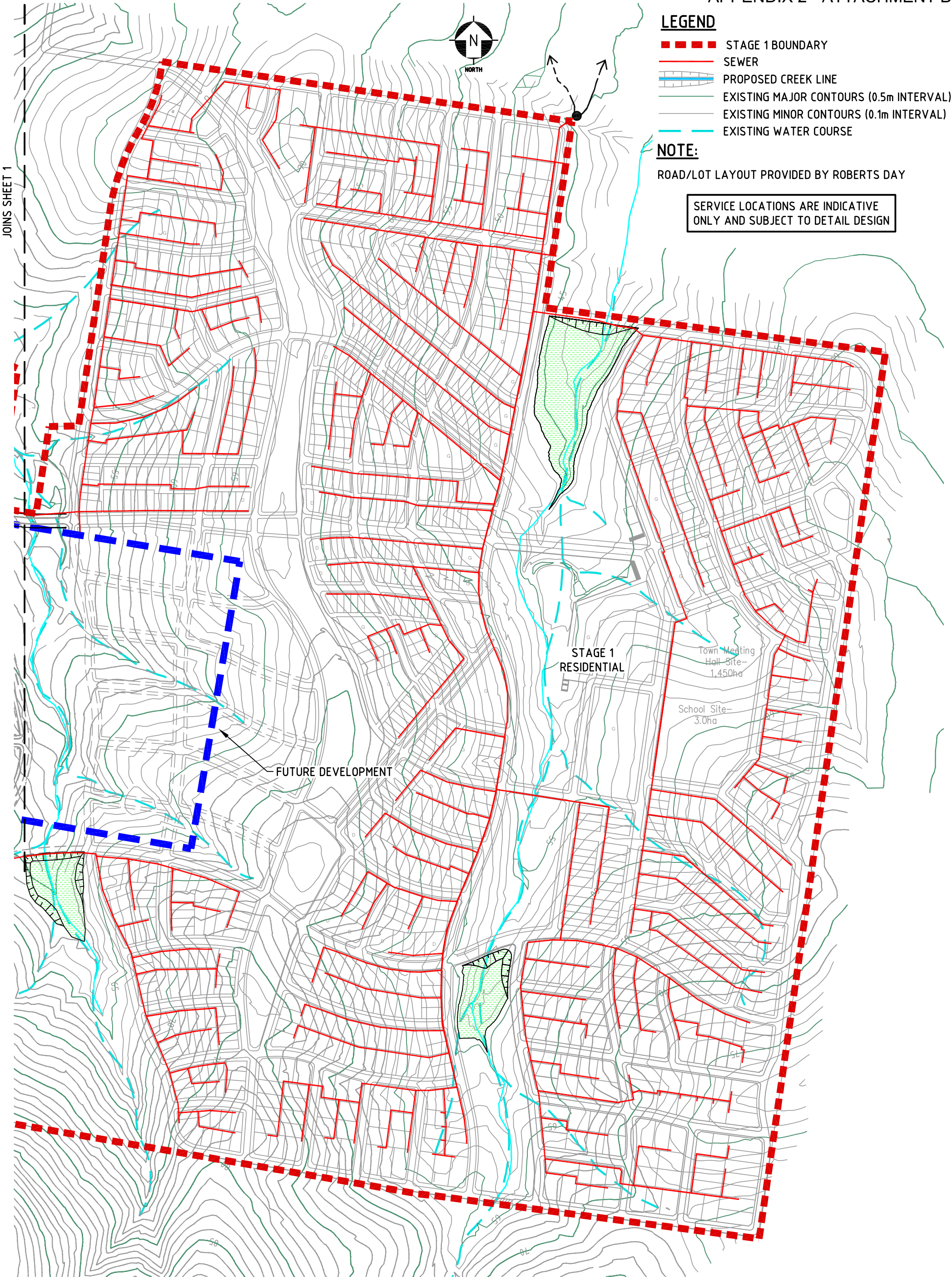






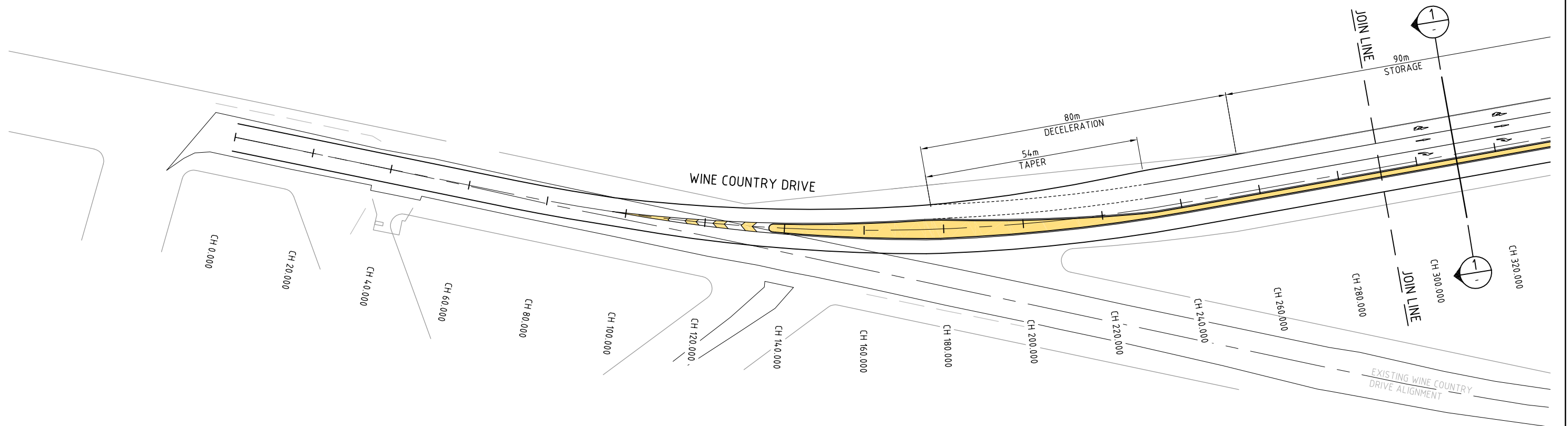
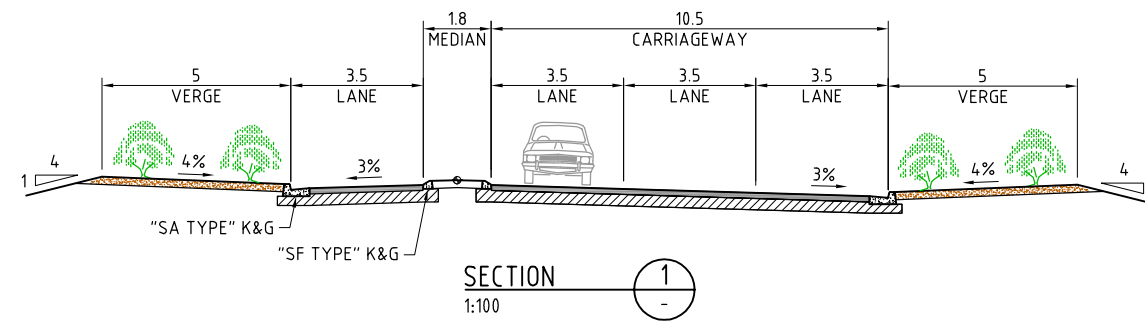
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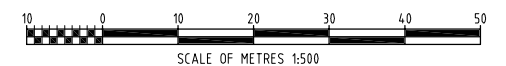
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Appendix 3 Preliminary Wine Country Drive Details



NOTES:

- EXISTING AND PROPOSED UTILITIES NOT SHOWN FOR CLARITY.
- 70 Km/h DESIGN SPEED HAS BEEN ADOPTED (WINE COUNTRY DRIVE)
- DRAWINGS PROVIDED FOR DA PURPOSES ONLY AND SUBJECT TO DETAILED DESIGN REVIEW/APPROVAL PROCESS WITH RMS.



										A1 SHEET	SCALE	1:500	 WorleyParsons resources & energy Copyright © WorleyParsons Services Pty Ltd ABN 61 001 279 812	CUSTOMER		HUNTLEE PTY LTD		HUNTLEE STAGE 1 PROJECT APPLICATION GENERAL ARRANGEMENT WINE COUNTRY DRIVE SHEET 1						
D	01.08.12	FINAL PREFERRED PROJECT REPORT SUBMISSION				NAH	PMM	NAH	GS	GS														
C	22.06.12	PREFERRED PROJECT REPORT SUBMISSION				NAH	PMM	NAH	GS	GS														
B	12.01.11	TRANSITION FROM EXISTING PAVEMENT TO NEW AMENDED				NAH	PMM	NAH	GS	BGP														
A	15.12.10	ISSUED FOR CLIENT APPROVAL				NAH	PMM	NAH	GS	BGP														
REV	DATE	REVISION DESCRIPTION				DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE				301017-00364	DRG No	301017-00364-006				REV	D

