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

3rd December 2019

Our Reference: 19335:NB617

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RIVERDALE – STAGE 9 (TARNEIT)

Please find attached our Report No 19335/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 was performed in May 2019.

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 inspection and testing was performed by experienced geotechnicians 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 reported allotments by Winslow Constructors during the aforementioned period. The approximate locations of the field density tests can be seen on the attached plan (Figure 1).

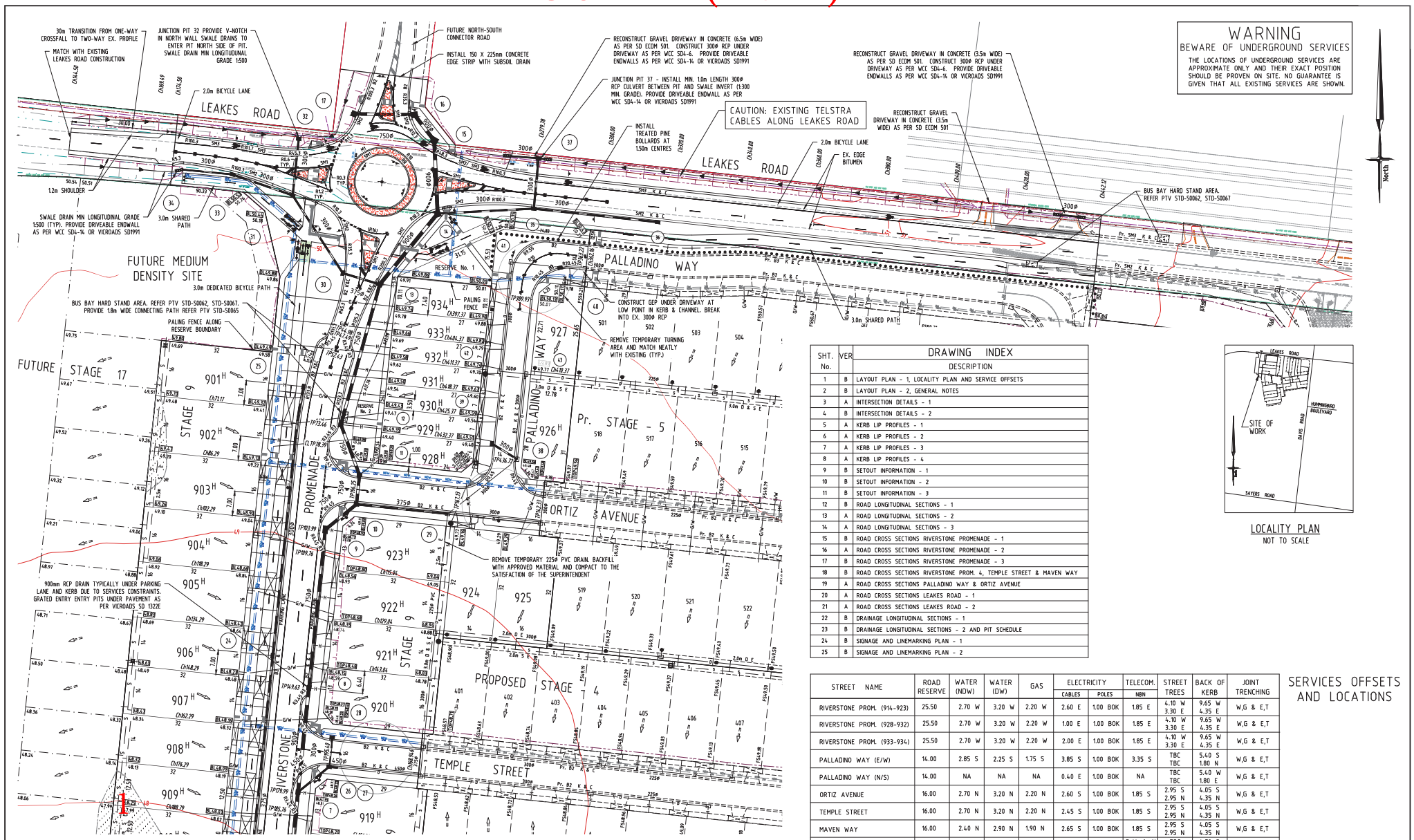
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1 (1 of 2)



