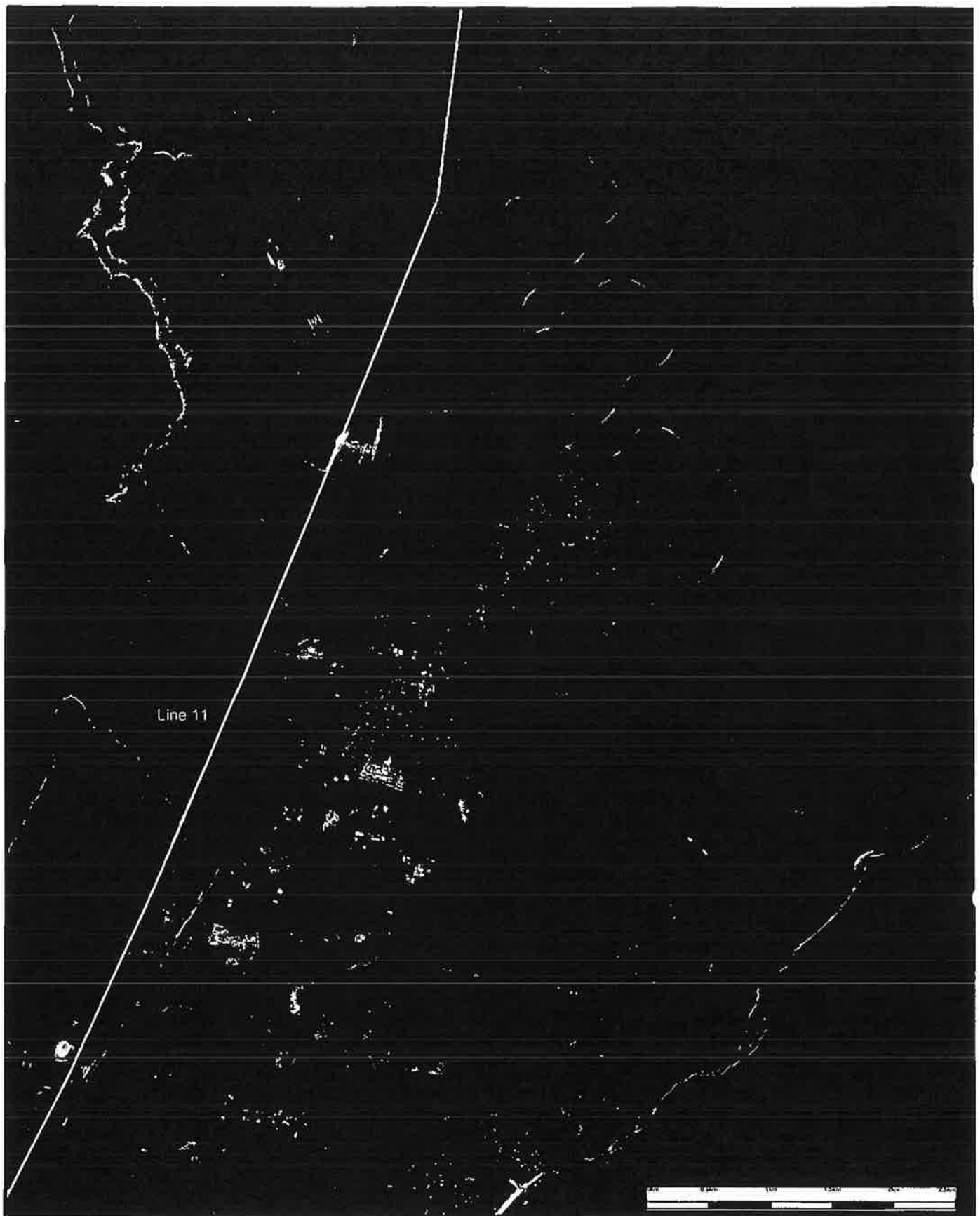
Yours sincerely,



Mr Tim Cowdroy  
Land Economist | Land Assets and Facilities



### Attached:

1. Map showing TransGrid sites and easements
2. Six principles for zoning infrastructure land in standard instrument LEP
3. TransGrid's guidelines for the management of activities and encroachments on easements
4. Safe working platforms



Satellite Imagery 2005

## Legend

-  Transmission Line 330 kV
-  Suburb Coverage



**TransGrid**

TransGrid Transmission Line  
Easement - Wollongong LGA  
TL: Feeder 11 Str 85 - 115

Property of Transgrid. No warranty is given  
that information shown is complete or accurate.

