



Your ref: AM2022.01

Our ref: 12590738

6 September 2022

Devonport City Council Planning Authority
Sent by email to: council@devonport.tas.gov.au

AM2022.01 - 133 Middle Road PSA & DA

Dear Planning Authority

This letter refers to the TasWater representation to the application for a combined permit and amendment at 133 Middle Road, Miandetta with TasWater reference TWDA 2022/01103-DCC. The letter addresses the matters therein for the Council's consideration in its report pursuant to s40K of the *Land Use Planning and Approvals Act 1993*.

This letter provides a general discussion on the anticipated impact of the proposed changes on TasWater services and then address each item raised in the TasWater representation in turn.

The Application Proposal

The proposal involves a change from the present lot and zone configuration represented in Figure 1 below to the configuration represented in Figure 2.

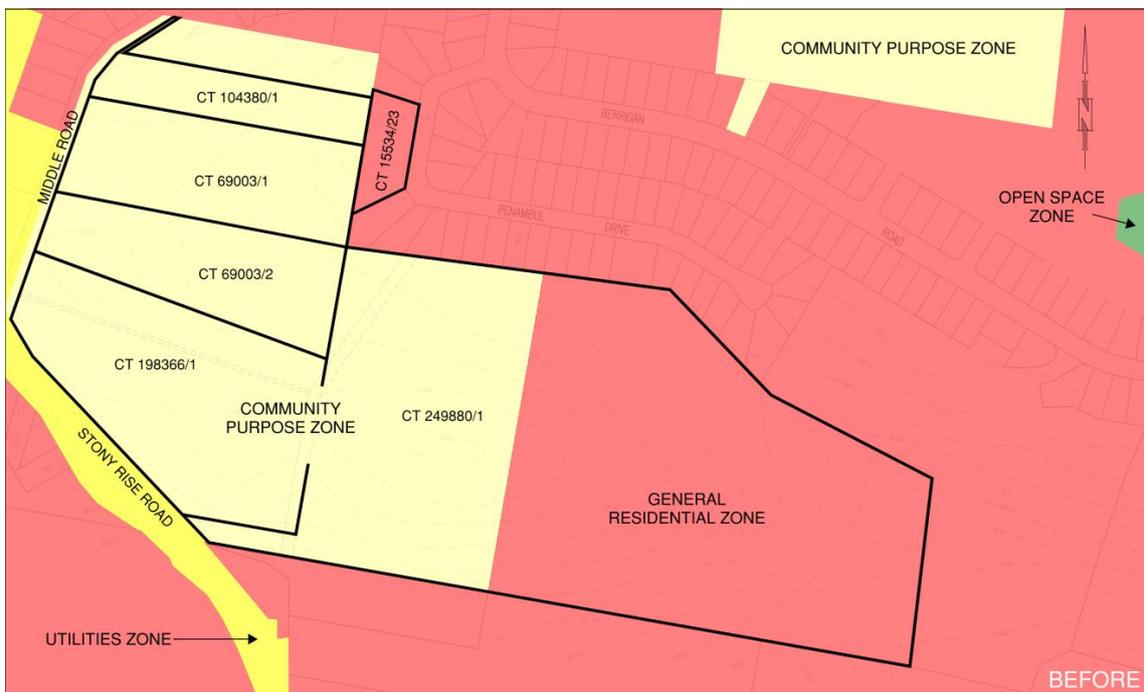


Figure 1 Present lot and zone configuration

The Power of Commitment

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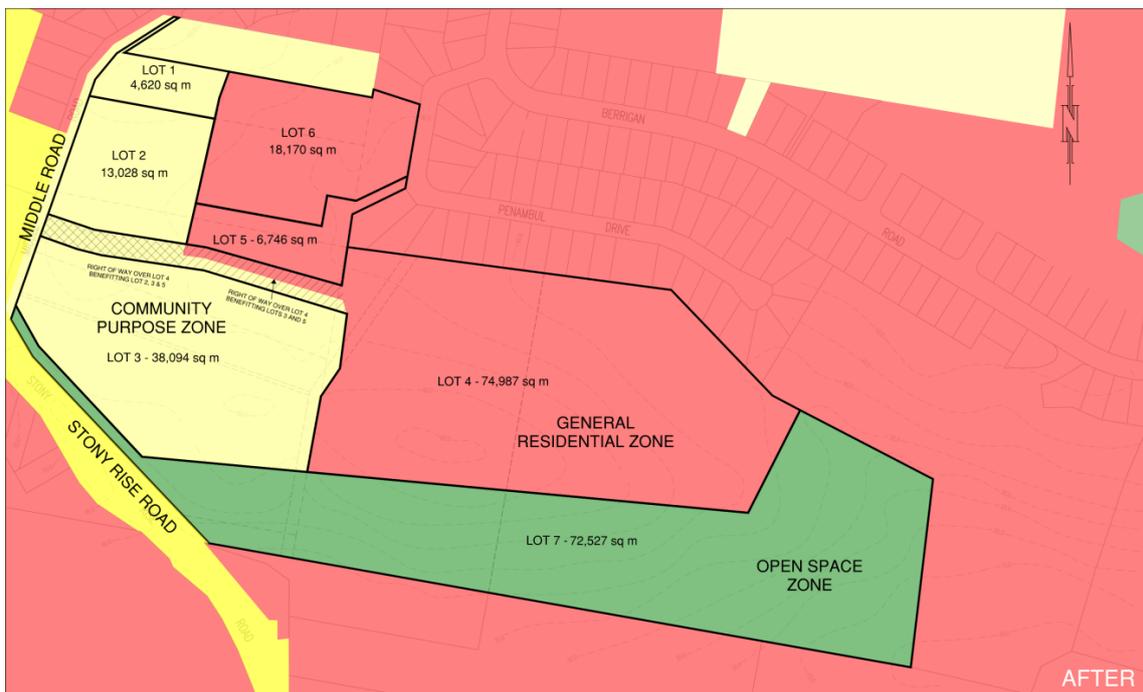


Figure 2 Proposed lot and zone configuration

The proposal is essentially a reconfiguration of lots and zones. One additional lot would be created, which would be in the Open Space Zone, gifted to Council and used for electricity transmission, environmental management and passive recreational purposes. The masterplan is conceptual and not part of the proposal. The application does not propose any ultimate development other than that shown in Figure 2 above.

Impact on TasWater

The land is within the TasWater water supply and sewerage district and is currently serviced by TasWater infrastructure. The current potential demand for TasWater services (current lot configuration) is governed by the zoning. Similarly, the potential demand for TasWater services following the proposed lot configuration will be governed by the proposed reconfigured zoning. The impact of the proposed reconfiguration on TasWater services will be the potential for increase or decrease in demand for services triggered by the reconfiguration.

The proposed changes to the areas of land in each Zone are as follows:

Zone	Existing area	Proposed area	Difference
General Residential Zone	85,266m ²	92,040m ²	+6,774m ² (+8%)
Community Purpose Zone	138,956m ²	59,829m ²	- 79,127m ² (-57%)
Open Space Zone	0	72,527m ²	+ 72,527m ²

It can be seen from the table that the proposed changes involve an 8% increase in land zoned for general residential use and a 57% reduction in land available for community purpose use. The impacts on demand for TasWater services that this may trigger are as follows:

Potential for change in water demand

The land-uses for Community Purposes Zone are relatively unconstrained and includes uses such as schools, hospitals, and emergency services. The reduction in available land for these uses represents a major reduction in the potential water demand in this area.

In the current lot configuration, development potential in the General Residential Zone lots is constrained by the presence of electricity transmission infrastructure. The Reserved Residential Land Specific Area Plan (RRLSAP) presently applies to the General Residential Zone land at the eastern end of the site. Constraints within the RRLSAP involve environmental values considerations and staging for servicing and roads. These constraints are relatively minor in the context of the similar constraints that would apply to the proposed General Residential Zones. Based thereon, it is considered that the proposed reconfiguration will have a moderate increase in potential water demand due to the larger area and the fewer constraints on that land for development.

Overall, the major decrease in potential water demand on land in the Community Purposes Zone can be offset against a moderate increase in potential water demand on land in the General Residential Zone. Based on this, it is considered that the proposal does not represent a change in potential water demand.

Potential for increase in demand for sewerage services

Similar to the above, it was concluded that the proposed reconfiguration will not increase the potential demand for sewerage services.

Serviceability of the reconfigured lots

An assessment was undertaken on the serviceability of the proposed reconfigured lots and the outcome is included in Attachment 1. The conclusions are summarised below.

Water Supply

The reconfigured lots will be connected directly to the adjacent TasWater mains, and it will not be required to extend the TasWater network. Most of the lots will retain their existing connections with only lots 4 and 5 requiring new connections.

The serviceability assessments notes that, if any of these lots are further sub divided in future, a hydraulic model will be required to design the connecting mains and internal water reticulation network. It is possible that for such a sub-division, low pressures issues may arise at elevated areas (above 65m AHD) or high pressures in the area below 10m AHD. These areas are however very small, and readily available options exist to avoid these areas or to manage pressure. This will ultimately depend on the available pressures in the TasWater connection points. This issue also exists for the current lot layout.

Sewerage

The development application nominated connection points to the sewerage network for each of the reconfigured lots. New sewerage mains are proposed along the boundary of lots 5 and 6 to drain lots 2 and 3.

The serviceability assessments notes that, if these lots are further sub divided in future, a sewerage network will have to be implemented. A small portion of lots 3 and 4 may not be able to drain under gravity to the nominated connection point to the TasWater sewers. If such areas are to be utilised for residential Lots, pumping may be required. Similarly, a small area of Lot 1 will not be able to drain to the proposed connection point.

Responses to aspects raised in the TasWater representation

Water Modelling

The Development Application proposes connection points to the TasWater water network for each lot. These connections will be directly from the TasWater mains with meters proposed at the respective property boundaries adjacent to the TasWater mains. The construction of additional water supply mains will not be required, and modelling is not deemed necessary at this stage

Sewer Servicing

The application nominated connection points for each reconfigured lot. A new sewer will be required to connect lots 2 and 3. The services assessment has concluded that, if the lots proposed by the current application are further sub divided in future, some areas of lots 1, 3 and 4 may not be practical to drain under gravity to the nominated connection points although that will depend on how such a future layout is

planned. The potential for development of these areas with habitable buildings would be constrained by the presence of bushfire hazard management areas and therefore development on areas unable to be drained is less likely.

A drainage easement is proposed over the rear of lot 2 to accommodate the unlikely event that any areas on lot 1 that are unable to drain to Middle Road require drainage.

Burrowing crayfish habitat

Impacts on burrowing crayfish are addressed in the natural values report by Scott Livingston. An alternative route to access the sewer main is shown on Figure 13, Revision B, which can be explored should the need arise. It is noted that burrowing crayfish frequently move depending on a range of environmental conditions and that the location of the sewer main would need to be based on a survey undertaken at the time of construction.

It is considered that the management of works to ensure appropriately minimal impact on burrowing crayfish is routine in nature and can be mandated through a condition on a permit requiring an appropriately thorough construction and environmental management plan to address potential issues.

Existing private infrastructure

Existing private infrastructure is shown on the detail survey plans enclosed with this letter and now forming part of the application. The proponent intends to rationalise all existing services and locate connections within respective lot boundaries. All redundant water, sewer and stormwater infrastructure (including the private pump station) would be removed. It is considered that these matters are routine in nature and can be mandated through permit conditions as follows:

All redundant water, sewer and stormwater connections and infrastructure is to be removed to Council and TasWater's satisfaction.

All lots must have water, sewer and stormwater connections and services located within respective lot boundaries unless otherwise agreed by Council and TasWater and subject to appropriate easements to Council and TasWater's satisfaction.

Easements

The creation of easements for TasWater infrastructure is routine in nature. A commitment to provide these easement is provided on Figure 13, Revision B. It is considered that the commitment is sufficient but to put the matter beyond doubt, it is suggested that the permit contain the following condition:

All existing and proposed sewer, water and stormwater mains to be provided with easements with a width and description to Council and TasWater's satisfaction.

We note that the conditions of approval proposed by TasWater would provide adequate opportunity to ensure matters related to TasWater interests proceed through an orderly and routine process. We see no concern with meeting the proposed conditions of approval.

Conclusion

It is concluded that:

- The proposed Planning Scheme amendment and subdivision would not enable future development that is likely to lead to a material change to the potential demand on TasWater services.
- The present application will not require additional water mains infrastructure. Each proposed lot connections is capable of meeting TasWater's standards.

- The proposed lots 2 and 3 will require a new sewerage main to connect to the TasWater sewerage network adjacent to the rear boundary of 85 Penambul Drive. The proposed new mains would enable present and potential future gravity service connections.
- Other matters raised in the TasWater representation can be implemented and are reasonably enforceable through permit conditions i.e.:
 - o Appropriate management of impacts on burrowing crayfish habitat.
 - o Appropriate rationalisation of existing private infrastructure.
 - o Requirement for easements with appropriate width and description.

Thank you for your consideration of these matters.

Sincerely



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Senior Engineer

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Attachment 1

Engineering Assessment of Water and Sewerage Serviceability



1. Applicable standards

The Water Services Association of Australia Codes of Practice stipulates the requirements for the provision of water and sewerage. These are

- Water Supply Code of Australia WSA03-2011-3.1 MRWA edition and the associated TasWater supplement,
- Gravity Sewerage Code of Australia WSA02-2014-3.1 MRWA edition and the associated TasWater supplement.

These include, amongst other, the following basic requirements.

Table 1 Water and sewerage standards

Item	Value	Comments
Water supply		
Water		
The WSA Code of Practice and the associated TasWater supplement, state requirements for water supply including minimum and maximum pressures. For land where the topography will result in pressures outside the stated envelope pressure, pressure reduction or boosting installations is required.		
Minimum pressure	<18% grade 22 m >18% grade 25 m	At road frontage (property boundary) with storage <33% full (excl firefighting) (Based on supplying 0.1 L/s at 50 kPa at most disadvantaged fixture)
	WSA03 Desirable minimum static pressure 35m	Not called up in TW supplement
	WSA03 Maximum pressure 80m	
Sewerage		
The WSA Code of Practice and the associated TasWater supplement state requirements for the provision of sewerage including the requirement that the total lot area (or building envelope) can be connected to the TasWater sewerage. Gravity is the preferred option to drain sewage. For a subdivision where some allotments cannot drain to the connection point, a pump station can be installed.		