SHT. No.	VER	DRAWING INDEX DESCRIPTION
1	B	LAYOUT PLAN - 1, LOCALITY PLAN AND SERVICE OFFSETS
2	B	LAYOUT PLAN - 2, GENERAL NOTES
3	A	INTERSECTION DETAILS - 1
4	B	INTERSECTION DETAILS - 2
5	A	KERB LIP PROFILES - 1
6	A	KERB LIP PROFILES - 2
7	A	KERB LIP PROFILES - 3
8	A	KERB LIP PROFILES - 4
9	B	SETOUT INFORMATION - 1
10	B	SETOUT INFORMATION - 2
11	B	SETOUT INFORMATION - 3
12	B	ROAD LONGITUDINAL SECTIONS - 1
13	A	ROAD LONGITUDINAL SECTIONS - 2
14	A	ROAD LONGITUDINAL SECTIONS - 3
15	B	ROAD CROSS SECTIONS RIVERSTONE PROMENADE - 1
16	A	ROAD CROSS SECTIONS RIVERSTONE PROMENADE - 2
17	B	ROAD CROSS SECTIONS RIVERSTONE PROMENADE - 3
18	B	ROAD CROSS SECTIONS RIVERSTONE PROM. 4, TEMPLE STREET & MAVEN WAY
19	A	ROAD CROSS SECTIONS PALLADINO WAY & ORTIZ AVENUE
20	A	ROAD CROSS SECTIONS LEAKES ROAD - 1
21	A	ROAD CROSS SECTIONS LEAKES ROAD - 2
22	B	DRAINAGE LONGITUDINAL SECTIONS - 1
23	B	DRAINAGE LONGITUDINAL SECTIONS - 2 AND PIT SCHEDULE
24	B	SIGNAGE AND LINEMARKING PLAN - 1
25	B	SIGNAGE AND LINEMARKING PLAN - 2

LOCALITY PLAN
NOT TO SCALE

SERVICES OFFSETS AND LOCATIONS

STREET NAME	ROAD RESERVE	WATER (NDW)	WATER (DW)	GAS	ELECTRICITY CABLES	ELECTRICITY POLES	TELECOM. NBN	STREET TREES	BACK OF KERB	JOINT TRENCHING
RIVERSTONE PROM. (914-923)	25.50	2.70 W	3.20 W	2.20 W	2.60 E	1.00 BOK	1.85 E	4.10 W 3.30 E	9.65 W 4.35 E	W,G & E,T
RIVERSTONE PROM. (928-932)	25.50	2.70 W	3.20 W	2.20 W	1.00 E	1.00 BOK	1.85 E	4.10 W 3.30 E	9.65 W 4.35 E	W,G & E,T
RIVERSTONE PROM. (933-934)	25.50	2.70 W	3.20 W	2.20 W	2.00 E	1.00 BOK	1.85 E	4.10 W 3.30 E	9.65 W 4.35 E	W,G & E,T
PALLADINO WAY (E/W)	14.00	2.85 S	2.25 S	1.75 S	3.85 S	1.00 BOK	3.35 S	TBC TBC	5.40 S 1.80 N	W,G & E,T
PALLADINO WAY (N/S)	14.00	NA	NA	NA	0.40 E	1.00 BOK	NA	TBC TBC	5.40 W 1.80 E	W,G & E,T
ORTIZ AVENUE	16.00	2.70 N	3.20 N	2.20 N	2.60 S	1.00 BOK	1.85 S	2.95 S 2.95 N	4.05 S 4.35 N	W,G & E,T
TEMPLE STREET	16.00	2.70 N	3.20 N	2.20 N	2.45 S	1.00 BOK	1.85 S	2.95 S 2.95 N	4.05 S 4.35 N	W,G & E,T
MAVEN WAY	16.00	2.40 N	2.90 N	1.90 N	2.65 S	1.00 BOK	1.85 S	2.95 S 2.95 N	4.05 S 4.35 N	W,G & E,T
LEAKES ROAD (INTERIM)	20.50	NA	NA	NA	Ex2.50 N	Ex2.50 N	ExVariesN 2.00 S	TBC TBC	4.70 S 5.70 N	W,G