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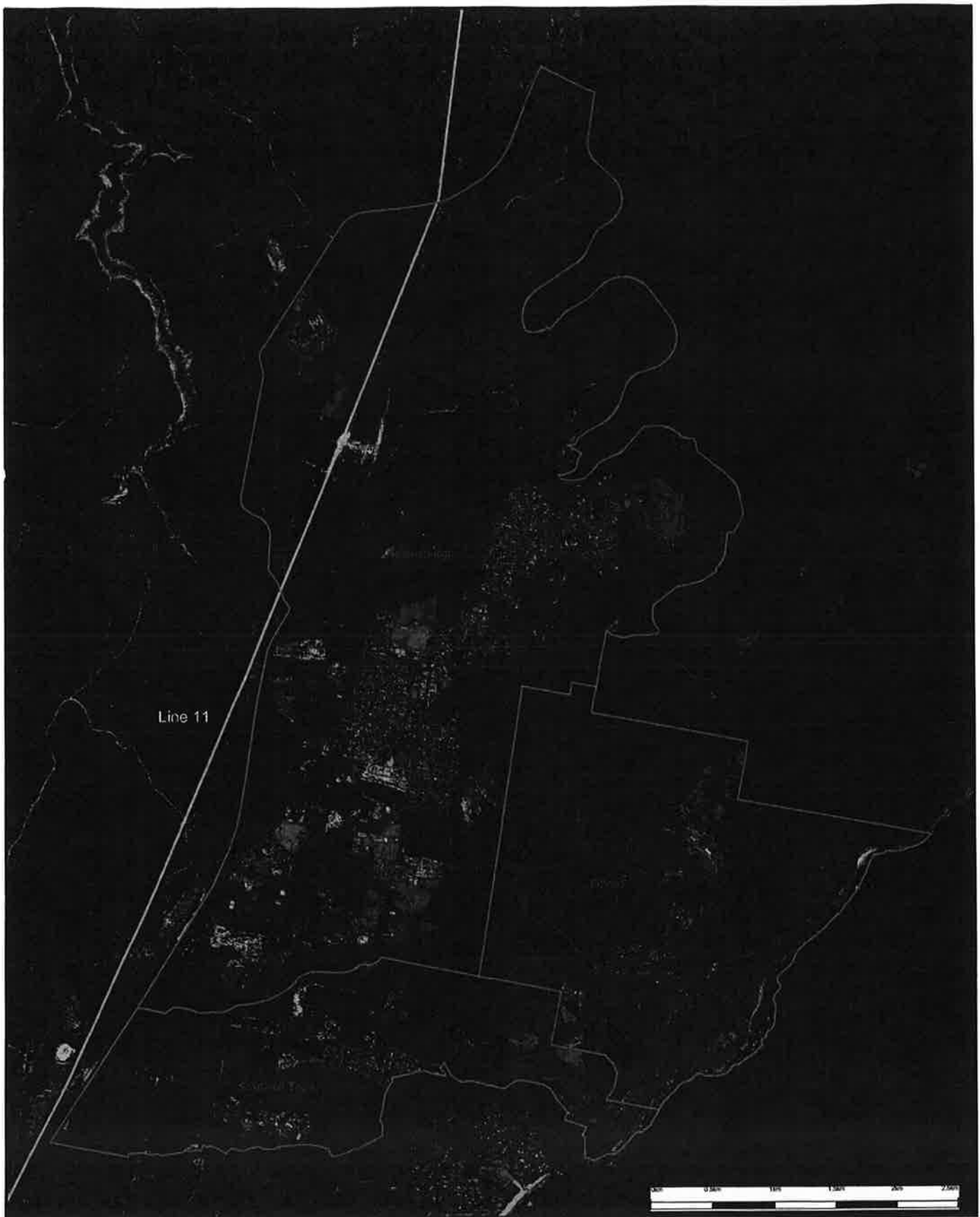
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<p>Satellite Imagery 2005</p> <h2>Legend</h2> <p>— Transmission Line 330 kV</p> <p>▭ Suburb Coverage</p>	 <b>TransGrid</b>		<b>TransGrid Transmission Line Easement - Wollongong LGA</b> TL: Feeder 11 Str 85 - 115		
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Satellite Imagery 2005

## Legend

- Transmission Line 330 kV
- Suburb Coverage



**TransGrid**

Property of Transgrid. No warranty is given that information shown is complete or accurate.