2. The site

The site is elevated between 10 m and approximately 65 m AHD. The most distinctive topographical feature on the site is the ridgeline running east-west. The topographical features are shown below in Figure 2 with the proposed lots overlaid. A detail survey plan for the western half of the site, prepared by Michell Hodgetts, is attached at Annexure 4.

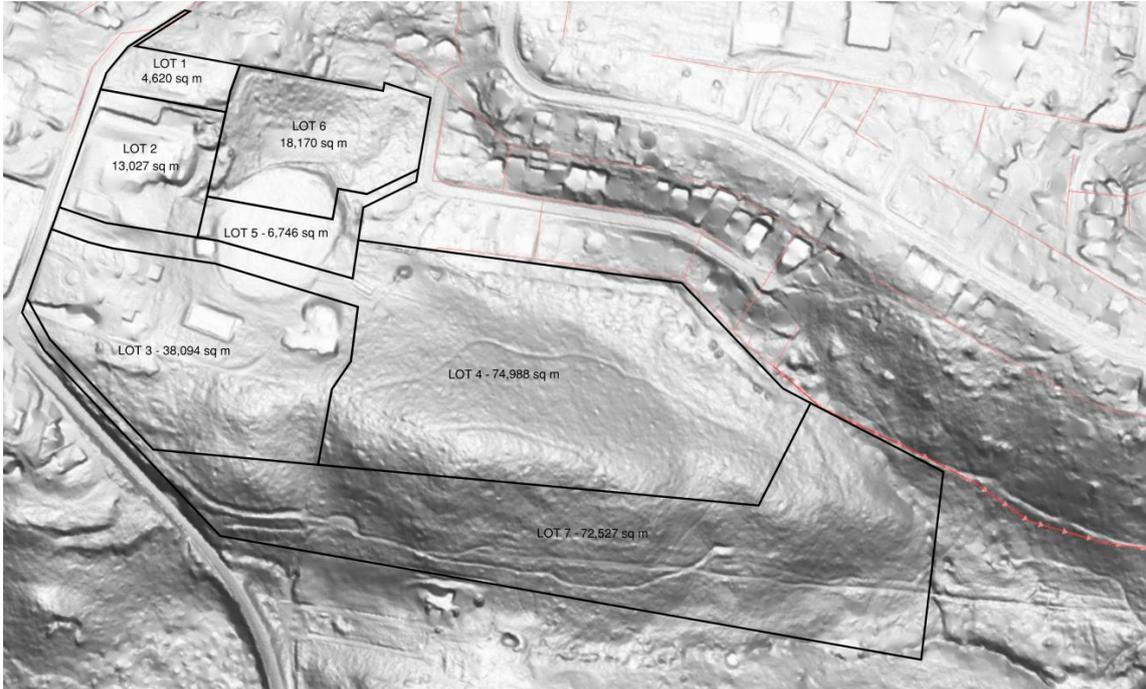


Figure 3 Site Topography

The Development Application has proposed connection points to TasWater infrastructure. Refer Attachment 2.

3. Basis of this assessment

The development proposal involves a configuration of lots as detailed in the application. The proposal involves a decrease of land in the Community Purposes Zone, an increase in the General Residential Zone land and the introduction of a large area of land in the Open Space Zone. Potential future use in each zone would be aligned with the respective Zone purposes.

Whilst we can only speculate, it is not obvious that the proposed changes would lead to demand for water or sewage infrastructure that is significantly different than that which is possible at present. Based thereon, this engineering assessment did not assess potential demand scenarios and did not assess the capacity of the existing infrastructure to accommodate such possible demand. This assessment focussed on the serviceability of the land and the ability for the lots to be connected to the adjacent TasWater infrastructure.

4. Sewerage Serviceability

In the table below the serviceability of the respective lots are detailed.

Table 2 Sewerage Serviceability

Lot number and size	Topography and serviceability
Lot 1 4,620 m ²	Lot 1 is developed with buildings on. A new sewerage connection to Middle Road is proposed for this lot. The existing buildings are on the high point with the lot falling away towards Middle Road. Lot 1 is currently developed and would continue to be connected to the existing reticulated sewerage system in Middle Road.

Lot number and size	Topography and serviceability
	<p>It may be impractical for underground sewer or stormwater to service land within 20m of the eastern boundary of the lot. Whilst it is unlikely that this land would be developed in the near term, a drainage easement along the rear boundary of Lot 2 is proposed to provide an alternative means to access reticulated sewer and stormwater mains.</p> <p>It is considered that the proposed Lot 1 would have an acceptable level drainage serviceability.</p>
Lot 2 13,028 m ²	<p>The Development application proposed a connection point in the south eastern corner which will be able to drain the Lot. This connection point is in the same vicinity as the existing private sewage pump station which will be decommissioned as part of this development. A connecting sewer is proposed along the boundary between lots 5 and 6 connecting Lot 2 to the existing TasWater sewer running along the back of the houses in Penambul Drive.</p> <p>An alternative is also proposed along the southern boundary of Lot 5 in the event that burrowing crayfish habitat needs to be avoided. Either would provide an acceptable level of drainage serviceability for the present development on Lot 2.</p> <p>Lot 2 will be sufficiently serviced with this proposed arrangement</p>
Lot 3 38,094 m ²	<p>Lot 3 has a ridgeline running in an east-west direction. On the northern side of the ridge the lot slopes towards the north-east where the lowest point is in the north-east corner. This point is nominated as property connection point. From this connection point a connecting sewer is proposed to join the connecting sewer from Lot 2.</p> <p>There is a small portion south of the ridge of Lot 3 that may not be able to drain under gravity to the nominated property connection location. Much of this land is adjacent to the bushland in the proposed lot 7 and therefore is constrained for development by bushfire risk.</p> <p>The Wright Centre, located in the north-east corner of the proposed Lot 3, is connected to the sewer main adjacent to the rear boundary of 89 Penambul Drive. It is proposed that this connection be removed and reconnected to the proposed new sewer main.</p> <p>The proposal would provide an acceptable level of drainage serviceability for Lot 3.</p>
Lot 4 74,987 m ²	<p>Lot 4 has a ridgeline running in an east-west direction. The proposed connection point is at a low point in the east of the allotment.</p> <p>Figure 13 Revision B indicates a small portion of land in the south-western corner that may be impractical to drain under gravity to the nominated property connection location. Much of this land is adjacent to the bushland in the proposed lot 7 and therefore is constrained for development by bushfire risk.</p> <p>The proposal would provide an acceptable level of drainage serviceability for Lot 4.</p>
Lot 5 6,746 m ²	<p>Lot 5 slopes towards the east. The Development Application proposes that Lot 5 be connected to the existing sewerage connection in Penambul St. As an alternative, Lot 5 can be connected to the proposed connecting sewers from Lot 2 and 3 depending on the depth of the receiving sewer in Penambul drive.</p>
Lot 6 18,170 m ²	<p>The topography of the proposed Lot 6 has an even and gradual slope down to the existing sewer main in Penambul Drive. The proposed new connection would allow gravity drainage from all parts of the site. The proposal would provide an acceptable level of drainage serviceability for Lot 6.</p>
Lot 7 72,527 m ²	<p>No water or sewer connections are required</p>

5. Water Serviceability

The lots are all adjacent to water supply mains and existing water supply connections will be retained for the majority of the lots with new connections proposed for lots 4 and 5.