Approximate field density test location

LAYOUT PLAN
SCALE: 1:500
10 0 10
1:500 @ A1
ALL LENGTHS ARE IN METRES

COUNCIL REF. No. 2315/17 - 6215/12

SYMBOL LEGEND

Prop Drains
Exist Drains < 600
Exist Drains > 600
Prop Sewers < 300
Prop Sewers > 300
Exist Sewers < 300
Exist Sewers > 300
Prop Water
Prop Gas Conduit
Exist Water
Exist Gas
Exist Telstra/Optus
Exist Electricity
Prop 100mm Water Conduit
House drain
Property Inlet
Street Sign
PSM
Existing Surface Level + 26.57
F.S. Level at Building Line + 26.57
F.S. Level at Top of Batter + 27.57
F.S. Level at Back of Lots + 26.57
Top of Retaining Wall Level + 27.57
F.S. Level Previous Stage + 26.57
Coloured Concrete Pavement
Fill > 200mm

VER.	DATE	REMARKS
B	07-05-2018	MINKIN STREET INTERSECTION
A	23-04-2018	ISSUED FOR CONSTRUCTION

MEWAY REF. 234-G-2
SURVEY BPD
DESIGN L.G.
DRAWN L.G.
CHECKED

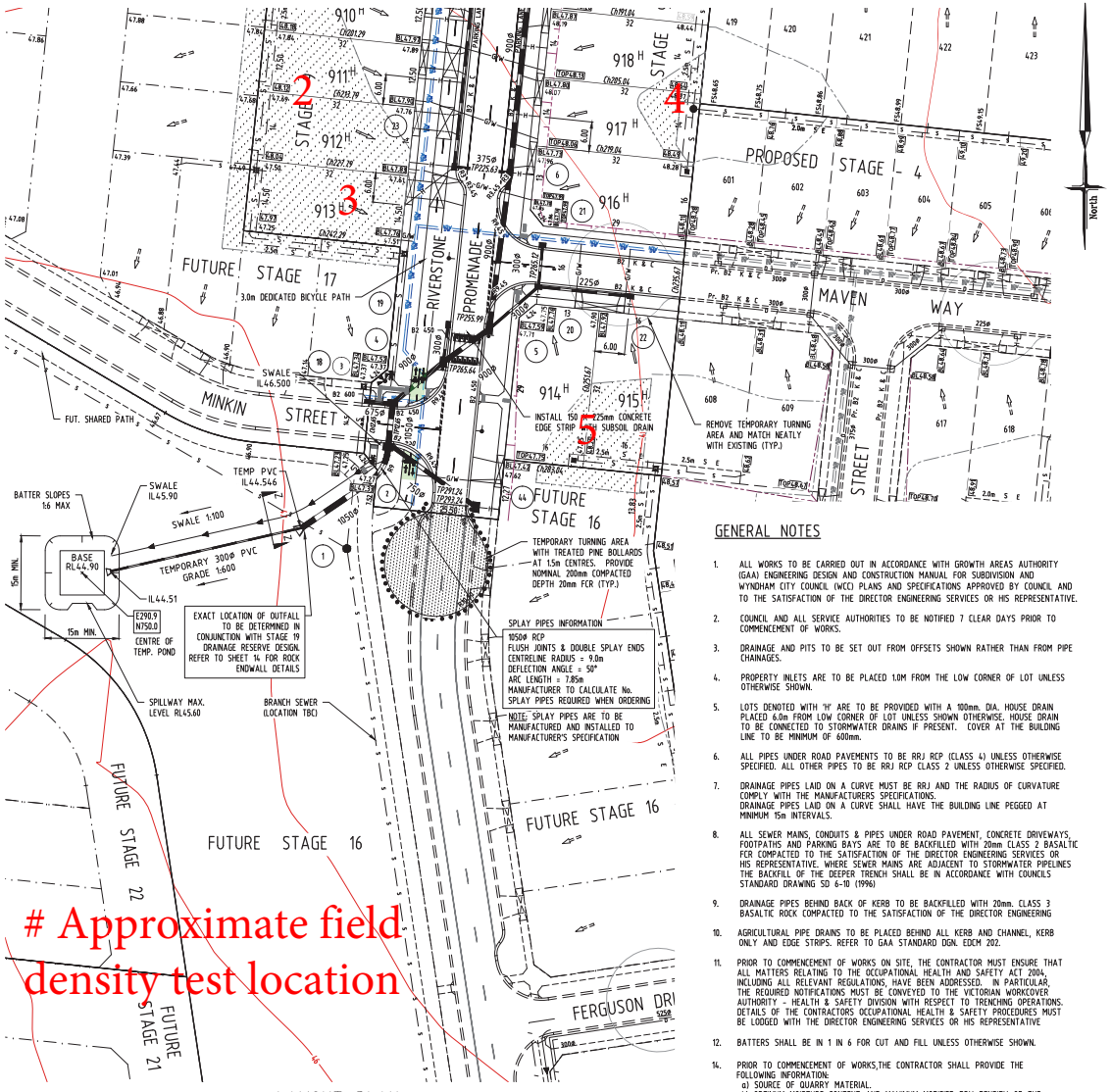
breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 Cato Street
Hawthorn East, 3123
Telephone 8823 2300
Fax no. 8823 2310

