



CIVIL GEOTECHNICAL SERVICES
ABN 26 474 013 724
PO Box 678 Croydon Vic 3136
Telephone: 9723 0744 Facsimile: 9723 0799

24th May 2017

Our Reference: 17273:GB178

Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

Dear Sirs/ Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ROTHWELL – STAGE 7, TRUGANINA

Please find attached our Report No 17273/R001 which relates to the field density testing that was conducted within the filled allotments at the above subdivision. The level 1 inspections and associated field density testing were conducted in mid March 2017.

The inspections and testing of the earthworks was undertaken in general accordance with the Level 1 requirements of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments.

The site inspections and testing was performed by an experienced geotechnician from this office. Any areas that were deemed unsatisfactory were reworked and retested under their supervision. The testing was performed to the relevant Australian Standards and the accompanying test reports carry NATA endorsement. The attached compaction results, which were located randomly throughout the fill profile, are considered to be representative of the bulk fill materials that were placed across the filled allotments by Rokon during the aforementioned period. The approximate locations of the field density tests can be seen on the attached plan (Figure 1).

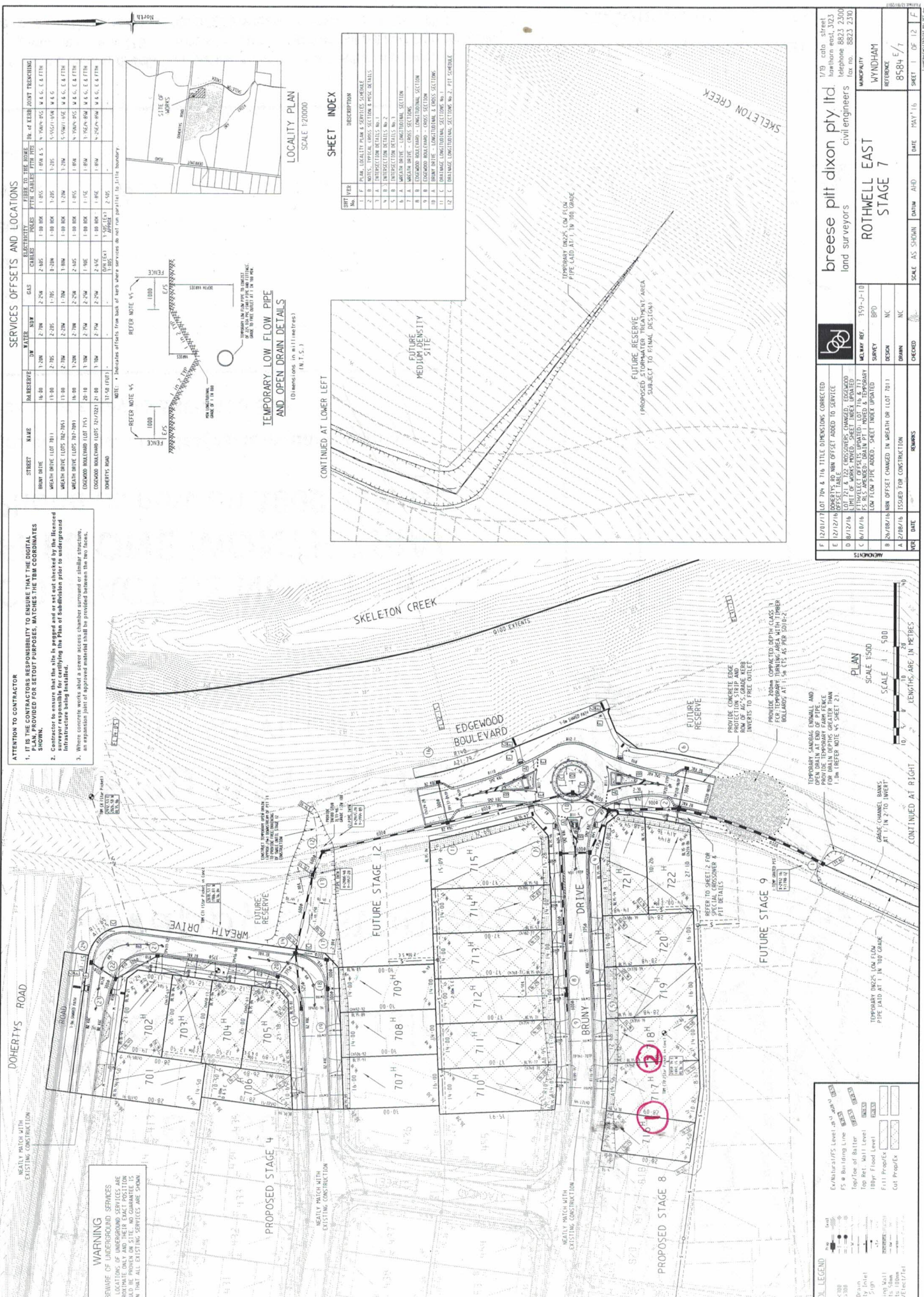
We are of the view that the bulk fill materials that have been placed across the filled allotments by Rokon during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Griffin Brown

③ APPROXIMATE FIELD DENSITY TEST LOCATION





COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client ROKON (RICHMOND)
Project ROTHWELL ESTATE - STAGE 7
Location TRUGANINA

Job No 17273
Report No 17273/R001
Date Issued 24/05/2017
Tested by AG
Date tested 18/05/17
Checked by JHF

Feature EARTHWORKS Layer thickness 200 mm Time: 09:12

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	-	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1				
Approximate depth below FSL						
Measurement depth mm	175	175	-	-	-	-
Field wet density t/m ³	2.00	1.99	-	-	-	-
Field moisture content %	20.9	21.7	-	-	-	-

Test procedure AS 1289.5.7.1

Test No	1	2	-	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	-	-	-	-
Percent of oversize material wet	4	4	-	-	-	-
Peak Converted Wet Density t/m ³	1.99	2.02	-	-	-	-
Adjusted Peak Converted Wet Density t/m ³	2.08	2.10	-	-	-	-
Optimum Moisture Content %	21.5	22.5	-	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	0.5% dry	-	-	-	-
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Density Ratio (R_{HD})	%	96.0	95.0	-	-	-	-
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Material description

No 1 - 2 Clay Fill



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards. Accredited for compliance to ISO/IEC 17025. Accreditation No 9909

Justin Fry

Approved Signatory : Justin Fry

AVRLOT HILF V1.10 MAR 13



FILL CERTIFICATE

PROJECT: Lot No 702 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_702

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 702, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

Griffin Brown



FILL CERTIFICATE

PROJECT: Lot No 703 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_703

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 703, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 716 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_716

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with Lot 716 of Rothwell (Stage 7), Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the Lot. On the completion of earthworks and after examining the test results and the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

Accordingly, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 717 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_717

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with Lot 717 of Rothwell (Stage 7), Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the Lot. On the completion of earthworks and after examining the test results and the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

Accordingly, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 718 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_718

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with Lot 718 of Rothwell (Stage 7), Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the Lot. On the completion of earthworks and after examining the test results and the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

Accordingly, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 719 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_719

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 719, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 720 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_720

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 720, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 721 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_721

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 721, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

The use of this Certificate is only appropriate for the field conditions present up to May 2017.

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FILL CERTIFICATE

PROJECT: Lot No 722 (as per Drawing No 8584E/7)
Rothwell (Stage 7), Truganina

CLIENT: Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

REPORT NO: 17273_722

DATE: 24/05/17

SUMMARY

Civil Geotechnical Services were engaged by Rokon Pty Ltd to provide inspection and testing services on the earthworks associated with the construction of the Rothwell (Stage 7) Truganina, in a manner which would satisfy the criteria for Level 1 Supervision as specified in Section 8.2 of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments - 2007. The project was classified as Type 1/2 requiring a minimum density ratio of 95.0% (standard compactive effort) within the area of fill placement.

A site inspection was conducted prior to any fill being placed on the allotments. On the completion of the earthworks and after examining the materials used, we are of the opinion that the filling procedure conducted by Rokon Pty Ltd during the construction of the estate satisfied the requirements of AS 3798 in regard to the placement of fill on a Type 1/2 Project under Level 1 Supervision.

With respect to Lot 722, the depth of fill materials that were placed during the current construction phase (excluding top soiling activities) was less than 0.3 metres. As a consequence of the limited depth of fill materials, field density testing was not considered warranted. However, when classifying the site in accordance with the procedures presented in Section 2 of AS 2870 – Residential Slabs and Footings – Construction (2011), we are of the view that the bulk fill materials that were placed on this Lot by Rokon Pty Ltd can be considered as being placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

LIMITATIONS

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