



Attachments to item number 4.2 –

Town Planning Compliance Advice – Gray Planning

Geotechnical Assessment – Peter Hofto

Stormwater Management Report – Gandy & Roberts

Engineering Plans – Gandy & Roberts

For Mr D Miller
116A Bally Park Road, Dodges Ferry 7173
Sorell Council municipality

21 December 2022



grayplanning.com.au
ABN 99148920244

Gray Planning
224 Warwick Street
West Hobart TAS 7000

21 December 2022

Mr D Miller
Brooks Lark and Carrick Surveyors
Unit 1, 2 Kennedy Drive
Cambridge TAS 7170

Dear David,

I refer to recent discussions with you in relation to the property at 116A Bally Park Road at Dodges Ferry and a proposed development of the site comprising subdivision of the existing dwelling to be contained on a balance lot (lot 6), as shown on a proposal plan dated 16 November 2022. The proposal also includes the subdivision of 7 new vacant lots and also two road lots for the extension of Bally Park Road and Eastaugh Street.

Please find attached a town planning report with respect to confirmation of compliance for the proposal against applicable development standards for subdivision in the Low Density Residential zone of the Sorell Local Provisions Schedule and State Planning Provisions of the Tasmanian Planning Scheme.

Should you have any questions about the content of the report, please do not hesitate to contact me on 0439 342 696.

Yours faithfully



Danielle Gray B.Env.Des. MTP. MPIA
Principal Consultant, Gray Planning



Table of Contents

1	Introduction	4
1.1	Purpose	4
1.2	Copyright.....	4
2	The subject site.....	5
2.1	Existing Site Development at the subject site 116A Bally Park Road, Dodges Ferry	5
2.2	Title for the subject site 116A Bally Park Road	8
3	Subdivision proposal	10
4	Applicable Planning Scheme Zone Development Standards for subdivision	12
5	Summary	28



1 Introduction

1.1 Purpose

The purpose of this report is to provide compliance advice about the proposed development (7 lot subdivision and balance) of the subject site at 116A Bally Park Road at Dodges Ferry in the Sorell Council municipality.

1.2 Copyright

The report is subject to copyright the owner of which is Danielle Gray Planning, trading as Gray Planning. All unauthorised copying or reproduction of this report or any part of it is forbidden by law and is subject to civil and criminal penalties as asset out in the *Copyright Act 1968*. All requests for permission to reproduce this report or its contents must be directed to Danielle Gray.

This document may only be used for the purposes for which it was commissioned and in accordance with the Letter of Engagement for the commission. Any unauthorised use of this document in any form whatsoever is prohibited.

Last updated: 21 December 2022

Report Author: Danielle Gray

Report Version: 1.0



2 The subject site

2.1 Existing Site Development at the subject site 116A Bally Park Road, Dodges Ferry

The subject site is 116A Bally Park Road at Dodges Ferry.

The subject site has frontage to Bally Park Road to the west and Eastaugh Street to the south.

The site does not have frontage to any other 'road' or public frontage.

The subject contains a late 20th century (1980's with a specific date of construction given as 1985) dwelling located centrally within the subject site. This dwelling is constructed of brick veneer wall cladding and sheet metal roof cladding. This house is noted on the property report as being 184sqm in floor area.

The subject site also contains an outbuilding noted as a garage also located centrally within the subject site. This garage is noted on the property report as measuring 39sqm in floor area.

There is an unsealed gravel driveway that runs from Bally Park Road from the western side boundary and terminates at the garage adjacent to the dwelling.

The subject site measures 1.34 hectares in total site area.

The subject site is not serviced with sewer, water and stormwater infrastructure.

The site contains an exotic planted garden of predominantly mown lawn and has an irregular configuration with a gentle gradient across the site averaging less than (flatter than) 1 in 10.





Figure.1. The subject site at 116A Bally Park Road. The subject sites are surrounded by residential development. Lot sizes vary but most are in the vicinity of 580 – 1500sqm.
Source: TheLIST, sourced December 2022. No nominated scale.





Figure.2. The subject site (arrowed) is outlined in the above aerial image. The subject site is in a locality where there is no discernible pattern of consistent lot size or configuration. Source: TheLIST, sourced December 2022. No nominated scale.



2.2 Title for the subject site 116A Bally Park Road

The subject title reference is CT- 51501/1 with the subject site noted as measuring 1.34 hectares in total site area.

A check of the title for the property revealed there is no applicable Schedule of Easements attached to the subject title.

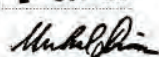
The property has no covenants, Part 5 Agreements or building areas.

There are no easements noted on the title plan.

The following Figure 3 is a copy of the title plan for the subject site, noting the subject site on this plan contains no easements, covenants or building areas.

There are no title impediments that impact upon the application to subdivide.



Owner:	PLAN OF TITLE of land situated in the TOWN OF DODGES FERRY COMPILED FROM D17097 SCALE 1:1000 MEASUREMENTS IN METRES	Registered Number D51501
Title Reference: CT 3980/42		Approved 2-OCT-1991
Grantee:		 Recorder of Titles

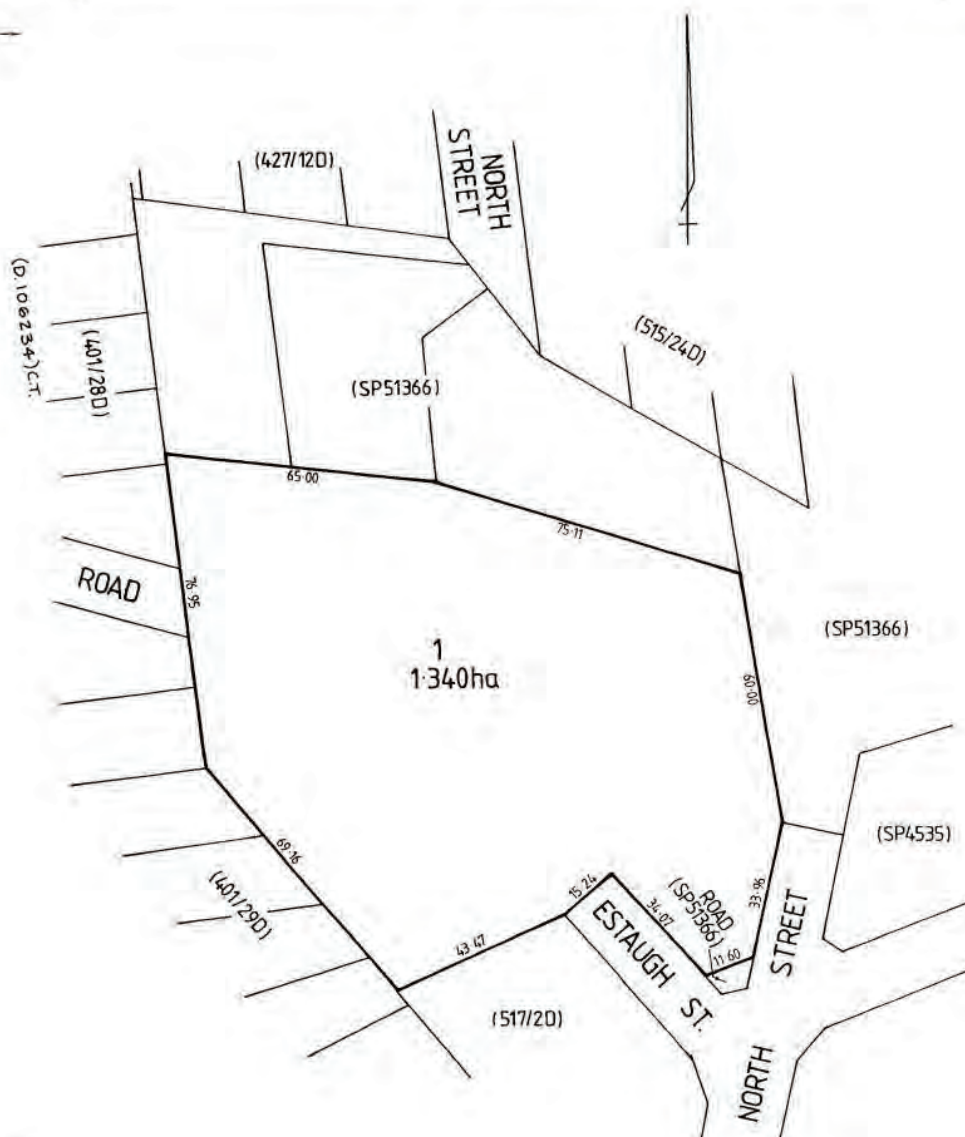


Figure.3. Title plan for the subject site which is shown as lot 1. Source: TheList, sourced December 2022. No nominated scale.



3 Subdivision proposal

The proposal seeks approval to create a new road lot from Bally Park Road comprising a cul de sac.

The existing dwelling and garage are proposed to be located on lot 6 as the balance lot. This lot measures 2981sqm in total area and will have a 6.48m frontage onto the new road from Bally Park Road.

The subdivision seeks approval for a further 7 new vacant lots to be created that range in size from 1201sqm to 1512sqm in area.

A new road lot measuring 90.2sqm to extend Eastaugh Street will be created to provide frontage for the proposed lots 1, 2 and 3.

No vegetation removal is proposed or required as part of the development.

No demolition is proposed or required as part of the development.

A proposal plan is shown overleaf as Figure 4.

This plan indicates 10m x 15m building areas on each proposed new vacant lot against boundary setback requirements for the applicable Low Density Residential zone.

Also lodged with the application and considered in the following town planning assessment are the following documents:

- Onsite Wastewater Design Assessment for existing dwelling from Rock Solid Geotechnics Pty Ltd dated 21 July 2022; and
- Stormwater Trench Design Assessment from Rock Solid Geotechnics Pty Ltd dated 29 September 2022; and
- Gandy and Robert Site Works Plans for stormwater management dated 28 September 2022; and
- Onsite Wastewater Design Assessment for proposed vacant lot from Rock Solid Geotechnics Pty Ltd dated 21 July 2022.



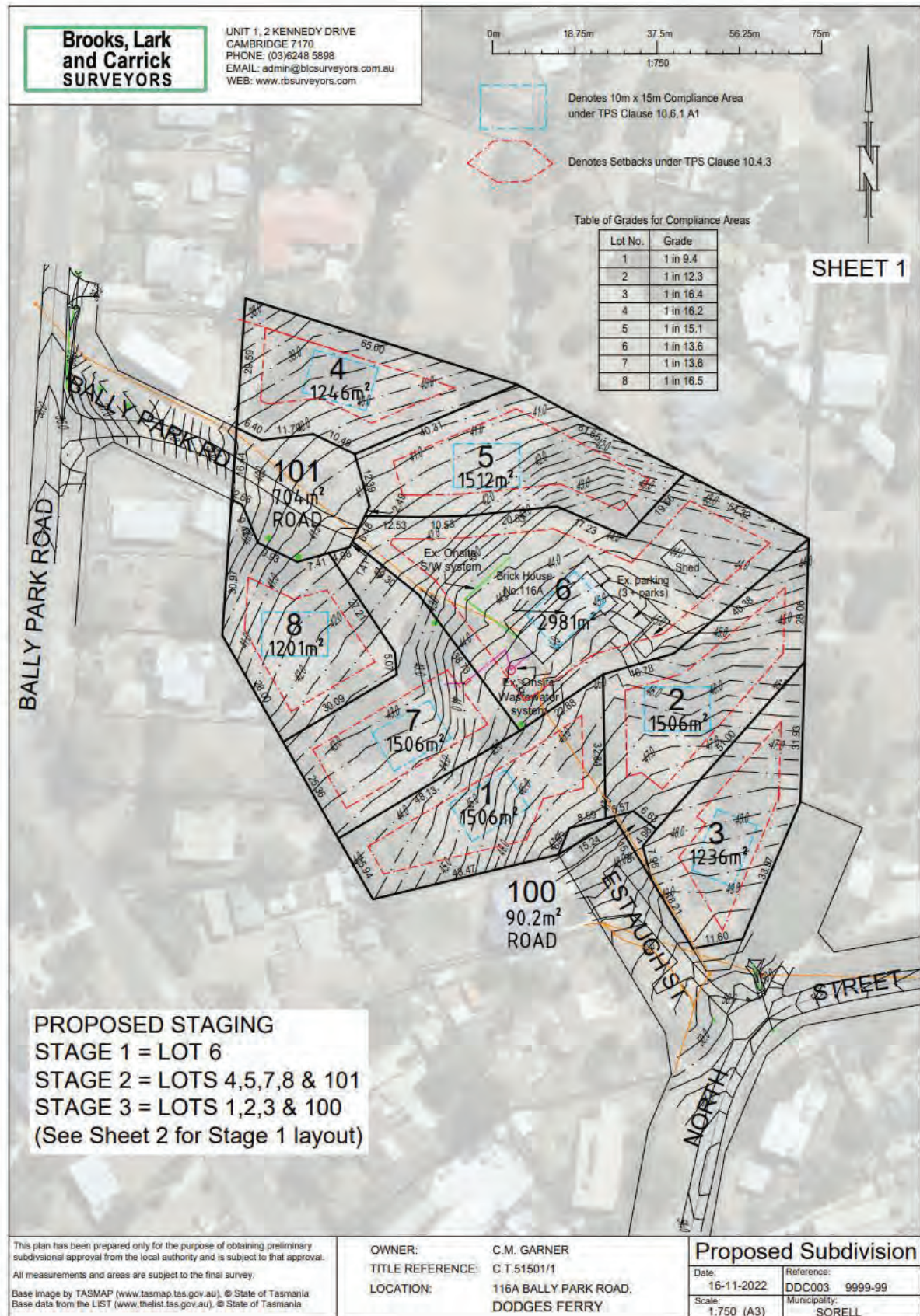


Figure.4. Subdivision plan dated 16 November 2022. Source: Brooks, Lark and Carrick. Not to nominated scale.



