



**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3538  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 942 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 942 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 942 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

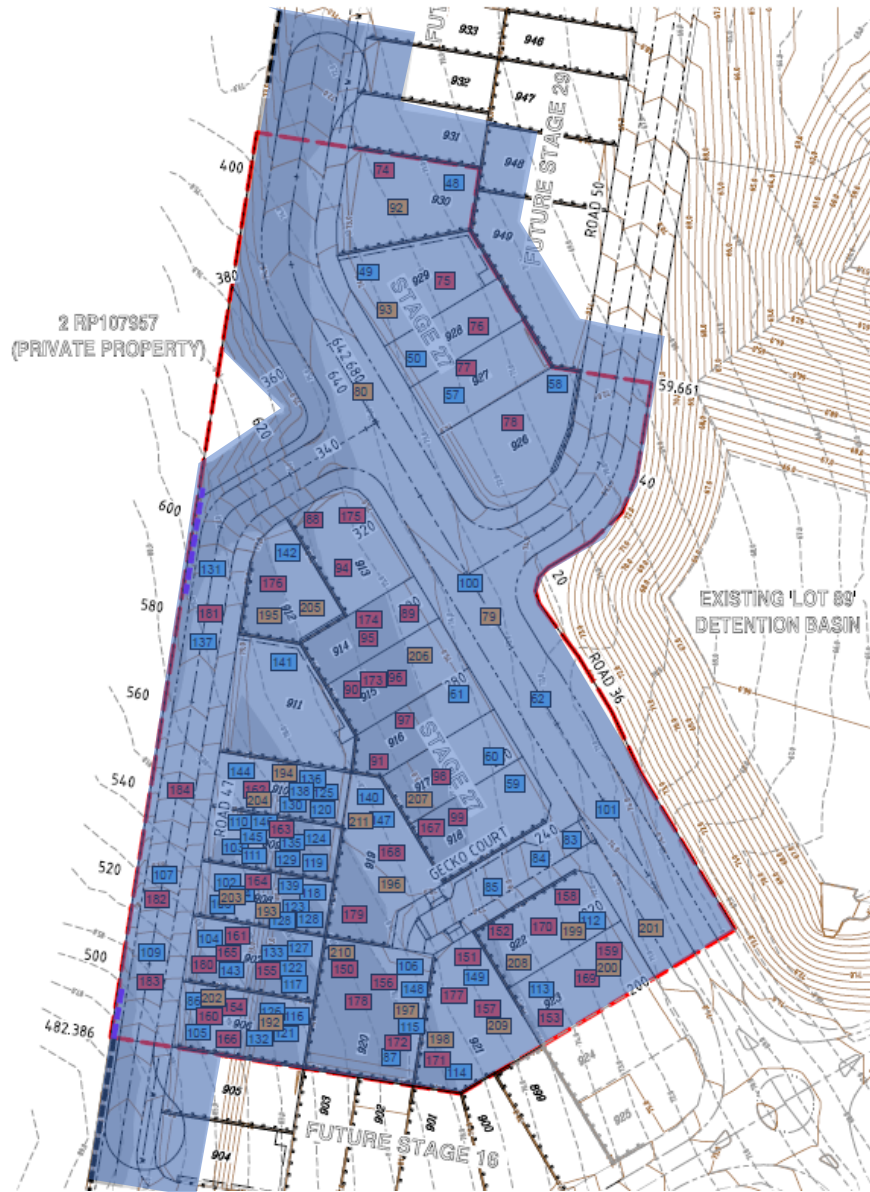
Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
Coopers Plains QLD 4108  
PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

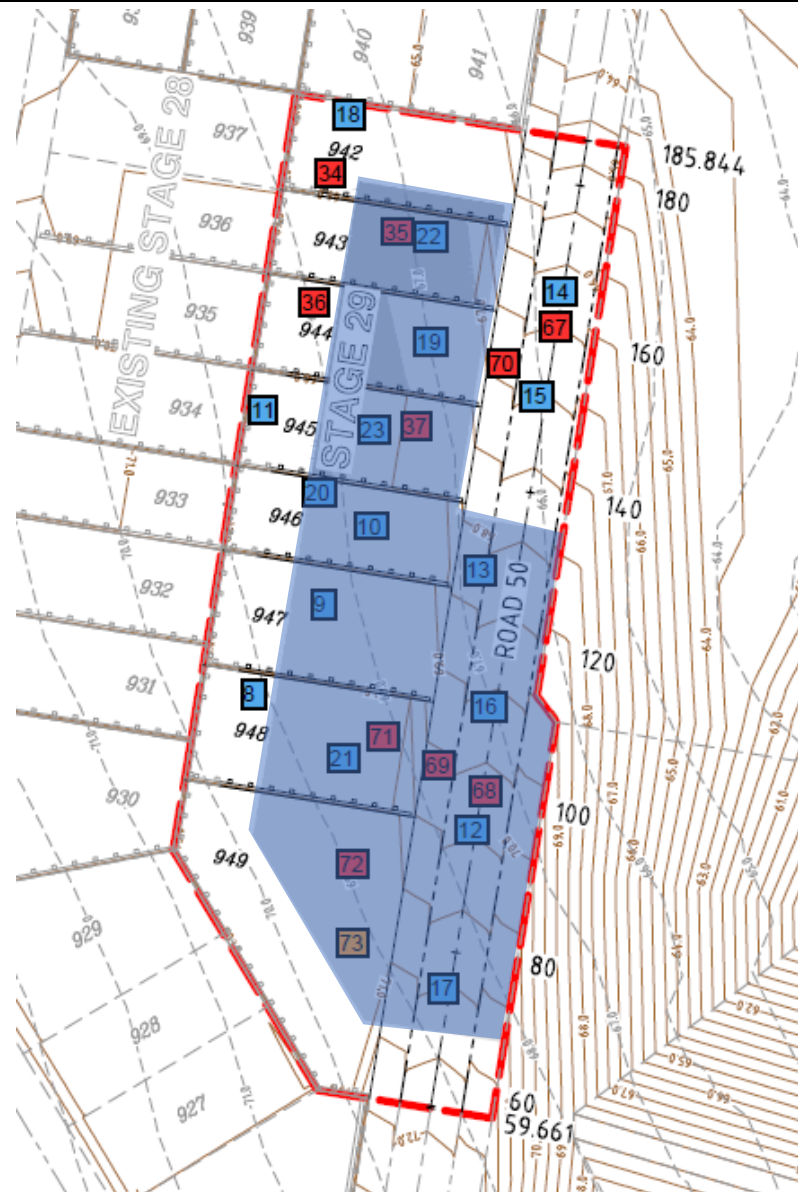
PROJECT NO: 23-021

CHECKED BY: GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations 

Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-03

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 29

PROJECT NO: 23-021

CHECKED BY: GG



**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3539  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 943 – EDEN'S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 943 in the Eden's Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 "*Guidelines on Earthworks for Commercial and Residential Developments*". Full details of the Inspection and Testing program contained in the Qualtest Report "Report Ref – 3485, Level One Earthworks Report – Eden's Crossing Stage 27, 28 and 29" dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 943 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 "*Residential Slabs and Footings*".

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

Yours faithfully,

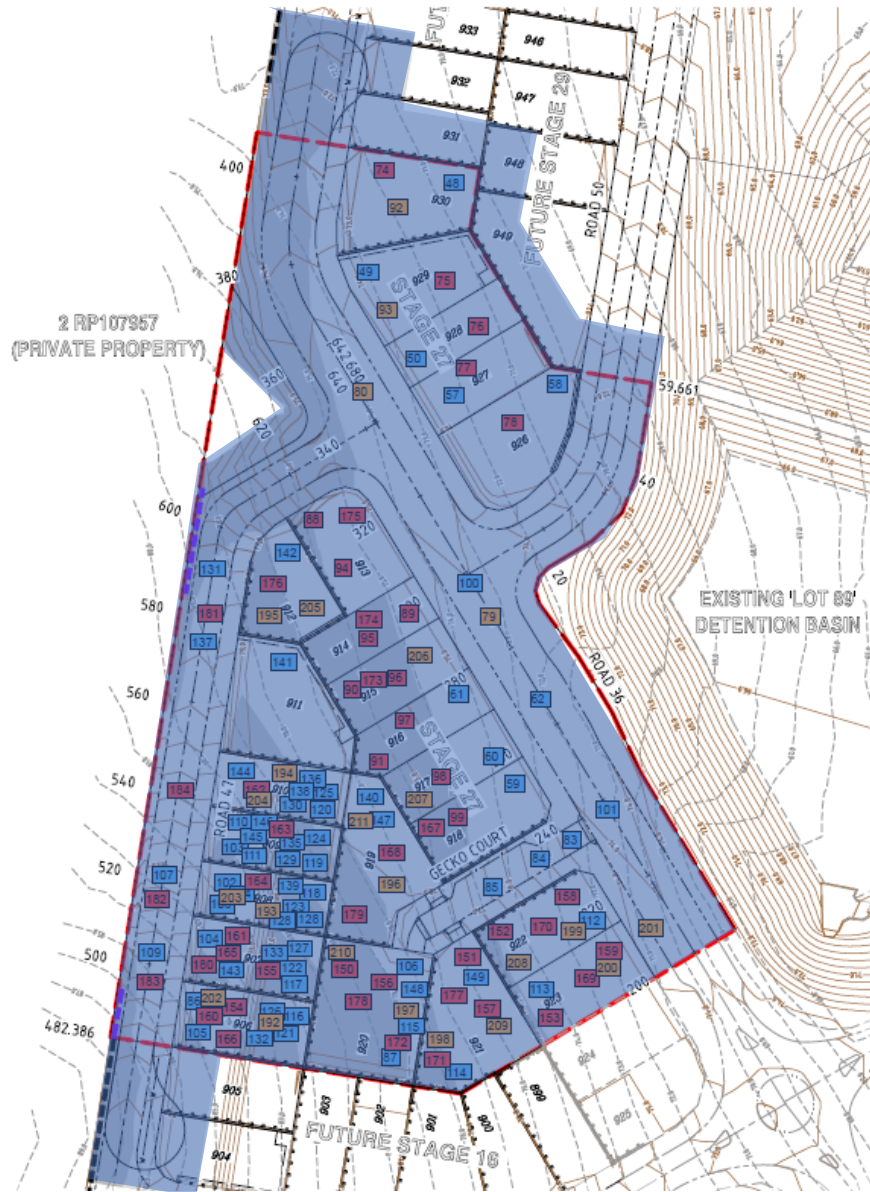
**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
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PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815





**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

LOCATION: Edens Crossing Stage 28

DATE: 3<sup>rd</sup> May 2023

PROJECT NO: 23-021

CHECKED BY: GG







**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3540  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 944 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 944 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 944 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

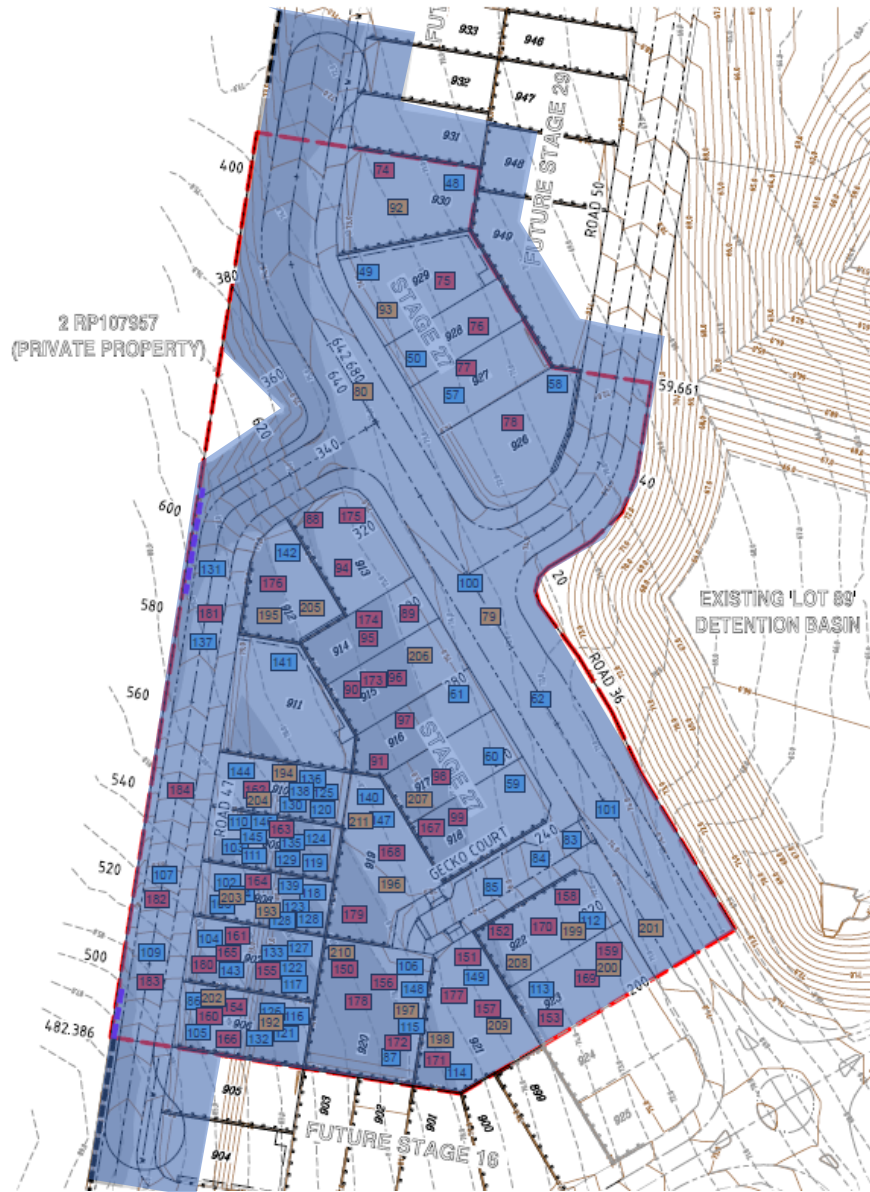
Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
Coopers Plains QLD 4108  
PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

LOCATION: Edens Crossing Stage 28

DATE: 3<sup>rd</sup> May 2023

PROJECT NO: 23-021

CHECKED BY: GG







**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3541  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 945 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 945 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 945 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

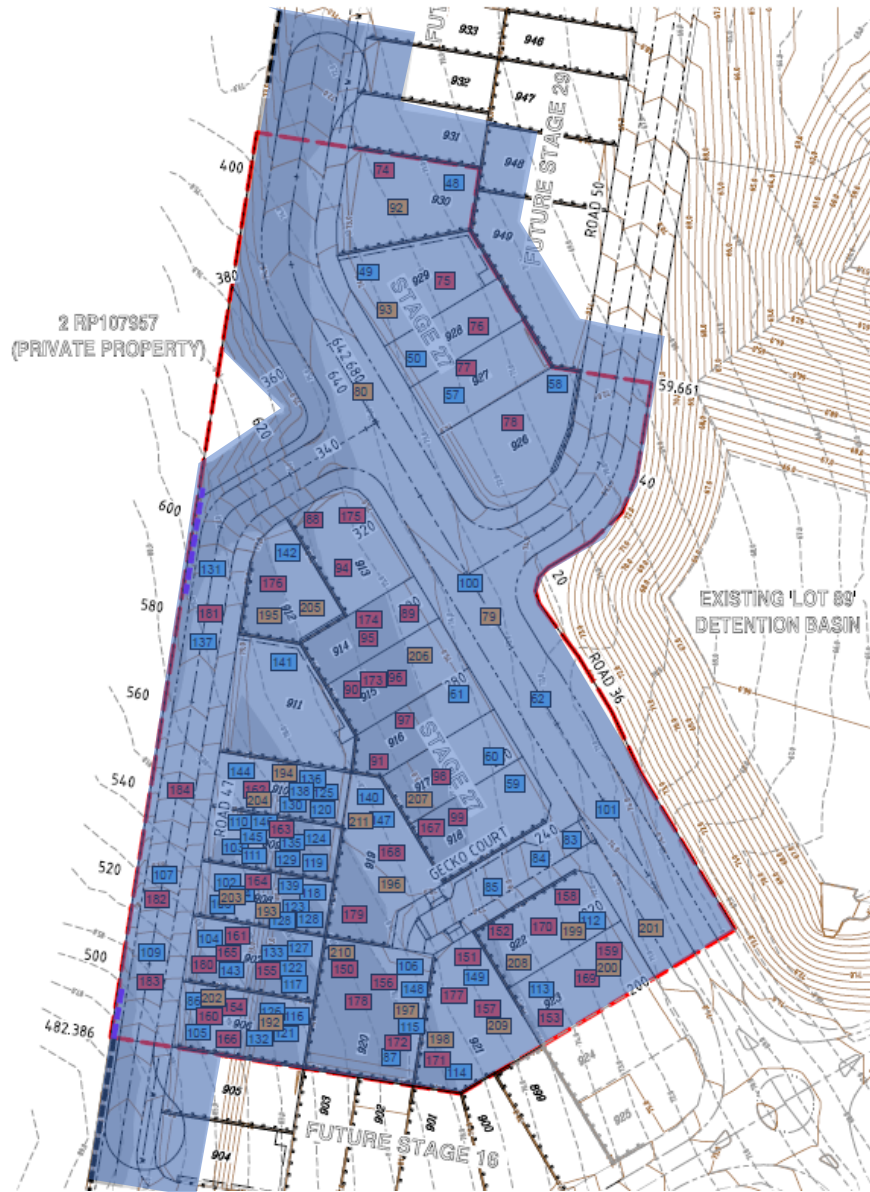
This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of  
Controlled Filling



CLIENT: Shadforth's Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

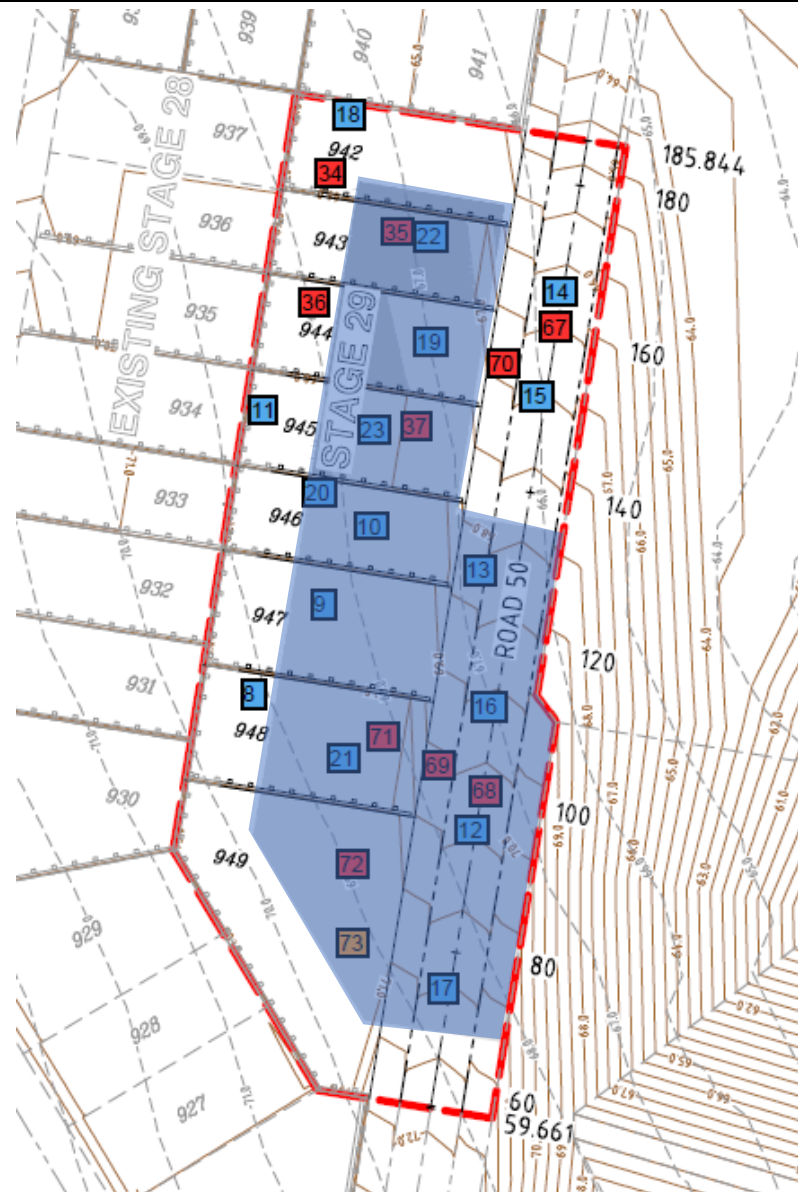
PROJECT NO: 23-021

CHECKED BY: GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations 

Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-03

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 29

PROJECT NO: 23-021

CHECKED BY: GG





**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3542  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
LOT 946 – EDEN'S CROSSING STAGE 27, 28 AND 29  
REDBANK PLAINS**

Fill was placed and compacted on Lot 946 in the Eden's Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 "*Guidelines on Earthworks for Commercial and Residential Developments*". Full details of the Inspection and Testing program contained in the Qualtest Report "Report Ref – 3485, Level One Earthworks Report – Eden's Crossing Stage 27, 28 and 29" dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 946 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 "*Residential Slabs and Footings*".

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

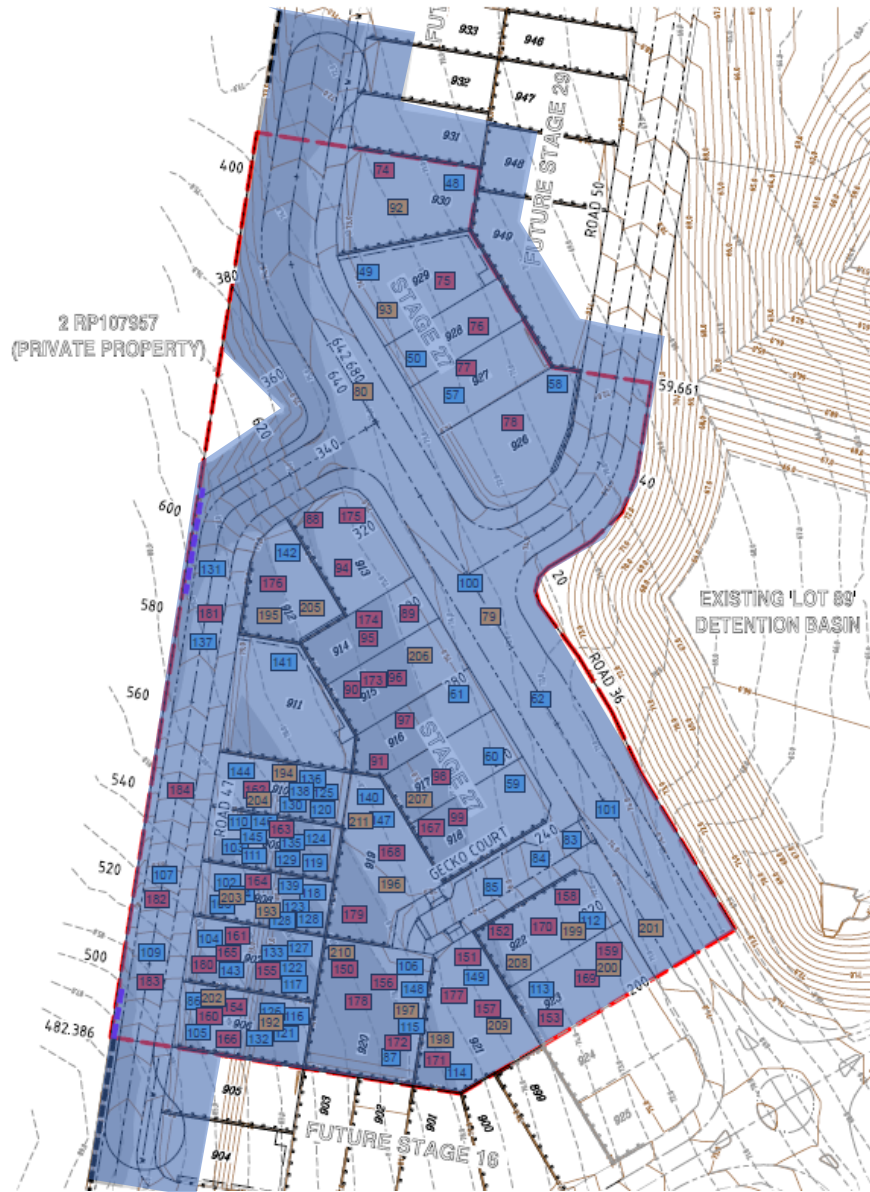
Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
Coopers Plains QLD 4108  
PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

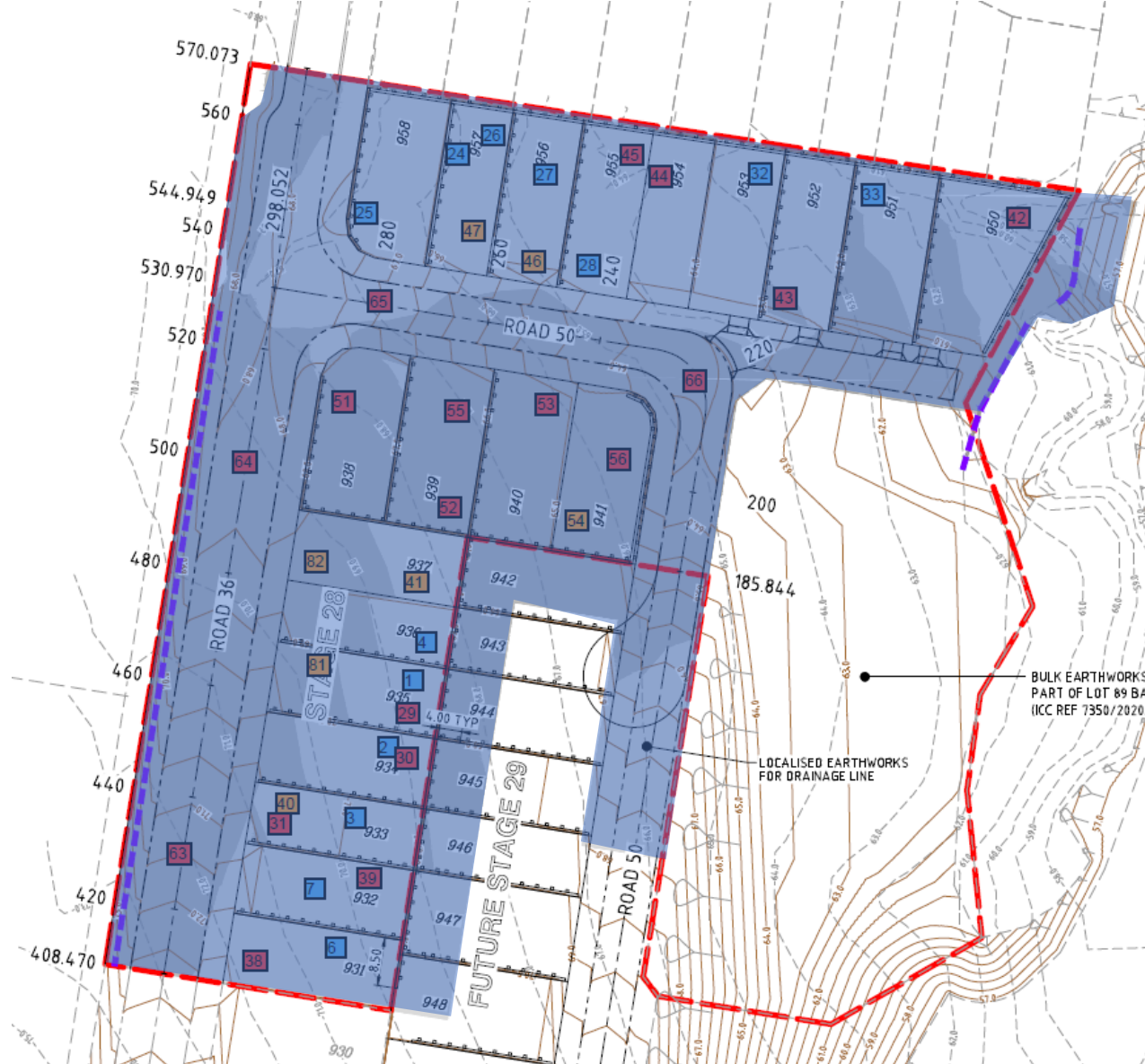
**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

PROJECT NO: 23-021

CHECKED BY: GG







**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3543  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 947 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 947 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 947 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

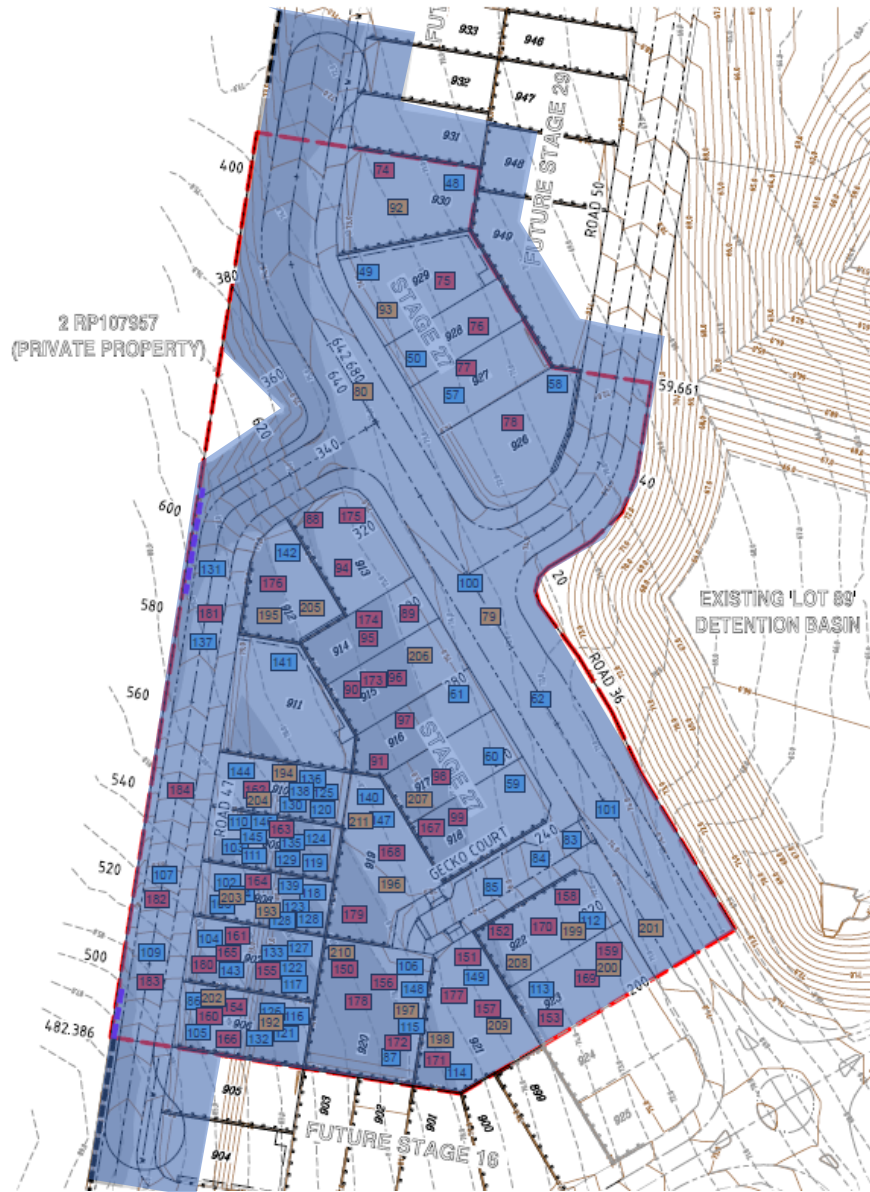
Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
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PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815



Sub Capping

Capping

Finish Level



**LEGEND:**

Test Locations **175**

Approximate Extents of Controlled Filling

**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**DATE:** 3<sup>rd</sup> May 2023

**LOCATION:** Edens Crossing Stage 27

**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations 175

Approximate Extents of Controlled Filling

**CLIENT:** Shadforths Civil

**LOCATION:** Edens Crossing Stage 28

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-02

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

**CHECKED BY:** GG







**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3544  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 948 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 948 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 948 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

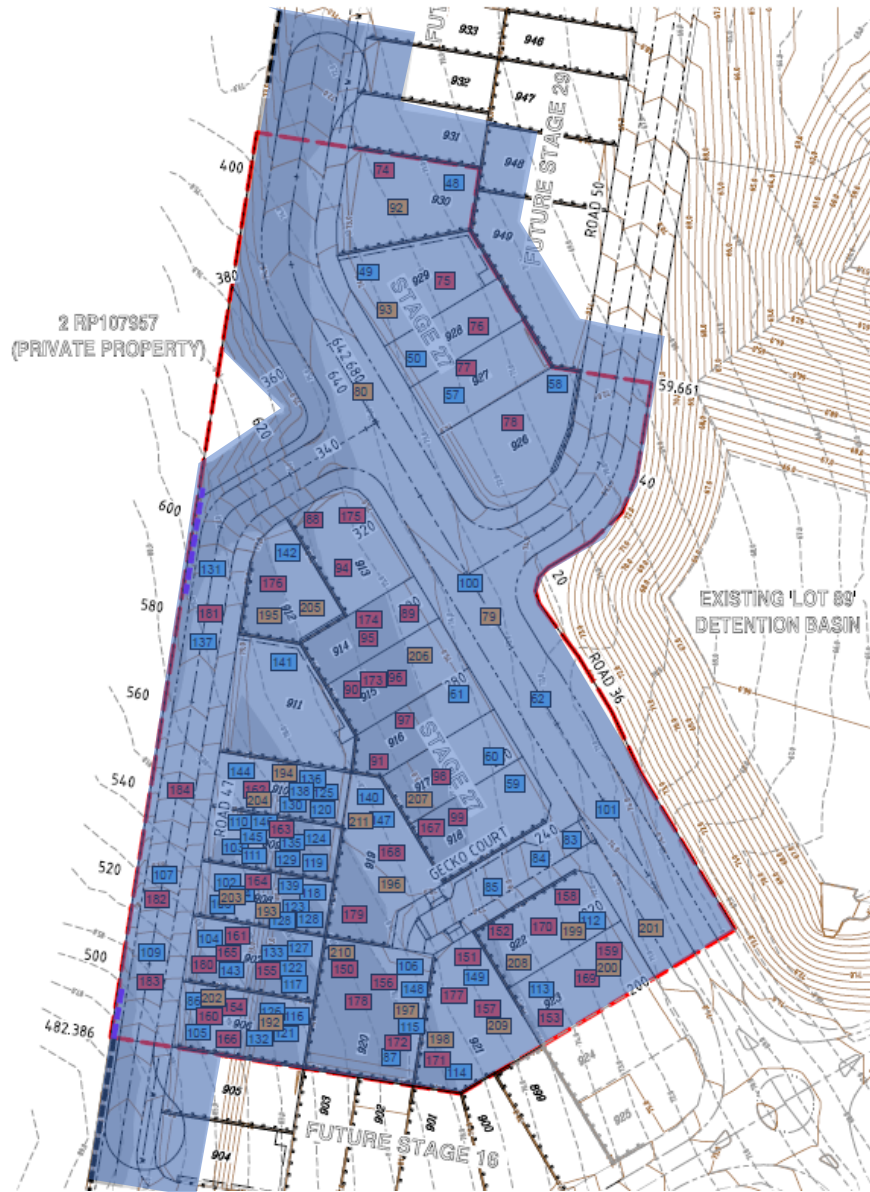
Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*

**GEOTECHNICAL AND LABORATORY SERVICES**

Qualtest Laboratory Pty Ltd  
2/40 Boyland Avenue  
Coopers Plains QLD 4108  
PO Box 733 Archerfield QLD 4108  
(07) 3875 1898  
qualtest@qualtestgeo.com  
www.qualtestgeo.com  
ABN 74 010 752 815



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

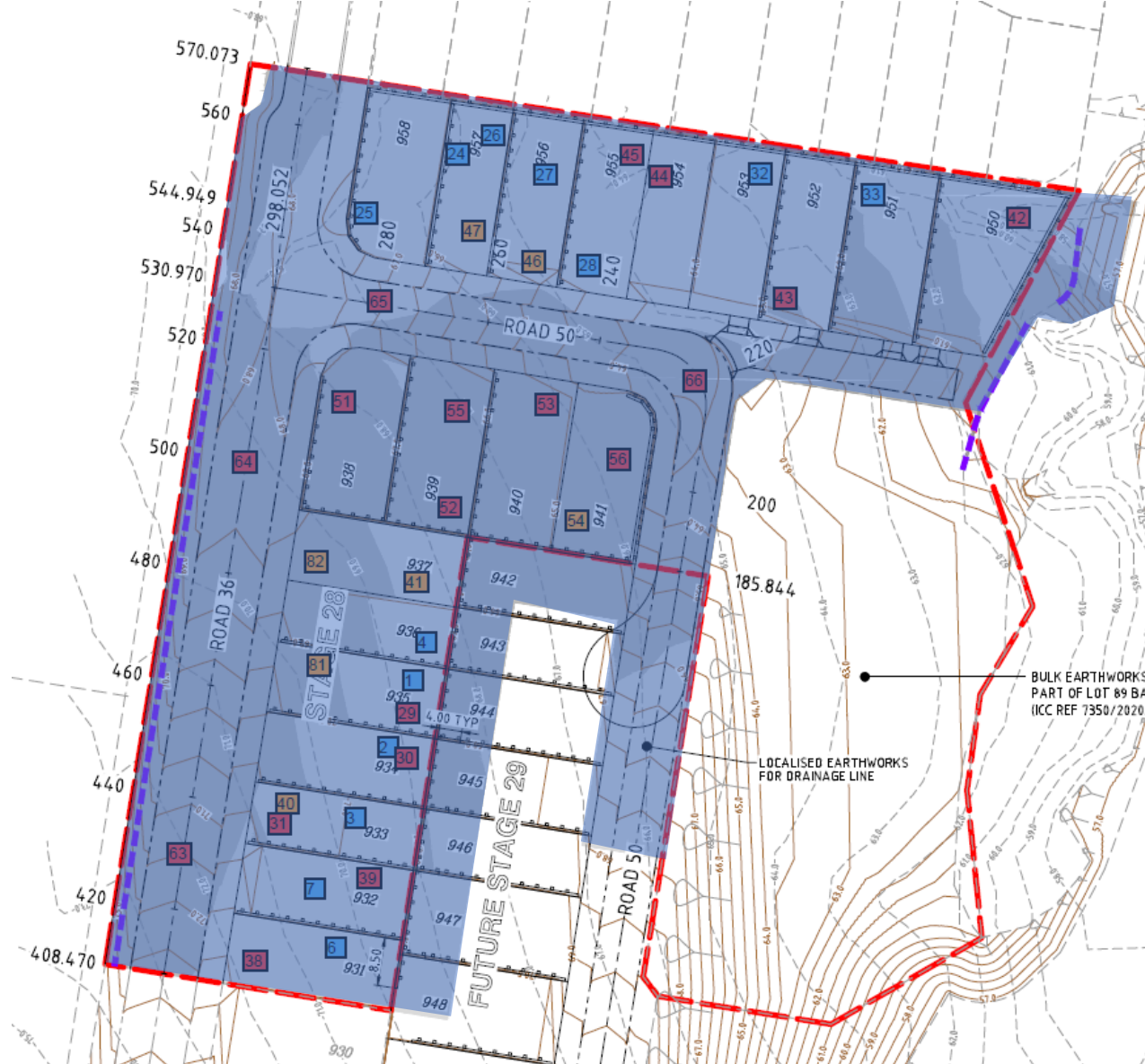
**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

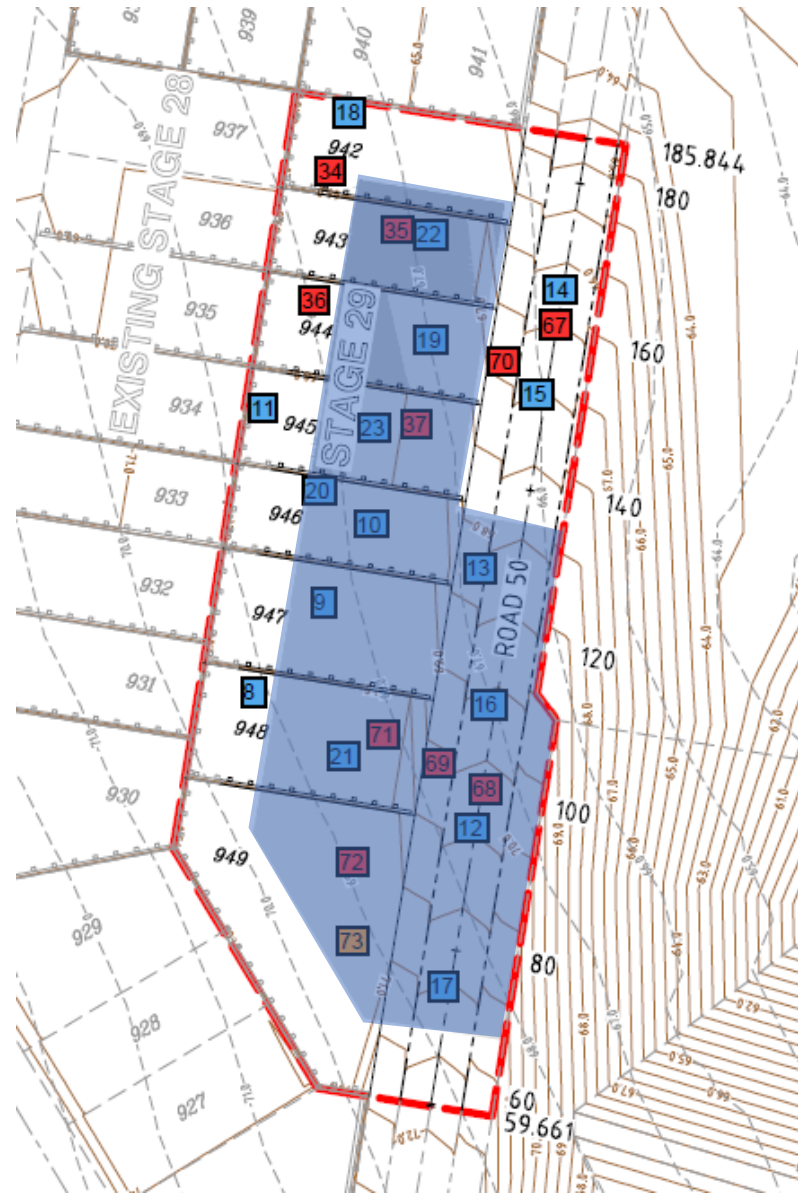
PROJECT NO: 23-021

CHECKED BY: GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations 

Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-03

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 29

PROJECT NO: 23-021

CHECKED BY: GG





**Qualtest Laboratory**

Est. 1987

Job: 23-021  
Ref: 3545  
Author: R. Mitchell

8<sup>th</sup> May 2023

Shadforths Civil  
195 Sandalwood Lane  
Forest Glen Qld 4556

**RE:                   REPORT ON CONTROLLED FILLING  
                          LOT 949 – EDEN’S CROSSING STAGE 27, 28 AND 29  
                          REDBANK PLAINS**

Fill was placed and compacted on Lot 949 in the Eden’s Crossing Stage 27, 28 and 29 Estate between 24<sup>th</sup> January 2023 and 31<sup>st</sup> March 2023 under Level One Inspections and Testing by Qualtest Laboratory.

Qualtest was commissioned on this development to provide earthworks inspection and testing services on a Level One basis as detailed in Clause 8.2 of AS3798 - 2007 “*Guidelines on Earthworks for Commercial and Residential Developments*”. Full details of the Inspection and Testing program contained in the Qualtest Report “Report Ref – 3485, Level One Earthworks Report – Eden’s Crossing Stage 27, 28 and 29” dated 8<sup>th</sup> May 2023.

Based on the test results and site inspections, Qualtest concludes that the fill on Lot 949 to the extent shown as Figure 1 below has been constructed in general accordance with the project requirements and AS3798.

The fill in the area defined on Figure 1, within the time frame of our inspection and testing program, is considered to be Controlled Fill as defined in AS2870 “*Residential Slabs and Footings*”.

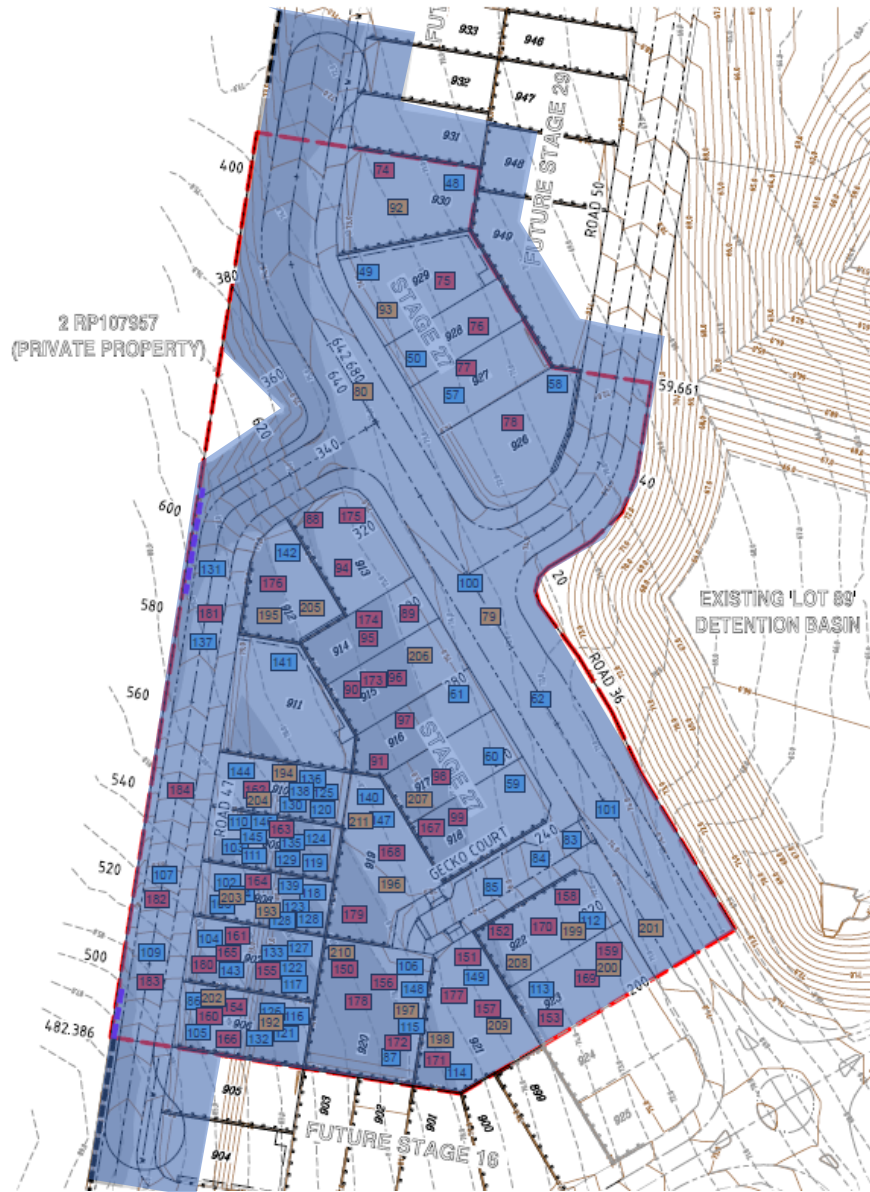
This statement does not cover topsoil which may be used as lot dressing, trench backfill or any earthworks on the Lot after 31<sup>st</sup> March 2022.

Should you require further information regarding the above, please do not hesitate to contact this office.

Yours faithfully,

**RHYS MITCHELL**  
For and on Behalf of  
**QUALTEST LABORATORY PTY LTD.**

*Attached: Figure 1 – Site Plans showing test locations and approximate extents of Controlled Filling.*



**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

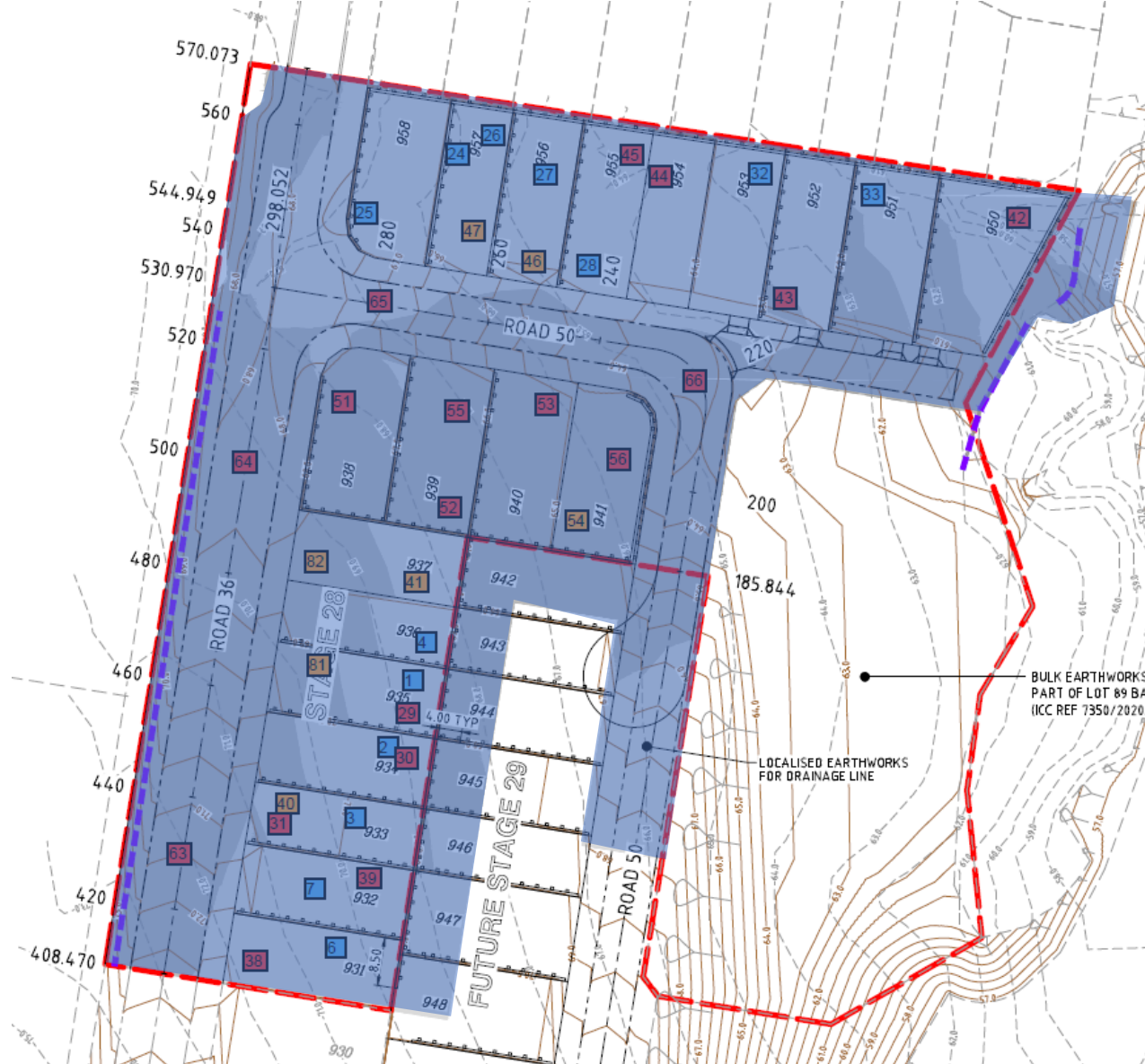
**PROJECT NO:** 23-021

**CHECKED BY:** GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

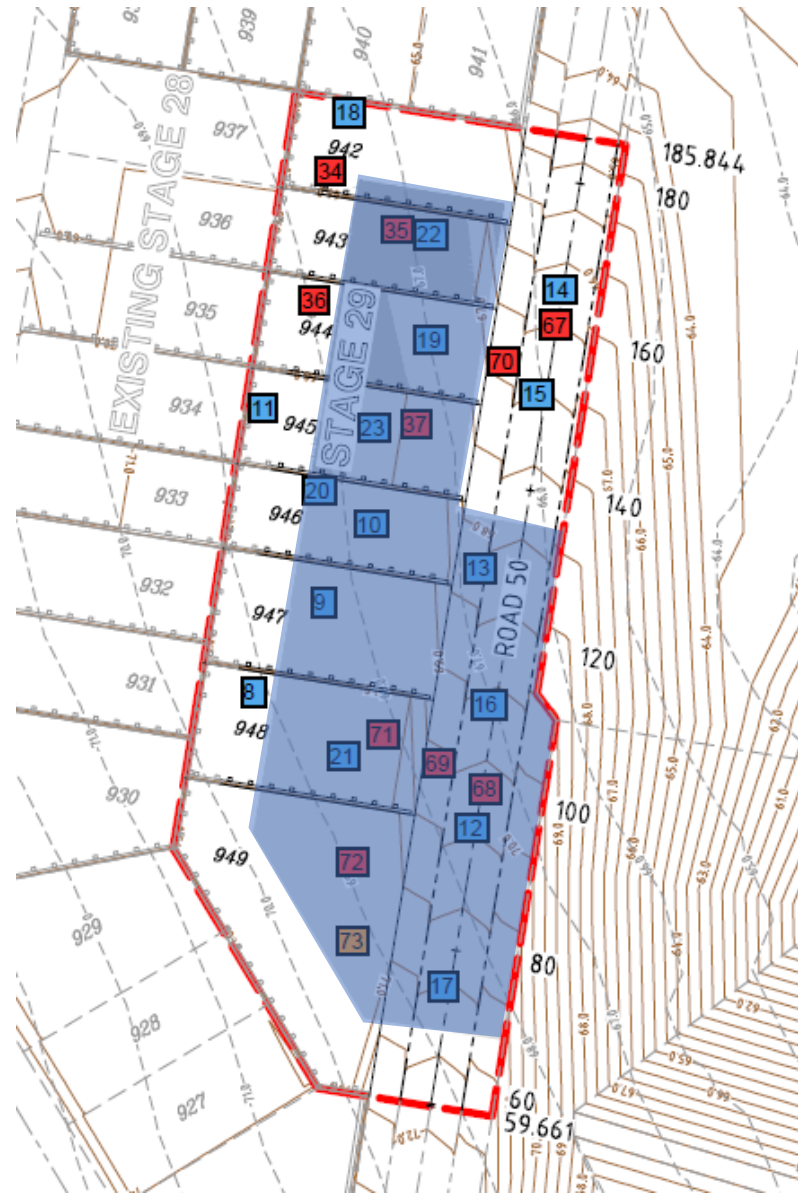
PROJECT NO: 23-021

CHECKED BY: GG



Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations 

Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-03

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 29

PROJECT NO: 23-021

CHECKED BY: GG





# LEVEL ONE EARTHWORKS REPORT

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**Proposed Residential  
Subdivision  
Eden's Crossing Stages 27, 28 &  
29**

**JUNE 2 2023**

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**Shadforth Civil Pty Ltd  
Authored by: QUALTEST LABORATORY PTY  
LTD REF: 3485RevA**

Ref: 3485RevA  
Job: 23-021  
Author: R. Mitchell

2<sup>nd</sup> June 2023

Shadforth Civil  
99 Sandalwood Lane  
Forest Glen Qld 4556

**ATTENTION: MR RILEY BROOKS**  
Email: [Riley.Brooks@shadcivil.com.au](mailto:Riley.Brooks@shadcivil.com.au)

Dear Sir,

**RE: LEVEL ONE EARTHWORKS REPORT**

**PROJECT: PROPOSED RESIDENTIAL SUBDIVISION  
EDEN'S CROSSING STAGE 27, 28 AND 29**

**CLIENT: SHADFORTHS**

**CONSULTANT: KN GROUP**

**CONTRACTOR: SHADFORTHS**

## **1.0 INTRODUCTION**

### **1.1 General**

This report presents results and documentation for the Level One Inspection and Testing of earthworks filling operations for the proposed Residential Subdivision the Eden's Crossing Stage 27, 28 and 29 developments at Redbank Plains (The Site).

Qualtest Laboratory Pty Ltd was commissioned by Shadforth Civil (The Client) to provide Level 1 Earthworks Inspection and Testing services as defined in Section 8 of AS3798.

Filling operations covered by this report were constructed between 24<sup>th</sup> January and 31<sup>st</sup> March 2023.

The purpose of Level 1 commission and this report is to provide an opinion that the earthworks operations carried out by the Client have been carried out in accordance with AS3798, relevant project specifications and Local Authority requirements as appropriate.

This report has been carried out in general accordance with the following: -

- AS3798-2007 - Guidelines on Earthwork for Commercial and Residential Development
- KN Group Consulting Engineers Notes and Drawings
- Ipswich City Council Requirements.

This report does not cover underground services, trench backfill, pavements, retaining walls, filling outside areas shown on Figure 2 or any other works after 31<sup>st</sup> March 2023.

### **1.2 The Development**

The development comprises of the following: -

- Stage 27 - 23 residential lots,
- Stage 28 - 20 residential lots,
- Stage 29 - 8 residential lots and
- Associated infrastructure including roads and underground services.

Earthworks to be constructed at the site are presented on KN Group Consulting Engineers Drawings. A marked-up plan showing the extent of fill covered by this report is presented as Figures 1, 2 and 3 below.



Figure 1: Bulk Earthworks Plan – Eden’s Crossing Stage 27– Extent of Fill – Blue Shade

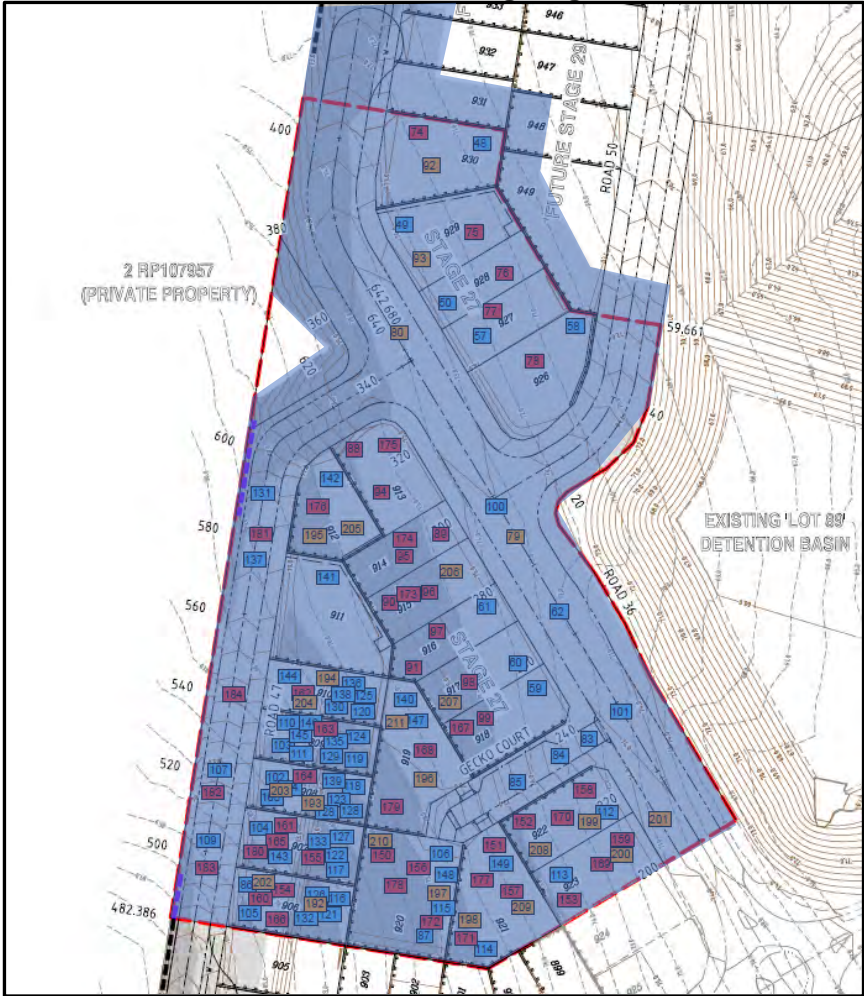


Figure 2: Bulk Earthworks Plan – Edens Crossing Stage 28 – Extent of Fill – Blue Shade

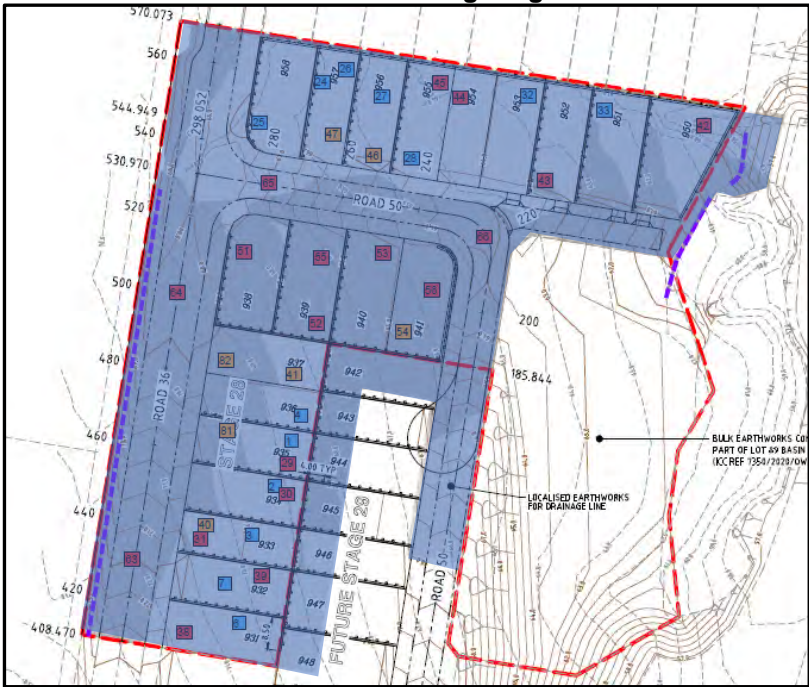
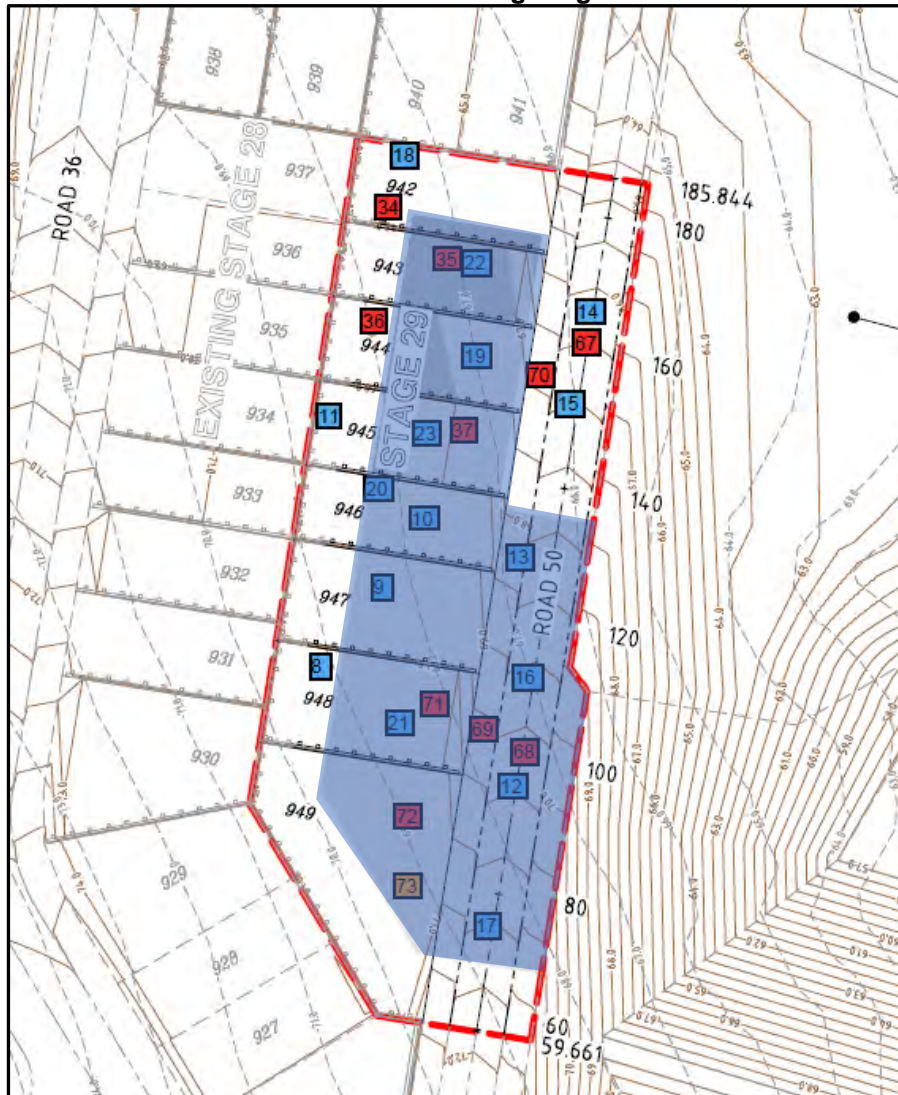




Figure 3: Bulk Earthworks Plan – Eden’s Crossing Stage 29 – Extent of Fill – Shaded Blue



## 2.0 WORKS AND SPECIFICATIONS

All filling operations at the Site are to be placed and compacted in accordance with the following: -

- Level One Inspection and Testing of the placement and compaction of fill materials in accordance with AS 3798 2007 – “Guidelines on Earthworks for Commercial and Residential Developments”.
- Relative Density Control Testing in accordance with AS 1289 – Testing of Soils for Engineering Purposes and at frequencies required in AS 3798 Table 8.1.
- Ipswich City Council Specifications.
- KN Group Consulting Engineers Drawings and Notes on Drawings.
- Density Ratio – 95% Standard

Low reactive fill materials has been used as capping over potentially reactive soils was to generally conform to the following criteria: -

- Shrink Swell Index (Iss) – 1.5% Max.
- Particle Size Distribution:
  - Max Particle Size – 75mm
  - % passing 19mm – 80% Min.
  - % passing 0.075mm – 10% Min.
- Plasticity:
  - Liquid Limit – 45% Max.
  - Plasticity Index - >7% <20%
- Permeability –  $5 \times 10^{-7}$  m/s Max.

### 3.0 FILL FOUNDATION

Areas to be filled at the site were observed to be stripped of vegetation, grass, redundant services, existing uncontrolled fill, water affected ground and topsoil to depths exposing competent natural ground.

Compliance of the fill foundation and approval to commence filling was on the basis of: -

- Adequate removal of topsoil, organics and existing fill to expose natural soils consisting of: -
  - Sandy Clay (SC), at least stiff, medium plastic fines, orange brown and moist.
  - Sandstone (XW), typically low strength, fine to coarse sands, grey brown.
- Compliant proof roll testing of the stripped surface using onsite earthworks plant.

A picture of the stripped natural surface observed prior to filling are presented below.

**Picture 1: Stripped Natural Surface**



#### 4.0 FILLING OPERATIONS

Fill at the site was sourced from the following locations: -

- General Fill below 1.2m from Final Earthworks Levels
  - Onsite cuts, trench and road box spoil.
- Low Reactive Capping Fill between the final earthworks level and 1.2m below.
  - Onsite Borrow sources consisting ripped sandstone

All fill materials were appropriately blended and moisture conditions prior to and during placement and compaction.

Materials used as fill can be broadly summarised as: -

- Lower Fill Materials – Below 1.2m from the finished earthworks levels
  - Sandy Clay (CI) medium plasticity, fine to medium sands, orange brown and moist.
  - Silty Sand (SM) fine to medium sands, low elastic fines, grey brown and moist.
- Capping Materials – Upper 1.2m of the fill profile and borrowed from local borrow pit.
  - Clayey Sand (SC), fine to coarse sand, low plasticity fines, traces of fine to medium gravel and moist.
  - Sandy Clay (CL), low to medium plasticity fines, fine to coarse sand and moist.

Fill was constructed using the following plant: -

- |               |                  |
|---------------|------------------|
| • Excavators  | • Padfoot Roller |
| • Water Truck | • Compactor      |
| • Dozer       | • Grader         |
| • Scrapers    |                  |

Fill was observed to be placed in layers within the capacity of the above plant, appropriately moisture conditioned and compacted using several passes.

To the extent that was reasonably practicable, fill materials visibly containing excessive amounts of silts or deleterious materials such as sticks, oversize particles were sorted to remove the contaminants prior to placement or rejected for use. Some cobble sized particles may remain in the body of the fill, however, are unlikely to be in sufficient quantities to adversely affect the performance of the new fill. Sloping areas requiring filling were benched and continually keyed into the slope prior to and during fill placement.

Pictures of the filling operations are presented below.



**Picture 2: Filling Operations**



**Picture 3: Filling Operations**



Samples of the capping materials used between the final earthworks level and 1.2m below were collected after compaction and testing generally conformed with the criteria presented in Section 2 and are summarised below in Table 1. Test reports are attached.



**Table 1 – Summary of Capping Materials Test Results.**

Test Number	Particle Size % Passing			Plasticity Index %		Shrink Swell (%)
	75mm	19mm	0.075mm	LL	PI	
S4275A	100	81	15	23	9	0.0
S4275B	100	82	14	26	8	0.0
S4275C	100	100	21	23	7	0.0
S4275D	100	100	24	27	11	0.3
S4437A	100	100	31	32	19	0.6
S4560A	100	100	26	29	13	0.4
S4599A	100	97	27	27	13	0.4
S4628A	100	96	23	24	7	0.4
S4719A	100	100	19	25	7	0.5
S4903A	100	100	28	32	16	0.8
S4915A	100	100	22	30	12	1.1
S5029A	100	100	22	25	7	0.1
S5192A	100	98	21	25	7	0.1
S5192B	100	100	26	25	9	0.3
S5192C	100	100	33	32	18	0.8

Notes.  
LL – Liquid Limit  
PI – Plasticity Index  
LS – Linear Shrinkage  
Green – Meets Specification

The tested materials generally conform to the specification. Based on the above test results, it is considered likely that the specification for permeability will be met based on the achieved test results.

## 5.0 COMPACTION TESTING

Compaction testing was carried out on the compacted fill materials in accordance with Table 5.1 and 8.1 of AS3798 2007 and tested to AS1289 test methods. All test locations were selected by Qualtest at random and staggered over the fill area and depth. Test locations were not obtained by survey and on this basis, the locations should be considered as approximate only.

Compaction testing achieved the minimum required compaction specification of 95% Standard at the test locations. Areas where the compaction specification was not achieved were reworked and re-tested using random stratified location processes.

The location of the compaction tests and area of fill covered under this report are shown on the Site Plan contained in Appendix A.

Compaction Test Reports and Capping Compliance Testing are contained in Appendix B.

## 6.0 STATEMENT OF COMPLIANCE

Our representatives observed the relevant earthworks operations during our engagement including the stripped surface, new fill placement and compaction operations, and compaction testing.

As far as Qualtest could assess, the fill at The Site has been observed to be placed and compacted in accordance with the requirements outlined in Section 2.0.

The fill at The Site can be considered to be “Controlled” as defined in AS2870.

## 7.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after 31<sup>st</sup> March 2023. All trench backfill, underground services, landscaping fill, fill outside the area shown as Figure 1 and other fill placed without our knowledge is also excluded.

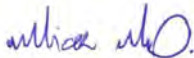
Assessments of batter stability, global stability, and material quality such as soaked CBR and site classifications are excluded from this commission. The stability of any fill batters in the long term must take account of the variable materials used for the construction of the fill platforms and all surface loads including traffic loads near the crest of all batters.

Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS.3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials comprise clay soils, which may result in unfavourable site classifications for individual lots and low subgrade design strengths for pavements.

Controlled fill (Level 1 Fill) provides an overview that the Earthwork Specification has been met. There are instances where significant long-term settlements of controlled fill can occur. Large total and differential settlements can be expected where fill has been placed over soft and compressible soils and where the thickness of controlled fill varies significantly across a lot.

Should you require further information regarding the above please do not hesitate to contact this office.

Yours faithfully,



**MICHAEL MORRISON**

For and on behalf of

**QUALTEST LABORATORY PTY LTD.**

**Appendix A** – Site Plan and Compaction Test Locations

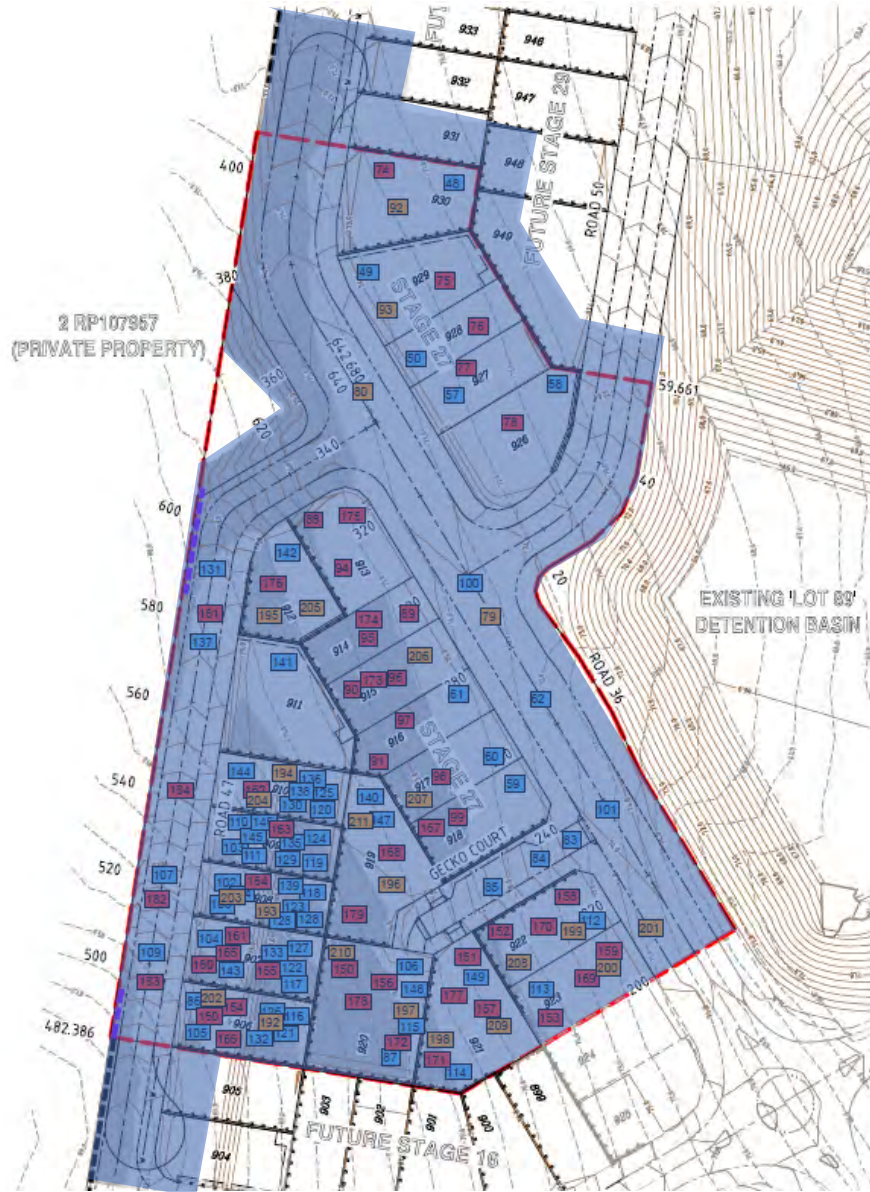
**Appendix B** - Compaction Test Reports



# APPENDIX A

## Site Plan and Compaction Test Locations





**Qualtest Laboratory**

Est. 1987

**LEGEND:**

Test Locations

**175**

Approximate Extents of Controlled Filling



**CLIENT:** Shadforths Civil

**TITLE:** Compaction Test Location

**DRAWING NO:** 23-021-01

**LOCATION:** Edens Crossing Stage 27

**DATE:** 3<sup>rd</sup> May 2023

**PROJECT NO:** 23-021

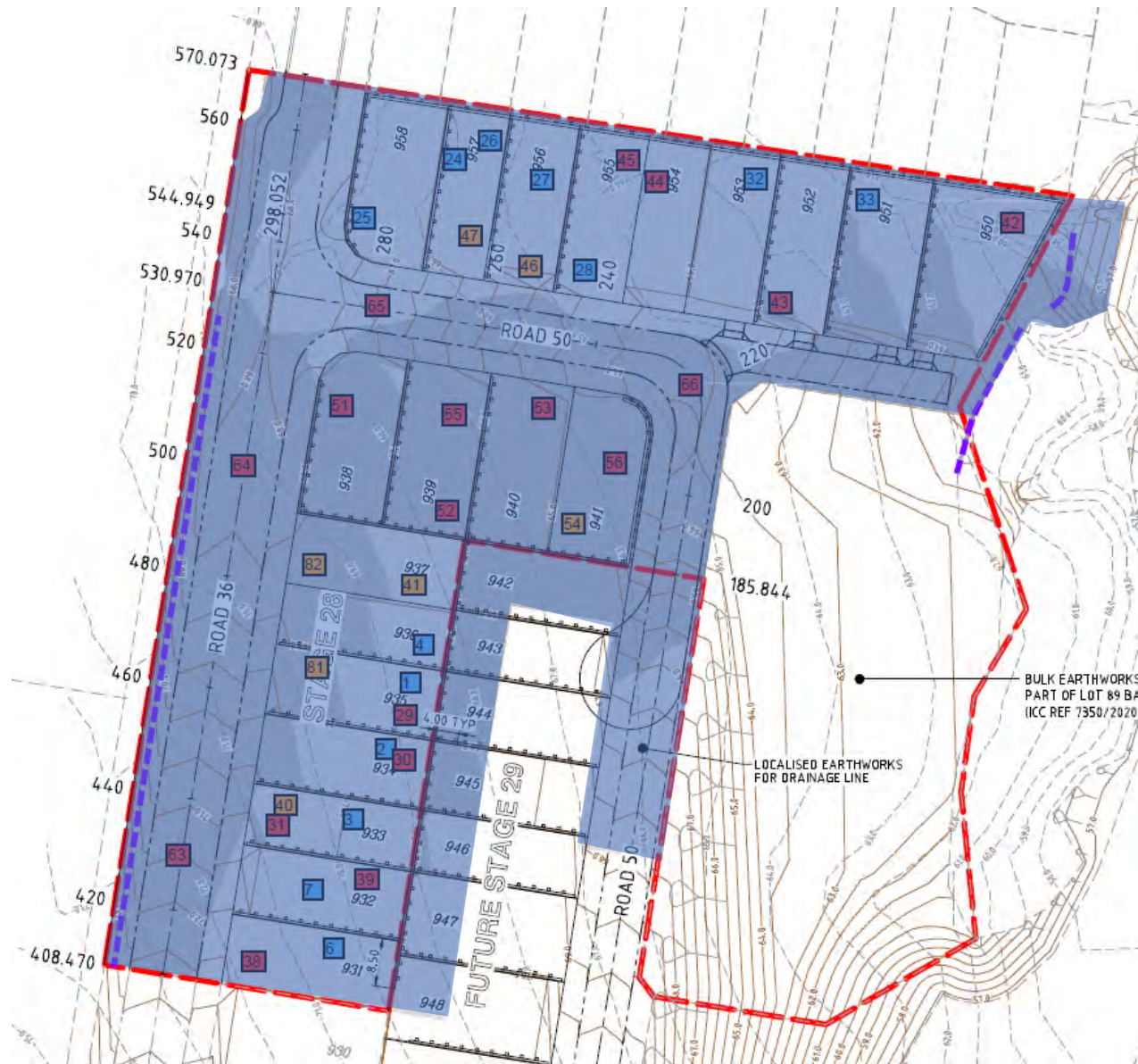
**CHECKED BY:** GG





Qualtest Laboratory

Est. 1987



**LEGEND:**

Test Locations



Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-02

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 28

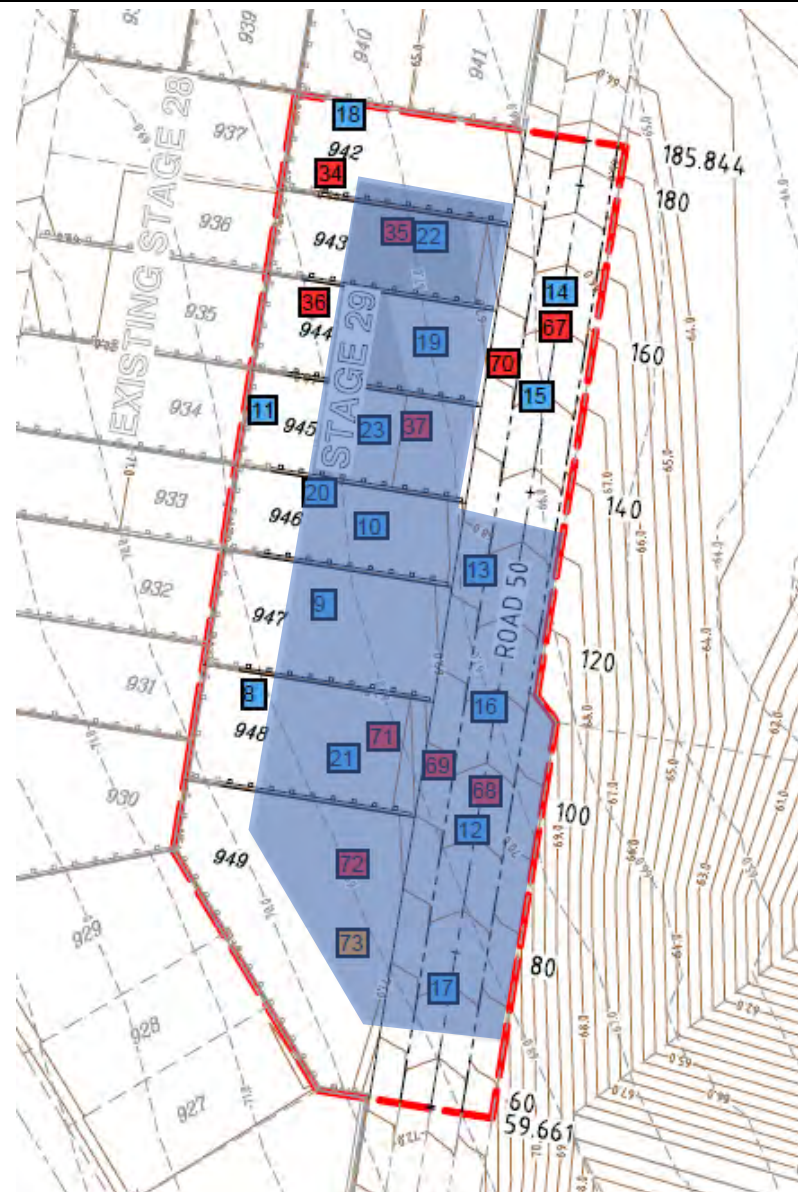
PROJECT NO: 23-021

CHECKED BY: GG



Qualtest Laboratory

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**LEGEND:**

Test Locations 

Approximate Extents of Controlled Filling



CLIENT: Shadforths Civil

TITLE: Compaction Test Location

DRAWING NO: 23-021-03

DATE: 3<sup>rd</sup> May 2023

LOCATION: Edens Crossing Stage 29

PROJECT NO: 23-021

CHECKED BY: GG