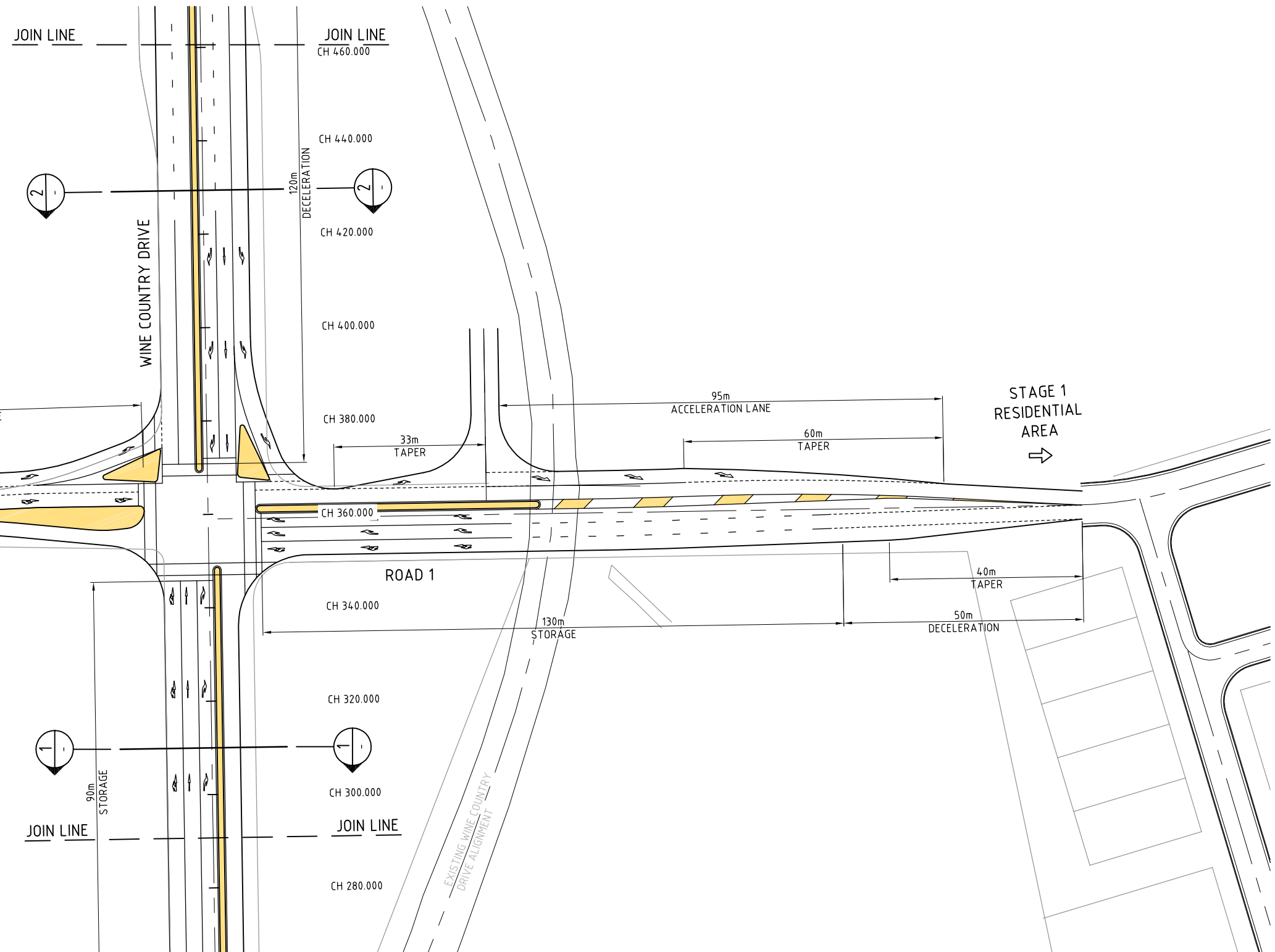
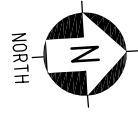


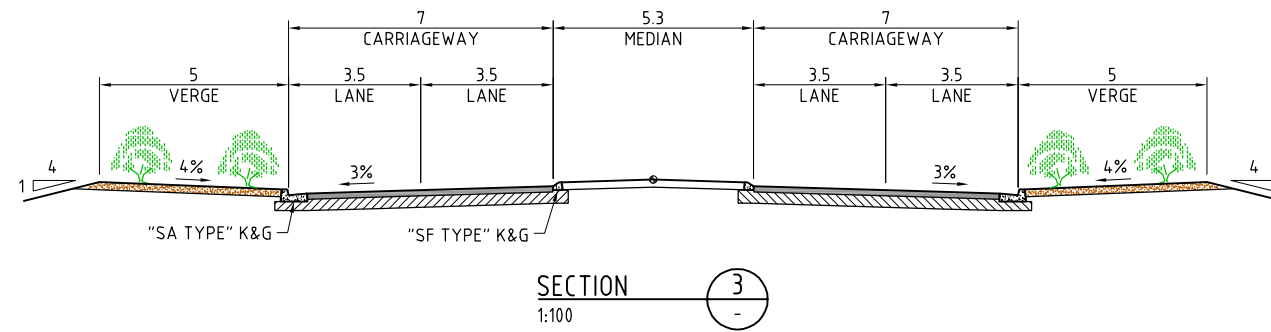
Diagram illustrating the cross-section of a road with dimensions and drainage details:

