



View Location R13 Existing view north east to east from residential dwelling R13



View Location R13 Proposed view north east to east from residential dwelling R13



View Location R13 Proposed view north east to east from residential dwelling R13 with screen planting

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AGL DALTON POWER PROJECT PREFERRED PROJECT REPORT

ADDITIONAL PHOTOMONTAGE FROM RECEPTOR R13

URS

VISUAL IMPACT ASSESSMENT

File No: 43166771-g-4-6.dwg Drawn: AH Approved: KT Date: 11-10-2011

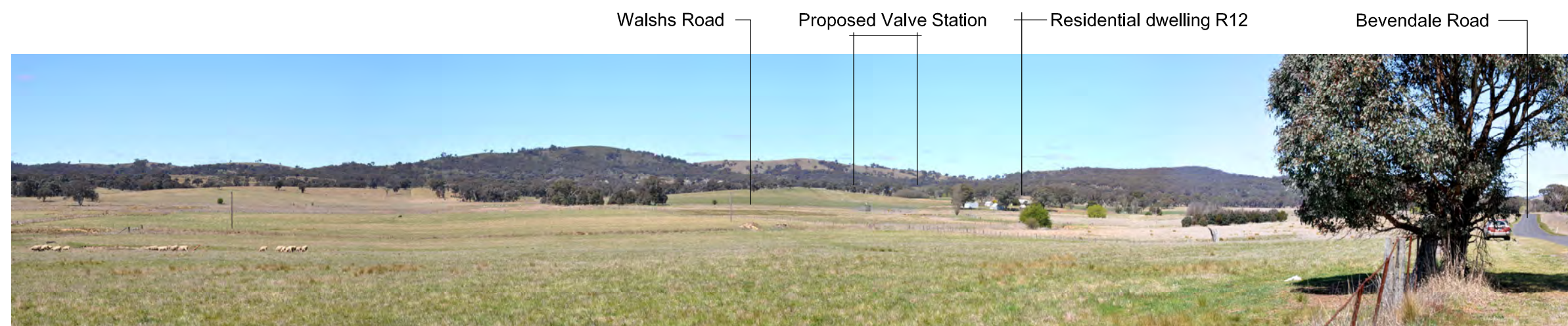
Figure: **4-6**

Rev. A A3

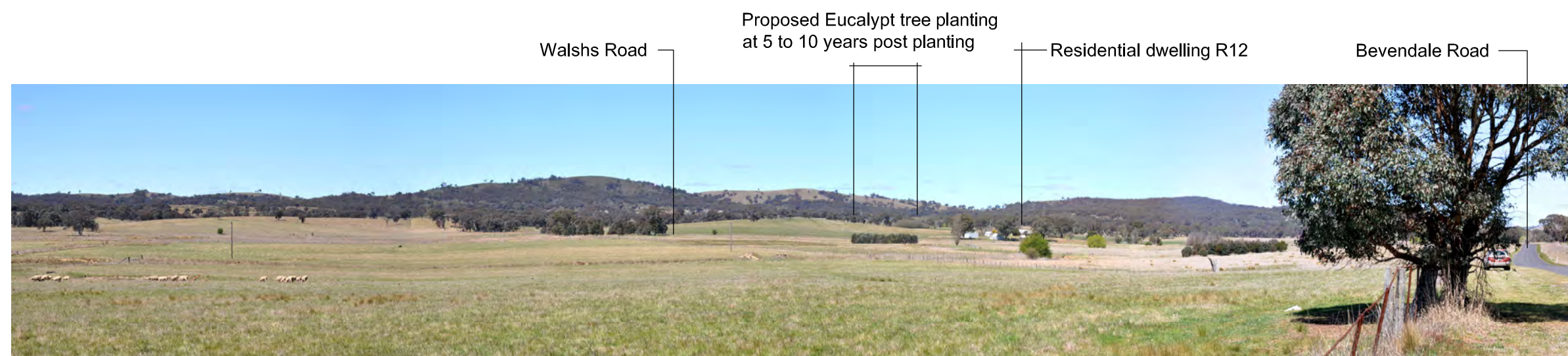




View Location R14 (from road corridor opposite R14) Existing view south to south east from Bevendale Road



View Location R14 (from road corridor opposite R14) Proposed view south to south east from Bevendale Road



View Location R14 (from road corridor opposite R14) Proposed view south to south east from Bevendale Road with tree screen

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ADDITIONAL PHOTOMONTAGE FROM RECEPTOR R14