4 Applicable Planning Scheme Zone Development Standards for subdivision

The subject site at 116A Bally Park Road at Dodges Ferry is wholly zoned Low Density Residential under the *Sorell Local Provisions Schedule* and *Tasmanian Planning Scheme* (the 'Planning Scheme') that came into effect on 21 December 2022.

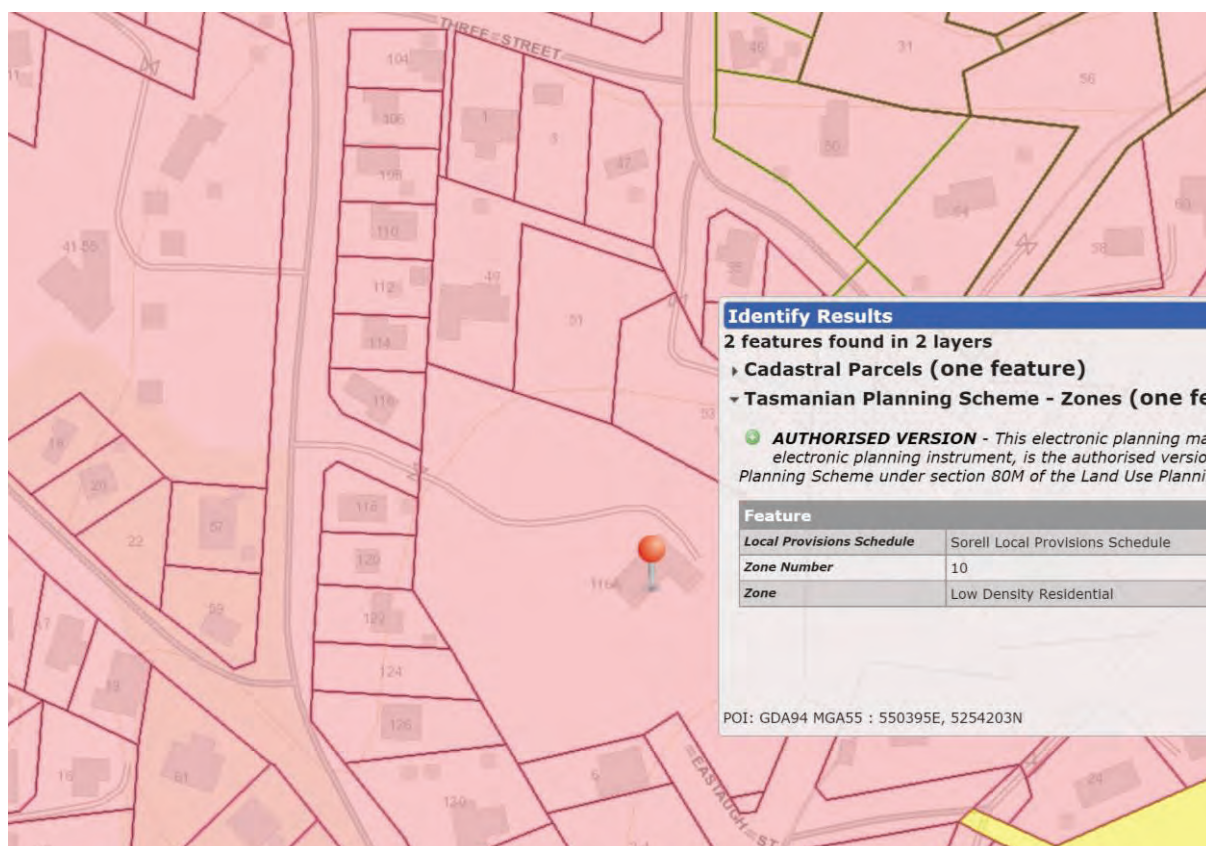


Figure.6. Zoning that applies to the subject site and surrounding area. The subject site is shown as being wholly contained in the Low Density Residential zone. Source: TheList, sourced December 2022. No nominated scale.

The standards for subdivision in the Low Density Residential zone are contained under Part 10.6 of the Planning Scheme.

The proposed plan of subdivision dated 16 November 2022 and accompanying consultant assessments have been commented on under development standards for subdivision for the applicable zone.



10.6 Development Standards for Subdivision

10.6.1 Lot Design

Objective:	
<p><i>That each lot:</i></p> <p><i>(a) has an area and dimensions appropriate for use and development in the zone;</i></p> <p><i>(b) is provided with appropriate access to a road; and</i></p> <p><i>(c) contains areas which are suitable for residential development</i></p>	
Acceptable Solutions	Performance Criteria
<p>A1</p> <p><i>Each lot, or a lot proposed in a plan of subdivision, must:</i></p> <p><i>(a) have an area of not less than 1500m² and:</i></p> <p style="padding-left: 40px;"><i>(i) be able to contain a minimum area of 10m x 15m with a gradient not steeper than 1 in 5, clear of:</i></p> <p style="padding-left: 80px;"><i>a. all setbacks required by clause 10.4.3 A1 and A2; and</i></p> <p style="padding-left: 80px;"><i>b. easements or other title restrictions that limit or restrict development; and</i></p> <p style="padding-left: 40px;"><i>(ii) existing buildings are consistent with the setback required by clause 10.4.3 A1 and A2;</i></p> <p><i>(b) be required for public use by the Crown, a council or a State authority;</i></p> <p><i>(c) be required for the provision of Utilities; or</i></p> <p><i>(d) be for the consolidation of a lot with another lot provided each lot is within the same zone</i></p> <p>.</p>	<p>P1</p> <p><i>Each lot, or a lot proposed in a plan of subdivision, must have sufficient useable area and dimensions suitable for its intended use, having regard to:</i></p> <p><i>(a) the relevant requirements for development of buildings on the lots;</i></p> <p><i>(b) the intended location of buildings on the lots;</i></p> <p><i>(c) the topography of the site;</i></p> <p><i>(d) adequate provision of private open space;</i></p> <p><i>(e) the pattern of development existing on established properties in the area; and</i></p> <p><i>(f) any constraints to development,</i></p> <p><i>and must have an area not less than 1200m².</i></p>
<p>Response to A1 Acceptable Solution:</p> <p>In terms of compliance:</p> <p>The proposed subdivision is unable to comply with the minimum area of 1500sqm under A1(i) for the proposed new lots 3, 4 and 8. These lots respectively measure 1236sqm, 1246sqm and 1201sqm.</p>	



All three of these lots are able to comply with the placement of a 10m x 15m building area within their area with a gradient not steeper than 1 in 5 and also in a location that complies with setbacks under clause 10.4.3.A1 and A2.

There are no easements or title restrictions on the title for the subject site as already discussed under title investigations in this report.

The remaining lots 1, 2, 5 and 7 all exceed 1500sqm and are able to comply with the placement of a 10m x 15m building area in a part of the site with a gradient not steeper than 1 in 5 and also in a location that complies with setbacks under clause 10.4.3.A1 and A2.

The balance lot containing the existing dwelling and garage has setbacks to new boundaries that comply with setbacks under clause 10.4.3.A1 and A2.

Therefore, the only non compliance against A1(a) is for lots 3, 4 and 8 being less than 1500sqm.

The proposal therefore requires assessment under the P1 Performance Criteria as a result of not being able to comply with all of (a) owing to not being able to meet 1500sqm for lots 3, 4 and 8.

In terms of the P1 Performance Criteria, the following comments are provided to each as follows:

(a): the relevant requirements for development of buildings on the lots

Response:

The relevant requirements for the rear lot include boundary setbacks as per clause 10.4.3 A1 and A2. All lots are able to comply with the future placement of a dwelling that facilitates compliance with setbacks in clause 10.4.3 A1 and A2.

The required 10 x 15m building envelope has been placed on every new vacant lot that complies with setbacks from all required boundaries as per the Acceptable Solution for clause 10.4.3.

Height requirements with respect to the building envelope are not considered problematic given the level topography of the subject site.

The maximum permitted site coverage is 30% for the zone. It is considered that the proposed new vacant lots measuring 1236sqm, 1246sqm and 1201sqm can easily allow a typical 3 bedroom dwelling of around 150-200sqm in floor area, which is in keeping with the pattern of development in the surrounding area which comprises generally modest size dwellings typically with a footprint of between 150-200sqm.

In terms of the balance lot containing the existing dwelling, all setbacks are complied with, there is sufficient space for no less than 2 off street car parking spaces directly adjacent to the dwelling and the ability to provide northerly orientated private open space no less than 24sqm in area that is located directly adjacent to the dwelling.



The subject site has a generally level gradient throughout the site and all lots are considered to have excellent northerly orientation.

The proposal is considered to comply with P1(a).

(b): the intended location of buildings on the lots

Response:

The intended location of future building(s) on all 7 new vacant lots is the nominated location of the 10m x 15m building envelope as shown on the proposal plan. This placement complies with all setbacks under clause 10.4.3 A1 and A2 and is located in a level area with excellent solar orientation and access.

The proposal is considered to comply with (b).

(c): the topography of the site

Response:

The topography of the subject site is virtually level with a gradient across the subject site flatter than 1 in 10 and presents no impediment to the future development of any of the proposed lots.

The proposal is considered to comply with (c).

(d): adequate provision of private open space; and

Response:

There is considered sufficient space for northerly orientated private open space no less than 24sqm in area can be provided in a location directly adjacent to the existing dwelling on the proposed lot 6.

The proposed vacant lots 1 to 5 and 7 and 8 are likewise generally level in gradient with excellent northerly orientation and has no obvious impediments that could make it difficult to facilitate the provision of private open space as part of a future single dwelling on that lot.

The proposal is considered to comply with (d).



(e): the pattern of development existing on established properties in the surrounding area.

Response:

There is no Planning Scheme definition for what constitutes 'established properties'. For the purposes of this assessment, it has been considered that established properties are those constructed with a single dwelling.

There is no pattern of development existing on established properties in the surrounding area in terms of characteristic and prevailing lot areas.

The vast majority of properties surrounding the subject site are 'established' in that virtually none of them are vacant and virtually all contain residential development in the form of a single dwelling.

Dwelling footprints are relatively modest and are typically in the realm of 150 to 200sqm in building footprint area.

The area is characterised by single dwellings with no multiple dwellings cited.

It is considered that relatively modest dwelling sizes and a single dwelling per lot is the only consistent pattern of development in the surrounding area. There is no other discernible consistent pattern of lot sizes or configurations in the identified surrounding area.

Lot sizes in the surrounding area vary considerably from approximately 580sqm in area to lots that are in excess of 1500sqm in area.

The proposed subdivision will create 3 lots measuring 1236sqm, 1246sqm and 1201sqm in area. These are larger in size to adjacent lots along Bally Park Road which are predominantly less than 1000sqm.

It is considered that, in the absence of any cohesive or consistent pattern of development in the surrounding area with respect to lot size, the proposed subdivision will not create any incompatible development pattern in terms of the size of the lots proposed and are of a size, configuration and dimensions considered sufficient to create a useable area and dimensions suitable for their intended use, that being a single dwelling on each lot.

The proposal is considered to comply with (f).

(f): any constraints to development.

Response:

There are no mapped hazards on the subject site.



There are no topographical constraints that would impede the future development of the proposed lots.

The subject site is not serviced with any sewer, water or stormwater.

However, the application includes assessments and proposed new infrastructure with respect to stormwater and wastewater management to ensure that each proposed new lot can provide for the predicted servicing of a single dwelling on each.

A2

Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must have a frontage not less than 20m.

P2

Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be provided with a frontage or legal connection to a road by a right of carriageway, that is sufficient for the intended use, having regard to:

- (a) the width of frontage proposed, if any;*
 - (b) the number of other lots which have the land subject to the right of carriageway as their sole or principal means of access;*
 - (c) the topography of the site;*
 - (d) the functionality and useability of the frontage;*
 - (e) the ability to manoeuvre vehicles on the site; and*
 - (f) the pattern of development existing on established properties in the area,*
- and is not less than 3.6m wide.*

Response to A2 Acceptable Solution:

Lots 1, 2, 5, 6 and 7 do not provide frontage to a road of 20m.

The following comments are made against each of the P2 criteria as follows:



(a): the width of frontages proposed if any

Response:

All lots with the exception of 6 and 7 have a frontage of at least 10m to a 'road'.

Lot 6 and 7 have frontages proposed of 6.48m and 4.98m respectively.

Each proposed new vacant lot will only be able to seek approval for a single dwelling in the future as multiple dwellings require a site area of no less than 1200sqm each.

It is considered that the widths proposed will easily be able to cater for traffic associated with a future single dwelling

It is considered the proposal complies with (a).

(b): the number of other lots which have the land subject to the right of carriageway as their sole or principal means of access

Response:

No lots will have access via a right of way. Each lot proposed has its own exclusive frontage within which to locate a driveway to service the future development of a single dwelling.

It is considered the proposal complies with (b).

(c): the topography of the site

Response:

The subject site is virtually level and presents no topographical or gradient impediments that would impede any proposed lot being able to achieve excellent site access and sight distances from their nominated frontage onto the 'road'.

It is considered the proposal complies with (c).

(d): the functionality and useability of the frontage

Response:

Each lot frontage is of a width, gradient and configuration able to accommodate a future access and new driveway to achieve easy and convenient access.



Given the very low traffic levels that would result from a single dwelling on each lot, it is considered that the frontages proposed will be both functional and useable.

It is considered the proposal complies with (d).

(e): the ability to manoeuvre vehicles on the site

Response:

The dimensions, level gradient, site area and the generally regular configuration of the proposed lots are considered sufficient so that a proposed future development of a single dwelling on lots (within an area nominated approximately by the 10 x 15m building area as shown on the proposal plan) would be able to provide manoeuvring within the site area to ensure that vehicles could leave the site in a forward direction via their own individual access over which they have sole use.