RIVERDALE VILLAGE
STAGE 9

MUNICIPALITY WYNDHAM
REFERENCE 8554 E/9

SCALE AS SHOWN DATUM AHD DATE NOV' 17 SHEET 1 OF 25 B

FIGURE 1 (2 of 2)



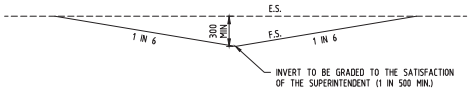
LAYOUT PLAN

SCALE: 1:500

1:500 @ A1

ALL LENGTHS ARE IN METRES

COUNCIL REF. No. 2315/17 - 6215/12



SECTION Z-Z

TEMPORARY SWALE DRAIN (<0.8m DEPTH)

N.T.S.

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

GENERAL NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH GROWTH AREAS AUTHORITY (GAA) ENGINEERING DESIGN AND CONSTRUCTION MANUAL FOR SUBDIVISION AND WYNDHAM CITY COUNCIL (WCC) PLANS AND SPECIFICATIONS APPROVED BY COUNCIL AND TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE.
2. COUNCIL AND ALL SERVICE AUTHORITIES TO BE NOTIFIED 7 CLEAR DAYS PRIOR TO COMMENCEMENT OF WORKS.
3. DRAINAGE AND PITS TO BE SET OUT FROM OFFSETS SHOWN RATHER THAN FROM PIPE CHAINAGES.
4. PROPERTY INLETS ARE TO BE PLACED 1.0M FROM THE LOW CORNER OF LOT UNLESS OTHERWISE SHOWN.
5. LOTS DENOTED WITH 'H' ARE TO BE PROVIDED WITH A 100mm. DIA. HOUSE DRAIN PLACED 6.0m FROM LOW CORNER OF LOT UNLESS SHOWN OTHERWISE. HOUSE DRAIN TO BE CONNECTED TO STORMWATER DRAINS IF PRESENT. COVER AT THE BUILDING LINE TO BE MINIMUM OF 600mm.
6. ALL PIPES UNDER ROAD PAVEMENTS TO BE RRJ RCP (CLASS 4) UNLESS OTHERWISE SPECIFIED. ALL OTHER PIPES TO BE RRJ RCP CLASS 2 UNLESS OTHERWISE SPECIFIED.
7. DRAINAGE PIPES LAID ON A CURVE MUST BE RRJ AND THE RADIUS OF CURVATURE COMPLY WITH THE MANUFACTURERS SPECIFICATIONS.
   DRAINAGE PIPES LAID ON A CURVE SHALL HAVE THE BUILDING LINE PEGGED AT MINIMUM 15m INTERVALS.
8. ALL SEWER MAINS, CONDUITS & PIPES UNDER ROAD PAVEMENT, CONCRETE DRIVEWAYS, FOOTPATHS AND PARKING BAYS ARE TO BE BACKFILLED WITH 20mm CLASS 2 BASALTIC FCR COMPACTED TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE. WHERE SEWER MAINS ARE ADJACENT TO STORMWATER PIPELINES THE BACKFILL OF THE DEEPER TRENCH SHALL BE IN ACCORDANCE WITH COUNCILS STANDARD DRAWING SD 6-10 (1996)
9. DRAINAGE PIPES BEHIND BACK OF KERB TO BE BACKFILLED WITH 20mm. CLASS 3 BASALTIC ROCK COMPACTED TO THE SATISFACTION OF THE DIRECTOR ENGINEERING
10. AGRICULTURAL PIPE DRAINS TO BE PLACED BEHIND ALL KERB AND CHANNEL, KERB ONLY AND EDGE STRIPS. REFER TO GAA STANDARD DGN. EDCM 202.
11. PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004, INCLUDING ALL RELEVANT REGULATIONS, HAVE BEEN ADDRESSED. IN PARTICULAR, THE REQUIRED NOTIFICATIONS MUST BE CONVEYED TO THE VICTORIAN WORKCOVER AUTHORITY - HEALTH & SAFETY DIVISION WITH RESPECT TO TRENCHING OPERATIONS. DETAILS OF THE CONTRACTORS OCCUPATIONAL HEALTH & SAFETY PROCEDURES MUST BE LODGED WITH THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE
12. BATTERS SHALL BE IN 1 IN 6 FOR CUT AND FILL UNLESS OTHERWISE SHOWN.
14. PRIOR TO COMMENCEMENT OF WORKS,THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:
    a) SOURCE OF QUARRY MATERIAL.
    b) OPTIMUM MOISTURE CONTENT AND MAXIMUM MODIFIED DRY DENSITY OF THE F.C.R. TO BE USED (FROM NATA APPROVED LABORATORY).
    c) IF THE SOURCE OF THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF WORKS, NEW TEST RESULTS SHALL BE PROVIDED.
15. NO TOP SOIL SHALL BE REMOVED FROM LAND COVERED BY THE SUBDIVISION WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE. THE TRUCK ROUTE FOR REMOVAL OF SPOIL FROM SITE IS TO BE SUBMITTED TO AND APPROVED BY THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE IN WRITING PRIOR TO COMMENCEMENT OF ANY WORK.
16. ON COMPLETION THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL RUBBISH AND SPOIL FROM THE SITE.
17. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL NECESSARY SHORING AND PLANKING AND STRUTTING, DEWATERING DEVICES, BARRICADES, SIGNS, LIGHTS ETC. NECESSARY TO KEEP THE WORKS IN A SAFE AND STABLE CONDITION AND PROTECT THE PUBLIC FROM THE WORK AS PER AUSTRALIAN STANDARD AS1742.2,2.3 -1986.