Table 3 Proposed Water Connections

Lot no	Proposed connection points
Lot 1	Existing connection to be retained

Lot no	Proposed connection points
Lot 2	Existing connection to be retained
Lot 3	Existing connection to be retained
Lot 4	A new water connection is proposed to the TasWater main in Middle Street.
Lot 5	New connection proposed to the water main in Penambul Drive
Lot 6	Existing connection to be retained
Lot 7	NO connection proposed – Open space

All these connection points are adjacent to existing residential connections and will have the same level of WSA compliance as the adjacent connections.

6. Future Development

It is possible that these lots may be developed in future through further subdivision and densification. The future options plan at attachment 3 is one possible outcome. For this, the following is noted.

6.1 Water Service for potential future developments

- If any of these lots are sub divided, a hydraulic model will be required to design the internal water reticulation network required to service such lots. Such modelling will be based on pressure and flow data for the existing TasWater network. It is possible that low pressures issues may arise at elevated areas where pressure boosting may be required or alternatively such areas can be avoided.

6.2 Sewerage Service for potential future developments

- If any of these lots are sub divided a sewerage network will have to be implemented. As noted above, a small portion of lots 1, 3 and 4 may not be able to drain under gravity to the nominated connection point to the TasWater sewers. If such areas are to be utilised for residential Lots, pumping may be required.

Sincerely

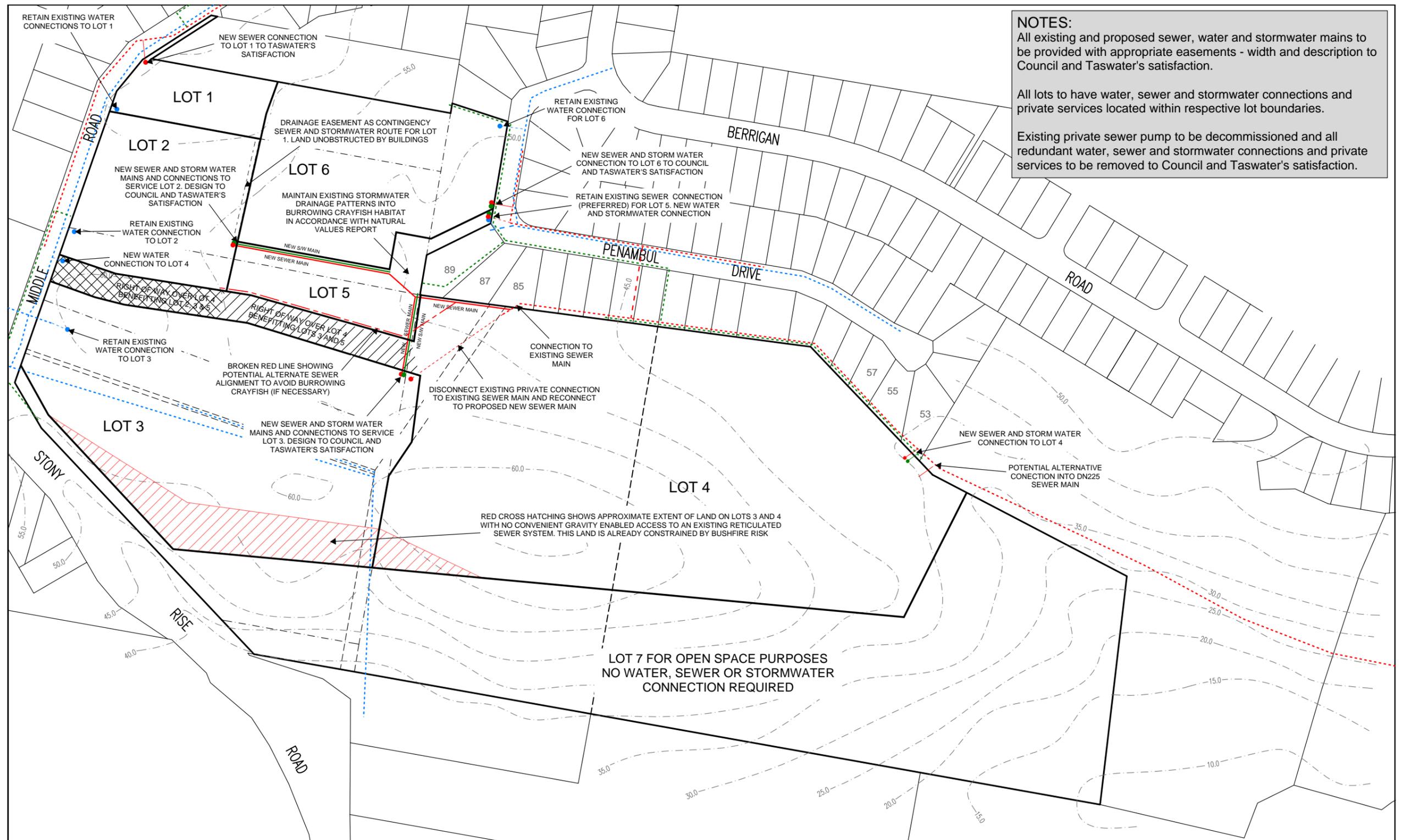


Chris Pieterse
B Eng (Hons)
Senior Engineer



Attachment 2

Proposed Service Connection Points



1:2,500 @ A3



LEGEND

- Existing water connection
- - - Existing sewer main
- - - Existing storm water main
- Proposed water connection
- - - Proposed sewer main
- - - Proposed storm water main
- Existing water connection
- Existing sewer connection
- Existing storm water connection
- Proposed water connection
- Proposed sewer connection
- Proposed storm water connection

NOTE

- Drawing produced based on data provided by Michell Hodgetts & Associates P/L. GHD accepts no responsibility for the accuracy of that data.
 - This plan has been prepared for the purpose of supporting a planning application to the Devonport City Council and should be used for no other purpose.