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TransGrid Transmission Line  
Easement - Wollongong LGA  
TL: Feeder 11 Str 85 - 115

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<p>Satellite Imagery 2005</p> <h2>Legend</h2> <ul style="list-style-type: none"> <li>— Transmission Line 330 kV</li> <li>▭ Suburb Coverage</li> </ul>	 <b>TransGrid</b>		<p>TransGrid Transmission Line Easement - Wollongong LGA TL: Feeder 11 Str 85 - 115</p>		
	<p>Property of Transgrid. No warranty is given that information shown is complete or accurate.</p> <p>30/08/2012 11:26:34 Created by: p86731</p>		<p>PRODUCED FROM TAMIS</p> <p>T863 PREFIX</p>	<p>Scale: 1:40000</p> <p>1 SHEET</p> <p>00 AMD</p>	<p>A4</p>

## **Six principles for zoning infrastructure land in standard instrument LEPs**

1. Where the infrastructure type is permitted on all land in the Infrastructure SEPP:
  - Future infrastructure may be placed in any zone
  - Existing 'special use' zones should be rezoned the same as the adjacent zone
  - Roads must be rezoned
2. Where the infrastructure type is only permitted in certain prescribed zones in the Infrastructure SEPP:
  - Provide for future infrastructure in prescribed zones rather than special use zones
  - Existing 'special use' zones should be rezoned the same as the adjacent land (if a prescribed zone)
  - Rezone land SP2 Infrastructure, if there is no adjacent prescribed zone.
3. If currently zoned 'special use', the following infrastructure land should remain zoned for a 'special purpose':
  - Special purposes such as cemeteries, sewage treatment plants, waste disposal or landfill sites (rezone as SP2 Infrastructure)
  - Strategic sites (rezone as SP2 Infrastructure)
  - Large complexes (rezone as SP1 Special Activities).

It is anticipated that only a minority of TAFEs and schools across NSW could be considered a 'strategic site', however, to assist in the initial assessment the following criteria should be used:

- Is it 20 hectares or more in size; and/or
  - Does it provide a wide range of facilities (meeting rooms, halls, pool, sports fields, tennis courts and the like) that can also be used by the surrounding community; and/or
  - Is it of regional significance (i.e. the only school servicing a large region).
4. Where land is to be zoned SP1 Special Activities or SP2 Infrastructure:
    - Include flexible zone boundary provisions where appropriate
    - Use generic land use map annotations.
  5. Where surplus public land is currently zoned 'special use':
    - Where a valid site compatibility certificate exists, the land is to be rezoned consistent with the certificate, or
    - The land should be rezoned as a compatible land use, (e.g. to a prescribed zone).
  6. When preparing an LEP, avoid duplicating provisions in the Infrastructure SEPP (including those to manage impacts on infrastructure corridors).

Source: LEP practice note (PN 10-001), released by the NSW Department of Planning on 14 December 2010

## **Easement - Actions and Responsibilities**

An easement is an encumbrance on the title of land that confers the right to construct, operate and maintain a transmission line or cable. Easements are acquired by TransGrid to obtain the legal right to have access to its lines or cables for the purposes of construction, operation, maintenance, renewal and replacement and also to enable activities, which could either by accident or otherwise create an unsafe situation, to be controlled. Such easements impose an obligation on affected property owners not to do anything that may interfere with TransGrid's rights.

This document provides guidelines for the management of activities and encroachments on easements for overhead transmission lines and high voltage underground cables.

Because of the varied circumstances that apply to electricity easements, there will be circumstances that will require special attention. The particular circumstances may suggest restrictions over and above those outlined in this document.

### ***1.1 Encroachments Onto Easement Areas***

From TransGrid's viewpoint, it is essential that buildings, structures or other objects that could interfere with access along the easement, particularly to any structure or joint bay, not be placed within an easement area and that nothing be done which may affect the safe and continuous operation of the transmission line or cable or prevent its repair, replacement or renewal.

From both TransGrid's and the property owner's viewpoint, it is desirable that the property owner be prevented from doing anything within the easement which, while not necessarily interfering with TransGrid's formal rights, creates a safety risk either to the operation of the transmission line or cable or to persons. Such risks could possibly occur from induction, step or touch potentials under fault conditions, infringement of safety clearances to conductors, failure of line material or structures, or the uncovering of an underground cable.

The most important questions to be considered in the examination of a request for an encroachment within an easement area are the following:

1. Will it affect the safe operation of the line or cable, under normal conditions as well as maximum sag and blowout?
2. Will it unduly restrict access, particularly to overhead line structures, underground cable joint bays or surface installations?
3. What will be the effect on the encroachment of electrostatic induction, electromagnetic induction or an earth fault at the nearest structure of an overhead line or an earth fault on an underground cable?
4. What is likely to happen if there is a line structure collapse or failure of an earthwire, conductor or fitting?
5. What will be the effect if the line is uprated and/or structure positions are changed or the underground cable is relaid?

## ***1.2 Approval For Encroachments Or Activities Affecting Easements***

All approvals are to be notified in writing.