18. REMOVAL OR RETENTION OF EXISTING TREES OR VEGETATION MUST BE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLANS. NO MATERIAL IS TO BE BURNT ON SITE.
19. ANY FOOTPATH OR KERB AND CHANNEL DAMAGED DURING CONSTRUCTION AND MAINTENANCE PERIOD TO BE REINSTATED TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE.
20. LOTS TO BE GRADED TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE. ALL LOTS TO BE 1 IN 150 MINIMUM SLOPE.
21. FILL AREAS TO BE STRIPPED OF TOPSOIL, FILLED USING APPROVED CLAY FILL, AND TOPSOIL REPLACED TO OBTAIN FINAL FILL LEVELS AS SHOWN ON PLANS. ALL FILLING TO BE CARRIED OUT IN 150MM LAYERS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS3798-2007, SECTION 8.2, LEVEL 1 ("GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS"). ON COMPLETION THE CONTRACTOR SHALL PRESENT A "LEVEL 1" TYPED REPORT, FROM A NATA REGISTERED SOIL TESTING LABORATORY, NOMINATING THE EXTENT OF FILL PLACED, ITS CONFORMANCE WITH THE SPECIFICATION AND ITS CLASSIFICATION AS "CONTROLLED FILL". IF ANY SUBSTANDARD FILLING IS ENCOUNTERED ON THE SITE IT MUST BE REMOVED AND REPLACED WITH APPROVED FILL MATERIAL PROPERLY COMPACTED TO COUNCIL REQUIREMENTS. A GEO-TECHNICAL REPORT MUST BE SUBMITTED SHOWING DETAILS OF DEPTH, TYPE OF MATERIAL AND DENSITY OF THE FILL AREAS CONCERNED.
22. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL IMPORTED FILL MATERIAL, INCLUDING TOPSOIL, SATISFIES THE DESCRIPTION FOR CLEAN FILL MATERIAL IN EPA BULLETIN PUBLICATION NO. 448 (SEPT '95) AND SUBSEQUENT REVISIONS. THE CONTRACTOR SHALL PROVIDE VERIFICATION INCLUDING TEST CERTIFICATES TO THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE.
23. WHERE WORKS ARE IN THE VICINITY OF EXISTING SERVICES THESE SERVICES ARE TO BE LOCATED AND THE VARIOUS AUTHORITIES NOTIFIED PRIOR TO THE COMMENCEMENT OF WORKS.
24. THE WATER CONDUIT OFFSET FROM THE LOT BOUNDARY IS GIVEN ON THE WATER RETICULATION PLAN. THE CONTRACTOR MUST CONSTRUCT CONDUITS TO ACCORD WITH THE GIVEN OFFSET AND ENSURE THAT THE CONCRETER MARKS THE KERB AND FOOTPATH EXACTLY ABOVE THE CONDUIT.
25. TELSTRA/NBN CO TO BE NOTIFIED 7 DAYS PRIOR TO CONCRETE WORKS BEING PLACED.
26. ALL DRIVEWAYS TO BE OFFSET 0.75m FROM SIDE BOUNDARY OR EASEMENT UNLESS OTHERWISE SHOWN. REFER TO WCC STD. DRG. SD 4-1.
27. THE CONTRACTOR IS TO ARRANGE CCTV OF DRAINAGE AND ACCEPTANCE FROM COUNCIL PRIOR TO INSTALLATION OF THE KERB & CHANNEL AND ASPHALT PLACEMENT.
28. B2 PROFILE KERB AND CHANNEL TO BE CONSTRUCTED IN ALL STREETS UNLESS OTHERWISE SHOWN.
29. PSM'S TO BE LANDS DEPT. HIGH STABILITY TYPE. REFER TO COUNCIL STANDARD DRAWING SD11-10. AMG CO-ORDINATES AND AHD LEVEL TO BE SUPPLIED TO COUNCIL. (TO BE INSTALLED BY OTHERS)
30. LEVELS SHOWN THUS:
    - 28.57 DENOTES EXISTING SURFACE LEVEL
    - BL28.57 DENOTES F.S. LEVEL AT BUILDING LINE
    - TOP28.57 DENOTES F.S. LEVEL AT TOP OF BATTER
    - TOE28.57 DENOTES F.S. LEVEL AT TOE OF BATTER
    - 28.57 DENOTES F.S. LEVEL AT BACK OF LOTS
    - TW28.57 DENOTES TOP OF RETAINING WALL LEVEL
31. ALL SERVICE TRENCHES UNDER CONCRETE FOOTPATHS AND VEHICLE CROSSINGS TO BE BACKFILLED WITH CLASS 3 CRUSHED ROCK MATERIAL.
32. i - LEAKES ROAD FULL DEPTH PAVEMENT TO CONSIST OF:
    a) 40mm COMPACTED DEPTH 14mm NOMINAL SIZE TYPE 'H' ASPHALT WITH C320 BINDER. (ASPHALT TO BE 5mm PROUD OF LIP OF KERB)
    b) 75mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SI' ASPHALT WITH C320 BINDER.
    c) 75mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SF' ASPHALT WITH C320 BINDER.
    d) PRIME.
    e) 160mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 3 CEMENT TREATED CRUSHED ROCK COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    f) 100mm COMPACTED DEPTH 40mm NOMINAL SIZE RIPPED ROCK. COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa. PERMEABILITY SHALL BE LESS THAN $1x10^{-9}$ m/s.
    g) 300mm COMPACTED DEPTH SELECTED MATERIAL WITH MINIMUM SOAKED CBR OF 10%. COMPACTED TO 98% STANDARD DRY DENSITY WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%