- Dimensions:**
 - Left Verge: 5m
 - Left Carriageway: 10.5m (3x 3.5m LANE)
 - Median: 1.8m
 - Right Carriageway: 10.5m (3x 3.5m LANE)
 - Right Verge: 5m
- Drainage:**
 - Left Verge: 4% slope
 - Left Carriageway: 3% slope
 - Right Carriageway: 3% slope
 - Right Verge: 4% slope
- Details:**
 - "SF TYPE" K&G (Kerbside Gutter) at the junction of the left carriageway and median.
 - "SA TYPE" K&G (Kerbside Gutter) at the junction of the right carriageway and median.
- Section Marker:** SECTION 2 (1:100)

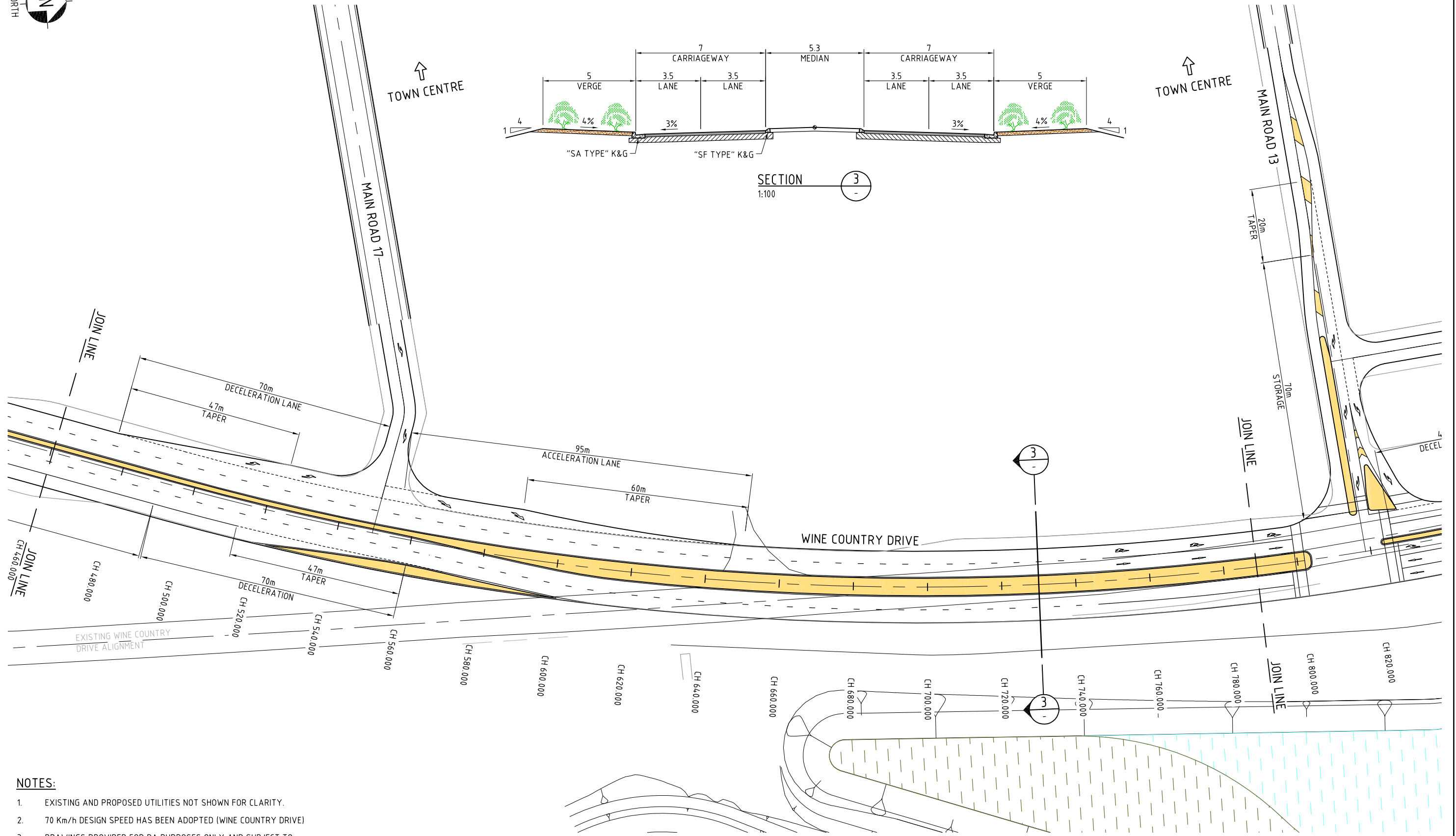
											A1 SHEET	SCALE	1:500	 WorleyParsons resources & energy Copyright © WorleyParsons Services Pty Ltd ABN 61 001 279 812	CUSTOMER HUNTLEE PTY LTD	HUNTLEE STAGE 1 PROJECT APPLICATION GENERAL ARRANGEMENT WINE COUNTRY DRIVE SHEET 2			
C	01.08.12	FINAL PREFERRED PROJECT REPORT SUBMISSION	NAH	PMM	NAH	GS	GS				WORLEYPARSONS PROJECT No. 301017-00364					DRG No	301017-00364-007	REV	C
B	22.06.12	PREFERRED PROJECT REPORT SUBMISSION	NAH	PMM	NAH	GS	GS												
A	15.12.10	ISSUED FOR CLIENT APPROVAL	NAH	PMM	NAH	GS	BGP												
REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE									



TOWN CENTRE

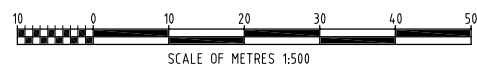


TOWN CENTRE

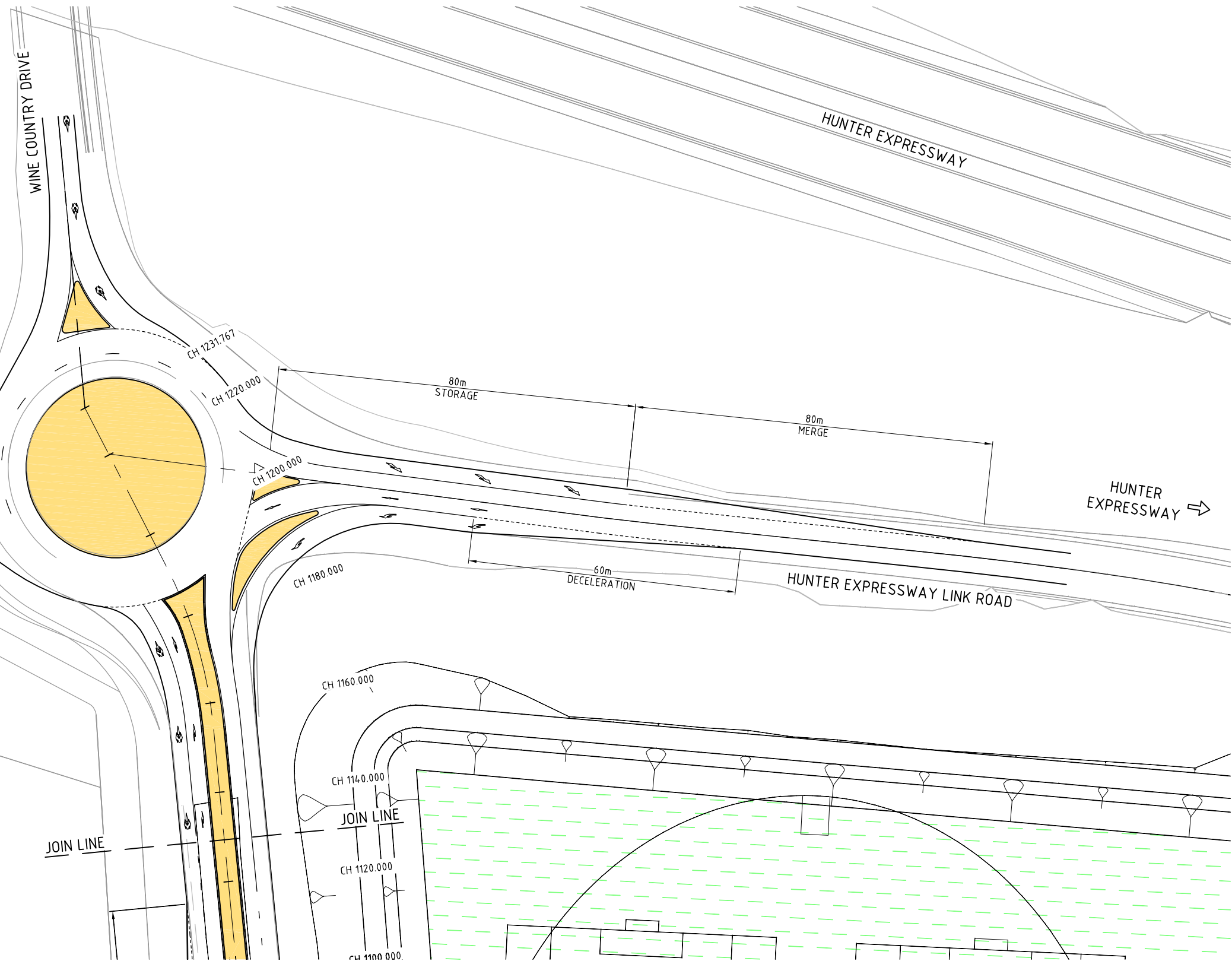


NOTES:

1. EXISTING AND PROPOSED UTILITIES NOT SHOWN FOR CLARITY.
2. 70 Km/h DESIGN SPEED HAS BEEN ADOPTED (WINE COUNTRY DRIVE)
3. DRAWINGS PROVIDED FOR DA PURPOSES ONLY AND SUBJECT TO DETAILED DESIGN REVIEW/APPROVAL PROCESS WITH RMS.



