

Kingbird Estate Stage 14

GITA Inspection Verification Report

Prepared For: Kingbird Developments

Report Number P21553A V1

Version Release Date 14 May 2021

Report Released By C Caulfield

Title Project Manager

Signature



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1 Introduction

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical Inspection and Testing Authority (GITA) to provide Level 1 supervision and testing works on the earthworks component for Kingbird Estate Stage 14. This work was conducted over the period of 20/03/2021 to 23/04/2021.

This report presents that the allotment earthworks was carried out in accordance with AS3798-2007 *Guidelines for Earthworks for Commercial and Residential Development* and in compliance with the compaction control specifications established by the contractor.

2 Scope of Work

2.1 Area of Work

The areas of work included Lots 1401 through to 1424, bounded by streets Tulloch Street, Bindarri Crescent and Bellthorpe Road. The site will be a Residential development.

The area on which fill was placed is shown on site plan (Appendix 1: *Test Location Plan*) based on drawings prepared by Beveridge Williams (Drawing Reference: 010 P1) and provided by Kingbird Developments.

The supervision work by the GITA involved both inspection of sub grade preparation work and full time inspection and testing of fill placement.

2.2 Specification

The technical specification (Reference from Drawings) for compaction control requirements was provided by Kingbird Developments and established that:

Test Rolling is required for all layers of structural fill and materials within 150mm of permanent subgrade level so as to withstand test rolling without visible deformation or springing. Corrective action is required where unstable areas exceed 20% of the area being considered by test rolling.

Section 5.2 of AS3798-2007 (Section 5.2) establishes a specification requirement for a minimum density ratio of not less than 95% noting that soils containing more than 20% of particles coarser than 37.5mm cannot be tested for relative compaction using the procedures of AS1289 5.1.1 and AS1289 5.2.1.

In accordance with Table 8.1 (AS3798), for large scale operations, (greater than 1500m²), the minimum testing frequency is 1 test per layer per material type per 2500m² or 1 test per 500m³ distributed reasonable evenly throughout full depth and area or 3 tests per lot. AS3798 defines a lot as “an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work”. All three of these test frequencies must be achieved and this is typically confirmed to have been achieved when 3 tests per visit (day) have been completed.

2.3 Limitations

Terra Firma Laboratories cannot verify any works completed by others outside of the time period specified in the introduction. Uncontrolled works may include, but are not limited to trenching for services, cut and fill works for slab preparation or subsequent removal of vegetation and back fill of holes unless specified in section 2.1 of this report.

Terra Firma Laboratories cannot verify that the material used as a filling medium is free from chemical or other contamination. The scope and the period of Terra Firma Laboratories as described in the introduction are subject to restrictions and limitations. Terra Firma Laboratories did not perform a complete assessment of all possible conditions and circumstances that may exist at the site. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Terra Firma Laboratories.

Verification of finished surface level to design levels is outside of the scope of the GITA report.

Any drawings or marked locations presented in this report should be considered only as pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions should not be used for accurate calculations or dimensioning.

Where data has been supplied by the client or a third party, it is assumed that the information is correct unless otherwise stated. No responsibility is accepted by Terra Firma Laboratories for incomplete or inaccurate data supplied by others.

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3 Construction Method

3.1 Subgrade Preparation

At the time of subgrade inspection the following was observed:

- Subgrade preparation involved stripping the site of topsoil, vegetation and organic matter to a depth of approximately 200mm below existing levels.
- The site was cleared of all trees and stumps to the extent necessary for the fill placement to proceed
- The roots of all trees and any debris was removed from site prior to any fill placement

The sub-grade area was then proof-rolled to confirm it was capable of withstanding test rolling without visible deformation or springing and any areas observed to be soft or otherwise unsuitable were rectified. The sub-grade was watered and scarified prior to fill placement to aid layer bonding.

3.2 Fill Placement

The contractor was observed to have suitable construction equipment and plant available on-site during the construction period for use in the fill placement.

All fill was placed in layers of thicknesses not exceeding 300mm. At the completion of a placed layer, compaction testing was performed to confirm appropriate compaction had been achieved and supported the observations made. It should be noted that the compaction tests are representative samples of the fill placed and support the visual assessment of the works completed. Each house lot does not necessarily require a compaction test to have been conducted within the house allotment but may have been verified by testing conducted within up to a 2500m² area of the house lot.