    TOTAL PAVEMENT DEPTH 750mm
ii - LEAKES ROAD ROUNDABOUT PAVEMENT TO CONSIST OF:
    a) 40mm COMPACTED DEPTH 14mm NOMINAL SIZE TYPE 'V' ASPHALT WITH C320 BINDER. (ASPHALT TO BE 5mm PROUD OF LIP OF KERB)
    b) 75mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SI' ASPHALT WITH C320 BINDER.
    c) 75mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SF' ASPHALT WITH C320 BINDER.
    d) PRIME.
    e) 160mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 3 CEMENT TREATED CRUSHED ROCK COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    f) 100mm COMPACTED DEPTH 40mm NOMINAL SIZE RIPPED ROCK. COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa. PERMEABILITY SHALL BE LESS THAN $1x10^{-9}$ m/s.
    g) 350mm COMPACTED DEPTH SELECTED MATERIAL WITH MINIMUM SOAKED CBR OF 10%. COMPACTED TO 98% STANDARD DRY DENSITY WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%

    TOTAL PAVEMENT DEPTH 800mm

    NOTE: LIMITS OF ROUNDABOUT PAVEMENT AS DIRECTED BY WYNDHAM CITY COUNCIL
iii - RIVERSTONE PROMENADE ROAD PAVEMENT TO CONSIST OF:
    a) 40mm COMPACTED DEPTH 14mm NOMINAL SIZE TYPE 'H' ASPHALT WITH C320 BINDER. (ASPHALT TO BE 5mm PROUD OF LIP OF KERB)
    b) 80mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SI' ASPHALT WITH C320 BINDER.
    c) 75mm COMPACTED DEPTH 20mm NOMINAL SIZE TYPE 'SF' ASPHALT WITH C320 BINDER.
    d) PRIME.
    e) 100mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 3 CEMENT TREATED CRUSHED ROCK COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    f) 100mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 4 CRUSHED ROCK COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    g) 250mm COMPACTED DEPTH 40mm RIPPED ROCK WITH A MINIMUM SOAKED CBR OF 10%, COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT. PERCENTAGE SWELL SHALL BE LESS THAN 1.5% AND PERMEABILITY SHALL BE LESS THAN $1x10^{-9}$ m/s.

    TOTAL PAVEMENT DEPTH 645mm
iv - ORTIZ AVENUE, TEMPLE STREET, MAVEN WAY & PALLADINO WAY PAVEMENT TO CONSIST OF:
    a) 30mm COMPACTED DEPTH 10mm NOMINAL SIZE TYPE 'N' ASPHALT WITH C170 BINDER. (ASPHALT TO BE 5mm PROUD OF LIP OF KERB)
    b) 30mm COMPACTED DEPTH 10mm NOMINAL SIZE TYPE 'N' ASPHALT WITH C170 BINDER.
    c) 10mm SAMI SEAL/ PRIME.
    d) 125mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 2 F.C.R. COMPACTED TO AT LEAST 100% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT AND TO ACHIEVE A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    e) 100mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 3 CEMENT TREATED CRUSHED ROCK COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa.
    f) 235mm COMPACTED DEPTH 40mm RIPPED ROCK WITH A MINIMUM SOAKED CBR OF 10%, COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT. PERCENTAGE SWELL SHALL BE LESS THAN 1.5% AND PERMEABILITY SHALL BE LESS THAN $1x10^{-9}$ m/s.

    TOTAL PAVEMENT DEPTH 530mm
