

Strategy and Assets Committee-19 January 2016 - Item 20 - Attachment A

| Outlet      | location   | actions  | Cost  | Status update (Dec 2015)                  |
|-------------|--|--|---|---|
| Ulladulla24 | Eastern end of Dowling Street                      | <p>Council engaged GHD to prepare a detailed design for remedial works for this site. The approach adopts the use of a reno mattress to stabilise the outlet channel for a distance of approximately 10m downstream of the outlet.</p> <p>Due to the height of the retaining wall and the associated drop to the outlet the installation of the safety fencing along the top of the wall is recommended.</p> | The works are currently under contract and funding for the works has been committed by Council. | Completed                                 |
| Vincentia17 | Behind No.332 Elizabeth Drive                      | Remediation of this outlet is included in a shaped pathway design which traverses this area. The pathway and associated outlet remediation works is currently out to tender.   | The works are currently out to tender and funding has been committed by Council.                | Completed                                 |
| Ulladulla10 | Corner of Crescent Street and Burrill Street North | A concept design for remediation of this outlet was prepared as part of this project and is included in Appendix D. The proposed works involve the construction of a drop structure consisting of 1200mm diameter precast concrete pit and outlet scour protection.  | \$26,000 <sup>1</sup>   | Programmed early 2016<br>Design completed |

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|-------------|--|--|---|--|
| Ulladulla20 | Eastern end of Parson Street                       | <p>Since undertaking the site inspection which this highlighting the public safety risk associated with this site Council has erected safety fencing to preclude public access to this site.</p> <p>Mitigation measures to combat the erosion issue and asset risk at this site would need to be designed with significant geotechnical input and the preparation of an estimate of cost for these works is beyond the scope of this project, but could be in the order of several million dollars. It is likely to be possible only with funding support provided by government.</p> <p>In the interim is it recommended that the site be inspected at intervals not exceeding 12 months and the risk re-assessed. Any progression of the head cut toward the roadway may trigger intervention.</p> | <p>Safety fencing already constructed under existing maintaining budget.</p> <p>Due to significance of the erosion problem potential sources of grant funding should be explored in orders to fund remediation words.</p> | <p>Site secured (fenced off)<br/>On going Monitoring<br/>No further works proposed at this stage</p> |
| Ulladulla19 | East of Caravan Park off eastern end of New Street | <p>Since undertaking the site inspection which highlighted the public safety risk association with the site Council has permanently locked the pedestrian access gate at the</p>   | <p>Due to significance of the erosion problem potential sources of grant funding should be explored in order to fund remediation works should the head cut</p>  | <p>On going Monitoring<br/>No further works proposed at this stage</p>                               |

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|----------------|-------------------------------------|---|-----------------------|---|
|                |                                     | <p>caravan park preventing access from the park to this site and removed trail markers delineating the information access route.</p> <p>Due to the minimal risk of asset damage in the foreseeable future it is recommended that the site be monitored at intervals not exceeding 12 months. Should the public safety or asset damage risk increase then remedial works would likely be required.</p> |                       |   |
| Nth Bendalong2 | Northern side of Allawah Cabins     | <p>A concept design for remediation of this outlet was prepared as part of this project and is included in Appendix D. The proposed works (Option 1) involved the construction of a drop structure consisting of a 1200mm diameter precast concrete pit and approximately 20m of 400mm diameter pipe and associated outlet scour pool.</p>  | \$28,000 <sup>1</sup> | <p>Works programmed early 2016<br/>Design completed</p> |
| Mollymook7     | Opposite No.89 Bannisters Head Road | <p>A concept design for remediation of this outlet was prepared as part of this project and is included in Appendix D. The proposed works involve the construction of a 1200mm diameter precast concrete pit and outlet scour protection.</p>   | \$22,000 <sup>1</sup> | <p>Design completed<br/>Works programmed 2016/17</p>    |