										A1 SHEET	SCALE	1500	WorleyParsons resources & energy Copyright © WorleyParsons Services Pty Ltd ABN 61 001 279 812	CUSTOMER		HUNTLEE STAGE 1 PROJECT APPLICATION GENERAL ARRANGEMENT WINE COUNTRY DRIVE SHEET 3			
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B	22.06.12	PREFERRED PROJECT REPORT SUBMISSION			NAH	PMM	NAH	GS	GS										
A	15.12.10	ISSUED FOR CLIENT APPROVAL			NAH	PMM	NAH	GS	BGP										
REV	DATE	REVISION DESCRIPTION			DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE					DRG No	REV	
													301017-00364					301017-00364-008	C



											A1 SHEET	SCALE	1:500	 WorleyParsons resources & energy Copyright © WorleyParsons Services Pty Ltd ABN 61 001 279 812	CUSTOMER	HUNTLEE STAGE 1 PROJECT APPLICATION GENERAL ARRANGEMENT WINE COUNTRY DRIVE SHEET 5			
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B	22.06.12	PREFERRED PROJECT REPORT SUBMISSION	NAH	PMM	NAH	GS	GS												
A	15.12.10	ISSUED FOR CLIENT APPROVAL	NAH	PMM	NAH	GS	BGP												
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PHYSICAL INFRASTRUCTURE REPORT

Appendix 4 Electrical Report

Worley Parsons

**Huntlee
Electrical Servicing**

November 2010



Suite C106 The Landmark
215 Pacific Hwy CHALESTOWN NSW
PO BOX 278 CHARLESTOWN NSW 2290
t: (02) 4923 8100 f: (02) 4923 8199
e: office@powersol.com.au

1. SCOPE

Power Solutions was commissioned by Worley Parsons to liaise with Energy Australia to ascertain what studies had been undertaken in the past by the energy supplier to establish the electrical servicing issues associated with the proposed Huntlee Urban Development.

The scope of work was to obtain details of any prior investigations that had been undertaken for the electrical supply strategy to service the Huntlee development from the Energy Australia network.

2. EXPECTED ELECTRICAL LOAD

Residential

The Huntlee site is 1,722 hectares in area and is identified in the Lower Hunter Regional Strategy as a major urban release area able to accommodate up to 7,500 residential lots.

The present development proposal is for a maximum of 5,600 standard residential lots and 200 large rural lots.

The Town Centre also includes 1,700 residential small lots.

Based on the above development density, we estimate the expected maximum electrical load for the residential component of Huntlee to be in the vicinity of 30 MVA. This is only a preliminary estimate and will require confirmation as the development plans are finalised.

Employment Land

The development also includes a Town Centre with 200ha of employment land.

At this time details are very limited regarding the likely occupiers of the proposed employment land. From a servicing perspective, this employment area has been estimated as being equivalent to approximately 2000 tenements.

Based on the above details, we estimate the likely electrical load for the employment land to be in the range of 8 to 18 MVA.

Thus the total electrical demand of the completed Huntlee development is likely to be in the order of 38 to 48 MVA.

3. DISCUSSIONS WITH ENERGY AUSTRALIA

We spoke to Mr Greg Skinner, Area Manager Lower Hunter, Distribution Operations & Reliability, in order to determine what previous studies had been undertaken by Energy Australia associated with servicing the proposed Huntlee project.

Mr Skinner indicated that at this time, Energy Australia had not undertaken detailed planning or design works to service the Huntlee development. Preliminary studies were carried out some years ago to determine a concept plan to supply electricity to the development.

The electricity supply upgrade works would be constructed in stages as needed to service the staged development of the Huntlee site.

A letter from Mr Skinner is included as an Appendix to this report listing the planning options and servicing issues identified by Energy Australia.

4. SUMMARY OF ELECTRICAL SERVICING

Based on the details provided by Energy Australia, the following is a summary of the likely approach to provide electrical services to Huntlee.

The following details provide only a high level overview of proposed works. As each stage of Huntlee is developed, a formal application would be required to Energy Australia who would advise the specific network extension works required to service that stage of the project.

Large Lot Residential

The proposed large rural lots on Old North Road & Wine Country Drive can be serviced from the existing North Rothbury Zone Substation.

Stage 1 Village & Employment Land

The existing feeder from North Rothbury Zone Substation can supply around 400 lots in its present configuration.

With a conductor upgrade, this feeder could supply up to 1200 lots.

Above this level, a new Zone Substation would need to be constructed in the Huntlee development.

Huntlee Zone Substation

Energy Australia has indicated that their long term requirement is for a new 132/11kV zone substation to be constructed within the development area.

They will require approximately 200m x 200m of land. The 132kV feeders will be constructed as overhead lines following easement routes, normally 30m wide. Around ten 11kV underground feeders may be needed from the substation to service the final development.

If the land has already been secured, Energy Australia has indicated they can construct a zone substation in around 5 years.

It would be prudent in the early planning and design phase of the development to establish the location of the substation, and set aside the land and associated 132kV power line routes.

5. APPENDICES

- Letter from Energy Australia advising of Preliminary Electrical Servicing Requirements



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STAGE 1 PROJECT APPLICATION
PHYSICAL INFRASTRUCTURE REPORT

Appendix 5 Authority Correspondence



Hunter Water Corporation
ABN 46 228 513 446
Customer Enquiries 1300 657 657
enquiries@hunterwater.com.au

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300

22 June 2012

Ref:2007-1222

SMEC
PO Box 1346
NEWCASTLE NSW 2300

Att: Kate Beard

Dear Kate

RE: Provision of Water and Sewerage Services to Huntlee New Town

The purpose of this letter is to confirm the status of the provision of water and sewerage facilities to the Huntlee New Town development (Huntlee).

Hunter Water has been liaising with the developer, the LWP Property Group (LWP) and its consultants for over five years regarding the provision of water and sewerage facilities to Huntlee. LWP has prepared detailed water and sewer strategies for the site which were approved by Hunter Water in 2009.

Hunter Water has recently viewed the latest development proposal for Huntlee and understands that the overall yield is generally the same, although there is a revised rollout and staging for the development. Whilst the latest development proposal is broadly in line with the approved strategies, Hunter Water has requested that LWP revise the strategies to reflect these changes.

Overall, Huntlee can be serviced by a combination of developer-funded and Hunter Water-funded works. Hunter Water has a staged regional water supply upgrade program to increase the available system capacity in the Branxton area. The program identifies the progressive construction of works to increase capacity in four stages. Stages 1 and 2 are complete; with Stage 3 works (including the construction of a new reservoir at Windella and a new water pumping station at Lochinvar) are currently under way. The Stage 4 works (which include a new watermain from Lochinvar to Harpers Hill, a new reservoir at Harpers Hill and a new watermain from Harpers Hill to Greta) are currently scheduled for completion in 2017-18.

Water

Hunter Water's growth projection for the catchment includes an estimate of around 350 Equivalent Tenements (of actual customer demand on the system) from Huntlee prior to the Stage 4 regional upgrades. Whilst Hunter Water's ability to service development in the interim is dependent on actual growth over time, if growth is higher (or lower) than predicted, there are options available to cater for this; largely through optimising the timing/staging of developer works. Hunter Water will confirm the optimal strategy for servicing Huntlee at the time a revised developer servicing strategy is submitted for review.

Wastewater

There is currently around 900 Equivalent Tenements spare capacity at Branxton Wastewater Treatment Works (WWTW). Branxton WWTW was upgraded in 2010 to a Membrane Bioreactor plant where membrane capacity is staged over time to match flows. To realise the additional plant capacity beyond 900ET, extra membrane cells and associated infrastructure need to be installed. Based on previous growth projections which excluded Huntlee, Hunter Water currently has the membrane upgrade work scheduled for the 2017-21 price path. However, this work can be brought forward (either through developer funding or Hunter Water funding) to cater for Huntlee or other growth in the catchment that exceeds Hunter Water's current forecast.

Hunter Water confirms that it has no objection to the Huntlee development provided that water and sewerage facilities are provided by the developer, in accordance with approved servicing strategies. Should you require further clarification or assistance please do not hesitate to contact me on 4979 9545.

Yours Sincerely

A handwritten signature in dark ink, appearing to read 'M. Withers', is positioned above the printed name.

MALCOLM WITHERS

Senior Developer Services Engineer

145 Newcastle Road
Wallsend NSW 2287

Address all mail to
PO Box 487 Newcastle
NSW 2300 Australia

Telephone +61 2 13 15 25



26 November, 2010

Mr David Griffiths
Power Solutions
PO Box 278
Charlestown NSW 2290

Dear David

RE: Huntlee New Town Electricity Supply

This letter is in response to your email enquiry on 11 November requesting EnergyAustralia to provide preliminary comment on the electricity planning requirements associated with the Huntlee development. In particular, comment on electricity supply to the initial stages of development and longer term requirements to complete the development.

Introduction

Information provided to Energy Australia in November 2010 provided a concept plan for the development. This concept plan shows four village centres with surrounding residential development, two areas of large rural lot residential development, and a proposed town centre with employment land.

The development proposal contains a total of up to 5,600 residential lots, 200 large rural lots, and 200 ha of employment land, equivalent to 3,700 lots.

Development is expected to commence with 125 residential lots in 2013, with annual releases steadily increasing to 350 per annum in 2017 and continuing to 2035.

As detailed loadings have not been provided a number of assumptions have been made for the purpose of this advice. It is noted that gas will be available within the Huntlee development which may affect the following analysis in terms of capacity and timing requirements of the development. In particular, the commercial and industrial customers may have significant impact on these assessments.

Existing Supply Arrangements in the Area

Zone Substation Capacity

The Branxton 66/11kV zone substation is located less than one kilometre from the proposed development area, but is operating at full capacity.

The Rothbury 132/11kV zone substation is located approximately five kilometres from the proposed development area, and has some spare capacity. Rothbury zone substation is experiencing load growth of approximately 4% per annum. Any load supplied to Huntlee will be in addition to this growth.

11kV Feeder Capacity

There are three 11kV feeders near to the proposed development which each have between 0.5MVA and 2MVA available capacity.

Huntlee Supply Options

Zone Substation Capacity

The two zone substations near to the proposed development do not have sufficient capacity to supply the whole Huntlee town development. Projects required to increase the capacity of these zone substations would be extensive, and construction of a new zone substation within the Huntlee development is viewed as the most effective way to provide the capacity required for the whole development.

A zone substation within the Huntlee development is forecast to be required by 2018, when the addition of the Huntlee development to the forecast load for Rothbury shows that Rothbury zone substation will reach full capacity.

11kV Supply

Large Lot Residential

The 11kV load forecast indicates that the proposed large lot residential areas on Old North Road and Wine Country drive can be supplied from existing Rothbury Feeders 34635 and 34641.

Stage 1 – Village 1 & Employment Land

The existing Rothbury feeder 34641 to North Rothbury has the capacity to provide normal supply to approximately 2 MVA (est. 400 lots). It is recommended that this feeder be re-built with larger conductor in 2015, which would provide capacity of 6 MVA which would service approximately 1200 new lots). Supply for development of greater than 6 MVA will require construction of a zone substation at Huntlee. It is expected that to support the total proposed load of the residential and employment land which has been assessed as approximately 48 MVA, a minimum of ten 11kV feeders would be required. Many of these feeders will need to be developed together, as the significant man made and natural boundaries restrict routes available for new works.

Recommendations

Based on this preliminary high level analysis EnergyAustralia recommend the following be included in the planning and approval stages of the Huntlee development:

- A new 132/11kV zone substation will be required within the development area.
- A site for the substation should be selected in accordance with the requirements below, and be added to the concept plan.
- Routes for 132kV supply to the substation, and routes for 11kV feeders should be identified and added to the concept plan.
- Design of the 11kV supply within Huntlee should allow the future cut over of supply to the new Huntlee zone substation.

- It is forecast that the Huntlee zone substation will be required by 2018 dependant upon load growth including Huntlee on the existing Rothbury zone substation.
- Beyond 2018, up to ten 11kV feeders will need to be constructed from Huntlee zone substation to supply residential and employment land development.

Zone substation site requirements

Energy Australia will require a site approximately 200m x 200m. The site is required to have suitable council zoning, and be free of easements, environmental and/or native title constraints.

Items to be considered when selecting a site include :

- The site should be central to the load area.
- The site should be level, above the 1 in 100 year flood level, and be free of contamination, acid/sulphate soils, mine subsidence etc.
- The site must be suitable for access for a 20m low loader with 12 tonne axle loading, and have water suitable for fire fighting.

In conclusion, the above information has been provided to allow details of electricity supply infrastructure requirements to be included in the town planning and approval process. Detailed analysis of the proposal has not been made and this report does not constitute an application for connection. EnergyAustralia will require the proponent to submit a formal application for connection and comply with the relevant Network Standards and Electricity Supply requirements before connection will be allowed. When more detailed planning is available I recommend the proponent contact EnergyAustralia to advise short and long term supply requirements, staging of developments and any refined loading details. More detailed analysis may be required at that time.

Thankyou for your enquiry. Should you wish to discuss this proposal further please contact me during normal business hours on (02) 4934 9110.

Yours sincerely



Greg Skinner
Area Manager Lower Hunter
Distribution Operations & Reliability



7 December 2010

Networks and Access Technologies

Integrated Network Planning
Locked Bag 6018
Hunter Region Mail Centre 2310

Kate Beard (Worley Parsons)
PO Box 668
Newcastle

Telephone (02) 4924 9475
Facsimile (02) 4924 9212

Edward.J.Bush@team.telstra.com

Re: HUNTLEE – TELECOMMUNICATIONS SERVICES

Dear Kate,

In response to your letter dated 16th Nov 2010, key planning issues that have been considered as having an impact on Telstra's existing telecommunications infrastructure include the following: NIL

You will be aware that there have been recent announcements relating to changes to the Government policies on the provision of infrastructure in new developments.

These can be viewed at

http://www.dbcde.gov.au/broadband/national_broadband_network/policy_state_ments

These changes to policy will have a significant impact on the way infrastructure is provided in your proposed development.

Telstra will work with Government, NBN Co and stakeholders on the implementation of the new policy on Greenfields estates.

Our key concerns during this period are to help ensure services to developers and end customers are maintained and meet our commercial and legal obligations.

Until alternative arrangements are put in place, developers are requested to remain in contact with Telstra through the normal channels.

Planned property developments can be registered with Telstra via the www.telstrasmartcommunity.com website.

The opportunity to respond and provide input is appreciated.

For future correspondence and enquiries regarding this matter, please contact the undersigned on 02 4924 9475.

Yours faithfully,

Edward Bush
Area Planner