Final fill placement levels were verified against design level by others. For the purposes of this report, it was observed that finished levels were in accordance with levels marked on site by survey markers.

The final 300mm of material placed across the site was placed as a topsoil layer or growing medium and should be considered as non-structural, as it was placed in an uncontrolled manner, as allowed by specifications and placement of the final 300mm of material was not observed by the GITA.

4 Construction Verification

Compaction Verification testing is summarized in a detailed test register with test certificates attached provided in Appendix 2: *Compaction Test Register and Test Certificates*. A test location

plan (P21553D1, Appendix 1) providing a schematic of test locations across the extent of scope of works for every placed layer of fill is also documented.

A total of 15 density tests (Hilf method in accordance with 1289 5.7.1) were undertaken with 0 failed results. The results summarised in the compaction test register (Appendix 2) confirm that for every layer of fill placed in a specific work area, satisfactory testing was completed.

5 Statement of Compliance

The intention of this report is to provide a description of the earthworks construction for Stage 14 at Kingbird Estate. For completed fill areas of greater than 300mm, and for works completed between 20/03/2021 and 23/04/2021, earthworks construction activities were conducted under the full time supervision of the Geotechnical Inspection and Testing Authority. Inspections and testing of the fill areas at this site indicate that both sub grade preparation and fill placement have been conducted in accordance with the specification. The earthworks construction for Stage 14 of Kingbird Estate was observed to be constructed in compliance with the requirements of the Technical Specification.



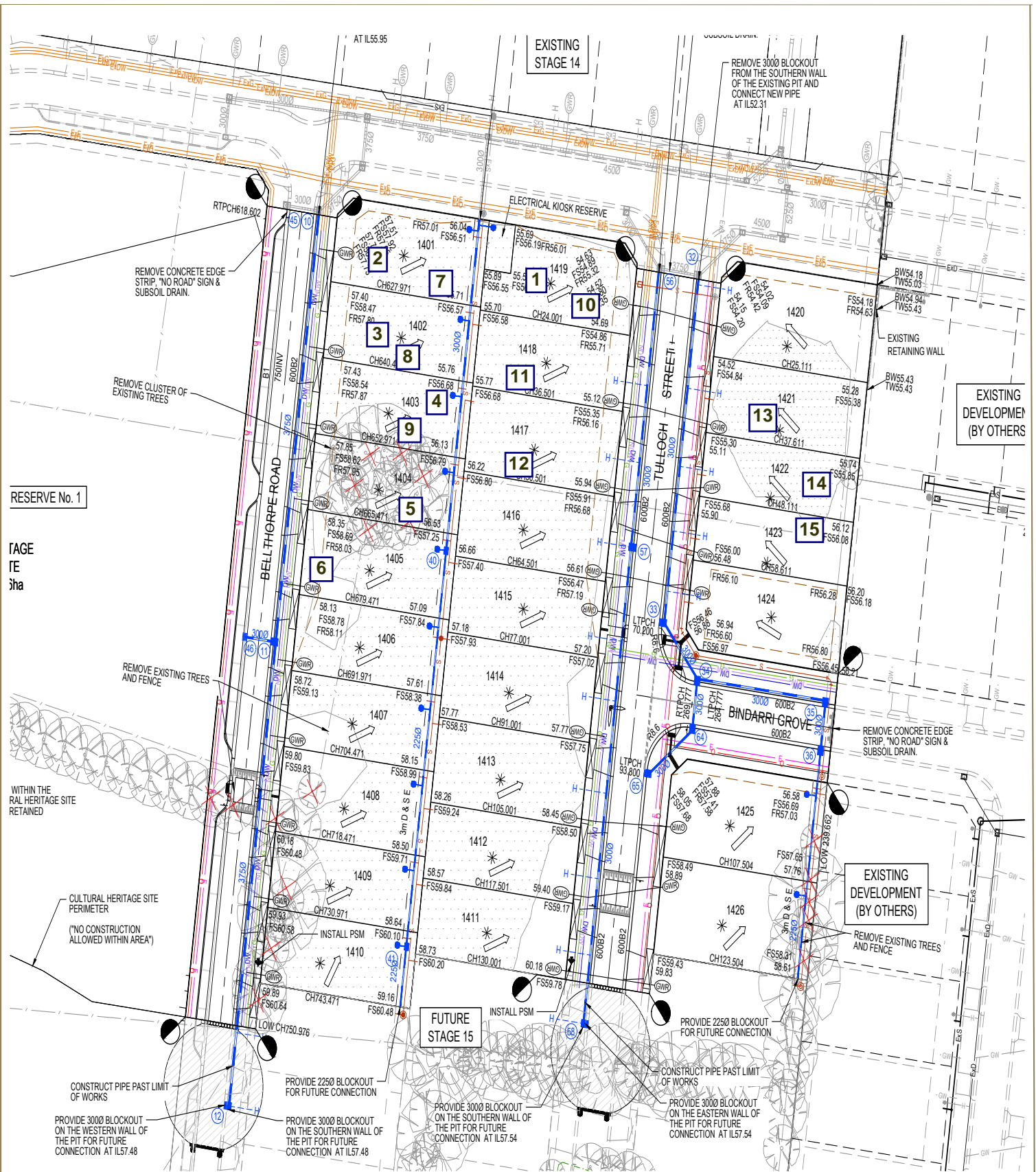
Your Worksite is Our Laboratory.