All approvals granted should be subject to the encroachments being removed or relocated at the owner's cost in the event that TransGrid requires this for line maintenance, operation or further construction/reconstruction.

It is recognised that this requirement may be difficult to negotiate for *substantial structures* and in-ground swimming pools (for example). This requirement is necessary, however, in case the encroachments need to be removed in the future and serves to confirm the awareness of the land owner to the terms of the approval.

The granting of a local council approval for a given encroachment does not negate TransGrid's rights. It does, however, create the potential for conflict with landowners that believed they had done all that was required to obtain the necessary approvals.

An important strategy in avoiding encroachments of significance is to have a good working relationship with constituent councils in respect of Building Approvals. In particular, the recording of electricity easements on constituent council records is essential for their consideration of such easements in the approval process.

The co-operation of constituent councils should be sought to include a general condition on every approval, referring to electricity easements, such as "subject to approval by the relevant authority where easements are involved".

## ***1.3 Specific Restrictions Within Easement Areas***

Property owners and others frequently make inquiries with regard to the restrictions that apply to the use of land affected by easements. Having regard to the type of easement in question and to any special conditions which may apply, the activities listed below have been categorised as being either permitted, controlled or prohibited as applicable.

The list is not necessarily exhaustive and the omission of a particular activity does not relieve those concerned from seeking advice from TransGrid where there is any doubt as to whether its rights are likely to be infringed.

Note that in the following, allowable encroachments are normally given in terms of distances from the edge of the easement. **This is for an easement of standard width.** Standard easement widths are:

132 kV – 45 metres

220 kV – 50 metres

330 kV – 60 metres

500 kV – 70 metres

A reduction in the width of the easement similarly reduces any allowable encroachment. For example, if the easement is 10m narrower than standard (5m off each side) then allowable encroachments are reduced by 5m.

### **1.3.1 Overhead Transmission Line Easements**

#### **A. Permitted Activities**

The activities listed below are permitted within easement areas provided that they do not interfere with the maintenance or safe operation of the line. In this regard, access is to be available to all structures at all times and no physical obstructions other than timber boundary fences are to be placed within 15 metres of a transmission line structure or supporting guy. It is desirable, where *practicable*, to retain a continuous and *unobstructed access way* along the entire length of the easement.

- (i) Normal agricultural pursuits subject to restrictions applying to the heights of mobile plant and equipment being observed. Care should be taken when ploughing or operating mobile machinery in the vicinity of structures or supporting guys to ensure that the buried earthing system or the tower is not damaged.
- (ii) Domestic recreational activities other than the flying of kites, model aircraft, etc.
- (iii) Gardening activities involving trees, shrubs or plants that grow to a mature height not exceeding 4 metres.
- (iv) Parking of vehicles subject to adequate precautions being taken to protect structures or supports from accidental damage and a 4.3 metre height limitation on the vehicles to be parked.

Flammable liquid carriers, caravans and other camping vehicles and vehicles with fixed ladders which make it possible for a person to ascend to the top of the vehicle are not permitted.

- (v) The operation of mobile plant and equipment having a height not exceeding 4.3 metres when fully extended, including aerials, subject to adequate precautions being taken to prevent collision or interference with structures or supporting guys.
- (vi) The storage of *non-flammable materials*, subject to a height limitation of 2.5 metres.
- (vii) The erection of *minor structures*, subject to a height limitation of 2.5 metres and the *earthing* of metallic parts.

#### **B. Controlled Activities**

The activities listed below are not permitted within transmission line easements without written approval. Each case should be assessed on its merits in accordance with the guidelines indicated below and subject to the general provisions concerning access, maintenance and safe operation as detailed for Permitted Activities.

It is normal that a site inspection would be made for these cases. Note that during the site inspection it should be confirmed that there is not a suitable alternative site within the property where the proposal could be accommodated.

Where the extent of a proposed encroachment by a *substantial structure* exceeds half of the maximum encroachment stipulated in these guidelines, the property owner should be required at their expense to have the structure set out by a registered surveyor. On completion of the work, an identification survey is to be carried out and a copy of the survey plan forwarded to TransGrid. This requirement should be specifically referenced in the approval.

Many of the activities described are confined to a height of 4.3 metres. In particular cases, where the conductor height above ground is substantially greater than the normal design minimum, approval may be given after obtaining *engineering advice*, for the 4.3 metre height restriction to be relaxed. This would normally only be done following detailed investigation of the situation.

- (i) Burning off or the lighting of fires within the easement area if there is no other location other than in the easement, provided that structures and supporting guys are not endangered and provided that the activity does not produce flames exceeding 3 metres in height.

Lighting of fires directly under energised conductors would not normally be approved, with the exception of burning of crop stubble.

