DISCRETIONARY APPLICATION

For Public Display

Applicant:
Artas Architects

Location:
67 & 69 Arthurs Lake Road, Wilburville

Proposal:
Subdivision (2 Lots into 4 Lots)

DA Number:
DA 2020 / 00055

Date Advertised:
07 September 2020

Date Representation Period Closes:
21 September 2020

Responsible Officer:
Jacqui Tyson (Senior Planning Officer)

Viewing Documents:
The relevant documents may be viewed at Council's website www.centralhighlands.tas.gov.au or at Council's Offices 19 Alexander Street, Bothwell & 6 Tarleton Street, Hamilton during normal office hours.

Representations to:

General Manager
19 Alexander Street
BOTHWELL TAS 7030

Email:
development@centralhighlands.tas.gov.au

central highlands COUNCIL

Development & Environmental Services
19 Alexander Street
BOTHWELL TAS 7030

Phone (03) 6259 5503
Fax (03) 6259 5722

www.centralhighlands.tas.gov.au

For office use only:

Date Received:	
DA Number:	
PID:	

Application for Planning Approval – Subdivision & Strata Division

Use this form to apply for subdivision approval in accordance with section 81 of the Local Government (Building & Miscellaneous Provisions) Act 1993 *and section 57 and 58 of the* Land Use Planning and Approvals Act 1993 *(the Act).*

Tick ✓ if there has been a pre-application meeting with a Council officer: *Yes:* ☑ *No:* ☐

Officer's name Jacqui Tyson *Date:* 12/08/2020

Applicant, Owner & Contact Details:

Provide details of the Applicant and Owner of the land. (Please print)

Applicant: ARTAS Architects
Address: Level 1, 73 Paterson Street
Launceston TAS 7248
Email: launceston@artas.com.au
Phone No: (03) 6331 2731
Fax No:
Mobile No:

Owner: Thane Brady
Address: 61 Mayne St,
Invermay TAS 7248
Phone No:
Fax No:

Land Details:

Provide details of the land, including street address, title details and the existing use.

Address: 67 & 69 Arthurs Lake Road
Wilburville TAS 7030
Volume: 32280
Folio: 36 & 37

Existing Use Vacant Lots (Zoned Low Density Residential)

Please use definitions in planning scheme

Proposed Development Details:

Provide details of the proposed subdivision development.

Development: Proposing to subdivide 2 existing vacant lots into 4 lots (total).
Retain zone as Low Density Residential.

Tick ✓ if proposed developed is to be staged: *Yes* ☐ *No* ☑

Tick ✓ Is the proposed development located on land previously used as a tip site? *Yes* ☐ *No* ☑

Provide an estimate of the completed value of the proposed development works, including the value of all site works and any labour contributions by the Applicant or the Owner.

Est. value: $ *Write 'Nil' if no works are proposed, e.g. boundary adjustment*

Declaration:

I/we hereby apply for planning approval to carry out the subdivision development described in this application and the accompanying documents and declare that: -

- **The information in this application is true and correct.**
- **In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.**
- **I/we authorise Council to provide a copy of any documents relating to this application to any person for the purpose of assessment or public consultation and agree to arrange for the permission of the copyright owner of any part of this application to be obtained.**
  Council will only use the information provided to consider and determine the application for planning approval. Information provided may be made available for public inspection in accordance with section 57 of the Act.
- **I/We declare that the Owner has been notified of the intention to make this application in accordance with section 52(1) of the *Land Use Planning and Approvals Act 1993*.**
  Applies where the applicant is not the Owner and the land is not Crown land or owned by a council, and is not land administered by the Crown or a council.

Signature: *The Applicant must sign and date this form.* *Date:* 17/08/20

Refer to application checklist over page for additional information requirements

Checklist

To ensure that we can process your application as quickly as possible, please read the following checklist carefully and ensure that you have provided the following at the time of lodging the application. If you are unclear on any aspect of your application, please contact Central Highlands Council by phone on (03) 6259 5503 to discuss or arrange an appointment concerning your proposal. Note that Council may require additional information in accordance with section 54 of the Land Use Planning and Approvals Act 1993.

---

1. A completed Application for Approval of Use/Development form.
   Please ensure that the information provides an accurate description of the proposal, has the correct address and contact details and is signed and dated by the applicant.

2. A current copy of the Certificate of Title for all lots involved in the proposal.
   The title details must include, where available, a copy of the search page, title plan, sealed plan or diagram and any schedule of easements (if any), or other restrictions, including covenants, Council notification or conditions of transfer.

3. Two (2) copies of the following information -
   a) An analysis of the site and surrounding area setting out accurate descriptions of the following -
      (i) topography and major site features including an indication of the type and extent of native vegetation present, natural drainage lines, water courses and wetlands, trees greater than 5 metres in height in areas of skyline or landscape importance and identification of any natural hazards including flood prone areas, high fire risk areas and land subject to instability;
      (ii) soil conditions (depth, description of type, land capability etc);
      (iii) the location and capacity of any existing services or easements on the site or connected to the site;
      (iv) existing pedestrian and vehicle access to the site;
      (v) any existing buildings on the site;
      (vi) adjoining properties and their uses; and
      (vii) soil and water management plans.

   b) A site plan for the proposed use or development drawn, unless otherwise approved, at a scale of not less than 1:200 or 1:1000 for sites in excess of 1 hectare, showing -
      (i) a north point;
      (ii) the boundaries and dimensions of the site;
      (iii) Australian Height Datum (AHD) levels and contours;
      (iv) natural drainage lines, watercourses and wetlands;
      (v) soil depth and type;
      (vi) the location and capacity of any existing services or easements on the site or connected to the site, including the provisions to be made for supplying water and draining the lots;
      (vii) the location of any existing buildings on the site, indicating those to be retained or demolished, and their relationship to buildings on adjacent sites, streets and access ways;
      (viii) the use of adjoining properties;
      (ix) the proposed subdivision lots boundaries and the building envelopes for buildings, including distinguishing numbers, boundary dimensions and areas;
      (x) the streets, roads, footpaths and other ways public and private, existing and to be opened or constructed on the land, including the widths of any such roads, footpaths and other ways;
      (xi) the general location of all trees over three (3) metres in height;
      (xii) the position of any easement over or adjoining the land;
      (xiii) the location of any buildings on the site or lots adjoining it;
      (xiv) any proposed public open space, or communal space or facilities;
      (xv) proposed landscaping, indicating vegetation to be removed or retained and species and mature heights of plantings; and
      (xvi) methods of minimizing erosion and run-off during and after construction and preventing contamination of storm water discharged from the site.

4. A written submission supporting the application that demonstrates compliance with the relevant parts of the Act, State Polices and the Central Highlands Planning Scheme 1998, including a Traffic Impact Statement where the development is likely to create more than 100 vehicle movements per day.

5. Application fees.
   As per Fee Schedule. Please contact Central Highland Council's Development and Environmental Services Department by phone on (03) 6259 5503 if you require assistance in calculating the fees.

ARTAS
ARCHITECTS

14th August 2020

Attention: Jacqui Tyson
Central Highlands Council
19 Alexander Street
Bothwell TAS 7030

Dear Jacqui,

67 & 69 ARTHURS LAKE ROAD, WILBURVILLE – DEVELOPMENT APPLICATION

Applicant: ARTAS Architects

Development: Subdivision

Development Site: 67 & 69 Arthurs Lake Road, Wilburville

Zone: Low Density Residential

Use Class: Residential

This application is to subdivide the existing lots.

Roofed area: N/A

Written submission for relevant codes applicable to development

Table 12 Low Density Residential Zone

12.5.1 Lot Design – P4

An internal lot must satisfy all of the following:

a) access is from a road existing prior to the planning scheme coming into effect, unless site constraints make an internal lot configuration the only reasonable option to efficiently utilise land;

Response:
The existing lots are only 30-31m in width so if we subdivide to allow all lots fronting Arthurs Lake Road works out to be approx. 15m in width which is too narrow for future residences.

b) it is not reasonably possible to provide a new road to create a standard frontage lot;

Response:
This is not practical for a 4 lot subdivision.

c) the lot constitutes the only reasonable way to subdivide the rear of an existing lot;

Response:
The existing lots are only 30-31m in width so if we subdivide to allow all lots fronting Arthurs Lake Road works out to be approx. 15m in width which is too narrow for future residences.

d) the lot will contribute to the more efficient utilisation of living land;

Response:
The lots have greater chance of use if the are smaller due to high maintenance (bushfire prevention).

e) the amenity of neighbouring land is unlikely to be unreasonably affected by subsequent development and use;

Response:
There are a few instances along Arthurs Lake Rd that has been subdivided in this manner.

f) the lot has access to a road via an access strip, which is part of the lot, or a right-of-way, with a width of no less than 3.6m;

Response:
The developer is providing a 6m wide access way with a 3.6m wide sealed driveway to each rear tenancy the full length of the access way.

g) passing bays are provided at appropriate distances along the access strip to service the likely future use of the lot;

Response:
The width of the access way being 6m allows for vehicles to pass each other.

h) the access strip is adjacent to or combined with no more than three other internal lot access strips and it is not appropriate to provide access via a public road;

Response:
An access way is provided to each rear tenancy to the public road.

i) a sealed driveway is provided on the access strip prior to the sealing of the final plan.

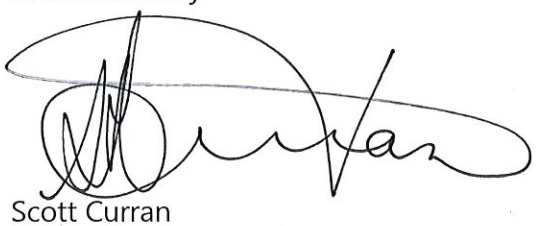
Response:
As outlined on the site plan, a 3.6m wide sealed access strip is being provided.

j) the lot addresses and provides for passive surveillance of public open space and public rights of way if it fronts such public spaces.

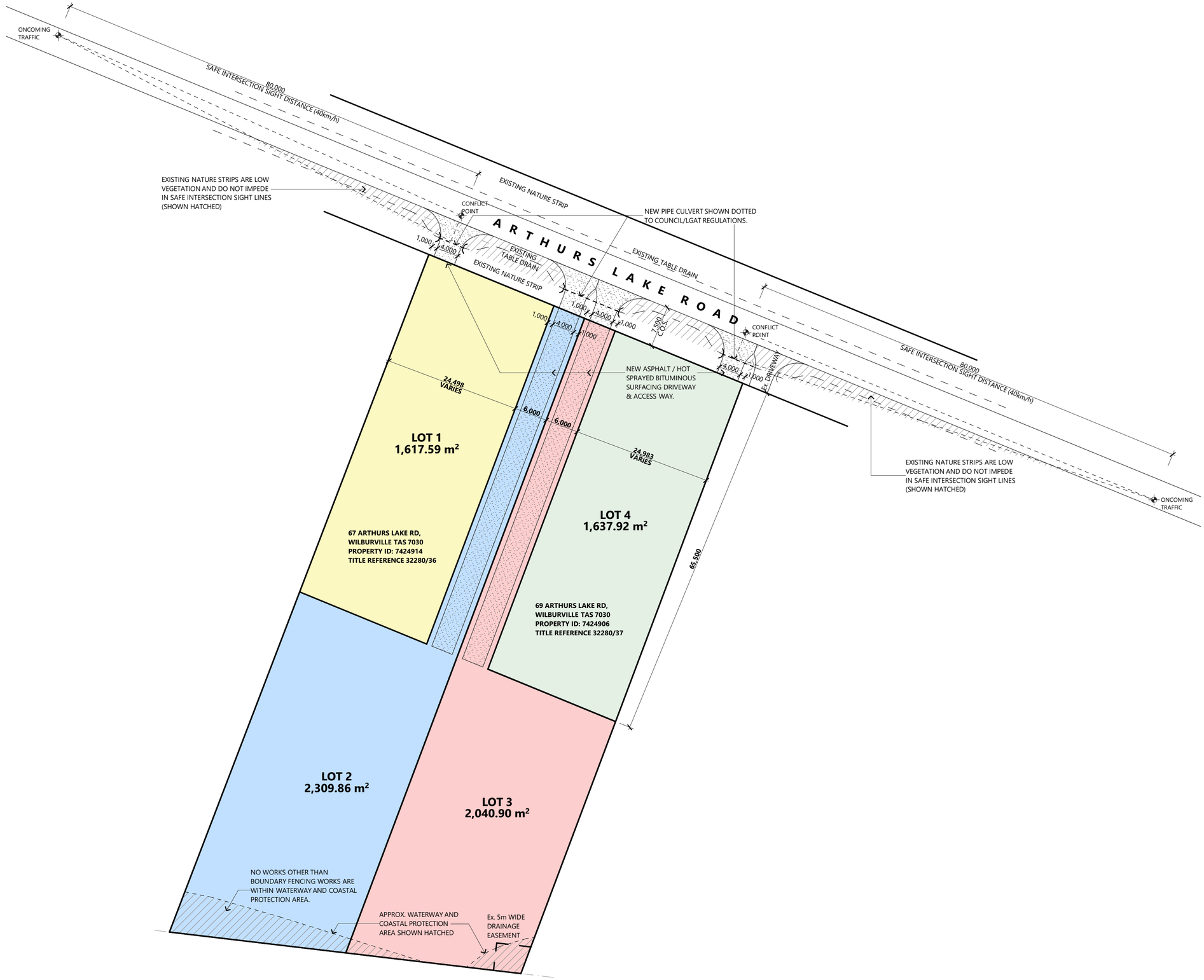
Response:
N/A

If you require any further information in regard to the above, I can be contacted on (03) 6331 2731.

Yours sincerely



Scott Curran
Director / Architect



North

SITE PLAN
SCALE 1:500

0mm 5000 10000 15000 20000 25000

REVISION

Rev	Description	Date	Int.	App
Sk01	ISSUED TO CLIENT FOR COMMENTS	2/06/2020	BT	SC
Sk02	ISSUED TO CLIENT FOR COMMENTS	6/07/2020	BT	SC
Sk03	ISSUED TO CLIENT FOR COMMENTS	10/08/2020	BT	BT
Sk04	ISSUED TO CLIENT FOR COMMENTS	13/08/2020	BT	BT

ARTAS ARCHITECTS

PROJECT NAME
WILBURVILLE SUBDIVISION

PROJECT ADDRESS
67-69 ARTHURS LAKE RD
WILBURVILLE TASMANIA 7030

CLIENT NAME
THANE BRADY

DRAWING NAME
SITE PLAN

DRAWN	APPROVED	SHEET SIZE
BT	SC	A2 (LANDSCAPE)

DRAWING ISSUE
SKETCH

PROJECT NUMBER:
201027

DRAWING NUMBER
A700-Sk04

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
32280	36
EDITION	DATE OF ISSUE
7	21-Aug-2019

SEARCH DATE : 17-Aug-2020
SEARCH TIME : 10.10 AM

DESCRIPTION OF LAND

Parish of OOLUMPTA, Land District of WESTMORLAND
Lot 36 on Sealed Plan 32280
Derivation : Part of 250 Acres Gtd. to A. Morrison and Part of 950 Acres Gtd. to J. Jones
Prior CT 4410/17

SCHEDULE 1

M771621 TRANSFER to THANE MATTHEW BRADY Registered 21-Aug-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 33280 COVENANTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
32280	37
EDITION	DATE OF ISSUE
7	21-Aug-2019

SEARCH DATE : 17-Aug-2020
SEARCH TIME : 10.10 AM

DESCRIPTION OF LAND

Parish of OOLUMPTA, Land District of WESTMORLAND
Lot 37 on Sealed Plan 32280
Derivation : Part of 250 Acres Gtd. to A. Morrison and Part of 950 Acres Gtd. to J. Jones
Prior CT 4410/18

SCHEDULE 1

M771627 TRANSFER to THANE MATTHEW BRADY Registered 21-Aug-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 32280 EASEMENTS in Schedule of Easements
SP 33280 COVENANTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

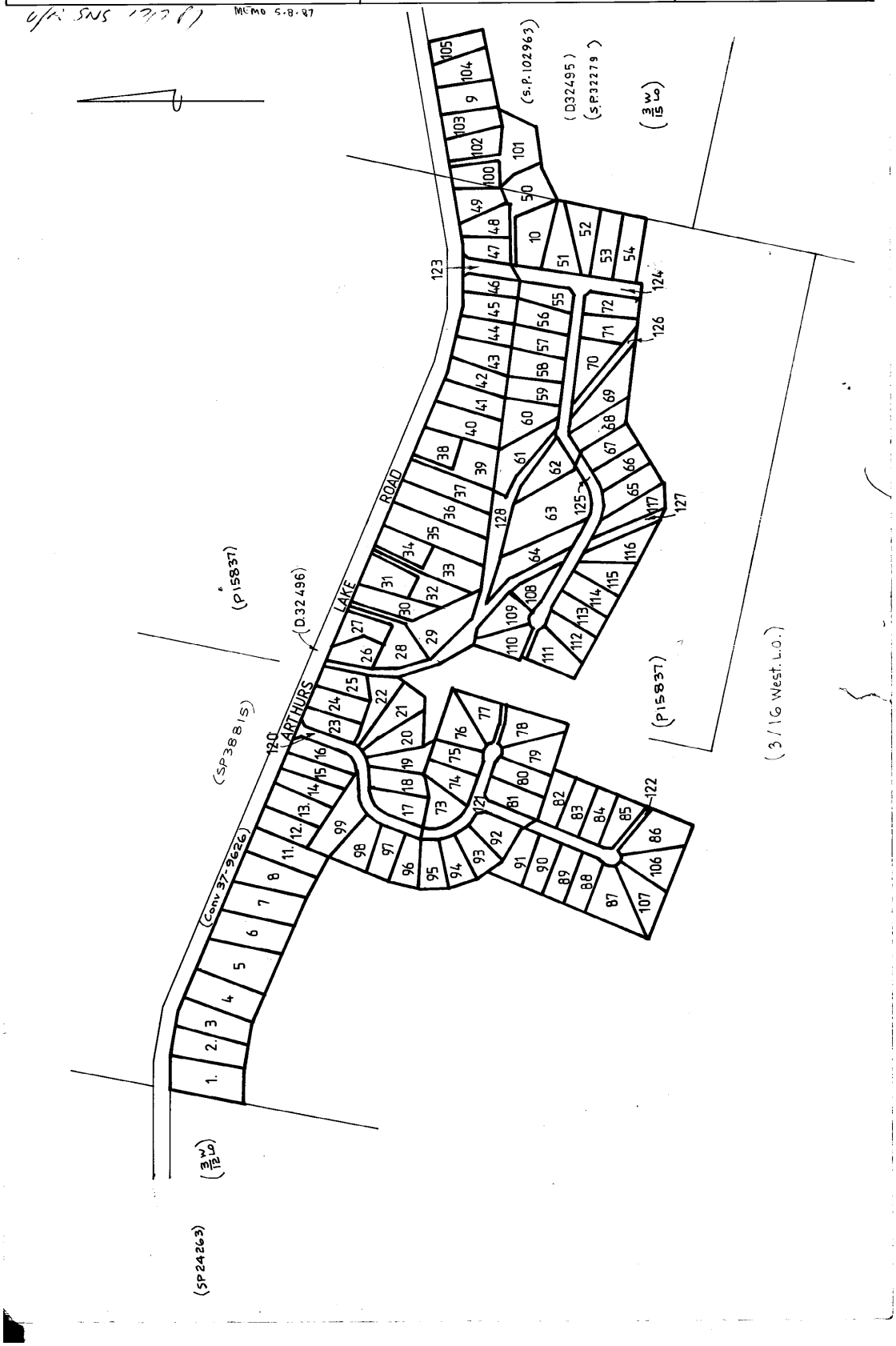
No unregistered dealings or other notations

OSK 1110

32280

Owner: Forest Marsh Pty. Ltd.	PLAN OF SURVEY by Surveyor. N.D. Leary of land situated in the LAND DISTRICT OF WESTMORLAND PARISH OF OOLUMPTA SCALE 1: 4000 MEASUREMENTS IN METRES	Registered Number S. P32280 ~~Approved~~ Effective from: 28 OCT 1987 Recorder of Titles
Title Reference: C.T. ~~3884-42~~ 4332-83 & C.T. PURSUANT TO LOT 1 ON S.P. 32279 → 4394-43 C.T.		
Grantee: Parts Of 250 ac Gtd to Askin Morrison, 950 ac Gtd to John Jones & Lot 1289, 600 ac Gtd to John Jones		

MEMO 5.8.87



ANNEXURE Sheet No. 1

10

N D Leary

Signed for the purposes of identification

Council Clerk

... sheet contains detailed drawings of parcels shown on the ... to which it is attached which plan is verified by my ... dated 1·6·87 and that certificate extends to the detail shown on this sheet

N D Leary.

