

LEVEL ONE

Reference  
No.: 9206-011

SURVEILLANCE

AND INSPECTION REPORT

*Carried Out  
By*



PREPARED FOR: -

DRAPERS CIVIL CONTRACTING PTY LTD



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Appendix A Construction Drawings

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Client Name: Drapers Civil Contracting Pty Ltd

Project Name: Armstrong Estate, Stage 53B

Date: 10<sup>th</sup> of September 2024

Author: Mr. Thomas Crowe

Reference No.: 9206-011

Revision: 0

Project Manager: Mr. Chris Nation

### **1. Introduction & Scope**

At the request of Drapers Civil Contracting Pty Ltd, Geotechnical Laboratories has carried out inspection and testing of the above-mentioned site from the 19<sup>th</sup> of March 2024 to the 21<sup>st</sup> of March 2024 where a residential development is being constructed. Inspection and testing of stripping, material quality and compaction control tests were carried out to comply with the requirements of AS 3798 Appendix B, Level 1.

The following documentation was submitted to Geotechnical Laboratories by Drapers Civil Contracting Pty Ltd and was used to determine compliance of earthworks in conjunction with the requirements of AS 3798 – 2007.

(1). Creo Layout Plan Project No. 180016.53B, Drawing No. R200 (Rev. 2)

General site works involved the placement of fill, using on-site clay, to bring the fill region to the required finished levels as indicated on the construction drawings.

### **2. Site Preparation**

Site inspections were undertaken on the 18<sup>th</sup> of March 2024 confirming that selected areas to be filled were completely stripped of topsoil prior to filling. The silty topsoils had been stockpiled around the site for later removal off-site.

Initial proof roll inspections were performed and subsequently throughout the project duration to ensure no significant soft areas were present prior to filling.

### **3. Fill Material**

It is understood that the fill material used was sourced from on-site excavations, mainly service trenches and road boxing.



The fill material is best described as a silty CLAY, orange brown, red brown, slightly moist to moist, medium to high plasticity with basalt gravels and occasional cobbles.

The fill material is consistent with the naturally occurring soils for this region.

Source material was deemed a **Suitable Material** in accordance with guidelines set out in AS 3798 - 2007 Section 4.4.

#### **4. Fill Construction Procedure**

The following plant (but not always limited to) were engaged in the fill placement process:

- Dump trucks
- A watercart
- A sheepsfoot compactor
- A padfoot roller
- An excavator

The sheepsfoot compactor and excavator placed material in horizontal loose layers of approximately 250mm-300mm. The sheepsfoot compactor and padfoot roller performed compaction of the clay fill.

The moisture condition of the fill was closely monitored, and moisture conditioning procedures were applied to bring the material closer to its Standard Optimum Moisture Content (AS 1289 5.7.1).

#### **5. Compaction Control Testing**

Compaction control testing was performed on-site using a Nuclear Densometer in accordance with AS 1289 5.8.1. Laboratory reference densities were determined from material sampled at each test site location using the Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.

A total of thirteen compaction tests were performed on the fill construction. Results are presented in Appendix B of this report.

#### **6. Testing Frequency**

Testing frequencies were in accordance with **AS 3798 - 2007 Table 8.1 for Large Scale Operations.**

Acceptance of fill layers for compaction was based on the requirements of **AS 3798 - 2007 Table 5.1 Item 1. Residential.**

As a result, the compliance criteria adopted by Geotechnical Laboratories was a hilf density ratio not less than 95 percent of the maximum hilf density value as determined by the Standard Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.



Test results indicate that the above-mentioned requirements have been successfully achieved.

No moisture criterion was specified.

### **7. Statement of Compliance**

So far as can be determined, Drapers Civil Contracting Pty Ltd has satisfactorily complied with the compaction and construction processes required for the structural filling of this site. As such, structural filling placed on this site by Drapers Civil Contracting Pty Ltd from the 19<sup>th</sup> of March 2024 to the 21<sup>st</sup> of March 2024 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

### **8. Limitations and Liability of this Report**

This report has been produced for and remains the property of Drapers Civil Contracting Pty Ltd.

The release of this report to a third party will only occur if Geotechnical Laboratories Pty Ltd has received, in writing, the authority to do so by our client.