- (ii) The operation of mobile plant or equipment having a height when fully extended exceeding 4.3 metres. Approval would be based on the need to maintain adequate clearance between the equipment and the line, having regard to the particular situation. Note that plant may require trailing earths and supervision by TransGrid staff.
- (iii) Parking of caravans and other camping vehicles provided that there is no *practicable* alternative site clear of the easement area. Approval will normally be given for temporary parking only, in the outer 3 metres of the easement area, subject to metallic parts being *earthed* and a 4.3 metre height restriction.
- (iv) The erection of flagpoles, weather vanes, single post signs, outdoor lighting and the like provided that adequate clearance is maintained to the overhead conductors, the height does not exceed 4.3 metres and metallic parts are *earthed*.
- (v) The erection of non-electric agricultural fencing, yards and the like, provided that the height of the fencing does not exceed 2.5 metres and that access along the easement is not impeded. In the case of metallic fencing, *earthing* may be required.
- (vi) The erection of electric fencing provided that the height of the fencing does not exceed 2.5 metres and provided that the fence does not pass beneath the overhead conductors.

Approval may be given for a portable electric fence to pass underneath the conductors provided that it is supplied from a portable battery-powered energiser that is located remotely from frequented areas.

Where it is necessary for a permanent electric fence to pass beneath the overhead conductors, or where an extensive permanent electric fencing system is installed in proximity to a transmission line certain additional safety requirements may be required. *Engineering advice* should be obtained prior to approval.

- (vii) The erection of metallic fencing provided that:
  - (a) the height of the fencing does not exceed 2.5 metres;
  - (b) the fence is *earthed*;
  - (c) the fence is not located within 15 metres of any part of a transmission line structure or supporting guy or within 4 metres of the vertical projection of the overhead conductors;  
and
  - (d) access to structures is maintained.

Approval may be given for such fencing to be located within 4 metres of the vertical projection of the overhead conductors provided that any section so located is electrically isolated from the remainder of the fence. In the case of swimming pool or tennis court enclosures, it is sufficient to isolate the enclosure fence from other metallic fencing not forming part of the enclosure.

- (viii) The installation or use of irrigation equipment inside the easement provided that:
- (a) no part of the system is permitted to come within 4 metres of the overhead conductors at any time;
  - (b) the height of the equipment does not exceed 4.3 metres;
  - (c) the length of individual sections of rigid or semi-rigid pipe associated with the equipment does not exceed 4.3 metres;
  - (d) the equipment as located is not capable of projecting a solid jet of water to within 3 metres of any overhead conductor up to 330 kV and 4 metres for 500 kV. In the case of gun type irrigators, it is required that the water jet not be directed towards the line;
  - (e) the equipment is suitably *earthed*, if necessary; and
  - (f) the equipment does not interfere with the maintenance or safe operation of the line.

- (ix) The installation of *low voltage* electricity, telephone, communication, water, sewerage, gas, whether overhead, underground or on the surface subject to there being no *practicable* alternative and provided that:
- (a) standard clearances are maintained to the overhead conductors;
  - (b) services are to be at least 15 metres from the centre-line of the easement and 15 metres from any part of a transmission line supporting structure; and
  - (c) services within 30 metres of any part of a structure are to be non-metallic.

Where the service is to be buried, it is understood that heavy vehicles may be driven on the ground above the service. In the case of 330 kV and 500 kV lines, all undercrossings by the above mentioned services are required to be underground. For lower voltage lines the service should preferably be underground where *practicable*.

Where extensive parallels are involved, certain additional safety requirements may be necessary, depending on the particular case and *engineering advice* should be obtained.

In the case of critical services such as optical fibre communications circuits, these should be buried on the edge of the easement (typically within 1 metre of the edge) and must be clearly marked to show the location of the buried cable.

Details specific to each installation should be ascertained and approved to ensure minimal impact on TransGrid operations and to reduce our exposure to liability.

- (x) The installation of high voltage electricity services subject to there being no *practicable* alternative and provided that *standard clearances* are maintained to the supporting structures.

Where extensive parallels are involved certain additional safety requirements may be required, depending on the particular case and *engineering advice* should be obtained.

- (xi) Swimming pools, whether above or in-ground, provided there is no *practicable* alternative site clear of the easement area. Approval may be given for encroachments of not more than 4.5 metres, including coping, subject to the pool being not less than:

- (a) 30 metres from the centre of a transmission line structure for voltage or 132kV and below; or
- (b) 30 metres from any part of a transmission line structure for voltages greater than 132 kV.

These requirements are aimed at minimising step potentials under fault conditions.