It is considered the proposal complies with (e).

(f): the pattern of development existing of established properties in the area

Response:

In terms of the pattern of development on established properties in the surrounding area, it is again considered that there is no consistent pattern of development dominating in the area that characterises a particular pattern of development with respect to frontages and access arrangements for lots.

In terms of frontages, there is no consistent pattern of development on established lots in the surrounding area.

Access and frontages have been provided by way of direct frontage to a road or via an internal driveway on an access strip.

Regardless of how a lot in the surrounding area has achieved access or frontage to a road, sites have been provided with either a frontage or an access strip to a road that is sufficient for the intended use which is that of a single dwelling.

The majority of lots fronting Bally Park Road on the eastern side adjacent to the subject site do not have a 20m frontage.

There is also evidence of multiple existing internal lots in the surrounding area with narrow access strips less than 5m. These occur North Street, Hilltop Place, Kuneamee Street and Elise Drive. Most of these lots are located at the end of a cul de sac. The proposed subdivision will create a similar configuration.

It is considered the proposal complies with (f).



A3

Each lot, or a lot proposed in a plan of subdivision, must be provided with a vehicular access from the boundary of the lot to a road in accordance with the requirements of the road authority.

P3

Each lot, or a lot proposed in a plan of subdivision, must be provided with reasonable vehicular access to a boundary of a lot or building area on the lot, if any, having regard to:

- (a) the topography of the site;*
- (b) the distance between the lot or building area and the carriageway;*
- (c) the nature of the road and the traffic;*
- (d) the anticipated nature of vehicles likely to access the site; and*
- (e) the ability for emergency services to access the site*

Response to A3 Acceptable Solution:

Each proposed lot has an access directly onto a proposed extension of an existing Council road.

It is likely that the arrangement as proposed will be acceptable to Council and in accordance with their requirements as the relevant road authority as the developer has undertaken preliminary consultation with Council officers prior to preparing the proposed plan of subdivision.

In any case, comments have been made against each of the Performance Criteria:

(a) the topography of the site;

Response:

The subject site is virtually level and does not present any access difficulties for the construction of a future dwelling on each vacant lot.

(b) the distance between the lot or building area and the carriageway;

Response:

The distance between the vacant lot building areas and the road carriageway is typically a short distance of 10-25m on a virtually level gradient.



(c) the nature of the road and the traffic;

Response:

The accesses are onto extensions of existing roads that are level. Traffic levels are generally low with excellent sight distances.

(d) the anticipated nature of vehicles likely to access the site; and

Response:

A maximum of one dwelling per lot is expected. In any case, multiple dwellings will be prohibited on each of the new vacant lots given wastewater requirements under development standards for the zone which require a density of 1200sqm per multiple dwelling. There is no ability to request discretion on this density.

On that basis, vehicles are expected to be private cars catering to a single dwelling.

(e) the ability for emergency services to access the site

Response:

It is expected that the access arrangements which avoids long narrow access strips will facilitate access by emergency services to all lots.



The following clauses are also applicable to subdivision proposals in the Low Density Residential zone.

10.6.2 Roads

Objective:	
<p><i>That the arrangement of new roads within a subdivision provides:</i></p> <p><i>(a) the provision of safe, convenient and efficient connections to assist accessibility and mobility of the community;</i></p> <p><i>(b) the adequate accommodation of vehicular, pedestrian, cycling and public transport traffic; and</i></p> <p><i>(c) the efficient ultimate subdivision of the entirety of the land and of surrounding land.</i></p>	
<p>A1</p> <p><i>The subdivision includes no new road.</i></p>	<p>P1</p> <p><i>The arrangement and construction of roads within a subdivision must provide an appropriate level of access, connectivity, safety, convenience and legibility for vehicles, pedestrians and cyclists, having regard to:</i></p> <p><i>(a) any relevant road network plan adopted by council;</i></p> <p><i>(b) the existing and proposed road hierarchy; (c) the need for connecting roads and pedestrian paths, to common boundaries with adjoining land, to facilitate future subdivision potential;</i></p> <p><i>(d) maximising connectivity with the surrounding road, pedestrian, cycling and public transport networks;</i></p> <p><i>(e) minimising the travel distance between key destinations such as shops and services and public transport routes;</i></p> <p><i>(f) access to public transport;</i></p> <p><i>(g) the efficient and safe movement of pedestrians, cyclists and public transport;</i></p> <p><i>(h) the need to provide for bicycle infrastructure on new arterial and collector roads in accordance with the Guide to Road Design Part 6A: Paths for Walking and Cycling 2016;</i></p> <p><i>(i) the topography of the site; and</i></p> <p><i>(j) the future subdivision potential of any balance lots on adjoining or adjacent land.</i></p>



Response:

The proposal seeks extensions to existing roads.

The proposed new cul de sac off Bally Park Road to be created as part of the proposal facilitates the '*efficient ultimate subdivision of the entirety of the land and of surrounding land*' as per objective (c).

The creation of the Bally Park Road cul de sac and very minor extension of Eastaugh Street will not result in a loss of subdivision potential for any lot. Conversely the proposal creates an extension of an existing road to maximise subdivision potential at acceptable densities compatible with existing development in the surrounding area.

No arterial or collector roads are proposed, affected or adjacent the subject site.

Travel distance between key destinations will remain unaffected.

The creation of the road lots as part of the proposed development will enable efficient and safe pedestrian and vehicular movement onto established roads surrounding the subject site.

It is considered the proposed development does not present any objection against any of the Performance Criteria as the existing road network will remain substantially unaltered.



10.6.3 Services

Objective:	
<i>To ensure that the subdivision of land provides adequate services to meet the projected needs of future development.</i>	
<p>A1</p> <p><i>Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must:</i></p> <p><i>(a) be connected to a full water supply service if the frontage of the lot is within 30m of a full water supply service; or</i></p> <p><i>(b) be connected to a limited water supply service if the frontage of the lot is within 30m of a limited water supply service,</i></p> <p><i>unless a regulated entity advises that the lot is unable to be connected to the relevant water supply service.</i></p>	<p>P1</p> <p><i>No performance criteria.</i></p>
<p>Response:</p> <p>The proposed subdivision is not within an area serviced by any reticulated water. The developer has been in contact with Taswater and a letter confirming the subject site cannot be connected to a relevant water supply service is imminent to be lodged as part of application documentation.</p> <p>Therefore, the proposal can demonstrate compliance with A1.</p>	
<p>A2</p> <p><i>Each lot must be connected to a reticulated sewerage system.</i></p>	<p>P2</p> <p><i>Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of accommodating an on-site wastewater treatment system adequate for the future use and development of the land.</i></p>
<p>Response:</p> <p>Similarly, to the reticulated water situation, reticulated sewerage infrastructure is not available for the subject site and the proposed subdivision has been designed to achieve future wastewater servicing for a single dwelling on each proposed lot.</p>	



The application is accompanied by Onsite Wastewater Design Assessments from Rock Solid Geotechnics Pty Ltd dated 21 July 2022 for both the dwelling and each of the vacant lots.

These assessments confirm that each lot as proposed is able to accommodate an on-site wastewater treatment system for the future use and development of single dwelling for each lot.

The existing dwelling is proposed to have its existing wastewater system replaced with an AWTs as outlined in the Rock Solid Geotechnics assessment.

A3

Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of connecting to a public stormwater system.

P3

Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of accommodating an on-site stormwater management system adequate for the future use and development of the land, having regard to:

- (a) the size of the lot;*
- (b) topography of the site;*
- (c) soil conditions;*
- (d) any existing buildings on the site;*
- (e) any area of the site covered by impervious surfaces; and*
- (f) any watercourse on the land.*

Response:

The proposal has been designed to facilitate stormwater management by piping connection to existing drains by the assessing engineer Gandy and Roberts and as shown in their servicing plans dated 28 September 2022.

The following comments are made against each of the P3 criteria as follows:

(a) the size of the lot;

Response:

The developer has been in discussions with Council staff about stormwater management of the proposed development. Plans prepared by Gandy and Roberts engineers have been provided to propose stormwater management piped to existing drains in accordance with Council feedback received during the design of the proposed development.

The size of the proposed new vacant lots are considered large enough to incorporate multiple water tanks for the disposal of stormwater from all roof areas of a standard dwelling if required. Disposal of stormwater from each lot by way of pipes has also been proposed to connect to existing drains as per the Gandy and Roberts servicing proposal



plans lodged as part of application documentation. This is in accordance with expectations set by Council in preliminary discussions about servicing the proposed development.

(b) topography of the site;

Response:

The topography of the subject site is generally level in gradient and it is not expected that stormwater would be channelled toward any neighbouring properties as a result of topographical features, particularly given that stormwater piping infrastructure to connect to existing drains is proposed as part of works.

(c) soil conditions;

Response:

The soil at the subject site is sandy and in close proximity to the coast. Soil conditions are not conducive to exacerbating or collecting run off.

(d) any existing buildings on the site;

Response:

The stormwater assessment submitted as part of the application considers stormwater trenches to alleviate tank runoff for the existing dwelling which is only expected to occur during winter months, if at all.

(e) any area of the site covered by impervious surfaces; and

Response:

The subject site is in an area where only the Council roads are sealed. Road shoulders are unsealed with open drains either side of the road.

The subject site itself has no impervious surfaces as the driveway is unsealed gravel. It is expected the lack of impervious surfaces within the subject site will aid in stormwater absorption and management.



(f) any watercourse on the land.

There are no watercourses within, or adjacent to, the subject site.



5 Summary

The subject site does not have any covenants, building areas, easements or Part 5 Agreements that impede the proposed development.

The proposal complies with all subdivision development standards except for the Permitted minimum lot size of 1500sqm per lot and 20m frontage per lot. Both can be varied by discretion.

A planning argument has been provided to endorse the proposed subdivision against the triggered Performance Criteria P1 and P2 for clause 10.6.1 for minimum lot sizes not complying with 15000sqm and minimum frontages not complying with 20m.

It is considered the proposed subdivision is in an area where there is no consistent or prevailing development pattern on established lots in terms of frontage sizes and minimum lot sizes.

The developer has undertaken extensive stormwater and wastewater assessments to confirm future serviceability of the lots and also demonstrate compliance with triggered Performance Criteria with respect to servicing.

The proposed lots are of a size and area and configuration sufficient to facilitate the intended future use and development of a single dwelling per lot as demonstrated in the proposal plans and accompanying servicing assessments.

It is considered the proposed development is one which should be approved given its compliance against triggered Performance Criteria.



ROCK SOLID GEOTECHNICS PTY LTD

24/2/2023

CLIENT: DDC Holdings P/L

C/o Mr David Miller 0422619255
david@blcsurveyors.com.au

Peter Hofto
163 Orielton Road
ORIELTON
TAS 7172
0417 960 769
peter@rocksolidgeotechnics.com.au

Geotechnical Assessment - Subdivision of Land at 116A Bally Park Road, Dodges Ferry

Response to Council RFI. Council have issued an RFI, specifically;

- Demonstrate compliance with Clause 10.6.3P2 of the Tasmanian Planning Scheme- Sorell 2022 by identifying on the subdivision plan potential wastewater land application areas for each lot and comment on appropriate setback distances.
- P2 states – Each lot, or a lot proposed in a plan of subdivision, excluding for public open space, a riparian or littoral reserve or Utilities, must be capable of accommodating an on-site wastewater treatment system adequate for the future use and development of the land.
- For the purpose of this report, it is considered that a 'typical' future use of the proposed lots is the development of a three-bedroom residence and associated infrastructure.

The boundary setback distance requirements outlined in the 2016 Director's Guidelines are defined below.

A3 Horizontal separation distance from a property boundary to a LAA must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1.5m from an upslope or level property boundary; & (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a LAA must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A3
---	---	-------------------------

This development proposal is for an eight-lot subdivision at 116A Bally Park Road, Dodges Ferry (Figure 1). It is proposed to subdivide the block into;

- Lot 1 (1506m²) – vacant land
- Lot 2 (1506m²) – vacant land
- Lot 3 (1236m²) – vacant land
- Lot 4 (1246m²) – vacant land
- Lot 5 (1512m²) – vacant land
- Lot 6 (2981m²) – Includes the current, 4-bedroom residence
- Lot 7 (1506m²) – vacant land
- Lot 8 (1201m²) – vacant land

Lot 6 can sustain an onsite wastewater system for the current 4-bedroom dwelling but will require the installation of a new system.

ONSITE WASTEWATER REQUIREMENTS

The land designated for an eight-lot subdivision at 116A Bally Park Road, Dodges Ferry is underlain by thin sandy soils over Triassic sandstone bedrock. Individual block test hole information is attached below.

All the proposed new blocks will require the utilisation of secondary treated effluent, most probably an Aerated Wastewater Treatment System (AWTS), preferably with a shallow sub-surface irrigation Land Application Area (LAA). The dripline irrigation areas will distribute the secondary treated effluent over a large surface area.

The size of the Land Application Area (LAA) / subsurface irrigation zone is conditional on the potential wastewater load entering the system and the permeability of the site. The potential wastewater load is determined by the number of bedrooms in the dwelling.

A Design Irrigation Rate (DIR) of 5mm/day is appropriate (Class 1 – SAND over BEDROCK site).

3-bedroom residence	5 persons occupancy	
Tank water	120 litres/person/day	
Wastewater Load	5 x 120 litres/person/day	600 litres/day
Design Irrigation Rate (DIR)	5mm/day	Secondary treated effluent
Irrigation Area	600 / 5 = 120m ²	

Total size of calculated Land Application Area (LAA) is 120m².

Each of the proposed Lots has suitable available area for a 120m² LAA.

The locations of the LAAs on the proposed blocks must also comply with the requirements of the Tasmanian Planning Scheme and the Director's Guidelines for Onsite Wastewater. There are requirements for minimum setback distances of the LAAs from buildings and boundaries. These can easily be attained (shallow slopes) on all the proposed blocks.

An individual site assessment will ultimately determine the type and position of the onsite wastewater system required for any proposed development on any proposed Lot. These assessments will determine the most suitable location for the LAAs, including staying clear of the areas where the bedrock is exposed at the surface.

In order to ensure that each of the proposed lots has a suitable and available area for the required LAA, an area has been marked on a plan each of the blocks – taking into consideration the required boundary setbacks.

LOT 1

Proposed Lot 1 is a 1506m², vacant block, with access directly from Estaugh Street.

Lot 1 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the west/northwest at 2-4 degrees. Triassic sandstone bedrock was observed to be outcropping the surface on the southern portion of the block.

The profiles encountered in the Test Holes consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 0.55m	SAND: fine grained, grey / light brown, dry
0.55m+	Mechanical auger refusal on Triassic sandstone bedrock – 0.55m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 1 BOUNDARY SETBACK REQUIREMENTS

Slope 2-4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5\text{m} + (1\text{m} \times 2^\circ) = 3.5\text{m}$

A 120m² LAA is marked on Figure 2 with appropriate boundary setbacks.

Plate 1 – Lot 1 – Test Hole #1B - looking to the northeast.



LOT 2

Proposed Lot 2 is a 1506m², vacant block, with access directly from Estaugh Street.

Lot 2 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the north at 1-4 degrees. Triassic sandstone bedrock was observed to be outcropping the surface on the western portion of the block.

The profile encountered in Test Hole #2A consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 0.70m	SAND: fine grained, grey / light brown, dry
0.70m+	Mechanical auger refusal on Triassic sandstone bedrock – 0.70m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 2 BOUNDARY SETBACK REQUIREMENTS

Slope 2-4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5m + (1m \times 2^\circ) = 3.5m$

A 120m² LAA is marked on Figure 3 with appropriate boundary setbacks.

Plate 2 – Lot 2 – looking to the west at Test Hole #2A.



LOT 3

Proposed Lot 3 is a 1236m², vacant block, with access directly from Estaugh Street.

Lot 3 is covered in grass, minor small trees, and several semi-mature wattle and pine trees. The land generally slopes to the north at 2-3 degrees. Triassic sandstone bedrock was observed to be outcropping the surface on the southern portion of the block. The profile encountered in Test Hole #3A consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 0.60m	SAND: fine grained, grey / light brown, dry
0.60m+	Mechanical auger refusal on Triassic sandstone bedrock – 0.60m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 3 BOUNDARY SETBACK REQUIREMENTS

Slope 2-4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5\text{m} + (1\text{m} \times 2^\circ) = 3.5\text{m}$

A 120m² LAA is marked on Figure 4 with appropriate boundary setbacks.

Plate 3 – Lot 3 – looking to the northeast at Test Hole #3A.



LOT 4

Proposed Lot 4 is a 1246m², vacant block, with access directly from Bally Park Road.

Lot 4 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the northwest at 4 degrees. The profiles encountered in the Test Holes consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 0.50m	SAND: fine grained, grey / light brown, dry
0.50m+	Mechanical auger refusal on Triassic sandstone bedrock – 0.50m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 4 BOUNDARY SETBACK REQUIREMENTS

Slope 4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5m + (1m \times 4^\circ) = 5.5m$

A 120m² LAA is marked on Figure 5 with appropriate boundary setbacks.

Plate 4 – Lot 4 – looking to the southeast at Test Hole #4A.



LOT 5

Proposed Lot 5 is a 1512m², vacant block, with access directly from Bally Park Road.

Lot 5 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the north/northwest at 2-5 degrees. The profile encountered in Test Hole #5B consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 1.05m	SAND: fine grained, grey / light brown, dry
1.05m+	Mechanical auger refusal on Triassic sandstone bedrock – 1.05m.

Test Hole #5A encountered sandstone bedrock at 0.45m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 5 BOUNDARY SETBACK REQUIREMENTS

Slope 4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5m + (1m \times 4^\circ) = 5.5m$

A 120m² LAA is marked on Figure 6 with appropriate boundary setbacks.

Plate 5 – Lot 5 – looking to the northeast at Test Hole #5A.



LOT 7

Proposed Lot 7 is a 1506m², vacant block, with access directly from Bally Park Road.

Lot 7 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the north / northwest at 3-4 degrees. Triassic sandstone bedrock was observed to be outcropping the surface on the western portion of the block. The profile encountered in Test Hole #7B consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets - TOPSOIL
0.20 – 0.45m	SAND: fine grained, dark brown, dry
0.45 – 0.70m	SAND: fine grained, brown, dry
0.70 – 1.20m	sandy CLAY: medium plasticity, brown / light brown, 40% fine to medium grained sand, some silt, moist
1.20m+	Mechanical auger refusal on Triassic sandstone bedrock – 1.20m.

Test Hole #7A encountered sandstone bedrock at 0.90m. Groundwater was not encountered in either hole.

The site is classified as CLASS 1 (SAND) over CLASS 5 (light CLAY) and BEDROCK.

LOT 7 BOUNDARY SETBACK REQUIREMENTS

Slope 4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5\text{m} + (1\text{m} \times 3^\circ) = 4.5\text{m}$

A 120m² LAA is marked on [Figure 7](#) with appropriate boundary setbacks.

[Plate 7](#) – Lot 7 – looking to the northeast at [Test Hole #7B](#).



LOT 8

Proposed Lot 8 is a 1201m², vacant block, with access directly from Bally Park Road.

Lot 8 is covered in grass, minor small trees, and several semi-mature wattle trees. The land generally slopes to the northwest at 3 degrees.

The profile encountered in Test Hole #8A consisted of:

0.00 – 0.20m	SAND: fine grained, dark grey, rootlets – TOPSOIL
0.20 – 0.60m	SAND: fine grained, grey / light brown, dry
0.60m+	Mechanical auger refusal on Triassic sandstone bedrock – 0.60m.

Test Hole #8B encountered sandstone bedrock at 0.45m.

Groundwater was not encountered in either hole. The site is classified as CLASS 1 (SAND) over BEDROCK.

LOT 8 BOUNDARY SETBACK REQUIREMENTS

Slope 4 degrees

120m² of LAA required (3-bedroom residence)

Side slope and up-slope boundary setback required 1.5m

Lower slope boundary setback required $1.5\text{m} + (1\text{m} \times 3^\circ) = 4.5\text{m}$

A 120m² LAA is marked on Figure 8 with appropriate boundary setbacks.

Plate 8 – Lot 8 – looking to the southeast at **Test Hole #8A**.



RECCOMENDATIONS

It is the conclusion of this report that each of the proposed vacant Lots can sustain an onsite wastewater system for a three-bedroom dwelling.

Lot 6 can sustain an onsite wastewater system for the current 4-bedroom dwelling but will require the installation of a new onsite wastewater system (see [GEOTECH 22-147a](#)).

A handwritten signature in blue ink, appearing to read 'P. Hofto'.

Peter Hofto
ROCK SOLID GEOTECHNICS P/L

CONDITIONS OF INVESTIGATION

This report remains the property of Rock Solid Geotechnics Pty. Ltd. (RSG). It must not be reproduced in part or full, or used for any other purpose without written permission of this company. The investigations have been conducted, & the report prepared, for the sole use of the client or agent mentioned on the cover page. Where the report is to be used for any other purpose RSG accepts no responsibility for such other use. The information in this report is current and suitable for use for a period of two years from the date of production of the report, after which time it cannot be used for Building or Development Application.

This report should not be used for submission for Building or Development Application until RSG has been paid in full for its production. RSG accepts no liability for the contents of this report until full payment has been received.

The results & interpretation of conditions presented in this report are current at the time of the investigation only. The investigation has been conducted in accordance with the specific client's requirements &/or with their servants or agent's instructions.

This report contains observations & interpretations based often on limited subsurface evaluation. Where interpretative information or evaluation has been reported, this information has been identified accordingly & is presented based on professional judgement. RSG does not accept responsibility for variations between interpreted conditions & those that may be subsequently revealed by whatever means.

Due to the possibility of variation in subsurface conditions & materials, the characteristics of materials can vary between sample & observation sites. RSG takes no responsibility for changed or unexpected variations in ground conditions that may affect any aspect of the project. The classifications in this report are based on samples taken from specific sites. The information is not transferable to different sites, no matter how close (ie. if the development site is moved from the original assessment site an additional assessment will be required).

It is recommended to notify the author should it be revealed that the sub-surface conditions differ from those presented in this report, so additional assessment & advice may be provided.

Investigations are conducted to standards outlined in Australian Standards:

- AS1726-1993: Geotechnical Site Investigations
- AS1547-2012: Onsite Domestic Wastewater Management

& as specified in 'Guidelines for Geotechnical Assessment of Subdivisions and Recommended Code of Practise for Site Classification to AS2870 in Tasmania' - Institute of Engineers, Tasmanian Division.

Copyright: The concepts & information contained in this report are the Copyright of Rock Solid Geotechnics Pty. Ltd.

PETER HOFTO

ROCK SOLID GEOTECHNICS PTY LTD

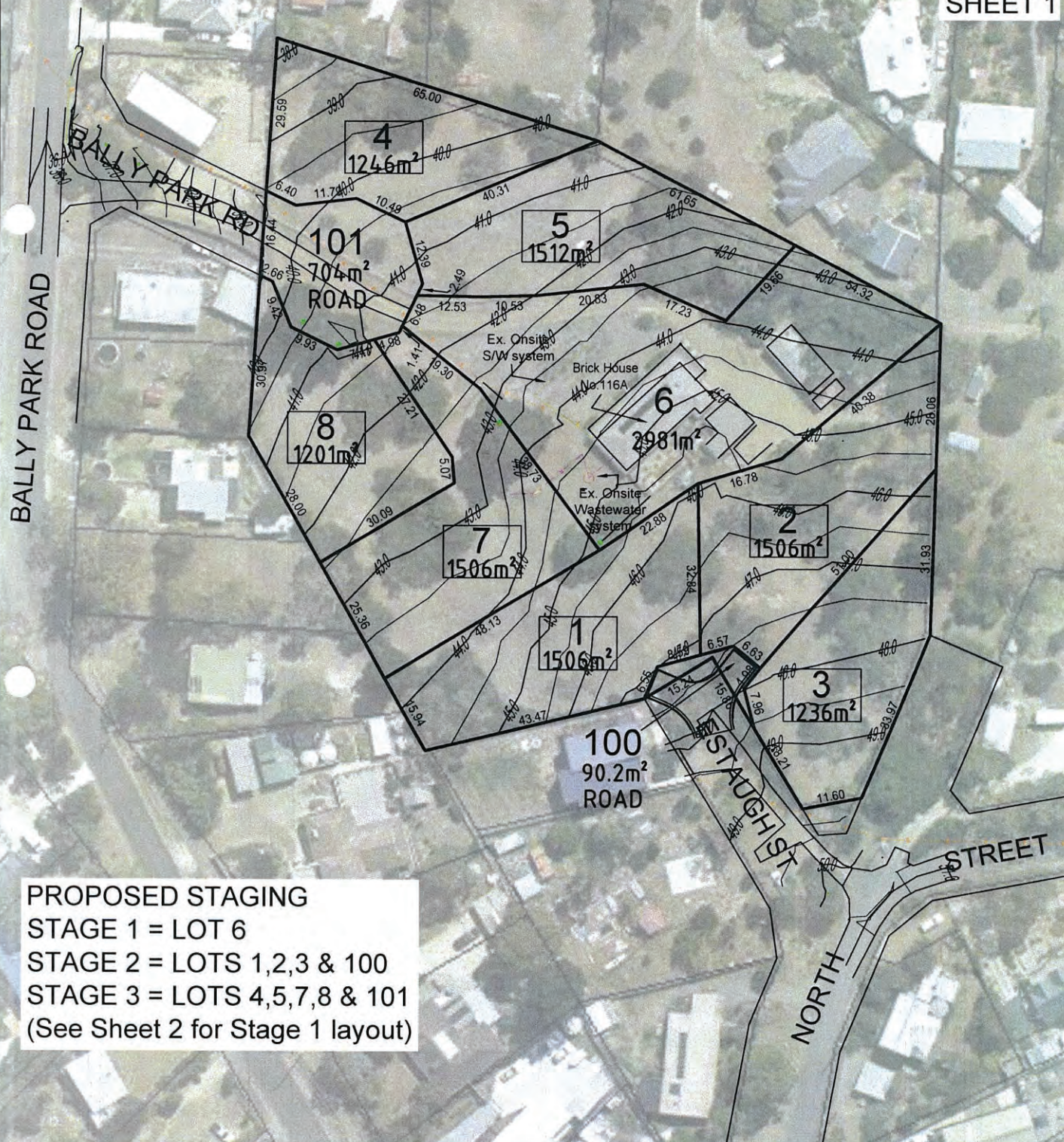
**Brooks, Lark
and Carrick
SURVEYORS**

UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@blcsurveyors.com.au
WEB: www.rbsurveyors.com

0m 18.75m 37.5m 56.25m 75m
1:750



SHEET 1



This plan has been prepared only for the purpose of obtaining preliminary subdivisional approval from the local authority and is subject to that approval.
All measurements and areas are subject to the final survey.

Base image by TASMAP (www.tasmap.tas.gov.au), © State of Tasmania
Base data from the LIST (www.thelist.tas.gov.au), © State of Tasmania

OWNER: C. M. GARNER
TITLE REFERENCE: C.T.51501/1
LOCATION: 116A BALLY PARK ROAD,
DODGES FERRY

Proposed Subdivision

Date: 28-2-2022	Reference: ZZGEN01 9999-99
Scale: 1:750 (A3)	Municipality: SORELL

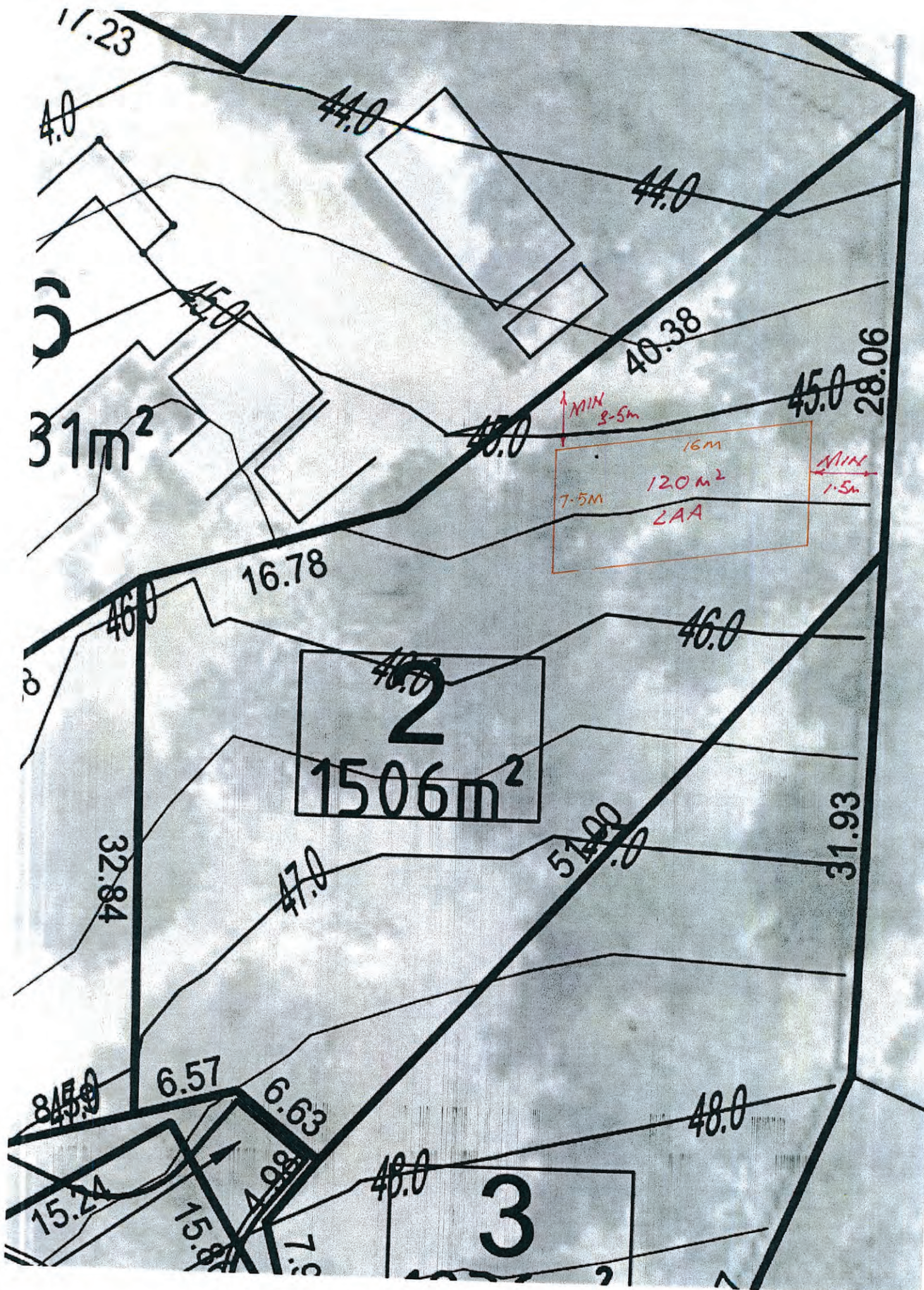


FIGURE 3
1:300

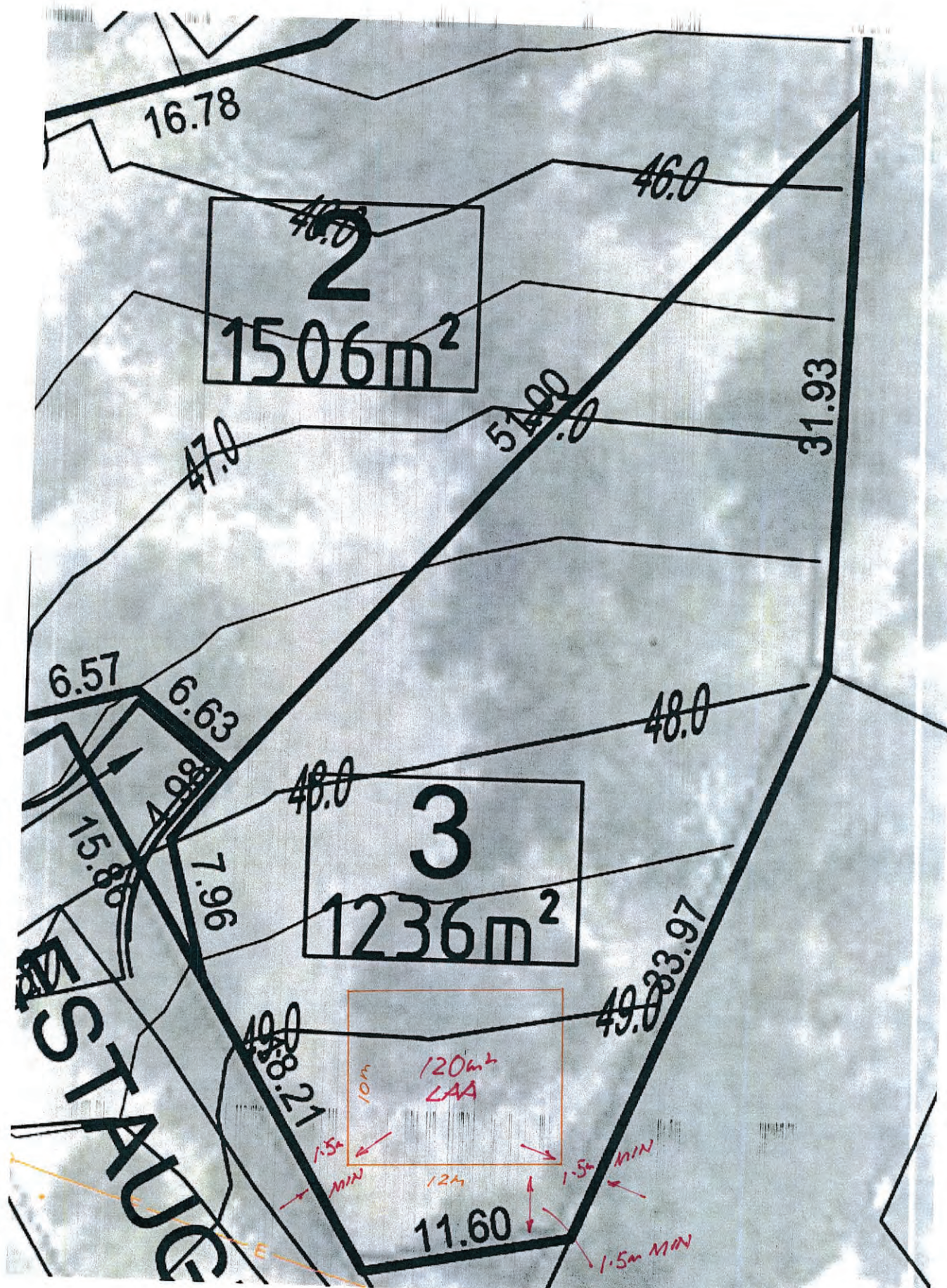


FIGURE 4

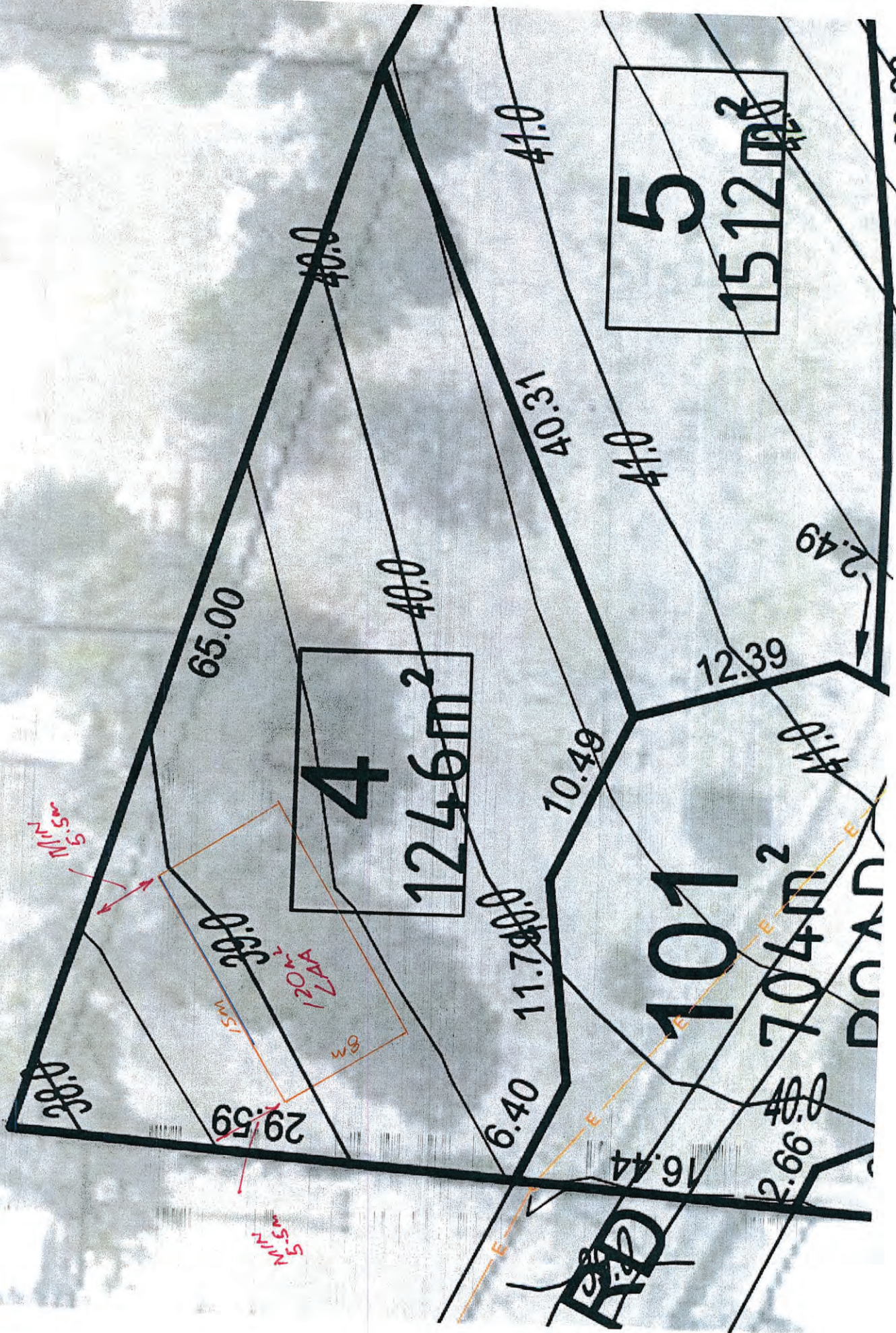


FIGURE 5
SCALE 1:300

FIGURE 1:300

5
1512 m²

Brick House No. 116A

Ex. Onsite S/W system

MIN

1.5m

6.6m

18m

41.0

120m² ZAA

40.0

40.31

41.0

12.39

2.49

12.53

6.48

19.30

1.41

27.27

42.0

42.71

10.53

20.83

17.23

44.0

44.0

43.0

19.66

67.65

42.0

43.0

44.0

45.0

66

5
151202

~~Ex. Onsite S/W system~~

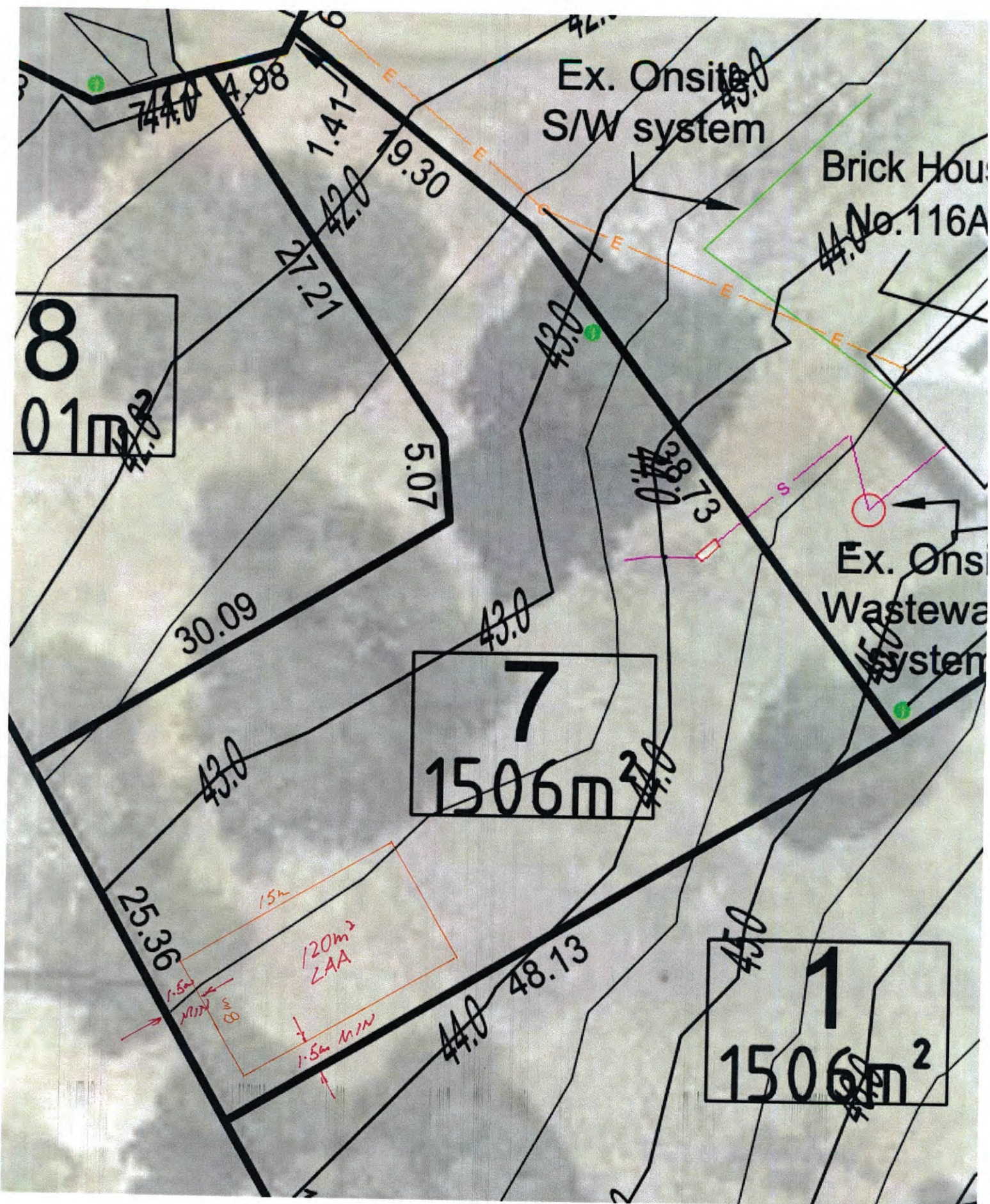


FIGURE 7
1/300

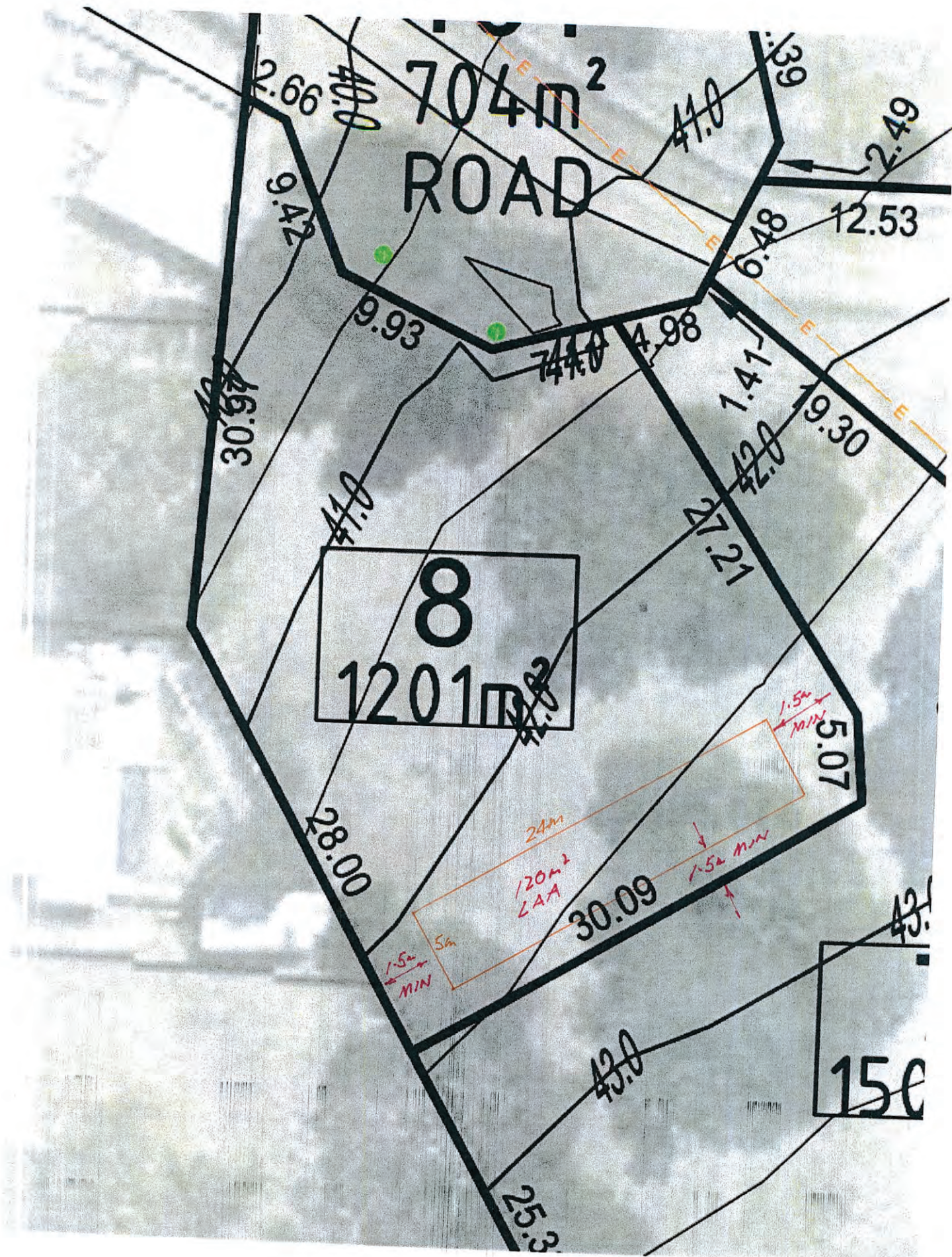
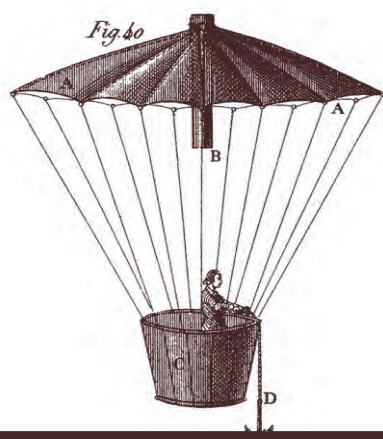


FIGURE 8
1:300



Stormwater Management Report

Planning Scheme Compliance

Bally Park Road Subdivision
116A Bally Park Road, Dodges Ferry, Tasmania

1st March 2023

PROJECT NUMBER **22.0159**
REPORT AUTHOR **A Curtain**
CHECKED BY **D Hayers**

Gandy and Roberts Consulting Engineers
STRUCTURAL CIVIL HYDRAULICS

ph (03) 6223 8877
fx (03) 6223 7183
mail@gandyandroberts.com.au
159 Davey Street Hobart, Tasmania 7000
www.gandyandroberts.com.au

Contents

1	Introduction.....	4
2	Existing Site.....	4
2.1	Current Stormwater Capacity.....	5
2.2	Current Runoff into Channel Drain System	6
3	Proposed Development.....	7
3.1	Stormwater Disposal	7
3.1.1	Stormwater Runoff.....	7
4	Council Stormwater Infrastructure Capacity Assessment.....	12

1 Introduction

Gandy and Roberts Consulting Engineers have been engaged by Brooks Lark & Carrick Surveyors to address the Sorell Council's Request for Information received on the 17th of January 2023 (SA 2022/32 -1 7723666), regarding the proposed eight-lot subdivision development at 116A Bally Park Road, Dargles Ferry. **Figure 1** shows the location of the site.

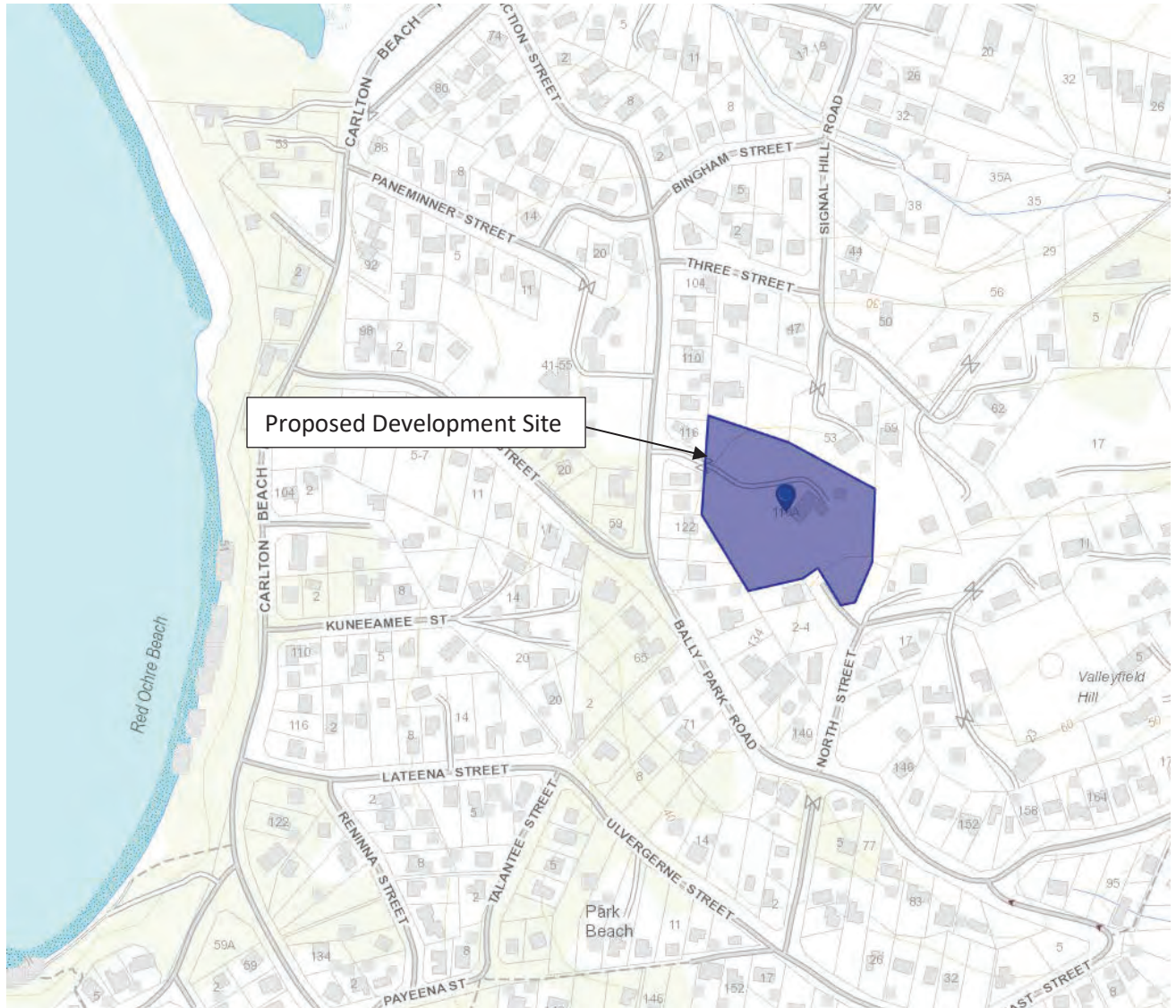


Figure 1: Location of Site.

2 Existing Site

The site contains an existing dwelling, sheds and gravel driveway, the remaining site is primarily cleared grassland with scattered vegetation. The existing buildings are serviced by rainwater tanks that provide re-use on site. The site is sloped towards the West (to Bally Park Road), where a Sorell Council channel drain collects rainwater runoff.

2.1 Current Stormwater Capacity

The current Sorell Council channel drain located in Bally Park Road provides a drainage path for a large extent of Bally Park Road. Due to the varying width, depth, and slope of the channel drain, three cross-sections were analysed downstream of the site location using Manning's Equation for open channel flow. The Manning coefficient of 0.035 was used for all calculations (due to the unkept vegetation in numerous locations of the drain) and a parabolic shape was adopted for the cross-sectional area. Therefore, capacities were determined as follows in **Table 1**, refer to **Figure 2** for locations of cross sections:

Table 1: Summary of capacities for three cross-sections of the existing channel drain.

Cross Section	Slope	Width (m)	Depth (m)	Wetted Area (m ²)	Capacity (L/s)
1	0.80%	1.90	0.27	0.347	278
2	2.00%	1.70	0.25	0.283	330
3	4.00%	1.76	0.33	0.387	759



Figure 2: Locations of channel drain considered for analysis.

Furthermore, driveways crossing the channel drain downstream of works on Bally Park Road divert the flow through concrete pipes of 300mm diameter underneath the cross-over. The capacity of these pipes was calculated using Manning's formula, with a Manning's Roughness Coefficient of 0.015 and minimum slope of 0.05. Thus, the capacity of existing driveway culverts is calculated to be 189 L/s.

2.2 Current Runoff into Channel Drain System

Upon analysis of the landscape, contours and road design, the existing flow through the channel drain was determined from its topographical crest between East and North Streets (it is assumed that runoff beyond this point will flow in the East direction on Bally Park Road) to its termination at the intersection with Three Street. Due to the crown of the sealed road, runoff from half of the road will be expected to enter the channel drain, thus only half the paved road width is considered. It is also expected that the grassland verge of the road is captured by the drain, estimated to an average of 1 metre width for the entirety of Bally Park Road. It is assumed that private lots detain their stormwater runoff on-site for personal re-use and are not considered in the existing flow through the channel drain. This catchment area is shown on **Figure 3** below.

Based on the Rational Method in AS/NZS 3500.3:2018, the expected maximum existing runoff for the length of Bally Park Road considered is 33.9 L/s. Clearly, the existing channel drain is sufficient in collecting drainage from the existing road and verge.

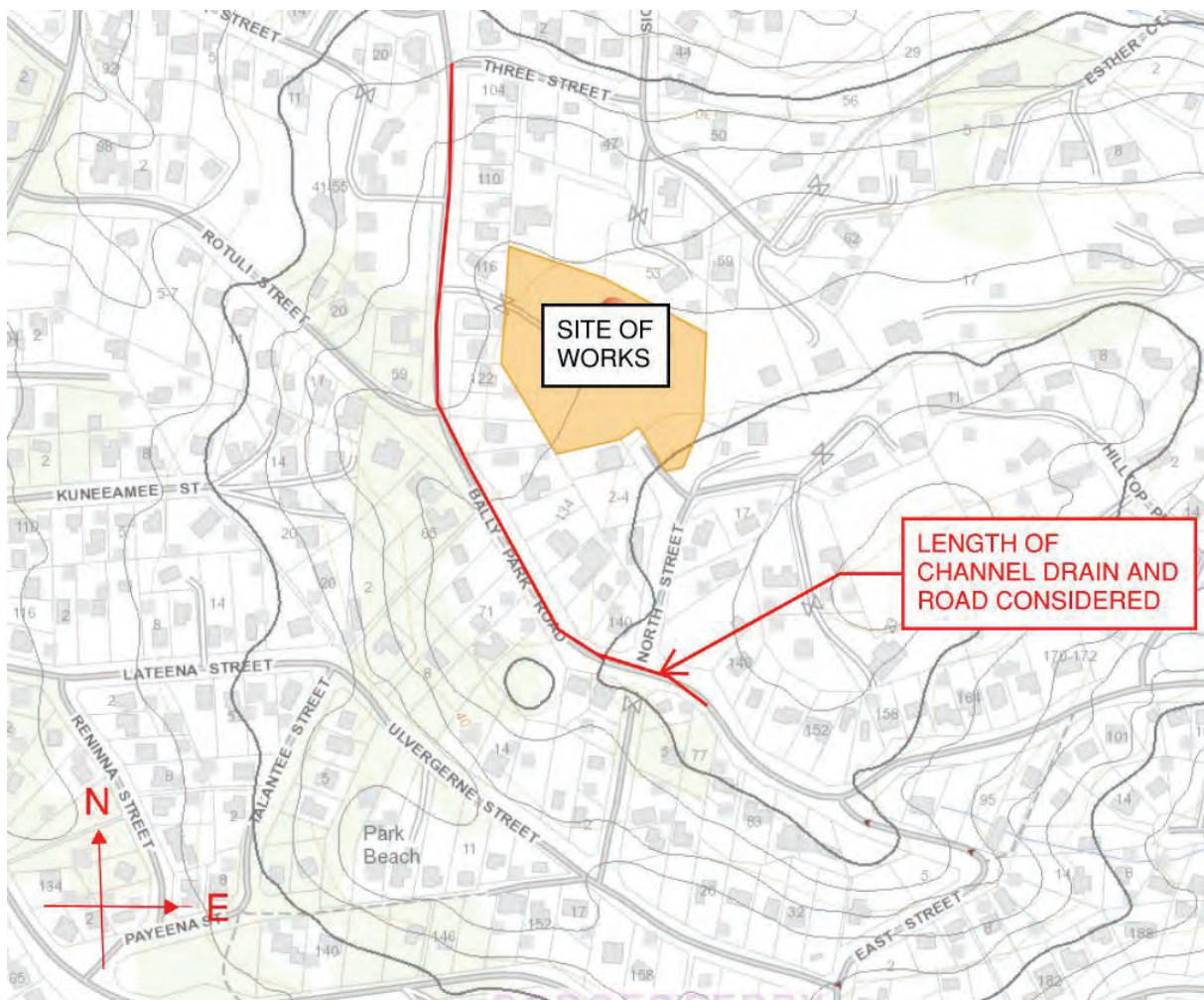


Figure 3: Delineated catchment area for the channel drain.

3 Proposed Development

The proposed multi-lot development consists of the creation of eight private lots, which shall be accessed by a central sealed driveway off Bally Park Road (providing access to Lots 4, 5, 6, 7 and 8) and an extension and sealing of Eastaugh Street (providing access to Lots 1, 2 and 3).

The stormwater management system proposed for the development comprises of a pipe network collecting runoff from Eastaugh street and all lots; this stormwater is to be discharged to the channel drain on Bally Park Road.

3.1 Stormwater Disposal

3.1.1 Stormwater Runoff

To determine the pre- and post- development runoffs for the site, hydrological analysis was undertaken in XP Storm 2019 using the methods recommended by Australian Rainfall and Runoff (ARR) 2019. Rainfall data for the site was extracted from the Bureau of Meteorology (BOM). Temporal pattern ensembles were sourced for the site from the ARR Data Hub. The existing site discharge was calculated by considering the existing grassland, gravel driveways and buildings, refer to **Table 2** for catchment areas.

Storm durations from 10 minutes to 3 hours were included in this analysis and ensembles of 10 temporal patterns for each duration were modelled. The median storm of each ensemble was identified, refer to **Figure 4**. XP Storm 2019 identified the critical storm duration as the 20-minute rainfall event for 5% AEP, with median design runoff flow of 106.2 L/s.

Table 2: Summary of pre-development site catchment sizes and runoff coefficients

Catchment	Percent Impervious (%)	Size (m ²)
Grassland	20	10214
Buildings	100	415
Gravel Driveway	60	1651

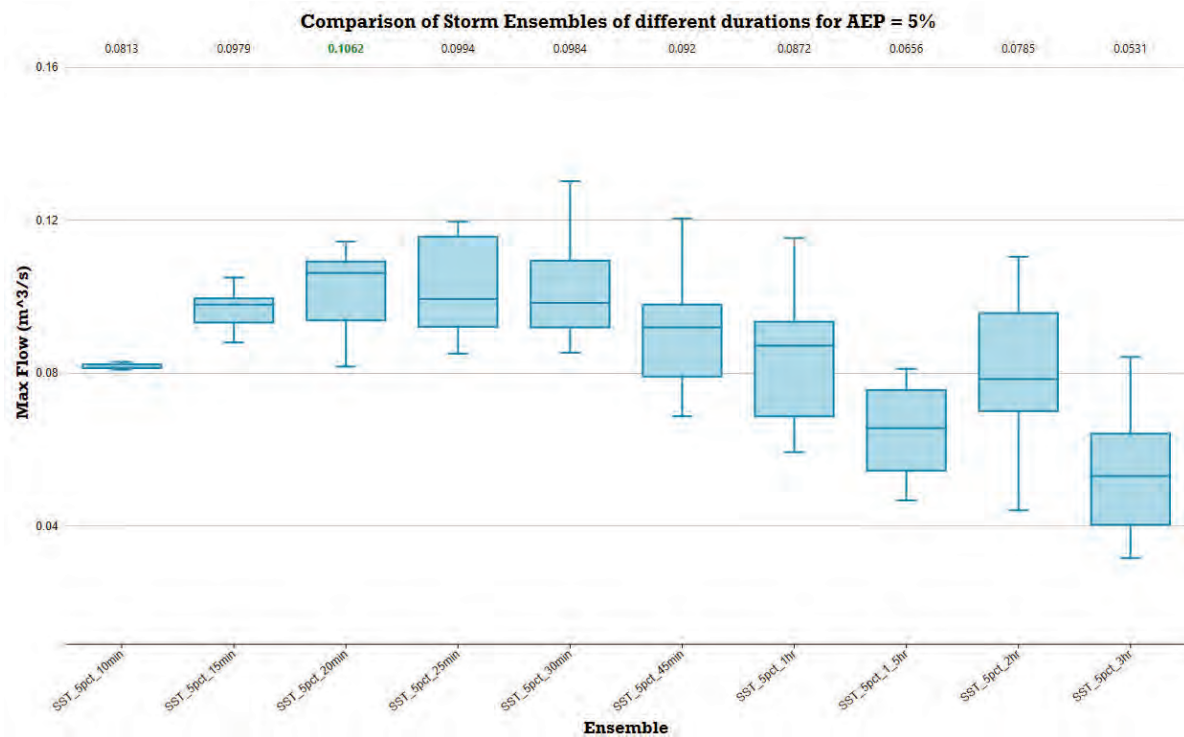


Figure 4: Box and whisker plots of storm ensembles for existing site for 5% AEP.

The developed site discharge was initially calculated for the construction of the central impervious sealed driveways on Bally Park Road and Eastaugh Street, refer to **Figure 5**. **Table 3** summarises the catchment sizes assigned for this analysis. Considering only the central driveways, grassland, gravel areas and existing buildings, the site discharge is calculated by XP Storm 2019 to be 111.1 L/s, see **Figure 6**.

Table 3: Summary of post-development site catchment sizes and runoff for central driveways.

	Catchment Size (m ²)
Bally Park Road	647
Eastaugh Street	626
Existing Building	415
Gravel Driveway	378
Grassland	10214



Figure 5: Site central driveway development areas considered for initial calculations.

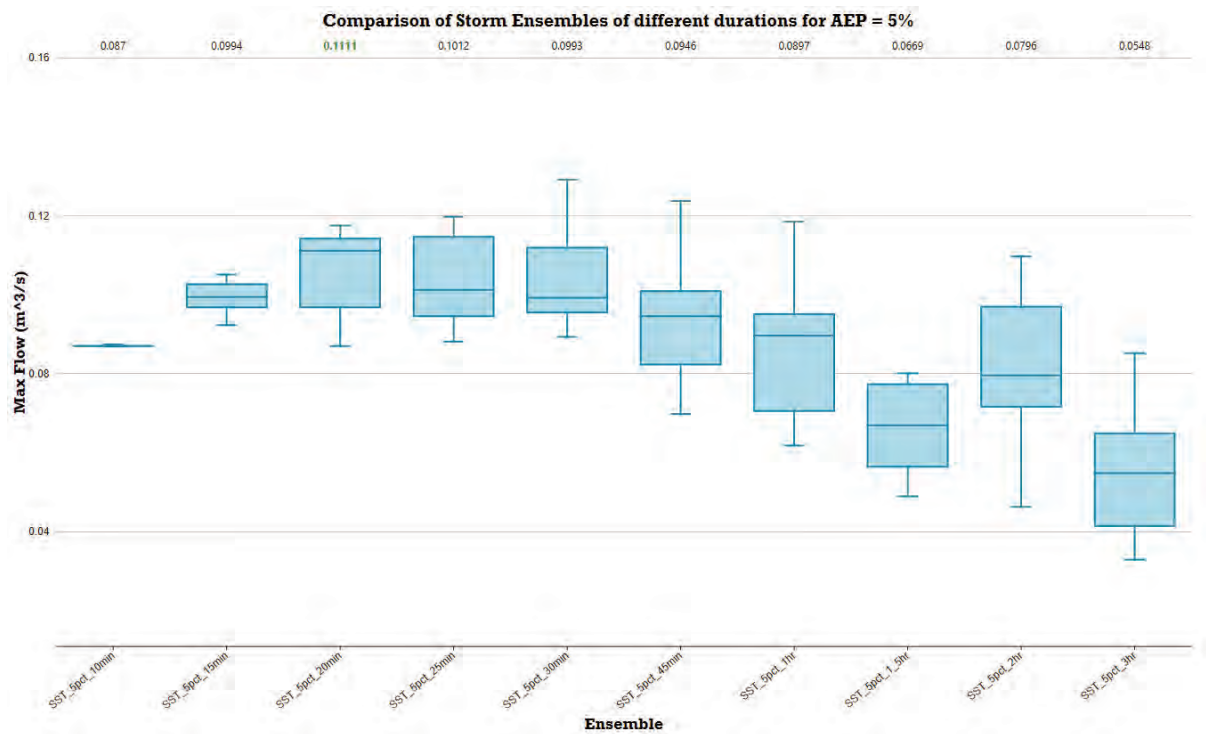


Figure 6: Box and whisker plots of storm ensembles for site with central driveways for 5% AEP.

Further analysis of site discharge was calculated for the site by including theoretical buildings and impervious sealed private driveways for each lot. Building and driveway areas were determined by considering domestic structures in neighbouring lots of similar size, as shown in **Figure 6** and summarised in **Table 4**. Therefore, the total site discharge for the central driveways, private driveways, buildings and landscaped areas is calculated by XP Storm 2019 to be 125.2 L/s, as shown in **Figure 7**.

Table 4: Summary of post-development site buildings and private driveways.