Appendix 1: Test Location Plan

Our Head Office
47 National Ave
Pakenham, VIC 3810

Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

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Page 1 of 2



SERVICE OFFSET TABLE

Road Width (m)		Kerb Type		Verge Width (m)	
Inv to Inv	Back to Back	Nth/West	Sth/East	Nth/West	Sth/East
7.3	7.6	600B2	600B2	5.35	5.35
7.3	7.6	600B2	600B2	5.35	5.35

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
BELLTHORPE ROAD (N-S)	E	2.10	E	2.60	E	3.10	W	1.10	W	0.5	-	-
BINDARRI GROVE	N	2.10	N	2.60	N	3.10	S	2.60	N	1.85	N	1.00



Our Head Office
47 National Ave
Pakenham, VIC 3860

Our Laboratories
Pakenham 03 9769 5799
Deer Park 03 8348 5596
Bibra Lake 08 9395 7220

Test Location Plan
not to scale

Client: Kingbird Developments

Project: Kingbird Estate, Stage 14

Reference: P21553 D1



Your Worksite is Our Laboratory.

Appendix 2: Compaction Test Register and Test Certificates



Compaction Test Register

Client: Kingbird Developments
Project: Kingbird Estate Stage 14

Project No: P21553
Specification: 95%

Date:	Test No:	Layer:	Retest of:	Density:	Pass/Fail:	Lot No:	Report No:
20/03/2021	1	Layer 3		100.5%	Pass	Lot 1419	P21553-1
20/03/2021	2	Layer 2		103.5%	Pass	Lot 1401	P21553-1
20/03/2021	3	Layer 1		100.0%	Pass	Lot 1402	P21553-1
22/03/2021	4	Layer 2		102.5%	Pass	Lot 1403	P21553-2
22/03/2021	5	Layer 2		99.5%	Pass	Lot 1404	P21553-2
22/03/2021	6	Layer 2		97.5%	Pass	Lot 1405	P21553-2
23/03/2021	7	Layer 3		97.0%	Pass	Lot 1401	P21553-3
23/03/2021	8	Layer 3		103.0%	Pass	Lot 1402	P21553-3
23/03/2021	9	Layer 3		97.0%	Pass	Lot 1403	P21553-3
29/03/2021	10	Layer 2		102.5%	Pass	Lot 1419	P21553-4
29/03/2021	11	Layer 1		102.0%	Pass	Lot 1418	P21553-4
29/03/2021	12	Layer 2		102.5%	Pass	Lot 1417	P21553-4
23/04/2021	13	Layer 1		108.0%	Pass	Lot 1421	P21553-5
23/04/2021	14	Layer 1		103.5%	Pass	Lot 1422	P21553-5
23/04/2021	15	Layer 1		108.5%	Pass	Lot 1423	P21553-5