- (xii) Detached garages, detached carports, detached sheds, detached stables, detached glass houses, caravans, site containers, portable tool sheds, pergolas and unroofed verandahs attached to residences where there is no *practicable* alternative site clear of the easement area. Approval may be given for encroachments of not more than 3 metres.
- (xiii) Prefabricated metal (garden) sheds not exceeding 2.5 metres in height, where a *practicable* site is not available clear of the easement area. Approval may be given for encroachments of up to 3 metres. Consideration may be given to a further encroachment provided that:
  - (a) the shed's floor area does not exceed 8 m<sup>2</sup>;
  - (b) the shed is not located within 15 metres of any part of a transmission line structure;
  - (c) the shed is *earthed*;
  - (d) electric power is not connected to the shed;
  - (e) the shed is not to be used for the storage of flammable liquids;
  - (f) in the event of TransGrid requiring the shed to be relocated at some future date, all costs are to be borne by the owner; and
  - (g) the shed is not easily convertible to living quarters.

Brick garages and other similar *substantial structures* should not be approved, as such structures are likely to create additional problems should TransGrid seek to upgrade the use of the easement.

- (xiv) Single tennis courts provided:
  - (a) the tennis court is for private, non-commercial use;
  - (b) there is no alternative space clear of the easement;
  - (c) adequate safety clearances are maintained;
  - (d) the fence is non-conductive or suitably *earthed* on all corners;
  - (e) fence height is restricted to 4 metres;
  - (f) lighting is limited to a maximum height of 4.3 metres and supplied via underground wiring;
  - (g) access to the transmission line is not hindered. This may involve gates and court construction able to withstand large, heavy plant; and
  - (h) changes to ground levels may be associated with the construction of the courts. If required, such changes should not affect access along the easement and should meet the requirements of (xx) below.



- (xv) Sporting facilities and open recreational areas subject to the general restrictions outlined in these guidelines and the displaying of suitable warning notices concerning the flying of kites or model aircraft. Facilities associated with the use of firearms and *public sporting venues* are discouraged.
- (xvi) Subdivisions for domestic or industrial purposes subject to relevant requirements being met such as:
  - (a) *standard clearances* and access being maintained;
  - (b) road intersections being well clear (preferably 30 metres) of line structures;
  - (c) line structures being suitably protected against motor vehicle impact; and
  - (d) the layout of the subdivision not being such as to give rise to numerous utility crossings or later requests for encroachments due to insufficient space being left between the Council's building alignment and TransGrid's easement.

Where a proposed road passes within 30 metres of a line structure or supporting guy, the structure earthing system may require modification in order to prevent fault currents from entering utility services which may be buried in the road.

Boundaries created by subdivisions should not pass, where *practicable*, within 15 metres of a structure to prevent the future erection of metallic fence in violation of these guidelines.

Care is also required to ensure that earthing will be adequate on structures that may be in a location which was regarded as 'remote' at the time of construction (as defined in the Electricity Association of NSW Publication – "Guide to Protective Earthing" – EA5). Development may cause the structures location to become 'frequented' or 'special'. Additional earthing required as a result of the subdivision should be at the cost of the developer.

Advantage should be taken of subdivisional activities to upgrade existing easements, especially "resumed" easements by insisting that they be shown on the new line plans with modern "Restrictions as to User" quoted in the Section 88B Instruments.

Many innovative planning techniques are available to incorporate existing transmission line easements within new subdivisions that do not result in lines straddling backyards and hence ultimately cause encroachment problems. These options should be actively pursued with developers and constituent councils.

- (xvii) Roads (other than access tracks) provided that *standard clearances* are maintained, the proposal is environmentally acceptable and line structures are adequately protected against motor vehicle impact.

Approval will not normally be granted for roads to be located within 15 metres of any part of a transmission line structure.

Where the road passes within 30 metres of a structure or supporting guy, the structure earthing system may require modification as outlined in (xvi) above.

The option of raising conductors or relocation of structures, at the full cost of the proponent, may be considered.

- (xviii) Cycleways, walking tracks and footpaths provided that *standard clearances* are maintained and the proposal does not alienate large sections of the easement area.

- (xix) Excavation (not including ploughing) in the case of minor excavations. In the case of substantial excavations, approval will normally be given, provided that the depth of the excavation does not exceed 3 metres, it is not located within 7 metres of a general purpose pole structure or supporting guy, or within 15 metres of any part of a steel tower or major pole structure.

Where there is no *practicable* alternative, consideration may be given to permitting an excavation which does not comply with the above general requirements, subject to *engineering advice* on the proposal confirming that it will not interfere with the maintenance or safe operation of the line. In such cases, TransGrid supervision of the excavation may be required and would normally be charged to the property owner.