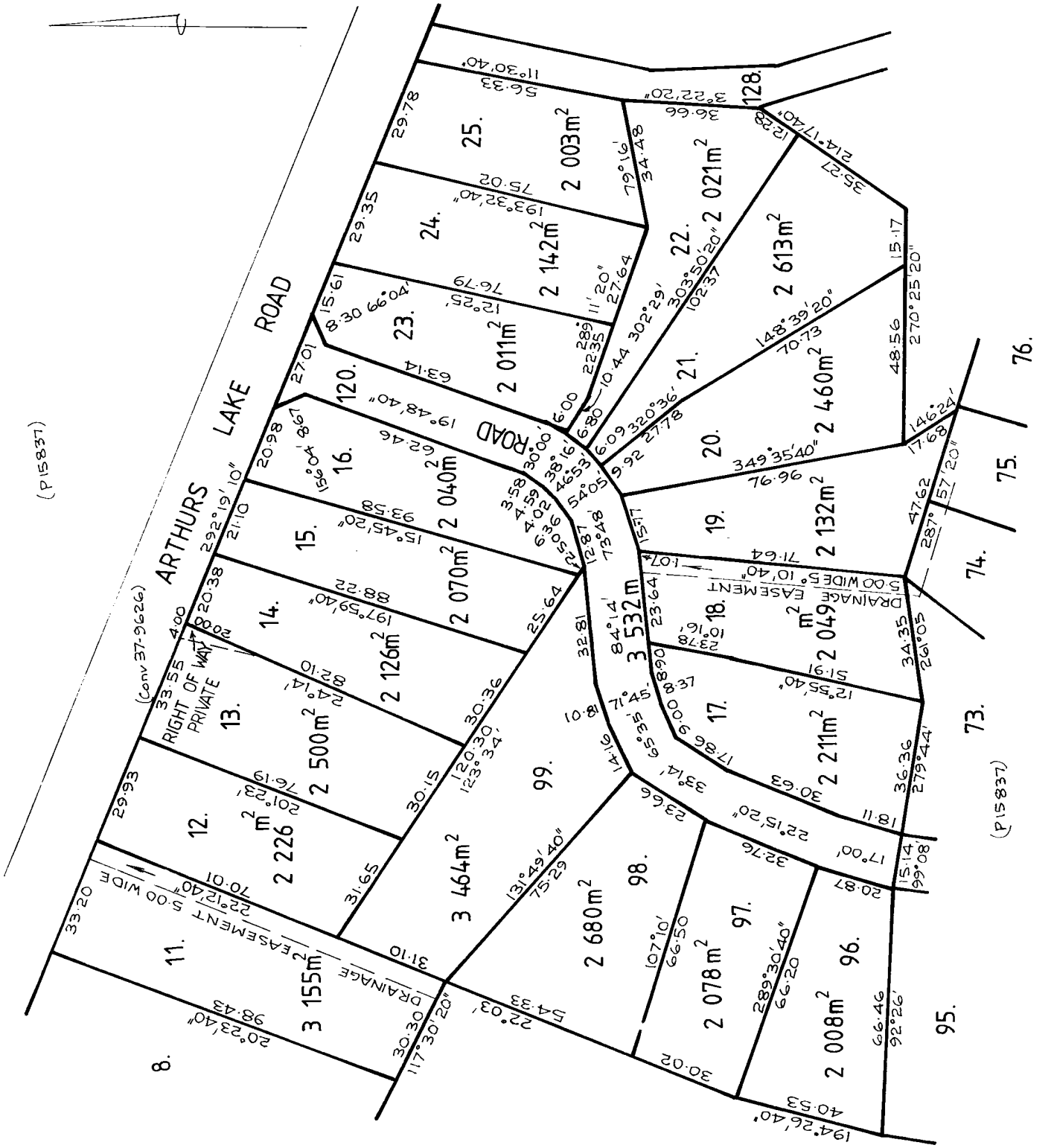
Owner Forest Marsh Pty Ltd

Title Reference CT ~~3884-42~~ 4332-83

Registered Number

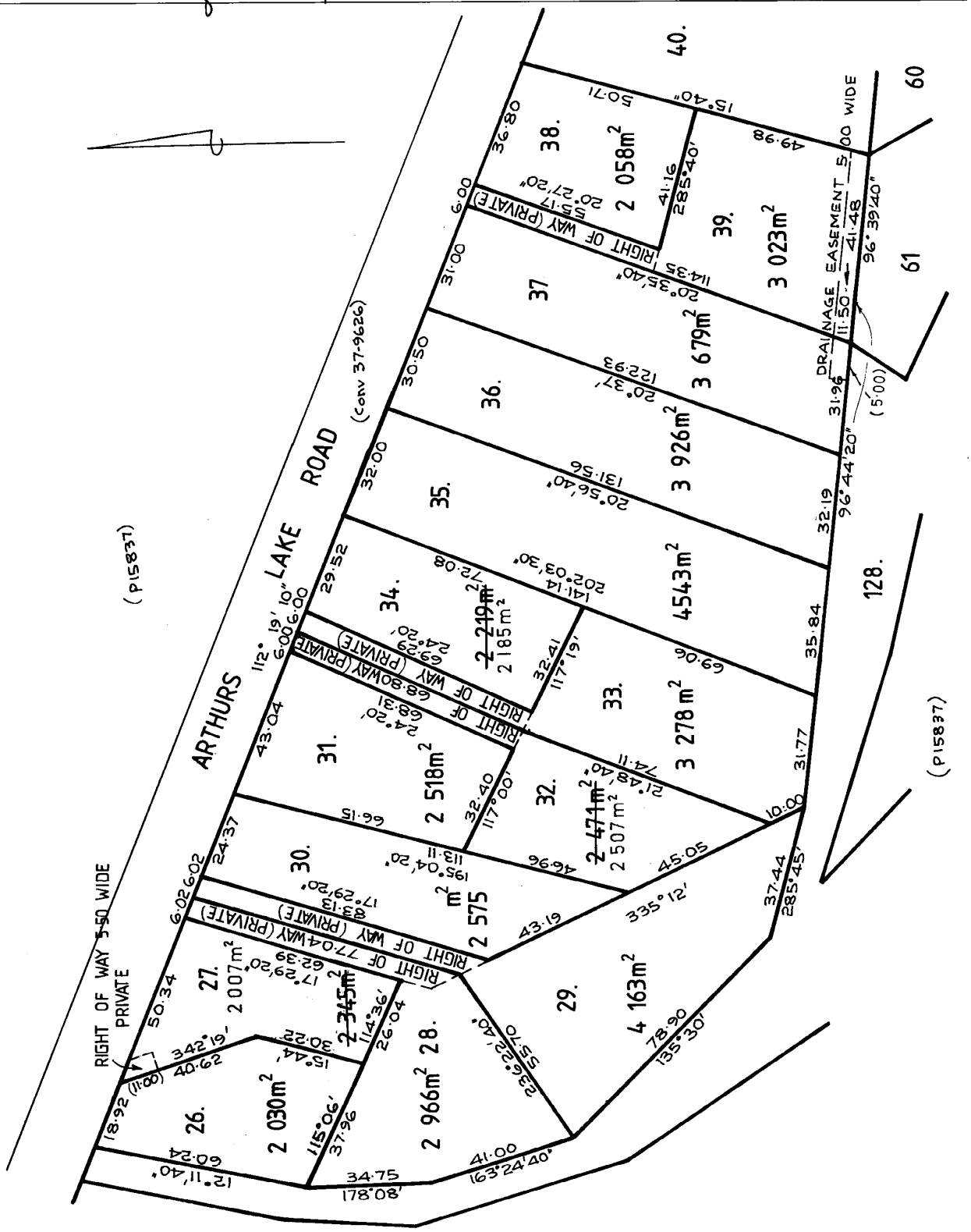
Scale 1000

Measurements in Metres



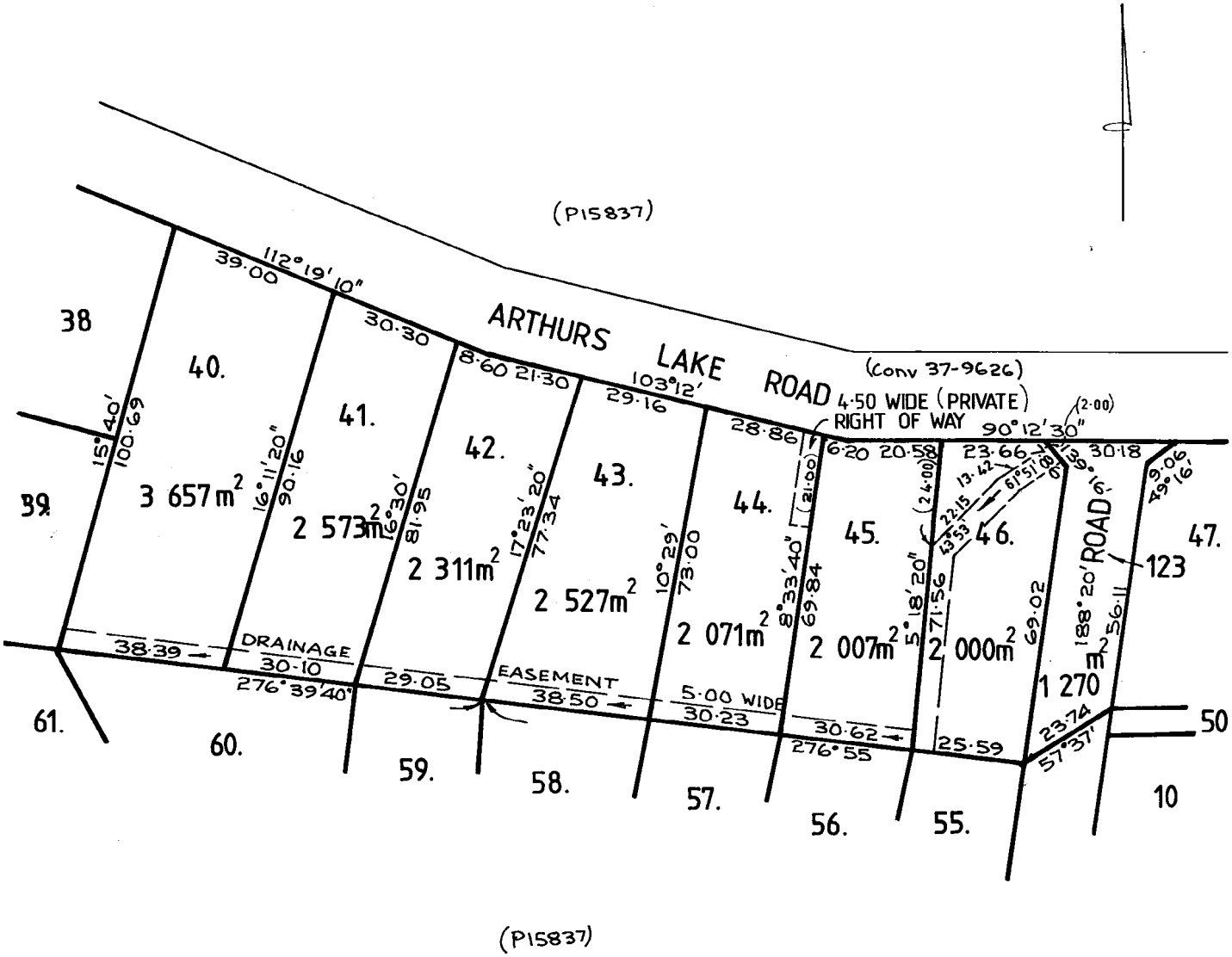
OS-K 1109

ANNEXURE SHEET No. 2 (of 10 annexures) to plan by Surveyor N D Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor N D Leary	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT 6332-83 ~~3884-42~~	Scale 1: 1000 Measurements in Metres



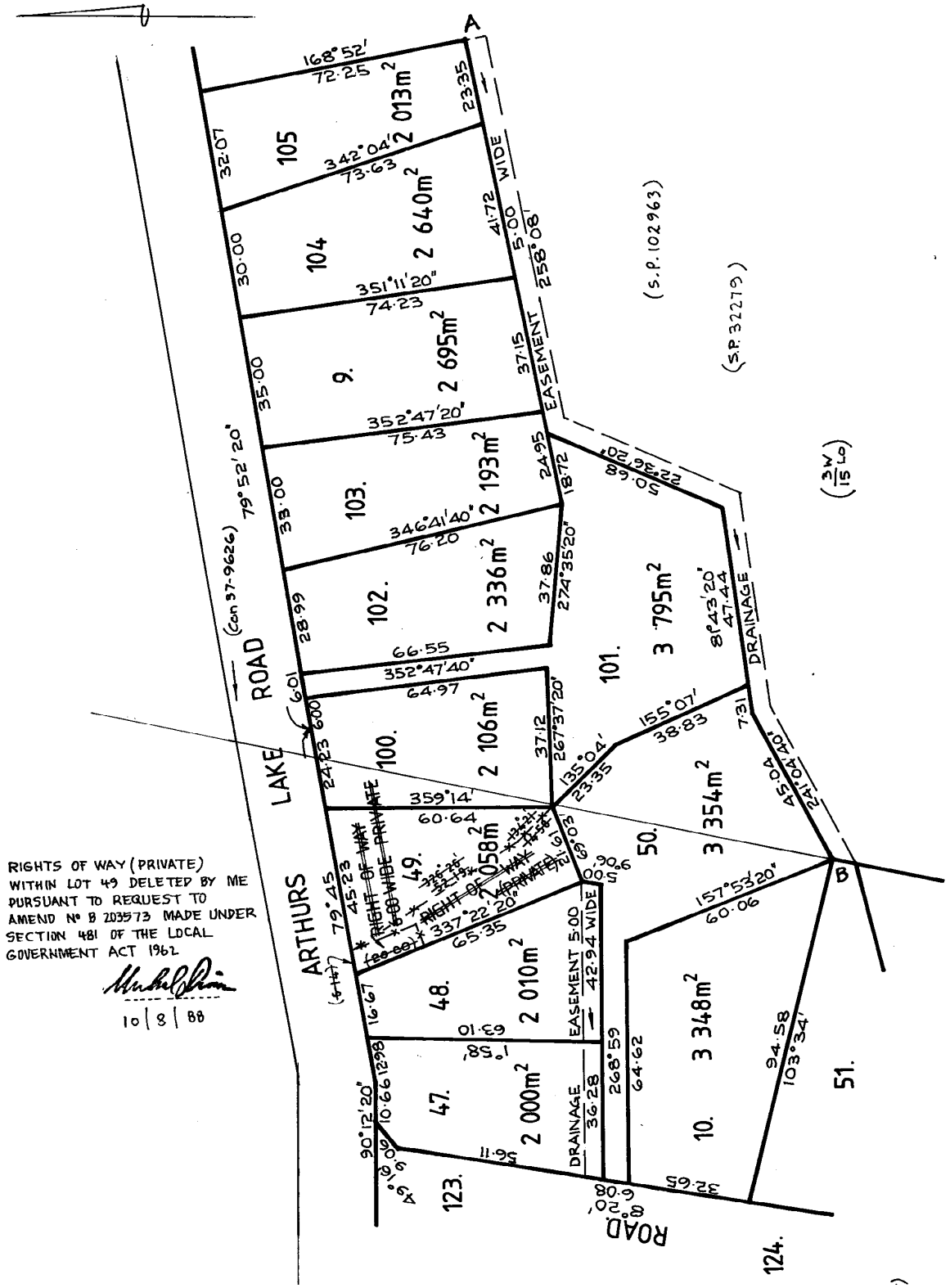
OS-K 1109

ANNEXURE SHEET No. 3 (of 10 annexures) to plan by Surveyor N. D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet. Surveyor	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT ~~3884-47~~ 4332-83	Scale 1: 1000 Measurements in Metres



OS-K 1109

ANNEXURE SHEET No. 4 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd 4332-83 Title Reference: C.Ts. ~~3884-42~~ & C.T. PURSUANT TO LOT 1 ON S.P. 32279.	Scale 1: 1000 Measurements in Metres

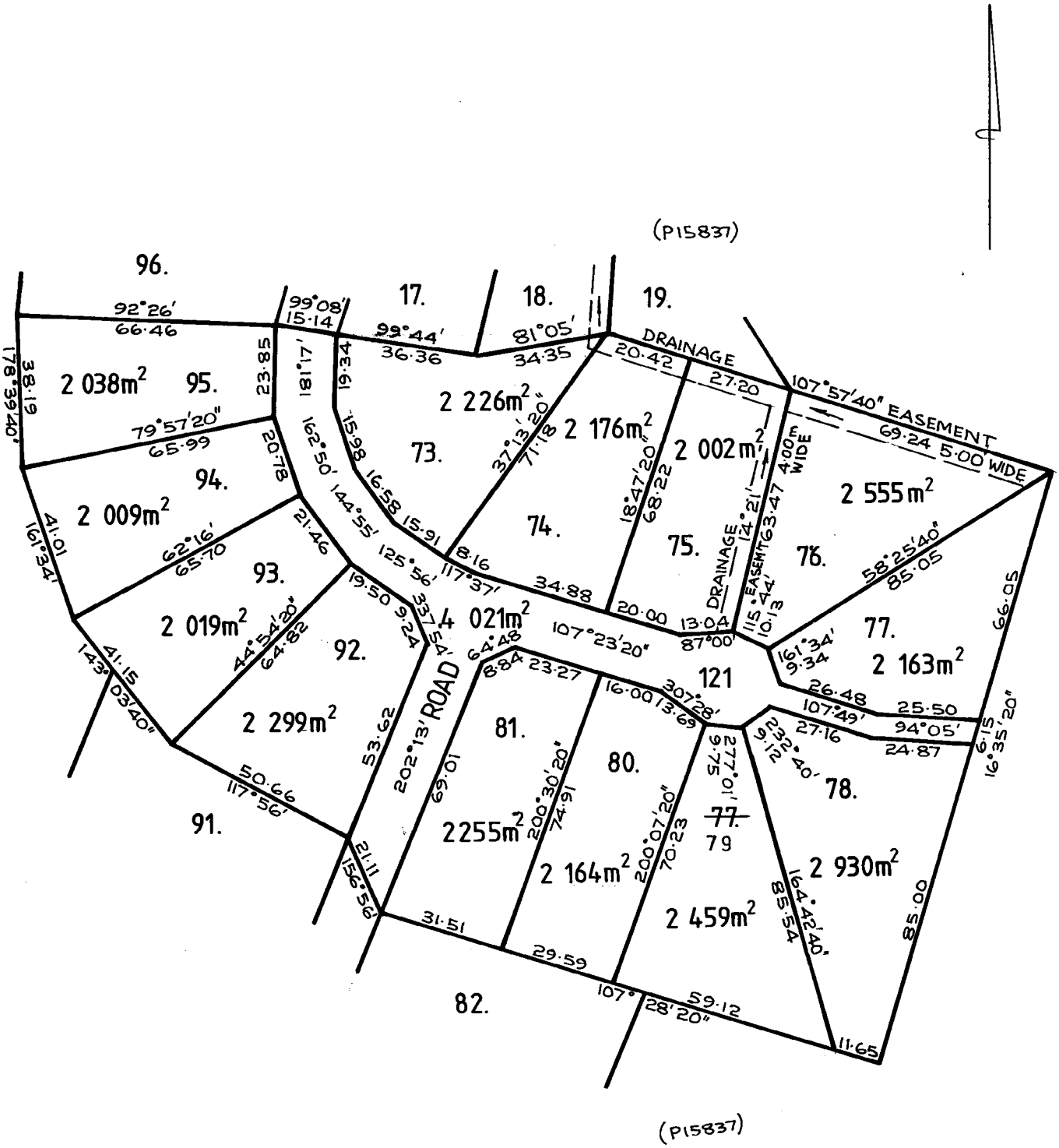


RIGHTS OF WAY (PRIVATE) WITHIN LOT 49 DELETED BY ME PURSUANT TO REQUEST TO AMEND Nº B 203573 MADE UNDER SECTION 481 OF THE LOCAL GOVERNMENT ACT 1962

10 | 8 | 88

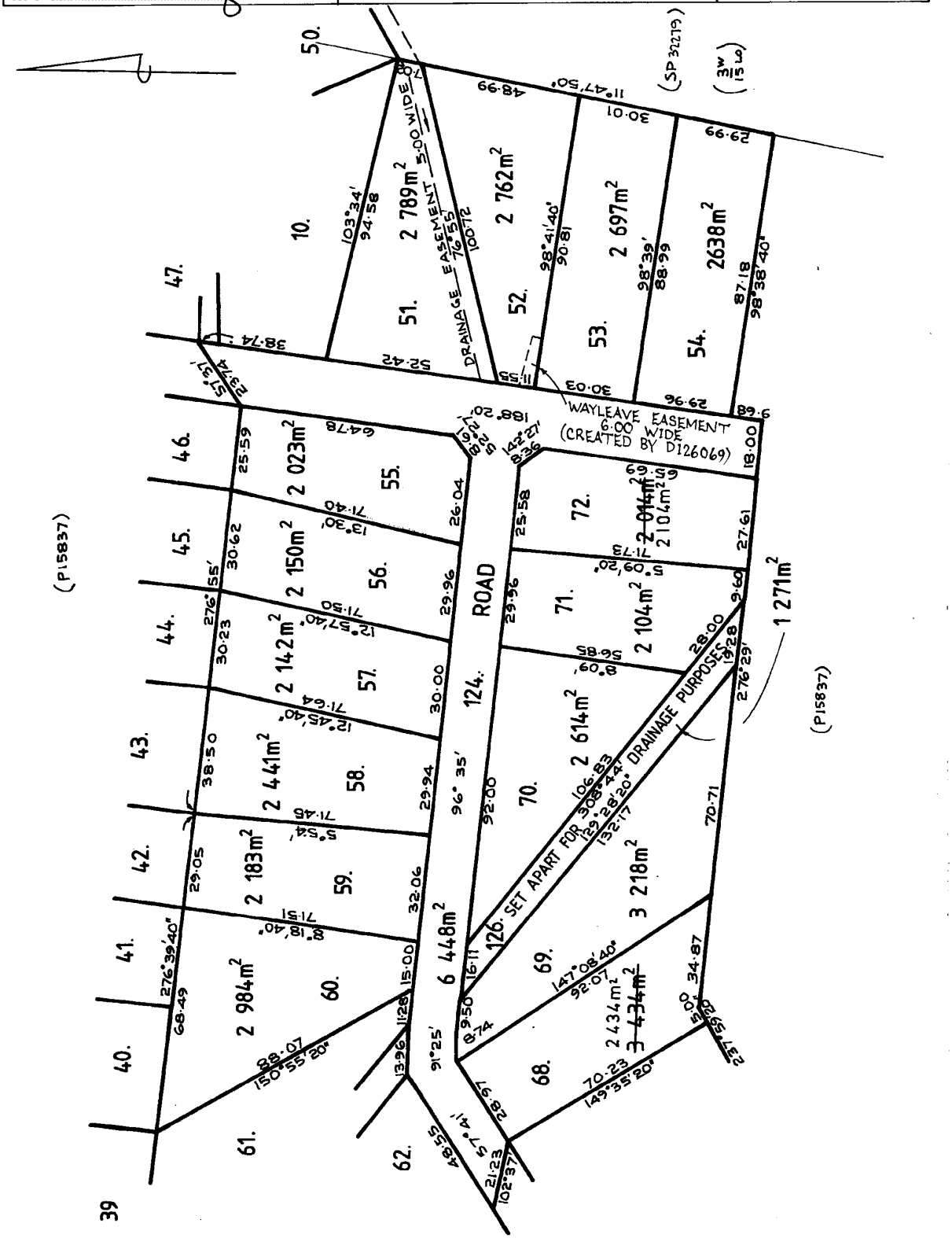
OS-K 1109

ANNEXURE SHEET No. 5 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor N.D. Leary	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT ~~3884-42~~ 6332-83	Scale 1: 1000 Measurements in Metres