Proposed lots and Concept Servicing Plan

Figure 13

Middle Road, Devonfield PSA & DA

Job Number 12548932
 Revision B
 Date 03 Aug 2022

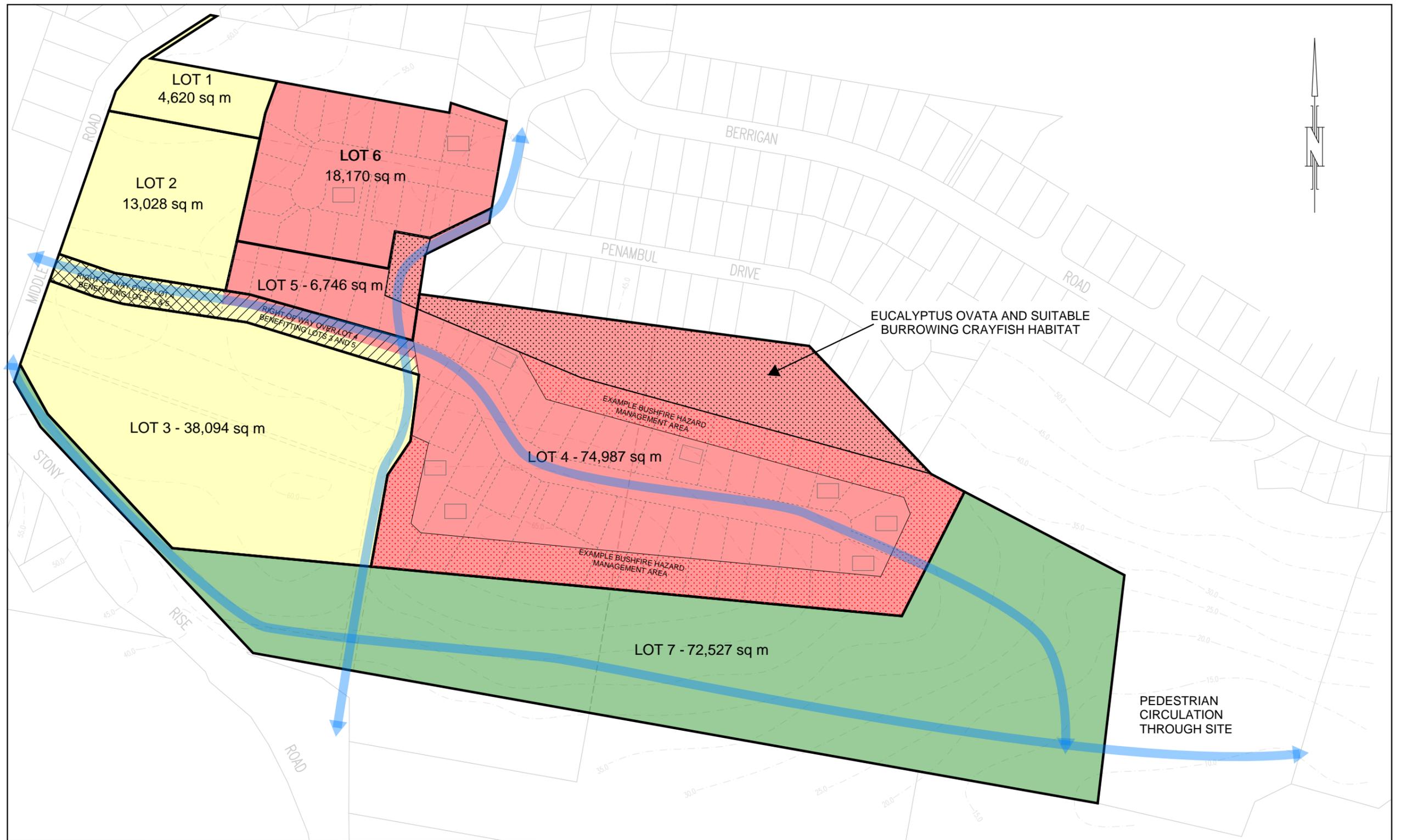
2 Salamanca Square, Hobart Tasmania 7000 Australia T 61 3 6210 0600 E hbamail@ghd.com W www.ghd.com

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Attachment 3

Proposed lots and future options plan



1:2,500 @ A3



LEGEND

- Surrounding lot boundaries in grey lines
- Subject lot boundaries in heavy black lines
- Possible future lots in broken grey lines
- Zones as coloured
- Pedestrian circulation in thick blue lines.

NOTE

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Proposed lots and Future Options Plan

Middle Road, Devonfield PSA & DA

Job Number 12548932
Revision A
Date 06 Oct 2021

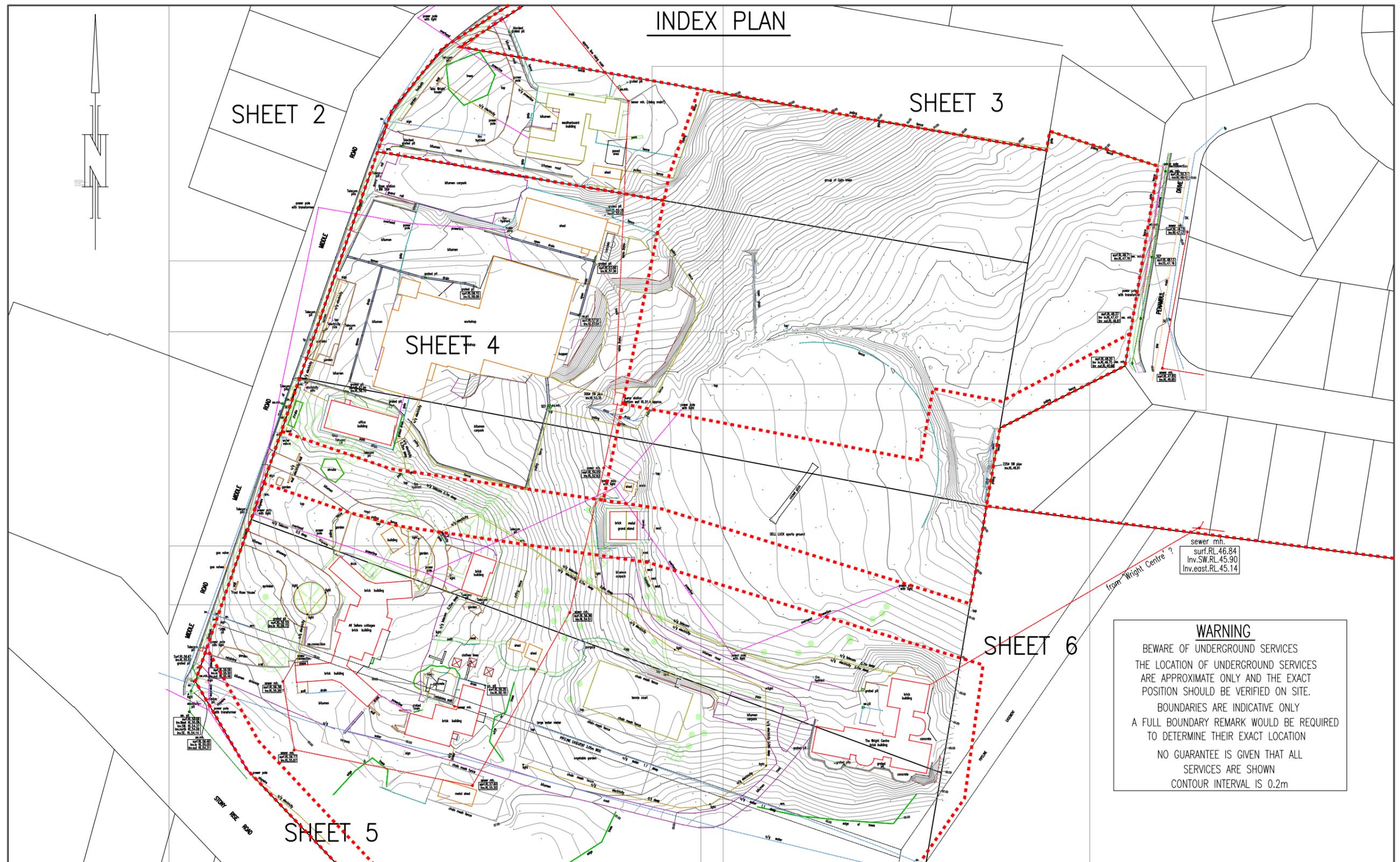
Figure 12

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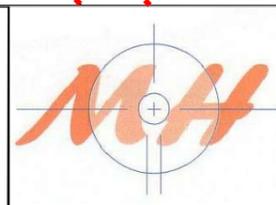
Attachment 4

Detail Survey Plan



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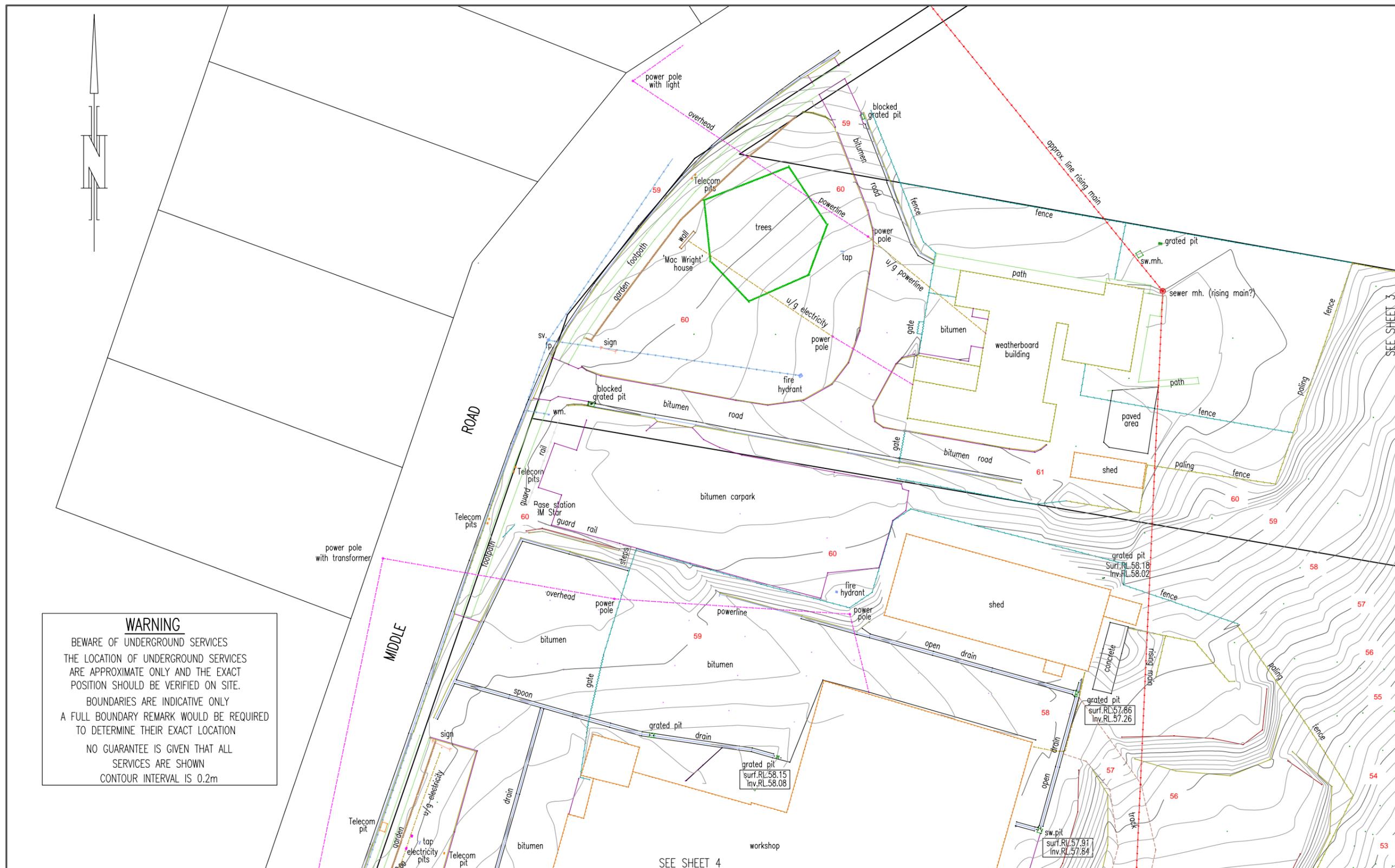
Notes:
 All measurements are in metres .
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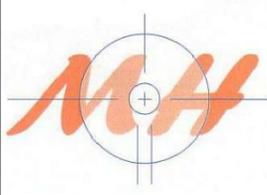
Detail Survey
 133 Middle Road, Miandetta
 Devonfield Enterprises Inc.
 Drawn : J.A.T Scale :1:1250 (A3) Date :23/12/19

Drawing No.
219112
 SHEET 1 OF 6 SHEETS
 Clive Rapier - graduate surveyor



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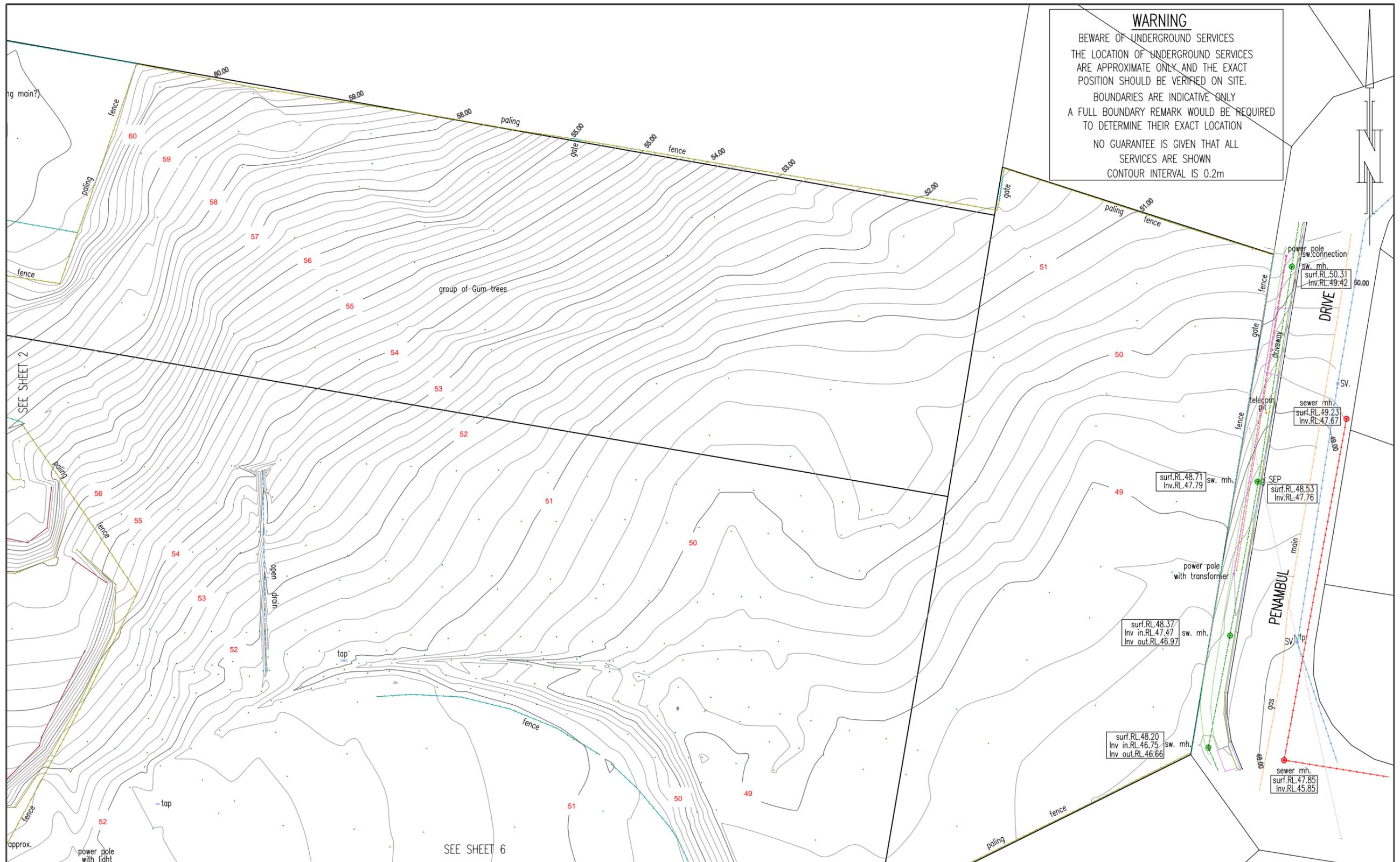
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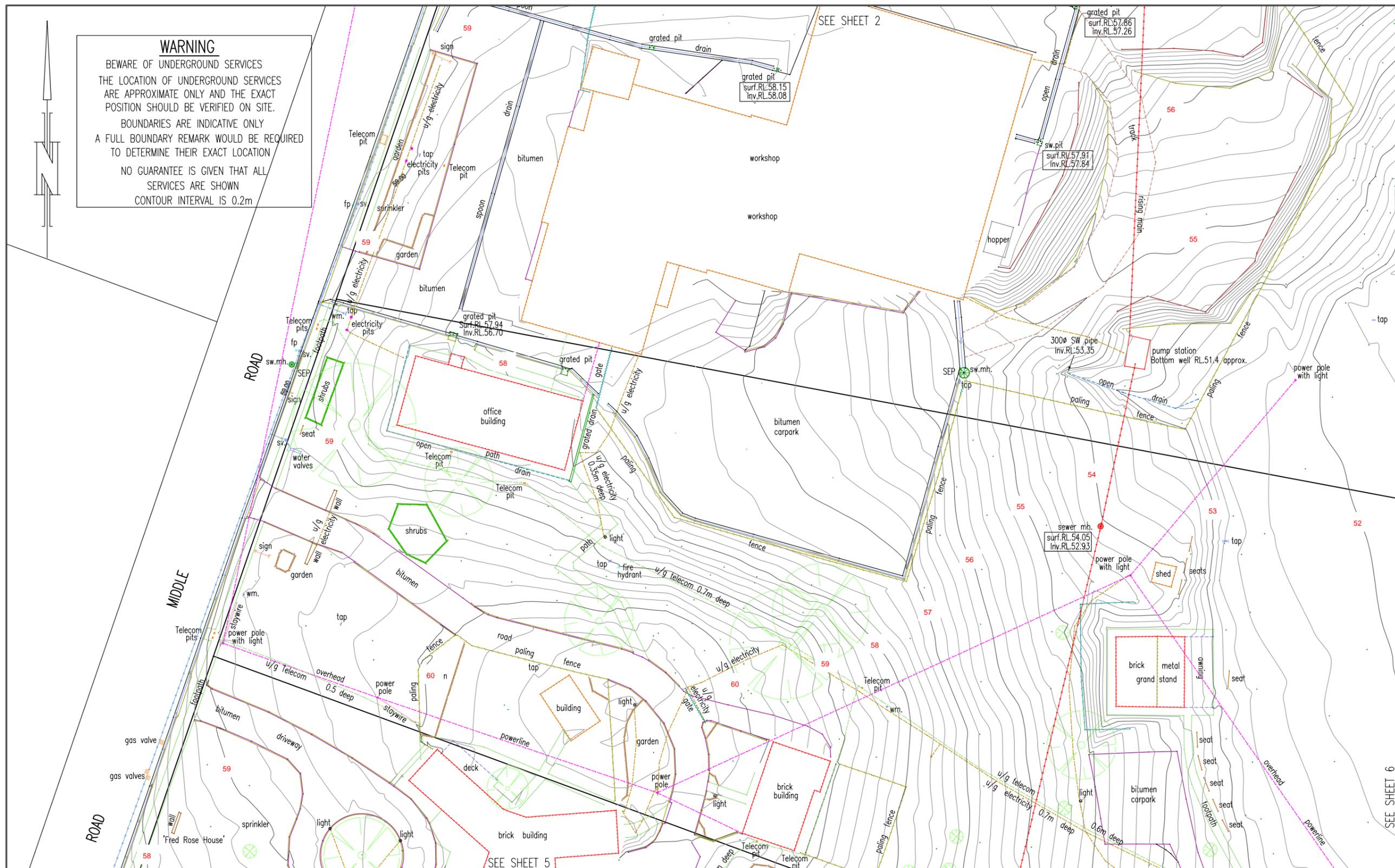
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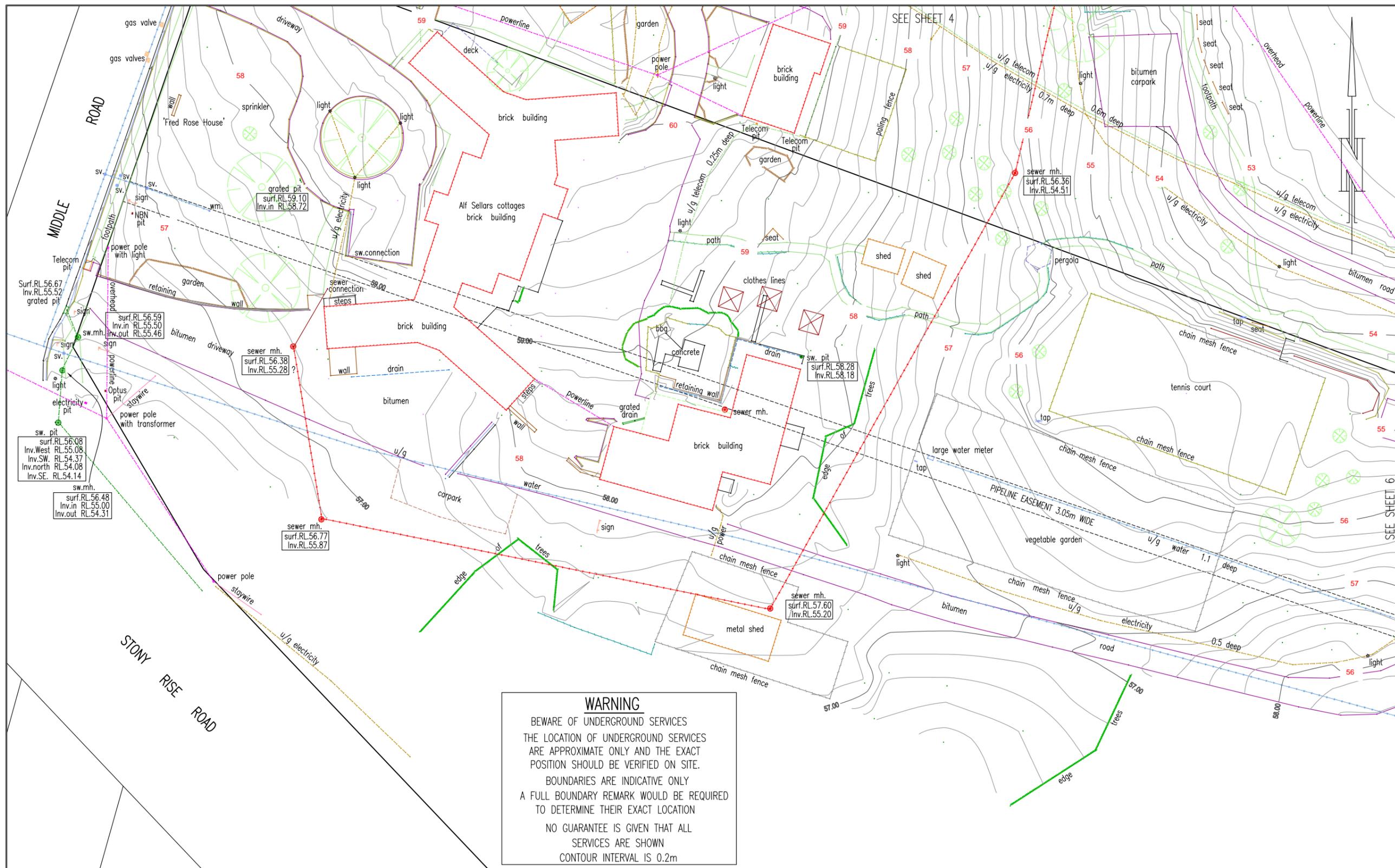
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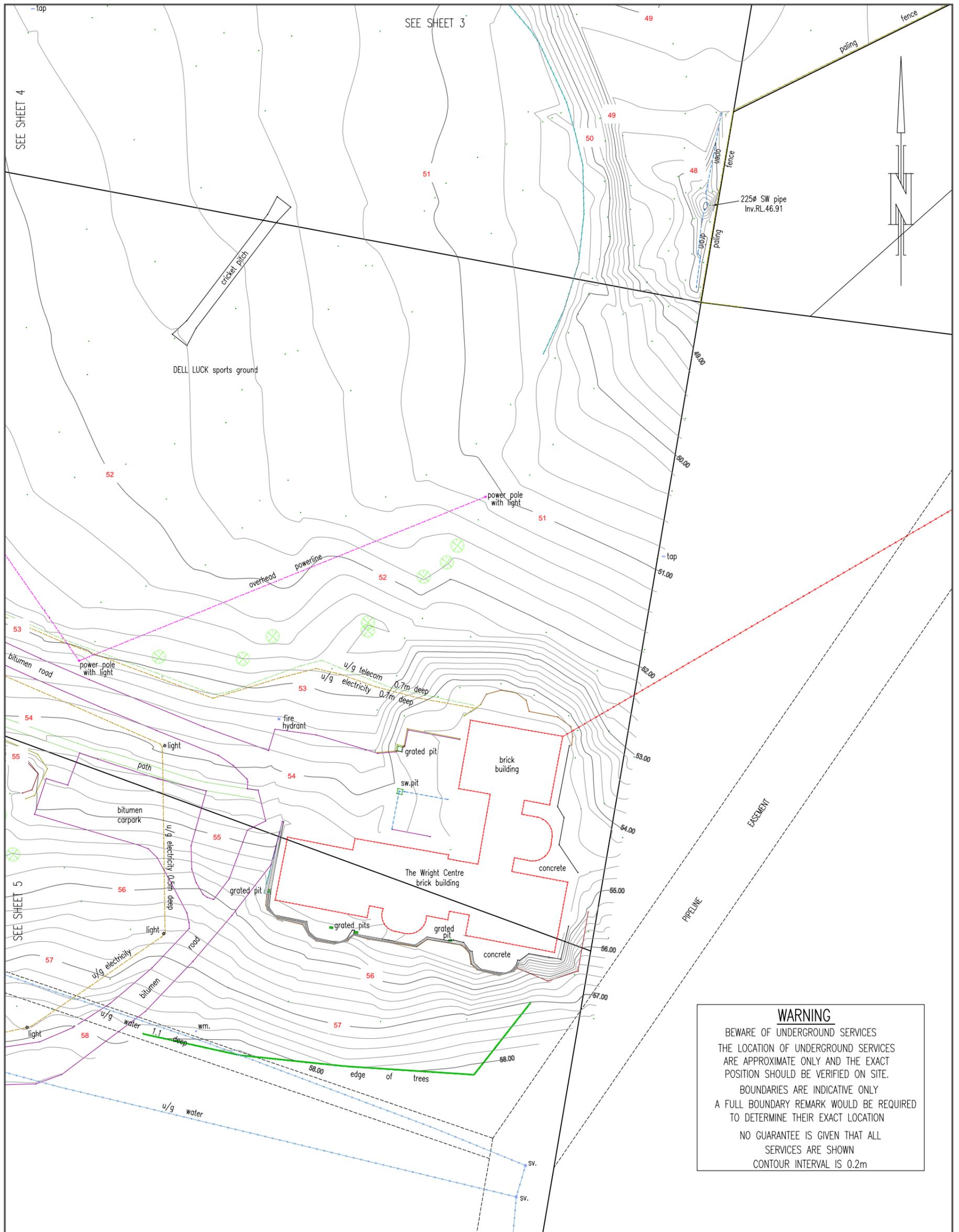
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<p>MICHELL HODGETTS SURVEYORS A.C.N. 109 596 152 AUTHORISED SURVEYORS DEVONPORT – SMITHTON – LAUNCESTON – SCOTTSDALE P.O. Box 712 , Devonport 7310 Telephone (03) 6424 5144 AUSDOC DX 70346 , Devonport Fax (03) 6423 4090 E.Mail : mhassurv@bigpond.net.au</p>	<p><i>Detail Survey</i> 133 Middle Road, Miandetta Devonfield Enterprises Inc.</p>	<p>Drawing No. 219112</p>
	<p>Notes: All measurements are in metres . Coordinates are plane based on GDA94 coordinates & levels are AHD scaled using BM STAR as origin SPM 10373 used as GDA94 & AHD GPS origin for BM STAR</p>	<p>SHEET 6 OF 6 SHEETS</p>
<p>Drawn : J.A.T</p>	<p>Scale : 1:500(A3)</p>	<p>Date :23/12/19</p>
		<p>Clive Rapier – graduate surveyor</p>