- (xx) Quarrying activities, earthworks, dam or artificial lake construction subject to the maintenance of adequate ground clearances and provided that the subsoil stability and surface drainage in the vicinity of structures is not adversely affected and excessive quantities of dust are not generated. *Engineering advice* should be obtained prior to approval being given.

Where artificial lakes or dams are classed as navigable waters then clearances specified by the Maritime Services Board shall be provided.

Where access is compromised by such developments, a condition of approval should be the provision of alternative access – for example with an access easement.

- (xxi) Mining – Approval would be based on the merits of the proposal and any related circumstances involved.
- (xxii) Use of explosives – Although not encouraged, approval may be given for minor blasting involving charges not greater than 2kg/delay and not closer than 30 metres to a supporting structure, provided that satisfactory safety procedures are observed and the safe operation of the line is not jeopardised.
- (xxiii) Blasting procedures in accordance with Australian Standard AS2187 and the use of blasting mats and safety fuses would normally be the minimum requirements. As specified in AS2187 the peak particle velocity should be kept to below 25mm/sec (unless modified in a subsequent issue). In cases where the charge exceeds 2kg/delay and/or blasting is required closer than 30 metres to supporting structures *engineering advice* should be obtained prior to approval.

#### C. Prohibited Activities

The activities listed below are normally prohibited within transmission line easements. Approval to engage in such activities will not be granted other than in the most exceptional circumstances.

- (i) The construction of houses, buildings, *substantial structures*, or parts thereof including eaves other than those permitted under Sections (A) or (B) above. Where difficulty is experienced in locating a residence between the Council's building alignment and TransGrid's easement or an extension to the residence between the existing building and TransGrid's easement, consideration may be given to permitting the eaves to encroach onto the easement area to a maximum distance of 600mm.

- (ii) The installation of fixed plant or equipment other than that permitted under Sections (A) or (B) above.
- (iii) The storage of *flammable materials*, corrosive or explosive material.
- (iv) The placing of garbage, refuse or fallen timber.
- (v) The planting or cultivation of trees or shrubs, which grow to a height exceeding 4 metres.
- (vi) The placing of obstructions other than timber boundary fences within 15 metres of any part of a transmission line structure or supporting guy.
- (vii) Camping or the permanent parking of caravans or other camping vehicles.
- (viii) The parking or storage of *flammable* liquid carriers or containers.

Where an existing encroachment contravenes the requirements of this section, arrangements should generally be made for its removal.

### **1.3.2 Underground Cable Easements**

Underground cables are predominantly installed in gazetted roadways. Easements are not normally obtained in this situation as the legal right to occupy space in a gazetted roadway, by a public utility, is conferred by 'The Roads Act 1993' and TransGrid, as an electricity supply organisation, has further rights conferred by the 'Electricity Supply Act 1995'.

The activities listed below are intended to apply in situations where cables are installed within cable easements outside of gazetted roadways.

#### **A. Permitted Activities**

The activities listed below are permitted within cable easements provided that they do not interfere with the maintenance or safe operation of the cable:

- (i) Domestic recreational activities.
- (ii) The temporary storage of non-flammable materials provided that the area of ground surface contact doesn't prevent the free flow of air over the cable trench. The material must be capable of being removed at short notice.
- (iii) The planting of small shrubs and tilling of the soil to a maximum depth of 200mm, except in the vicinity of joint bays, surface installations, cable marker plates and posts, and kiosks.

#### **B. Controlled Activities**

The activities listed below are not permitted within cable easements without written approval.

Each case should be assessed on its merits in accordance with the guidelines indicated below and subject to the general provisions concerning maintenance and safe operation as detailed for Permitted Activities.

- (i) Parking of vehicles provided that an adequate surface exists that is capable of supporting the vehicles likely to be parked, thus preventing the crushing of the cable/ducts or erosion of the ground.
- (ii) The operation of mobile plant and equipment provided that an adequate surface exists which is capable of supporting the mobile plant or equipment. If a suitable surface does not exist, approval may be given subject to the activity being supervised by TransGrid personnel.
- (iii) The erection of structures spanning the easement are discouraged, but approval may be given provided that there is no *practicable* alternative and sufficient clearance is maintained between the ground surface and the underside of the structure to allow cable maintenance and/or repairs to be carried out without inconvenience.
- (iv) Excavation will normally be approved, provided that TransGrid personnel supervise the activity. Excavation within 2 metres of the cables should normally be carried out by hand. Mechanical excavation is not permitted, unless directly supervised by TransGrid personnel.
- (v) Concrete driveways may be approved where cables are in existing continuous ducts and the driveway is capable of supporting the heaviest vehicle likely to traverse the driveway.
- (vi) The installation of metal pipes, metal fences, underground or overhead cables: Approval may be given subject to investigation.
- (vii) Road-boring in the vicinity of a high voltage cable. A trial hole should be dug alongside the cable trench to locate the cable and to verify that the bore does not interfere with the cable. Because the precise location of the cable is unknown, this precaution is required even where equipment is used which can accurately determine the location of the bore-head.

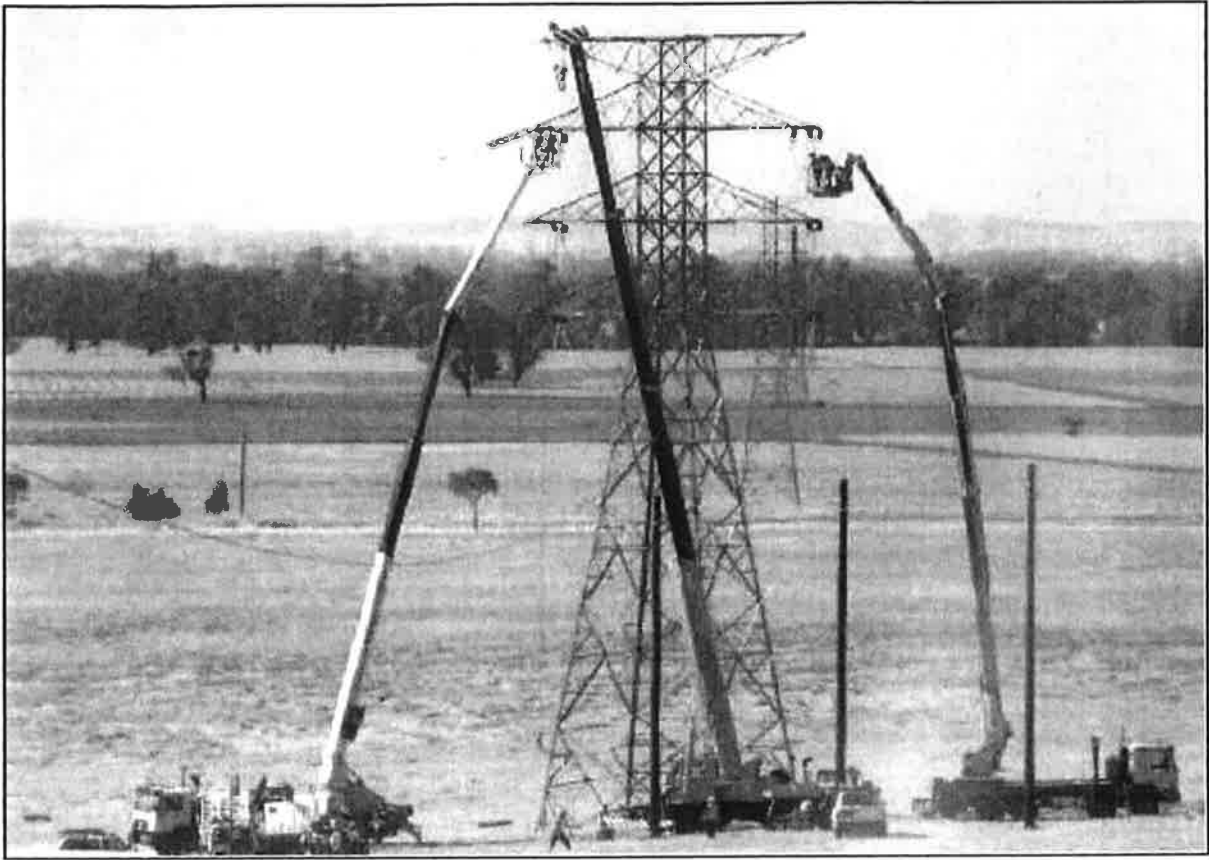
#### C. Prohibited Activities

The activities listed below are normally prohibited within cable easements. Approval to engage in such activities will not be granted other than in the most exceptional circumstances and only where a detailed investigation proves no impact on the operation or safety of the cable.

- (i) The storage of *flammable* liquids or explosives.
- (ii) The painting or cultivation of trees or shrubs with extensive root systems.
- (iii) The construction of houses, buildings or *substantial structures* other than those permitted under sections (A) or (B) above.
- (iv) The installation of fixed plant or equipment other than that permitted under sections (A) or (B) above.
- (v) The placing of garbage, refuse or fallen timber.
- (vi) Vertical boring directly over the cable lay (for example, for the installation of fencing or safety railing). These holes must be hand excavated.
- (vii) The raising or lowering of existing ground surface levels. Cable ratings are reduced by increased depth of burial.

## Examples of Required Working Platform for Infrastructure Maintenance

132kV Tower & Line



330kV Tower & Line