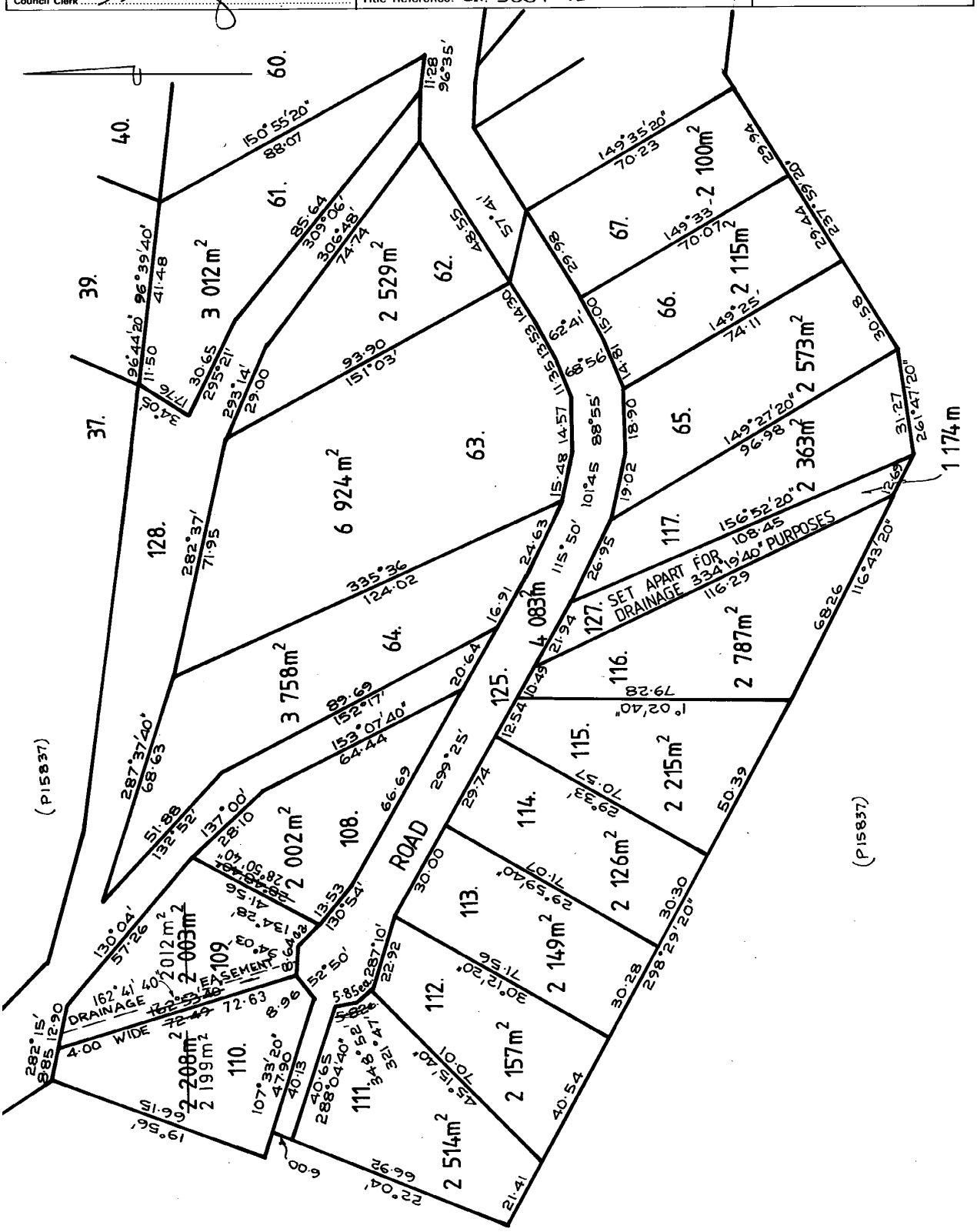
(P15837)

ANNEXURE SHEET No. 6 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet.	Registered Number: S. P32280
Signed for the purposes of identification	Surveyor N.D. Leary	Scale 1: 1000
Council Clerk	Owner: Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference: CT 4332-83 ~~3884-42~~	

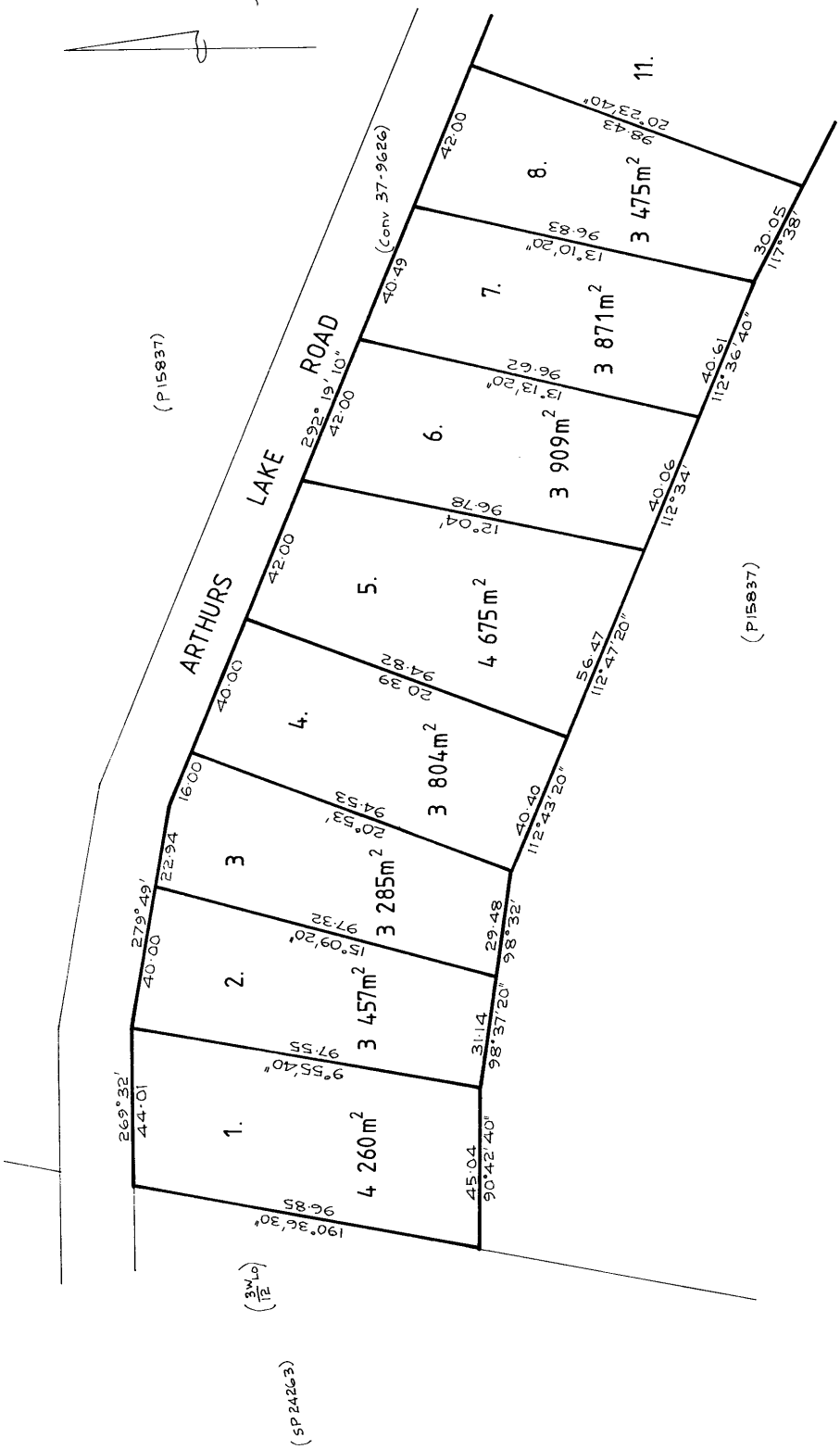


OS-K 1109

ANNEXURE SHEET No. 7 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet.	Registered Number: S. P32280
Signed for the purposes of identification	Surveyor N.D. Leary	Scale 1: 1000
Council Clerk	Owner: Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference: C.T. 4332-83 ~~3884-42~~	



ANNEXURE SHEET No. 8 to 10 annexed to plan by Surveyor N. D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet	Registered Number
Signed for the purposes of identification	Surveyor N D Leary	Scale 1 1000
Council Clerk	Owner Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference C.T. ~~3884-42~~ 4332-83	



ANNEXURE SHEET No 9
to 10 annexure(s) to plan by Surveyor
N D Leary

Signed for the purposes of identification

Council Clerk

This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet

Surveyor N D Leary

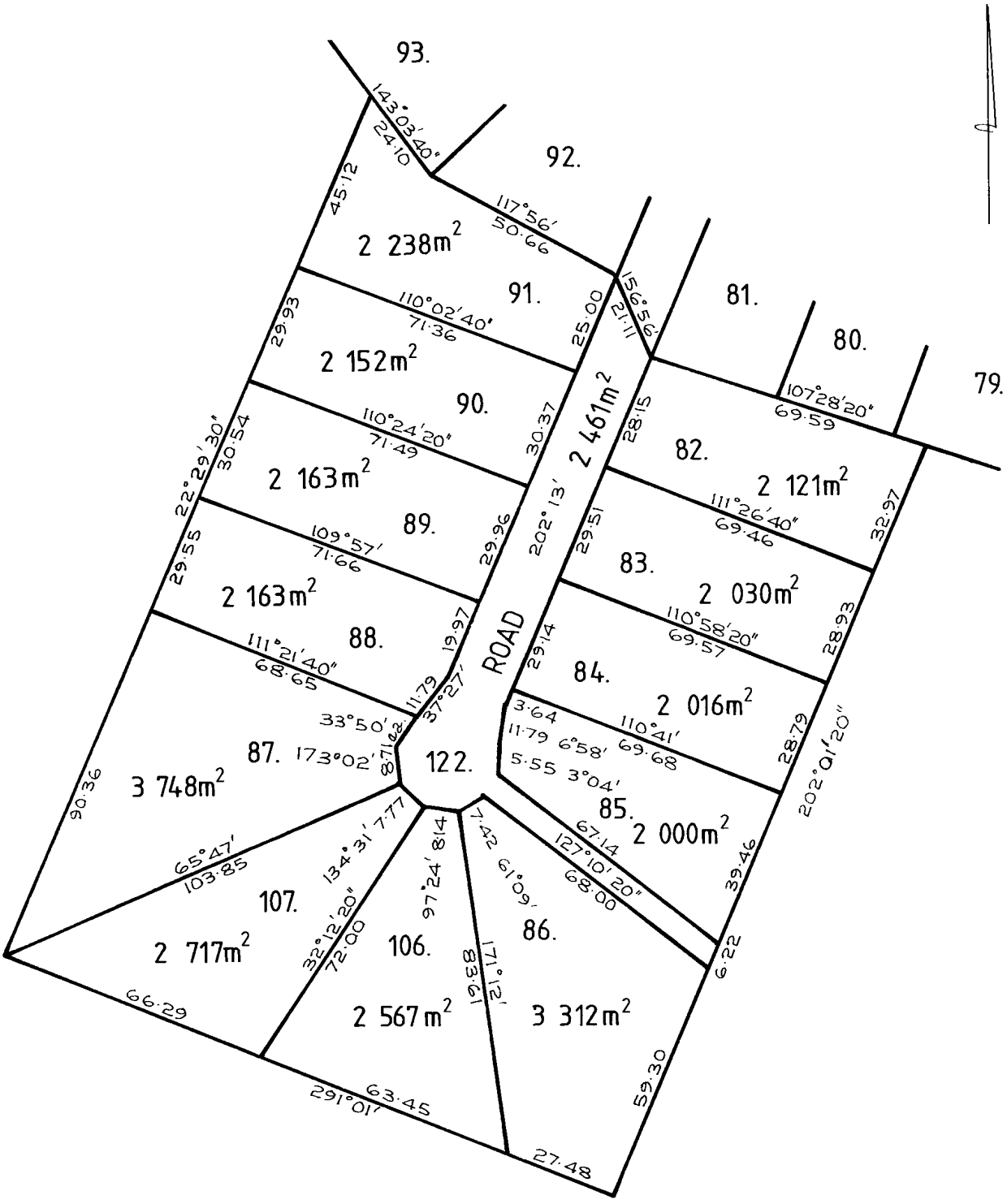
Owner Forest Marsh Pty Ltd

Title Reference C.T. ~~3884-42~~ 4332-83

Registered Number

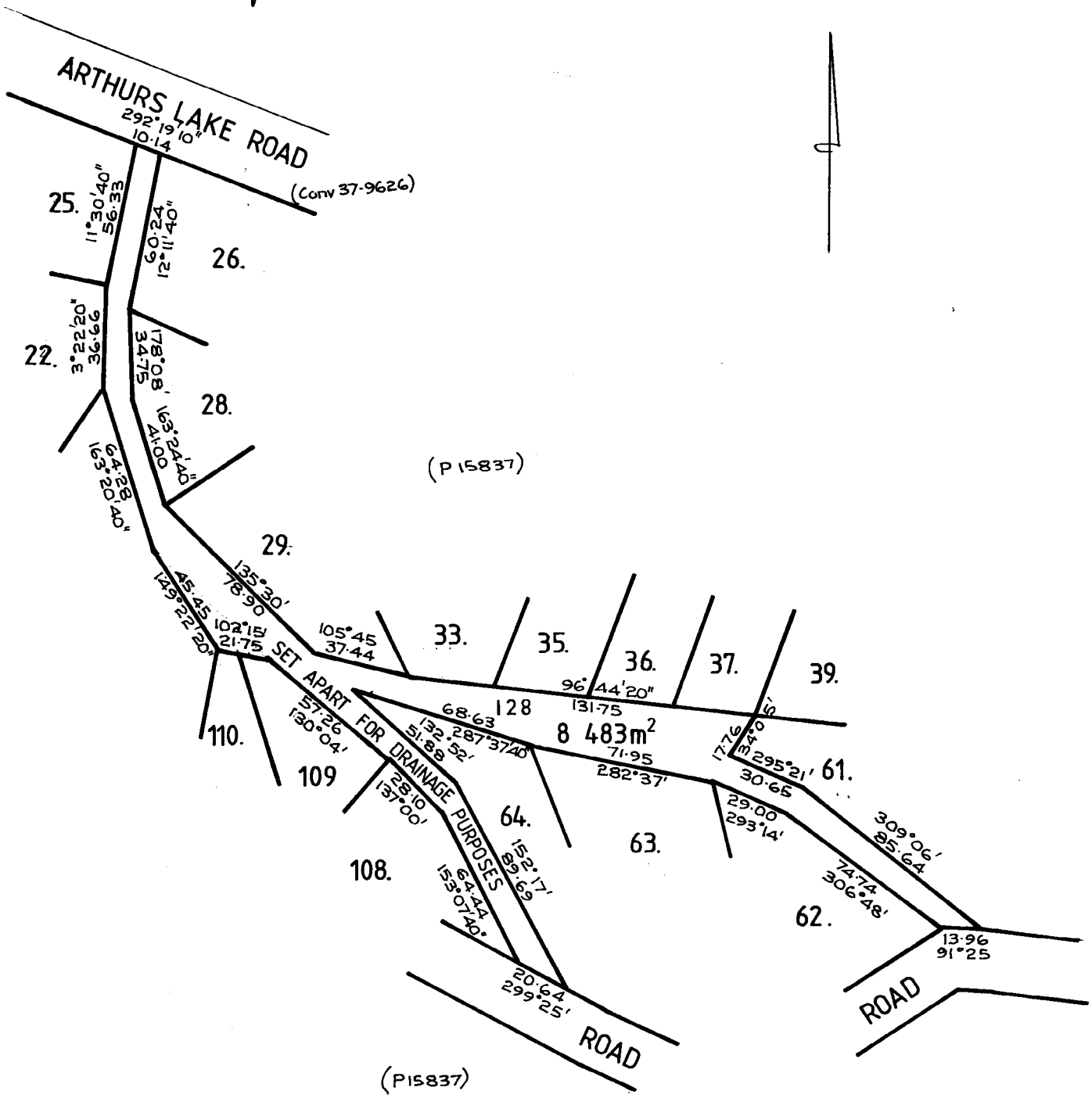
Scale 1 : 1000

Measurements in Metres



OS-K 1109

ANNEXURE SHEET No. 10 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT ~~3884-42~~ 4332-83	Scale 1: 1500 Measurements in Metres

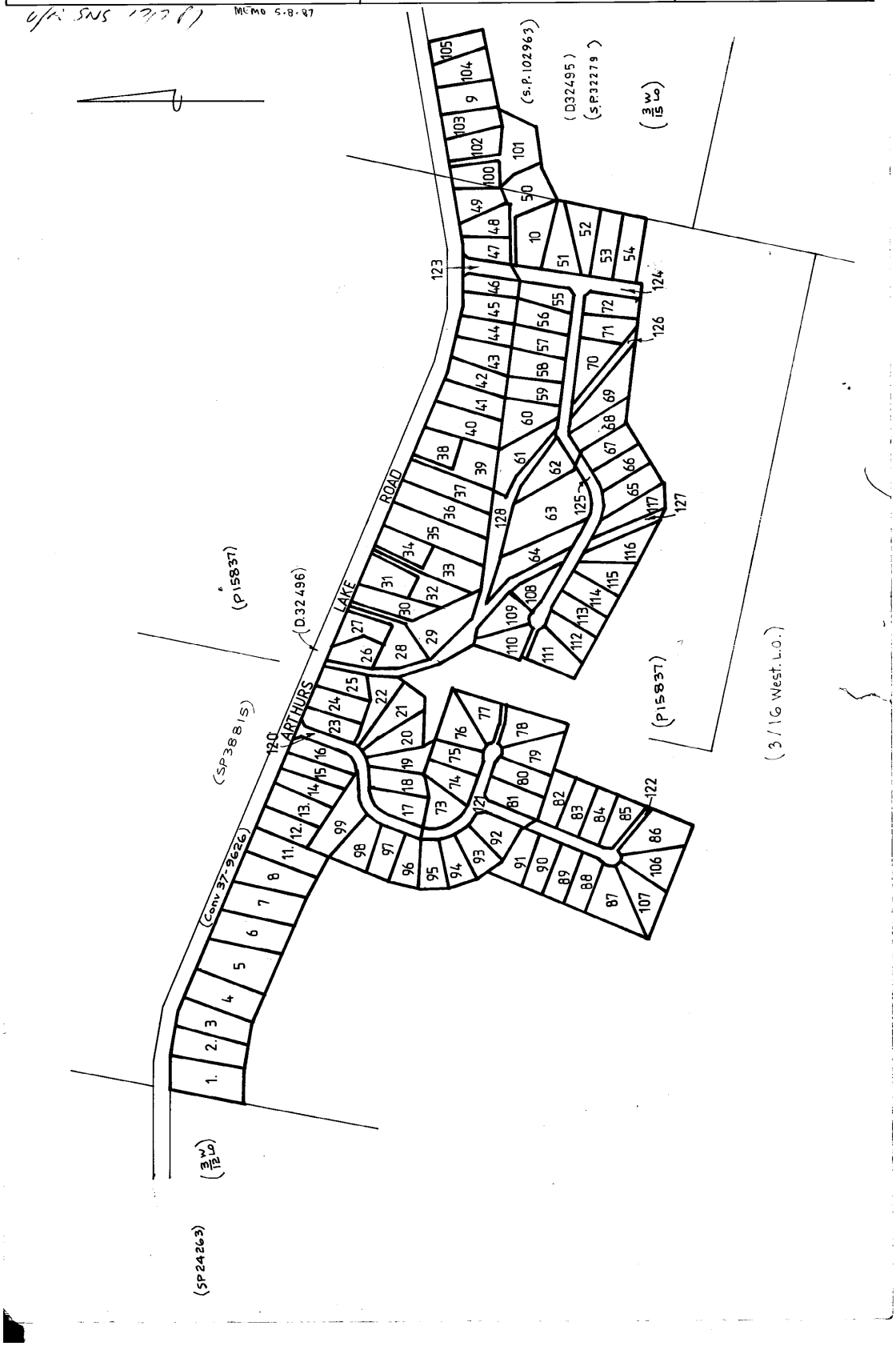


OSK 1110

32280

Owner: Forest Marsh Pty. Ltd.	PLAN OF SURVEY by Surveyor. N.D. Leary of land situated in the LAND DISTRICT OF WESTMORLAND PARISH OF OOLUMPTA SCALE 1: 4000 MEASUREMENTS IN METRES	Registered Number S. P32280 ~~Approved~~ Effective from: 28 OCT 1987 Recorder of Titles
Title Reference: C.T. ~~3884-42~~ 4332-83 & C.T. PURSUANT TO LOT 1 ON S.P. 32279 → 4394-43 C.T.		
Grantee: Parts Of 250 ac Gtd to Askin Morrison, 950 ac Gtd to John Jones & Lot 1289, 600 ac Gtd to John Jones		

MEMO 5.8.87



ANNEXURE Sheet No. 1

10

N D Leary

Signed for the purposes of identification

Council Clerk

... sets out detailed drawings of parcels shown on the ... to which it is attached which plan is verified by my ... dated 1·6·87 and that certificate extends to the detail shown on this sheet

N D Leary.