Geotechnical Laboratories Pty Ltd will not engage in any third-party communication regarding this report.

Where information has been supplied by the client or third party, the assumption is made that this is correct. Geotechnical Laboratories Pty Ltd will not be held responsible for any inaccuracies supplied.

Test results and controlled fill compliance relates only to fill placed by Drapers Civil Contracting Pty Ltd and for earthworks completed at the time of inspection and testing. Any previous or subsequent earthworks will require a separate evaluation.

For & on behalf of  
Geotechnical Laboratories Pty Ltd.

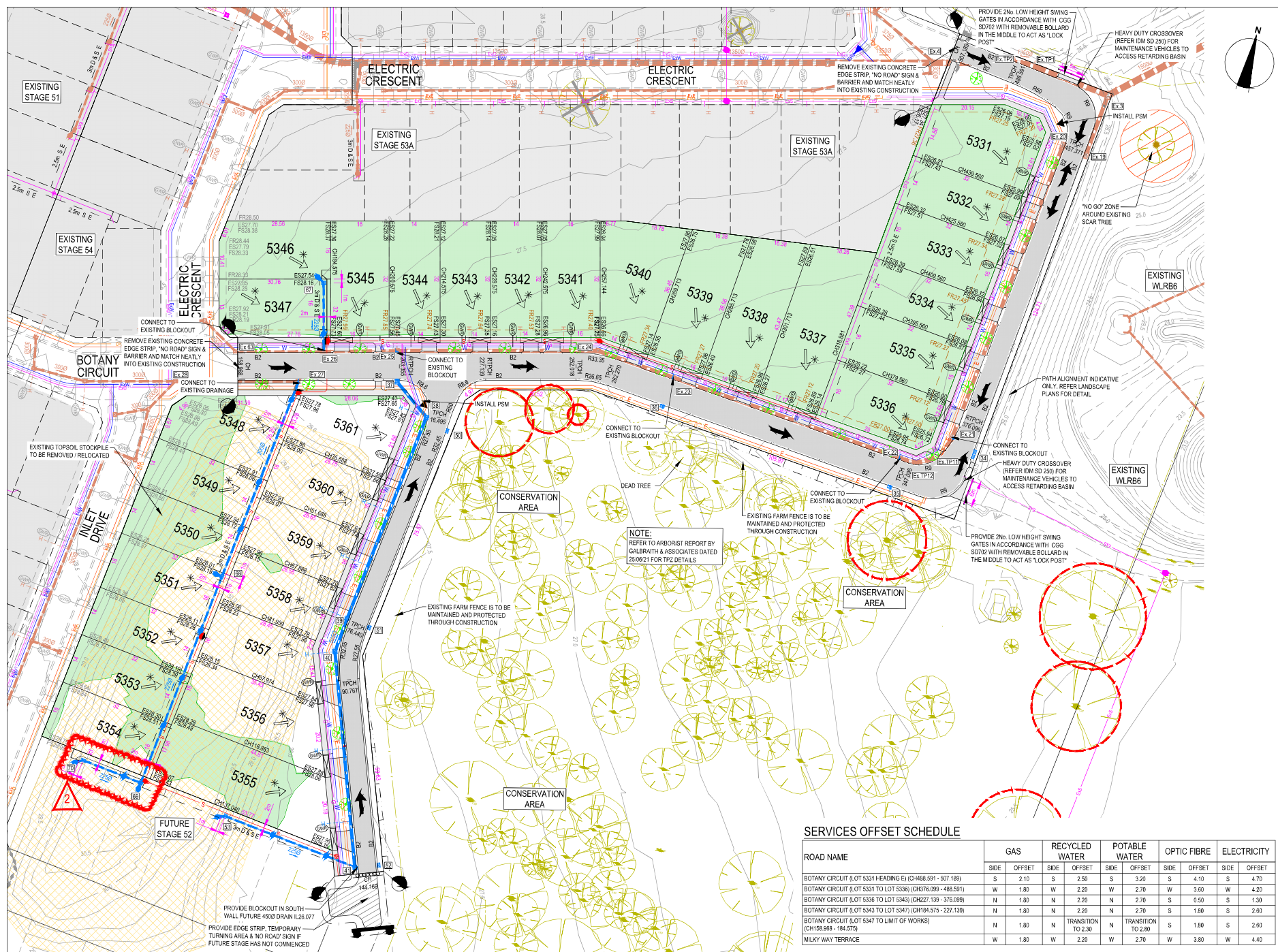
Thomas Crowe  
Technical Manager



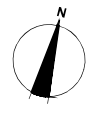
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SURVEILLANCE  
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APPENDIX A





CITY OF GREATER GEELONG TO STAMP HERE UPON APPROVAL



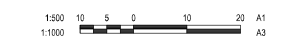
**NOTE: STREET TREE LOCATIONS SHOWN ARE INDICATIVE ONLY. ULTIMATE LOCATION IS TO BE PROVIDED/CONFIRMED BY LANDSCAPE ARCHITECTS**

- NOTES:**
1. ALL VEHICLE AND PRAM CROSSING LAYBACKS, TO BE MINIMUM OF 1.0m FROM PITS
  2. ALL PRAM CROSSINGS TO BE A MINIMUM 2.0m FROM VEHICLE CROSSINGS
  3. ALL PRAM CROSSINGS TO BE DDA COMPLIANT.
  4. VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF LANDSCAPE WORKS
  5. THE USE OF DIRECTIONAL AND HAZARD TACTILE PAVERS MUST ACCORD WITH SECTION 2.2.3.1 OF AS/NZS 1428.4:2002
  6. SEWER MAINTENANCE HOLE CONVERTER SLAB OR CONE, TO BE ROTATED TO ENSURE COVER POSITION IS GENERALLY LOCATED WITHIN FOOTPATH
  7. CHANAGES FOR SETOUT OF PROPERTY INLET POINTS, SERVICING FUTURE PLOTS, ARE MEASURED FROM THE DOWNSTREAM FIT
  8. CONTRACTOR TO LOCATE ALL EXISTING ASSETS PRIOR TO COMMENCEMENT OF WORKS. ANY DAMAGE TO EXISTING ASSETS TO BE RECTIFIED AT CONTRACTOR'S EXPENSE
  9. CONTRACTOR TO VERIFY DEPTH OF EXISTING SERVICES, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  10. LOTS WITH FRONTAGES OF 12.50m OR LESS ARE TO BE PROVIDED WITH CROSSOVERS OF MAXIMUM 3.50m WIDTH

**WARNING**  
BEWARE OF UNDERGROUND & OVERHEAD SERVICES  
The locations of underground & overhead services are approximate only & their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

**LEGEND - LAYOUT PLAN**

- STORMWATER DRAIN, PIT & PROPERTY INLET
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING OPTIC FIBRE
- EXISTING TELSTRA
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING STORMWATER DRAIN
- EXISTING SEWER
- EXISTING HOUSE DRAIN
- EXISTING SWALE DRAIN
- EXISTING SURFACE LEVEL
- FINISHED BUILDING LINE LEVEL
- FINISHED RIDGE LINE LEVEL
- TOP OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- RETAINING WALL
- BUILDING ENVELOPE
- PAVEMENT TREATMENT
- STRUCTURAL FILL > 200mm DEEP
- EX STRUCTURAL FILL > 200mm DEEP
- DIRECTION OF FALL
- OVERLAND FLOW
- ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FALL TO LEVELS INDICATED
- CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
- LIMIT OF WORKS
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY
- EXISTING TOPSOIL STOCKPILE
- EXISTING TPZ



**SERVICES OFFSET SCHEDULE**

| ROAD NAME   | GAS  |        | RECYCLED WATER |                    | POTABLE WATER |                    | OPTIC FIBRE |        | ELECTRICITY |        |
|---|------|--------|----------------|--------------------|---------------|--------------------|-------------|--------|-------------|--------|
|   | SIDE | OFFSET | SIDE           | OFFSET             | SIDE          | OFFSET             | SIDE        | OFFSET | SIDE        | OFFSET |
| BOTANY CIRCUIT (LOT 5331 HEADING E) (CH498.591 - 507.189)         | S    | 2.10   | S              | 2.50               | S             | 3.20               | S           | 4.10   | S           | 4.70   |
| BOTANY CIRCUIT (LOT 5331 TO LOT 5336) (CH376.099 - 488.591)       | W    | 1.80   | W              | 2.20               | W             | 2.70               | W           | 3.60   | W           | 4.20   |
| BOTANY CIRCUIT (LOT 5336 TO LOT 5343) (CH227.139 - 376.099)       | N    | 1.80   | N              | 2.20               | N             | 2.70               | S           | 0.50   | S           | 1.30   |
| BOTANY CIRCUIT (LOT 5343 TO LOT 5347) (CH194.575 - 227.139)       | N    | 1.80   | N              | 2.20               | N             | 2.70               | S           | 1.80   | S           | 2.60   |
| BOTANY CIRCUIT (LOT 5347 TO LIMIT OF WORKS) (CH158.988 - 184.575) | N    | 1.80   | N              | TRANSITION TO 2.30 | N             | TRANSITION TO 2.80 | S           | 1.80   | S           | 2.60   |
| MILKY WAY TERRACE   | W    | 1.80   | W              | 2.20               | W             | 2.70               | W           | 3.80   | W           | 4.40   |

| REVISION | DATE     | ISSUE DESCRIPTION             | DRAWN      | CHECKED   | APPROVED  |
|----------|----------|-------------------------------|------------|-----------|-----------|
| 2        | 27/02/24 | PIT 70 RELOCATED              | K.MCKELVIE | M.TROUNCE | M.TROUNCE |
| 1        | 12/01/24 | PIT 69 - 70 ALIGNMENT AMENDED | K.MCKELVIE | M.TROUNCE | M.TROUNCE |
| 0        | 02/02/23 | ISSUED FOR CONSTRUCTION       | K.MCKELVIE | M.TROUNCE | M.TROUNCE |
| B        | 17/10/22 | COUNCIL COMMENTS              | K.MCKELVIE | M.TROUNCE | M.TROUNCE |
| A        | 17/09/21 | ISSUED FOR APPROVAL           | K.MCKELVIE | M.TROUNCE | M.TROUNCE |



**ARMSTRONG - STAGE 53B LAYOUT PLAN**

**ISSUED FOR CONSTRUCTION**

| SCALE AT         | DRAWN           | DESIGNED         |
|------------------|-----------------|------------------|
| 1:500 @ A1       | K.MCKELVIE      | K.MCKELVIE       |
| PROJECT ENGINEER | PROJECT MANAGER | DATE FIRST ISSUE |
| M.TROUNCE        | M.TROUNCE       | SEPTEMBER 2021   |
| PRODUCT No.      | DRAWING No.     | REVISION         |
| 180016.53B       | R200            | 2                |