Material Test Report

Report Number: P21553-1
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Client Added
Date Issued: 04/05/2021
Client: King Bird Development
 29 Berwick Springs Promenade, Narre Warren South VIC 3805
Contact: Junsheng Lui
Project Number: P21553
Project Name: Kingbird Estate Stage 14
Project Location: Cranbourne
Client Reference: 6431
Work Request: 5635
Date Sampled: 20/03/2021 16:30
Dates Tested: 22/03/2021 - 22/03/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Kingbird Estate Stage 14 Level One
Material: silty CLAY
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	P21-5635A	P21-5635B	P21-5635C
Test Number	1	2	3
Date Tested	20/03/2021	20/03/2021	20/03/2021
Time Tested	**	**	**
Test Request #/Location	Lot 1419	Lot 1401	Lot 1402
Layer / Reduced Level	Layer 3	Layer 2	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	silty CLAY	silty CLAY	silty CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	1.85	1.97	1.85
Field Moisture Content %	17.3	19.4	15.8
Field Dry Density (FDD) t/m ³	1.58	1.65	1.60
Peak Converted Wet Density t/m ³	1.85	1.90	1.85
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	21.0	18.1
Adj. Field Moisture Content % (AS1289.5.4.1)	17.3	19.4	15.8
Moisture Ratio % (AS1289.5.4.1)	83.0	92.5	87.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	3.5	1.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	100.5	103.5	100.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P21553-2
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Client Added
Date Issued: 04/05/2021
Client: King Bird Development
 29 Berwick Springs Promenade, Narre Warren South VIC 3805
Contact: Junsheng Lui
Project Number: P21553
Project Name: Kingbird Estate Stage 14
Project Location: Cranbourne
Client Reference: 7271
Work Request: 5648
Date Sampled: 24/03/2021
Dates Tested: 24/03/2021 - 24/03/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Kingbird st.14 Level One
Material: Silty Caly
Material Source: Onsite



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Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-5648A	P21-5648B	P21-5648C
Test Number	7	8	9
Date Tested	23/03/2021	23/03/2021	23/03/2021
Time Tested	15:30	15:40	15:45
Test Request #/Location	Lot 1401	Lot 1402	Lot 1403
Layer / Reduced Level	Layer 3	Layer 3	Layer 3
Thickness of Layer (mm)	300	300	300
Soil Description	silty Clay	silty Clay	silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	1.92	1.99	1.85
Field Moisture Content %	25.1	25.7	17.9
Field Dry Density (FDD) t/m ³	1.54	1.58	1.57
Peak Converted Wet Density t/m ³	1.98	1.93	1.90
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	26.6	28.5	20.7
Adj. Field Moisture Content % (AS1289.5.4.1)	25.1	25.7	17.9
Moisture Ratio % (AS1289.5.4.1)	94.5	90.0	86.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	1.5	2.5	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	97.0	103.0	97.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P21553-3
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Client Added
Date Issued: 04/05/2021
Client: King Bird Development
 29 Berwick Springs Promenade, Narre Warren South VIC 3805
Contact: Junsheng Lui
Project Number: P21553
Project Name: Kingbird Estate Stage 14
Project Location: Cranbourne
Client Reference: 06432
Work Request: 5640
Date Sampled: 22/03/2021 15:30
Dates Tested: 22/03/2021 - 24/03/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 98%
Location: King Bird St 14 Level 1 Fill
Material: Silty Clay
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Chris Caulfield
 Project Manager

NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-5640A	P21-5640B	P21-5640C
Test Number	4	5	6
Date Tested	22/03/2021	22/03/2021	22/03/2021
Time Tested	15:30	15:30	15:30
Test Request #/Location	Lot 1403	Lot 1404	Lot 1405
Layer / Reduced Level	Layer 2	Layer 2	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	7	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	0	0
Field Wet Density (FWD) t/m ³	2.01	1.97	1.96
Field Moisture Content %	16.1	16.3	17.8
Field Dry Density (FDD) t/m ³	1.75	1.70	1.66
Peak Converted Wet Density t/m ³	**	1.98	2.00
Adjusted Peak Converted Wet Density t/m ³	1.96	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	15.2	17.8	17.1
Adj. Field Moisture Content % (AS1289.5.4.1)	15.0	16.3	17.8
Moisture Ratio % (AS1289.5.4.1)	**	91.5	104.0
Adjusted Moisture Ratio % (AS1289.5.4.1)	99.0	**	**
Moisture Variation (Wv) %	**	1.5	-0.5
Adjusted Moisture Variation %	0.0	**	**
Hilf Density Ratio (%)	102.5	99.5	97.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report