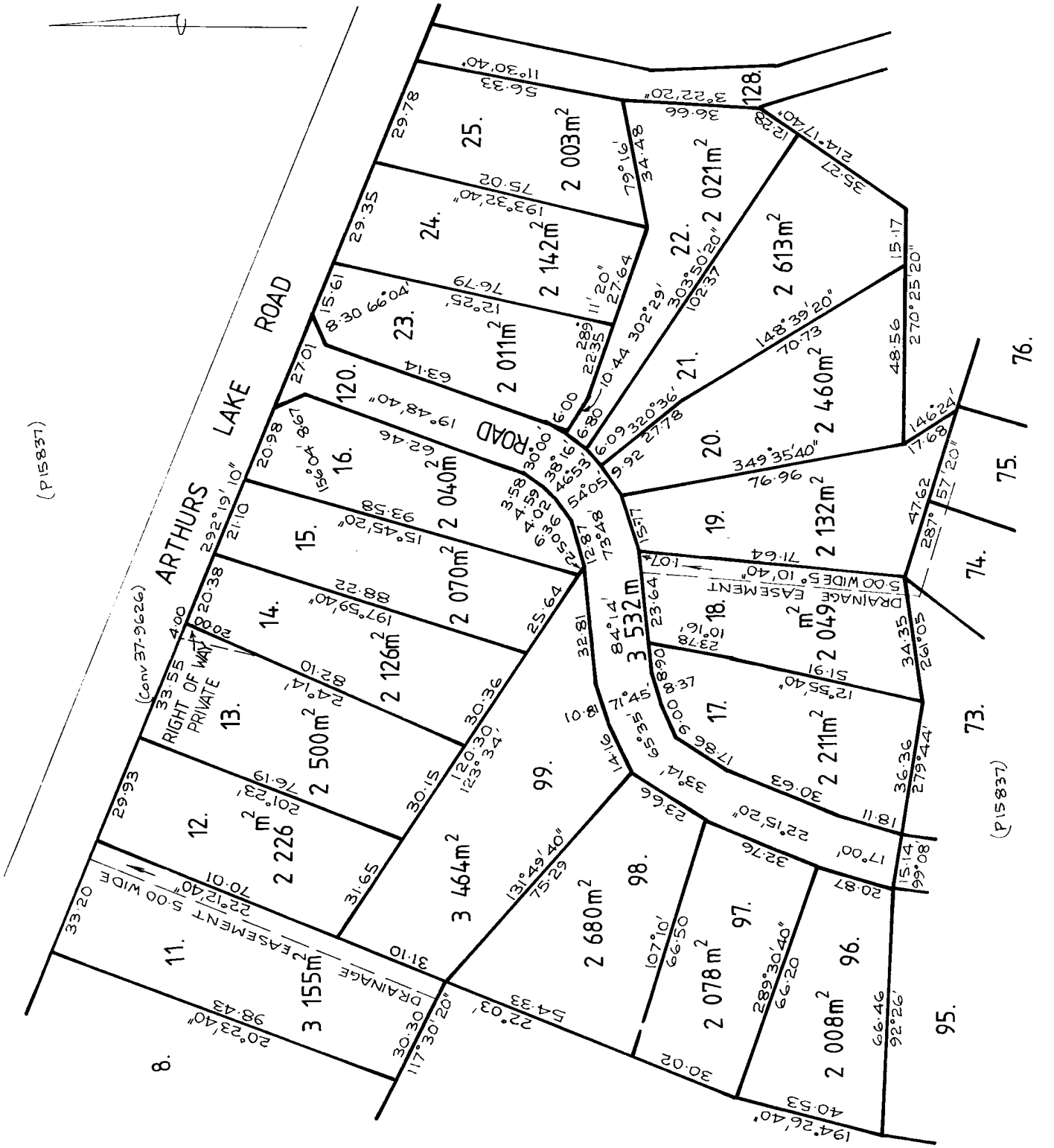
Owner Forest Marsh Pty Ltd

Title Reference CT ~~3884-42~~ 4332-83

Registered Number

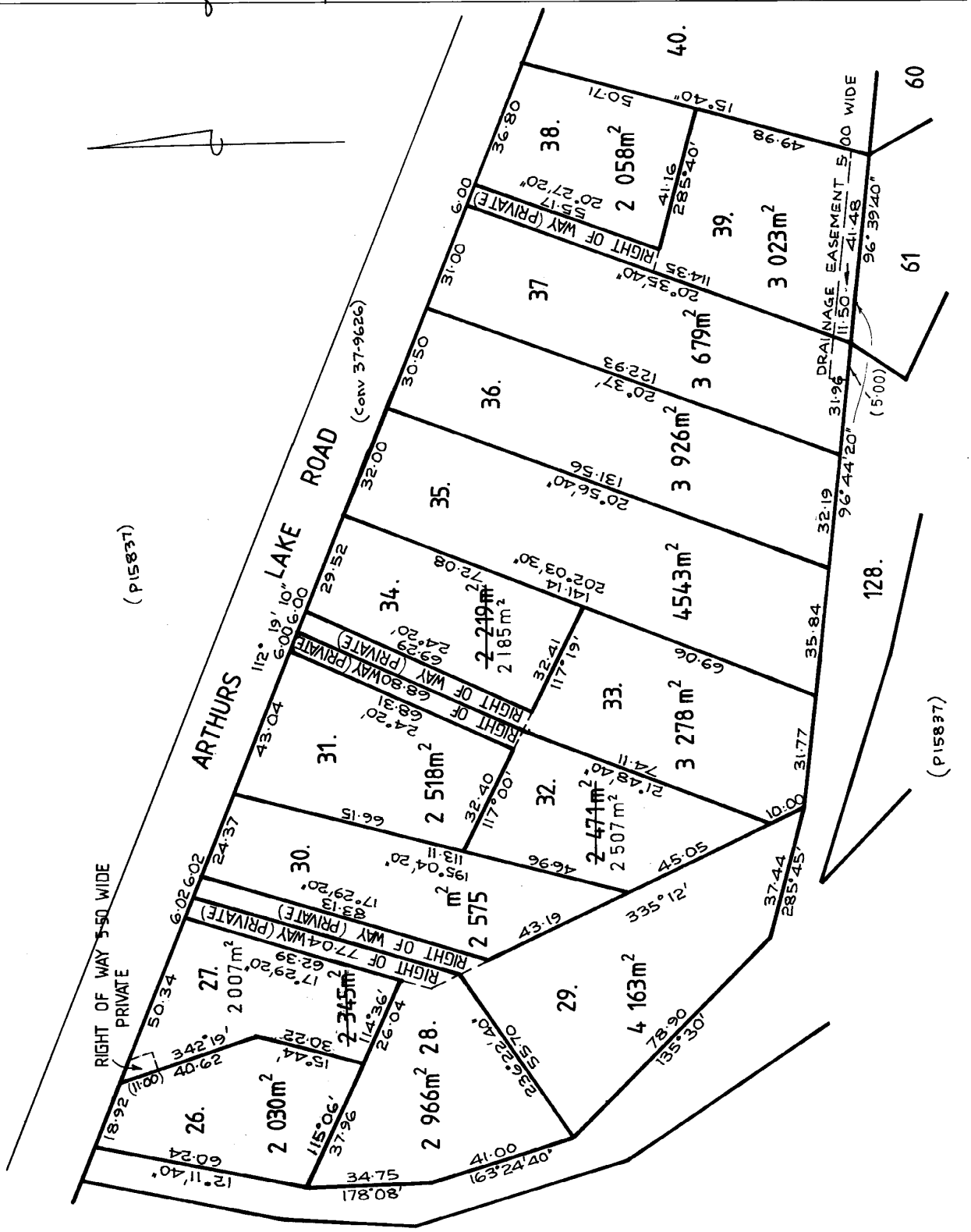
Scale 1000

Measurements in Metres



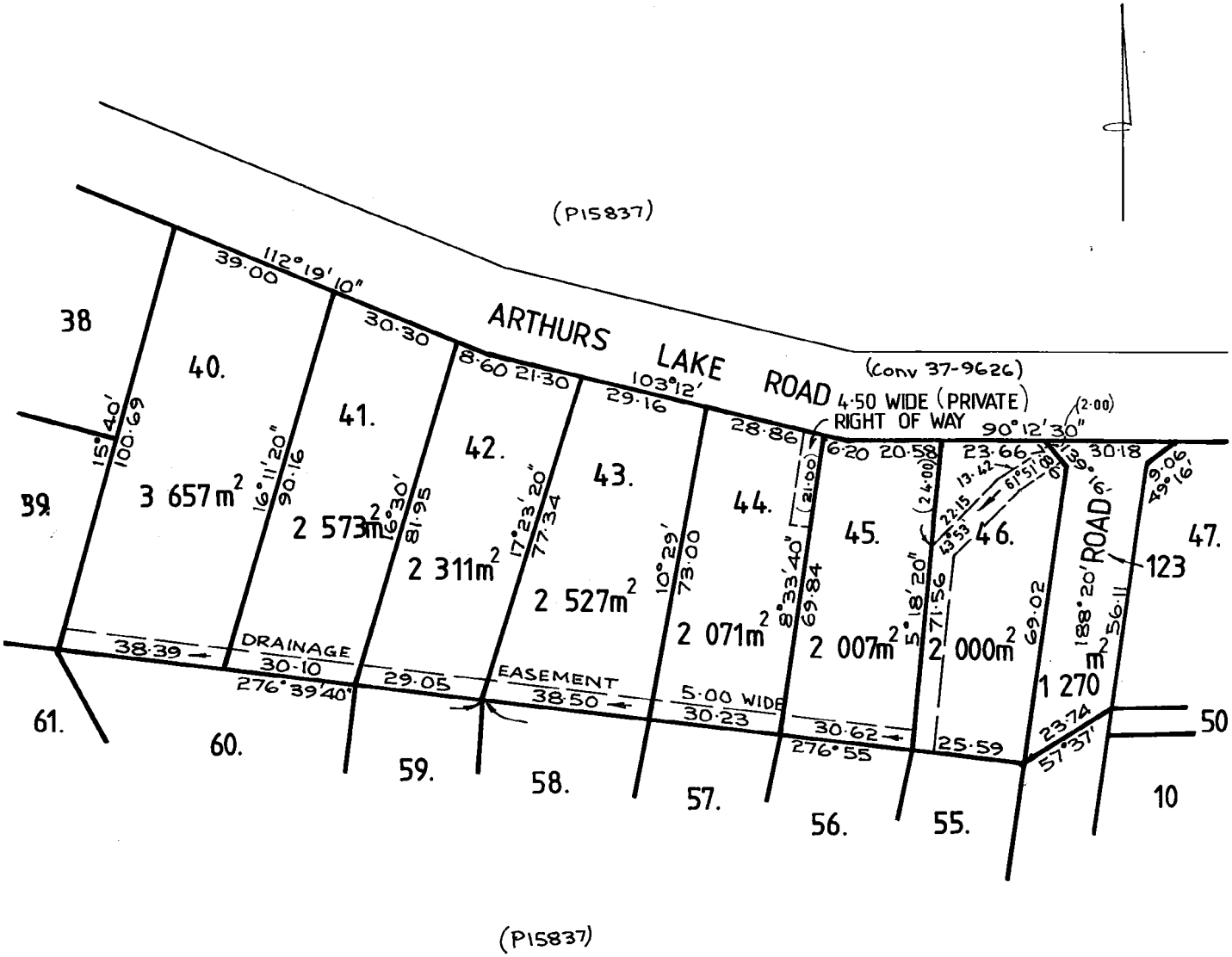
OS-K 1109

ANNEXURE SHEET No. 2 (of 10 annexures) to plan by Surveyor N D Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet.	Registered Number: S. P32280
Signed for the purposes of identification	Surveyor N D Leary	Scale 1: 1000
Council Clerk	Owner: Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference: CT 6332-83 ~~3884-42~~	



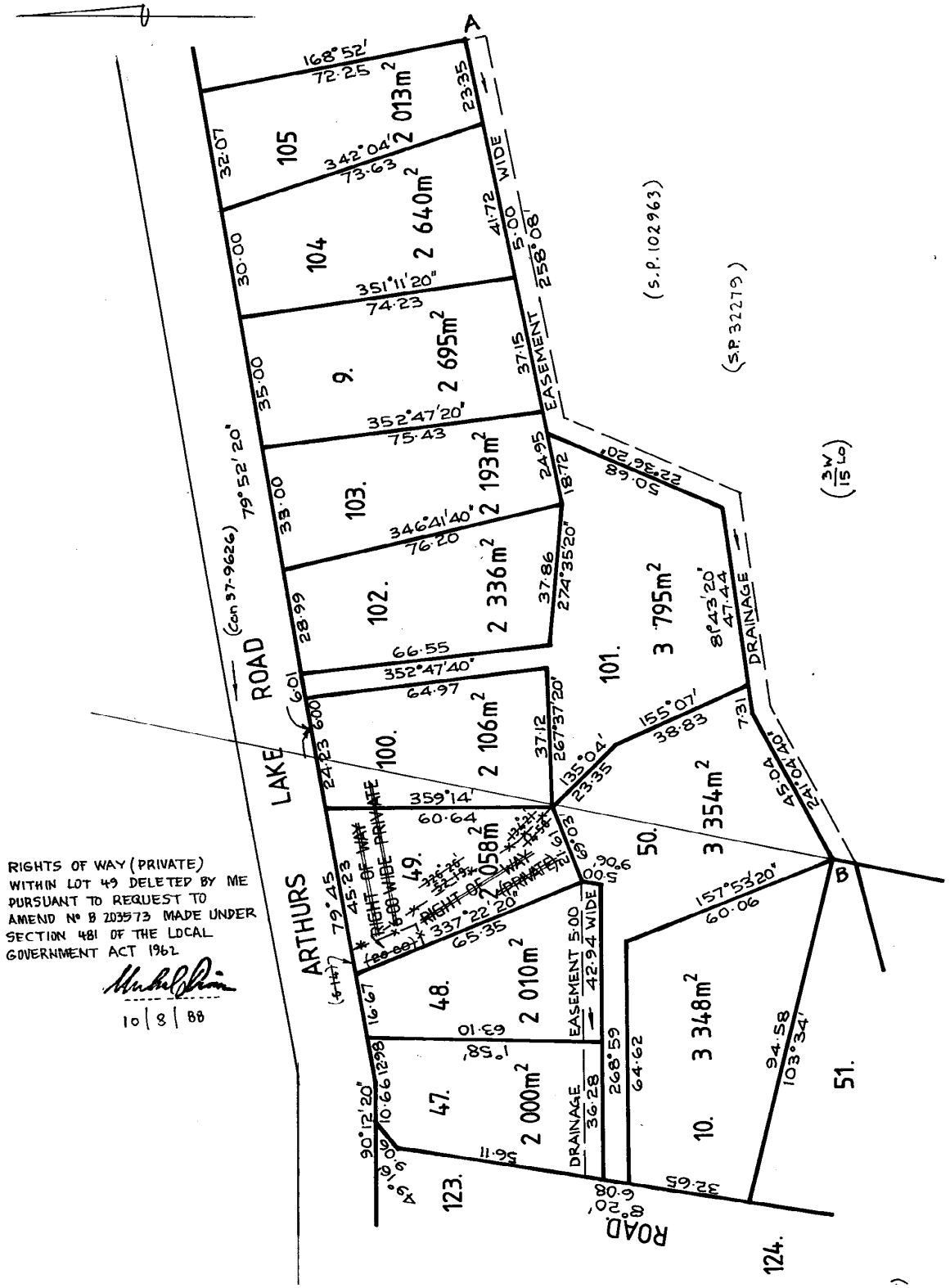
OS-K 1109

ANNEXURE SHEET No. 3 (of 10 annexures) to plan by Surveyor N. D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet. Surveyor	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT 4332-83 ~~3884-47~~	Scale 1: 1000 Measurements in Metres



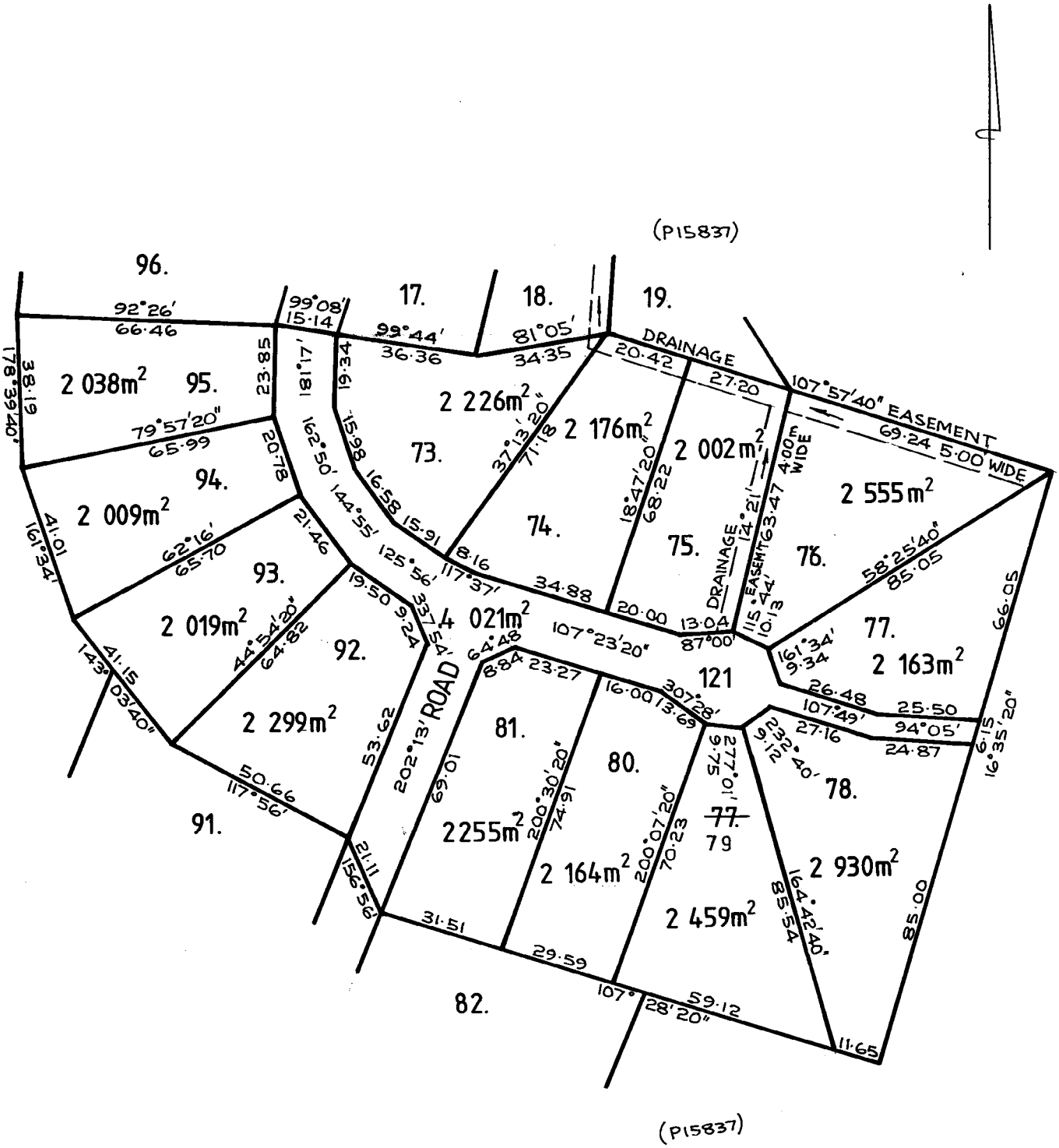
05-K 1109

ANNEXURE SHEET No. 4 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd 4332-83 Title Reference: C.Ts. ~~3884-42~~ & C.T. PURSUANT TO LOT 1 ON S.P. 32279.	Scale 1: 1000 Measurements in Metres

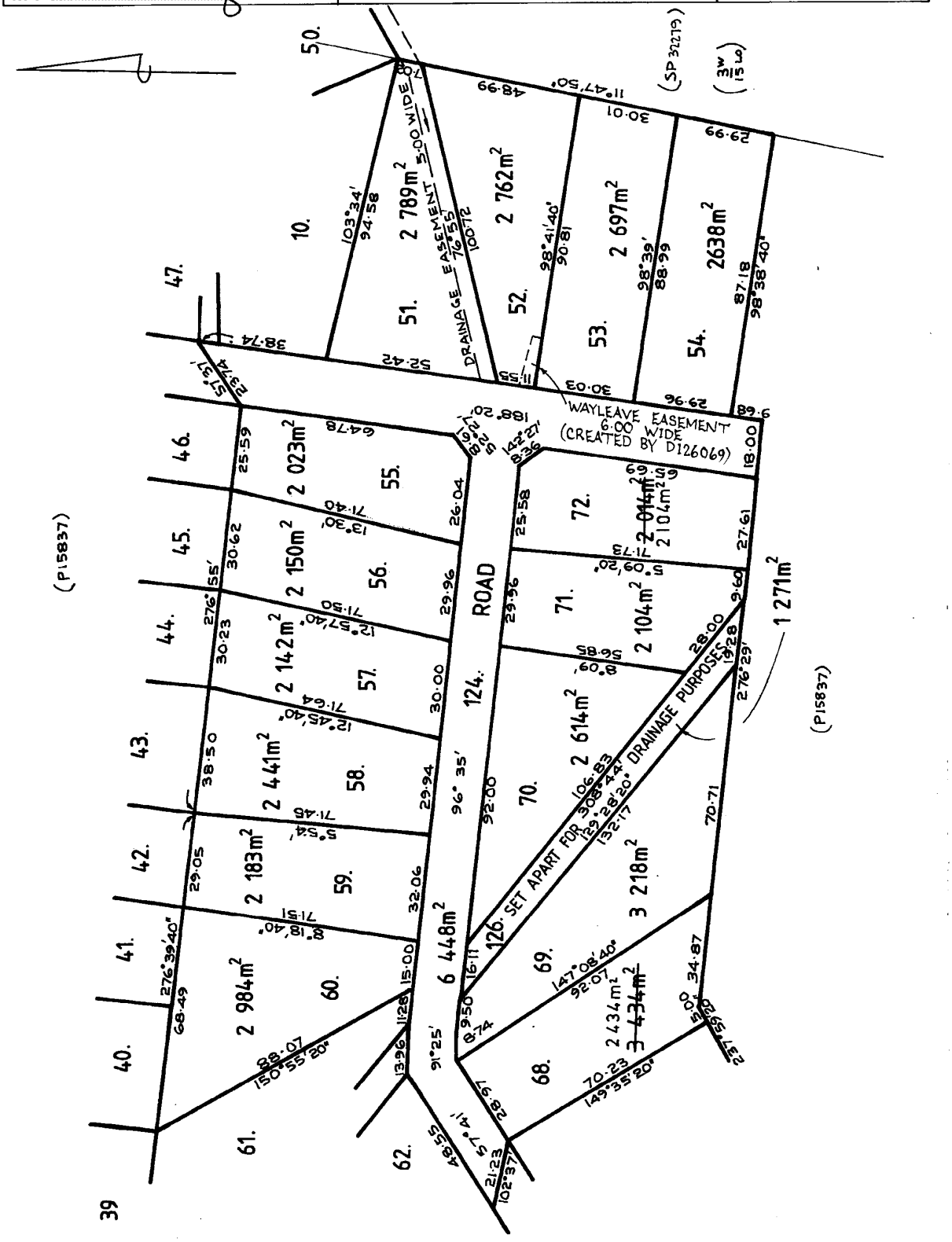


OS-K 1109

ANNEXURE SHEET No. 5 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor N.D. Leary	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT 6332-83 ~~3884-42~~	Scale 1: 1000 Measurements in Metres