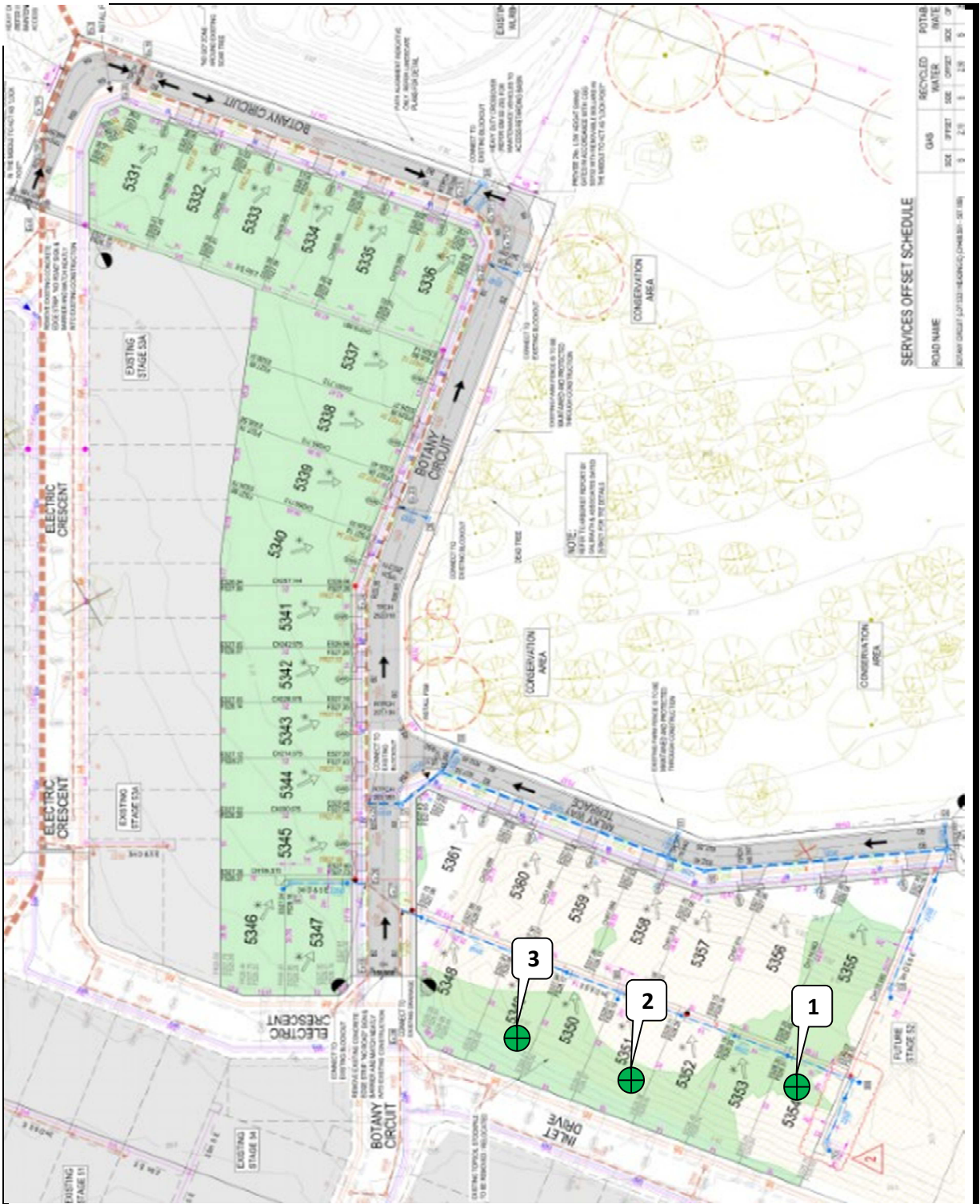


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APPENDIX B







**GEOTECHNICAL  
LABORATORIES**

**GEOTECHNICAL LABORATORIES  
ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023  
Email: info@geolab.com.au PH: (03) 8361-9140

**CLIENT: DRAPERS**

**LOCATION: Armstrong, Stage 53B**

**Sketch indicating compaction test locations**

**DATE: 19/03/2024**

**OPERATOR: PS**

**SCALE: NTS**

**JOB No.: 9206/004**

**CHECKED: KK**

**FIGURE No: -**







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ACN 102 571 077**

14 Ravenhall Way, Ravenhall, Vic 3023  
Email: info@geolab.com.au PH: (03) 8361-9140

**CLIENT: DRAPERS**

**DATE: 20/03/2024**

**JOB No.: 9206/007**

**LOCATION: Armstrong, Stage 53B**

**OPERATOR: PS**

**CHECKED: KK**

**Sketch indicating compaction test locations**

**SCALE: NTS**

**FIGURE No: -**







SERVICES OFFSET SCHEDULE

| ROAD NAME                                | DATE | SCALE | OFFSET | DATE | SCALE | OFFSET | DATE | SCALE | OFFSET |
|--|------|-------|--------|------|-------|--------|------|-------|--------|
| BOTANY CIRCUIT LOT 532-534, 536-537, 538 |      | 1:500 | 5      | 2.0  | 5     | 2.0    | 5    | 2.0   | 5      |
|  |      |       |        |      |       |        |      |       |        |
|  |      |       |        |      |       |        |      |       |        |
|  |      |       |        |      |       |        |      |       |        |
|  |      |       |        |      |       |        |      |       |        |



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Email: info@geolab.com.au PH: (03) 8361-9140

**CLIENT: DRAPERS**

**LOCATION: Armstrong, Stage 53B**

**Sketch indicating compaction test locations**

**DATE: 21/03/2024**

**OPERATOR: PS**

**SCALE: NTS**

**JOB No.: 9206/009**

**CHECKED: KK**

**FIGURE No: -**