33. ALL PAVEMENTS TO BE COMPACTED TO 98% AUSTRALIAN DRY DENSITY. PAVEMENT DEPTH MAY NOT BE MODIFIED UNLESS APPROVED BY COUNCIL TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE.
34. ALL 125mm THICK FOOTPATH CONCRETE PAVING TO BE REINFORCED WITH SL72 MESH AND MUST BE CONSTRUCTED WITH A 50MM UNDERLAYER OF 20MM COMPACTED CLASS 3 FCR IN ACCORDANCE WITH GAA STANDARD DRAWING EDCM 401.
35. THE CONTRACTOR MUST COMPLETE A LEVEL CHECK BETWEEN ALL TBM'S TO VERIFY LEVEL VALUES BEFORE COMMENCEMENT OF WORKS. ALL TBM'S AND CONTROL POINTS ARE TO BE MAINTAINED AND PROTECTED AT ALL TIMES DURING CONSTRUCTION. SHOULD ANY MARKS BE DISTURBED, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE DEVELOPER'S CONSULTANT TO ARRANGE RE-INSTATEMENT AT THE CONTRACTORS EXPENSE.
36. ALL SIGNS AND TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH AS 1742-1,2,3 -1986. LINE MARKING SHALL BE IN ACCORDANCE WITH VICROADS REQUIREMENT WITH LATERAL WORKS AND ARROWS BEING COLD APPLIED PLASTIC TROWELLED INTO PLACE (MATERIAL DEGADUR OR PLASTELINE) AND LONGITUDINAL LINES BEING EXTRUDED THERMOPLASTIC MATERIAL (VICROADS SPECIFICATION SEE SECTION 710 & 722).
37. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR MUST SUBMIT A SMP TO THE DEVELOPER'S CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT PROTECTION AUTHORITY PUBLICATION NO.275 "CONSTRUCTION TECHNIQUES FOR SEDIMENT POLLUTION CONTROL". APPROPRIATE SILTATION CONTROL IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE WORKS.
38. PRIOR TO START OF WORKS ON SITE, A PRE-COMMENCEMENT MEETING MUST BE HELD BETWEEN DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE, THE DEVELOPER'S CONSULTANT AND THE CONTRACTOR.
39. PRIOR TO COMMENCING WORKS ON SITE, THE CONTRACTOR MUST OBTAIN ROAD OPENING/WORKS PERMITS FROM COUNCIL FOR ANY WORKS WITHIN EXISTING ROAD RESERVES OR WORKS ON ANY EXISTING INFRASTRUCTURE.
40. STREET NAMES TO BE INSTALLED ON PUBLIC LIGHTING POLES AT INTERSECTIONS WHERE POSSIBLE. ALL SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCIL STANDARD DRAWING SD11-1.
41. LOCATION OF ALL UNDERGROUND SERVICE CONDUITS TO BE MARKED ON BOTH SIDES OF THE KERB AND CHANNEL WITH W FOR WATER, RW FOR RECYCLED WATER, G FOR GAS, T FOR TELECOMMUNICATIONS & E FOR ELECTRICITY (REFER TO STANDARD DRAWING SD11-8).
42. THE CONTRACTOR IS TO INSTALL BLUE RRPM'S ON THE ROAD CENTRLINE AND MARKER POSTS TO INDICATE THE LOCATION OF FIRE PLUGS OR HYDRANTS.
43. GAS AND WATER CONDUITS TO BE 50mm DIAMETER.
44. DEMOLITION WORKS TO INCLUDE BUT IS NOT LIMITED TO THE REMOVAL OF UNDERGROUND SERVICES, DRAINAGE & PITS, DISPOSAL OF MATERIAL FROM SITE, ALL TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE. EXCAVATIONS FROM TRENCHES OF REMOVED DRAINAGE AND SERVICES TO BE EXCAVATED TO A FIRM BASE,INSPECTED BY THE DEVELOPER'S CONSULTANT AND LEVELS TAKEN. APPROVED FILL MATERIAL SHALL BE PLACED AND COMPACTED TO THE SATISFACTION OF THE DIRECTOR ENGINEERING SERVICES OR HIS REPRESENTATIVE.