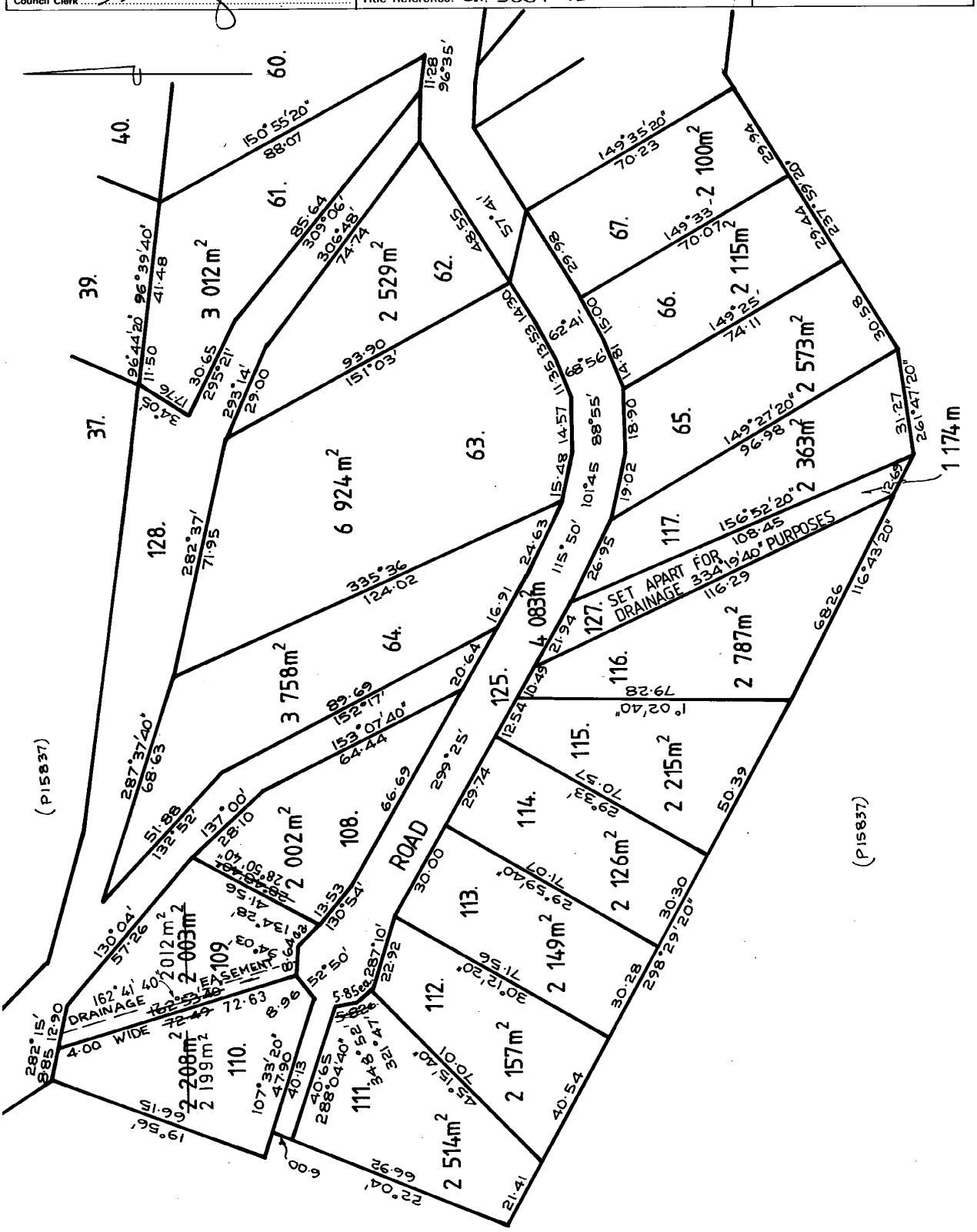


ANNEXURE SHEET No. 6 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet.	Registered Number: S. P32280
Signed for the purposes of identification	Surveyor N.D. Leary	Scale 1: 1000
Council Clerk	Owner: Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference: CT 4332-83 ~~3884-42~~	

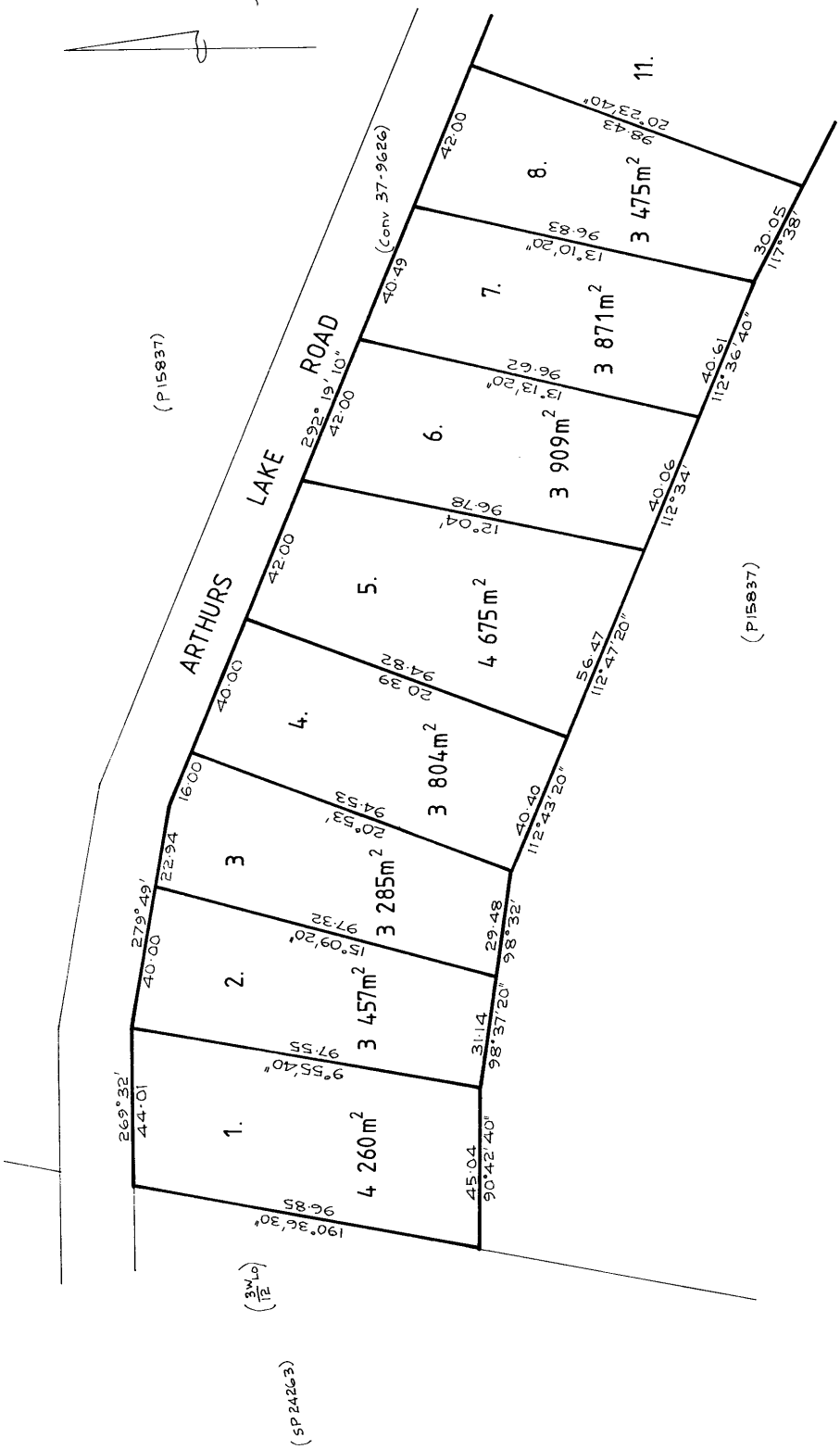


OS-K 1109

ANNEXURE SHEET No. 7 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet.	Registered Number: S. P32280
Signed for the purposes of identification	Surveyor N.D. Leary	Scale 1: 1000
Council Clerk	Owner: Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference: C.T. 4332-83 ~~3884-42~~	



ANNEXURE SHEET No. 8 to 10 annexed to plan by Surveyor N. D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1.6.87 and that certificate extends to the detail shown on this sheet	Registered Number
Signed for the purposes of identification	Surveyor N D Leary	Scale 1 1000
Council Clerk	Owner Forest Marsh Pty Ltd	Measurements in Metres
	Title Reference C.T. ~~3884-42~~ 4332-83	



ANNEXURE SHEET No 9

10 annexure(s) to plan by Surveyor

N D Leary

Signed for the purposes of identification

Council Clerk

This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet

Surveyor N D Leary

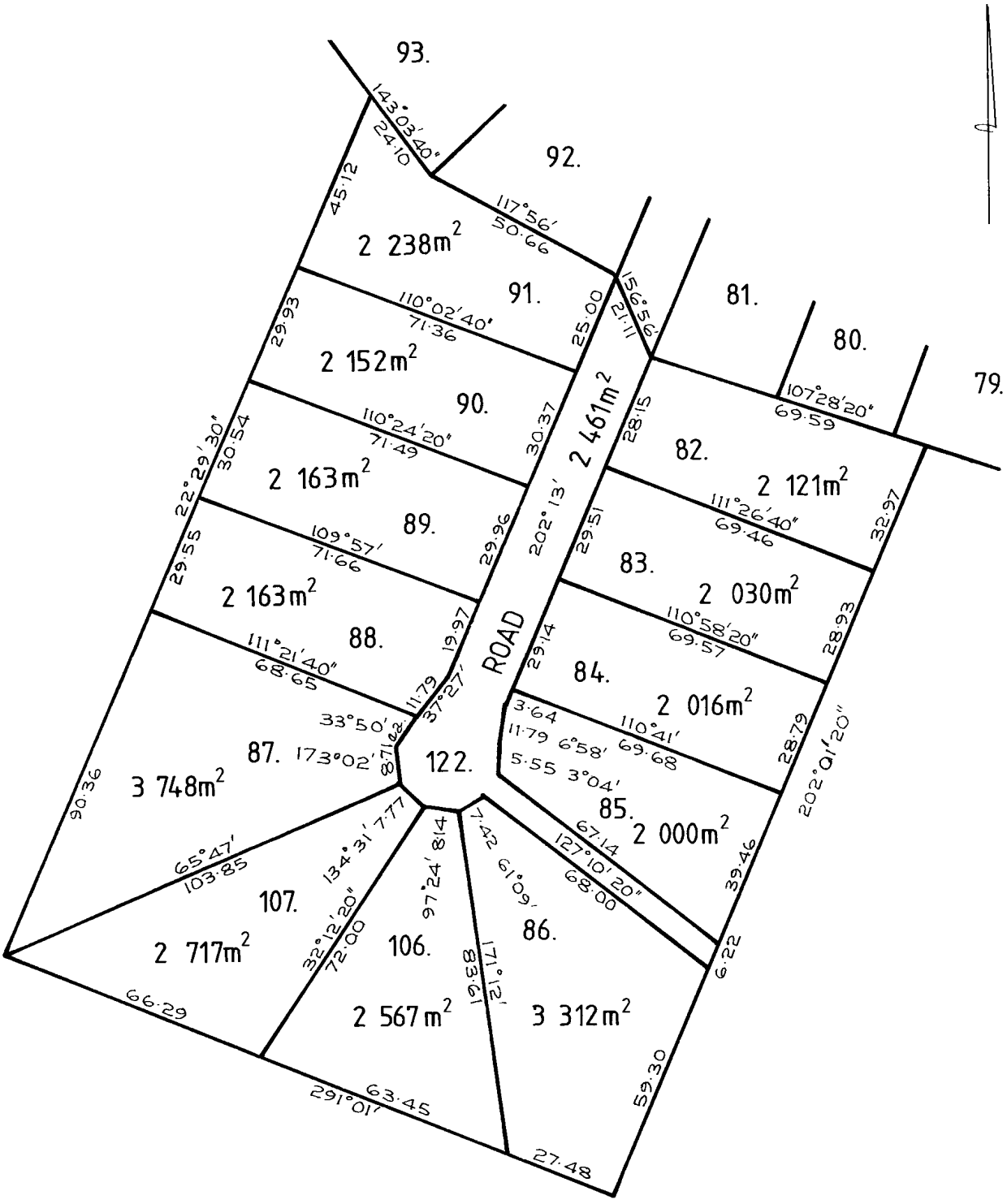
Owner Forest Marsh Pty Ltd

Title Reference C.T. ~~3884-42~~ 4332-83

Registered Number

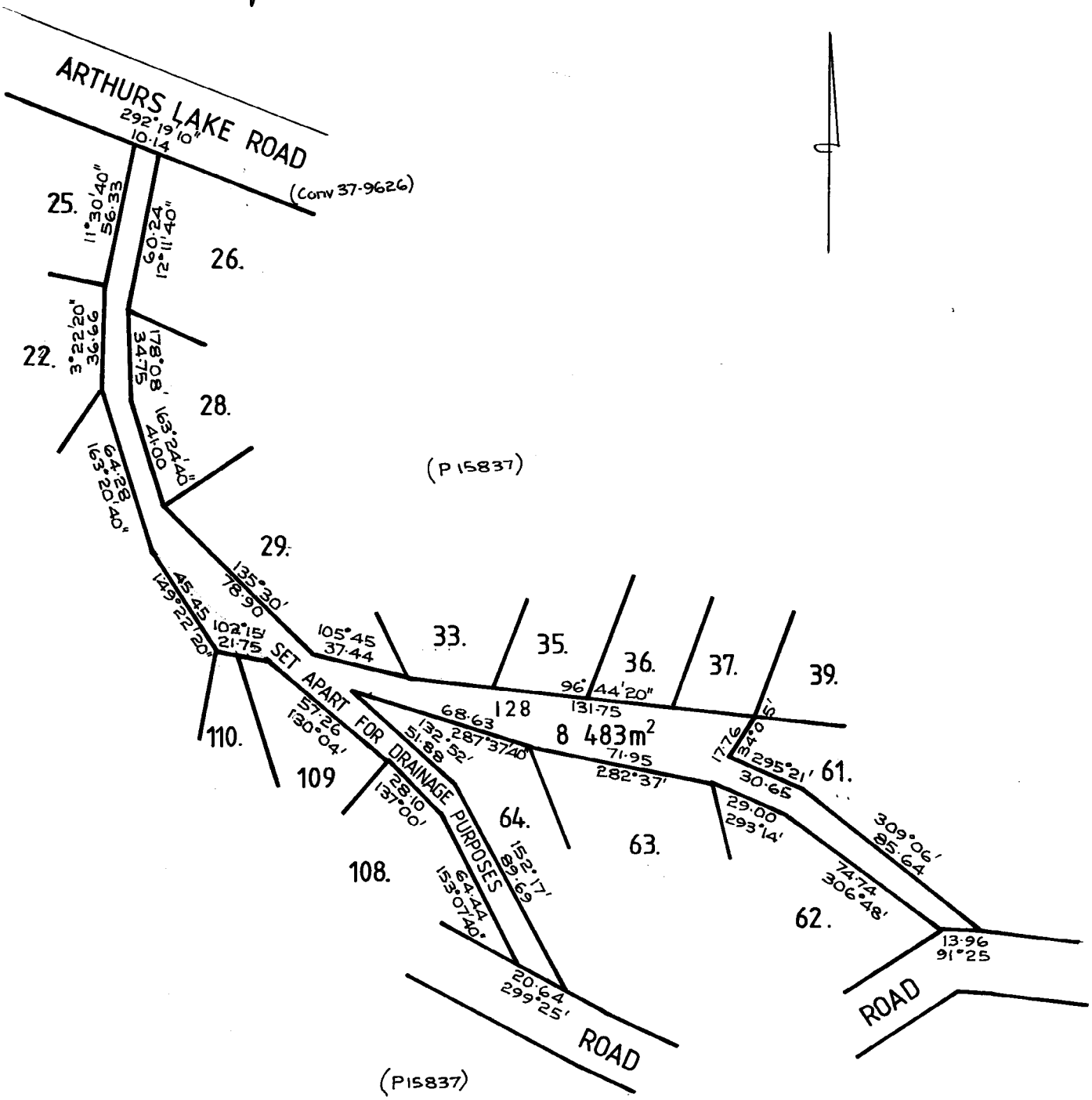
Scale 1 : 1000

Measurements in Metres



OS-K 1109

ANNEXURE SHEET No. 10 (of 10 annexures) to plan by Surveyor N.D. Leary	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated 1·6·87 and that certificate extends to the detail shown on this sheet. Surveyor N.D. Leary	Registered Number: S. P32280
Signed for the purposes of identification Council Clerk	Owner: Forest Marsh Pty Ltd Title Reference: CT ~~3884-42~~ 4332-83	Scale 1: 1500 Measurements in Metres



SCHEDULE OF EASEMENTS

PLAN NO. S. P32280

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and

(2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

RIGHTS OF DRAINAGE

Lots 50, 101, 103, 9, 104 and 105 have a Right of Drainage over the Drainage Easement 5 metres wide marked AB on the Plan and over ~~Lot 51.~~ the Drainage Easement shown passing through Lot 51 on the plan

Lot 51 is subject to a Right of Drainage over the Drainage Easement 5 metres wide ~~marked AB~~ shown passing through the said Lot 51 on the Plan appurtenant to Lots 9, 50, 101, 103 104 and 105 on the Plan.

Lot 11 is subject to a Right of Drainage over the Drainage Easement 5 metres wide shown on the Plan appurtenant to the balance.

RIGHTS OF CARRIAGEWAY

Lot 14 is together with a Right of Carriageway over the Right of Way Private passing through Lot 13 shown hereon.

Lot 13 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 14 shown hereon.

Lot 26 is togeher with a Right of Carriageway over the Right of Way Private passing through Lot 27 shown hereon.

Lot 27 is subject to a Right of Carriageway over the Right of Way Private ~~passing through Lot 29 shown hereon.~~ appurtenant to Lot 26 shown on the plan

Lot 28 is together with a Right of Carriageway over the Right of Way Private passing through Lot 29 shown hereon.

Lot 29 is subject to a Right of CArriageway over the Right of Way Private appurtenant to Lot 28 shown hereon.

Lot 29 is together with a Right of Carriageway over the Right of Way Private passing through Lot 28 shown hereon.

Lot 28 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 29 shown hereon.

Lot 32 is together with a Right of Carriageway over the Right of Way Private passing through Lot 33 shown hereon.

32280

RIGHTS OF CARRIAGEWAY (Cont)

Lot 33 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 32 shown hereon.

Lot 33 is together with a Right of Carriageway over the Right of Way Private passing through 32 shown hereon.

Lot ~~32~~ is subject to a Right of Carriageway (appurtenant to Lot 33) over the Right of Way (Private) shown passing through such Lot.

Lot 38 is together with a Right of Carriageway over the Right of Way Private passing through Lot 39 shown hereon.

Lot 39 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 38 shown hereon.

Lot 45 is together with a Right of Carriageway over the Right of Way Private passing through Lot 44 shown hereon.

Lot 44 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 45 shown hereon.

~~Lot 48 is together with a Right of Carriageway over the Right of Way Private 6 metres wide passing through Lot 49 shown hereon.~~

~~Lot 50 is together with a Right of Carriageway over the Right of Way Private passing through Lot 49 shown hereon.~~

~~Lot 49 is subject to a Right of Carriageway appurtenant to Lot 48 over the Right of Way Private 6 metres wide and the Right of Way Private appurtenant to Lot 50 shown hereon.~~

Rights of carriageway deleted by me pursuant to Request No. 320373 made under section 481 of the Local Government Act 1962
Recorder of Titles
/ /1983

INTERPRETATION

"Balance" means the land remaining in Certificate of Title volume 3884 folio 42.at the date of acceptance hereof excluding the Lots on the plan

COVENANTS

The owner of each lot on the Plan covenants with the Vendor Forest Marsh Pty Ltd and the owners for the time being of every other lot shown on the Plan to the intent that the burden of this covenant may run with and bind the covenantors lot and every part thereof and that the benefit thereof shall be annexed to and devolve with each and every part of each and every other lot shown on the Plan to observe the following stipulations:-

a) Not to erect or permit to be erected on ~~any~~ such Lot or part thereof or attach or permit to be attached to any erection on the property any advertisement, hoarding, bill or poster or any similar erection of an unsightly nature.

b) Not to erect any fence on ~~any~~ such lot or on the boundary or portion of any boundary of ~~any~~ such lot.

c) Not to carry on or permit to be carried on any trades, noisome, noxious or offensive or otherwise on ~~the said~~ such lot.

d) Not to fell any trees beyond an area necessary to provide a building site on ~~any~~ such lot or as may be required to ensure the safety of any building or outbuilding and its immediate surrounds.

THE COMMON SEAL of FOREST MARSH PTY LTD as Registered Proprietor of Certificate of Title volume 3884 folio 42 was hereunto affixed in the presence of:

FOREST MARSH PTY. LTD. COMMON SEAL

Director

Secretary

This is the schedule of easements attached to the plan of FOREST MARSH PTY LTD
(Insert Subdivider's Full Name)
affecting land in
C.T. 3884-42 & C.T.
(Insert Title Reference)
Sealed by MUNICIPALITY OF GLAMORGAN on 25TH JUNE 1987
Solicitor's Reference
Council Clerk/~~Town Clerk~~

OSK 3134

SCHEDULE OF EASEMENTS

PLAN NO. S. P32280

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and

(2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

RIGHTS OF DRAINAGE

Lots 50, 101, 103, 9, 104 and 105 have a Right of Drainage over the Drainage Easement 5 metres wide marked AB on the Plan and over ~~Lot 51.~~ the Drainage Easement shown passing through Lot 51 on the plan

Lot 51 is subject to a Right of Drainage over the Drainage Easement 5 metres wide ~~marked AB~~ shown passing through the said Lot 51 on the Plan appurtenant to Lots 9, 50, 101, 103 104 and 105 on the Plan.

Lot 11 is subject to a Right of Drainage over the Drainage Easement 5 metres wide shown on the Plan appurtenant to the balance.

RIGHTS OF CARRIAGEWAY

Lot 14 is together with a Right of Carriageway over the Right of Way Private passing through Lot 13 shown hereon.

Lot 13 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 14 shown hereon.

Lot 26 is togeher with a Right of Carriageway over the Right of Way Private passing through Lot 27 shown hereon.

Lot 27 is subject to a Right of Carriageway over the Right of Way Private ~~passing through Lot 29 shown hereon.~~ appurtenant to Lot 26 shown on the plan

Lot 28 is together with a Right of Carriageway over the Right of Way Private passing through Lot 29 shown hereon.

Lot 29 is subject to a Right of CArriageway over the Right of Way Private appurtenant to Lot 28 shown hereon.

Lot 29 is together with a Right of Carriageway over the Right of Way Private passing through Lot 28 shown hereon.

Lot 28 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 29 shown hereon.

Lot 32 is together with a Right of Carriageway over the Right of Way Private passing through Lot 33 shown hereon.

32280

RIGHTS OF CARRIAGEWAY (Cont)

Lot 33 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 32 shown hereon.

Lot 33 is together with a Right of Carriageway over the Right of Way Private passing through 32 shown hereon.

Lot ~~32~~ is subject to a Right of Carriageway (appurtenant to Lot 33) over the Right of Way (Private) shown passing through such Lot.

Lot 38 is together with a Right of Carriageway over the Right of Way Private passing through Lot 39 shown hereon.

Lot 39 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 38 shown hereon.

Lot 45 is together with a Right of Carriageway over the Right of Way Private passing through Lot 44 shown hereon.

Lot 44 is subject to a Right of Carriageway over the Right of Way Private appurtenant to Lot 45 shown hereon.

~~Lot 48 is together with a Right of Carriageway over the Right of Way Private 6 metres wide passing through Lot 49 shown hereon.~~

~~Lot 50 is together with a Right of Carriageway over the Right of Way Private passing through Lot 49 shown hereon.~~

~~Lot 49 is subject to a Right of Carriageway appurtenant to Lot 48 over the Right of Way Private 6 metres wide and the Right of Way Private appurtenant to Lot 50 shown hereon.~~

Rights of carriageway deleted by me pursuant to Request No. 320373 made under section 481 of the Local Government Act 1962
Recorder of Titles
/ /1983

INTERPRETATION

"Balance" means the land remaining in Certificate of Title volume 3884 folio 42.at the date of acceptance hereof excluding the Lots on the plan

COVENANTS

The owner of each lot on the Plan covenants with the Vendor/Forest Marsh Pty Ltd and the owners for the time being of every other lot shown on the Plan to the intent that the burden of this covenant may run with and bind the covenantors lot and every part thereof and that the benefit thereof shall be annexed to and devolve with each and every part of each and every other lot shown on the Plan to observe the following stipulations:-

a) Not to erect or permit to be erected on ~~any~~ such Lot or part thereof or attach or permit to be attached to any erection on the property any advertisement, hoarding, bill or poster or any similar erection of an unsightly nature.

b) Not to erect any fence on ~~any~~ such lot or on the boundary or portion of any boundary of ~~any~~ such lot.

c) Not to carry on or permit to be carried on any trades, noisome, noxious or offensive or otherwise on ~~the said~~ such lot.

d) Not to fell any trees beyond an area necessary to provide a building site on ~~any~~ such lot or as may be required to ensure the safety of any building or outbuilding and its immediate surrounds.

THE COMMON SEAL of FOREST MARSH PTY LTD as Registered Proprietor of Certificate of Title volume 3884 folio 42 was hereunto affixed in the presence of:

FOREST MARSH PTY. LTD. COMMON SEAL

Director

Secretary

This is the schedule of easements attached to the plan of FOREST MARSH PTY LTD
(Insert Subdivider's Full Name)
affecting land in
C.T. 3884 - 42 & C.T.
(Insert Title Reference)
Sealed by MUNICIPALITY OF GLAMORGAN on 25TH JUNE 1987
Solicitor's Reference
Council Clerk/~~Town Clerk~~

OSK 3134

Bushfire Hazard Management

Report: Subdivision

Report for: **Artas**

Property Location: **67 & 69 Arthurs Lake Road, Wilburville**

Prepared by: Scott Livingston

Livingston Natural Resource Services
12 Powers Road
Underwood, 7268

Date: 14th August 2020

Client:	Artas obo Thane Brady
Property identification:	67 Arthurs Lake Road, Wilburville, CT 32280/36 PID 7424914 69 Arthurs Lake Road, Wilburville, CT 32280/37 PID 7424906 Current zoning: Low Density Residential, Central Highlands Interim Planning Scheme 2015
Proposal:	4 Lot subdivision from 2 existing titles.
Assessment	A field inspection of the site was conducted to determine the Bushfire Risk and Bushfire Attack Level.

Assessment by: Scott Livingston

Master Environmental Management, Natural Resource Management Consultant.

Accredited Person under part 4A of the Fire Service Act 1979: Accreditation # BFP-105.

Contents

LIMITATIONS

This report only deals with potential bushfire risk and does not consider any other potential statutory or planning requirements. This report classifies type of vegetation at time of inspection and cannot be relied upon for future development or changes in vegetation of assessed area.

DESCRIPTION

A 4 lot subdivision from 2 existing lots is proposed from existing titles CT 32280/36 & 37 at 67 & 69 Arthurs Lake Road, Wilburville. The area is not serviced by a reticulated water supply. Authurs Lake fire station is around 500m east of the property on Wilburville Road.

The lots are currently native vegetation (forest) on the northern section and grassland on the southern section. The lots front Arthurs Lake Road to the north, with grassland/woodland mosaic on the opposite side of the road, noting lots on the northern side of the road are on sale and future development may reduce the risk in that direction. Land to the east of Lot 4 is low threat around a dwelling, land to the east and south of lot 3 is undeveloped grassland. Land to the south and west of Lot 2 is undeveloped grassland. Land to the west of Lot 1 has a dwelling but also contains some eucalypt trees is less than 0.1ha in extent with some fuel management it is contiguous with grassland to the south, this has been assessed as grassland fuel loading.

See Appendix 1 for maps and site plan. Appendix 2 for photos.

BAL AND RISK ASSESSMENT

The land is considered Bushfire Prone due to the proximity of woodland and grassland.

VEGETATION AND SLOPE

Lot		North	East	South	West
1	Vegetation within 100m existing dwelling	0-5m road verge, 5-15m road, 15-30m shrubland, 30-100m woodland	0-36m Lot 4, forest to be HMA/ grassland, 36-100m managed land	0-60m Lot 2 HMA/ grassland, 60-100m grassland	0-13/33m grassland (some trees) 33-100m low threat inc dwellings
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Flat/ Upslope	Downslope 0-5°
	BAL Rating: at Boundary	BAL 12.5	BAL 19	BAL 19	BAL FZ
	BAL Rating: with setbacks /HMA	BAL 19	BAL 19	BAL 19	BAL 19
2	Vegetation within 100m lot boundaries	0-65m Lot 1 forest to be HMA/grassland, 0-80m road and verge, 80-100m shrubland	0-36m Lot 3, forest to be HMA/ grassland, 36-80m grassland (some low threat) 80-100m low threat	0-100m grassland, (some low threat)	0-70 grassland 70-100m low threat

	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Flat/ Upslope	Downslope 0-5°
	BAL Rating: at Boundary	BAL 19	BAL 19	BAL 19	BAL FZ
	BAL Rating: with setbacks /HMA	BAL 19	BAL 19	BAL 19	BAL 19

3	Vegetation within 100m lot boundaries	0-65m Lot 4 forest to be HMA/grassland, 0-80m road and verge, 80-100m shrubland	0-50m grassland. 50-100m low threat	0-100m grassland	0-33m Lot, grassland to be HMA/ grassland, 33-1000m grassland
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Flat/ Upslope	Downslope 0-5°
	BAL Rating: at Boundary	BAL 19	BAL FZ	BAL FZ	BAL 19
	BAL Rating: with setbacks /HMA	BAL 19	BAL 19	BAL 19	BAL 19

4	Vegetation within 100m lot boundaries	0-5m road verge, 5-15m road, 15-30m shrubland, 30-100m woodland	0-100m low threat	0-60m Lot 3 HMA/ grassland, 60-100m grassland	0-100m grassland
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Flat/ Upslope	Downslope 0-5°
	BAL Rating: at Boundary	BAL 12.5	BAL Low	BAL 19	BAL FZ
	BAL Rating: with setbacks /HMA	BAL 19	BAL 19	BAL 19	BAL 19

BUILDING AREA BAL RATING

Setback distances for BAL Ratings have been calculated based on the vegetation that will exist after development and have also considered slope gradients. During development it is assumed adjacent lots may be managed as up to forest fuel loads.

Where no setback is required for fire protection other Planning Scheme setbacks may need to be applied, other constraints to building such as topography have not been considered.

The BAL ratings applied are in accordance with the Australian Standard AS3959-2009,

Construction of Buildings in Bushfire Prone Areas, and it is a requirement that any habitable building, or building within 6m of a habitable building be constructed to the BAL ratings specified in this document as a minimum.

Bushfire Attack Level (BAL)	Predicted Bushfire Attack & Exposure Level
BAL-Low	Insufficient risk to warrant specific construction requirements
BAL-12.5	Ember attack, radiant heat below 12.5kW/m²
BAL-19	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5-19kW/m²
BAL-29	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19-29kW/m²
BAL-40	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 29-40kW/m²
BAL-FZ	Direct exposure to flames radiant heat and embers from the fire front

Setbacks

		Grassland	Woodland	Forest
BAL 12.5	Upslope and flat	14m	22m	32m
	Downslope 0- 5°	16m	26m	38m
BAL 19	Upslope and flat	10m	15m	23m
	Downslope 0- 5°	11m	18m	27m

PROPOSED LOT BAL RATING

Lots lot have a potential building area at BAL 19, provided hazard management occurs on adjacent lots within the subdivision.

Lot	BAL 19 Setbacks for habitable buildings
1	11m from the western boundary and 5m from southern boundary
2	11m from the western boundary and 10m from the southern boundary, 5m from eastern and northern boundary
3	5m from the western and northern boundary and 10m from the southern boundary, 10m from eastern boundary
4	5m from the southern boundary

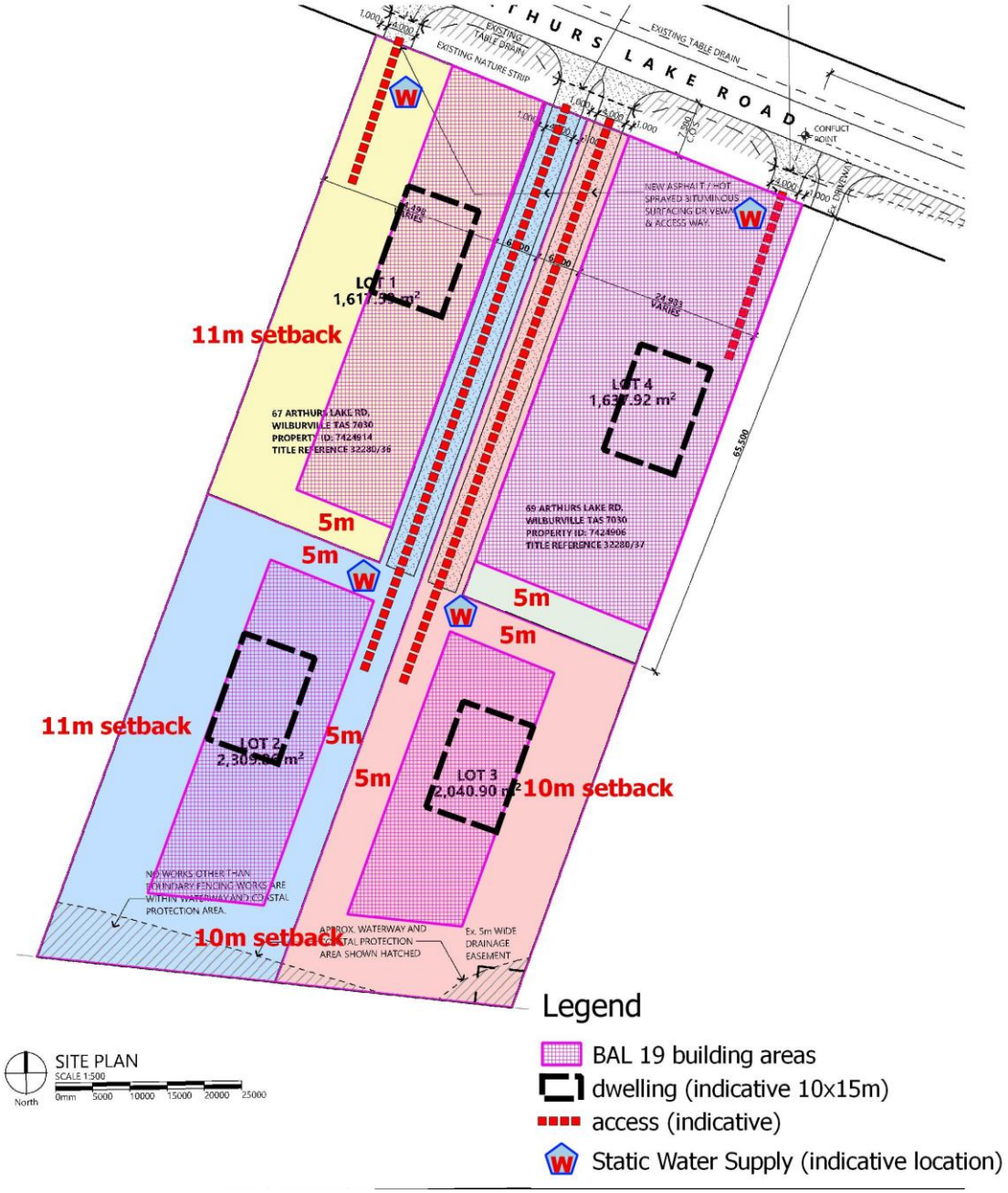


Figure 1: Building Area BAL19

HAZARD MANAGEMENT AREAS

For future habitable buildings on Lot 1-4 all land within the distances shown below must be managed as Low threat vegetation including maintained lawns (mown to < 100mm), gardens and orchards. All other land within the subdivision must be managed as no higher fuel load than grassland prior to commencement of construction of a habitable building on any lot of the subdivision.

Zone A: where any dwelling contains a dwelling

- all land within the panhandles of lot 2 & 3, all land on all lots within 5m of the boundaries of lots 1-2 and 3-4.

Zone B: where lot 2 or 3 contains a dwelling

- all land 5m east and 6m east of the boundary between lots 2 and 3.

Zone C: Where a lot contains a dwelling

- all land within that lot.

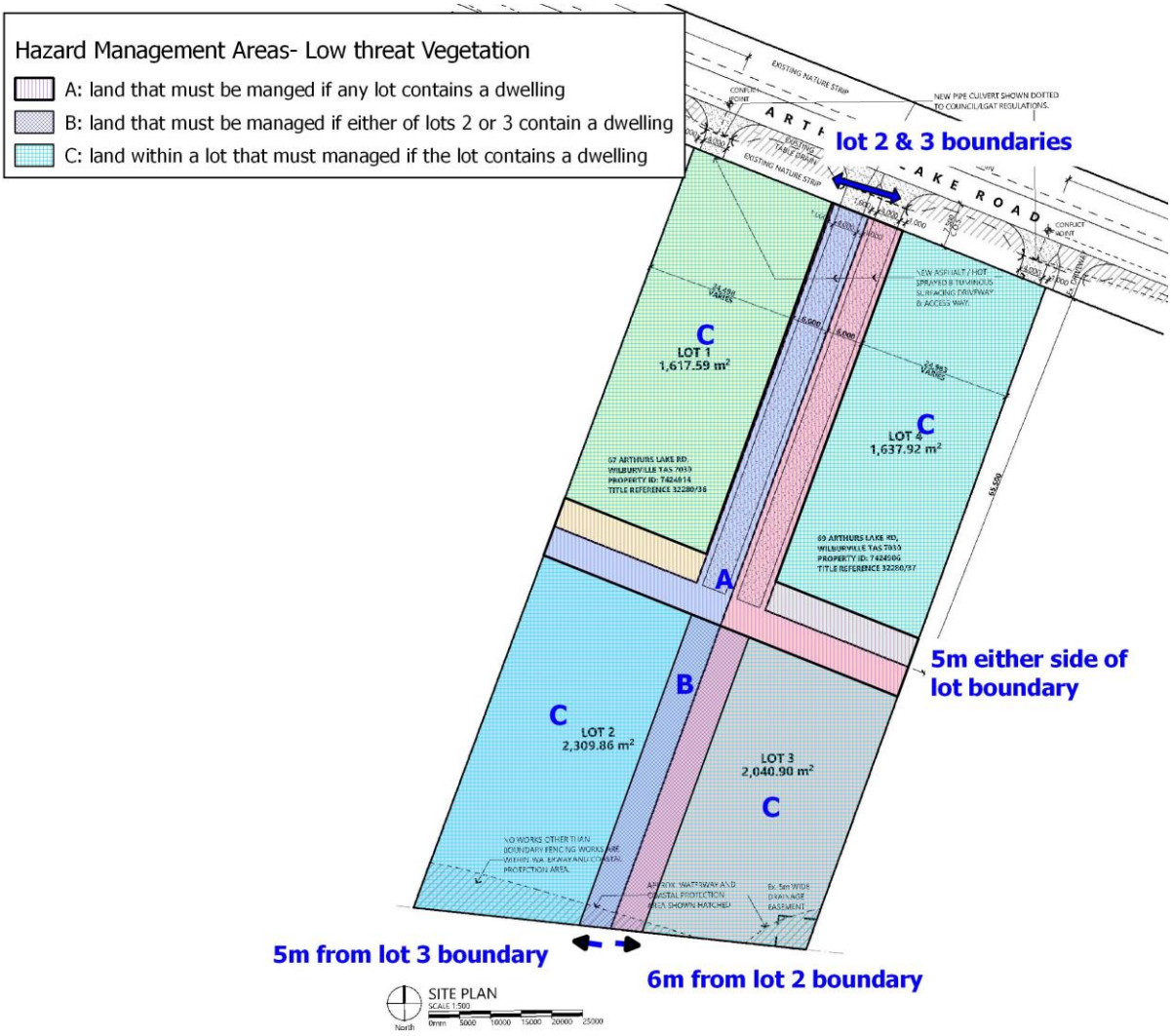


Figure 2: Hazard Management Areas

ROADS

Lots have access from Arthurs Lake Road. No additional roads required for the subdivision.

PROPERTY ACCESS

Access to lots must comply with the relevant elements of Table E2 Access from the *Planning Directive No. 5.1 Bushfire-Prone Areas Code.*

Access to dwellings and water supply points on Lots 2 & 3 will be longer than 30m but less than 200m and required to meet Element B of Table E2. Access to water supply points for Lots 1 and 4, will be required to meet Element B of Table E2. Panhandles of Lot 2 & 3 are 6m in width and sufficient for carriageway and horizontal clearance requirements.

Table E2: Standards for Property Access

Column 1		Column 2
Element		**Requirement**
A.	Property access length is less than 30 metres; or access is not required for a fire appliance to access a water	There are no specified design and construction requirements.

B.	Property access length is 30 metres or greater; or access for a fire appliance to a water connection point.	The following design and construction requirements apply to property access: (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3 degrees (1:20 or 5%); (7) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and (10) Terminate with a turning area for fire appliances provided by one of the following: (a) A turning circle with a minimum inner radius of 10 metres; or (b) A property access encircling the building; or (c) A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 metres or greater.	The following design and construction requirements apply to property access: (1) The Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length provided every 200 metres.
D.	Property access length is greater than 30 metres, and access is provided to 3 or	The following design and construction requirements apply to property access: (1) Complies with Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 100 metres.

The subdivision is not serviced by a reticulated supply. A static supply to meet the requirements of Table E5 of the *Planning Directive No. 5.1 Bushfire-Prone Areas Code* must be installed prior to commencement of construction of a habitable building on any lot.

Column		Column 2
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: a) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and b) The distance must be measured as a hose lay, between the water point and the furthest part of the building area.
B.	Static Water Supplies	A static water supply: a) May have a remotely located offtake connected to the static water supply; b) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; d) Must be metal, concrete or lagged by non-combustible materials if above ground; and e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.

Column	Element	Column 2 Requirement
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a water connection point for a static water supply must: (a) Have a minimum nominal internal diameter of 50mm; (b) Be fitted with a valve with a minimum nominal internal diameter of 50mm; (c) Be metal or lagged by non-combustible materials if above ground; (d) Where buried, have a minimum depth of 300mm (compliant with *AS/NZS 3500.1-2003 Clause 5.23);* (e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment; (f) Ensure the coupling is accessible and available for connection at all times; (g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: (i) Visible; (ii) Accessible to allow connection by fire fighting equipment; (iii) At a working height of 450 – 600mm above ground level; and (iv) Protected from possible damage, including damage by vehicles
D.	Signage for static water connections	The water connection point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must (a) comply with: Water tank signage requirements within AS 2304-2011 *Water storage tanks for fire protection systems; or* (b) comply with water tank signage requirements within *Australian Standard AS 2304-2011 Water storage tanks for fire protection systems*; or (c) comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.

Column		Column 2
Element		**Requirement**
E.	Hardstand	A hardstand area for fire appliances must be provided: (a) No more than three metres from the water connection point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) No closer than six metres from the building area to be protected; (c) With a minimum width of three metres constructed to the same standard as the carriageway; and (d) Connected to the property access by a carriageway equivalent to the standard of the property access.

CONCLUSIONS

A 4 lot subdivision is proposed from existing title CT 32280/36 & 37 at 67 & 69 Arthurs Lake Road, Wilburville. The area is considered to be bushfire prone.

There is sufficient area on lots to provide for BAL 19 habitable dwellings and will require a hazard management area – low threat vegetation on land adjacent to habitable buildings. Hazard management area will be required on adjacent lots within the subdivision and fuel loads on all lots must be grassland prior to commencement of construction on any lot The owner of a lot is responsible for hazard management on a lot regardless of whether their lot contains a habitable building.

No additional roads are required, access to new habitable buildings and water supply points must comply with the relevant elements of Table E2 Access from the *Planning Directive No. 5.1 Bushfire-Prone Areas Code*. Access for Lots must be compliant with Element B of Table E2.

Habitable buildings must have a static water supply installed to the standards listed in Table E4 of the *Planning Directive No. 5.1 Bushfire-Prone* Areas. Water supply for future habitable dwellings must be installed prior to commencement of construction of the habitable building.

REFERENCES

Central Highlands Council (2015) Central Highlands *Interim Planning Scheme.*

Standards Australia. (2009). *AS 3959-2009 Construction of Buildings in Bushfire Prone Areas.*

Planning Commission (2017), *Planning Directive No. 5.1 Bushfire-Prone Areas Code*

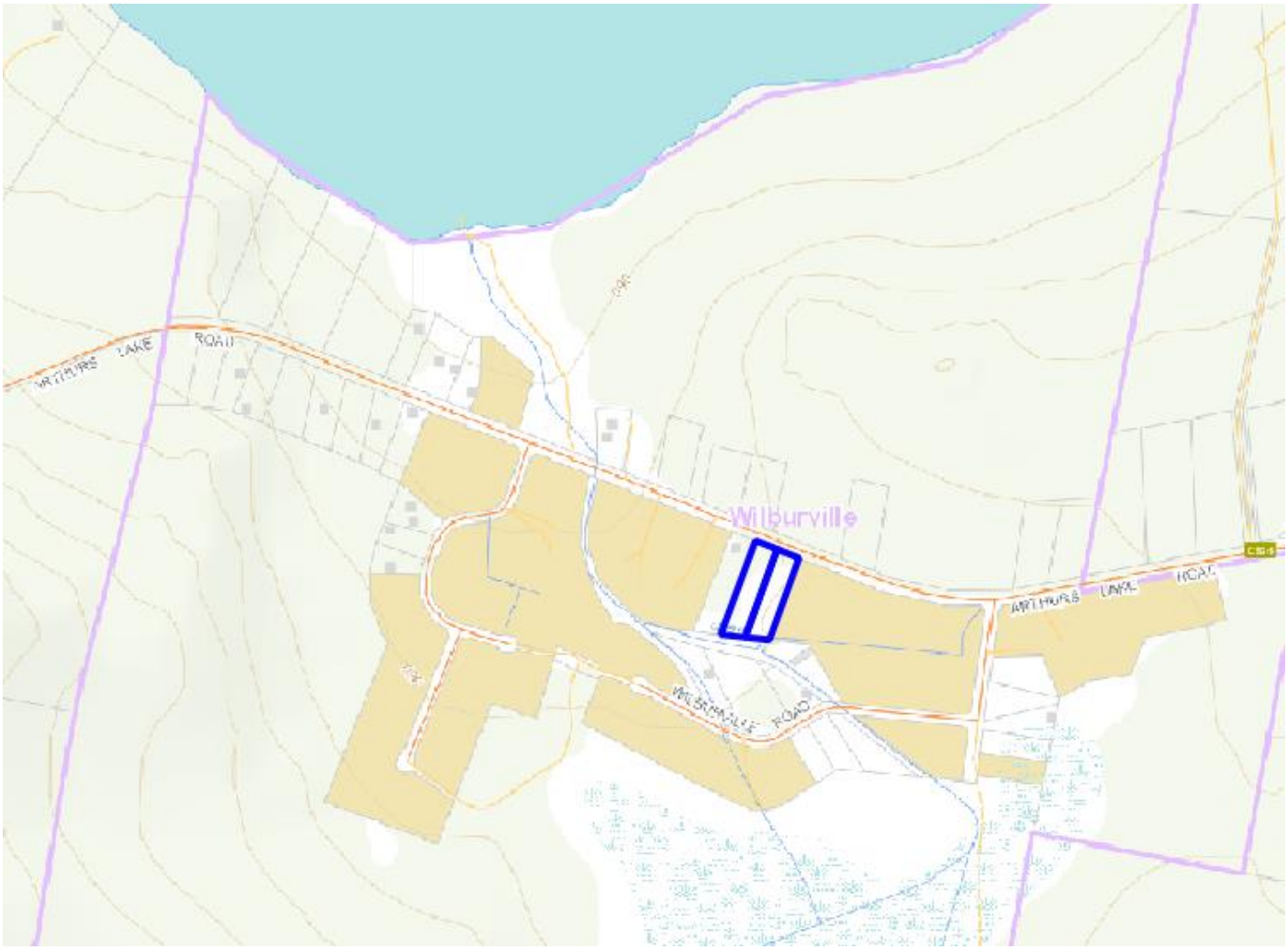


Figure 3: Location, existing titles

Figure 4: Aerial Image

Figure 5: Proposed Subdivision Plan

Figure 6: south from Arthurs Lake Road

Figure 7: along western boundary

Figure 8: southern portion of Lots 2 &3

Figure 9: eastern section Lot 3

Figure 10: east of Lot 4

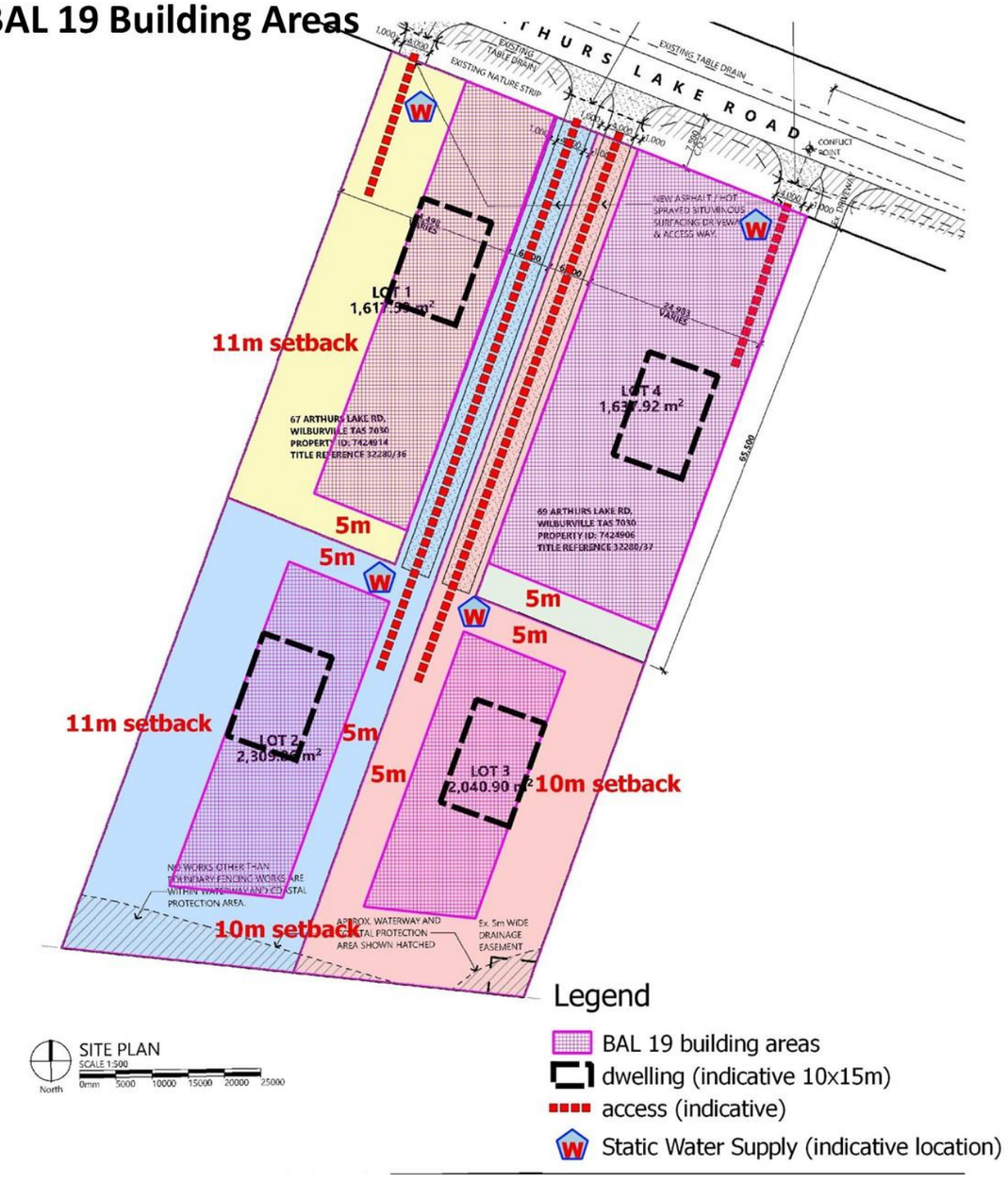
Bushfire Hazard Management Plan:

This BHMP has been prepared to satisfy the requirements of the *Central Highlands Planning Scheme, 2013*5 and *Planning Directive No. 5.1 Bushfire-Prone Areas Code.*.

This plan should be read in conjunction with the report titled: Bushfire Hazard Management Report 67 & 69 Arthurs Lake Road, Wilburville. Livingston Natural Resource Services

Proposed Development	Subdivision, 4 lots from 2 lots
Plan of Subdivision	Artas, Site Plan A700 SK04 13/8/2020
Property Owner	Thane Brady
Address	67 & 69 Arthurs Lake Road, Wilburville
CT	CT 32280/36 & 37
PID	7424914 , 7424906

BAL 19 Building Areas



Construction: BAL 19

Buildings in Bushfire Prone Area to be built in accordance with the Building Code of Australia and Australian Standard AS3959.

Building setbacks / BAL ratings apply to habitable buildings (Class 1, 2 3, 8 or 9) and class 10a buildings within 6m of a habitable building.

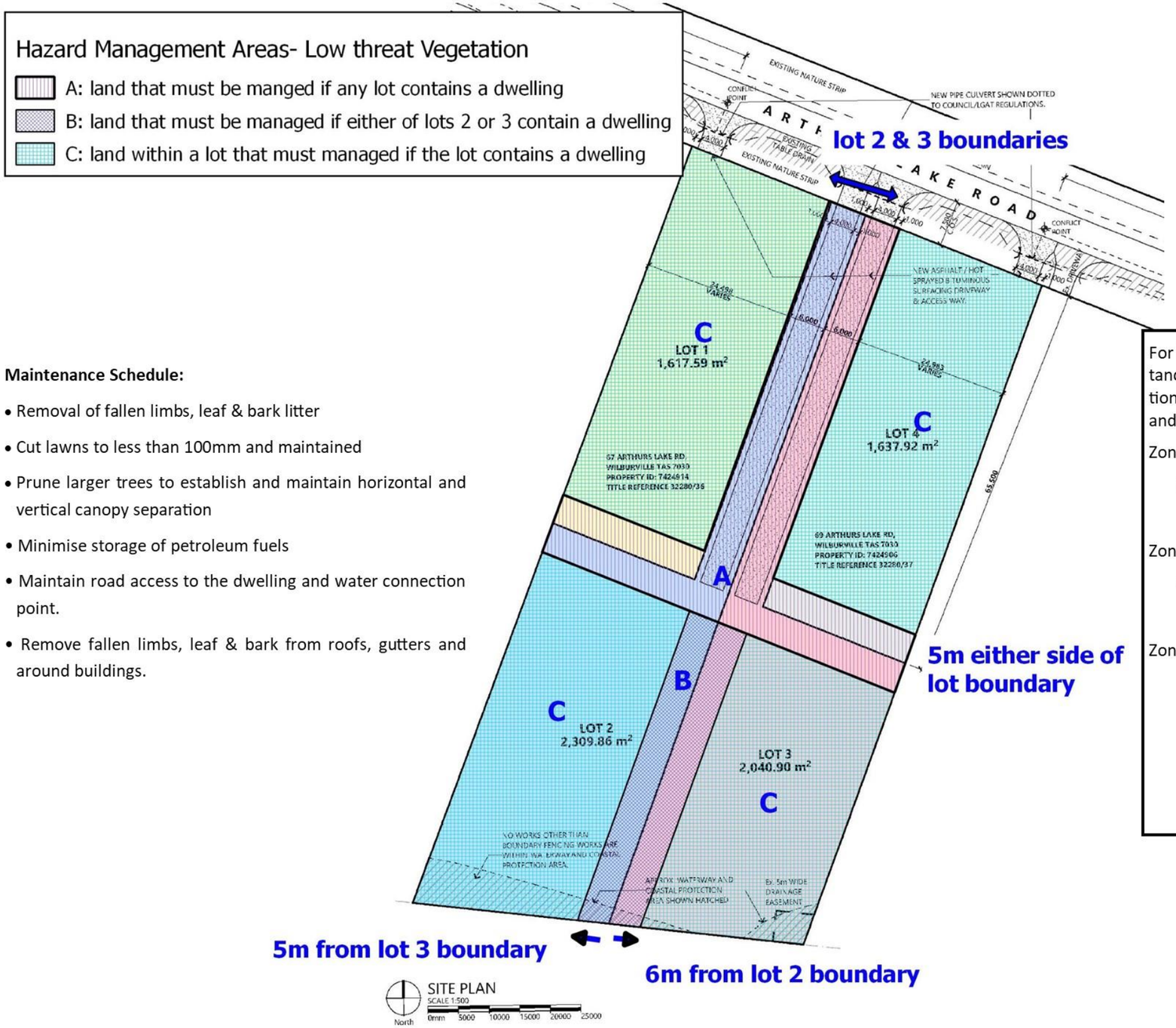
Lot	BAL 19 Setbacks for habitable buildings
1	11m from the western boundary and 5m from southern boundary
2	11m from the western boundary and 10m from the southern boundary, 5m from eastern and northern boundary
3	5m from the western and northern boundary and 10m from the southern boundary, 10m from eastern boundary
4	5m from the southern boundary

Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 14/8/2020

SRL20/47S

Hazard Management Areas (HMA)

Hazard management areas include the area to protect the buildings as well as the access and water supplies.



Maintenance Schedule:

- Removal of fallen limbs, leaf & bark litter
- Cut lawns to less than 100mm and maintained
- Prune larger trees to establish and maintain horizontal and vertical canopy separation
- Minimise storage of petroleum fuels
- Maintain road access to the dwelling and water connection point.
- Remove fallen limbs, leaf & bark from roofs, gutters and around buildings.

For future habitable buildings on Lot 1-4 all land within the distances shown below must be managed as Low threat vegetation including maintained lawns (mown to < 100mm), gardens and orchards.

Zone A: where any dwelling contains a dwelling

all land within the panhandles of lot 2 & 3, all land on all lots within 5m of the boundaries of lots 1-2 and 3-4.

Zone B: where lot 2 or 3 contains a dwelling

all land 5m east and 6m east of the boundary between lots 2 and 3.

Zone C: Where a lot contains a dwelling

all land within that lot.

All other land within the subdivision must be managed as no higher fuel load than grassland.

Scott Livingston
Accreditation: BFP – 105:
1, 2, 3A, 3B, 3C
Date 14/8/2020

SRL20/47S

Water Supply

A static water supply to following standards must be installed for each building area:

The following requirements apply:

a. the building area to be protected must be located within 90m of the fire fighting water point of a static water supply; and
b. the distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.

A static water supply:

a. may have a remotely located offtake connected to the static water supply;
b. may be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;
c. must be a minimum of 10,000l per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems;
d. must be metal, concrete or lagged by non-combustible materials if above ground; and
e. if a tank can be located so it is shielded in all directions in compliance with section 3.5 of *Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas*, the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by:
    i. metal;
    ii. non-combustible material; or fibre-cement a minimum of 6mm thickness.

Fittings and pipework associated with a fire fighting water point for a static water supply must:

a. have a minimum nominal internal diameter of 50mm;
b. be fitted with a valve with a minimum nominal internal diameter of 50mm;
c. be metal or lagged by non-combustible materials if above ground;
d. if buried, have a minimum depth of 300mm1*;*
e. provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment;
f. ensure the coupling is accessible and available for connection at all times;
g. ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length);
h. ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and
i. if a remote offtake is installed, ensure the offtake is in a position that is:
    i. visible;
    ii. accessible to allow connection by fire fighting equipment;
    iii. at a working height of 450 – 600mm above ground level; and
    iv. protected from possible damage, including damage by vehicles.

The fire fighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:

a. comply with water tank signage requirements within *Australian Standard AS 2304-2011 Water storage tanks for fire protection systems;* or
b. Comply with the Tasmania Fire Service Water Supply Guideline published by Tasmania Fire Service

A hardstand area for fire appliances must be:

a. no more than 3m from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
b. no closer than 6m from the building area to be protected;
c. a minimum width of 3m constructed to the same standard as the carriageway; and
d. connected to the property access by a carriageway equivalent to the standard of the property access

Property Access

Access to a to a habitable buildings and water supply point it must be constructed to the following standards:

a. All-weather construction;
b. Load capacity of at least 20 tonnes, including for bridges and culverts;
c. Minimum carriageway width of 4 metres;
d. Minimum vertical clearance of 4 metres;
e. Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
f. Cross falls of less than 3 degrees (1:20 or 5%);
g. Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
h. Curves with a minimum inner radius of 10 metres;
i. Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and
j. Terminate with a turning area for fire appliances provided by one of the following:
    i) A turning circle with a minimum inner radius of 10 metres; or
    ii) A property access encircling the building; or
    iii) a hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.

Scott Livingston
Accreditation: BFP – 105:
1, 2, 3A, 3B, 3C
Date 14/8/2020

SRL20/47S

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE[1] UNDER S51(2)(d) LAND USE PLANNING AND APPROVALS ACT 1993

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:	67 & 69 Arthurs Lake Road, Wilburville
Certificate of Title / PID:	CT 32280/36 PID7424914 CT 32280/37 PID7424906

2. Proposed Use or Development

Description of proposed Use and Development:	4 lot subdivision from 2 existing titles
Applicable Planning Scheme:	Central Highlands Interim Planning Scheme 2015

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Bushfire Hazard Management Report, 67 & 69 Arthurs Lake Road, Wilburville	Scott Livingston	14/8/2020	1

[1] This document is the approved form of certification for this purpose and must not be altered from its original form.

Bushfire Hazard Management Plan, 67 & 69 Arthurs Lake Road, Wilburville	Scott Livingston	14/8/2020	1
Site Plan	Artas	13/8/2020	SK04

4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

☐	**E1.4 / C13.4 – Use or development exempt from this Code**	
	Compliance test	**Compliance Requirement**
☐	E1.4(a) / C13.4.1(a)	Insufficient increase in risk

☐	**E1.5.1 / C13.5.1 – Vulnerable Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.1 P1 / C13.5.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.1 A2 / C13.5.1 A2	Emergency management strategy
☐	E1.5.1 A3 / C13.5.1 A2	Bushfire hazard management plan

☐	**E1.5.2 / C13.5.2 – Hazardous Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.2 P1 / C13.5.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.2 A2 / C13.5.2 A2	Emergency management strategy
☐	E1.5.2 A3 / C13.5.2 A3	Bushfire hazard management plan

☒	**E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas**	
	Acceptable Solution	**Compliance Requirement**

☐	E1.6.1 P1 / C13.6.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.1 A1 (a) / C13.6.1 A1(a)	Insufficient increase in risk
☒	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance')
☐	E1.6.1 A1(c) / C13.6.1 A1(c)	Consent for Part 5 Agreement

☒	**E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.2 P1 / C13.6.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk
☒	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

☒	**E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Insufficient increase in risk
☐	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply complies with relevant Table
☐	E1.6.3 A1 (c) / C13.6.3 A1 (c)	Water supply consistent with the objective
☐	E1.6.3 A2 (a) / C13.6.3 A2 (a)	Insufficient increase in risk
☒	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply complies with relevant Table

☐	E1.6.3 A2 (c) / C13.6.3 A2 (c)	Static water supply consistent with the objective

5. Bushfire Hazard Practitioner

Name:	Scott Livingston	**Phone No:**	0438 951 021
Postal Address:	12 Powers Road	**Email Address:**	scottlivingston.lnra@gmail.com
Accreditation No:	BFP – 105	**Scope:**	1, 2, 3A, 3B, 3C

6. Certification

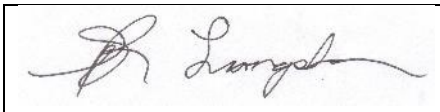
I certify that in accordance with the authority given under Part 4A of the *Fire Service Act 1979* that the proposed use and development:

☐ Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or

☐ The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate.

Signed:

certifier



Name: Scott Livingston **Date:** 14/8/2020

Certificate Number: SRL 20/47S

(for Practitioner Use only)

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Thane Brady *Owner /Agent*

61 Mayne St *Address*

Invermay 7248 *Suburb/postcode*

Qualified person details:

Qualified person: Scott Livingston

Address: 12 Powers Road Phone No: 0438 951 021

Underwood 7268 Fax No:

Licence No: BFP-105 Email address: scottlivingston.lnrs@gmail.com

Qualifications and Insurance details: Accredited Bushfire Assessor

BFP 105, 1,2,3A,3B, 3C

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Bushfire Assessment

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address:	67 & 69 Arthurs Lake Road,		Lot No:	1-4
	Wilburville	7030	Certificate of title No:	32280/36 & 37

The assessable item related to this certificate:	Bushfire Attack Level (BAL)	*(description of the assessable item being certified)* *Assessable item includes –* - *a material;* - *a design* - *a form of construction* - *a document* - *testing of a component, building system or plumbing system* - *an inspection, or assessment, performed*

Certificate details:	

Certificate type:	Bushfire Hazard	*(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)*

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: X

or

a building, temporary structure or plumbing installation:

In issuing this certificate the following matters are relevant –

Documents:	Bushfire Attack Level Assessment Report and Bushfire Hazard Management Plan
Relevant calculations:	NA

Australian Standard 3959

- Planning Directive No.5.1 *Bushfire-Prone Areas Code*
- Building Amendment Regulations 2016
- Director of Building Control, Determination
  - Application of Requirements for Building in Bushfire Prone Areas. (Aug 2017)
- Guidelines for development in bushfire prone areas of Tasmania

Substance of Certificate: (what it is that is being certified)

1. Assessment of the site Bushfire Attack Level (BAL) to Australian Standards 3959 Assessed as - BAL 19

2. Bushfire Hazard Management Plan

Proposal is compliant with DTS requirements, clauses 4.1, 4.2, 4.3 & 4.4 Directors Determination Requirements for Building in Bushfire Prone Areas (v2.1)

Scope and/or Limitations

Scope:

This report was commissioned to identify the Bushfire Attack Level for the existing property. All comment, advice and fire suppression measures are in relation to compliance with Planning Directive No 5.1, Bushfire-Prone Areas Code issued by the Tasmanian Planning Commission, the Building Code of Australia and Australian Standards, AS 3959-2009, Construction of buildings in bushfire-prone areas.

Limitations:

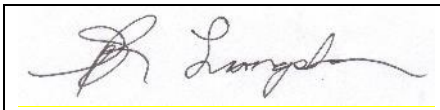
The inspection has been undertaken and report provided on the understanding that;-

1. The report only deals with the potential bushfire risk all other statutory assessments are outside the scope of this report.

2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken and cannot be relied upon for any future development.

3. Impacts of future development and vegetation growth have not been considered.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		SRL20/47S	14/8/2020

ON-SITE WASTEWATER & STORMWATER ASSESSMENT

67-69 Arthurs Lake Road

Arthurs Lake

July 2020

GEO-ENVIRONMENTAL

SOLUTIONS

Geo-Environmental Solutions P/L 29 Kirksway Place, Battery Point 7004. Ph 6223 1839

Introduction

Client: Thane Brady
Date of inspection: 14/7/20
Location: 67-69 Arthurs Lake Road, Arthurs Lake
Land description: Approx. 0.76ha property
Building type: Proposed new subdivision (4 lots of approx. 1600-2300m^2)
Investigation: Geoprobe
Inspected by: JP Cumming

Background information

Map: Mineral Resources Tasmania, SE Tasmania Sheet 1: 250 000
Rock type: Jurassic Dolerite
Soil depth: 1.8+
Planning overlays: Waterways protection overlay on small area of the property
Local meteorology: Annual rainfall approx 550 mm
Local services: Tank water with on site wastewater disposal required

Site conditions

Slope and aspect: Approx. 3% slope to the North West
Site drainage: Imperfect subsoil drainage
Vegetation: Pasture and scrub species
Weather conditions: Cloudy, approx. 5mm rainfall received in preceding 7 days.
Ground surface: Slightly moist surface conditions

Investigation

A number of excavations were completed to identify the distribution of, and variation in soil materials on the site. Representative excavations from each of the proposed lots indicated on the site plan were chosen for testing and classification according to AS1547-2012 (see profile summaries).

Profile Summaries

Depth (m)	Horizon	Description
0 – 0.20	A1	Very Dark Brown **CLAYEY SAND (SC**), approximately 30% clay, moderate angular blocky structure, moist firm consistency, common fine roots, abundant dolerite rocks (to 500mm) and gravels, distinct boundary to
0.20 – 0.60	B1	Brown **SANDY CLAY(CL**), approximately 50% fine sand, strong angular blocky structure, dry stiff consistency, medium to high plasticity, common fine roots, few dolerite rocks and gravels, gradual boundary to
0.60-1.80	B21	Light Reddish Brown **SANDY/GRAVELY CLAY(CL**), approximately 50% fine sand, strong angular blocky structure, moist firm consistency, low to medium plasticity, few fine roots, abundant dolerite rocks and gravels, abrupt boundary to
1.80+	R	Refusal on dolerite colluvium

Soil Profile Notes

The soil profile above is representative of the soils across all of the proposed lots. The soils on the site are developing on dolerite and consist of sands loam topsoils overlying clay rich subsoils with a considerable stone and gravel content.

Site Summary

The current development application is for the subdivision into four lots with a total area of approximately 0.76ha. The proposed new lots will be approximately 1600 to 2300m^2 in size.

Nutrient Balance and Sustainable Wastewater Application

The soils across the site have developed from dolerite and have a good estimated Cation Exchange Capacity (CEC). The soils returned negative results to all Emerson dispersion tests. Therefore, the soils have a good capacity to retain nutrients in applied wastewater.

Hydrological Balance and Wastewater Disposal

The capability of the proposed new lots to support a typical residential dwelling and on-site wastewater disposal must be evaluated to ensure environmental values are maintained. Modelling of wastewater application on the proposed lot was undertaken utilising the Trench

program, long term weather average for the central highlands and estimated flows from an average three bedroom home.

The soils are moderately structured, have a moderate permeability and moderate CEC for retention of nutrients. The soils across the site area classified according to AS1547-2012 as **Category 4 – Clay Loam.** The iron oxide content of the clays improves soil structure and provides for generally favourable permeability and as a result a range of wastewater disposal options are suitable for the proposed lots.

Assuming the construction of a typical three bedroom dwelling with tank water supply, the expected loading under AS1547-2012 is 600L/day. The soils in the local area are suited to traditional septic tank system provided adequate design is provided in accordance with the directors guidelines for on site wastewater disposal. For a septic tank system with a DLR of 15L/m^2/day an area of approximately 40m^2 would be required, whilst for a secondary treatment system using a DIR of 4mm/day, a subsurface irrigation area of 150m^2 would be required. The assessment a concludes that the proposed lot areas (minimum 1600m^2) would be more than sufficient to accommodate wastewater from future residential development.

It is recommended the final decision of wastewater system approval rest with the permit authority at the time of site specific design to ensure the most compatible environmental and economic outcomes. Therefore, it is not warranted to restrict the lot to a single wastewater system type at the subdivision approvals stage, as each dwelling will have individual nuances which may be more suited to any one of a range of designs allowable within AS1547-2012.

Setbacks Distances to Boundaries and Sensitive Features

A number of indicative minimum boundary setbacks applicable to the development have been modelled utilising the Trench program and with reference to the Building Act 2016 wastewater guidelines.

- Boundaries (upslope/across slope) – 1.5m
- Boundaries down slope – primary – 10m, secondary – 3.5m (slope 2^o)
- Down slope surface water – primary – 29m, secondary – 19m (slope 2^o)

On-site stormwater disposal

The deep clay soils in the local area are generally well suited to on site retention of stormwater from roof water tank overflows with an estimated permeability of approximately 1.5m/day. Modelling has been undertaken based upon the construction of a typical three bedroom dwelling on each lot with a roof area of approximately 150m^2.

Stormwater calculations

Stormwater runoff from impervious surfaces on site (new roof area) is calculated according to the rational method taken from *Australian Rainfall and Runoff (ARR).*

Where the flowrate Q = 0.00579CIA

C = Runoff coefficient (taken as 0.90 for roof and 0.75 for gravel)

I = Intensity of rainfall

A = Catchment area

All 1:20yr scenarios (5 minutes to 72 hours) have been calculated in the attached spread sheet. The Intensity Frequency Duration (IFD) data generated for the site is shown in the attached charts and table.

For typical dwelling with a roof area of approximately 150m^2

The required stormwater trench area from the stormwater worksheet attached is 8.4m^2. Therefore, a design of one 7m long by 1.2m wide by 0.5m deep absorption trench is recommended to accommodate stormwater overflow from the roof area. The resultant stormwater retention area/volume should therefore be sufficient to handle all ARI 1:20 events. Note site specific assessment and design will be required for future dwellings on each lot prior to building and plumbing approvals.

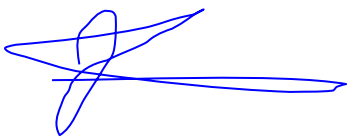
It is also noted that the proposed access strips to the rear lots will be sealed, and as such allowance for stormwater management will be required. Given the deep permeable clay soils on site retention and absorption of stormwater via an open grassed swale along the access strip would be appropriate and in keeping with the existing infrastructure in the local area. For an access strip approximately 65m long by 4m wide (260m^2) an open grassed swale alongside the driveway 65m long by 0.8m wide (55m^2 in area) by a minimum of 0.4m deep

would provide for more than sufficient retention area. Alternatively, if the driveway sealed area was fully drained with a series of grated drains and stormwater pits for on site absorption an area of 15m^2 would be required. This could be accommodated by a series of small absorption trenches connected to each stormwater pit. For example, if the driveway was divided into four areas, then four small absorption trenches each 4m x 1.2m x 0.6m would be appropriate. Trenches of this type could be accommodated alongside the sealed driveway within the proposed 6m access strip.

Conclusions

The current subdivision proposal allows for sufficient space on the proposed lots to be created for the installation and successful operation of a wastewater treatment system, with adequate setbacks in regards boundaries and sensitive features. The well-structured permeable clay soils on site are also suitable for stormwater retention/absorption.

No serious geotechnical impediments were identified for future residential use on the proposed lots and as such the land is suitable for the proposed subdivision. It is concluded that the development would be compliant with standards of the low-density residential zone and the stormwater code of the central highlands interim planning scheme.



Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD
Environmental and Engineering Soil Scientist

Appendix 1 – Site plan showing location of proposed lots and test holes

Appendix 2 – Trench Report

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for	Thane Brady	Assess. Date	30-Jul-20
		Ref. No.	
Assessed site(s)	67-69 Arthurs Lake Rd	Site(s) inspected	12-Jul-20
Local authority	Central Highlands Council	Assessed by	John Paul Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and sustem sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 600 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 200

Sullage volume (L/day) = 400

Total nitrogen (kg/year) generated by wastewater = 5.4

Total phosphorus (kg/year) generated by wastewater = 2.3

Climatic assumptions for site (Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	51	56	63	66	75	72	84	86	76	61	63	66
Adopted rainfall (R, mm)	51	56	63	66	75	72	84	86	76	61	63	66
Retained rain (Rr, mm)	46	50	57	59	68	65	76	77	68	55	57	59
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	**84**	**60**	**34**	**4**	**-26**	**-35**	**-44**	**-35**	**-5**	**29**	**48**	**67**

Annual evapotranspiration less retained rain (mm) = 180

Soil characterisitics

Texture = clay loam Category = 4 Thick. (m) = 2

Adopted permeability (m/day) = 1.5 Adopted LTAR (L/sq m/day) = 15 Min depth (m) to water = 5

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	All wastewater will be disposed of on the site
The preferred method of on-site primary treatment:	In dual purpose septic tank(s)
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	Trench(es)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	27
Width (m) =	1.5
Depth (m) =	0.6
Total disposal area (sq m) required =	40
comprising a Primary Area (sq m) of:	40
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The calculated LTAR for the category 4 soil present is 15L/sq m/day with a minimum required absorption area of 40 sq m for typical 3 bedroom house.

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Site assessment for on-site waste water disposal

Assessment for	Thane Brady	Assess. Date	30-Jul-20
		Ref. No.	
Assessed site(s)	67-69 Arthurs Lake Rd	Site(s) inspected	12-Jul-20
Local authority	Central Highlands Council	Assessed by	John Paul Cumming

This report summarises data relating to the physical capability of the assessed site(s) to accept wastewater. Environmental sensitivity and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) site limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
	Expected design area	sq m	800	V. high	Moderate		
	Density of disposal systems	/sq km	10	Mod.	Very low		
	Slope angle	degrees	3	High	Very low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Mod. good		High	Low		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
	Aspect (Southern hemi.)	Faces NE or NW		V. high	Low		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	600	High	Moderate		
	SAR of septic tank effluent		1.4	High	Low		
	SAR of sullage		2.5	High	Moderate		
	Soil thickness	m	2.0	V. high	Very low		
	Depth to bedrock	m	2.0	V. high	Low		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.5	High	Low		
	Soil dispersion	Emerson No.	8	V. high	Very low		
A	Adopted permeability	m/day	1.5	Mod.	High		
	Long Term Accept. Rate	L/day/sq m	15	High	Very low		

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The site has good capability to accept wastewater onsite.

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Site assessment for on-site waste water disposal

Assessment for	Thane Brady	Assess. Date	30-Jul-20
		Ref. No.	
Assessed site(s)	67-69 Arthurs Lake Rd	Site(s) inspected	12-Jul-20
Local authority	Central Highlands Council	Assessed by	John Paul Cumming

This report summarises data relating to the environmental sensitivity of the assessed site(s) in relation to applied wastewater. Physical capability and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Cation exchange capacity	mmol/100g	95	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-180	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	7.7	High	Low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	5	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
	Dist. to nearest surface water	m	150	V. high	Moderate		
	Dist. to nearest other feature	m	100	V. high	Low		
	Risk of slope instability	Very low		V. high	Very low		
	Distance to landslip	m	1000	V. high	Very low		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The clay soils on site have a good CEC and P absorption capacity, and given the land area available and use of vegetation nutrient retention should not be an issue.

Appendix 3 – Stormwater calculation sheet

		CATCHMENT AREA	150		**Ksat (m/d)**	**1.5**		**Absorption length (m**	7	**Absorption area (m2)**	8.4	
		Catchement Type	Roof		**AEP**	5%		**Absorption width (m)**	1.2	**Absorption perimeter (m)**	16.4	
		Moderation Factor	2		**Depth (m)**	0.6		**Absorption depth (m)**	0.6			
	5% AEP		**Infiltration (L/m2)**	**Storm Volume (L)**		**Trench infiltration in L (volume -area shown)**						
Storm Duration	**Intensity mm/hr**	**Flow rate (L/s)**	(L/m2)	150 m2 catchme	500L - 2.1 m2	730L - 3.125 m2	1000L - 4.2 m2	1500L - 6.25 m2	2000L - 8.35 m2	2500L - 10.45 m2	3000L - 12.5 m2	3500L - 14.6 m2
1 min	**140**	**5.25**	1.04	315.25	4.34	6.29	8.68	13.02	17.36	21.70	26.04	30.38
2 min	**116**	**4.35**	2.08	522.42	8.68	12.59	17.36	26.04	34.72	43.40	52.08	60.76
3 min	**104**	**3.90**	3.13	702.56	13.02	18.88	26.04	39.06	52.08	65.10	78.13	91.15
4 min	**94.1**	**3.53**	4.17	847.58	17.36	25.17	34.72	52.08	69.44	86.81	104.17	121.53
5 min	**86.8**	**3.26**	5.21	977.28	21.70	31.47	43.40	65.10	86.81	108.51	130.21	151.91
10 min	**64.2**	**2.41**	10.42	1445.66	43.40	62.93	86.81	130.21	173.61	217.01	260.42	303.82
15 min	**52.2**	**1.96**	15.63	1763.16	65.10	94.40	130.21	195.31	260.42	325.52	390.63	455.73
20 min	**44.6**	**1.67**	20.83	2008.61	86.81	125.87	173.61	260.42	347.22	434.03	520.83	607.64
25 min	**39.4**	**1.48**	26.04	2218.02	108.51	157.34	217.01	325.52	434.03	542.53	651.04	759.55
30 min	**35.4**	**1.33**	31.25	2391.41	130.21	188.80	260.42	390.63	520.83	651.04	781.25	911.46
45 min	**27.9**	**1.05**	46.88	2827.13	195.31	283.20	390.63	585.94	781.25	976.56	1171.88	1367.19
1 hour	**23.6**	**0.89**	62.50	3188.55	260.42	377.60	520.83	781.25	1041.67	1302.08	1562.50	1822.92
1.5 hour	**18.6**	**0.70**	93.75	3769.51	390.63	566.41	781.25	1171.88	1562.50	1953.13	2343.75	2734.38
2 hour	**15.7**	**0.59**	125.00	4242.39	520.83	755.21	1041.67	1562.50	2083.33	2604.17	3125.00	3645.83
3 hour	**12.5**	**0.47**	187.50	5066.55	781.25	1132.81	1562.50	2343.75	3125.00	3906.25	4687.50	5468.75
4.5 hour	**9.95**	**0.37**	281.25	6049.46	1171.88	1699.22	2343.75	3515.63	4687.50	5859.38	7031.25	8203.13
6 hour	**8.5**	**0.32**	375.00	6890.51	1562.50	2265.63	3125.00	4687.50	6250.00	7812.50	9375.00	10937.50
9 hour	**6.82**	**0.26**	562.50	8292.93	2343.75	3398.44	4687.50	7031.25	9375.00	11718.75	14062.50	16406.25
12 hour	**5.82**	**0.22**	750.00	9435.94	3125.00	4531.25	6250.00	9375.00	12500.00	15625.00	18750.00	21875.00
18 hour	**4.63**	**0.17**	1125.00	11259.90	4687.50	6796.88	9375.00	14062.50	18750.00	23437.50	28125.00	32812.50
24 hour	**3.91**	**0.15**	1500.00	12678.53	6250.00	9062.50	12500.00	18750.00	25000.00	31250.00	37500.00	43750.00
30 hour	**3.41**	**0.13**	1875.00	13821.55	7812.50	11328.13	15625.00	23437.50	31250.00	39062.50	46875.00	54687.50
36 hour	**3.04**	**0.11**	2250.00	14786.22	9375.00	13593.75	18750.00	28125.00	37500.00	46875.00	56250.00	65625.00
48 hour	**2.51**	**0.09**	3000.00	16277.81	12500.00	18125.00	25000.00	37500.00	50000.00	62500.00	75000.00	87500.00
72 hour	**1.88**	**0.07**	4500.00	18288.22	18750.00	27187.50	37500.00	56250.00	75000.00	93750.00	112500.00	131250.00

Catchment Area =	150	m2	Infiltration Area =	8.4	m2
Runoff Coefficient =	0.9		Perimeter =	16.4	m
Soil Kh =	62.5	mm/hr	Emptying time =	1.68	hr
Moderating factor =	2				
Width Infiltration =	1.2	m			
Length =	7	m			
Depth =	0.6	m	Volume	5.04	m3
Porosity =	0.35		Volume Storage Provided	1.764	m3
	5% AEP				
Storm Duration	**Intensity**	**Inflow Volume**	**Outflow Volume**	**Required**	**Emptying time**
	(mm/hr)	**(m^3)**	**(m^3)**	**(m^3)**	**(hr)**
1 min	**140**	0.32	0.03	0.29	0.27
2 min	**116**	0.52	0.06	0.47	0.44
3 min	**104**	0.70	0.08	0.62	0.59
4 min	**94.1**	0.85	0.11	0.74	0.70
5 min	**86.8**	0.98	0.14	0.84	0.80
10 min	**64.2**	1.44	0.28	1.17	1.11
15 min	**52.2**	1.76	0.42	1.35	1.28
20 min	**44.6**	2.01	0.56	1.45	1.38
25 min	**39.4**	2.22	0.69	1.52	1.45
30 min	**35.4**	2.39	0.83	1.56	1.48
45 min	**27.9**	2.82	1.25	1.58	1.50
1 hour	**23.6**	3.19	1.67	1.52	1.45
1.5 hour	**18.6**	3.77	2.50	1.27	1.21
2 hour	**15.7**	4.24	3.33	0.91	0.87
3 hour	**12.5**	5.06	5.00	0.07	0.06
4.5 hour	**9.95**	6.04	7.49	-	-
6 hour	**8.5**	6.89	9.99	-	-
9 hour	**6.82**	8.29	14.99	-	-
12 hour	**5.82**	9.43	19.98	-	-
18 hour	**4.63**	11.25	29.97	-	-
24 hour	**3.91**	12.67	39.96	-	-
30 hour	**3.41**	13.81	49.95	-	-
36 hour	**3.04**	14.77	59.94	-	-
48 hour	**2.51**	16.26	79.92	-	-
72 hour	**1.88**	18.27	119.88	-	-
			Full volume	1.76	1.50
Notes:					
Inflow volume calculated using Equation 10.1 (WSUD Guidelines: Chapter 10)					
Outflow volume calculated using Equation 10.2 (WSUD Guidelines: Chapter 10)					
Required storage and emptying time is left blank when outflow volume exceeds inflow volume					