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|             |                                       |  |   |                         |
|-------------|---------------------------------------|--|---|-------------------------|
| Berrara1    | Collier Drive opposite Fifth Avenue   | Construction of approximately 30m of bed and bank rock revetment on the northern side of the outlet channel in order to protect the adjacent property and building.                                    | \$50,000 <sup>2</sup>   | Works programed 2016/17 |
| Ulladulla18 | Northern end of Did-Dell Street South | Construct and bank reinforcement consisting of rock revetment to the bed on the channel and rock boulder walls to the sides of the existing scour channel for a minimum of 10m downslope of the outlet | \$20,000 <sup>2</sup>   |                         |
| Ulladulla21 | Rennies Beach Car Park                | Council engaged GHD to prepare a detailed design for remediation and stabilisation of this area incorporating gabion baskets and reno mattresses.  | The works are currently under construction and funding for the works has been committed by Council. | Completed               |
| Mollymook1  | Between No.s 8 & 10 Surfers Parade    | Construct a rock lined channel from the existing outlet to the beach (approximately 90m) in order to prevent any further undermining of the steep embankments on either side of the channel.           | \$90,000 <sup>2</sup>   |                         |
| Bawley21    | No.33 Harrington Parade               | Construct a rock apron downslope of existing concrete dish drain in order to prevent undermining of existing dish drain.   | \$3,500 <sup>2</sup>  |                         |
| Mollymook17 | Opposite No. 55 Mitchell Parade       | Construct the support using Elcorock wall or equivalent to the existing dune on the northern side of the outlet in   | \$50,000 <sup>2</sup>   |                         |

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|                 |   |   |                       |  |
|-----------------|---|---|-----------------------|--|
|                 |   | order to prevent dune erosion and protect the existing sewer pump station.  |                       |  |
| Bawley6         | Opposite No.46 Tingira Drive                        | Reconstruct outlet channel such that it achieves a positive fall away from the road to prevent water ponding on the road, saturation and failure of the road pavement. Reconstruct road shoulder as required. | \$15,000 <sup>2</sup> |  |
| Manyana2        | Behind No's 53 & 55 Sunset Strip                    | Construct rock boulder or gabion wall and associated bed reinforcement existing head cut/scour hole to prevent further upslope migration  | \$35,000 <sup>2</sup> |  |
| Bendalong5      | Boronia Street opposite Cedar Street (western side) | Reconstruct existing steps providing beach access to remove dangerous steel spikes and slippery uneven surfaces. Divert existing outlet channel south to limit potential for stormwater to scour new steps.   | \$25,000              |  |
| Shoalhaven Hds5 | River Road opposite Renown Avenue                   | Remove existing koppers log fence currently protecting the vertical drop at the headwall and replace with safety fencing (approx. 15m)  | \$5,000 <sup>2</sup>  |  |

<sup>1</sup> Preliminary cost estimate based on concept design developed as a part of the project (see Appendix E)

<sup>2</sup> Budget estimate based on preliminary desktop assessment only (see Appendix E)



## EXPLANATORY STATEMENT

### Proposal to install gates and barriers to regulate vehicle access into the 'Heritage Estates', Worroring Heights

#### Overview

An extensive network of informal vehicle and trail bike tracks has been created in the Heritage Estate over several years, causing erosion and land degradation. Vehicle access has also made the Heritage Estates a hotspot for illegal dumping. Unless vehicle and trail bike access is addressed, other measures to address these problems will have limited effect.

Pursuant to Section 116 of the NSW Roads Act 1993, Council proposes to install a series of gates and barriers to generally exclude vehicles and trail bikes, while allowing pedestrian access.

#### Statutory process

Although the tracks in the Heritage Estates occur across a range of land tenures, the entry points generally align with Council's road reserves.

A public road is one that provides a right of free passage to members of the public.

Under Section 116 of the NSW Roads Act 1993, a roads authority (i.e. Council) may apply to the NSW Roads and Maritime Services (RMS) for consent to erect a barrier for the purpose of regulating traffic on a public road for purposes (other than for road work). Section 116 of the Act has been delegated to Council, however Council must consider the technical recommendations of the Shoalhaven Traffic Committee (STC), and the Traffic Committee guidelines also apply, including the RMS right of appeal.

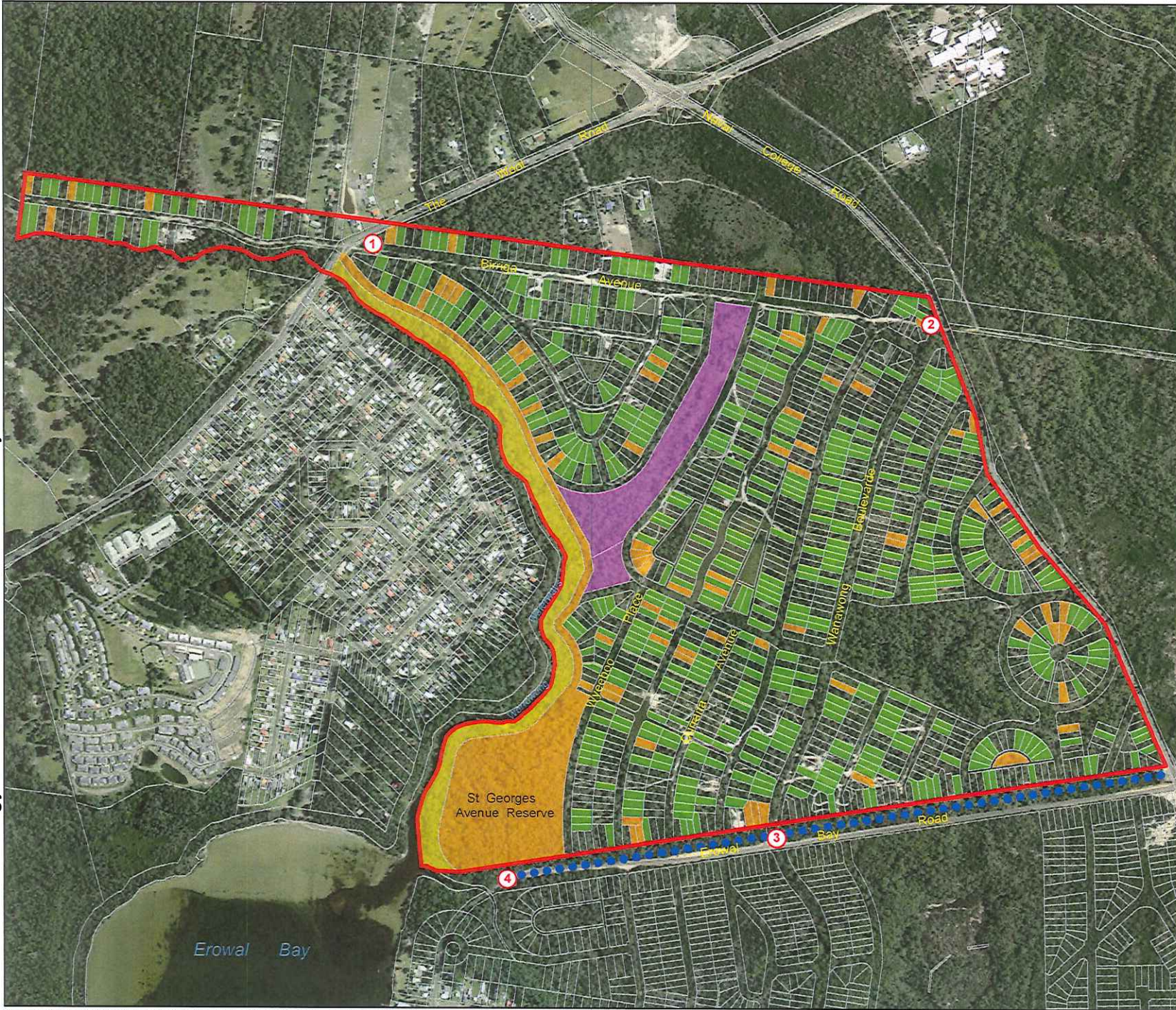
The proposal to install gates and is being publicly exhibited until 6 November 2015. A summary of feedback received during the exhibition will be referred to the STC for advice before Council makes a final decision. Consistent with usual practice, Council will notify the RMS of its decision and the RMS will have two weeks to appeal Council's decision if it chooses.

#### Proposed gates and barriers

A plan showing the proposed location of the gates and barriers can be viewed on Council's website at [www.shoalhaven.nsw.gov.au](http://www.shoalhaven.nsw.gov.au) under "Documents on exhibition" or at Council's Nowra administrative building. Each gate would be locked. Keys would be held by Council, the RFS and NPWS. Vehicle access will be possible for valid purposes, such as removal of dumped material, subject to consideration of the risk to safety.

#### Have your say

Submissions may be made in writing to the General Manager, Shoalhaven City Council, PO Box 42, Nowra NSW 2541, or by email [council@shoalhaven.nsw.gov.au](mailto:council@shoalhaven.nsw.gov.au) by 6 November 2015. Enquiries: Eric Hollinger, Senior Project Planner on (02) 4429 3320. File Reference 1446E/2.



## Legend

### Land Tenure

- Heritage Estate
- Crown Land
- SCC Lots
- NPWS Lots
- Offered to OEH as a future offset

\* Another 64 lots have been offered for sale to NPWS but have not settled.

Install locked gates with boulders and/or steel cable wire fence to prevent side access and chicanes where appropriate

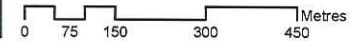
- 1 Birriga Ave - The Wool Rd
- 2 Birriga Ave - Naval College Rd
- 3 Warrigoo Blvd - Erowal Bay Rd

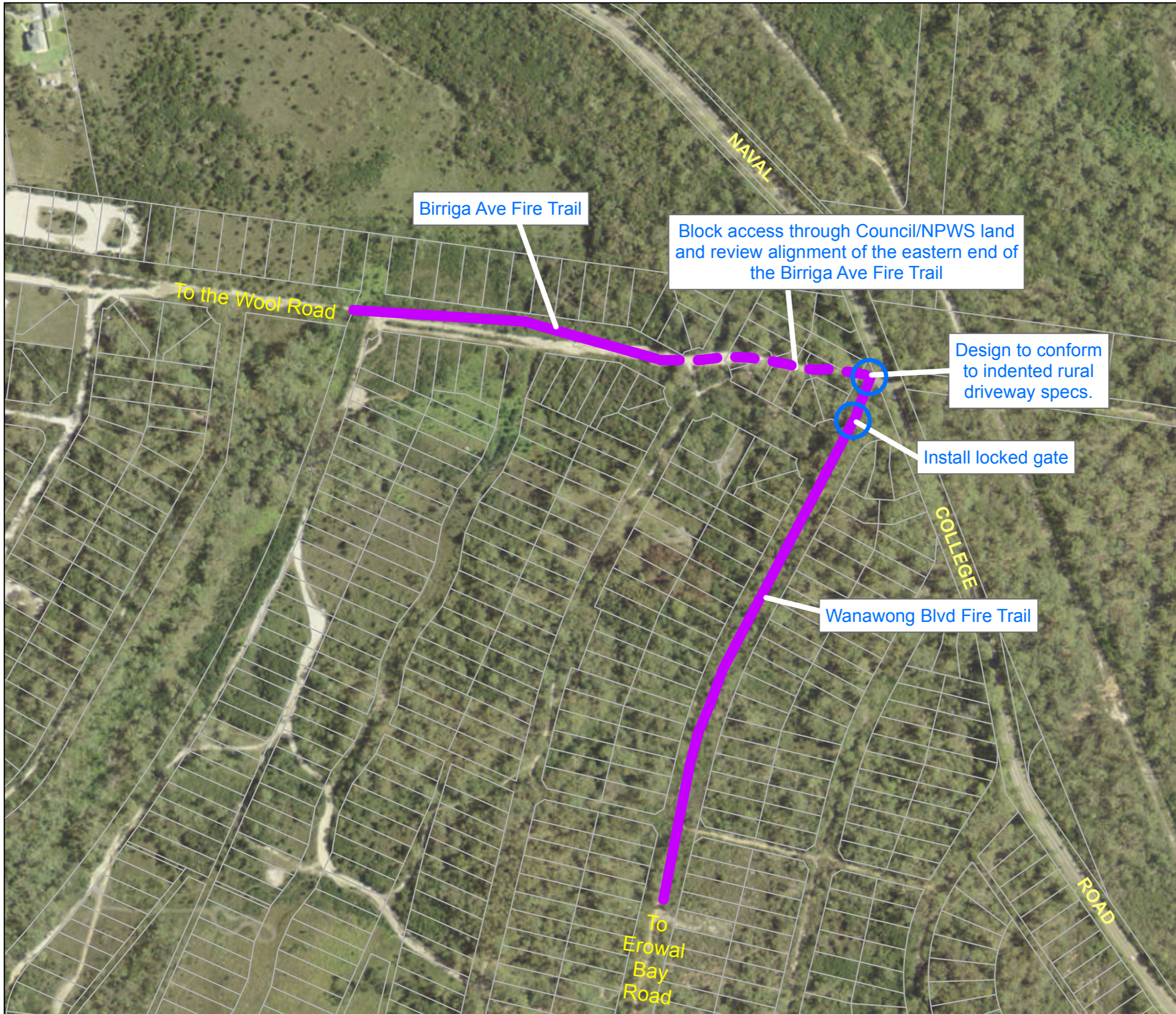
●●●● Install boulders and /or steel cable fence including along Naval College Rd if necessary

- 4 Entry to St Georges Avenue Reserve - Existing locked gate

## Proposed Vehicle Control Measures

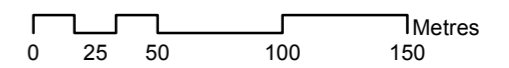
## Heritage Estates Warring Heights



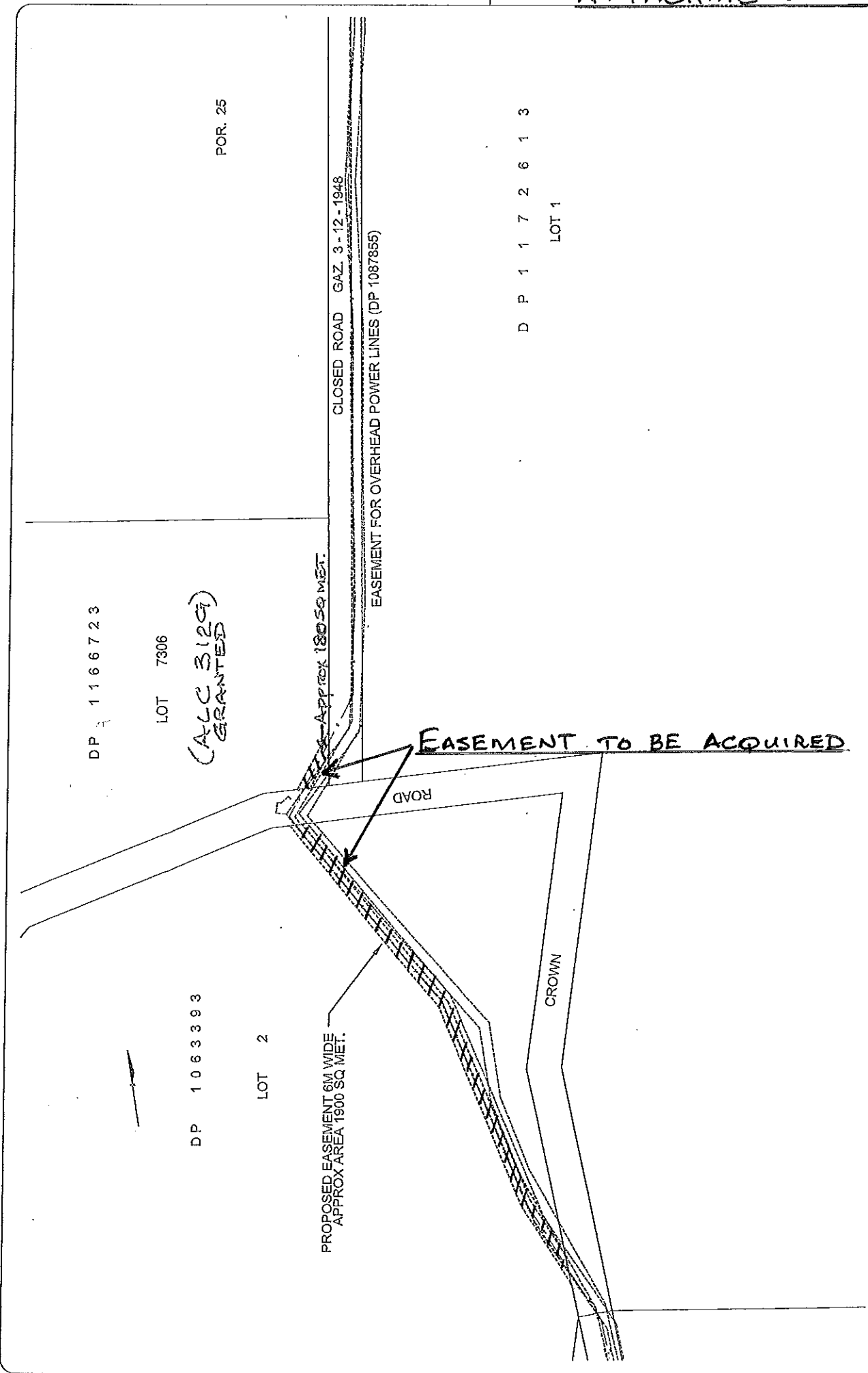


### Proposed Vehicle Control Measures

### Heritage Estates Worrowing Heights







DP 1166723

LOT 7306

(ALC 3129 GRANTED)

DP 1063393

LOT 2

PROPOSED EASEMENT 6M WIDE APPROX. AREA 1900 SQ. MET.

APPROX 180 SQ MET.

CLOSED ROAD GAZ. 3-12-1948

EASEMENT FOR OVERHEAD POWER LINES (DP 1087855)

ROAD

CROWN

EASEMENT TO BE ACQUIRED

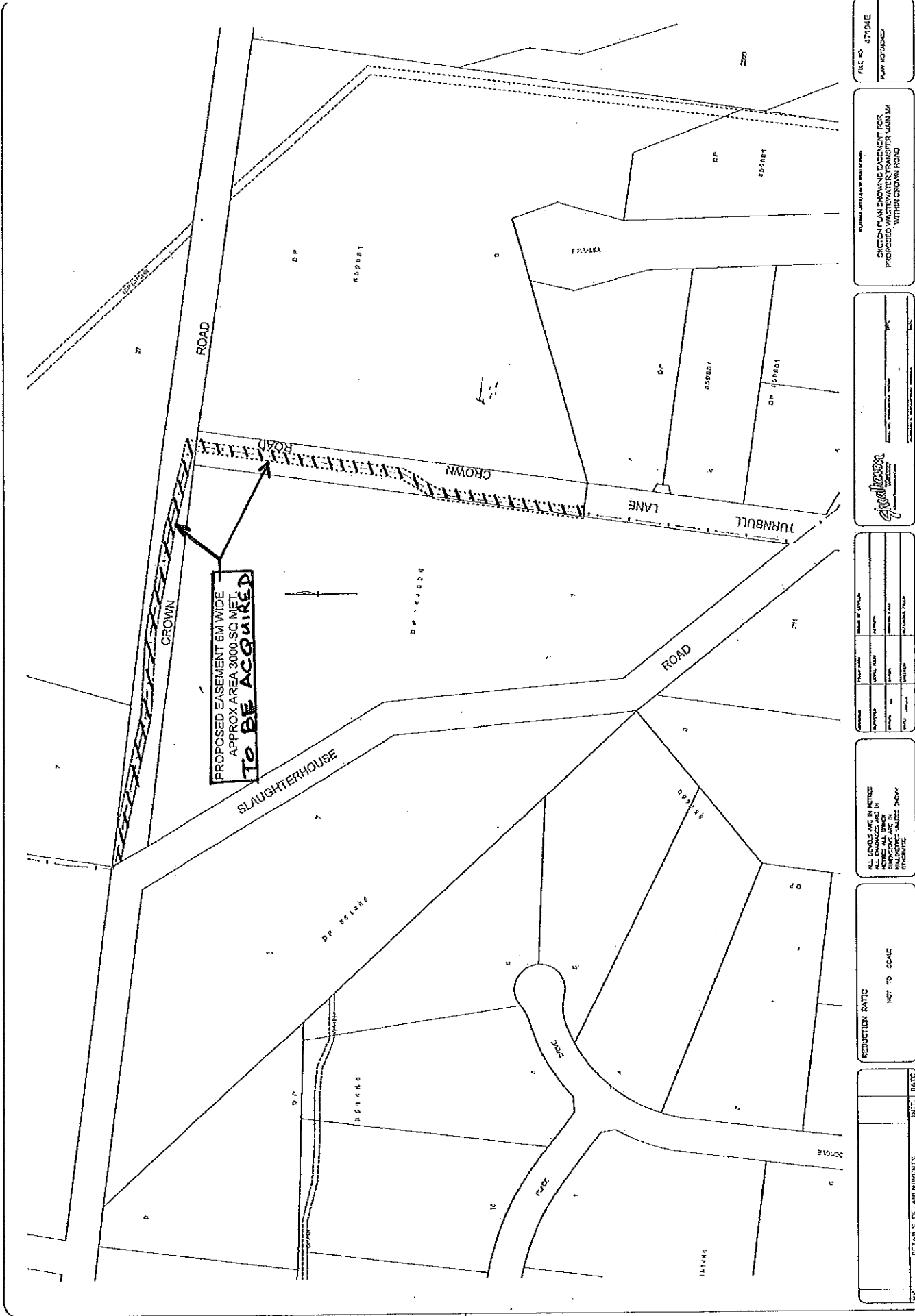
D P 1 1 7 2 6 1 3

LOT 1

POR. 25

| <p>FILE NO. 47104E<br/>PLAN REPRODUCED</p>   |      |     |      |  |  |  |  |
|--|------|-----|------|--|--|--|--|
| <p>NATIONAL LAND INFORMATION SERVICE<br/>SKETCH PLAN SHOWING EASEMENT FOR<br/>PROPOSED WASTEWATER TRANSFER MAIN I4<br/>WITHIN LT 2 DP 1063393</p>                |      |     |      |  |  |  |  |
| <p>DATE: _____<br/>DRAWN: _____<br/>CHECKED: _____<br/>APPROVED: _____<br/>PROJECT: _____<br/>SHEET NO. _____ OF _____</p>                                       |      |     |      |  |  |  |  |
| <p>REDUCTION RATIO<br/>NOT TO SCALE</p>  |      |     |      |  |  |  |  |
| <p>ALL LEVELS ARE IN METRES<br/>ALL DIMENSIONS ARE IN<br/>METRES UNLESS OTHERWISE<br/>SPECIFIED</p>  |      |     |      |  |  |  |  |
| <p>DETAILS OF AMENDMENTS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table> |      | NO. | DATE |  |  |  |  |
| NO.  | DATE |     |      |  |  |  |  |
|  |      |     |      |  |  |  |  |
|  |      |     |      |  |  |  |  |

ATTACHMENT 'A'



PROPOSED EASEMENT 6M WIDE  
APPROX AREA 3000 SQ MET  
**TO BE ACQUIRED**

FILE NO. 47104E  
PLAN NOTED

SITECH PLAN SHOWING EASEMENT FOR PROPOSED TURNBULL LANE WITHIN CROWN ROAD

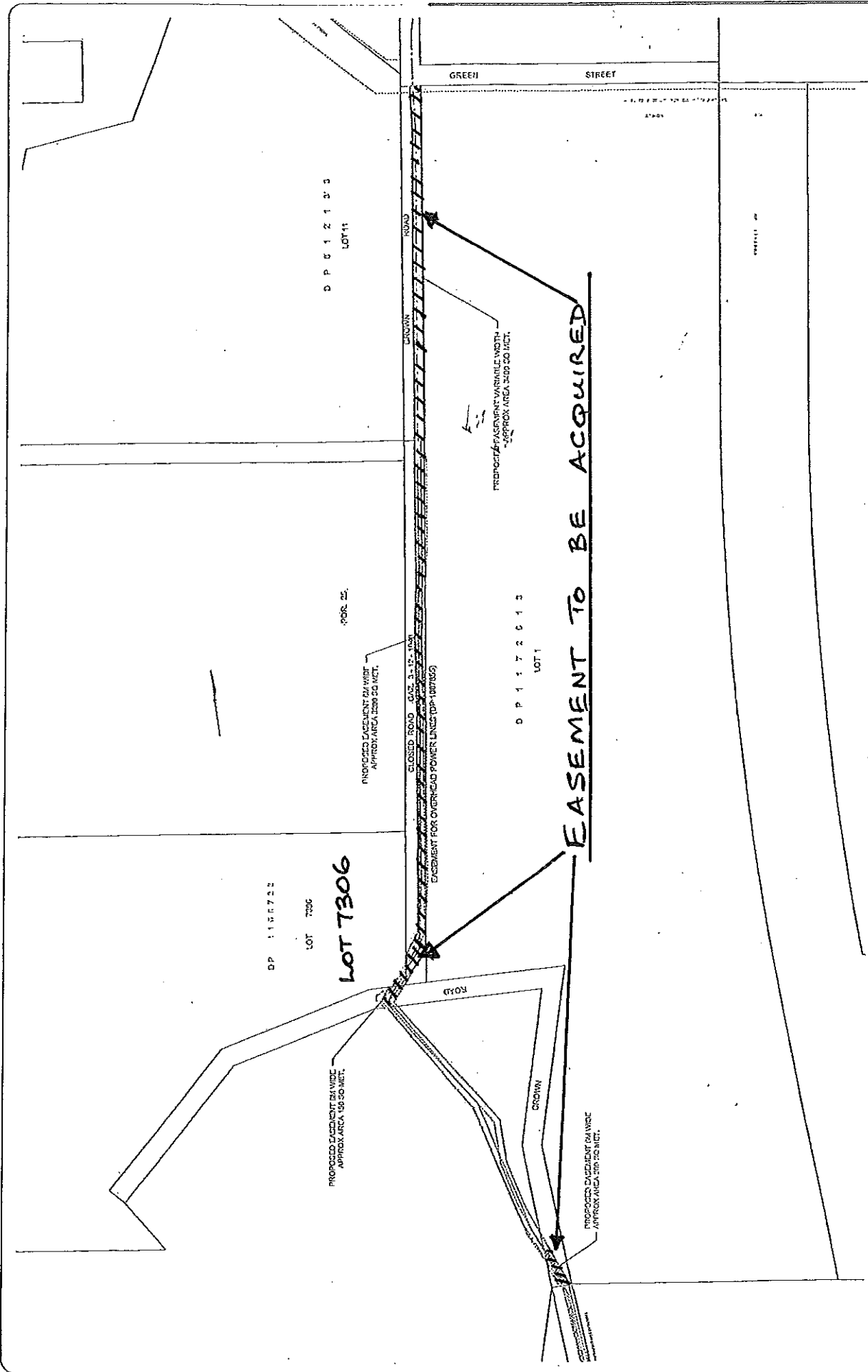
**Sitech**  
Engineering & Planning  
100/102 WILSON ROAD, WILSON  
TEL: 08 9437 1000  
WWW.SITECH.CO.NZ

| NO. | DATE | BY | REVISION |
|-----|------|----|----------|
|     |      |    |          |
|     |      |    |          |
|     |      |    |          |

ALL LEVELS ARE IN METRES  
UNLESS OTHERWISE STATED  
IN THIS PLAN  
DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION

REDUCTION RATIO  
NOT TO SCALE

DETAILS OF AMENDMENTS  
INIT. DATE



FILE NO 47704C  
PLAN REFERENCE

ALL DIMENSIONS IN METERS UNLESS OTHERWISE SPECIFIED

DITCH PLAN SHOWING EASEMENT FOR PROPOSED WATER TRANSFER MAIN M4 WITHIN CROWN ROAD & CLOSED ROAD

DATE

DRAWN BY

CHECKED BY

DATE

EASEMENT

SCALE: 1:100

| NO. | REVISION | DATE | BY |
|-----|----------|------|----|
|     |          |      |    |
|     |          |      |    |
|     |          |      |    |

REDUCTION RATIO: NOT TO SCALE

SCALE: 1:100

DATE: 1/19/16

DRAWN BY: [Signature]

CHECKED BY: [Signature]