SYMBOL LEGEND

Prop Drains	
Exist Drains < 600	50
Exist Drains > 600	900
Prop Sewers < 300	S
Prop Sewers > 300	S
Exist Sewers < 300	150 S
Exist Sewers > 300	300 S
Prop Water	W
Prop Gas Conduit	G
Exist Water	100 W
Exist Gas	100 G
Exist Telstra/Optus	TO
Exist Electricity	E
Prop 100mm Water Conduit	W100
House drain	H
Property Inlet	
Street Sign	
PSM	
Existing Surface Level	+ 28.57
F.S. Level at Building Line	+ BL28.57
F.S. Level at Top of Batter	+ TOP28.57
F.S. Level at Back of Lots	+ 28.57
Top of Retaining Wall Level	+ TW28.57
F.S. Level Previous Stage	+ 28.57
Coloured Concrete Pavement	
Fill > 200mm	

VER.	DATE	REMARKS
B	07-05-2018	MINKIN STREET INTERSECTION
A	23-04-2018	ISSUED FOR CONSTRUCTION

MEMORANDUM

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 Cato Street
Hawthorn East, 3123
Telephone 8823 2300
Fax no. 8823 2310

MELWAY REF.	234-G-2
SURVEY	BPD
DESIGN	L.G.
DRAWN	L.G.
CHECKED	

RIVERDALE VILLAGE
STAGE 9

MUNICIPALITY: WYNDHAM

REFERENCE: 8554 E/9

SCALE: AS SHOWN | DATUM: AHD | DATE: NOV' 17 | SHEET 2 OF 25 | B

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

Job No	19335
Report No	19335/R001
Date Issued	05/06/2019

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	RIVERDALE - STAGE 9	Date tested	24/05/19
Location	TARNEIT	Checked by	JHF

Feature	**EARTHWORKS**	Layer thickness	200 mm	Time:	13:11

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**4**	**5**	**-**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	
Approximate depth below FSL							
Measurement depth	mm	175	175	175	175	175	-
Field wet density	t/m³	1.79	1.77	1.77	1.76	1.76	-
Field moisture content	%	21.0	21.0	19.2	20.8	20.7	-

Test procedure AS 1289.5.7.1

Test No		1	2	3	4	5	-
Compactive effort		Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	-
Percent of oversize material	wet	6	6	6	3	4	-
Peak Converted Wet Density	t/m³	1.78	1.74	1.77	1.76	1.76	-
Adjusted Peak Converted Wet Density	t/m³	1.81	1.77	1.80	1.78	1.78	-
Optimum Moisture Content	%	23.5	23.0	21.5	23.0	23.0	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	-

Density Ratio (R_{HD})	**%**	**99.0**	**99.5**	**98.5**	**99.0**	**98.5**	**-**

Material description

No 1 - 5 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry