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5 July, 2012

Our ref: 09/73

Your ref: MP10_0144 & MP 10_0108

The Manager – Industry
Department of Planning & Infrastructure
GPO BOX 39
SYDNEY NSW 2011

Attention: Andrew Hartcher

Dear Sir

**RE: RESPONSE TO SUBMISSIONS REPORT
CONCEPT PLAN MP 10_0144 AND PROJECT APPLICATION MP 10_0108
SHOALHAVEN STARCHES GAS PIPELINE PROJECT**

I refer to the Department's email dated 22nd May 2012 attached to which were two (2) submissions that the Department have received in relation to this project.

The Department has received submissions from:

- NSW Roads & Maritime Services (Transport);
- Railcorp;
- NSW EPA;
- NSW Office of Environment & Heritage;
- NSW Primary Industries (and including specific issues raised by the Office of Water); and
- Shoalhaven City Council.

In addition two individual submissions from members of the public have been received from J. Apperley of 62 Edwards Avenue, Bomaderry and R. Graham of 55 Fletchers Lane, Meroo Meadow.

The Department has also requested a response to several additional issues.

The purpose of this submission is to provide a response to these submissions from government agencies as well as those made by members of the public, addressing the issues that are raised in these submissions. Prior to preparing this submission we met with staff from Shoalhaven City Council on the 20th June 2012 to clarify issues raised by Council in their submission dated 22nd May 2012. In addition, separate consultation has also occurred with Departmental staff in relation to noise issues.

GOVERNMENT AGENCY SUBMISSIONS

Department of Planning & Infrastructure (DoPI)

DoPI have raised the following comments outlined in **Table 1** below in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 1
DoPI Comments

<i>Issues raised by DoPI</i>	<i>Shoalhaven Starches Response</i>
<p><i>Landowners Consent</i></p> <ul style="list-style-type: none"> • <i>The Department notes that it has now received a copy of all landowners consent letters to lodge the project and concept plan applications from all those persons/agencies who own land along the pipeline route (ie. Roads and Maritime Services, Shoalhaven City Council, Mr & Mrs Crittle and RailCorp).</i> 	<p>Shoalhaven Starches note the Department acknowledges receipt of all owners' consents to lodge project and concept plan applications.</p>
<p><i>Construction Noise</i></p> <ul style="list-style-type: none"> • <i>Despite the use of a number of source controls to mitigate construction noise, the EA predicts a number of exceedances of the relevant Interim Construction Noise Guideline (ICNG) criteria where there is likely to be some community reaction to noise.</i> • <i>Therefore, the Department requests that the Statement of Commitments (SOCs) in relation to construction noise be revised in the Response to Submissions report (RTS) to include more detail and additional commitments relating to the management of construction noise.</i> • <i>In particular, more detail and additional commitments should be included on how the most affected residents would be individually consulted, notified and/or compensated to ensure that noise complaints are not received. Some guidance on the types of things that might be included is contained within the ICNG and the Construction Noise Strategy, Planning and Environment Standard – PE-ST-157/1.0 (Transport Construction Authority 2011). This may include the provision of project specific respite offers and/or alternative arrangements agreed to on a case by case basis, in particular for those residents who are likely to be most affected in Receptor Area 4.</i> • <i>The Department needs to be satisfied that all reasonable and feasible noise management and mitigation measures would be implemented to ensure that the local community is not adversely affected by construction noise emissions from the project.</i> 	<p>Annexure 1 to this RTS report is a supplementary report prepared by Day Design Pty Ltd who prepared the original noise assessment that accompanies the EA.</p> <p>This supplementary report prepared by Day Design provides more detail on how the most affected residents would be consulted, notified and compensated to reduce the impacts of noise. A draft copy of this supplementary report has been reviewed by Departmental staff prior to preparation and submission of this RTS report.</p> <p>These additional noise mitigation measures have also been outlined in the Revised Draft Statement of Commitments included as Annexure 6 to this RTS report.</p> <p>The attached supplementary report prepared by Day Design details public consultation measures to be undertaken including provision for project specific respite offers. These issues have also been addressed in Action 9.9 and 9.10 of the Revised Draft Statement of Commitments included as Annexure 6 to this RTS report.</p> <p>It is Shoalhaven Starches view that all reasonable and feasible noise management and mitigation measures will be implemented to ensure the local community will not be adversely affected by construction noise from the project.</p>

Table 1: DoPI (continued)

Issues raised by DoPI	Shoalhaven Starches Response
<ul style="list-style-type: none"> • <i>The Department also requests that the RTS include the combined noise levels in Tables 23 to 26 of the noise and vibration assessment in Section 7.3 (Volume 1) of the EA. It is likely that these levels would be the criteria included in any instrument, if approved.</i> 	<p>The supplementary Noise Report prepared by Day Design included in Annexure 1 to this RTS report provides revised Tables 23 – 26 providing combined noise levels as requested.</p>
<p>Hazards and Risk</p> <ul style="list-style-type: none"> • <i>The revised EA does not appear to have addressed the Department's hazards and risk comments in its original adequacy letter dated 24 November 2011.</i> • <i>The Preliminary Hazards Analysis has quantified risks via a risk matrix from the pipeline to the adjacent land uses and proposed several control measures, including concrete casing where necessary, to mitigate the risks.</i> • <i>However, it is not clear whether stress corrosion or fatigue failures due to pressure cycling have been taken into account. It is requested that this issues are addressed in the RTS including a description of the proposed control measures during design and operation.</i> 	<p>The issue of stress corrosion and fatigue failure due to pressure cycling is addressed in Risk No. 38 of the Preliminary Hazard Analysis Spreadsheet included as Annexure 14 of the EA that accompanied the Application.</p>

Shoalhaven City Council (SCC)

SCC have raised the following comments in **Table 2** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 2
SCC Comments

Issues Raised by SCC	Shoalhaven Starches Responses
<p>Strategic Planning Matters</p> <p><i>Council requests a condition be imposed that requires the proponent to submit detailed pipeline location plans in the section from the EGP to Princes Highway so further consultation can take place and Council can consider implications for future growth areas under the Nowra Bomaderry Structure Plan.</i></p>	<p>Council's submission refers to Council's letter dated 19th April 2010 which formed Annexure 4 to the EA. Following that letter further meetings and correspondence was undertaken between Shoalhaven Starches with Council in which Council accepted that the proposed gas pipeline will generally be located along the southern side of Pestells Lane.</p> <p>Council staff in an email dated 1st July 2010 confirmed that due to constraints, Council accepted the pipeline would generally be along the southern side of Pestells Lane. The email spelt out possible construction requirements for the pipeline. This email is included in Annexure 2 to this RTS report.</p> <p>Shoalhaven Starches have obtained geotechnical advice from Network Geotechnics and engineering advice from URS Australia concerning the construction of the pipeline along Pestells Lane in particular. URS Australia recommend that to enable future development of Pestells Lane the pipeline should be buried 1200 mm below ground surface and covered with a suitable concrete protection barrier. These details are also included in Annexure 2.</p> <p>In subsequent discussion on the 20th June 2012 Council staff also accept that detailed engineering plans will need to be prepared following Project Approval and prior to construction work has commenced on this project and that these detailed designs will address pipeline construction requirements along Pestells Lane. Council staff have indicated agreement with this approach.</p>
<p>Works within the Local Road Reserves</p> <p><i>Council has concerns in respect of the section that is east of the rail corridor as the information within the text and the plans have inconsistencies. Refer to Annexure 5 aerial photos series and Appendix C of Annexure 13 (16 sheet series – Erosion and Sediment Controls).</i></p>	<p>The route of the pipeline as shown in the aerial photographs in Annexure 5 and the plans in Annexure C of Annexure 13 to the EA are consistent, contrary to the comment by Council. There were some minor discrepancies however between the pipeline route as shown in the aerial photographs and the cadastral plans included in Annexure 5 of</p>

Table 2 – SCC (continued)

Issues Raised by SCC	Shoalhaven Starches Responses
	<p>the EA. These have now been clarified and a revised set of aerial photographs and cadastral plans showing the proposed pipeline route are included as Annexure 3 to this RTS report.</p>
<p><i>In particular, it is noted on the plans and aerial photographs provided by Allen, Price & Associates (AP&A) that the pipeline is to be placed on an 'old road reserve' running parallel to the southern railway. Council's GIS does not show an old road reserve in the location as indicated on the plans. If this is the case Council may not be able to approve of the pipeline being in the location shown. It is noted that there are other road reserves adjacent to the railway which although unconstructed are under Council control.</i></p>	<p>Annexure 4 to this RTS report is a submission from Allen Price & Associated which clarifies the location of the road reserve that runs to the east and parallel to the rail line. These plans clearly show the location of the road reserves within which it is proposed to locate the pipeline.</p>
<p><i>The traffic report by Stapleton Transportation & Planning (ST&P) indicates that the works are proposed on the kerb or eastern side of Railway Street yet the plans by AP&A show otherwise.</i></p> <p><i>The plans by AP&A show the existing gas line within what appears to be railway land (near Concorde Way) yet Council's GIS indicates an easement for gas pipeline on the eastern side of the road reserve to the east of railway land.</i></p> <p><i>Further, the proposed method of pipeline laying within close proximity to trees particularly those close to sealed roadways, is not included.</i></p>	<p>The Traffic Impact Assessment and the aerial photographs included within the EA are consistent in showing the location of the pipeline generally running along the eastern side of Railway Street. As identified above the cadastral plans were in some locations inconsistent with the aerial photographs. Annexure 3 to this RTS report includes a revised set of cadastral plans which are now consistent with the aerial photograph mapping.</p> <p>The EA relates to the Shoalhaven Starches gas pipeline and not the existing ActewAGL pipeline. The plans show the general location of this existing pipeline for information purposes only. The existing pipeline does deviate to a minor extent from the road reserve to the east of Concorde Way. The submission prepared by APA (Annexure 4) includes the Deposited Plan that created the easement for this minor encroachment. The location of this other pipeline in this location has little relevance to the current proposal.</p> <p>As discussed with Council staff at our meeting on the 20th June 2012, when the pipeline route does affect existing street trees the following management approach will be adopted:</p> <ul style="list-style-type: none"> • For significant trees pipeline underboring of the tree will be undertaken. • Less significant trees will be removed; and once the pipeline has been completed, replacement trees will be planted. <p>The decision to underbore or replace trees will be made on a tree by tree basis prior to works commencing.</p>

Table 2 – SCC (continued)

Issues Raised by SCC	Shoalhaven Starches Responses
<p><i>Council requests the Department:</i></p> <p>(a) <i>require clarification of the location of the pipeline so Council can assess impacts and provide comment. (Note: Council staff are prepared to meet with the proponent to discuss this matter to expedite the clarification and detail required.)</i></p> <p>(b) <i>require details of pipe laying methods in proximity to trees so impacts of the method can be assessed.</i></p>	<p>As discussed above, Annexure 3 to this RTS report are revised cadastral plans showing the location of the pipeline in a consistent manner to the aerial photographs included in Annexure 5 to the original EA.</p> <p>As discussed with Council staff on the 20th June 2012 detailed engineering design plans will be prepared following Project Approval and prior to construction commencing. A copy of these plans can be made available to Council prior to works commencing.</p> <p>A tree management policy as discussed with Council staff is discussed above.</p>
<p>Noise and Vibration</p> <p><i>The information about vibration damage to building and infrastructure impacts from expected rock hammering is inadequate. The report sections 5.4, 6.3 and 7.3 indicate that investigations and monitoring of likely or actual damage to buildings due to rock hammering after an event is likely to be increased. The EAR and the Construction Noise and Vibration Management Plan makes reference to monitoring vibration during any rock hammering and requires monitoring alarms to trigger at a Peak</i></p> <p><i>Particle Velocity of 15 mm/s at the nearest residential building but does not say what shall be done should be alarm be triggered (ie. stop work for a time period, install vibration controls, etc.).</i></p> <p><i>Council requests the department ensure, that conditions are imposed so there is an action plan should the vibration levels be exceeded, thus ensuring that property and infrastructure owners are protected from damage through vibration rather than relying on the current statements in Annexure 16 as part of the broad inclusion of the document in the application reference condition.</i></p>	<p>The supplementary submission prepared by Day Design (Annexure 1) outlines measures that will be undertaken including the cessation of works causing vibration and the employment of alternative measures. In addition the report includes undertaking structural inspection surveys and vibration monitoring at high risk receptor locations located within 30 metres of hammering activities. These measures have also been incorporated in the Revised Draft Statement of Commitments (Action 9.11) included in Annexure 6 to this RTS report.</p>
<p>Water and Sewer</p> <ul style="list-style-type: none"> <i>A large portion of the proposed design will impact upon Shoalhaven Water's assets, the proposed design route does not appear to have taken into consideration the congestion of existing services located within the existing roads reserves. Of particular concern is the section of main from approximately 160 m north of Edwards Avenue, Bomaderry to Cambewarra Road. Based on the</i> 	<p>As is evident from a review of the Infrastructure Impact Assessment prepared by APA and which formed Annexure 14 to the EA it is evident that the EA does identify the presence of Shoalhaven Water assets along the pipeline route and does make recommendations for the management of the pipeline construction along this route. Allen</p>

Table 2 – SCC (continued)

Issues Raised by SCC	Shoalhaven Starches Responses
<p><i>proposed design route the gas main is going to be located in close proximity to twin sewer rising mains and also a trunk water main.</i></p> <ul style="list-style-type: none"> • <i>With reference to Annexure 14 – Infrastructure Impact “Section 3.3 Shoalhaven City Council Sewerage Drainage Infrastructure” and also “Section 3.4 Shoalhaven City Council Water Infrastructure” the applicant’s proposal to remove the Shoalhaven City Council until completion of the proposed gas main is unacceptable and inappropriate. A large majority of the infrastructure is part of the trunk Water and Sewer networks and approval shall not be granted for any removal of these assets. The proposed gas lines shall be designed so as to not impact upon Shoalhaven City Council Water and Sewer Assets. Any alteration to Council’s infrastructure is to be at the applicant’s cost.</i> • <i>Prior to commencement of any works the applicant shall apply to Shoalhaven Water for a Certificate of Compliance under Section 307 of Division 5 of Part 2 of Chapter 6 of the Water Management Act 2000.</i> • <i>Adequate clearance is to be provided between water and sewerage infrastructure and the proposed gas main in accordance with Council’s website for Shoalhaven Water Sewer Design Specification and Drawings. www.shoalwater.nsw.gov.au/Publications/publications</i> • <i>The Developer is to indicate protective measures to be utilised where construction and / or construction plant movement is proposed in the vicinity of water and / or sewerage infrastructure.</i> • <i>Detailed design plans (of the proposed gas pipeline) are required to be submitted to Council (Shoalhaven Water) for Approval prior to the works commencing. Plans are to accurately detail all water and sewer assets within close proximity (10 m) of the proposed route of the gas pipeline.</i> • <i>A Shoalhaven Water inspector shall be onsite at all time when works are undertaken in proximity to Shoalhaven Water assets, where works are required to cross Shoalhaven Water assets the works shall be by open excavation, at the applicant’s cost.</i> • <i>The alignment of all water and sewerage infrastructure shall be accurately and clearly marked on site prior to the commencement of works within 10 m.</i> 	<p>Prices & Associates have prepared a response to this issue raised by Council and this is included in Annexure 4 to this RTS report.</p> <p>Following discussions with Council staff on the 20th June it was agreed that the Statement of Commitments be revised to include the requirements spelt out in the final 6 bullet points of Council’s comments. The Revised Draft Statement of Commitments includes, in Annexure 6 to this RTS report, additional commitments (Actions 14.1 – 14.6). This approach is consistent with the outcome of discussions with Council staff on the 20th June 2012.</p> <p>Action 14.1 – Revised Draft Statement of Commitments (Annexure 6).</p> <p>Action 14.2 – Revised Draft Statement of Commitments (Annexure 6).</p> <p>Action 14.3 – Revised Draft Statement of Commitments (Annexure 6).</p> <p>Action 14.4 – Revised Draft Statement of Commitments (Annexure 6).</p> <p>Action 14.5 – Revised Draft Statement of Commitments (Annexure 6).</p> <p>Action 14.6 – Revised Draft Statement of Commitments (Annexure 6).</p>

Railcorp

Railcorp have raised the following comments in **Table 3** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 3
Railcorp Comments

Issues raised by Railcorp	Shoalhaven Starches Response
<ul style="list-style-type: none"><i>In relation to the RailCorp issues within Table 39 Actions 13.5 and 13.6 should be undertaken prior to construction not prior to commissioning as proposed as some of the issues covered in the agreement mentioned in the Actions would incorporate construction issues as well.</i>	<p>Annexure 6 to this RTS report is a Revised Draft Statement of Commitments. Actions 13.5 and 13.6 have been modified to be undertaken prior to construction as requested by Railcorp.</p>
<ul style="list-style-type: none"><i>Additionally there is no reference in the Environmental Assessment to the point raised in our letter of 27 October 2011 paragraph 2 regarding the requirement to comply with our Guidelines for Minor Underbores that is a supplement of SPC 207 and the need for these requirements to be provided in detail for assessment. It is noted however this was mentioned briefly in the earlier received Contamination and Geotechnical Assessment we received for comment. RailCorp requires that this issue be addressed in the conditions of consent for this proposal.</i>	<p>In addition Action 13.9 has been included with the Revised Draft Statement of Commitments which forms Annexure 6 to this RTS report which addresses this issue.</p>

NSW EPA

The NSW EPA have raised the following comments in **Table 4** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 4
NSW EPA Comments

Issues raised by NSW EPA	Shoalhaven Starches Response
<ul style="list-style-type: none"> • <i>The EPA notes that the Predicted Noise Levels outlined in the Construction Noise and Vibration Management Plan (CNVMP) are generally in excess of the Noise Management Levels (NMLs) identified in the EA. The noise control measures proposed will reduce the predicted noise levels, however they remain likely to exceed the NMLs on occasion. As such, it is recommended that the proponent be required to apply all feasible and reasonable work practices outlined in section 7.2 of the CNVMP. It is further recommended that the proponent also be required to inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as relevant contact details for a representative of the company / person undertaking the construction works.</i> • <i>The CNVMP contained within the EA states that construction activities are to be undertaken between 7am to 5pm Monday to Friday, and 8am to 2pm Saturday. The EPA notes that the Interim Construction Noise Guideline (DECC, 2009 – “ICNG”) provides a recommendation that construction activities on Saturdays be limited to 8am to 1pm. As such, it is suggested that either the construction hours are amended to reflect the ICNG, or alternatively any construction activity outside of the recommended standard hours comply with the requirements of Table 2 of the ICNG. That is, the noise management level for these times is set at rating background level (RBL) + 5 dB.</i> 	<p>These issues are addressed in the RTS report raised by the DoPI (Table 1) above.</p> <p>The Revised Draft Statement of Commitments (Annexure 6) includes Action 8.1 with revised hours of 8:00 am to 1:00 pm on Saturdays.</p>

NSW Office of Environment & Heritage (OEH)

The NSW OEH have raised the following comments in **Table 5** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 5
NSW OEH Comments

Issues raised by NSW OEH	Shoalhaven Starches Response
<p>4. <i>Following from the draft Statement of Commitments provided in section 9 of the EA, OEH recommends Department of Planning and Infrastructure consider including the following conditions for Aboriginal Heritage in the project consent:</i></p> <p><i>The Proponent must prepare and implement and Aboriginal Heritage Management Plan, as part of the overall Construction Environmental Management Plan for the project, which should:</i></p> <p><i>(a) describe the procedures and measures that would be implemented if any Aboriginal objects or sites are discovered during the development.</i></p> <p><i>(b) describe the procedures for consultation with registered Aboriginal stakeholders should Aboriginal objects be discovered during the development; and</i></p>	<p>An additional Action 2.3 has been included in the Revised Draft Statement of Commitments (Annexure 6) confirming Shoalhaven Starches undertake to prepare and implement an Aboriginal Heritage Management Plan for this project.</p>

NSW Primary Industries

The NSW Primary Industries have raised the following comments in **Table 6** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 6
NSW Primary Industries Comments

Issues raised by NSW Primary Industries	Shoalhaven Starches Response
<p>Fisheries</p> <p><i>It is noted that the proposed pipeline (as initially proposed) crosses part of Abernethys Creek and Mulgen Creek that drain to the Shoalhaven River. Potential impact upon water quality and aquatic habitats on the site is of particular interest.</i></p> <p><i>Fisheries NSW has no objection to approval of the proposal as outlined in the Environmental Assessment and Annexures prepared by Cowman Stoddart Pty Ltd and dated March 2012 (including the Statement of Commitments and site plans) provided the following commitments are included as conditions of approval:</i></p> <ol style="list-style-type: none"> <i>1. The proposed surface and groundwater management measures recommended for the site in Annexure 13 – Erosion and Sediment Control Management Plan by Allen, Price and Associates Pty Ltd (dated February 2012).</i> <i>2. The commitment to use directional underboring for all waterway crossings.</i> <i>3. The proposed management of Acid Sulphate Soils recommended for the site in Annexure 10a – Acid Sulphate Soil, Contamination and Geotechnical Investigation by Coffey Environments Pty Ltd (dated July 2011).</i> 	<p>Shoalhaven Starches note that NSW Fisheries raise no objection to the proposal subject to the project complying with the EA documentation and Statement of Commitments and specifically:</p> <ul style="list-style-type: none"> • The Erosion and Sediment Control Plan prepared by Allen Price & Associates. • Commitment to use directional underboring. • Management of ASS as outlined in Annexure 10a of the EA.
<p>Office of Water</p> <p><i>The Environmental Assessment has addressed a number of the issues previously raised by the Office in its letter to the Department dated 16 November 2011. Further detailed comments are included in Attachment A. For any queries on Office of Water matters please contact Janne Grose on 4729 8262.</i></p>	<p>Office of Water comments are further discussed in Table 7 of this RTS report.</p>
<p>Crown Lands</p> <p><i>Records indicate that the proposed alignment of the pipeline does not involve any Crown land or Crown roads. A further check will be required should the alignment change as a condition of any approval, or by amendment by the proponent, including the crossing of any major watercourses (the beds of which are Crown land). For any queries on Crown Lands matters please contact Karen Fowler on 4428 9107.</i></p>	<p>Shoalhaven Starches note that Crown Lands confirm that the alignment of the pipeline does not involve Crown Land or Crown roads.</p>

NSW Office of Water

The NSW Office of Water have raised the following comments in **Table 7** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 7
NSW Office of Water Comments

Issues raised by NSW Office of Water	Shoalhaven Starches Response
<p>Watercourse Crossings</p> <p><i>Reference is made to the Office of Water’s submission of 16 November 2011 on the Test of Adequacy documentation. In this submission the Office of Water raised concern that the draft EA did not specify that directional drilling (underboring) be used at each waterway crossing. The EA confirms that Shoalhaven Starches commit to horizontal underboring to cross all watercourses (see section 3.2.3, page 24, and Section 7.4.1.1 (page 125) clarifies that watercourse crossings will not be made by open trenching. The Office of Water supports the use of horizontal underboring to cross all watercourses.</i></p> <p><i>Section 7.4.1 notes the watercourses will require temporary vehicle crossings for machinery access (page 125) and the vehicle crossings will remain in place for the full rehabilitation period (page 137). The crossings are likely to be located in high scour / energy dissipation areas in relation to the existing bridges/culverts and this needs to be taken into consideration. The proposed vehicle crossings have the potential to cause greater impacts on the watercourses (including bed and bank instability) than the gas pipeline crossings which will be underbored and buried below the scour depth of the watercourses.</i></p> <p><i>The temporary crossings should minimise cutting of the banks and the potential for erosion and should not compromise stream flow. Temporary crossings which disturb the bed and banks of watercourses can be problematic and it is suggested consideration be given to laying temporary gabion mattresses (or a similar solution) on the bed of the watercourses to minimise and mitigate disturbances to the bed. Once construction is completed the gabion mattresses should be removed and the watercourses rehabilitated to mimic natural systems. The Office of Water questions the need for vehicle crossings to remain in place once the pipeline has been installed. It is recommended the vehicle crossings are rehabilitated immediately following the completion of construction.</i></p>	<p>Shoalhaven Starches note that the Office of Water supports the Company’s proposal to use horizontal underboring to cross all watercourses.</p> <p>Annexure 5 to this RTS report is a supplementary submission prepared by Allen Price & Associates (APA) dated 2nd July 2012. This submission addresses this issue raised by the Office of Water.</p> <p>APA indicate the proposed method for water crossing given in Section 7.4.1.1 of the EA is consistent with recommendations in Landcom’s “Managing Urban Stormwater – Soils & Construction”. This approach however is similar to that recommended by the Office of Water. APA however support the Office of Water’s recommendation to use gabion mattresses as temporary waterway crossings. The Revised Draft Statement of Commitments (Annexure 6) addresses this issue (Action 3.8).</p> <p>With respect to the length of time that will be required for the temporary vehicle waterway crossings to remain in place, APA indicate (Annexure 4) the time required for these crossings to remain in place is dependent upon the need for heavy vehicles and machinery to transverse this area. The temporary vehicle crossings are required to remain in place until the need for this access ceases, which is dependent upon detailed design</p>

Table 7: NSW Office of Water (continued)

Issues raised by NSW Office of Water	Shoalhaven Starches Response
<p><i>The EA notes the monitoring program will include monitoring and maintenance of any bank stabilisation and stream bed and bank rehabilitation and the rehabilitation will be monitored until all the crossing sites are identified as stable by an independent suitably qualified certifier (see page 137). The Office of Water supports the inclusion of this monitoring.</i></p>	<p>and testing and commissioning of the pipeline. Under these circumstances APA recommend the temporary vehicle watercourse crossings remain in place until the length of pipeline between Fletchers Lane, Edwards Avenue and Railway Street is tested, commissioned and backfilled along the length of the unnamed road reserve adjacent the Railway Reserve. This has been outlined in the Revised Draft Statement of Commitments (Action 3.8) included in Annexure 6 to this RTS report.</p> <p>Shoalhaven Starches notes that the Office of Water supports the monitoring program as outlined in the EA.</p>
<p>Depth of pipeline at watercourse crossings</p> <p><i>The Office of Water previously advised scour calculations need to be undertaken to ensure the pipeline does not become exposed at the watercourse crossings and the depth of the underbore is well below any potential scour in the creek beds. The EA notes the scour depth at each watercourse crossing has been calculated (page 126) and indicates preliminary scour depth modelling has been undertaken but it recommends probabilistic modelling of scour depth as part of the detailed design of the gas pipeline (page 134). It is not clear when this additional modelling of scour depth is to be undertaken as the Shoalhaven Starches has lodged a concurrent major project and concept plan application and project is seeking approval to construct and operate the pipeline. Draft SOC 3.7 indicates water crossing construction method statements are to be prepared which call for design scour depth (page 211). It is recommended these method statements are prepared and all submitted to the DP&I for endorsement prior to any construction near the watercourses commencing.</i></p> <p><i>Section 3.2.3 of the EA notes the pipeline will be buried to a minimum depth of 2000 mm (2 m) below the creek bed (page 24) and Section 7.4.1.1 notes this minimum depth of cover will increase if scour is an issue at the crossings (page 125). The scour results presented in Table 27 of the EA are noted (see page 136). To prevent disturbance to the gas pipeline, the pipeline should be buried below the scour depth of the watercourses, particularly as Table 27 indicates the scour depths</i></p>	<p>The Revised Draft Statement of Commitments included in Annexure 6 to this RTS report includes a modified Action 3.7 which requires the water crossing construction method statements to be submitted to the Office of Water for endorsement prior to construction occurring near watercourse crossings.</p> <p>See above.</p>

Table 7: NSW Office of Water (continued)

Issues raised by NSW Office of Water	Shoalhaven Starches Response
<p>at waterway crossings 2, 3 and 4 are 2.3 m, 5.1 m and 3.4 m respectively. If the burial depth is only 2 m this means there is a risk the pipeline will be exposed by scour unless the burial depth is increased. Draft SOC 3.7 (page 211) indicates the water crossing construction method statements call for designed scour depth and a safety margin. As noted above it is recommended these method statements are prepared and submitted to the DP&I for endorsement prior to any construction near the watercourses commencing.</p>	
<p>Watercourse and Riparian Zone Assessment</p> <p>Section 7.4.1.1 states that “open trenching shall be stopped at the boundary of the core riparian zone watercourse” (page 125). A critical factor is the potential for scour to occur relative to trenching and this may require the underboring to extend beyond the CRZ depending on the crossing circumstances. The ninth dot point (on page 135) states the Category 3 waterways have no CRZ width requirements but it should be noted Category 3 watercourses do have a 10 m wide CRZ either side of the waterway. As a minimum, open trenching should be stopped at the 10 m boundary of the CRZ for Category 3 watercourses in order to preserve bed and bank stability. The practicalities of underboring may require this setback to be wider. For the Category 2 waterway crossings, a 20 m wide CRZ plus a 10 m wide vegetated buffer is generally required either side of the waterway. Given the current land use and extent of grazing, trenching may stop at the edge of the 20 m wide CRZ (rather than the edge of the vegetated buffer) and then drilling from that point on.</p>	<p>The supplementary submission prepared by APA (Annexure 5) confirms that:</p> <ul style="list-style-type: none"> • Trenches will be stopped 20 metres from the top of bank of Category 2 watercourses; and • 10 metres from the top of bank from Category 3 watercourses. <p>A revised plan reflecting the Office of Water’s requirements is included in the supplementary submission prepared by APA (Annexure 5).</p>
<p>Vegetation Management Plan</p> <p>Section 7.4.1.1 of the EA (see pages 133, 136) indicates a Vegetation Management Plan (VMP) is not considered necessary because the proposed pipeline route is mainly located along road reserves with little or no native vegetation but it recommends vegetation rehabilitation and maintenance should be addressed as part of the ESCP to ensure adequate rehabilitation of the CRZ for each watercourse. It is noted however, the ESCP recommends a VMP is prepared (see page 138 of the EA). Clarification is required on this point.</p>	<p>The supplementary submission by APA (Annexure 5) confirms that a VMP will not be required due to the lack of diversified vegetation along the main route of the gas pipeline.</p>

Table 7: NSW Office of Water (continued)

Issues raised by NSW Office of Water	Shoalhaven Starches Response
<p>Wetland Vegetation</p> <p><i>The Office of Water previously suggested the EA provide further details on the native wetland vegetation near Bolong Road. Section 7.6.4 of the revised EA provides further details and indicates the area is “an unnatural wetland” and concludes it does not need to be avoided by the proposed gas pipeline (page 166).</i></p>	<p>No further action warranted.</p>
<p>Groundwater</p> <p><i>The Office of Water previously suggested the EA quantify the likely volumes of groundwater to be extracted to assess potential impacts. Section 7.4.1.3 of the EA provides the requested additional details.</i></p>	<p>No further action warranted.</p>
<p>Groundwater dependent ecosystems</p> <p><i>The Office of Water previously suggested the EA include an assessment be undertaken at the local scale of any Groundwater Dependent Ecosystems (GDEs). Section 7.6.4. of the EA notes there are no natural communities along the proposed pipeline route and the wetland along the route is an artificial community.</i></p>	<p>No further action warranted.</p>
<p>Water Licence</p> <p><i>The Office of Water previously suggested the EA address whether a water supply is required for the project and the EA provides details on the water supply source, volumes required etc. and whether it is proposed to use groundwater or surface water as a water supply source during construction. Section 5.2.11 of the EA addresses this issue and states there will be no requirements to extract water or groundwater along the pipeline route and a licence will not be required (see page 51). The inclusion of a draft Statement of Commitments 3.10 (page 211 of the EA) is supported that “the Office of Water is to be consulted if groundwater dewatering is necessary during construction to determine if an approval is required”.</i></p>	<p>Shoalhaven Starches notes the Office of Water supports the inclusion of Action 3.10 of the Statement of Commitments included in the EA.</p>
<p>Draft Statement of Commitments – Table 39</p> <p><i>The Office of Water supports inclusion of the following draft Statement of Commitments (SOC):</i></p> <p>1. <i>Ecological Management:</i></p> <p><i>SOC 1.8 – “local native plant species must be used to rehabilitate native riparian vegetation, disturbed by the project”.</i></p>	<p>Shoalhaven Starches notes that the Office of Water supports the inclusion of these Statements of Commitments included in the EA.</p>

Table 7: NSW Office of Water (continued)

Issues raised by NSW Office of Water	Shoalhaven Starches Response
<p>3. <i>Surface and Groundwater Management:</i></p> <p><i>SOC 3.7 – “... all watercourse crossings are to be directionally bored:</i></p> <ul style="list-style-type: none"> <i>• with entry and exit points sufficiently set back to allow for desired Category 2 riparian objectives to be met and</i> <i>• which calls for designed scour depth and a safety margin”.</i> <p><i>SOC 3.10 – “the Office of Water is to be consulted if groundwater dewatering is necessary during construction to determine if an approval is required”.</i></p> <p><i>SOC 3.11 – “each watercourse is to be assessed to determine whether the soils are sodic or non-sodic within the flood liable land ...”.</i></p> <p>10. <i>Rehabilitation:</i></p> <p><i>SOC 10.6 – “local native plant species must be used to rehabilitate native riparian vegetation disturbed by the project”.</i></p> <p><i>SOC 10.7 – “rehabilitation should include the rehabilitation of watercourse crossings and the rehabilitation phase could continue until all watercourse crossing sites are identified as stable by an independent suitable qualified certifier ...”.</i></p> <p><i>SOC 10.10 – the inclusion of this draft SOC is supported namely: “the monitoring program should include monitoring and maintenance of any bank stabilisation and stream bed and bank rehabilitation. The rehabilitation will need to be monitored until all crossing sites are identified as stable by an independent suitably qualified certifier” and “monitoring should also be undertaken for the rehabilitation of native riparian vegetation where native riparian vegetation has been removed as part of the project and rehabilitated following construction ...”.</i></p>	<p>As above</p>

NSW Roads & Maritime Services (RMS) (Transport)

The NSW RMS (Transport) have raised the following comments in **Table 8** in relation to this Project. Shoalhaven Starches responses to these issues are also provided.

Table 8
NSW RMS (Transport)

Issue Raised by RMS (Transport)	Shoalhaven Starches Comments
<ul style="list-style-type: none"> • <i>Prior to the issuing of the construction certificate, the developer shall obtain Section 138 consent under the Roads Act, 1993 to the design for works within the road reserve.</i> • <i>Any infrastructure should be designed with the aim of making it maintenance free for the duration of its design life.</i> • <i>Longitudinal trenching is to be at a minimum of 0.6 m whilst in the road reserve of the Princes Highway, as close to the road boundary as possible and not within 3.0 m of the road formation or drainage structures.</i> • <i>The pits for the bores on either side of the Princes Highway are to be located outside the road reserve if possible. Where this is not practical, they are to be no closer than 3.0 m from the seal of the highway for both the exit and entry holes. The depth shall not be less than 1.2 below the road surface level to the top of the pipe or concrete.</i> • <i>All buried pipes must be maintenance free, eg. sleeved.</i> • <i>Where concrete bedding/slab or concrete encasement of the conduit is required, the developer shall ensure that the concrete has achieved its required early design strength.</i> 	<p>Shoalhaven Starches commits (Action 15.1 Revised Draft Statement of Commitments, Annexure 6) to seeking a Section 138 consent under the Roads Act for the proposed works associated with this Project Application.</p> <p>As outlined in Section 3.2.2 of the Environmental Assessment (EA) that supports this Project Application the design life of the pipeline will be for a minimum of 30 years. This section of the EA also details the materials to be used in its construction in terms of the pipe as well as corrosion protection. The objectives of these measures are to ensure that the design and construction of the pipeline will to provide a maintenance free pipeline for its design life (Action 15.2 Revised Statement of Commitments, Annexure 6).</p> <p>It is not proposed to undertake longitudinal trenching of the pipeline under the Princes Highway. As outlined in Table 6 of the EA that supports the Project Application it is proposed to cross the Princes Highway with the use of horizontal bore. It is not anticipated that longitudinal trenching will be necessary within 3 metres of the road formation (Action 15.3 Revised Statement of Commitments, Annexure 6).</p> <p>Bore pits will need to be established on both sides of the Princes Highway to enable the horizontal bore to be undertaken. The bore pits will be sited no closer than 3.0 metres to the seal of the highway for both entry and exit holes. As outlined in Figure 6 within the EA that supports the Project Application the depth of the proposed pipeline will be no less than 1.2 metres below the road surface level and the top of the proposed pipe (Action 15.4 Revised Statement of Commitments, Annexure 6).</p> <p>As outlined above the proposed pipeline will be designed with the objective of being maintenance free for the design life of the pipeline (Action 15.5 Revised Statement of Commitments, Annexure 6).</p> <p>If concrete bedding / slab or concrete encasement is required Shoalhaven Starches commit to ensure that the concrete has achieved its required early design strength (Action 15.6 Revised Draft Statement of Commitments, Annexure 6).</p>

Table 8: NSW RMS (Transport) (continued)

Issue Raised by RMS (Transport)	Shoalhaven Starches Comments
<ul style="list-style-type: none"> • <i>All roadworks, traffic control facilities and other works associated with this project, including any modifications required to meet RMS standards, will be at not cost to the RMS. All works shall be completed prior to occupation by a suitably qualified contractor.</i> • <i>All areas within the road reserve of the Princes Highway that are disturbed by works related to the project are to be restored to their original condition upon completion of the work. All restoration work is to be carried out to the satisfaction of RMS.</i> • <i>RMS will be exercising its power under Section 64 of the Roads Act, 1993 to become the roads authority for works on the Princes Highway. Given this, Section 138 consent under the Roads Act, 1993 shall be obtained from the RMS prior to construction. To obtain Section 138 consent please contact RMS Asset Officer, Peter Arrighi on 4221 2546.</i> • <i>The developer shall apply for, and obtain a Road Occupancy Licence (ROL) from the RMS Traffic Operations Unit (TOU) prior to commencing roadworks on a State Road or any other works that impact a travel lane of a State Road or impact the operation of traffic signals on any road. The application will require a Traffic Management Plan (TMP) to be prepared by a person who is certified to prepare Traffic Control Plans. Should the TMP require a reduction of the speed limit, a Speed Zone Authorisation will also be required from the TOU. The developer shall submit the ROL application 10 business days prior to commencing work. It should be noted that receiving an approval for the ROL within this 10 business day period is dependent upon RMS receiving an accurate and compliant TMP.</i> <p><i>Note: An approved ROL does not constitute an approval to commence works until an authorisation letter for the works has been issued by RMS Project Manager.</i></p>	<p>Shoalhaven Starches commit to meeting all costs associated with all road works, traffic control facilities and other works associated with this project (Action 15.7 Revised Draft Statement of Commitments, Annexure 6).</p> <p>Shoalhaven Starches commit to restoring any disturbed areas within the road reserve of the Princes Highway that are disturbed by the proposed works to their original condition upon completion of the work (Action 15.8 Revised Draft Statement of Commitments, Annexure 6).</p> <p>Shoalhaven Starches commit to making an application pursuant to Section 138 of the Roads Act prior to works being carried out within the Princes Highway to the RMS (Action 15.9 Revised Draft Statement of Commitments, Annexure 6).</p> <p>Shoalhaven Starches commit to obtaining a Road Occupancy Licence from the RMS prior to commencing works on the Princes Highway. As outlined in Section 7.8 and Statement of Commitment 4.1 in Section 9.0 of the EA that supports the Project Application Shoalhaven Starches commit to the formulation of a Construction Traffic Management Plan for this project (Action 15.10 Revised Draft Statement of Commitments, Annexure 6).</p>

PUBLIC SUBMISSIONS

Robin Graham (55 Fletchers Lane, Meroo Meadow)

Submission

The following is a summary of the main points raised by this submission:

- *The pipeline must be underground and there should be no above ground equipment visible.*
- *The pipeline must be sufficient depth, design and configuration so as to not impact upon flood and stormwater management systems in the road way.*
- *All existing trees should be retained and if required to be removed are reinstated with mature plantings of similar nature.*
- *The pipeline must be of sufficient depth, location and configuration so as to not prevent or disrupt the planting of trees in the roadway to achieve a tree line street. Shoalhaven Starches should undertake planting of road verge with trees nominated by residents.*
- *The road should be upgraded to ensure that damage to the road cannot occur and that dust nuisance is mitigated. Shoalhaven Starches should undertake sealing of road along length of pipeline.*

Response

- The proposed gas pipeline will be underground for its entire length. The only components that will be situated above ground will be the proposed meter station located off Pestells Lane; and the Pressure Reduction Facility located within the Shoalhaven Starches site off Bolong Road. No section of the pipeline will be visible along Fletchers Lane.
- As the pipeline will be laid underground it will not have any impacts upon flood or stormwater flows. The issue of the laying of the pipeline below watercourse and scour depth are discussed in Section 7.4.1.1 of the EA.
- Shoalhaven Starches commit to endeavour to retain existing trees located along the route of the gas pipeline. If individual trees are required to be removed, Shoalhaven Starches commit to replace such trees with similar species.
- There is no nexus between locating an underground pipeline along Fletchers Lane and the need to undertake additional street tree planting along this, or any other public road. Once construction is complete the pipeline will be invisible along this road and will therefore not create any visual impact along this streetscape. Under these circumstances there is no justification to require Shoalhaven Starches to undertake tree planting along this road. This public road is owned and managed by Shoalhaven City Council. Any such tree planting is required to be undertaken in consultation and with the approval of Council.
- There is no nexus between locating an underground pipeline along Fletchers Lane and the need or otherwise to seal Fletcher Lane or any other road along the pipeline route. It is anticipated that construction works will take no more than two weeks along this road. The EA for this project is supported by an Air Quality Impact Assessment prepared by

Stephenson Environmental Management Australia and Traffic Impact Assessment prepared by ARC Traffic Consultants. Neither of these assessments recommend the sealing of this road. Section 7.5.4 of the EA for this Project outlines construction mitigation and management measures which include measures recommended by SEMA for dust suppression during the construction phase. These recommended measures do not include the sealing of this public road. Furthermore Fletchers Lane is owned and managed by Shoalhaven City Council. It is unlikely that Council would be prepared to accept the ongoing maintenance costs for a sealed road in this location. Under these circumstances there is no justification to require Shoalhaven Starches to undertake the sealing of Fletchers Lane.

Janette Apperley (62 Edwards Avenue, Bomaderry)

Submission

The following is a summary of the main points made by this submission:

- *Do not wish to complain about the project, just to ask a few questions regarding the project.*
- *On our property, we run a small band of show horses, valued in the area of about \$30,000, and they are padocked in full view of where the work will be proceeding.*
- *who is responsible if one or more of our horses becomes injured due to fright, at the machinery being used, how long is the work going to take, and would there be some allocation of funds so that we could relocate our horses, until the completion of the work.*
- *One of the horses is just a young unbroken 18 month old filly, bred from deceased (very precious) mare and is irreplaceable. The others are 2 young thoroughbred geldings, one is qualified for Sydney Royal show for next year, and the other is an up and coming show horse.*
- *Horses are very special and would hate to see them injured.*
- *Understands the importance of this work on the future of Shoalhaven Starches, and the community, but concerned about horses welfare.*

Response

Shoalhaven Starches have consulted directly with Ms Apperley; as well as a local Horse Agistment property located along Bolong Road at Bomaderry with respect to the concerns raised in this submission.

Shoalhaven Starches will commit to arranging for the relocation of the horses from the Apperley premises and agisting them at the Agistment Property while the gas pipeline works occur along the frontage of 62 Edwards Avenue, Bomaderry (Action 16.1 Revised Draft Statement of Commitments, **Annexure 6**).

I trust the above is of assistance to the Departments consideration of this Project Application. If you require any clarification of the matters raised above please do not hesitate to contact me.

Yours faithfully

A handwritten signature in black ink that reads "Stephen Richardson". The signature is written in a cursive, flowing style.

Stephen Richardson
COWMAN STODDART PTY LTD

Enc.

ANNEXURE 1

Supplementary Noise Report

prepared by

Day Design Pty Ltd

ANNEXURE 1



50 Junction Street
Nowra NSW 2541
Phone: (02) 4421 2933 Fax: (02) 9584 2619
Email: southcoast@daydesign.com.au
www.daydesign.com.au

Shoalhaven Starches Pty Ltd
C/- Cowmann Stoddart Pty Ltd
PO Box 738
Nowra NSW 2541

Refer: 4522-L1

Attention: Mr Stephen Richardson
Telephone: 02 4423 6198

2 July, 2012

Dear Sir,

Shoalhaven Starches Proposed Gas Pipeline - Construction Noise and Vibration Management Plan - Response to Submissions

Day Design Pty Ltd recently submitted a Construction Noise and Vibration Management Plan (CNVMP) to Shoalhaven Starches for their proposed gas pipeline project, report number 4522-r1 Rev B, dated 26 March 2012. The report formed part of an Environmental Assessment and following a review of that assessment, the relevant regulatory authorities have provided submissions including requests for additional information, as detailed below.

NSW Department of Planning and Infrastructure (DoPI)

In summary the DoPI recognises that there is limited scope to realistically reduce the level of construction noise emission on this project through engineering noise controls, other than those already detailed in the CNVMP (Section 7). Consequently there is potential for an exceedence of the noise management levels at various residences, on some occasions.

The Department therefore requests greater emphasis be placed on managing the potential noise impact on individual receivers through a community consultation process.

The Department also requests that this response shows the predicted level of noise from all plant and equipment combined, following all reasonable and feasible noise controls as detailed in Section 7.3 of the CNVMP.

We are pleased to provide the following response:-

Section 7.2 of the CNVMP outlines Noise Management Controls which are recommended to minimise the noise impact on residential receptors. A significant part of the management controls is community consultation and Shoalhaven Starches will implement a management program as follows.

Periods of Respite

Noisy construction activities such as rock hammering or drilling will only operate for 2 to 3 hours at a time when in close proximity to residences, for example at the Edwards Avenue intersection.

Whilst noisy activities such as rock hammering occur near residences all other construction activities will cease in the same location so as to minimise the cumulative noise impact.

Work Practices

Workers and contractors will be trained in work practices to minimise noise emission such as the following:

- Employ the use of broadband audible reversing alarms on all mobile plant.
- Avoid dropping materials from a height.
- Avoid shouting and talking loudly outdoors.
- Avoid the use of radios outdoors that can be heard at the boundary of residences.
- Turn off equipment when not being used.
- Carry out work only within the recommended hours of operation (see Section 5.3).

Heavy Vehicles and Staff Vehicles

- Keep truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (for example, minimising the use of engine brakes, and no extended periods of engine idling).
- Locate site vehicle entrances away from residences where practicable.
- Optimise the number of vehicle trips to and from the site – movements can be organised to amalgamate loads rather than using a number of vehicles with smaller loads.
- Staff parking areas should be located as far from residential receiver locations as practicable.
- No motor vehicles should access the site via, or park within, residential areas prior to 7 am in order avoid sleep disturbance. For example whilst works progress through receptor area 4 from north of Roseville Road to south of Alfred Street (see Figure 4).

Community Relations

- A Shoalhaven Starches Community Liaison Officer will be appointed prior to the commencement of any works.
- The officer will approach all potentially affected residences prior to the commencement of works as an initial introduction.
- The officer will explain the project, duration of works, potentially noisy periods as well as determine any particularly sensitive receivers or sensitive time periods and schedule works accordingly, as far as reasonably practical.



- A contact number will be provided for any residents to call with complaints or queries.

Once works commence communication with affected residents will be maintained by the officer via a range of media including personal contact and / or letter box drops.

For example a one page flyer detailing any particularly noisy upcoming events with a description of the type of work, date/s on which it will occur, duration of the expected noise and a contact phone number can be delivered to each residence in the lead up to the event/s.

Managing a Noise Complaint

The Community Liaison Officer will receive and manage noise complaints.

All complaints will be treated promptly and with courtesy.

Should a justified noise complaint not be resolved, noise monitoring may be carried out at the affected receptor location and appropriate measures be taken to reduce the noise emission as far as reasonably practicable.

Where it is not practicable to stop the noise, or reduce the noise, a full explanation of the event taking place, the reason for the noise and times when it will stop should be given to the complainant.

Residents subjected to lengthy periods of noise or vibration may be eligible for a project specific respite offer. The purpose of such an offer is to provide residents with respite from an on-going impact. This measure is to be determined on a site by site basis.

The following guidelines are recommended in Section 6 of the *Interim Construction Noise Guideline* to manage a noise complaint:

- Provide a readily accessible contact point, for example, through a 24 hour toll-free information and complaints line.
- Give complaints a fair hearing.
- Have a documented complaints process, including an escalation procedure so that if a complainant is not satisfied there is a clear path to follow.
- Call back as soon as possible to keep people informed of action to be taken to address noise problems. Call back at night-time only if requested by the complainant to avoid further disturbance.
- Provide a quick response to complaints, with complaint handling staff having both a good knowledge of the project and ready access to information.
- Implement all feasible and reasonable measures to address the source of complaint.
- Keep a register of any complaints, including details of the complaint such as date, time, person receiving complaint, complainant's contact number, person referred to, description of the complaint, work area (for larger projects), time of verbal response and timeframe for written response where appropriate.



The following tables are replicated from Tables 7.2 to 7.5 inclusive from the CNVMP and include the calculated combined noise level as requested by the Department.

Table 7.2 Predicted $L_{eq\ 15\ minute}$ Construction Noise Levels – Receptor Area 1
(With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 1 (Pestells Lane)	Drilling (Princes Highway crossing)	42	47	Yes
	Backhoe	30	47	Yes
	Trencher	46	47	Yes
	Loader	42	47	Yes
	Welding Rig (Diesel)	38	47	Yes
	Dewatering Pump	27	47	Yes
	Truck	44	47	Yes
	Combined	50 *	47	No

- * As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.3 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 2
(With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 2 (Fletchers Lane)	Drilling (Meroo Road crossing)	48	42	No + 6 dB
	Drilling (at Railway Line)	52	42	No + 10 dB
	Backhoe	53	42	No + 11 dB
	Trencher	68	42	No + 26 dB
	Loader	64	42	No + 22 dB
	Welding Rig (Diesel)	54	42	No + 12 dB
	Dewatering Pump	49	42	No + 7 dB
	Truck	67	42	No + 25 dB
	Combined	72 *	42	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.4 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 3
(With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 3 (residences on the eastern side of Meroo Road, south of Fletchers Lane)	Drilling (Meroo Road crossing)	38	42	Yes
	Drilling (at Railway Line)	39	42	Yes
	Backhoe	31	42	Yes
	Trencher	48	42	No + 6 dB
	Loader	42	42	Yes
	Welding Rig (Diesel)	32	42	Yes
	Dewatering Pump	27	42	Yes
	Truck	44	42	No + 2 dB
	Combined	51 *	42	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.5 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 4
(With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 4 (residences in Edwards Avenue and south e.g. Alfred Street and Lillian Place)	Drilling (Edwards Avenue Crossing)	54 to 65	40	No + 14 to 25 dB
	Backhoe	53	40	No + 13 dB
	Trencher	68	40	No + 28 dB
	Loader	64	40	No + 24 dB
	Welding Rig (Diesel)	54	40	No + 14 dB
	Dewatering Pump	49	40	No + 9 dB
	Truck	67	40	No + 27 dB
	Rock Hammering (if required)	68	40	No + 28 dB
	Combined	72 * – 74**	40	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.

** The combined predicted sound level with rock hammering will not occur in practice as the management plan under 'periods of respite' precludes this activity occurring



simultaneously with another in the same location. Furthermore, different plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.

Shoalhaven City Council

Council has raised concerns in relation to ground borne vibration levels and states:-

“Council requests that the Department ensure, that conditions are imposed so there is an action plan should the vibration levels be exceeded. Thus ensuring that property and infrastructure owners are protected from damage through vibration rather than relying on the current statements in Annexure 16 as part of the broad inclusion of the document in the application reference condition.”

We are pleased to provide the following response:-

Given the distances that rock hammering is likely to occur from individual residences (circa greater than 30 metres), it is unlikely that vibration levels will reach the limit of 15 mm/s at all.

However, once rock hammering commences at any site, the level of vibration emission should be measured to determine the impact at any nearby receptors, and:-

- carry out structural inspection surveys (dilapidation reports) on residences within 30 metres of rock hammering or vibration producing activities; and
- continue to conduct vibration monitoring at residences within 30 metres whilst vibration producing works occur.

In the unlikely event that vibration levels exceed the recommended limit, all vibration works must cease immediately and alternative methods must be employed.

Environment Protection Authority

The EPA recommends that all feasible and reasonable work practices outlined in Section 7.2 of the CNVMP are required to be applied and that the proponent is required to inform all potentially impacted residents and provide details relating to the work to be carried out, expected noise levels and duration, as well as contact details of a company representative.

The EPA also request that the construction hours are amended to between 7 am and 5 pm Monday to Friday and 8 am to 1 pm on Saturdays, alternatively any construction outside of these hours must comply with the criteria of RBL +5 dB as outlined in the Interim Construction Noise Guideline.

We are pleased to provide the following response:-

We trust that the response to the DoPI above adequately addresses the EPA's request for community consultation. Shoalhaven Starches Pty has amended the proposed hours of construction to between 7 am and 5 pm Monday to Friday and 8 am to 1 pm on Saturdays, with no work on Sundays or Public Holidays.



We trust this adequately addresses the submissions.

Please do not hesitate to contact the undersigned should you require any further information.

Kind regards,



Matthew Harwood, MAAS
Senior Acoustical Consultant



The undersigned hereby certifies that this Report has been checked and approved in accordance with our Quality Management System.



ANNEXURE 2

**Email Correspondence
with Shoalhaven City Council
and other Related Documents**

Stephen Richardson

From: Brian Hanley [brian.hanley@manildra.com.au]
Sent: Monday, 4 June 2012 1:53 PM
To: Stephen Richardson
Subject: FW: Gas Pipeline in Prestell lane

Regards

Brian Hanley
Manager
Energy & Sustainability
Manildra Group

Phone: +61 2 4423 8388
Mobile: +61 412 672 783

-----Original Message-----

From: Britton, John [mailto:BRITTON@shoalhaven.nsw.gov.au]
Sent: Thursday, 1 July 2010 12:51 PM
To: Brian Hanley
Subject: Gas Pipeline in Prestell lane

Hello Brian,
You have asked for councils acceptance of the proposed gas pipeline being placed on the southern side of Pestells lane between the Receiving Station across the highway and to Meroo Road.

You have submitted :
AP&A drawings 24710-01J(2 sheets) dated 3-5-2010, the URS drawings -Figure 2 (25/6/2010) and 00dated 22.06.2010, the URS email to you dated 28 June 2010; and Network Geotechnics Pty Ltd letter dated 1 June 2010.

I have reviewed and discussed with the Strategic planning Group and the following advice is provided:

1. Based on the constraints due to the existing gas pipeline, Council accepts that the proposed gas pipeline will generally be on the southern side of Pestells Lane.
2. In respect of future road works and formation that may be required should Pestells Lane be upgraded, and with your advice that the depth of the pipeline would be 1200mm to top of pipe with a 100mm concrete top protection and allowing for a 520mm road base in future road formations, the following comments and clarifications as conveyed by Council's Traffic unit Manager, are relevant for your final designs:

- * Company to confirm whether this includes construction loads including compaction loading, or whether additional depth is required to allow compaction rolling/vibration etc

- * Not withstanding above; construction loading means from bottom of road sub base level; ie if the submitted figures are correct; the depth to top of pipe would be $1200 + 520 = 1720$ (for example).

- * If a greater depth is required to top of pipe for construction vibration / rolling as part of road construction - 1200 is to be increased

- * If a greater depth is required based on forecast worst case traffic volumes - 520mm to be increased

- * Pavement design depth in final designs are to be accepted by council construction and maintenance manager who will be responsible ultimately for working in the area

- * Company to provide confirmation in writing that as long as minimum depth of 1200mm (or greater as specified) is provided; then if damage to pipe occurs during construction / maintenance then they pay for repairs

In summary, the general location is acceptable, however in preparing design details as you proceed with the application through the Department of Planning , the above level of detail and approval would be required.

This advice is only in relation to the pipeline between the Receiving Station across the highway and to Meroo Road.

John Britton
Major Project 3A Coordinator
Project and Policy Unit, Development and Environment Services Shoalhaven City Council
Ph: 4429 3432 Mob: 0416 275 726

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Stephen Richardson

From: Brian Hanley [brian.hanley@manildra.com.au]
Sent: Monday, 4 June 2012 2:30 PM
To: Stephen Richardson
Subject: FW: Manildra Bomaderry Gas Lateral - Pestells Lane gas lateral route location - Hazardous Area and pipeline protection advice
Attachments: Figure 2.pdf; 43167736-001.pdf

Regards

Brian Hanley
Manager
Energy & Sustainability
Manildra Group

Phone: +61 2 4423 8388
Mobile: +61 412 672 783

From: Alex_Horn@URSCorp.com [mailto:Alex_Horn@URSCorp.com]
Sent: Monday, 28 June 2010 11:27 AM
To: Brian Hanley
Subject: Manildra Bomaderry Gas Lateral - Pestells Lane gas lateral route location - Hazardous Area and pipeline protection advice

Brian,

Thank you for your request for comment on the risk limitations of placing the Manildra lateral on the southern side of Pestells Lane.

During installation of the proposed gas lateral, it will be necessary to locate and expose the Actew AGL pipeline in Pestells lane.

The route, as proposed to Jemena, is to cross the Actew AGL pipeline in Shoalhaven Council Pestells Lane easement immediately adjacent to the eastern side of the existing Jemena metering facility.

The pipeline's intended centreline will then follow the existing Pestell's Lane route on the southern edge of the existing road, 1m north from the southern boundary of Shoalhaven Council's land.

To allow uncontrolled future development of Pestells lane into a widened suburban road, URS recommend the new lateral pipeline would need to be buried 1200 mm from the ground surface and be covered with a suitable concrete protection barrier during pipeline construction to provide adequate risk mitigation from potential future impact damage.

URS suggest any future upgrade to the road reserve be developed above the proposed pipeline route. Manildra advised URS that, based on geotechnical assessment of the soil in the Pestells Lane vicinity, the road development will likely require excavation to a depth of 500-600mm for road base to allow future widening of Pestells Lane.

Thus the pipeline, would likely be unaffected by being placed with a top of pipe depth of 1200mm with a suitable concrete protective cover (nominally 100mm thick) above.

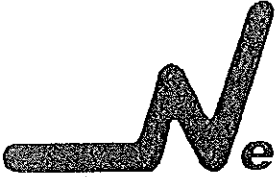
Copy of the proposed route and layout details are attached.

Hope this clarifies the issue for discussions with Shoalhaven City Council.

Cheers,
Alex Horn
Principal Engineer
URS Australia
L4, 407 Pacific Hwy
Artarmon NSW 2064
Ph 02 8925 5778
Fax 02 8925 5555
Mob 0428 421 967
Web www.ap.urscorp.com

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5/06/2012



**Network
Geotechnics Pty Ltd**

ACN: 069 211 561 ABN: 35 069 211 561

W07/1013-A SRT:NC

11th June, 2010

The Manager
Manildra Group Pty Ltd
c/- Ganderton Civil Pty Ltd
PO Box 5052
SOUTH NOWRA DELIVERY CENTRE NSW 2541

Attention: Mt Ian Ganderton

Dear Sir

Re: Proposed Road Upgrading: Pestells Lane, Bomaderry.

As requested, geotechnical studies have been undertaken at the above subdivision site in order to provide a recommended pavement thickness design for about 600m length of Pestells Lane.

Fieldwork was carried out on 24th May, 2010 and included six hand augered boreholes (HAH1 to HAH6) and sampling of material from approximate subgrade level prior to the commencement of earthworks.

Laboratory soaked California Bearing Ratio (CBR) tests were carried out on subgrade samples obtained from HAH1, HAH3 and HAH5 located at about Ch 100m, 300m and 500m respectively. The tests were carried out on specimens compacted to a target Dry Density Ratio (AS1289 5.4.1) of 100% Standard at a moisture content close to Standard Optimum Moisture Content (SOMC). The field moisture content of the samples ranged from about 1% wet to 4% dry of SOMC. The CBR results are attached.

Based on the above and our experience in the area, it is assessed that subgrade materials will comprise mainly high plasticity Silty CLAY. Soaked CBR values ranged from 2.5% to 9% and a value of 3% has been adopted for design.

The recommended pavement thickness design is attached, together with notes covering design assumptions and compaction, material quality, drainage and other construction criteria.

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Tuggerah NSW 2259
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Facsimile: (02) 4351 6300
centralcoast@netgeo.com.au

Sydney
14/25 Stockart Rd.
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Wollongong
1/140 Industrial Rd.
Oak Flats NSW 2529
Telephone: (02) 4257 4458
Facsimile: (02) 4257 4463
southcoast@netgeo.com.au

W07/1013-A

This report should be read in conjunction with the attached General Notes. Please do not hesitate to contact the undersigned if you have any queries or require further assistance.

For and on behalf of
Network Geotechnics Pty Ltd


Stephen Thorley
Principal Geotechnician

encl. Pavement Thickness Design Summary (1 sheet)
Laboratory Test Results (1 sheet)
Summary Bore Hole Log (1 sheet)
General Notes (1 sheet)

Manildra Group Pty Ltd
c/- Ganderton Civil Pty Ltd
Proposed Road Upgrading
Pestells Lane, Bomaderry

---Recommended Pavement Thickness Design---						
Location	Design Traffic (CVAG's)	Design Subgrade CBR (%)	Sub-base	Basecourse	Wearing Course (AC)	TOTAL
Pestells Lane Ch 00-600m	1 x 10 ⁶	3	370(U)	150(U)	2 coat seal	520

Notes:

1. (U) denotes unbound basecourse and sub-base material in accordance with RTA 3051 or as approved by Shoalhaven City Council.
2. The recommended design has been prepared in accordance with Austroads Pavement Design Guide (95% confidence charts) and is based on the CBR value and traffic loading noted above. Please contact this office if other design conditions are anticipated. The thicknesses stated herein do not include construction tolerance.
3. At the time of sampling, field moisture within insitu subgrade materials was typically about 1% wet to 4% dry of SOMC. It is expected that some adverse soil moisture conditions may be encountered at subgrade level during construction. Subgrade materials should be inspected during preliminary boxing as either drying or excavation and replacement of up to 300mm of wet material may be required in some areas. Further advice should be sought if extensive areas appear to require subgrade remedial works.
4. In accordance with Shoalhaven City Council's Subdivision Code, the following minimum dry density ratios (AS1289 5.4.1) should be achieved during construction.

Basecourse	98% Modified
Sub-base	95% Modified
Subgrade	100% Standard
5. Table drains should be installed to a depth preferably not less than 600mm below finished surface level or as directed by Council Engineers.

TEST PIT LOGS
SHOALHAVEN CITY COUNCIL
PESTELLS LANE, BOMADERRY

<u>Test Pit</u>	<u>Location</u>	<u>Depth (m)</u>	<u>Description</u>
TP1	Ch 100m	0.2 - 0.6m 3.0m LCL	(CH) CLAY, some fine to medium sand, brown.
TP2	Ch 200m	0.2 - 0.6m	(CH) CLAY, trace of silt, trace of fine sand, brown/red brown.
TP3	Ch 300m	0.1 - 0.5m	(CH) CLAY, trace of silt fines, trace of fine sand, brown.
TP4	Ch 400m	0.1 - 0.5m	(CH) CLAY, trace of sand fines, some gravel, brown.
TP5	Ch 500m	0.2 - 0.6m	(CH) CLAY, trace of silt fines, trace of fine sand, brown.
TP6	Ch 600m	0.3 - 0.7m	(CL - CM) CLAY, Silty Gravelly CLAY, floating rock from 70mm < in size, light brown, grey.

GENERAL

Geotechnical reports present the results of investigations carried out for a specific project and usually for a specific phase of the project (e.g. preliminary design). The report may not be relevant for other phases of the project (e.g. construction), or where project details change.

SOIL AND ROCK DESCRIPTIONS

Soil and rock descriptions are based on AS 1726 – 1993, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the terms and symbols sheet for definitions.

GROUNDWATER

The water levels indicated on the logs are taken at the time of measurement and depending on material permeability may not reflect the actual groundwater level at those specific locations. Also, groundwater levels can vary with time due to seasonal or tidal fluctuations and construction activities.

INTERPRETATION OF RESULTS

The discussion and recommendations in the accompanying report are based on extrapolation / interpolation from data obtained at discrete locations. The actual interface between the materials may be far more gradual or abrupt than indicated. Also, actual conditions in areas not sampled may differ from those predicted.

CHANGE IN CONDITIONS

Subsurface conditions can change with time and can vary between test locations. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions.

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FURTHER ADVICE

Network Geotechnics would be pleased to further discuss how any of the above issues could affect your specific project. We would also be pleased to provide further advice or assistance including:

- assessment of suitability of designs and construction techniques;
- contract documentation and specification;
- construction control testing (earthworks, pavement materials, concrete);
- construction advice (foundation assessments, excavation support).

CALIFORNIA BEARING RATIO (CBR) TEST REPORT

Client : Manildra Group
Project: Proposed Road Upgrading
Location: Pestells Lane, Bomaderry
GTR:

Job Number: W07/1013
Report Number: 1
Report Date: 11/06/2010
Tested By: Hamish James

TEST IDENTIFICATION

Sampling Method : AS1289.1.2.1 (CI 6.5.1) Hand Excavated Pit / Trench

Lab Number
Sample Date
Road :
Chainage :
Offset :
Level :
Sample Description

	W22020	W22021	W22022
	24/05/2010	24/05/2010	24/05/2010
	Pestells Lane	Pestells Lane	Pestells Lane
(m)	100m	300m	500m
(m)	CL	CL	CL
	Subgrade	Subgrade	Subgrade
	(CH) Sandy Gravelly CLAY	(CH) Sandy Gravelly CLAY	(CH) Sandy Gravelly CLAY

LABORATORY DATA

Field Moisture Content
Maximum Dry Density
Optimum Moisture Content

	AS1289.5.1.1	AS1289.2.1.1	
(%)	22.0	25.3	19.1
(t/m ³)	1.59	1.57	1.56
(%)	23.3	23.7	23.9

TEST RESULTS

Date Tested
Days Soaked
Surcharge Weight

	AS1289.6.1.1	AS1289.2.1.1	
	01/06/2010	07/06/2010	03/06/2010
	4	4	4
	9 kg	9 kg	9 kg

Before Soaking

Dry Density
Density Ratio
Moisture Content
Moisture Ratio

	AS1289.6.1.1	AS1289.2.1.1	
(t/m ³)	1.56	1.55	1.56
(%)	98 Standard	99 Standard	100 Standard
(%)	23.7	24.2	22.7
(%)	102	102	95

After Soaking

Dry Density
Density Ratio
Swell

(t/m ³)	1.56	1.50	1.55
(%)	98 Standard	96 Standard	99 Standard
(%)	0.3	3.2	0.6

Moisture Content

After Soaking
Top 30mm
Full Depth After Test

(%)	25.4	29.4	24.0
(%)	29.4	30.4	25.3
(%)	27.4	25.7	24.7

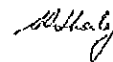
CBR Value
Percentage of oversize

(%)	4 @ 2.5mm	2.5 @ 2.5mm	9 @ 5.0mm
(%)	0.0 Excluded	0.0 Excluded	0.0 Excluded

Note :

This document is issued in accordance with NATA's accreditation requirements.

Approved Signatory:



Stephen Thorley



Wollongong Laboratory 1318

Document No. RP5-28 version 3 25-7-08

Stephen Richardson

From: Brian Hanley [brian.hanley@manildra.com.au]
Sent: Wednesday, 20 June 2012 9:14 AM
To: Stephen Richardson
Subject: FW: Gas Lateral - Responses to Shoalhaven Council Queries
Attachments: Sample - Gas pipeline service crossing 200612.xlsx

Regards

Brian Hanley
Manager
Energy & Sustainability
Manildra Group

Phone: +61 2 4423 8388
Mobile: +61 412 672 783

From: Horn, Alex [mailto:alex.horn@urs.com]
Sent: Wednesday, 20 June 2012 9:06 AM
To: Brian Hanley
Subject: Gas Lateral - Responses to Shoalhaven Council Queries

Brian,

As discussed on 19 June 2012, URS' proposed design for the Bomaderry gas lateral will involve the following protections along the Pestells Lane section:

1. Selection of heavy wall pipe to minimise puncture risk from physical contact with excavation equipment
2. Installing concrete slabs above the pipeline as additional protection
3. Installation at 1200mm minimum depth in the Pestells Lane section

A layout schematic also provides a typical service crossing showing exposure of the service and under laying of the gas service.

Cheers,

Alex Horn

Senior Principal Engineer

National Professional Engineers Register, RPEQ

URS Corporation Australia

Level 4, 407 Pacific Highway, Artarmon. NSW 2064. Australia

Phone: + 61 2 8925 5500 Direct +61 2 8925 5778 Fax: +61 2 8925 5555 Mobile: +61 428 421 967

email: alex.horn@urs.com visit our website at <http://www.urs.com.au>

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20/06/2012

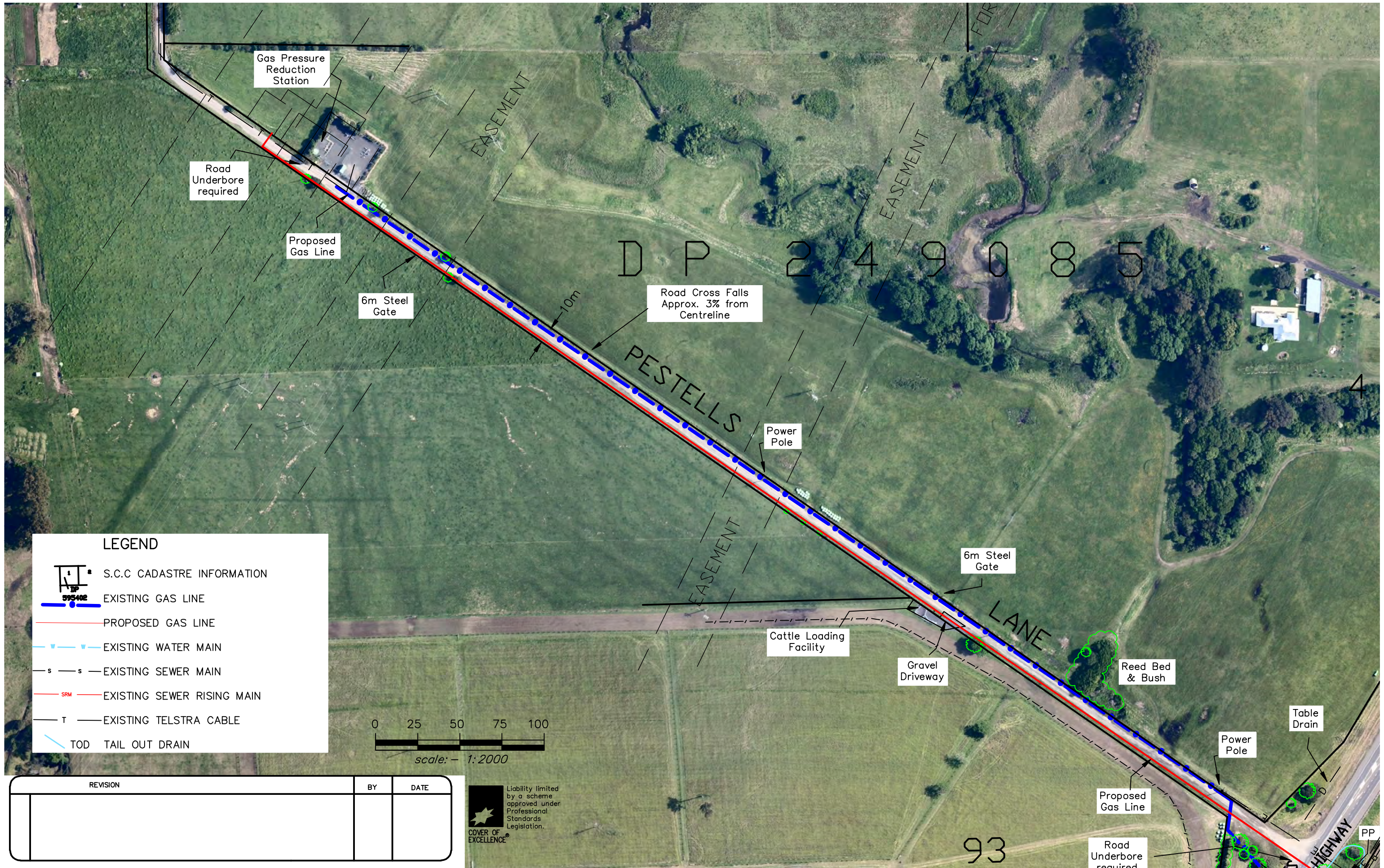
ANNEXURE 3

**Revised Aerial Photographs
and Cadastral Plans**

prepared by

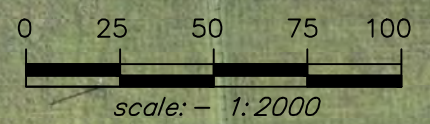
Allen Price & Associates

ANNEXURE 3



LEGEND

- S.C.C CADASTRE INFORMATION
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING SEWER RISING MAIN
- EXISTING TELSTRA CABLE
- TAIL OUT DRAIN



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 consultants@allenprice.com.au www.allenprice.com.au

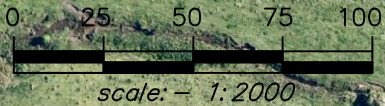
PLAN OF PROPOSED GAS LINE ROUTE FROM EXISTING GAS MAIN TO THE BOLONG ROAD FACTORY (PESTELLS LANE) FOR SHOALHAVEN STARCHES

REF. No. 24710-03 sheet 1 of 9
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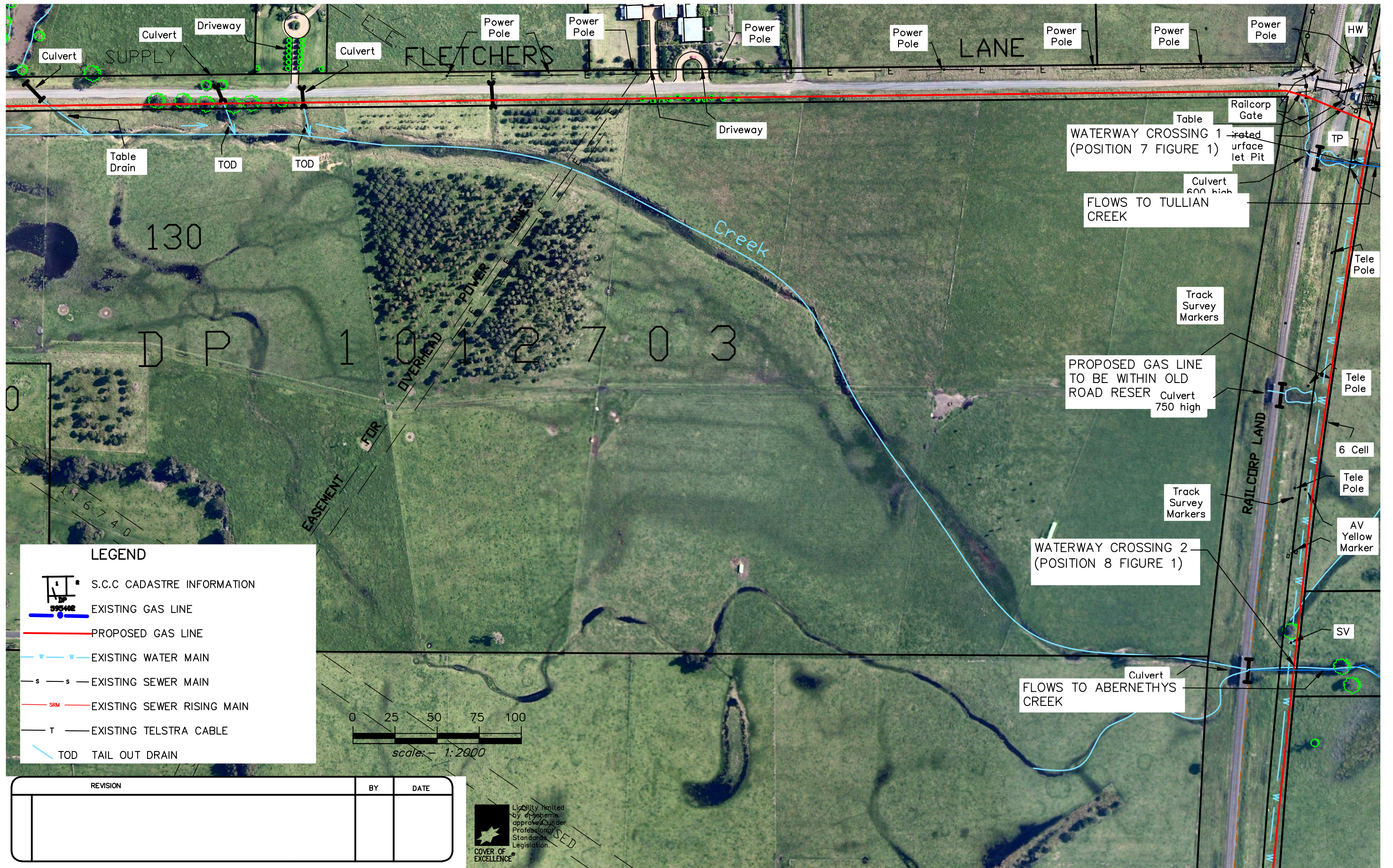
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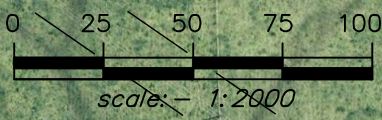
PLAN OF PROPOSED GAS LINE ROUTE
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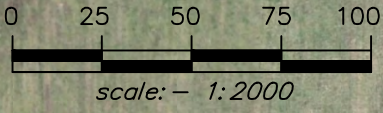
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REF. No.
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 sheet 3 of 9
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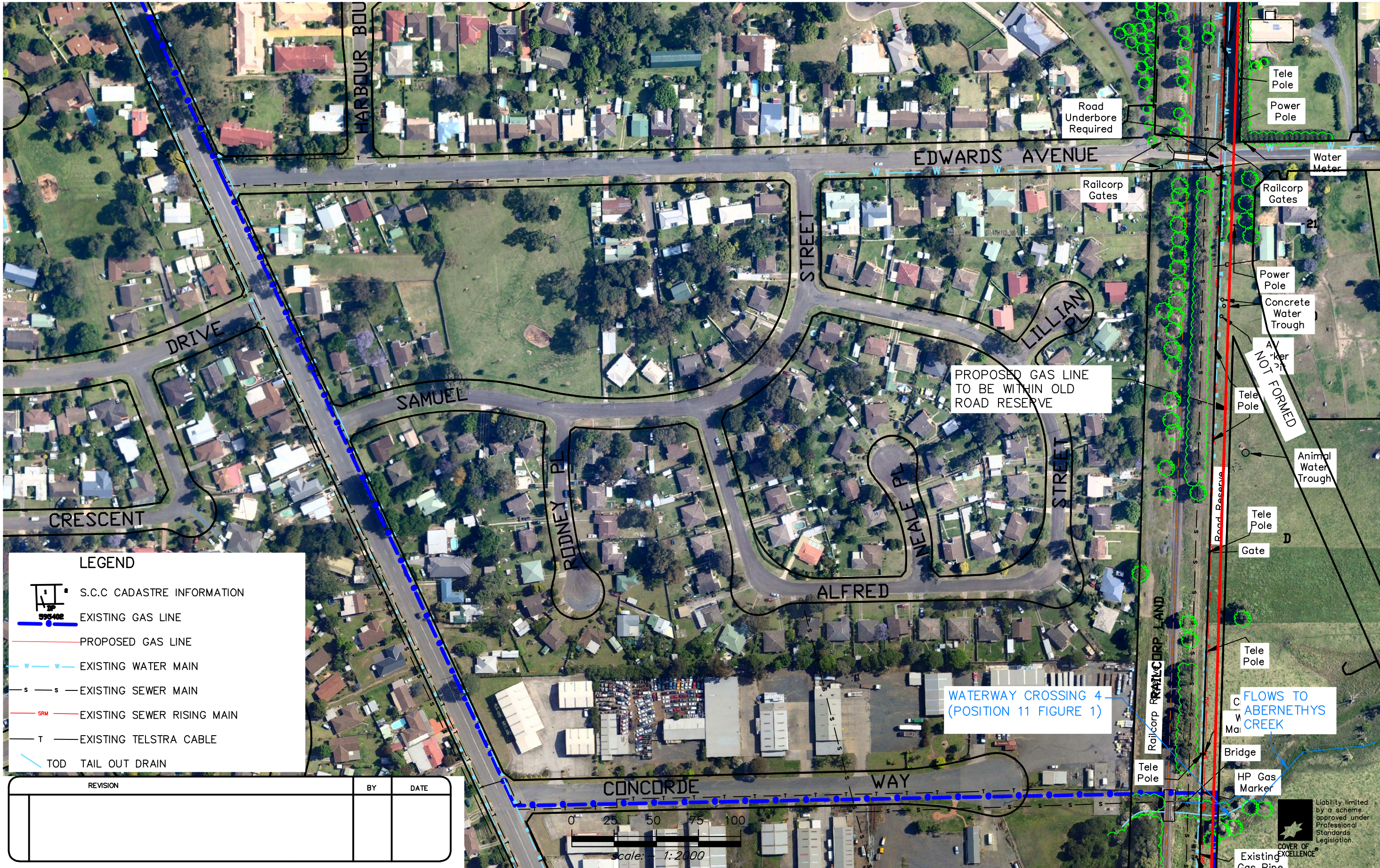
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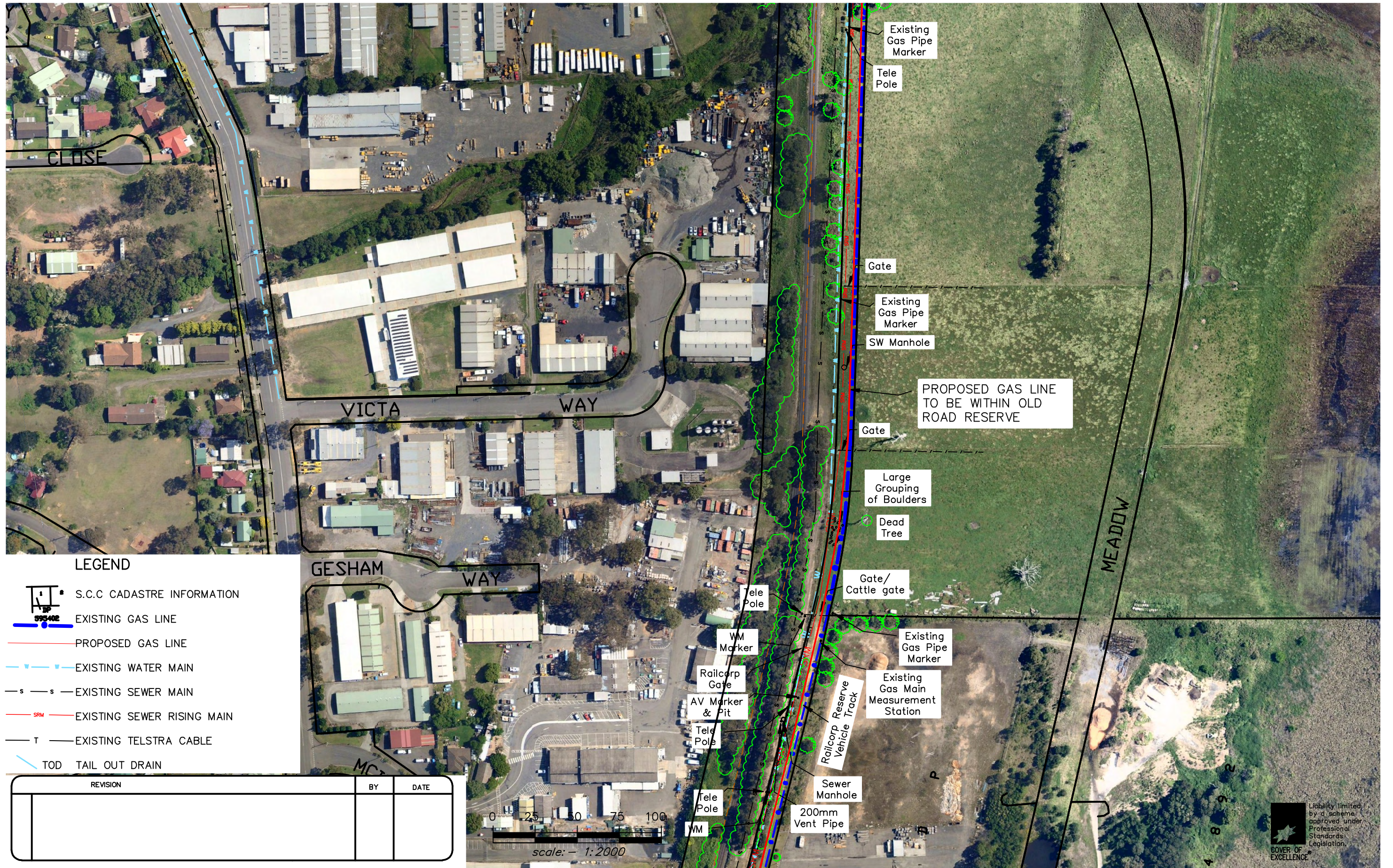
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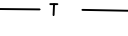
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REF. No. 24710-03 sheet 6 of 9
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REF. No. **24710-03**
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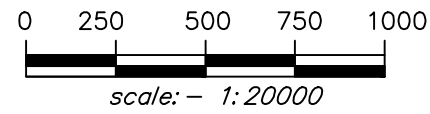
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PLAN OF PROPOSED GAS LINE ROUTE
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 ROAD FACTORY
 FOR SHOALHAVEN STARCHES

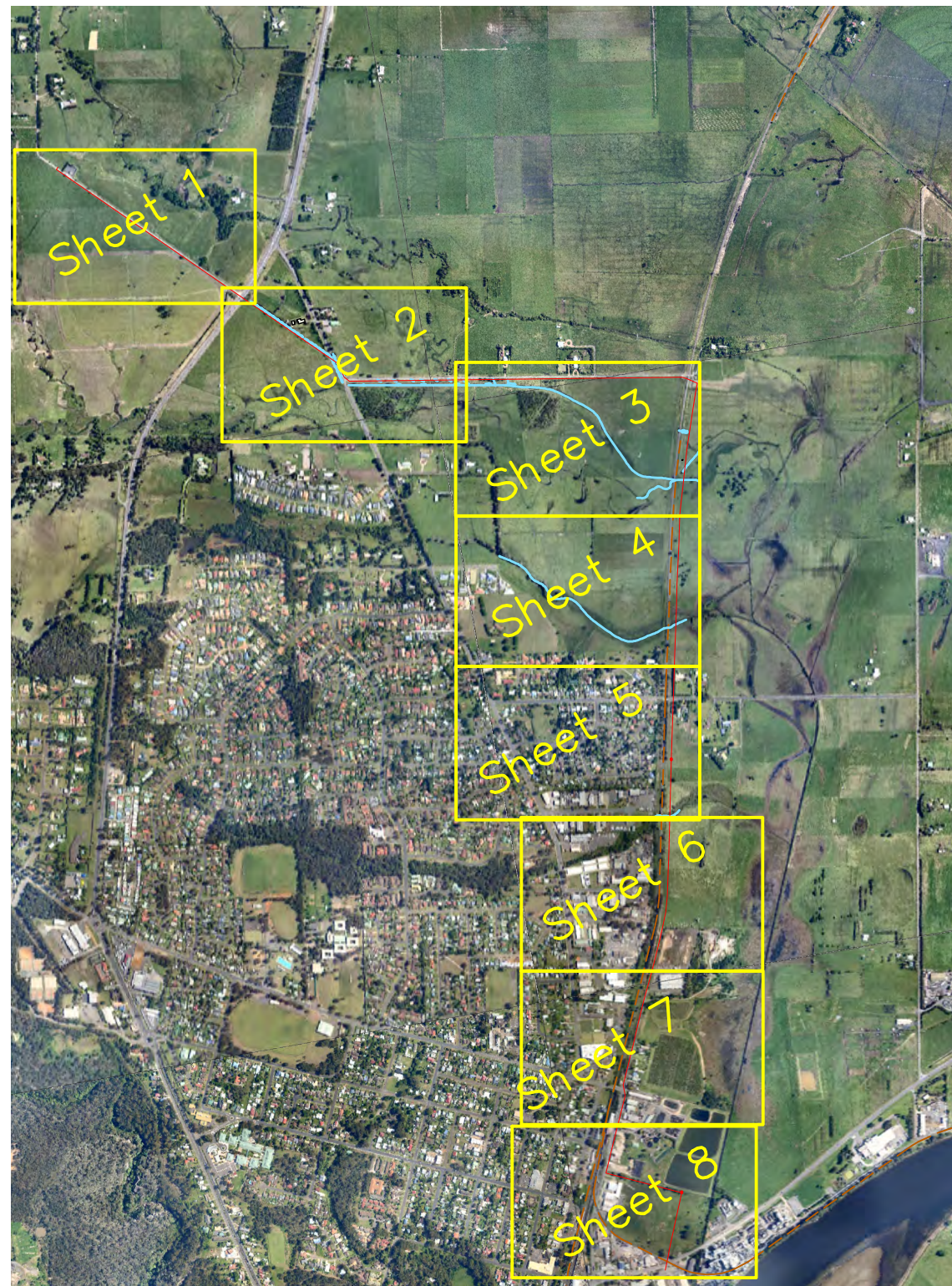
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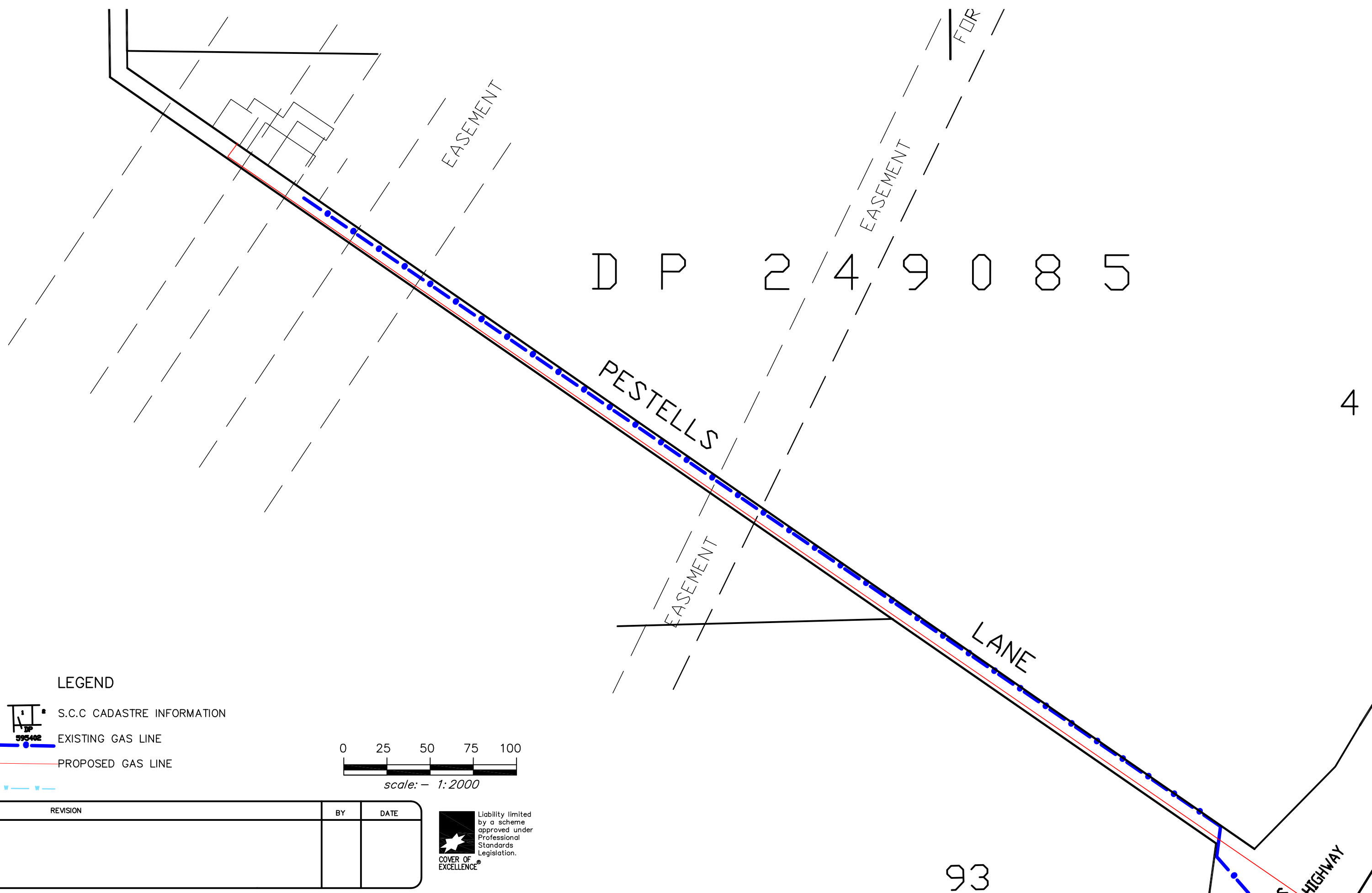
PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY – KEY MAP
 FOR SHOALHAVEN STARCHES

Liability limited
 by a scheme
 approved under
 Professional
 Standards
 Legislation.




COVER OF EXCELLENCE

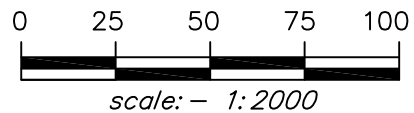
REF. No.
24710-03
 sheet 9 of 9

REVISION 00



LEGEND

-  S.C.C CADASTRE INFORMATION
-  EXISTING GAS LINE
-  PROPOSED GAS LINE



REVISION	BY	DATE

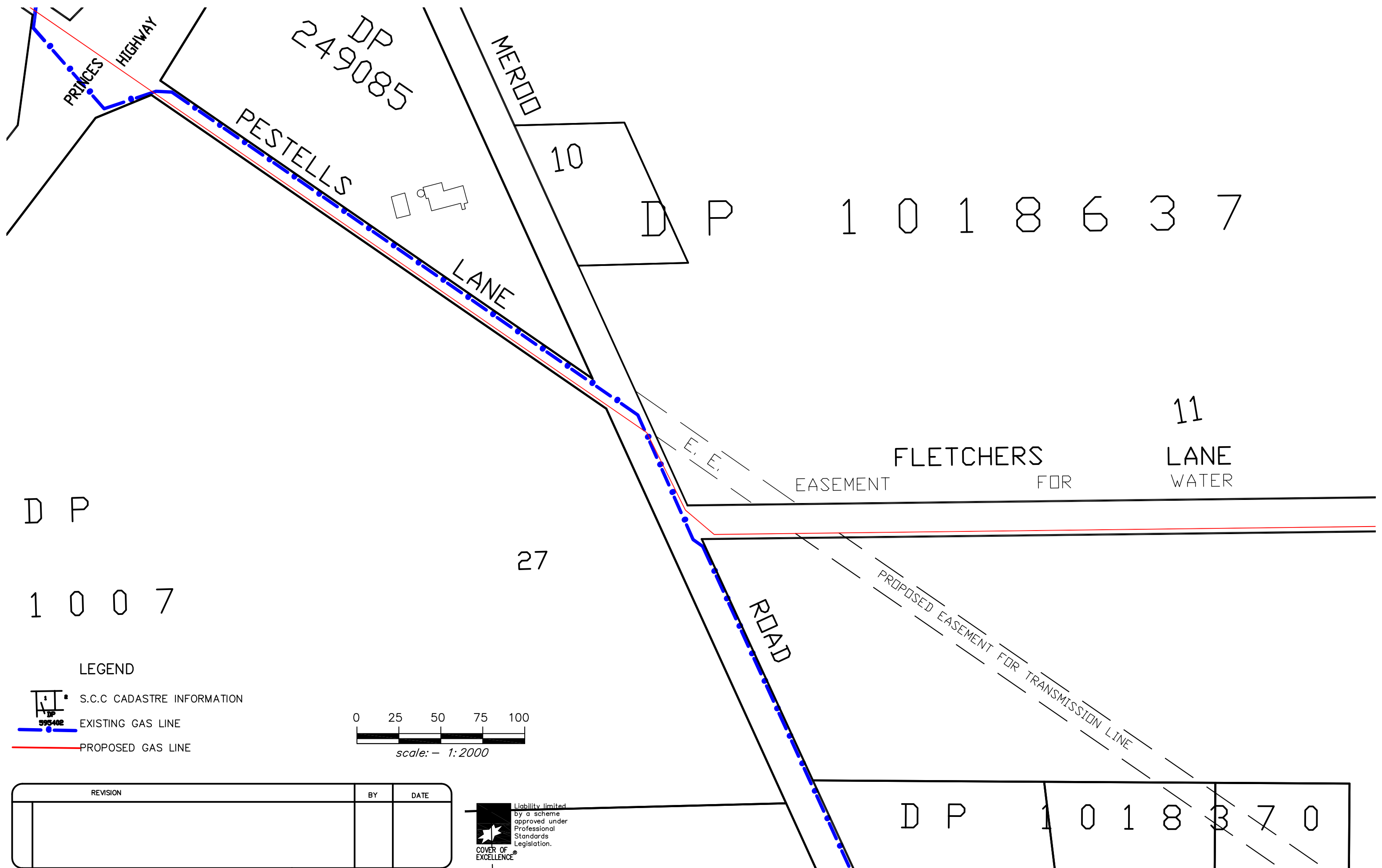
Liability limited by a scheme approved under Professional Standards Legislation.
 COVER OF EXCELLENCE

RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
----------------------	---

allen, price & associates
 land and development consultants
 75 plunkett street, nowra, nsw. 2541
 phone:(02) 4421 6544 fax:(02) 4422 1821
 consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE FROM EXISTING GAS MAIN TO THE BOLONG ROAD FACTORY (PESTELLS LANE) FOR SHOALHAVEN STARCHES

REF. No. 24710-03 sheet 1 of 9 REVISION 01

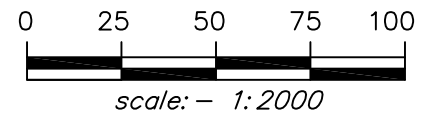


LEGEND

S.C.C CADASTRE INFORMATION

EXISTING GAS LINE

PROPOSED GAS LINE



REVISION	BY	DATE

RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
------------------	---

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consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE FROM EXISTING GAS MAIN TO THE BOLONG ROAD FACTORY FOR SHOALHAVEN STARCHES

REF. No. 24710-03
sheet 2 of 9
REVISION 01

SUPPLY

FLETCHERS

LANE

130

D P

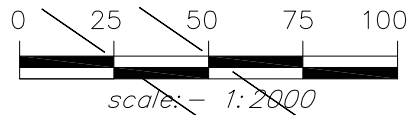
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EASEMENT FOR OVERHEAD POWER LINES

RAILCORP LAND

LEGEND

- S.C.C CADASTRE INFORMATION
- EXISTING GAS LINE
- PROPOSED GAS LINE



REVISION	BY	DATE

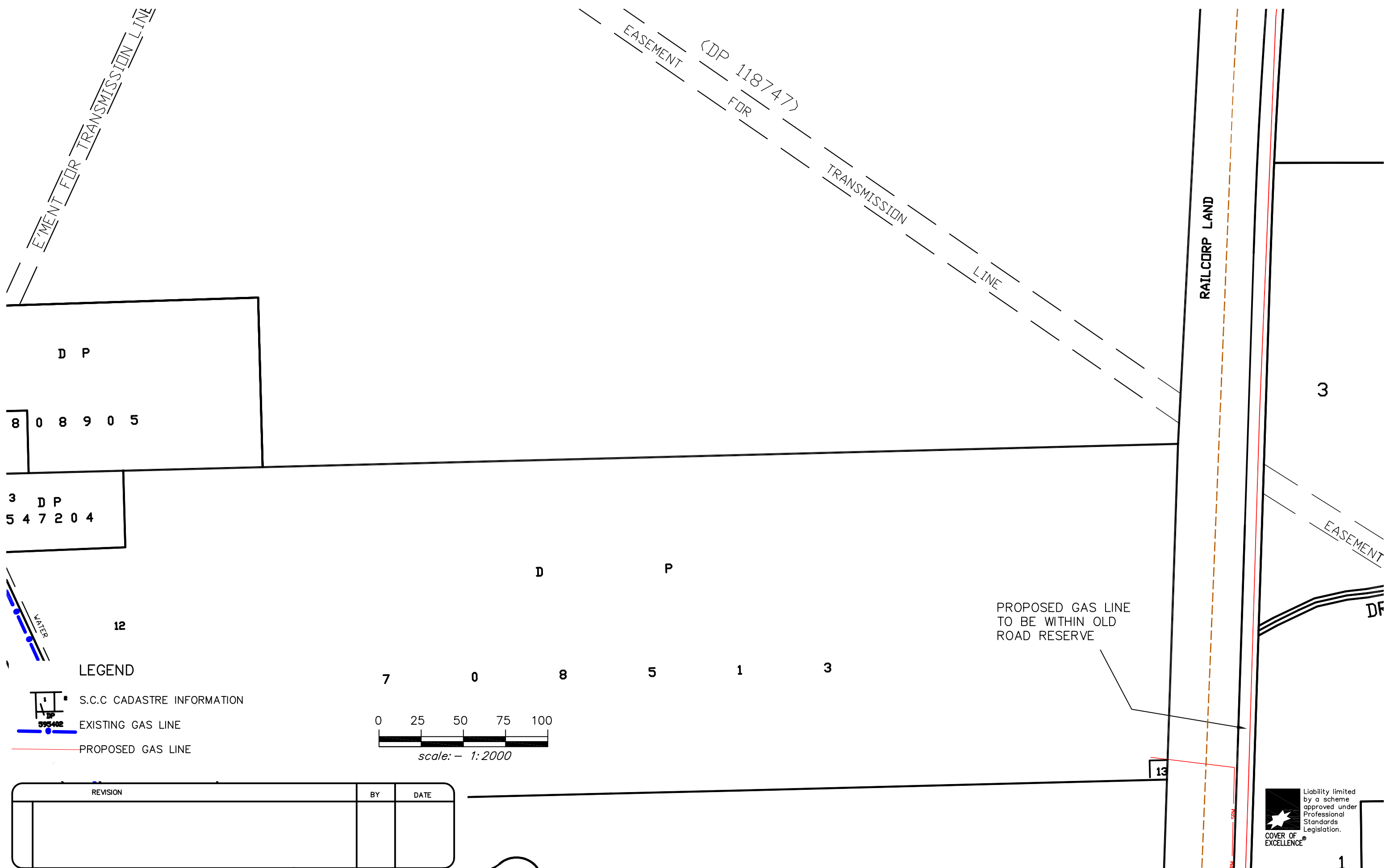
RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
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 land and development consultants
 75 plunkett street, nowra, nsw. 2541
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 consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY
 FOR SHOALHAVEN STARCHES

REF. No.
24710-03
 sheet 3 of 9
 REVISION 01



REVISION	BY	DATE

RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
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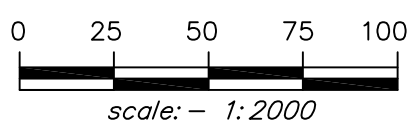
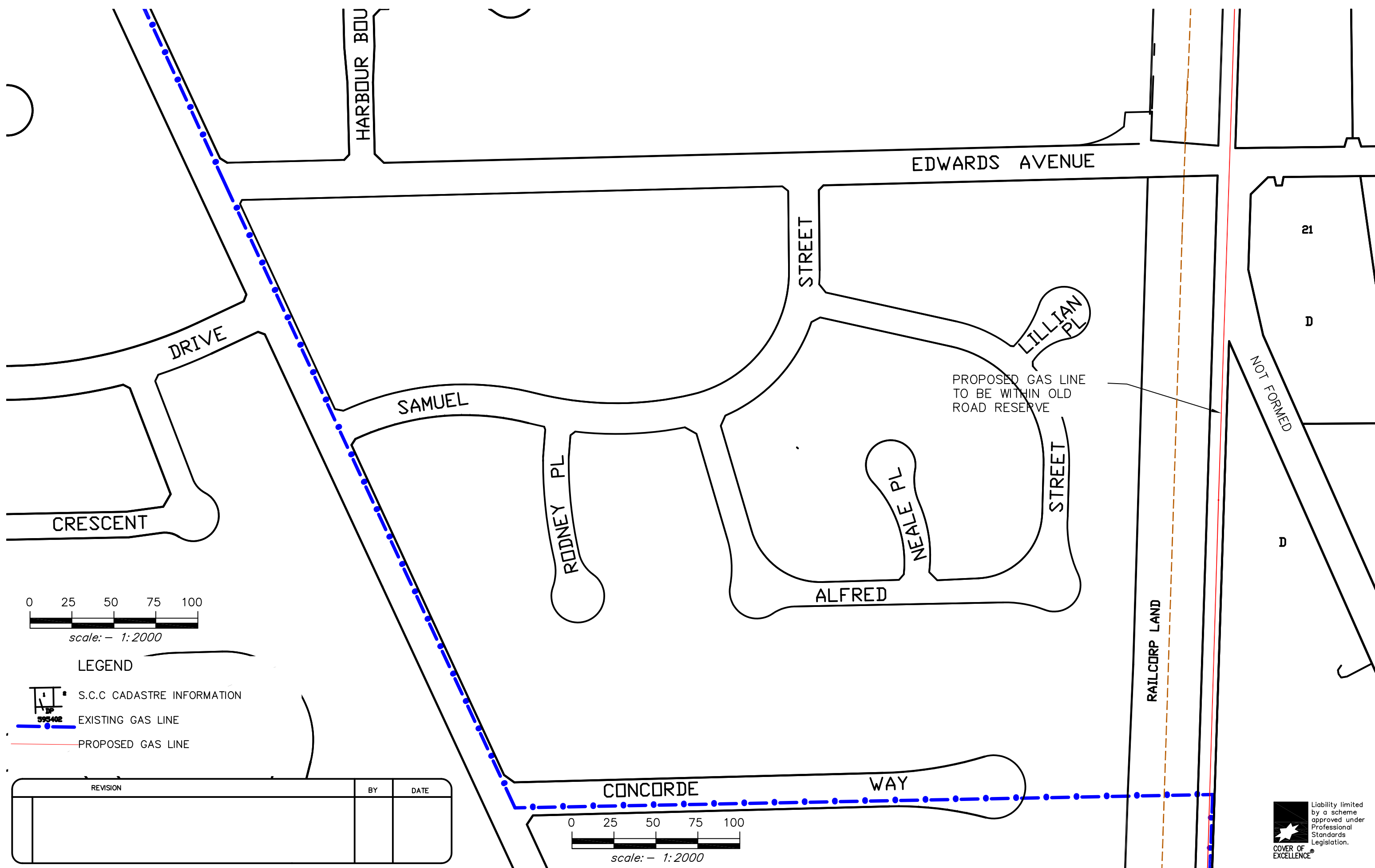
allen, price & associates
 land and development consultants
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 phone:(02) 4421 6544 fax:(02) 4422 1821
 consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY
 FOR SHOALHAVEN STARCHES

Liability limited by a scheme approved under Professional Standards Legislation.

COVER OF EXCELLENCE

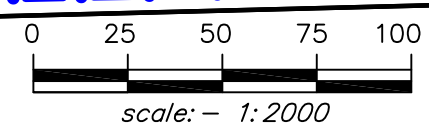
REF. No.
24710-03
 sheet 4 of 9
 REVISION 01



LEGEND

- S.C.C CADASTRE INFORMATION
- EXISTING GAS LINE
- PROPOSED GAS LINE

REVISION	BY	DATE



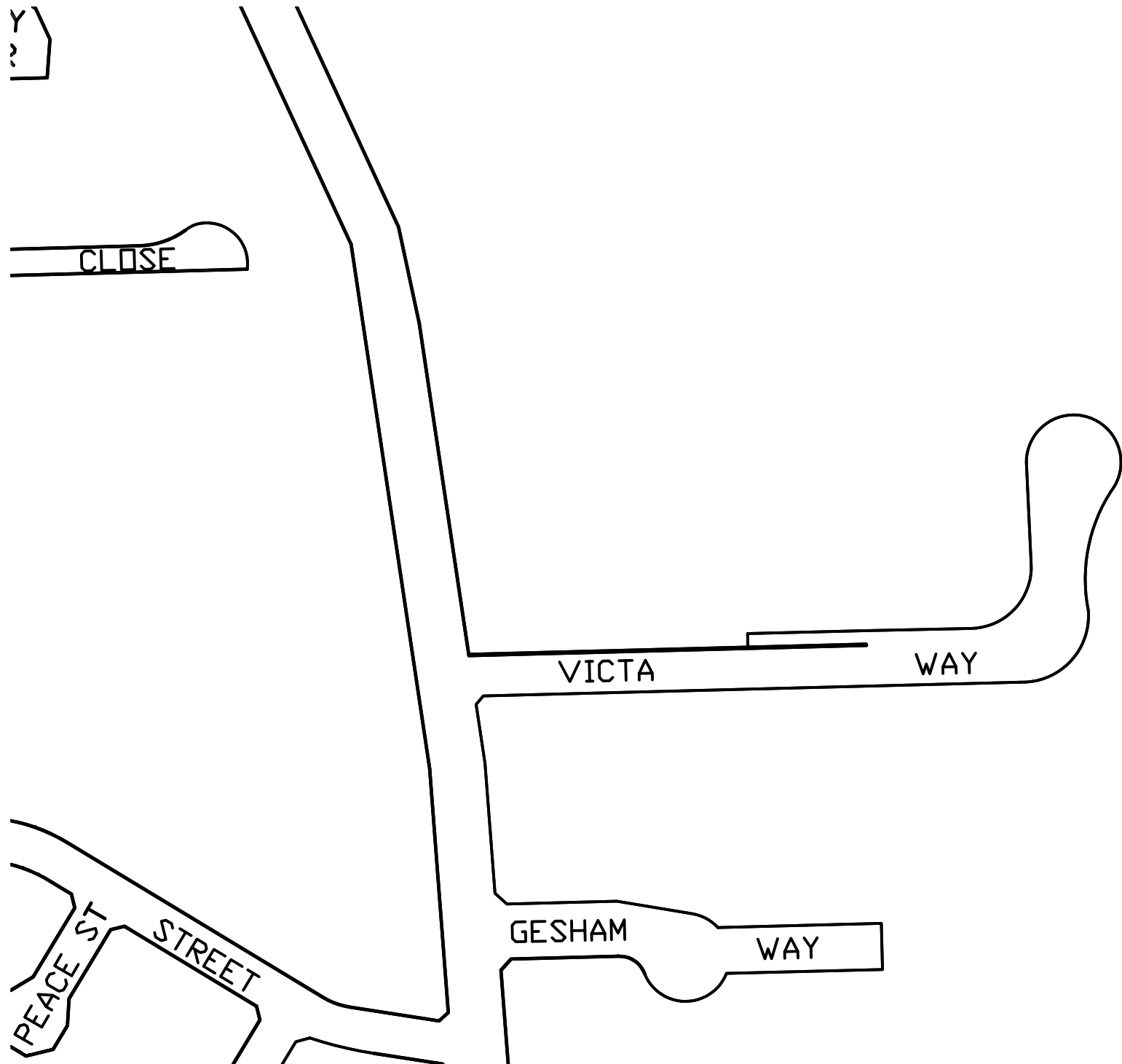
RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
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PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY
 FOR SHOALHAVEN STARCHES

REF. No. 24710-03	sheet 5 of 9
REVISION 01	

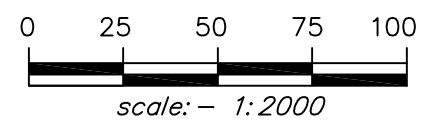




LEGEND

- S.C.C CADASTRE INFORMATION
- EXISTING GAS LINE
- PROPOSED GAS LINE

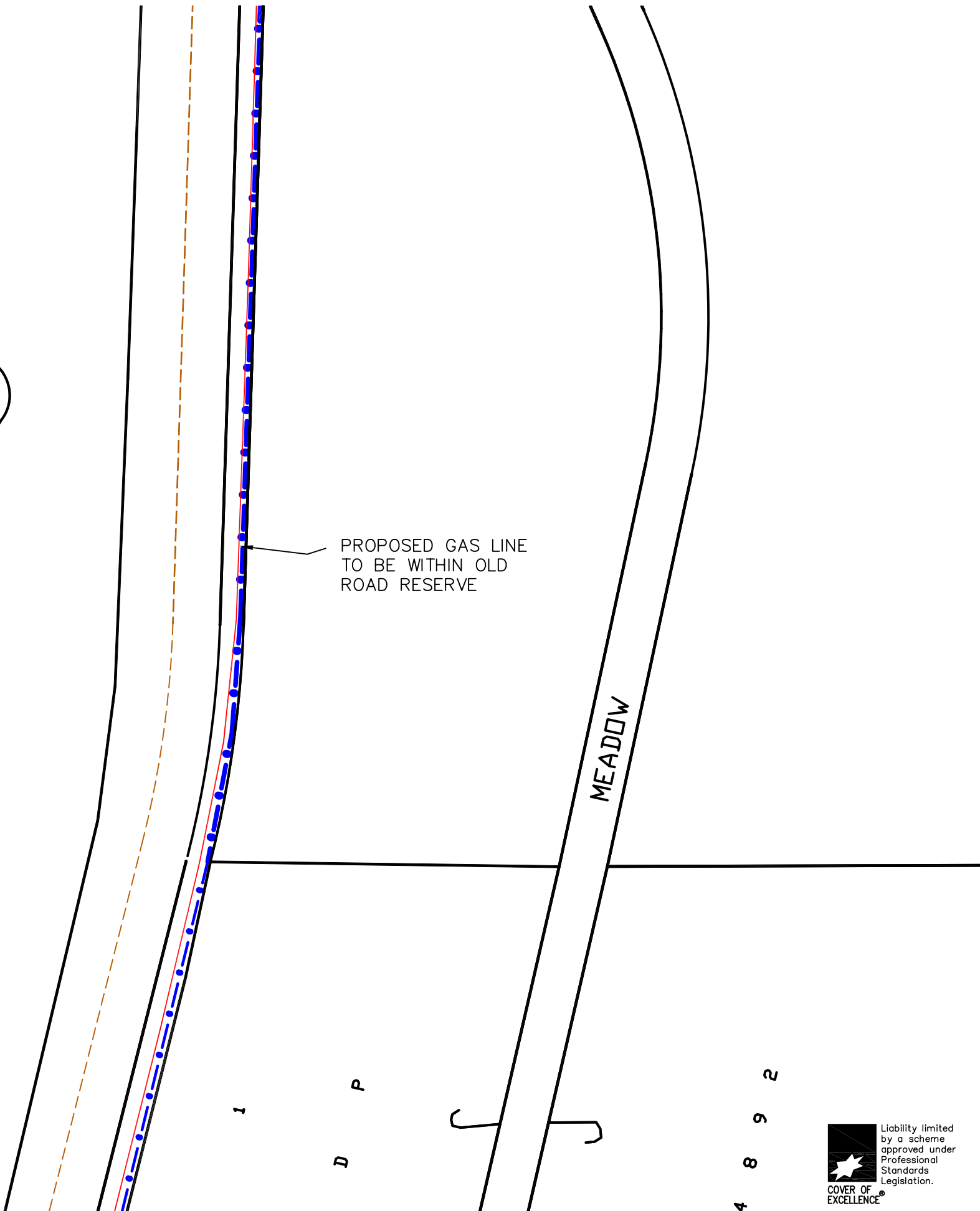
REVISION	BY	DATE



RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
----------------------	---

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 land and development consultants
 75 plunkett street, nowra, nsw. 2541
 phone:(02) 4421 6544 fax:(02) 4422 1821
 consultants@allenprice.com.au www.allenprice.com.au

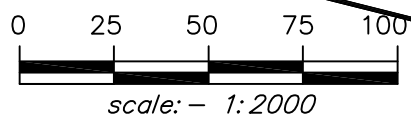
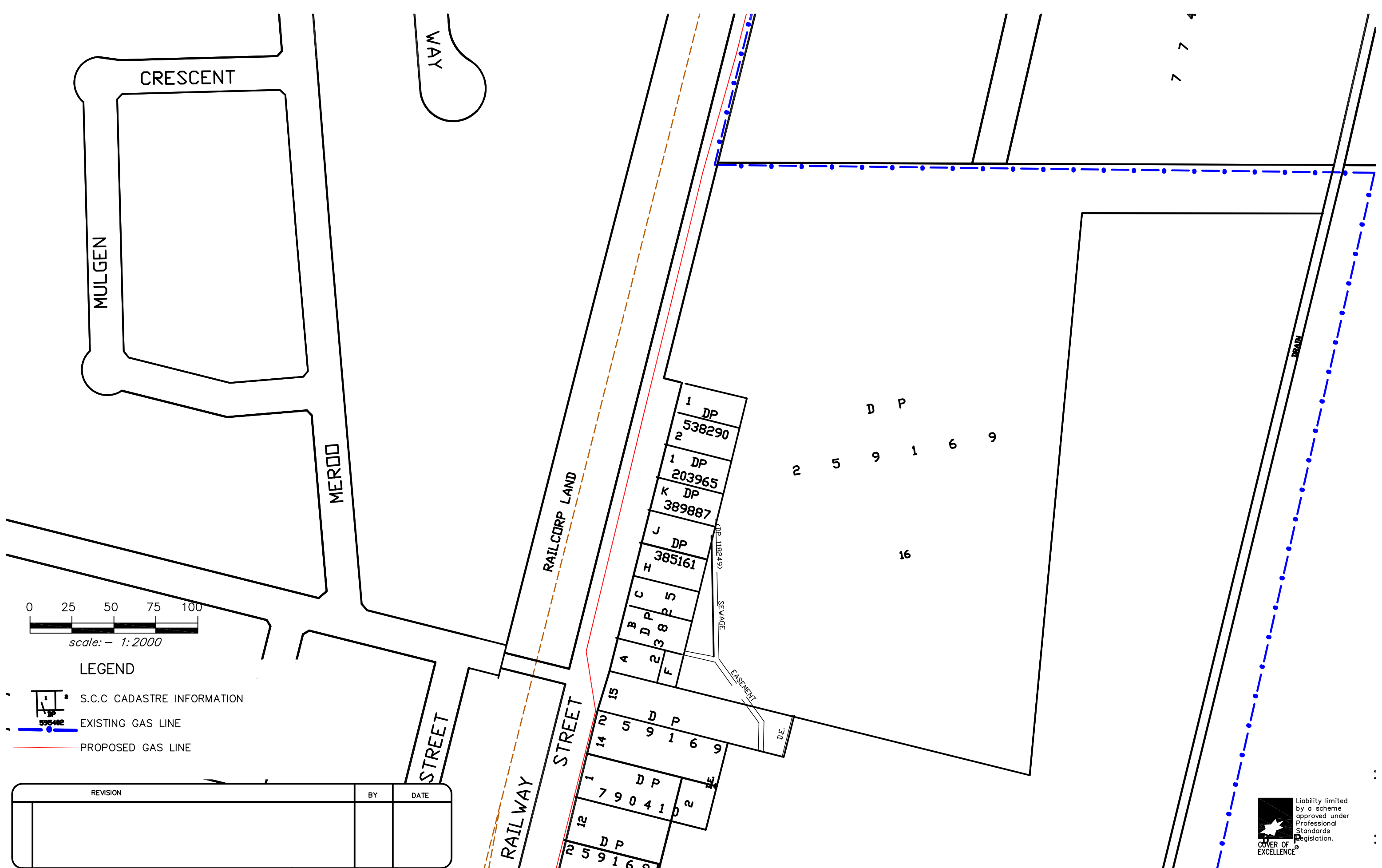
PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY
 FOR SHOALHAVEN STARCHES



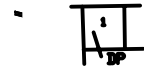


4
8
9
2



REF. No. 24710-03 sheet 6 of 9
REVISION 01



LEGEND

-  S.C.C CADASTRE INFORMATION
-  EXISTING GAS LINE
-  PROPOSED GAS LINE

REVISION	BY	DATE

RATIO: 1:2000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
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 consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY
 FOR SHOALHAVEN STARCHES

REF. No.
24710-03
 sheet 7 of 9
 REVISION 01





LEGEND

- S.C.C CADASTRE INFORMATION
- EXISTING GAS LINE
- PROPOSED GAS LINE

REVISION	BY	DATE

RATIO: 1:2000

DATUM: 0 25 50 75 100

ORIGIN: scale: - 1:2000

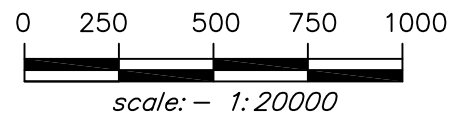
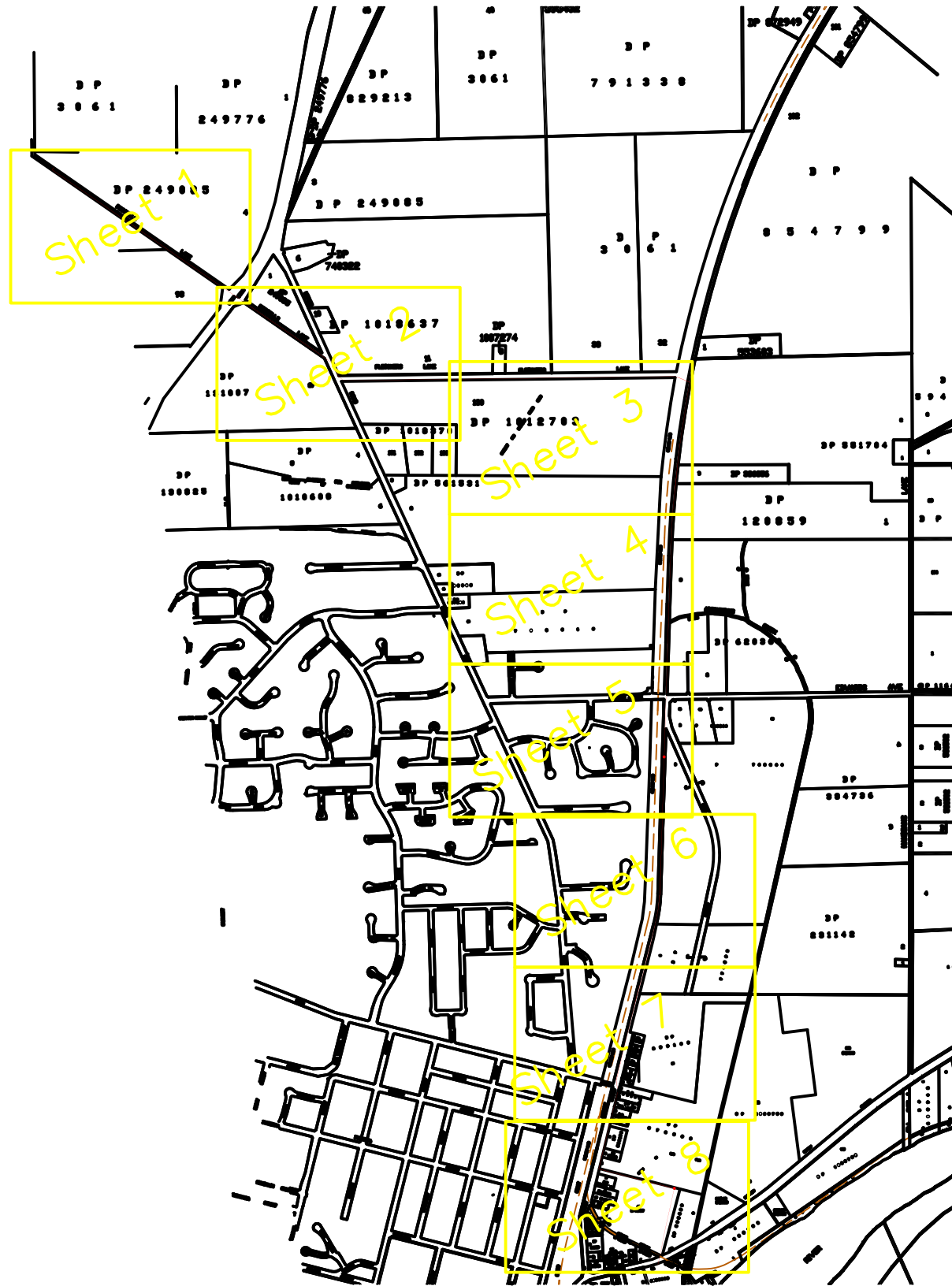
DATE OF PLAN: JANUARY 2011

allen, price & associates
 land and development consultants
 75 plunkett street, nowra, nsw. 2541
 phone: (02) 4421 6544 fax: (02) 4422 1821
 consultants@allenprice.com.au www.allenprice.com.au

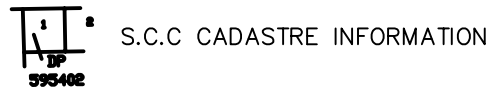
PLAN OF PROPOSED GAS LINE ROUTE FROM EXISTING GAS MAIN TO THE BOLONG ROAD FACTORY FOR SHOALHAVEN STARCHES

REF. No. 24710-03
 sheet 8 of 9
 REVISION 01





LEGEND



S.C.C CADASTRE INFORMATION

EXISTING GAS LINE

PROPOSED GAS LINE

REVISION	BY	DATE

RATIO: 1:20000	DATUM: ORIGIN: DATE OF PLAN: JANUARY 2011
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 consultants@allenprice.com.au www.allenprice.com.au

PLAN OF PROPOSED GAS LINE ROUTE
 FROM EXISTING GAS MAIN TO THE BOLONG
 ROAD FACTORY – KEY MAP
 FOR SHOALHAVEN STARCHES

REF. No.
24710-03
 sheet 9 of 9
 REVISION 01



ANNEXURE 4
Submission
prepared by
Allen Price & Associates
dated 6th June 2012



allen, price & associates
land and development consultants

6 June 2012

Our Ref: 24710 pwr

Cowman & Stoddart
Unit 15/29 Kinghorn Street
NOWRA NSW 2541

Attention: Mr Steve Richardson

Dear Steve

SHOALHAVEN STARCHES PROPOSED GAS LINE – PESTELLS LANE TO BOLONG ROAD, BOMADERRY

In reply to concerns raised in Item 3 in Council's submission to the Department of Planning Part 3A, Environmental Planning & Assessment Act, 1979, dated 22 May 2012.

Attached are copies of :

1. Printout from Council's on-line GIS system, with position of unformed road reserve shown, together with the approximate position of the existing Gas Pipeline Easement;
2. Part of DP4469, being a survey completed in 1904 by Mr Surveyor Dobbie (this plan created the 50 link wide road, adjacent to the eastern side of the South Coast Railway);
3. Part of Council's 1:10,000 map (Part of Sheet 6440), showing the 10.06 wide road in pink;
4. Part of the Berry 1:25,000 topographical map showing the subject road highlighted in pink;
5. DP746244, with the subject road highlighted in yellow; and
6. DP1043207, being the plan that created the gas pipe easement affecting Lot 24 DP746244.

In reference to the third paragraph.

The above information clearly shows the existing 'old road reserve', running parallel and adjacent to the eastern side of the South Coast Railway, within which it is proposed to locate the proposed gas pipeline.

In reference to the second sentence in the third paragraph.

The plans by APA show the existing gas line for a small section being outside the existing 'old road reserve', east of the railway land. When the old existing gas line was installed, it was found to have deviated outside the old road reserve, onto private land to the East. APA were engaged to locate the gas line and create an easement to cover the encroachment onto the private land (see DP1043207).

75 Plunkett Street, Nowra NSW 2541 • PO Box 73, Nowra 2541
tel 02 4421 6544 • fax 02 4422 1821 • email consultants@allenprice.com.au
directors RJ Douglas, AR Aulsebrook, MJ Philpott • associates PW Rowell

Liability limited by a scheme approved under *Professional Standards Legislation*

ABN 13 236 275 350
a partnership of
Ross Douglas Surveys Pty Limited
Taylinda Pty Limited
Pororo Pty Limited



allen, price & associates
land and development consultants

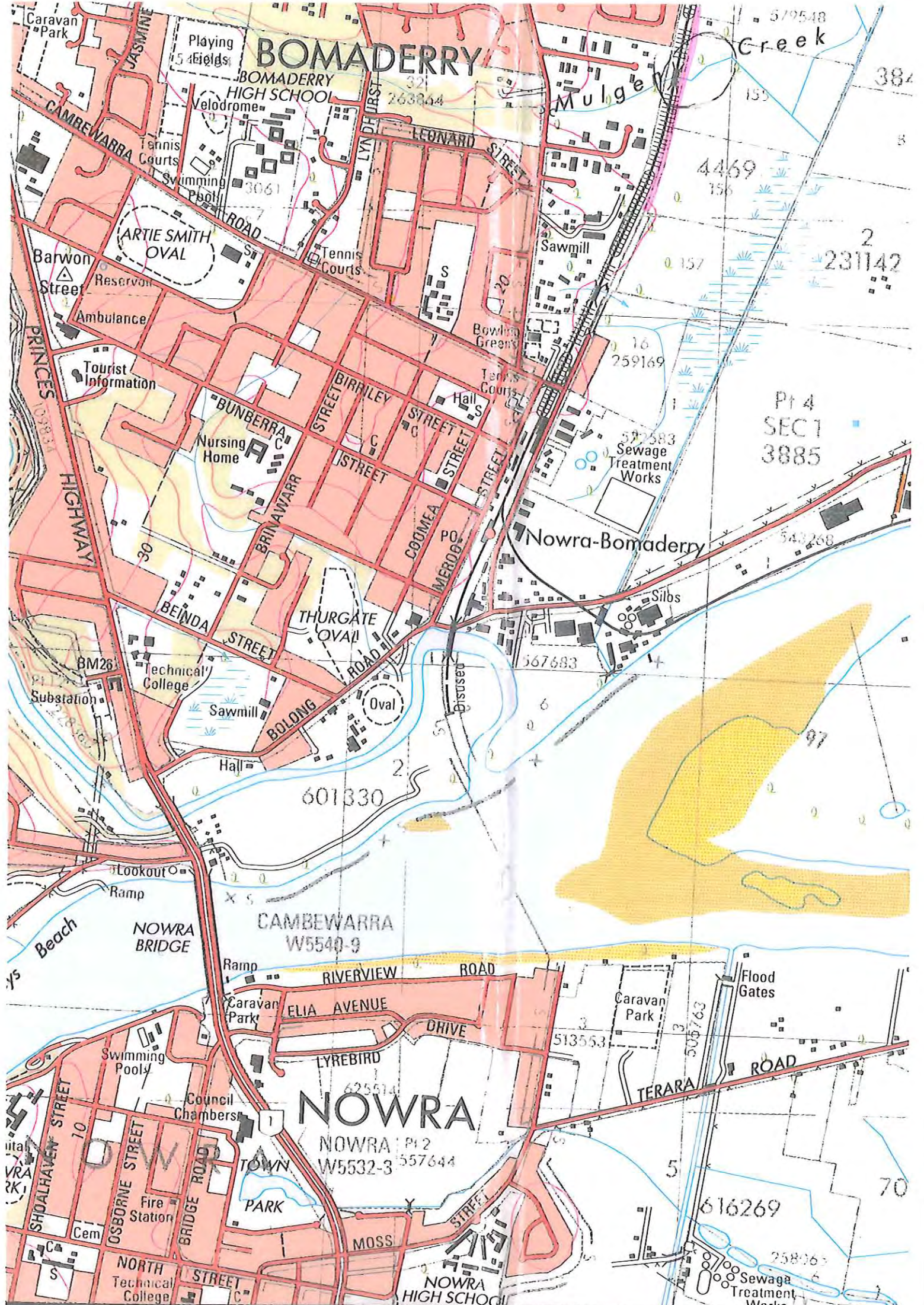
Hope this goes some way to clarifying these issues with Council.

Please contact me if you need further assistance.

Yours faithfully
ALLEN, PRICE & ASSOCIATES

P W Rowell

Encl



BOMADERY

BOMADERY HIGH SCHOOL

ARTIE SMITH OVAL

BUNBERRA NURSING HOME

THURGATE OVAL

Nowra-Bomaderry

CAMBEWARRA W5540-9

NOWRA

NOWRA Pt 2 W5532-3

Creek

4469

Pt 4 SEC 1 3885

601330

97

NOWRA BRIDGE

RIVERVIEW ROAD

ELIA AVENUE

LYREBIRD DRIVE

TERARA ROAD

Swimming Pool

Council Chambers

TOWN PARK

OSBORNE STREET

BRIDGE ROAD

NORTH TECHNICAL COLLEGE

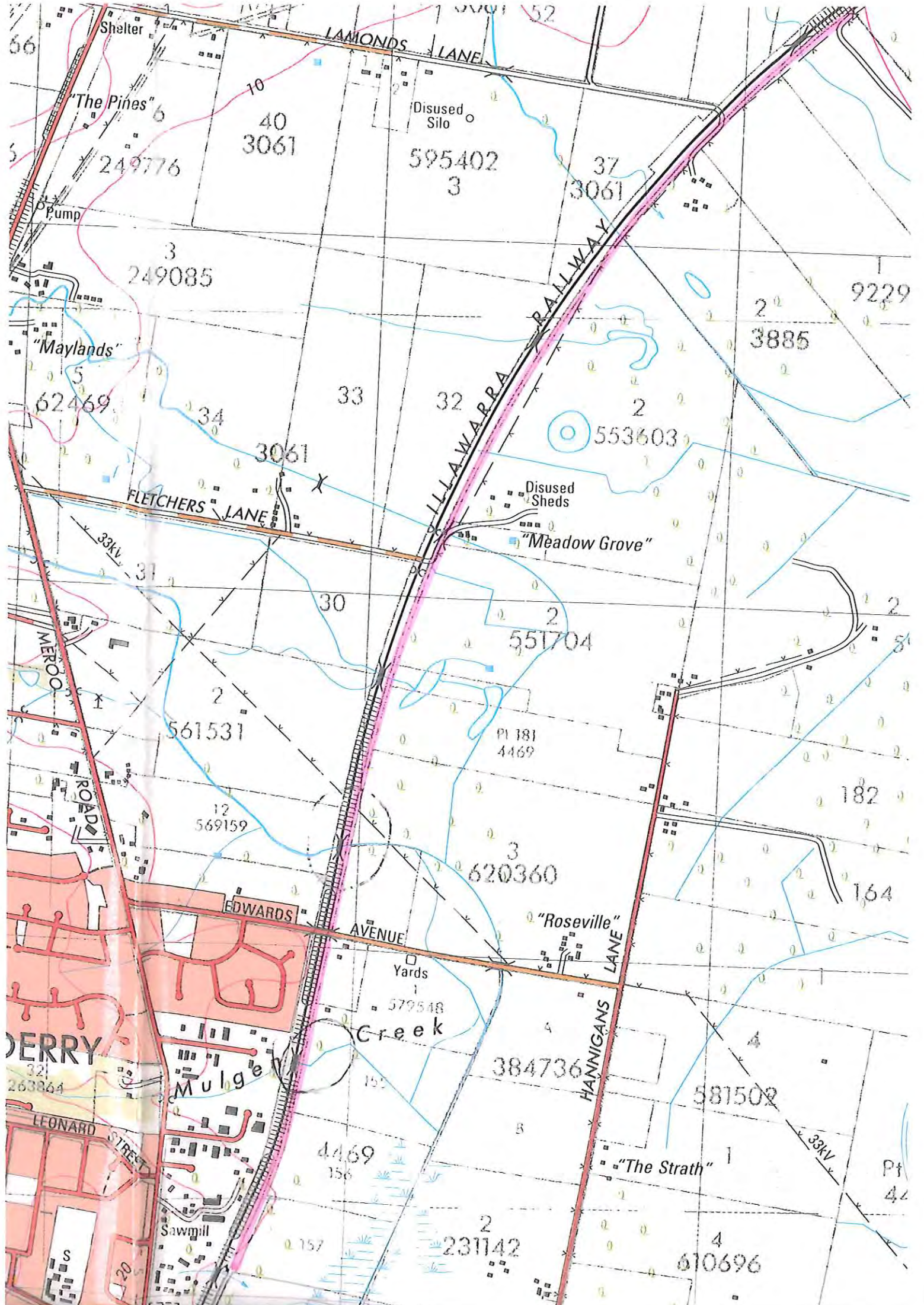
MOSS STREET

NOWRA HIGH SCHOOL

Flood Gates

616269

Sewage Treatment Works



56

Shelter
"The Pines" 6
249776
Pump

10
40
3061

LAMONDS LANE

Disused Silo
595402
3

37
3061

3
249085

"Maylands"
5
62469

2
9229
3885

FLETCHERS LANE

MULLAWARRA RAILWAY

Disused Sheds
"Meadow Grove"

553603

33KV
31
MEROO ROAD

2
561531

2
551704

PI 181
4469

ROAD

12
569159

3
620360

EDWARDS AVENUE

Creek

"Roseville"
LANE

DERRY
321
263864

Mulgey

Yards
579548

384736

LEONARD STREET

Sawmill

4469
156

HANNIGANS LANE

581502

S
120

321

157

2
231142

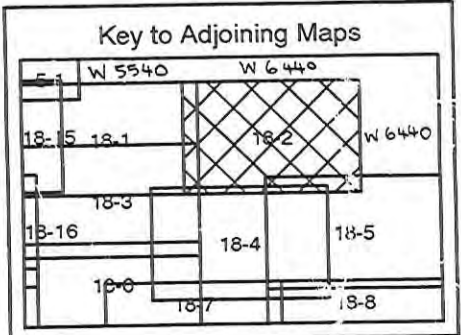
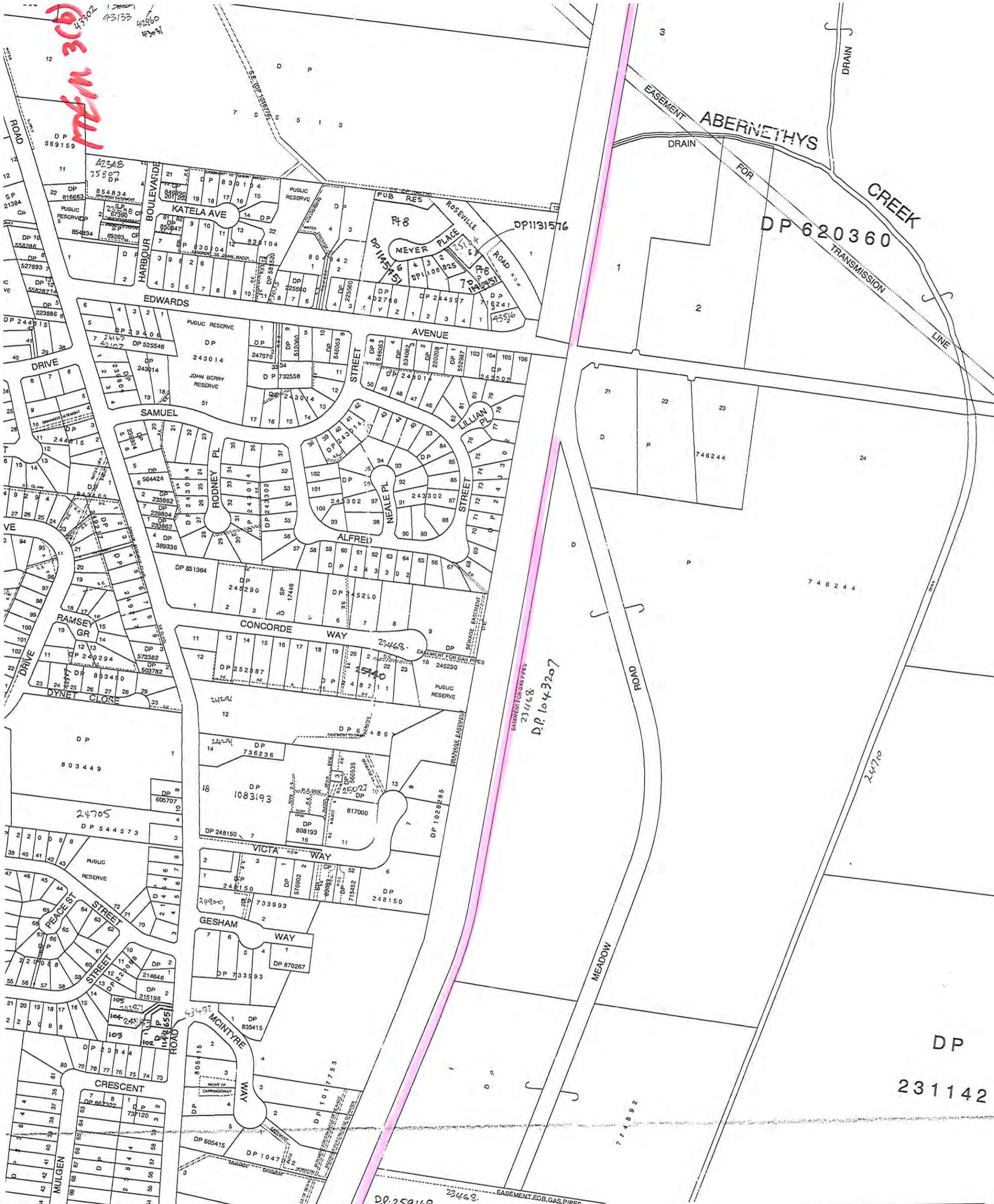
"The Strath" 1

4
610696

33KV

Pt
44

PLAN 30
43302
43133
42860



A 6440 B

6

7

8

9

012703

EASEMENT FOR OVERLINE

PROPOSED EASEMENT FOR TRANSMISSION LINE (DP 118747)

2477.0

DP 386356

DP

120859

675

DRAIN

EASEMENT FOR ABERNETHYS CREEK

DP 620360

CREEK

EDWARDS



ROAD

EASEMENT FOR GAS PIPES DP 234468 DP 1043207

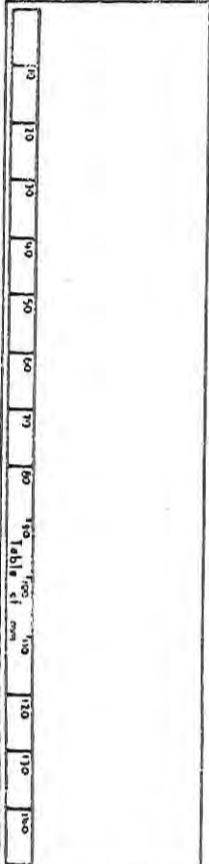
2477.0

DP 384736

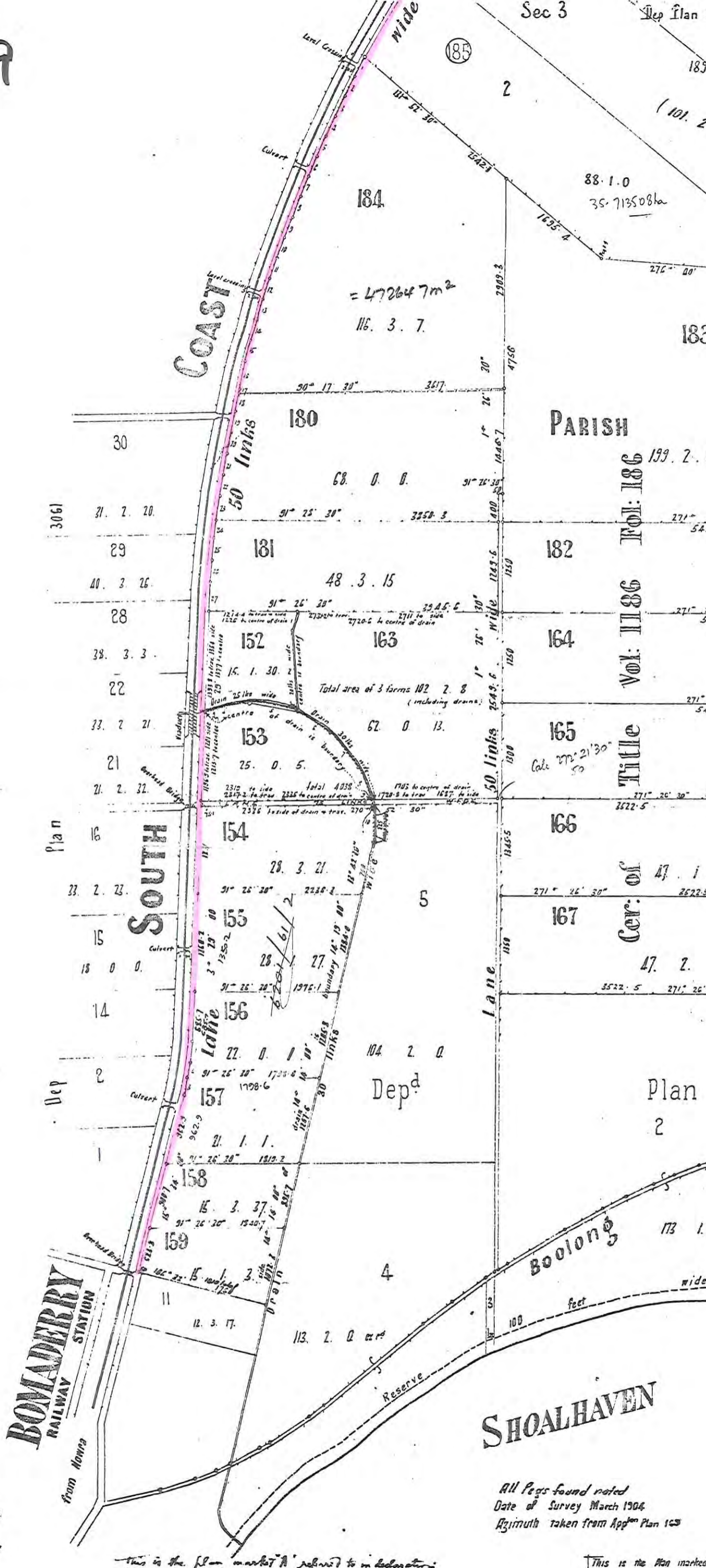
PART 6440B. 1:10,000 SEC MAP

PART D.P. 4469

SR DOBBIE
MARCH 1904



I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 5th day of September, 1979.



PARISH
Title
VOL: 1186
FOL: 186

All Pgs found noted
Date of Survey March 1904
Azimuth taken from Appⁿ Plan 105

This is the plan marked 'A' referred to in declaration

This is the plan marked

Ad. 107 p. 165
H.M.

D.P. 746244

Registered: 18.8.1987
 CA No 5774 of 6-1-1987
 Title System TORRENS
 Purpose SUBDIVISION
 Ref Map W6440-4
 Last Plan DP 4469
 DP 579548

PLAN OF SUBDIVISION OF
 LOTS 155 & 156 D.P. 4469 AND
 LOTS 1 & 2 D.P. 579548

Reduction Ratio 1:2000
 Lengths are in metres

Municipality: SHOALHAVEN
 Locality: BOMADERRY
 Parish: BUNBERRA
 County: CAMDEN

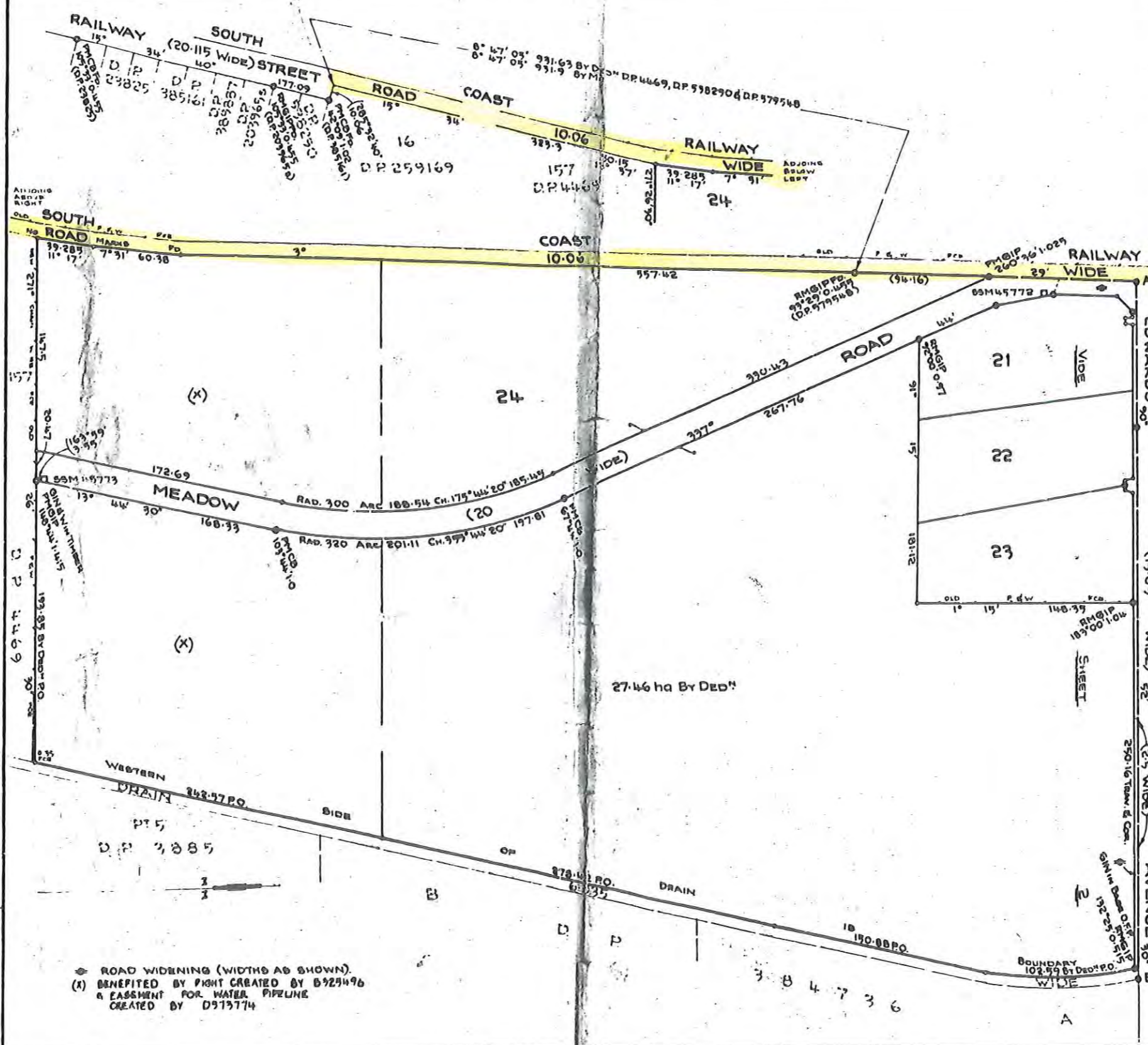
This is sheet 1 of my plan in 2 sheets
 (Delete if inapplicable)

ROBB JAMES DOUGLAS
 G. SCARRATT & ASSOC. PO Box 209, KIAMA
 a surveyor registered under the Surveyors Act 1929, as amended, hereby certifies that the survey represented on this plan as regards lots 21, 22 & 23, MEADOW ROAD & ROAD WIDENING is accurate and has been made in accordance with the Survey Practice Regulations 1977 and was completed on 1 27th AUGUST, 1986

Signature: [Signature]
 Surveyor registered under the Surveyors Act 1929, as amended
 Datum Line of Altitude A-B
 *Strike out either (1) or (2) Insert date of survey.

Panel for use only for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or restrictions as to user.

IT IS INTENDED:
 i) TO DEDICATE MEADOW ROAD AND THE ROAD WIDENING OF EDWARDS AVENUE AND ROAD 10-06 WIDE AS PUBLIC ROAD.
 ii) PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT, 1919, TO CREATE:
 1) RESTRICTION AS TO USER 0.5 WIDE.
 2) RESTRICTION AS TO USER.
 3) RESTRICTION AS TO USER.
 AND AS SET OUT IN THE ACCOMPANYING INSTRUMENT SIGNED BY THE TOWN CLERK.



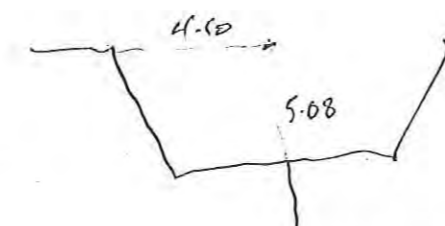
signatures and seals only
 R. C. Turner
 D Turner

THIS DEPOSITED PLAN IS ISSUED BY SHOALHAVEN CITY COUNCIL AND IS TAKEN FROM A DUBIATVE MICROFILM APPLICABLE ACT, 1977 AND HAS NO EVIDENTIARY VALUE UNDER THE LAND TITLE ACT, 1977. THE ORIGINAL PLAN HELD AT THE LAND TITLES OFFICE.

Council Clerk's Certificate
 I hereby certify that
 (a) the requirements of the Local Government Act, 1919
 (b) the requirements of section 24B of the Metropolitan Water Sewerage and Drainage Act, 1904, as amended
 (c) the requirements of section 111 of the Metropolitan Water Sewerage and Drainage Act, 1904, as amended
 have been complied with by the applicant in relation to the proposed SUBDIVISION
 Subdivision No 5774
 Date 6/8/1987
 Signature: [Signature] Council Clerk

ROAD WIDENING (WIDTHS AS SHOWN)
 (X) BENEFITED BY EIGHT CREATED BY B929496
 & EASEMENT FOR WATER PIPELINE
 CREATED BY D913774

259



PLAN FORM 3

To be used in conjunction with Plan Form 2

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

OFFICE USE ONLY

D.P. 746244

Registered: 15 8-4-1987

This is sheet 2 of my plan in 2 sheets dated 27th AUGUST, 1986

Douglas

Surveyor registered under Surveyors Act 1929.

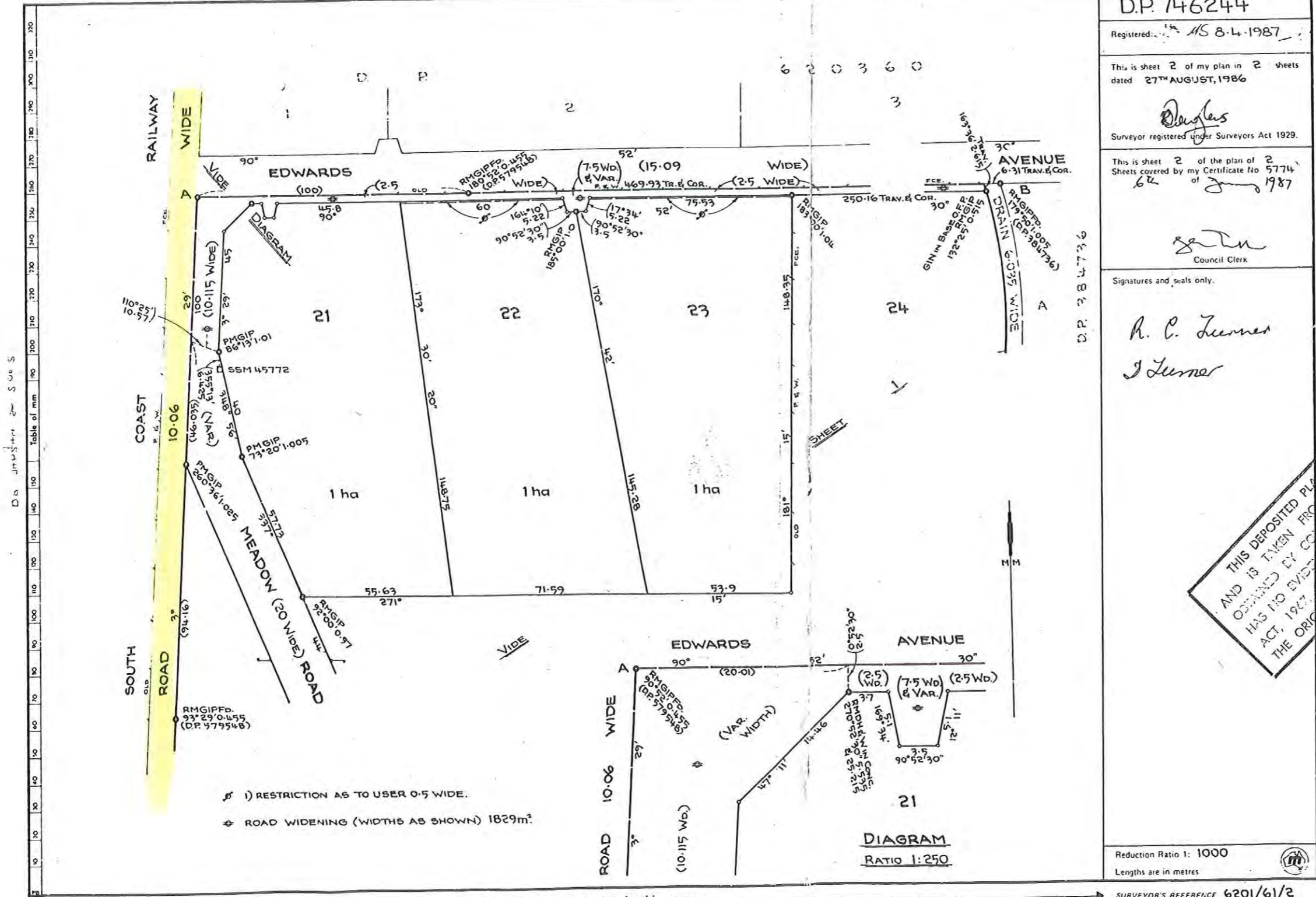
This is sheet 2 of the plan of 2 sheets covered by my Certificate No 5774 of 6th of 1987

John
Council Clerk

Signatures and seals only.

R. C. Turner
J. Turner

D.P. 383736



- ⊗ 1) RESTRICTION AS TO USER 0.5 WIDE.
- ⊕ ROAD WIDENING (WIDTHS AS SHOWN) 1829m².

DIAGRAM
RATIO 1:250

Reduction Ratio 1: 1000

Lengths are in metres

SURVEYOR'S REFERENCE 6201/61/2

THIS DEPOSITED PLAN IS ISSUED BY SHOALHAVEN CITY COUNCIL AND IS TAKEN FROM A DUPLICATE MICROFILM APERTURE CARD OBTAINED BY COUNCIL FROM THE LAND TITLES OFFICE. THE COPY HAS NO EVIDENTIAL VALUE UNDER THE EVIDENCE (REPRODUCTION) ACT, 1927, AND MAY NOT SHOW MINOR AMENDMENTS MADE TO THE ORIGINAL PLAN HELD AT THE LAND TITLES OFFICE.

Table of mm

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300

M.P.D.

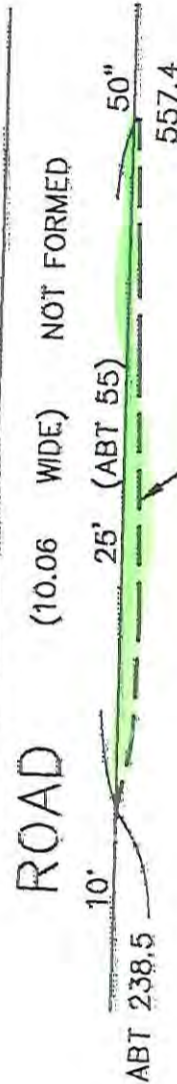
Plan Drawing only to appear in this space

SIGNATURE AND SEALS ONLY.

AT DP. 1043207

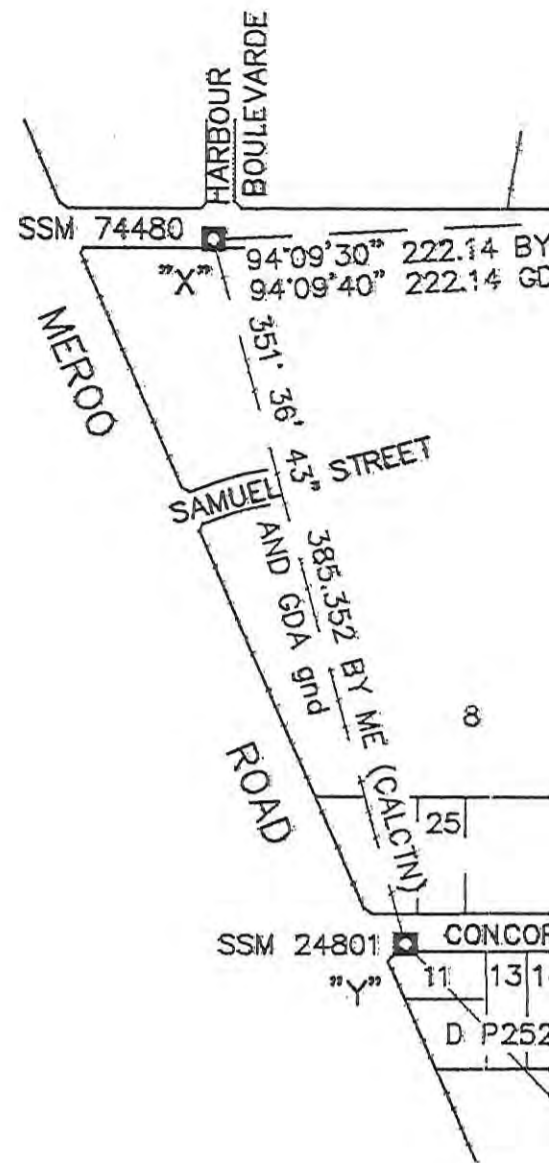
1) α EASEMENT FOR GAS PIPES OVER EXISTING LINE OF PIPES (APPROX. POSITION)

SOUTH COAST RAILWAY



24
D P 746244

DIAGRAM 'A'
SCALE: 1:600



Crown Lands Office Approval:
 AN APPROVED _____
 Authorised Officer
 Land District _____
 Paper No. _____
 Field Book _____ pages _____

Subdivision Certificate
 I hereby certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed _____ set out herein
 * (Insert "subdivision" or "new road")

 * Authorised Person/General Manager/Accredited Certifier
 Consent Authority: _____
 Date of endorsement: _____
 Accreditation no: _____
 Subdivision Certificate no: _____
 File no: _____

SURVEYORS (PRACTICE) REGULATION 1996: CLAUSE 32(2)				
MGA COORDINATES				
MARK	EASTING	NORTHING	ZONE	CLASS
SSM 24801	281584.177	6141912.107	56	B
SSM 61406	281749.551	6142277.287	56	B
SSM 74480	281527.952	6142293.409	56	B
COMBINED SEA LEVEL & SCALE FACTOR 1.000186				
SOURCE: COORDINATES ADOPTED FROM S.C.I.M.S 17 OCTOBER 2000				

Note:
 Where the plan is to be lodged electronically in the Land Titles Office, the applicant should include a signature in an electronic or digital format approved by the Registrar-General.

* Delete whichever is inapplicable

DP 1043207

Registered 5.8.02

Title System:

Purpose:

Ref. Map:

Last Plan:

PLAN
OF EASEMENT AFFECTING
LOT 24 DP746244

Lengths are in metres. Reduction Ratio 1: 4000

L G A SHOALHAVEN CIT

Suburb/Locality: BOMADERRY

Parish: BUNBERRA

County: CAMDEN

This is sheet 1 of my plan in _____ sheets.
(Delete if inapplicable)

Surveyors (Practice) Regulation 1996
by ROSS J. DOUGLAS
of ALLEN PRICE & ASSOCIATES
75 PLUNKETT ST NOWRA 2541
a surveyor registered under the Surveyors Act, 1929, hereby
certify that the survey represented in this plan is accurate,
has been made in accordance with the Surveyors (Practice)
Regulation 1996 and was completed on 20.10.2000
The survey relates to THE EASEMENT
(here specify the land actually surveyed, or specify any land
shown in the plan that is not the subject of the survey)
Datum Line: _____
Zone: Suburban/Country
(Signature) _____
Surveyor registered under
the surveyors Act 1929.

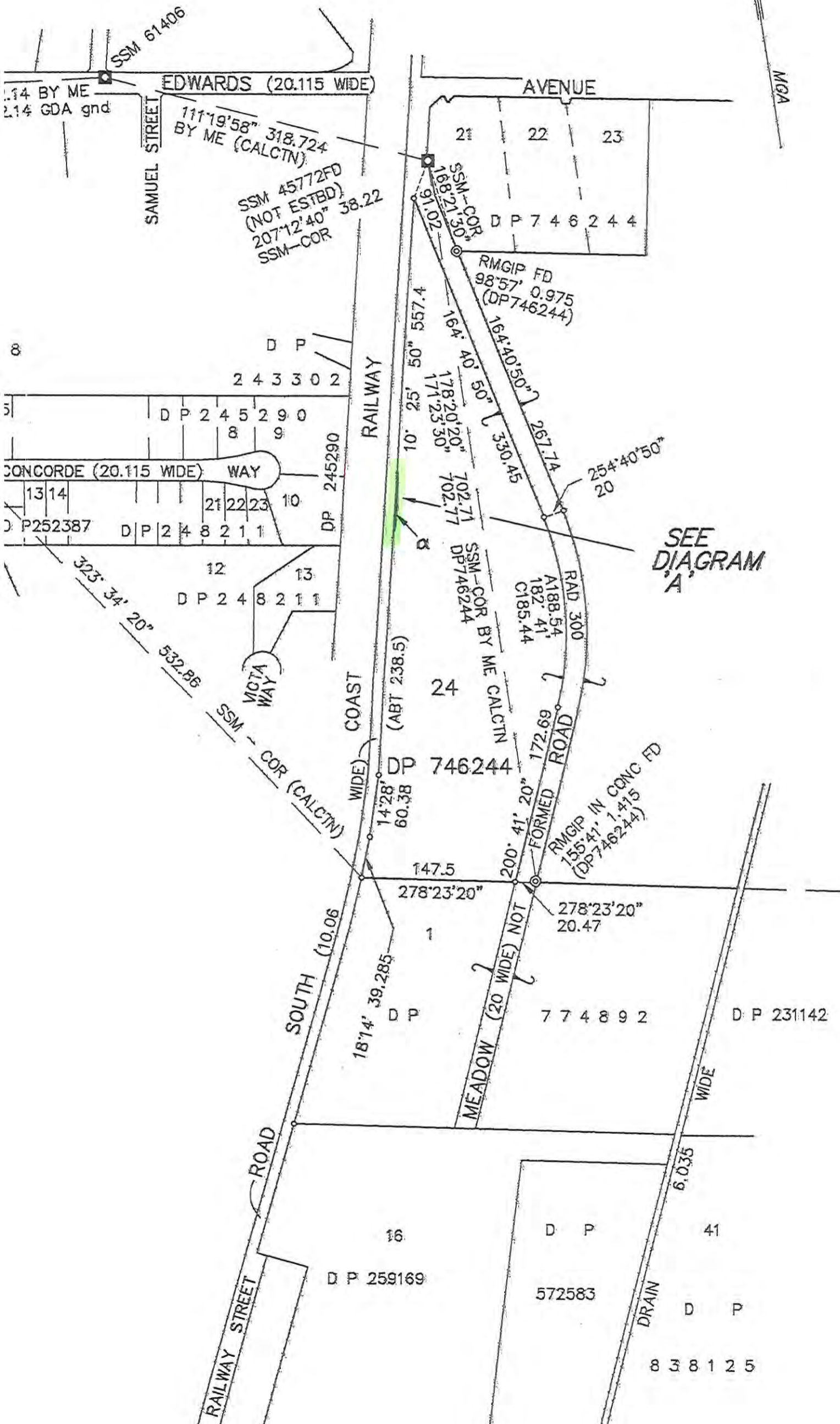
Plans used in preparation of survey/compilation.

DP 245290 DP 746244
DP 245321 DP 774892
DP 248211
DP 259169

PANEL FOR USE ONLY for statements of intention
to dedicate public roads, to create public reserve
drainage reserves, easements, restrictions on the
use of land or positive covenants.

PURSUANT TO SECTION 88B OF THE
CONVEYANCING ACT, 1919, IT IS
INTENDED TO CREATE: -

1) EASEMENT FOR GAS PIPES OVER
EXISTING LINE OF PIPES (APPROX
POSITION)



SEE
DIAGRAM
A

ANNEXURE 5
Supplementary Submission
prepared by
Allen Price & Associates
dated 2nd July 2012



allen, price & associates
land and development consultants

2 July 2012
Our Ref: 24710 APUmr

Cowman Stoddart
PO Box 738
NOWRA NSW 2541

Attention: Steve Richardson

Dear Steve

ADDENDUM LETTER RESPONDING TO COMMENTS MADE BY THE OFFICE OF WATER AND SHOALHAVEN CITY COUNCIL REGARDING DRAFT STATEMENT OF COMMITMENTS AND ENVIRONMENTAL ASSESMENT OF THE SHOALHAVEN STARCHES GAS PIPELINE.

Further to our discussions and meeting on the 6 June 2012, I supply the following information to clarify some of the issues raised by the NSW Office of Water and Shoalhaven City Council, with respect to the draft Environmental Assessment document for the Shoalhaven Starches Pty Ltd gas pipeline.

Office of Water Comments

In reference to NSW Office of Water comments made in Attachment A of the NSW Primary Industries letter, MP10 0144 and MP10 0108-Environmental Assessment, the following comments are made;

1. The Office of Water's concerns regarding potential impacts to the waterways is noted, including bed and bank instability especially at the outlets to culverts and bridges where temporary waterway crossings are to be installed to aid construction of the gas pipeline.

The given method of vehicle waterway crossing in section 7.4.1.1 of the EA document is adequate and in line with recommendations made in Landcom's Managing Urban Stormwater- Soils and Construction, Volume 1, 4th Edition, March 2004 (The Blue Book).

However, the Blue Book's recommended method of vehicle waterway crossing is very similar to that recommended by the Office of Water, i.e. the use of gabion mattresses, laid across the waterway, except for a low flow pipe and gravel confinement. The use of gabion mattresses would also provide an adequate vehicle waterway crossing, when designed correctly, and may have the potential to limit bed and bank stability during large stormwater events. Therefore the recommendation by the Office of Water to use gabion mattresses as temporary waterway crossings will be followed for the construction of their gas pipeline, and



have a statement to this effect made in the statement of commitments, with the condition to have the gabion mattresses engineered to suit.

2. With respect to the Office of Water's comments on the need for vehicle crossings to remain in place once the pipeline has been installed, and their recommendation for vehicle crossings to be removed and rehabilitated immediately following the completion of construction, the time required for temporary waterway crossings to remain in place is dependent upon the need for heavy vehicle and machinery to traverse the unnamed road reserve adjacent the railway track. The temporary waterway crossings should be allowed to remain in place until the need for such activity ceases, which is dependent upon the detailed design of the gas pipeline and the requirements of relevant authorities with respect to testing and commission of the gas pipeline.

Shoalhaven Starches should request that the Office of Water make it a condition in the draft statement of commitments, that all four temporary waterway crossings be allowed to remain in place until the length of gas pipeline between Fletchers Lane, Edwards Avenue and Railway Street is tested, commissioned and backfilled along the entire length of the unnamed road reserve, adjacent the Railway Reserve. This would reduce the time that watercourse crossings are in place, yet allow access to heavy machinery to fix any issues if they arise during construction, along usually inaccessible sections of the un-named road reserve.

3. With respect to comments made by the NSW Office of Water under the title of Watercourse and Riparian Zone Assessment, the requirement of the Office of Water regarding core riparian zone distances, at category 2 and category 3 watercourses is acknowledged. Category 2 watercourses will be allowed to have trenches stop 20 metres from the top of bank, at the CRZ boundary, and category 3 watercourses will have trenches stopped 10 metres from the top of bank, at the CRZ boundary.

APA plan 24710-Appendix E was revised to reflect the Office of Waters requirements for core riparian zone distances, with minimum trenching distances shown before the top of bank of each watercourse is reached. The revised plan is included as an attachment to this addendum letter.

4. With respect to Office of Water's comments regarding vegetation management plan, the inconsistency between section 7.4.1.1 of the EA and the Erosion & Sediment Control Management Plan is acknowledged. We clarify that a vegetation management plan will not be required due to the lack of diversified vegetation along the main route of the gas pipeline.

Shoalhaven City Council Comments

In relation to Shoalhaven City Council's comments outlined in the letter by Tim Fletcher on 22 May 2012 Council ref. 3A10/1005, the following comments are made;



Council suggests that the proposed design route does not appear to have been made with respect to impacts on Shoalhaven Water's assets, as well as the congestion of existing services located in existing road reserves, particularly the section of main of approximately 160 metres north of Cambewarra Road. Council's concerns are noted.

Congestion between services was identified and taken into consideration during preliminary route selection, with Shoalhaven Water's sewer and water assets being located and detailed in the Infrastructure Impacts Report, and its Appendix E, APA plan 24710-04, sheets 1 to 16.

Detailed design of the gas pipeline will aim to prevent impacts on Council's services. It is not proposed to remove or replace any of Shoalhaven Water's infrastructure, unless full consultation with Shoalhaven Water has occurred and approval is given. Consultation is to be made with Council and Shoalhaven Water during detailed design phase to consider such aspects of this project, especially in the congested areas along the proposed route.

The original intent of the recommended methods to minimise impacts to infrastructure, in part f of section 3.3 and part e of section 3.4 of APA's Infrastructure Impacts Report, was to draw the attention of Shoalhaven Water to their services and general location along the proposed gas pipeline route, and that a number of recommend options are available to mitigate impacts to these services. The report was undertaken to allow Shoalhaven Water to make comments, which is what they have done. It is understood that Shoalhaven Water have made their comments on the basis of ensuring that their assets are looked after, with minimal impacts during construction, and that their requirements are known and understood as early as possible in the development of the projects.

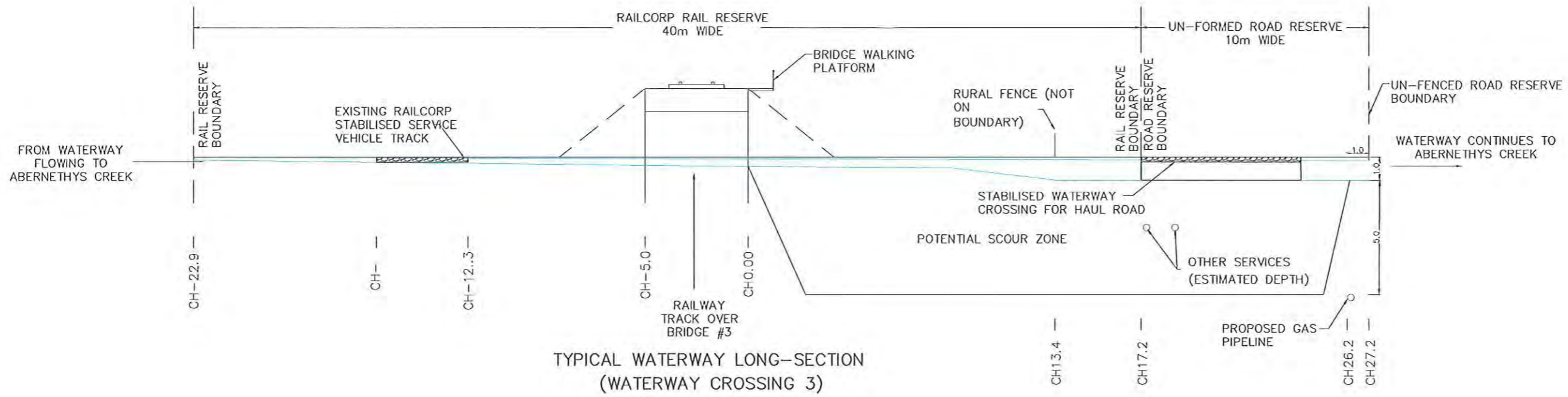
It should be noted that this project is similar to other completed projects in the Bomaderry area (especially along the front of Manildra on Bolong Road) where existing congested services were negotiated successfully.

This project is only at approval stage, with detailed survey of services to be completed for the detailed design phase. Once completed, Shoalhaven Starches will be in a position to discuss service/asset impact mitigation measures in detail with Shoalhaven Water and Shoalhaven City Council.

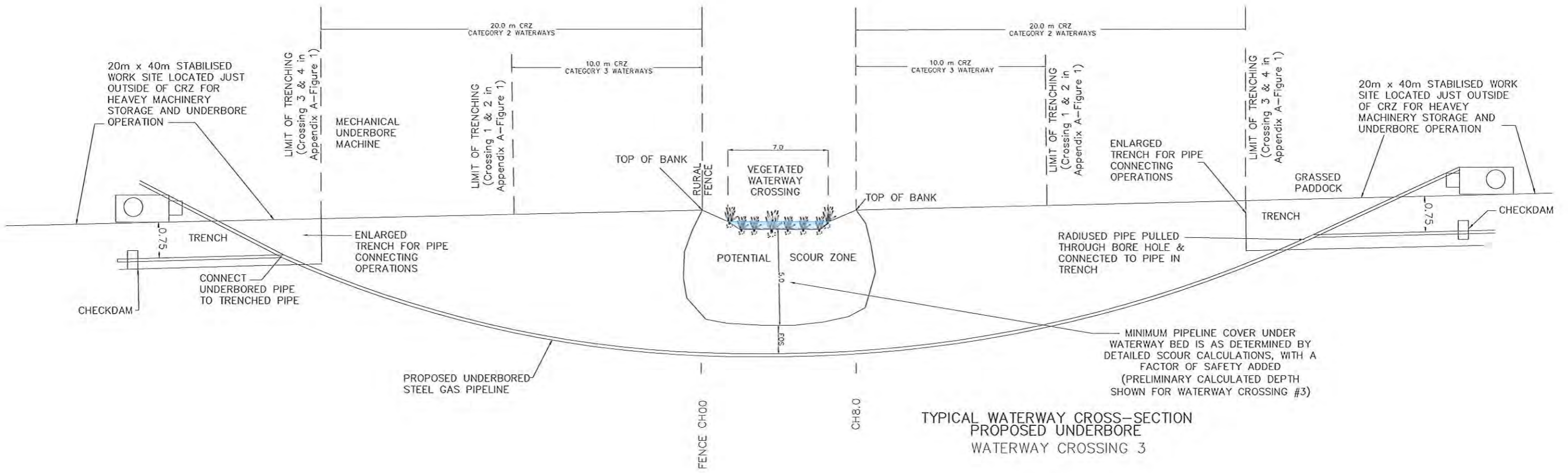
If you have any questions or wish me to clarify these matters further, please contact me at our office.

Yours faithfully
ALLEN, PRICE & ASSOCIATES

Adam Urszulak
Encl

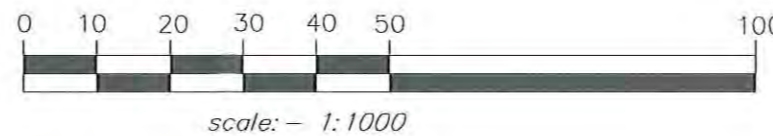
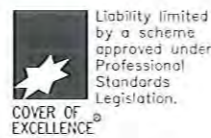


TYPICAL WATERWAY LONG-SECTION
(WATERWAY CROSSING 3)



TYPICAL WATERWAY CROSS-SECTION
PROPOSED UNDERBORE
WATERWAY CROSSING 3

REVISION	BY	DATE
01 AMMEND CRZ AND TRENCHING LIMITS AS PER OFFICE OF WATER REQ	APU	12.06.12



RATIO: NTS	DATUM: ORIGIN: DATE OF PLAN: JUNE 2012
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APPENDIX E: TYPICAL SECTIONS – WATERWAY CROSSING 3 LONG SECTION & CROSS SECTION FOR PROPOSED GAS PIPELINE AT MEROO MEADOW AND BOMADERRY FOR SHOALHAVEN STARCHES

REF. No. 24710 sheet 1 of 1
REVISION 01

ANNEXURE 6

Revised Draft

Statement of Commitments

REVISED DRAFT STATEMENT OF COMMITMENTS

Section 75F(6) of the EP&A Act states that the Director-General may require the proponent to include in an EA a Statement of the Commitments the proponent is prepared to make for environmental management and mitigation and management measures on the site.

Section 9.0 of the original EA that accompanied this Project Application included a draft Statement of Commitments which was designed to effectively manage and mitigate the environmental effects of the project. This draft Statement of Commitments has been revised to incorporate comments on issues arising from submissions received from government agencies and the public

Table 39 shows the revised draft commitments and identifies the desired outcomes, actions and timing of the stated commitments.

Notwithstanding the commitments made in **Table 39** Shoalhaven Starches is committed to implementing all mitigation measures set out in Sections 7.0 and 8.0 of the EA that accompanied this Project Application.

Table 39
Draft Statement of Commitments

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
1. Ecological Management			
Minimise impacts of on flora and fauna across project corridor and surrounding area	1.1 Maintain strict control on clearance envelope. Ensure no clearing to occur outside of surveyed pipeline corridor.	Prior to and during corridor preparation.	7.6
	1.2 Care is required when constructing the pipeline across low lying areas to ensure that the movement of soil is minimised. An Erosion and Sediment Control Plan should be prepared to facilitate good on-site management of erosion during construction.	Prior to construction.	7.6
	1.3 If street trees are removed from Railway Street or elsewhere, they should be replaced. The species to be used should be determined through consultation with Shoalhaven City Council.	Rehabilitation period.	7.6
	1.4 Minimise extent of vegetation clearance where possible.	During corridor surveying and clearing activity.	7.6

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	1.5 Avoid unnecessary removal of hollow-bearing trees identified during corridor surveying.	During corridor surveying and clearing activity.	7.6
	1.6 Retain all understorey and groundcover from pipeline corridor to ensure retention of natural seed stocks to facilitate rehabilitation program.	During corridor preparation.	7.6
	1.7 The areas of the proposed pipeline corridor which have not been assessed should be before construction begins.	Prior to construction.	7.6
	1.8 Local native plant species must be used to rehabilitate native riparian vegetation disturbed by the project.	Post construction.	
	1.9 Undertake weed monitoring and management program along pipeline corridor.	Post rehabilitation.	7.6
	1.10 Consult with landholders regularly to ensure rehabilitation objectives are being achieved.	Ongoing (periodic).	7.6
2. Cultural Heritage			
Employees and contractors aware and respectful of Aboriginal heritage values of project site and surrounding area.	2.1 Include specific Aboriginal heritage awareness in project induction program.	Site induction process.	7.7
	2.2 CEMP to include specific action should unknown sites or items be discovered during corridor creation or any other period. Consult with OHE and stakeholders as required.	Construction period.	7.7
	2.3 Shoalhaven Starches undertake to prepare and implement an Aboriginal Heritage Management Plan, as part of the overall Construction Environmental Management Plan for the project, which will: (a) describe the procedures and measures that would be implemented if any Aboriginal objects or sites are discovered during the development;		

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	(b) describe the procedures for consultation with registered Aboriginal stakeholders should Aboriginal objects be discovered during the development; and (c) include a commitment to provide all site workers and contractors with induction training on the identification of Aboriginal objects, Aboriginal cultural awareness and procedures that must be followed in the event of discovery of unknown Aboriginal objects.		
3. Surface and Groundwater Management			
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion.	3.1 The CEMP for the project is to make provision for erosion and sediment control.	Prior to construction.	7.4.1
	3.2 A comprehensive Erosion and Sediment Control Plan (ESCP) is to be prepared for the project in accordance with the recommendations of the Erosion and Sediment Control Management Plan prepared by Allen Price & Associates (refer 24710).	Prior to construction.	7.4.1
	3.3 Observe strict controls over the stripping, stockpiling and protection of topsoils and trench spoil during pipeline installation.	All stages.	7.4.1
	3.4 Replace trench spoil and topsoils as soon as practicable.	Completion of backfilling activities.	7.4.1
	3.5 Install silt fencing or otherwise to protect topsoil stocks where delays prevent replacement.	Construction period.	7.4.1
	3.6 Re-establish soil conservation systems (where applicable) on freehold lands to agreed condition.	Rehabilitation period.	7.4.1
	3.7 Prepare activity specific water crossing construction method statements. In this regard all watercourse crossings are to be directionally bored:		

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	<ul style="list-style-type: none"> • with entry and exit points sufficiently setback to allow for desired Category 2 riparian objectives to be met with trenching to stop at the edge of the 20 m CRZ. As a minimum, open trenching should be stopped at the 10 m boundary of this CRZ for Category 3 watercourses in order to preserve bed and bank stability; and • which calls for designed scour depth and safety margin. <p>The water crossing construction method statements are to be submitted to the Office of Water (DP&I) for endorsement prior to any construction near the watercourse commencing.</p>	Prior to construction.	7.4.1
	<p>3.8 Temporary watercourse vehicle crossings are to be undertaken by laying temporary gabion mattresses (or similar) on the bed of the watercourse to minimise disturbance to the bed. Temporary waterway vehicle crossings are to remain in place until the length of the pipeline between Fletchers Lane, Edwards Avenue and Railway Street is tested, commissioned and backfilled.</p>	Prior to construction.	
	<p>3.9 Based upon results of this EA it is considered Acid Sulphate Soils are likely to be encountered along low lying parts of the pipeline route located in Lots 4 and 5 and in the vicinity of creek crossings (reference CTP09 and CTP12). ASS may also be encountered sporadically up to the intersection with Fletchers Lane. The previous ASSMP prepared for the proposed SSEP Packing Plant be extended to incorporate other sections of the proposed pipeline where ASS could be intersected.</p>	Prior to construction.	7.4.1

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	3.10 Appropriate safety procedures should be implemented for all excavations in accordance with relevant OH&S legislation and the findings and recommendations of the assessment carried out by Coffeys (Annexure 10a).	All stages.	7.4.2
	3.11 The Office of Water is to be consulted if groundwater de-watering is necessary during construction to determine if an approval is required.	During construction.	
	3.12 Each watercourse is to be assessed to determine whether the soils are sodic or non-sodic within the flood liable land. The soil properties (such as sodicity) at watercourse crossings need to be assessed to determine appropriate crossing methodologies and rehabilitation measures. The investigation should be undertaken before construction commences.	Prior to construction.	
4. Traffic Management			
Minimise the impact of the project on the areas of normal traffic flow.	4.1 Prepare a Construction Traffic Management Plan which details: <ul style="list-style-type: none"> • Access points; • Staff parking; • Safety management proposals; • Traffic management proposals; • Consultation and liaison with adjacent property owners who may be affected by construction. Remediate any damage to roads/access tracks caused by the construction of the pipeline.	Planning stages.	7.8
Traffic safety considerations	4.2 Erect appropriate road signage along project site as per NSW RTA requirements.	Construction period.	
	4.3 Minimise overall impacts of project on major traffic flows.	Construction period.	
	4.4 Inform all potentially affected residents adjoining the gas pipeline corridor of proposed traffic arrangements. Provide alternate access to landholders where access is disrupted.	Construction period.	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
5. Air Quality			
Complete proposed development without exceeding OEH air quality criteria objectives.	5.1 Dust emissions during construction phase will be managed by implementing best practice dust control measures such as minimising exposed areas, rehabilitation and revegetation upon completion of work and using water sprays if required.	When required.	7.5
	5.2 Suppress dust along unsealed site access roads. Restrict project vehicle speeds along the ROW.	When required.	7.5
	5.3 Limit topsoil stripping and trenching during high winds.	When required.	7.5
6. Documentation			
Documents governing planning, construction and operation.	6.1 Prepare and implant a CEMP for the project.	Pre-commencement.	
	6.2 Encourage strict observation of published construction plans and site specific work procedures.	All stages.	
	6.3 Ensure all construction and operating conditions are available to personnel.	Pre-commencement.	
7. Overall Project			
All approved activities to occur within the defined corridor boundaries.	7.1 Survey and clearly mark the boundary of the pipeline construction corridor.	Prior to commencement of disturbances.	
	7.2 Construction plans and induction program clearly state responsibilities of contractors to observe disturbance limitations.	During tender process and contractor inductions.	
	7.3 Construct and operate in accordance with Australian Standard AS2885 series and the Australian Pipeline Industry Association (APIA) Code of Environmental Practice 2005.	During construction and operations.	
8. Operating Hours			
Management of construction activities in accordance with approved operating hours.	8.1 Undertake all construction activities associated with the project that would generate an audible noise at any residential premises between 7:00 am to 6:00 pm Monday to Friday; 8:00 am to 1:00 pm on Saturday.	Duration of construction period.	7.3

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	8.2 Limit construction materials deliveries along gas pipeline to operating hours as above.	Duration of construction period.	
9. Noise and Vibration			
All construction activities undertaken in appropriate manner to minimise noise and vibration impacts on surrounding environment.	9.1 All plant and machinery should be selected with consideration to low noise options where practicable and available.	All stages.	7.3
	9.2 Noisy construction activities (such as drilling at the Edward Avenue intersection) only operate for 2 – 3 hours at a time to reduce noise impacts at nearby residences (for example at the Edwards Avenue intersection). Ensure activities in any one location are staggered. For instance, if rock hammering or drilling is occurring at one location all other construction activities will cease in the same location to minimise cumulative noise impact.	All stages.	7.3
	9.3 Workers and contractors be trained in work practices to minimise noise emissions: <ul style="list-style-type: none"> • Employ the use of broadband audible reversing alarms on all mobile plant. • Avoid dripping materials from a height. • Avoid shouting and talking loudly outdoors. • Avoid the use of radios outdoors that can be heard at the boundary of residences. • Turn off equipment when not being used. • Carry out work only within the recommended hours of operation. 	All stages.	7.3
	9.4 Truck drivers to be informed of designated vehicle routes, parking locations and acceptable delivery hours.	All stages.	7.3
	9.5 Work site vehicle entrance to be sited away from residences where practicable.	Prior to construction.	7.3

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	9.6 Optimise the number of vehicle trips to or from site, <i>ie.</i> amalgamate loads rather than using more vehicles with smaller loads.	All stages.	7.3
	9.7 Staff parking should be sited away from residential areas where practicable.	All stages.	7.3
	9.8 No motor vehicles should access site prior to 7:00 am in order to avoid sleep disturbance, for example whilst works progress through receptor area 4 north of Roseville Road to south of Alfred Street.	All stages.	7.3
	<p>9.9 A community liaison officer should be available to consult with neighbouring property owners and contractors. The community liaison officer should also receive and manage noise complaints.</p> <ul style="list-style-type: none"> • The community liaison officer will approach all potentially affected residences prior to the commencement of works as an initial introduction. • The community liaison officer will explain the project, duration of works, potentially noisy periods as well as determine any particularly sensitive receivers or sensitive time periods and schedule works accordingly, as far as reasonably practical. • A contact number will be provided for any residents to call with complaints or queries. <p>Once works commence communication with affected residents will be maintained by the officer via a range of media including personal contact and / or letter box drops.</p> <p>For example a one page flyer detailing any particular noise upcoming events with a description of the type of work, date/s on which it will occur, duration of the expected noise and a contact phone number can be delivered to each residence in the lead up to the event/s.</p>	Prior to construction and all stages.	7.3

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	<p>9.10 Managing a Noise Complaint</p> <p>The Community Liaison Officer will receive and manage noise complaints. All complaints will be treated promptly and with courtesy.</p> <p>Should a justified noise complaint not be resolved, noise monitoring may be carried out at the affected receptor location and appropriate measures be taken to reduce the noise emission as far as reasonably practicable.</p> <p>Where it is not practicable to stop the noise, or reduce the noise, a full explanation of the event taking place, the reason for the noise and times when it will stop should be given to the complainant.</p> <p>Residents subjected to lengthy periods of noise or vibration may be eligible for project specific respite offer. The purpose of such an offer is to provide residents with respite from an ongoing impact. This measure is to be determined on a site by site basis.</p> <p>The following guidelines are recommended in Section 6 of the <i>Interim Construction Noise Guideline</i> to manage a noise complaint:</p> <ul style="list-style-type: none"> • Provide a readily accessible contact point, for example, through a 24 hour toll-free information and complaints line. • Give complaints a fair hearing. • Have a documented complaints process, including an escalation procedure so that if a complainant is not satisfied there is a clear path to follow. • Call back as soon as possible to keep people informed of action to be taken to address noise problems. Call back at night-time only if requested by the complainant to avoid further disturbance. 		

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	<ul style="list-style-type: none"> • Provide a quick response to complaints, with complaint handling staff having both a good knowledge of the project and ready access to information. • Implement all feasible and reasonable measures to address the source of complaint. • Keep a register of any complaints, including details of the complaint such as date, time, person receiving complaint, complainant's contact number, person referred to, description of the complaint, work area (for larger projects), time of verbal response and timeframe for written response where appropriate. 		
	<p>9.11 Vibration measurements be undertaken during installation in the event that rock hammering is required or complaints regarding vibration are made.</p> <p>Vibration measurements can be carried out using either an attended or unattended vibration monitor.</p> <p>As a precaution, once the specific areas where rock hammering will occur are identified the following shall be undertaken:</p> <ul style="list-style-type: none"> • carry out structural inspection surveys (dilapidation reports) on residences within 30 metres of rock hammering or vibration producing activities; • conduct vibration monitoring at residences within 30 metres of vibration producing works. <p>In the event that vibration levels exceed the recommended limit, all vibration works must cease immediately and alternative methods must be employed.</p>	Construction period.	7.3
	9.12 Publish working hours clearly in all site induction documents.	Pre-commencement.	7.3
	9.13 Observe stated operating hours.	Construction period.	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	9.14 Encourage all employees and contractors to drive in courteous manner and avoid undue generation of traffic noise.	All stages.	
	9.15 Ensure all equipment is in good working order and noise attenuation equipment installed on all machinery.	All stages.	
	9.15 Ensure deliveries of construction materials and equipment occur within operating hours.	Construction period.	
10. Rehabilitation			
Rehabilitation of gas pipeline corridor as soon as practicable.	10.1 Vegetation rehabilitation and maintenance should be addressed in the ESCP (see SOC 3.2) and as outlined in Section 3.11 of the Erosion & Sediment Control Plan prepared by Allen Price & Associates (refer 24710).	Prior to construction.	7.4.1
	10.2 Ensure topsoil and trench spoil are clearly segregated within pipeline corridor.	Duration of construction period.	7.4.1
	10.3 Ensure topsoil is not placed back across working area until trench is adequately compacted to avoid settling.	Rehabilitation period.	7.4.1
	10.4 Stabilise topsoil with retained vegetation as soon as practicable to encourage natural regeneration of disturbed corridor.	Rehabilitation period.	7.4.1
	10.5 Materials used for backfilling and trenches should be materials capable of providing uniform basal, wall and corner support for the service pipes. The excavated materials from the trenches are not considered suitable materials for backfilling in the immediate vicinity of the pipeline.	Construction period.	7.4.2.2
	10.6 Local native plant species must be used to rehabilitate native riparian vegetation disturbed by the project.	Following construction.	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	10.7 Rehabilitation should include the rehabilitation of watercourse crossings and the rehabilitation phase should continue until all watercourse crossing sites are identified as stable by an independent suitably qualified certifier. Any trench areas should be maintained until they are certified as stable.	Following construction.	
	10.8 Re-establish previous land uses as soon as practicable after trench backfilling.	As area becomes available.	7.4.1
	10.9 Ensure land profile is re-established to previous or agreed condition.	Ongoing with periodic monitoring.	7.4.1
	10.10 Conduct ongoing monitoring and maintenance of disturbed lands. The monitoring program would need to be undertaken to assess the outcomes of the works undertaken including areas of potential erosion and ground instability associated with construction impact. The monitoring program should include monitoring and maintenance of any bank stabilisation and stream bed and bank rehabilitation. The rehabilitation will need to be monitored until all crossing sites are identified as stable by an independent suitably qualified certifier. Monitoring should also be undertaken for the rehabilitation of native riparian vegetation where native riparian vegetation has been removed as part of the project and rehabilitated following construction. The Office of Water recommends a maintenance period of 5 years after final planting. The rehabilitation of other non native vegetation in riparian areas should be maintained until it is established and the area has been certified as stable by a suitably qualified certifier.	Ongoing.	7.4.1

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	10.11 Monitor corridor for weed species growth.	Ongoing.	7.4.1
	10.12 Undertake weed control and eradication where needs identified.	Ongoing / project life.	7.4.1
11. Waste Management			
Management of waste materials produced during construction phase.	11.1 Waste generated during construction is collected at staging points for regular removal by contractor.	Duration of construction period.	
	11.2 Waste materials collected for recycling where possible.	Duration of construction period.	
12. Consultation			
All stakeholders are satisfied with the outcomes of consultation.	12.1 Establish a 24 hour toll-free complaints telephone line.	Prior to construction period.	
	12.2 Advertise to the community that construction is going to commence and provide regular updates of project details.	Duration of construction period.	
	12.3 Put the project as an Agenda item for the Community Consultative Committee.	Ongoing.	
13. RailCorp Requirements			
To satisfy RailCorp requirements for the project.	13.1 Shoalhaven Starches agree to provide an accurate survey locating the development with respect to the rail boundary and rail infrastructure. This work is to be undertaken by a registered surveyor, to the satisfaction of RailCorp's representative.	Prior to Construction	
	13.2 Prior to the issue of a Construction Certificate Shoalhaven Starches will undertake a services search to establish the existence and location of any rail services. Persons performing the service search shall use equipment that will not have any impact on rail services and signalling. Should rail services be identified within the subject development site the Applicant must discuss with the Rail Authority as to whether these services are to be relocated or incorporated within the development site.	Prior to Construction	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	13.3 Prior to the issue of a Construction Certificate Shoalhaven Starches will engage an Electrolysis Expert to prepare a report on the Electrolysis Risk to the development from stray currents. Shoalhaven Starches must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the Principal Certifying Authority with the application for a Construction Certificate.	Prior to construction	
	13.4 Prior to the issue of a Construction Certificate Shoalhaven Starches will undertake a Risk Assessment / Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to RailCorp for review and comment on the impacts on rail corridor. The Principle Certifying Authority shall not issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied. No metal ladders, tapes and plant/ machinery, or conductive material are to be used within 6 horizontal metres of any live electrical equipment. This applies to the train pantographs and 1500V catenary, contact and pull-off wires of the adjacent tracks, and to any high voltage aerial supplies within or adjacent to the rail corridor.	Prior to construction During construction	
	13.5 Shoalhaven Starches commit to provide a plan of how future maintenance of the development facing the rail corridor is to be undertaken. The maintenance plan is to be submitted to RailCorp prior to the issuing of the Occupancy Certificate. The Principle Certifying Authority shall not issue an Occupation Certificate until written confirmation has been received from RailCorp advising that the maintenance plan has been prepared to its satisfaction.	Prior to construction	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	13.6 Shoalhaven Starches undertake to enter into an agreement with RailCorp defining the controls to be implemented in managing the access required and/or the potential impacts of the development on RailCorp, and the involvement of RailCorp staff in ensuring the appropriate safety and technical standards are complied with throughout the development.	Prior to construction	
	13.7 Shoalhaven Starches undertake to comply with RailCorp <i>Guidelines for Minor Underbores</i> that is a supplement to SPC 207. These details are to be provided in detail to RailCorp to enable RailCorp to undertake a full assessment of the project in so far as it may relate to the crossing on RailCorp land prior to construction commencing.	Prior to construction	
14. Shoalhaven Water Requirements			
To satisfy requirements of Shoalhaven Water	14.1 Prior to commencement of any works Shoalhaven Starches undertake to apply to Shoalhaven Water for a Certificate of Compliance under Section 307 of Division 5 of Part 2 of Chapter 6 of the Water Management Act 2000.	Prior to construction	
	14.2 Shoalhaven Starches commit to providing adequate clearance is to be provided between water and sewerage infrastructure and the proposed gas main in accordance with Council's website for Shoalhaven Water Sewer Design Specification and Drawings. www.shoalwater.nsw.gov.au/Publications/publications	During construction	
	14.3 Shoalhaven Starches commit to providing Shoalhaven Water with details of protective measures to be utilised where construction and / or construction plant movement is proposed in the vicinity of water and / or sewerage infrastructure.	Prior to construction	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	14.4 Detailed design plans (of the proposed gas pipeline) are to be submitted by Shoalhaven Starches to Council (Shoalhaven Water) for approval prior to the works commencing. Plans are to accurately detail all water and sewer assets within close proximity (10 m) of the proposed route of the gas pipeline.	Prior to construction	
	14.5 Shoalhaven Starches acknowledge that a Shoalhaven Water inspector shall be onsite at all time when works are undertaken in proximity to Shoalhaven Water assets. Shoalhaven Starches acknowledge that where works are required to cross Shoalhaven Water assets the works shall generally be undertaken by open excavation, except where underboring is required to be undertaken as agreed with Council staff in discussions on the 20 th June 2015. All associated works are to be at the cost to Shoalhaven Starches.	During construction	
	14.6 Shoalhaven Starches will commit to ensuring that the alignment of all water and sewerage infrastructure shall be accurately and clearly marked on site prior to the commencement of works within 10m.	Prior to construction	
15. Roads & Maritime Services (TMS) Transport Requirements			
To satisfy requirements of RMS.	15.1 Shoalhaven Starches commit to obtaining a Section 138 consent under the Roads Act, 1993 to the design for works within the road reserve.	Prior to construction	
	15.2 Shoalhaven starches undertake to design infrastructure with the aim of making it maintenance free for the duration of its design life.	Prior to construction	
	15.3 Shoalhaven Starches accept that longitudinal trenching is to be at a minimum of 0.6 m whilst in the road reserve of the Princes Highway, as close to the road boundary as possible and not within 3.0 m of the road formation or drainage structures.	Prior to construction	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	15.4 Shoalhaven Starches will seek to locate the pits for the bores on either side of the Princes Highway outside the road reserve if possible. Where this is not practicable, they are to be no closer than 3.0 m from the seal of the highway, for both the exit and entry holes. The depth shall not be less than 1.2 m below the road surface level to the top of the pipe or concrete.	Prior to construction	
	15.5 Shoalhaven Starches will seek to ensure all buried pipes be maintenance free, eg. sleeved.	Prior to construction	
	15.6 Where concrete bedding/slab or concrete encasement of the conduit is required, Shoalhaven Starches will ensure that the concrete has achieved its required early design strength.	Prior to construction	
	15.7 Shoalhaven Starches acknowledges that all roadworks, traffic control facilities and other works associated with this project, including any modifications required to meet RMS standards, will be at no cost to the RMS. All works shall be completed prior to occupation by a suitably qualified contractor.	Prior to construction	
	15.8 Shoalhaven Starches accept that all areas within the road reserve of the Princes Highway that are disturbed by works related to the project are to be restored to their original condition upon completion of the work. All restoration work is to be carried out to the satisfaction of RMS.	Prior to construction	
	15.9 Shoalhaven Starches acknowledge that RMS will be exercising its powers under Section 64 of the Roads Act, 1993 to become the roads authority for works on the Princes Highway. Given this, Section 138 consent under the Roads Act, 1993 shall be obtained from the RMS prior to construction.	Prior to construction	

Table 39 (continued)

<i>Outcomes</i>	<i>Action</i>	<i>Timing</i>	<i>EA Section No.</i>
	15.10 Shoalhaven Starches undertake to apply for, and obtain a Road Occupancy Licence (ROL) from the RMS Traffic Operations Unit (TOU) prior to commencing roadworks on a State Road or any other works that impact a travel lane of a State Road or impact the operation of traffic signals on any road. The application will require a Traffic Management Plan (TMP) to be prepared by a person who is certified to prepare Traffic Control Plans. Should the TMP require a reduction of the speed limit, a Speed Zone Authorisation will also be required from the TOU.	Prior to construction	
16. Reducing Impacts to Stock at 62 Edwards Avenue, Bomaderry			
To reduce impacts of construction works on horses kept at 62 Edwards Avenue, Bomaderry (the Apperley premises) in response to public submissions.	16.1 Shoalhaven Starches commit to arranging for the relocation of the horses from the Apperley premises and agisting them at an agistment property away from the construction site while the gas pipeline works occur along the frontage of the Apperley premises.	Prior to construction occurring along frontage of 62 Edwards Avenue, Bomaderry.	