	Catchment Size (m ²)
<i>Post-development Site (Lot Buildings)</i>	
Lot 1	167
Lot 2	228
Lot 3	166
Lot 4	166
Lot 5	209
Lot 6 (Existing)	415
Lot 7	228
Lot 8	182
<i>Post-development Site (Lot Private Driveways)</i>	
Lot 1	32
Lot 2	77
Lot 3	57
Lot 4	47
Lot 5	45
Lot 6	378
Lot 7	214
Lot 8	47
<i>Other Catchments</i>	
Central driveways	1273
Grassland	8349

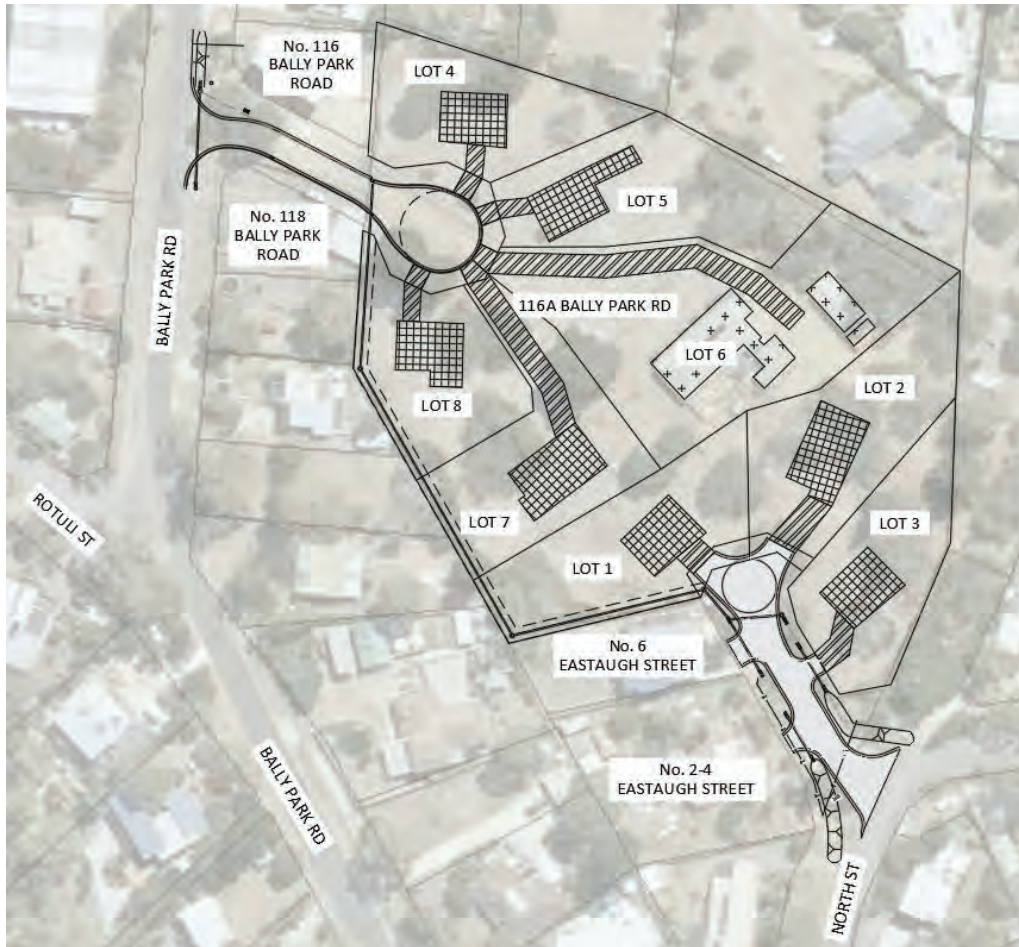


Figure 6: Site building and private driveway development areas considered for initial calculations.

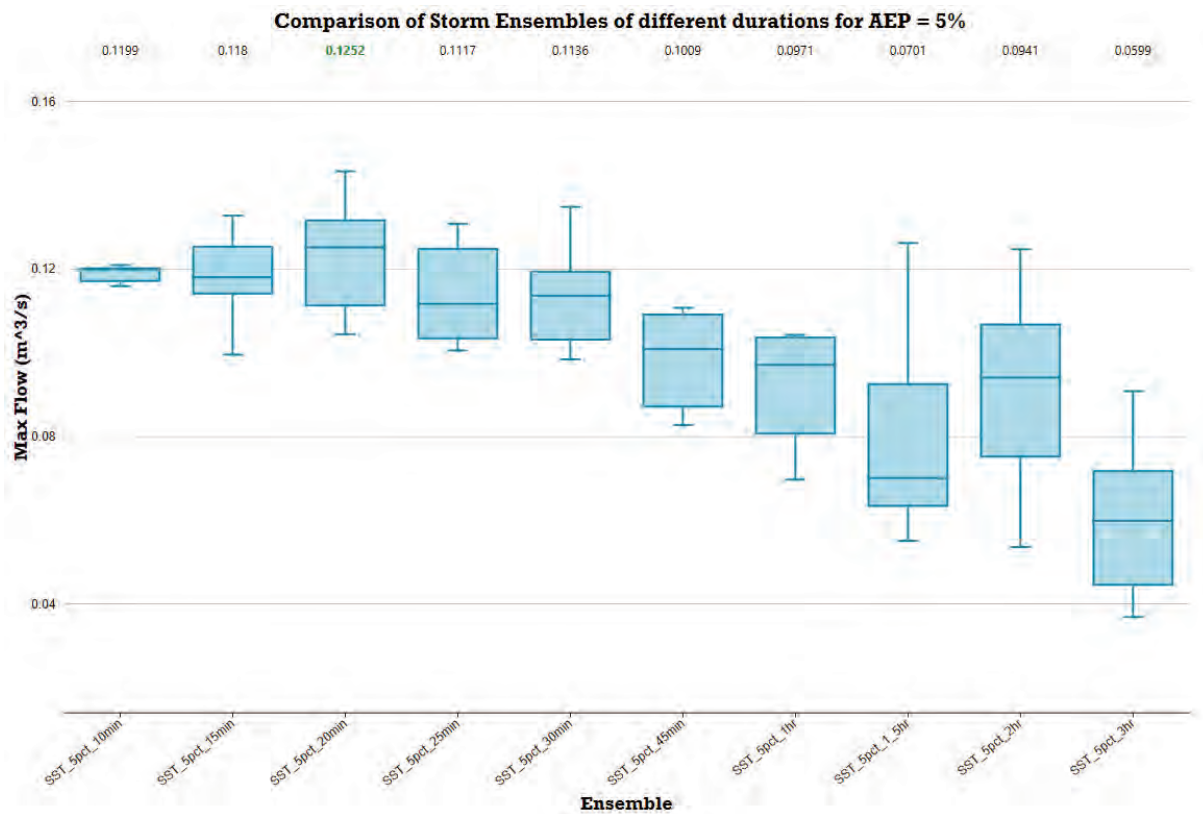
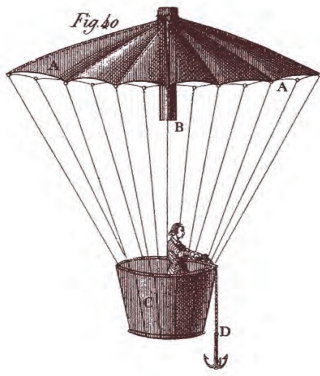


Figure 7: Box and whisker plots of storm ensembles for fully developed site for 5% AEP.

4 Council Stormwater Infrastructure Capacity Assessment

Considering the existing maximum runoff from Bally Park Road (occurring at the termination of the channel drain at Three Street) of 33.9 L/s calculated in *Section 2.2*, the runoff through the channel drain and driveway culverts is expected to increase to a maximum of 159.1 L/s when the lot buildings, private driveways and central driveways are constructed. Therefore, the channel drain and the 300mm driveway culverts have capacity to accommodate the increase in stormwater flow from the proposed development.

Therefore, no alterations are required for the existing channel drain or driveway culverts for the length of Bally Park road from the site to its intersection with Three Street. It remains the responsibility of the Sorell Council to provide alterations to stormwater infrastructure beyond this point.





PROPOSED STAGING -
STAGE 1: LOT 6
STAGE 2: LOTS 4, 5, 7, 8 / 101
STAGE 3: LOTS 1, 2, 3 / 100

REV	DESCRIPTION	APP'D	DATE	REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	DH	03.03.2023				

THIS DRAWING HAS NOT BEEN
APPROVED FOR CONSTRUCTION



**GANDY AND
ROBERTS**
CONSULTING
ENGINEERS

159 DAVEY ST, HOBART
TASMANIA, AUSTRALIA 7000
www.gandyandroberts.com.au
mail@gandyandroberts.com.au
ph 03 6223 8877 fx 03 6223 7183

BALLY PARK ROAD SUBDIVISION
116A BALLY PARK ROAD, DODGES FERRY
TASMANIA 7173
DRAWING TITLE
OVERALL SITEWORKS PLAN

0	50mm	SCALE 1:500@A1
DESIGNED DH	DRAWN DH	CHECKED AC
PROJECT 22.0159	DRAWING C020	REVISION C



REV	DESCRIPTION	APP'D	DATE	REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	DH	03.03.2023				

THIS DRAWING HAS NOT BEEN
APPROVED FOR CONSTRUCTION

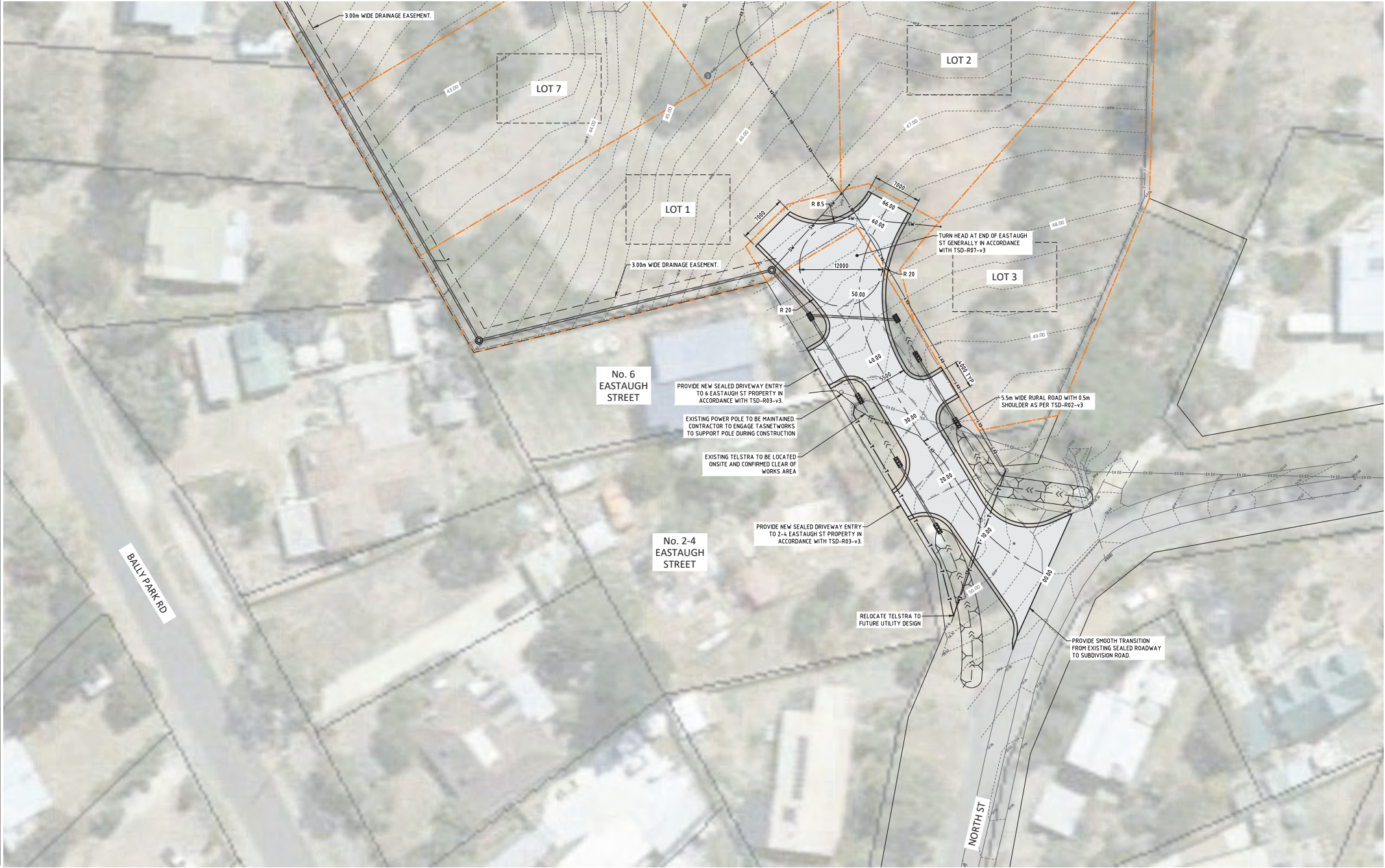


**GANDY AND
ROBERTS**
CONSULTING
ENGINEERS

159 DAVEY ST, HOBART
TASMANIA, AUSTRALIA 7000
www.gandyandroberts.com.au
mail@gandyandroberts.com.au
ph 03 6223 8877 fx 03 6223 7183

BALLY PARK ROAD SUBDIVISION
116A BALLY PARK ROAD, DODGES FERRY
TASMANIA 7173
DRAWING TITLE
SITEWORKS PLAN 01

0 50mm		SCALE 1:250@A1
DESIGNED DH	DRAWN DH	CHECKED AC
PROJECT 22.0159	DRAWING C021	REVISION C



REV	DESCRIPTION	APP'D	DATE	REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	DH	03.03.2023				

THIS DRAWING HAS NOT BEEN
APPROVED FOR CONSTRUCTION



**GANDY AND
ROBERTS**
CONSULTING
ENGINEERS

159 DAVEY ST, HOBART
TASMANIA, AUSTRALIA 7000
www.gandyandroberts.com.au
mail@gandyandroberts.com.au
ph 03 6223 8877 fx 03 6223 7183

BALLY PARK ROAD SUBDIVISION
116A BALLY PARK ROAD, DODGES FERRY
TASMANIA 7173
DRAWING TITLE
SITWORKS PLAN 02

0	50mm	SCALE 1:250@A1
DESIGNED DH	DRAWN DH	CHECKED AC
PROJECT 22.0159	DRAWING C022	REVISION C



REV	DESCRIPTION	APP'D	DATE	REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	DH	03.03.2023				

THIS DRAWING HAS NOT BEEN
APPROVED FOR CONSTRUCTION



**GANDY AND
ROBERTS**
CONSULTING
ENGINEERS

159 DAVEY ST, HOBART
TASMANIA, AUSTRALIA 7000
www.gandyandroberts.com.au
mail@gandyandroberts.com.au
ph 03 6223 8877 fx 03 6223 7183

BALLY PARK ROAD SUBDIVISION
116A BALLY PARK ROAD, DODGES FERRY
TASMANIA 7173
DRAWING TITLE
STORMWATER PLAN 01

DESIGNED DH	DRAWN DH	CHECKED AC
PROJECT 22.0159	DRAWING C040	REVISION C