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VISUAL IMPACT ASSESSMENT

File No: 43177661-g-4-7.dwg Drawn: AH Approved: KT Date: 11-10-2011

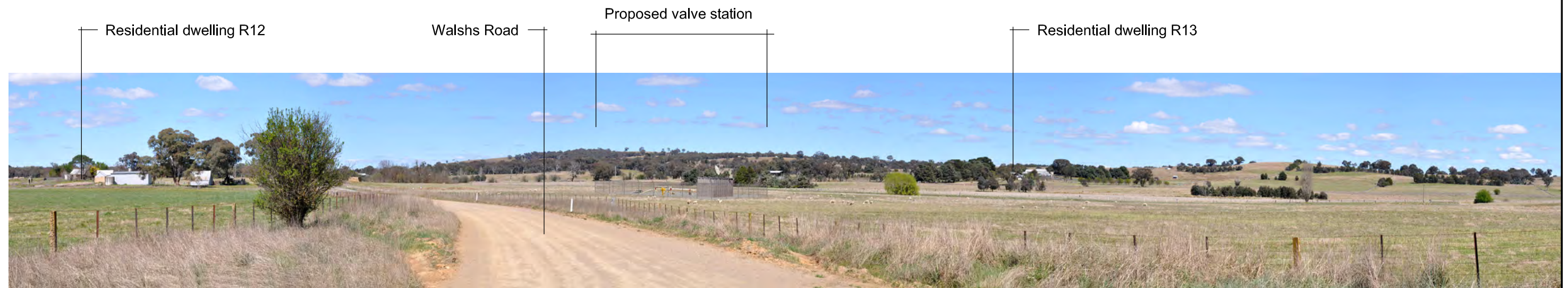
Figure: **4-7**

Rev. A A3

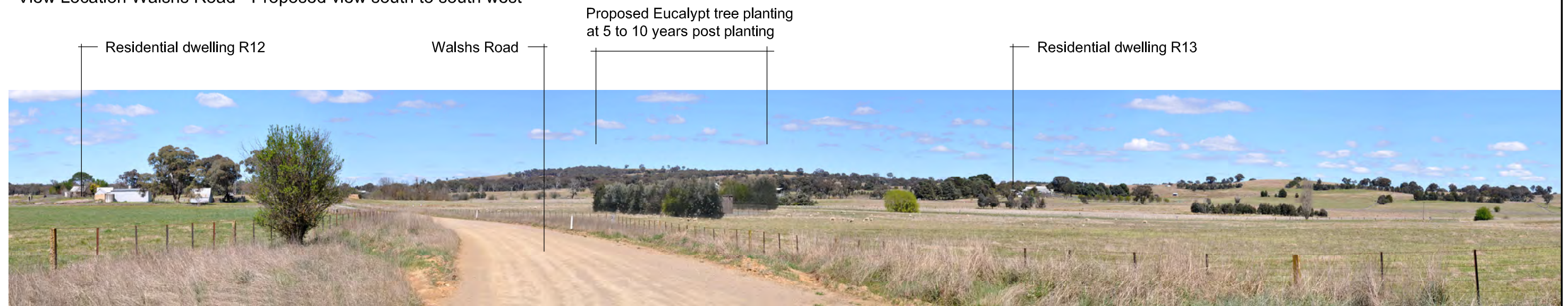




View Location Walshs Road - Existing view south to south west



View Location Walshs Road - Proposed view south to south west



View Location Walshs Road - Proposed view south to south west with screen planting

Source: Green Bean Design

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ADDITIONAL PHOTOMONTAGE FROM WALSHS ROAD

URS

VISUAL IMPACT ASSESSMENT

File No: 43177661-g-4-8.dwg

Drawn: AH

Approved: KT

Date: 11-10-2011

Figure: 4-8

Rev. A A3



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A photomontage showing the potential view of the power station from “Mount Pleasant” has been prepared in response to **Submission 20497**. This is provided in addition to the visual simulations requested by DP&I above. **Figure 4-10** has been prepared from a vantage point between R20 and R21 within the Mount Pleasant property as shown in **Figure 4-9**. While existing vegetation would effectively screen the development from view from R20, the photomontage shows a view similar to that which would be seen from R21. AGL notes that the stack heights represented in this photomontage are 46m. However, heights are likely to be in the order of 28m. AGL extends the commitment to liaising with the Walsh’s to offer appropriate vegetation screening to minimise the impact of the proposal on views from their house.

Figure 4-9 View locations towards the power station from Mt Pleasant



Residential dwelling R20



View Location R20 Existing view south to south east from Mount Pleasant

Proposed communication tower
Proposed power station

Residential dwelling R20



View Location R20 Proposed view south to south east from Mount Pleasant

Proposed communication tower
Proposed power station

Residential dwelling R20



View Location R20 Proposed view south to south east from Mount Pleasant with existing and supplementary planting at 5 years post planting

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AGL POWER PROJECT PREFERRED PROJECT REPORT

ADDITIONAL PHOTOMONTAGE FROM MOUNT PLEASANT

URS

VISUAL IMPACT ASSESSMENT

File No: 43177661-g-4-10.dwg Drawn: AH Approved: KT Date: 11-10-2011

Figure: 4-10

Rev. A A3

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With regards to the concern expressed by DP&I about plumes being visible from the stacks, the nature of the emissions from open cycle gas turbines are such that the plumes emitted are extremely hot and fast. For example, at operation, plumes are typically emitted in excess of 500 deg.C, and at speeds of around 150km/h. The exhaust moisture content is also lower than for traditional combustion sources (e.g. boilers) due to the relatively high amount of excess air present in the combustion process. These factors collectively mean that moisture within the plume is unlikely to condense into a visible vapour in the vicinity of the power station. Other than a potentially visible heat haze, industry experience along with manufacturer's input indicates that steam plumes would not be visible during the operation of the power station. Given the unlikelihood of plumes being visible, AGL has not included visible plumes in any revised figures given that such impacts are not assessed as likely to occur.

DP&I requested that AGL supply additional plans illustrating the valve station and communications tower:

“ the inclusion of dimensions of the project layout and components, levels and setbacks to the site boundaries within the site concept plan (including scaled, dimensioned plans of the valve station and communications tower)..”

DPI also requested further plans be presented upon review of the Draft Response to Submissions Report. DP&I notes:

- *The inclusion of dimensions of the power station layout and components, levels and setbacks to the site boundaries within the site concept plan (i.e Figure 4.3 of the EA) represented on A3 sized pages has not been provided.*
- *Elevations from all four sides of the power plant are required. A height is also to be indicated on the communications tower plan.*

Response

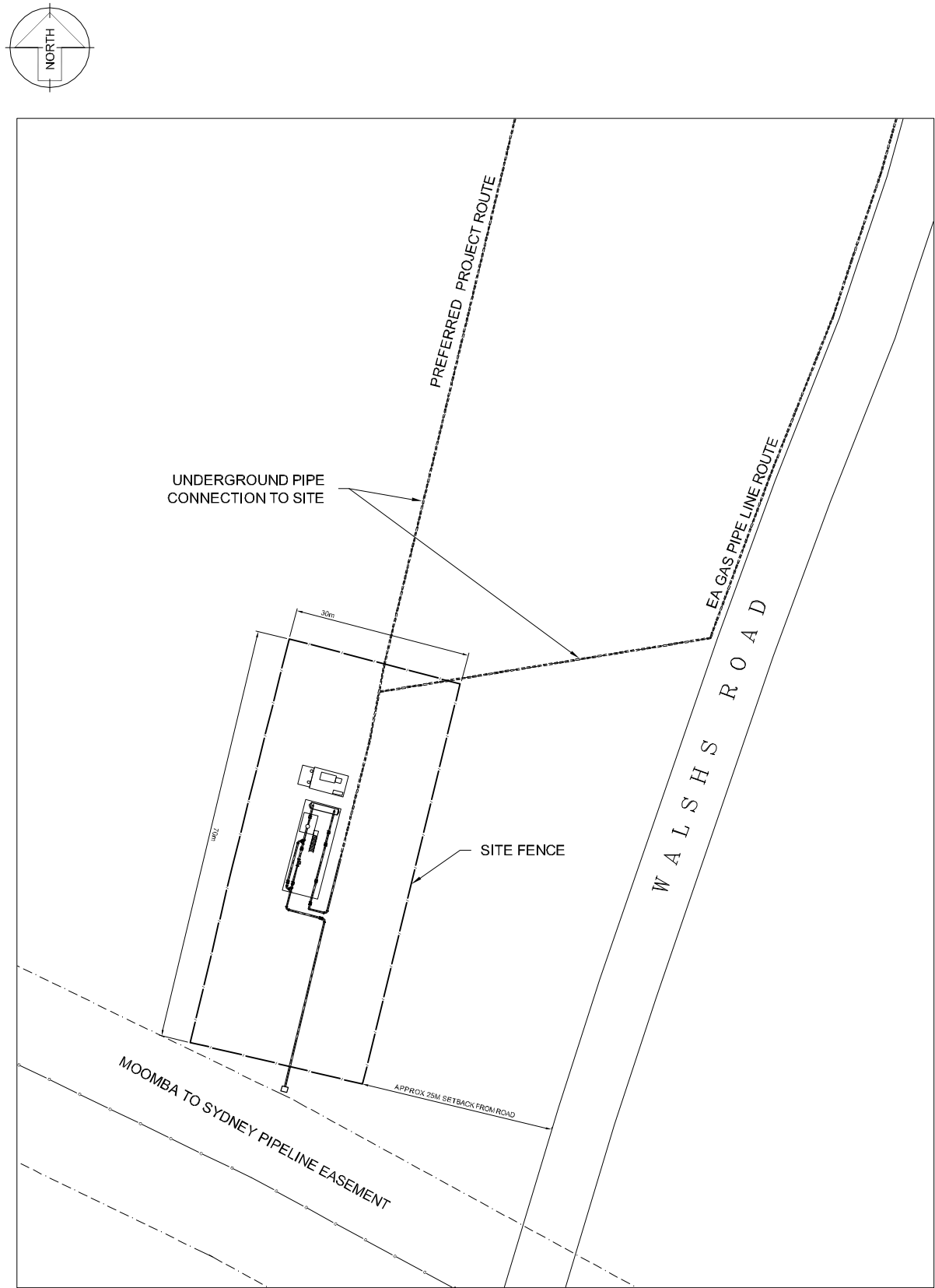
Figures 4-11 and **4-12** respectively addresses the request for the valve station and the communication tower.

Further to these figures, additional Facility Plans are presented within **Appendix F** inclusive of the power station layout and components dimensions; levels and setbacks to the site boundaries within the site concept plan, and elevations from all four sides of the power plant. AGL notes that Appendix F and its contents have been updated since submission of the Responses to Submissions Report dated 27.01.2012.

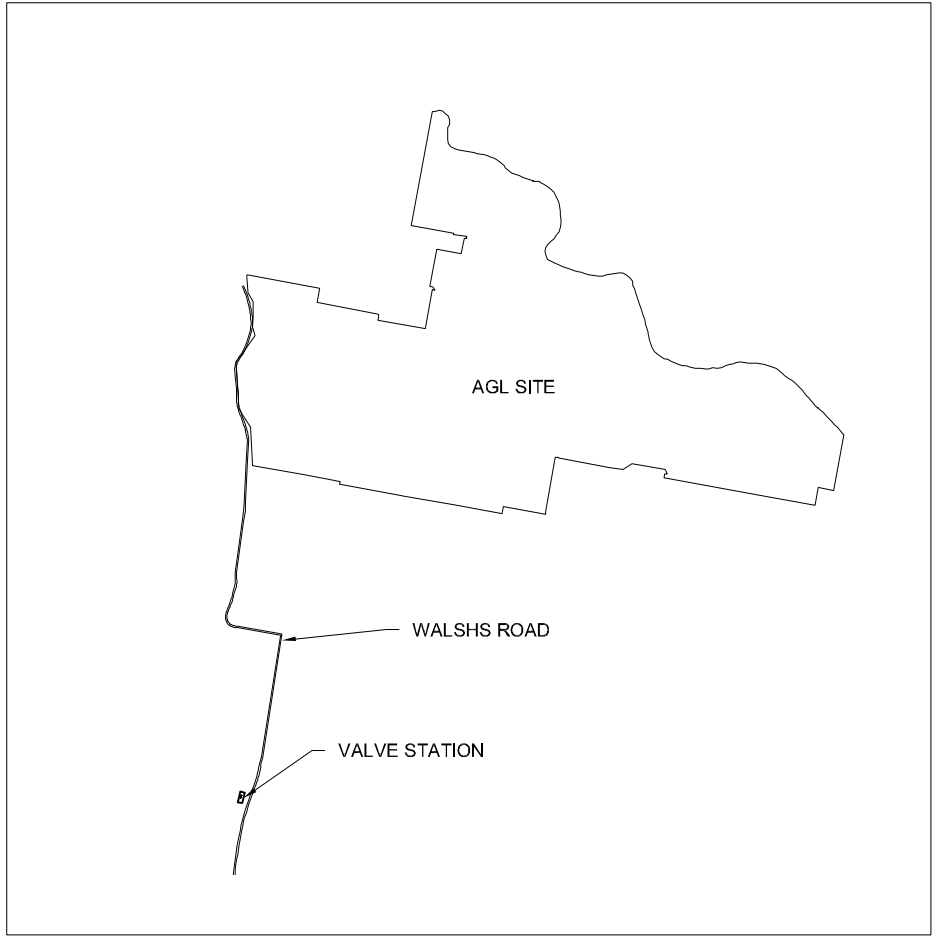
Appendix F includes the following figures;

- FIGURE F-1 – Proposed layout with plant scale and setback distances;
- FIGURE F-2 – Layout showing elevation series view point;
- FIGURE F-3 – Indicative elevations looking north (elevation 1) and south (elevation 2); and
- FIGURE F-4 – Indicative elevations looking east (elevation 3) and west (elevation 4).

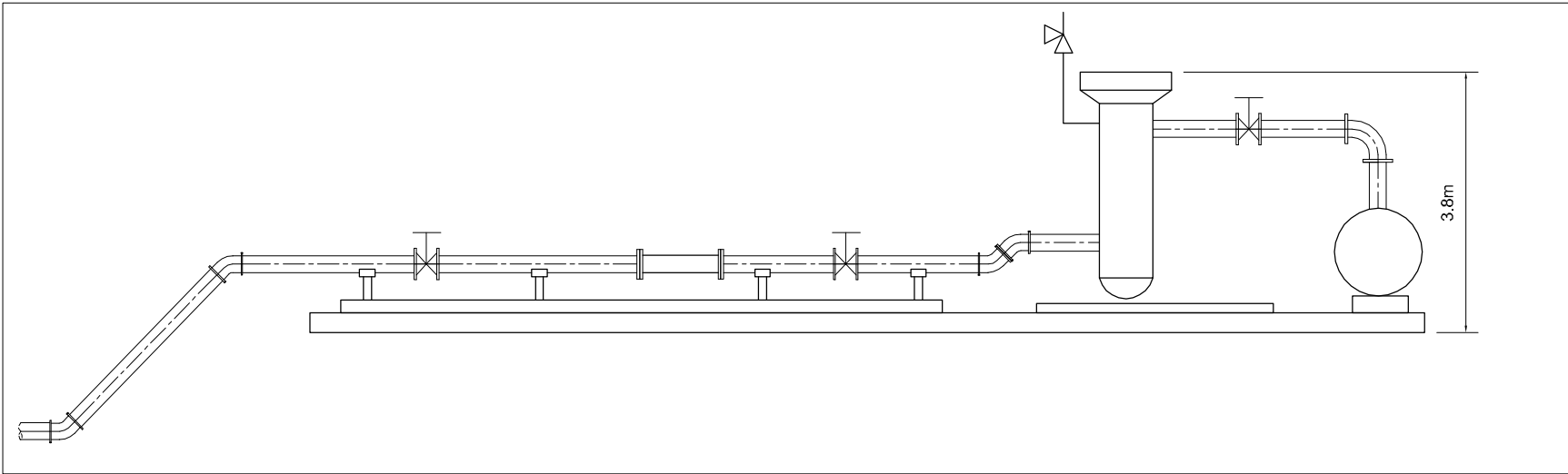
This drawing is subject to COPYRIGHT. Plotted: 11/10/2011 11:01:02 AM File Name: U:\JOBS\43177661\CAD\Working\CI\Figure 1.dwg Plotted: Archie Petridis



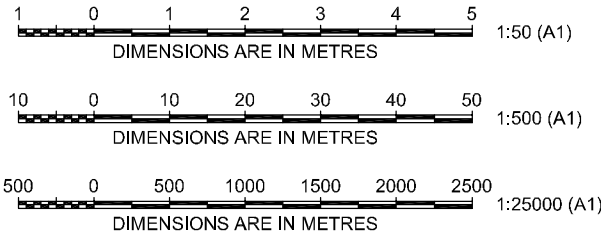
PLAN
SCALE 1:1000



SITE LOCATION
SCALE 1:25000



ELEVATION
SCALE 1:50



Rev	Drawn	Design	Date	Revision Record
0	A.P.	K.T.	11.10.11	FINAL
A	A.P.	K.T.	05.10.11	ISSUE FOR DRAFT

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Client:

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Project Title:

DALTON POWER PROJECT
PREFERRED PROJECT REPORT

Drawing Title:

INDICATIVE VALVE STATION LAYOUT

Datum

Date

05.10.2011

Status

FINAL

URS

PROJECT MANAGER:

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Drawn By: A.PETRIDIS

Checked By:

Approved By: K.TINKER

Drawing:

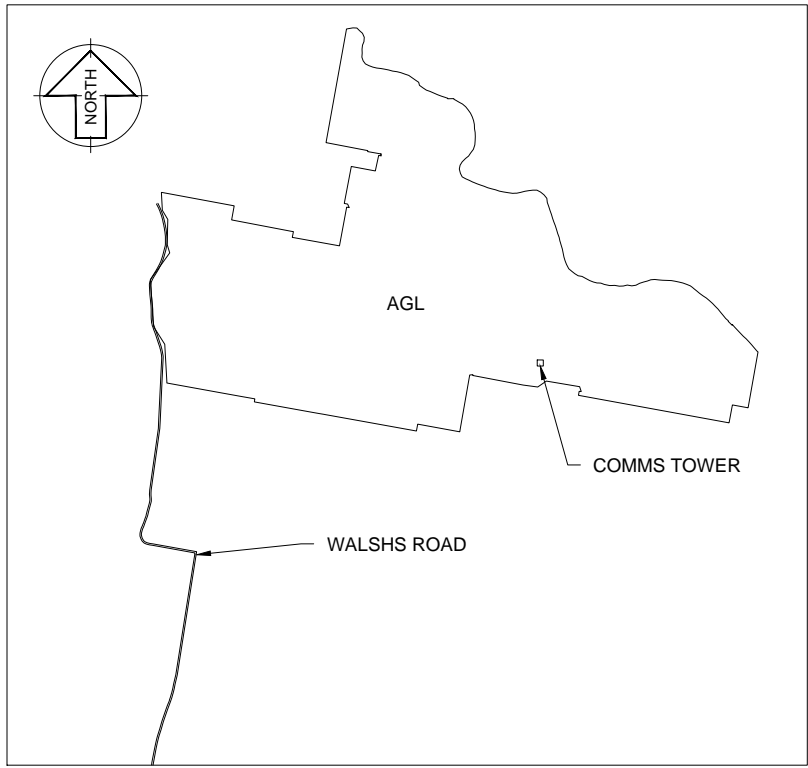
Figure 1.dwg

FIGURE 4-11

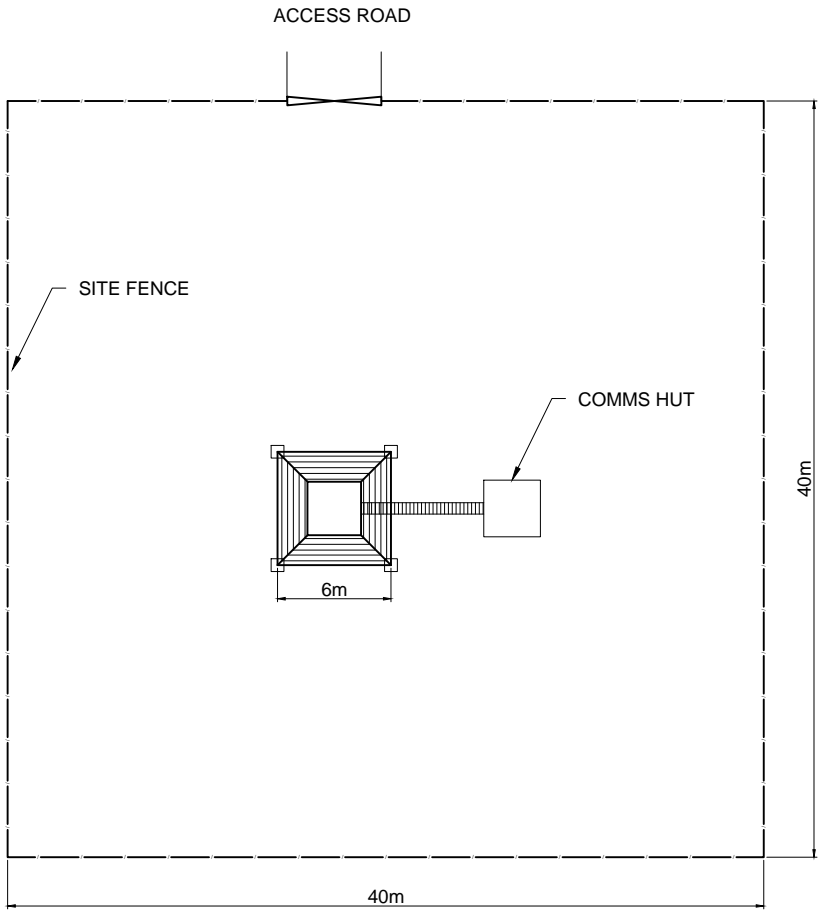
REV. A



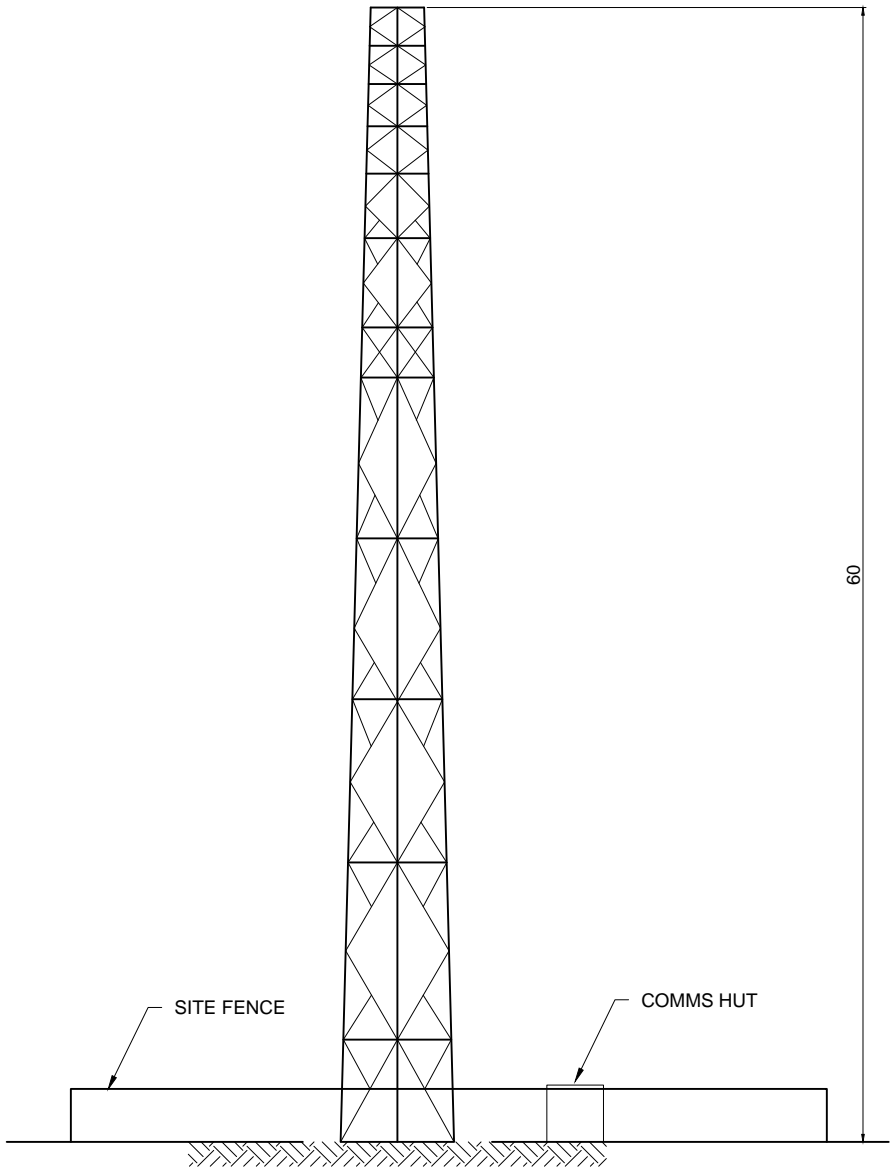
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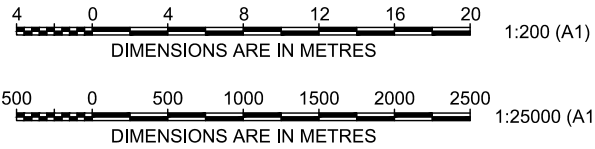
SITE LOCATION
SCALE 1:25000



PLAN
SCALE 1:200



ELEVATION
SCALE 1:200



Rev	Drawn	Design	Date	REVISION RECORD
0	A.P.	K.T.	11.10.11	FINAL
A	A.P.	K.T.	05.10.11	ISSUE FOR DRAFT

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Project Title:

DALTON POWER PROJECT
PREFERRED PROJECT REPORT

Drawing Title:

COMMUNICATIONS TOWER

Datum

Date

05.10.11

Status

FINAL

URS

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Drawing:

Figure 2.dwg

FIGURE 4-12

REV. A



4 Preferred Project Report

4.7 Noise Assessment

DP&I notes an apparent discrepancy between the residential receptors noted in the noise assessment and the visual and landscape assessment:

"There is a disparity in the identification of the total number of surrounding receptors between the visual and noise assessments. There appears to be additional receptors identified within the visual assessment that have not been considered within the noise assessment, which are located closer to the power station than receptor F. Distances of some receptors to the power station are also different between the two assessments. These discrepancies should be rectified and/or assessments updated".

Response

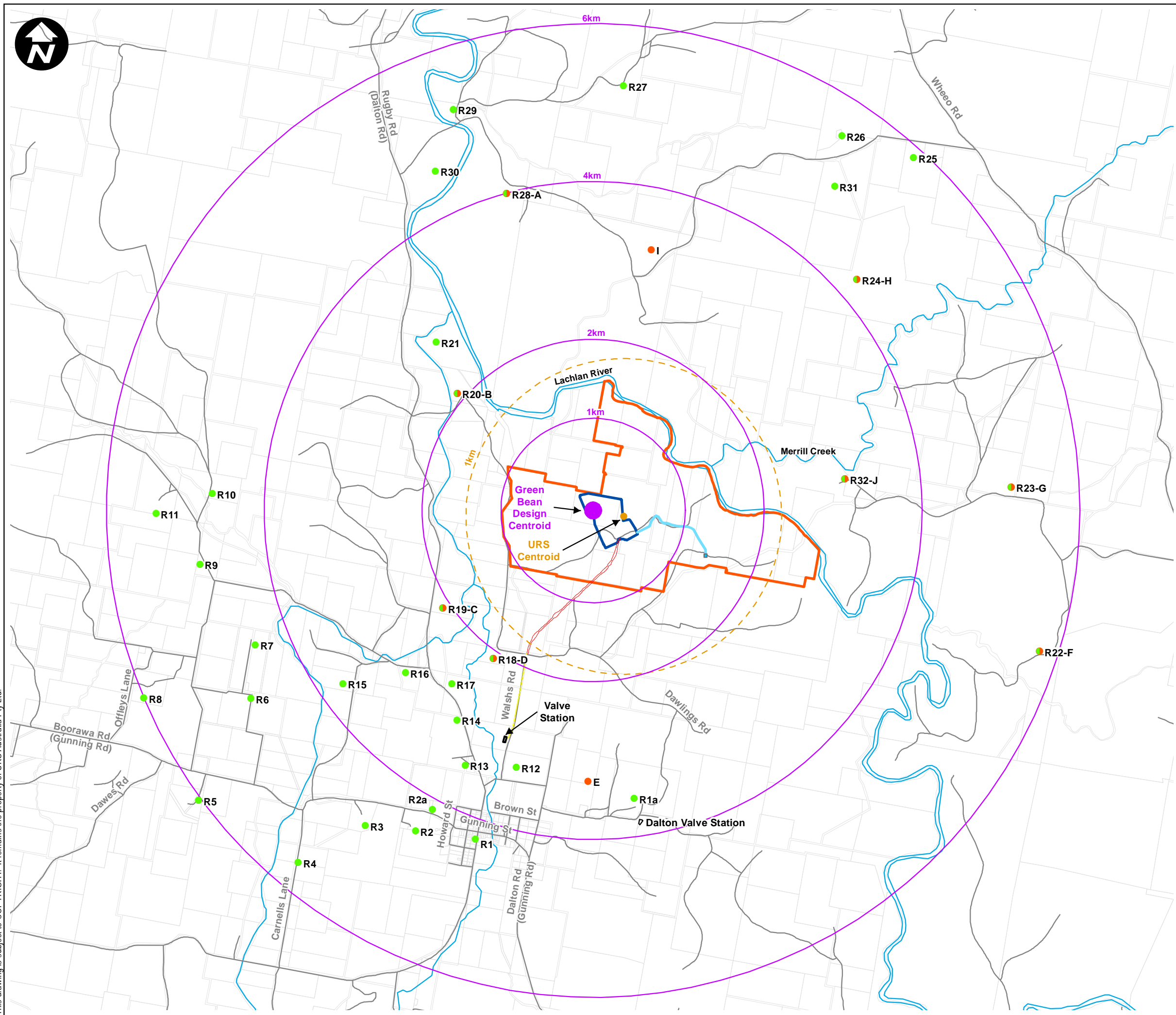
URS has prepared an additional figure (**Figure 4-13**) to clarify the residential receptor locations discussed and assessed within both the Noise and Visual and Landscape Assessments and which formed part of the EA. From **Figure 4-13**, it can be seen that two slightly different centroids were used between the different technical reports: both centre points are inside the plant footprint and the slight differences in receptor distances quoted are the result of different scales for the figures generated by the technical specialists. Because of this, it is not considered that there is any material discrepancy in the data reported for each receptor location.

From **Figure 4-13**, it can be determined that Receptor J in the noise report corresponds to R32 in the visual assessment, and Receptor G in the noise report corresponds to R23 in the visual assessment.

To the north, the noise assessment identified and assessed potential impacts from Receptor I which was not included in the visual and landscape assessment. At the time of the Noise Assessment, this receptor location was included as it was unclear from aerial imagery whether this location was an existing house or a potential building site. To adopt a precautionary approach, it was included in the assessment. Subsequent field visits made by the landscape and visual consultant have confirmed that no residential building exists at this site. For this reason, the visual report did not include this location. This discrepancy is noted. However, there is no material impact on the findings of either the NIA or the VIA.

To the South, Location E as considered by the Noise Assessment refers to the same receptor location as the visual R1a location. The R1a location as plotted within the figure produced for the visual and landscape assessment is placed between two built structures on the property. However, it is confirmed that both the noise and landscape assessment included assessment of the built structure which is the residential building on this property.

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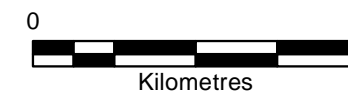


Legend

- Gas Pipeline (northern section) and Access Road
- Gas Pipeline (southern section)
- Communications Tower and Hut Footprint
- Communications Tower Services and Access Track
- AGL Site Boundary
- Plant Footprint

Identified Residences

- Receptor Location References from Visual Assessment
- Receptor Location References from Noise Assessment
- Receptor Location References from Noise Assessment and Visual Assessment



Source: Residence locations translated from CAD file received from Green Bean Design 29-Sept-2011 ("Dalton View Locations.dwg")

Map compiled using MapInfo StreetPro data. © 2011 MapInfo Australia Pty Ltd and PSMA Australia Ltd. URS Australia, MapInfo Australia or PSMA Australia do not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that these companies shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

Drawn: SB Approved: KT Date: 11/10/2011

Job No.: 43177661 File No.: 43177661.060-4.mxd

Client
AGL

Project
DALTON POWER PROJECT
PREFERRED PROJECT REPORT

Title
IDENTIFIED RESIDENCES

Figure: 4-13

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4 Preferred Project Report

The DP&I requested the following additional information regarding potential noise impacts:

“..an assessment on noise associated with the valve station (construction and operation)”

Clarification was also sought by the DP&I in terms of the implications of construction noise impacts at Receptor D:

“construction noise for the pipeline associated with receptor D is identified as above the noise criterion, however no period of exceedance has been given or assessment on why any exceedance may be considered acceptable..”

Upon review of the Draft Response to Submission Report, DP&I reiterated that the following additional matters that are required to be addressed within the submissions report for the project:

- construction noise impacts to be assessed for locations in proximity to the valve station and pipeline i.e R12-R14 & R17.*

Response

The noise impact assessment reported Receptor D to be the closest receptor to the proposed pipeline alignment. This receptor was noted to be potentially the most affected by pipeline construction noise, with predicted construction noise levels of up to L_{Aeq} 43-52 dB(A). Receptor R12 is setback from the proposed pipeline alignment by a comparable distance (approximately 400 m), whilst receptors R13, R14 and R17 are setback further from the proposed pipeline alignment.

The construction of the valve station would not be expected to generate noise levels any higher than the pipeline/alignment development. **Table 4-3** sets out the predicted pipeline construction noise levels at the identified receptor locations.

Table 4-3 Predicted Construction Noise Levels at R12-R14 and R17

Receptor	Approximate Distance from Pipeline Alignment	Predicted Noise Level, $L_{Aeq,15min}$ dB(A)	Daytime Construction Noise Criterion $L_{Aeq,15min}$ dB(A)		Exceedance	
			Noise Affected	Highly Noise Affected	Noise Affected	Highly Noise Affected
D	400	43-52	40	75	Up to 12	No
R12	380	43-52			Up to 12	No
R13	630	39-48			Up to 8	No
R14	680	38-47			Up to 7	No
R17	860	36-45			Up to 5	No

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With consideration to the extent of the exceedances and the relatively short construction timeframe for the pipeline, physical construction noise mitigation measures are not considered necessary. However, adoption of the noise management strategies set out in Section 6.1 Appendix G of the EA (**Volume 2, Part 1**). would be implemented to minimise any noise impacts on the identified receptors during the proposed pipeline and valve station construction works. These would be incorporated into the construction phase Environmental Management Plan (EMP).

The 'noise affected' construction noise criteria (RBL +10 dB, Daytime / RBL + 5 dB, Night-time) are characteristically difficult to achieve, especially in rural areas as background noise levels are typically low. With respect to the predicted construction noise impact on Receptor D, construction activities with the potential to cause the stated exceedances associated with the pipeline construction are expected to continue for no more than approximately one week. Where the works are not likely to affect an individual or sensitive land use for more than three weeks in total, the works (with respect to the individual receptor) may be classified as 'short-term' under the NSW Interim construction noise guideline and as such would not necessarily require a quantitative assessment.

Notwithstanding this, the predicted noise levels during pipeline construction presented in Table 4-1 above result from a conservative approach where it has been assumed that all equipment and plant items would operate continuously and simultaneously during the whole assessment period. With regard to the duration of the predicted exceedance, URS considers that compliance with the noise management level of LAeq,15min 75 dB(A) (Highly Affected Noise Level), as predicted, indicates no significant impacts in relation to this work on Receptor D. Any short-term impact would be within the agreed working hours.

It is therefore considered that physical construction noise mitigation measures such as noise barriers would not be required for the pipeline construction. Noise management strategies such as engineering noise controls and work practices are considered the best options for the proposed construction activities. The recommendations for mitigation of construction noise impacts are detailed in Section 6.1 Appendix G of the EA (**Volume 2, Part 1**).

Valve Station Noise Emissions

AGL can confirm that the valve station will be silent in operation and would therefore have no influence of the findings of the operational noise assessment undertaken for the project.

Noise management strategies such as engineering noise controls and work practices are considered the best options for the proposed construction activities at the valve station. The recommendations for mitigation of construction noise impacts are detailed in Section 6.1 Appendix G of the EA (**Volume 2, Part 1**).

4.8 Traffic

In response to the issue of the EA's consideration of traffic impacts from potential trucking requirements, DP&I requested the following:

"the traffic assessment should assume the worst case, in that 100% of water for the operation of the power plant is to be supplied via truck, and assess the impacts accordingly.."

4 Preferred Project Report

Response

As outlined within **Section 3.7**, AGL confirms its commitment to trucking a maximum 200-300KL per annum of potable water to site only. The availability of the required operational water supply for the Dalton power plant has been confirmed on site through the successful drilling and testing of two bore wells. This is now the proposed source of operational water for the plant.

In addition to the proposed sourcing of operational water for the Dalton power plant from groundwater sources, the EA also examined other options for the supply of operational water, including the trucking of water to site.

AGL is not currently proposing that the trucking of operational water to site be approved. Should the trucking of water to site be reconsidered at some future date, a separate approval application would be prepared for this. We anticipate that the studies undertaken as part of the EA would be used in support of such an application. AGL notes that an assessment of trucking a maximum of 25ML/annum represents this 100% worst case scenario, and has already been assessed.

Submissions 20042 and **20019** highlighted a concern that vegetation clearing would be required along the local road network to transport oversized loads to the Site (**Section 3.5.2**).

Response

AGL commissioned Green Bean Design to reinvestigate the road network. Visual representations of typical over-mass / over-size vehicles traversing along the local road network are included as additional information within **Figures 4-14- 4-16**.

AGL notes that while haulage would not require the clearing of vegetation, some vegetation trimming may be required along the local road network between Gunning and Dalton.