Report Number: P21553-4
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Client Added
Date Issued: 04/05/2021
Client: King Bird Development
 29 Berwick Springs Promenade, Narre Warren South VIC 3805
Contact: Junsheng Lui
Project Number: P21553
Project Name: Kingbird Estate Stage 14
Project Location: Cranbourne
Client Reference: 06433
Work Request: 5682
Date Sampled: 30/03/2021 08:04
Dates Tested: 30/03/2021 - 31/03/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: KingBird St14 Level 1 Fill
Material: CLAY
Material Source: Onsite



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 Approved Signatory: Chris Caulfield
 Project Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-5682A	P21-5682B	P21-5682C
Test Number	10	11	12
Date Tested	29/03/2021	29/03/2021	29/03/2021
Time Tested	15:00	15:00	15:00
Test Request #/Location	Lot 1419	Lot 1418	Lot 1417
Layer / Reduced Level	Layer 2	Layer 1	Layer 2
Thickness of Layer (mm)	300	300	300
Soil Description	CLAY	CLAY	CLAY
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m ³	2.10	2.07	2.09
Field Moisture Content %	24.0	21.4	22.0
Field Dry Density (FDD) t/m ³	1.69	1.70	1.71
Peak Converted Wet Density t/m ³	2.04	2.03	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	0.0	0.5	1.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	102.5	102.0	102.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: P21553-5
Issue Number: 3 - This version supersedes all previous issues
Reissue Reason: Client Added
Date Issued: 04/05/2021
Client: King Bird Development
 29 Berwick Springs Promenade, Narre Warren South VIC 3805
Contact: Junsheng Lui
Project Number: P21553
Project Name: Kingbird Estate Stage 14
Project Location: Cranbourne
Client Reference: 07184
Work Request: 5839
Date Sampled: 23/04/2021 15:00
Dates Tested: 23/04/2021 - 26/04/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95%
Location: Kingbird Stage 14
Material: silty Clay
Material Source: Onsite



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Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Chris Caulfield
 Project Manager
 NATA Accredited Laboratory Number: 15357

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	P21-5839A	P21-5839B	P21-5839C
Test Number	13	14	15
Date Tested	23/04/2021	23/04/2021	23/04/2021
Time Tested	15:00	15:00	15:00
Test Request #/Location	Lot 1421	Lot 1422	Lot 1423
Layer / Reduced Level	Layer 1	Layer 1	Layer 1
Thickness of Layer (mm)	300	300	300
Soil Description	silty Clay	silty Clay	silty Clay
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Percentage of Dry Oversize (%) (AS1289.5.4.1)	0	0	0
Field Wet Density (FWD) t/m ³	2.05	2.07	2.04
Field Moisture Content %	27.4	21.9	23.7
Field Dry Density (FDD) t/m ³	1.61	1.70	1.65
Peak Converted Wet Density t/m ³	1.90	2.00	1.88
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Adj. Optimum Moisture Content % (AS1289.5.4.1)	27.7	21.2	24.1
Adj. Field Moisture Content % (AS1289.5.4.1)	27.4	21.9	23.7
Moisture Ratio % (AS1289.5.4.1)	99.0	103.5	98.5
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	**
Moisture Variation (Wv) %	0.5	-0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	108.0	103.5	108.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1401

Terra Firma Laboratories was engaged by *Kingbird Developments* as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 *Guidelines for Earthworks for Commercial and Residential Development*.

Lot 1401 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1402

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1402 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1403

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1403 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1404

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1404 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1405

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1405 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1406

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1406 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1407

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1407 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1408

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1408 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1409

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1409 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1410

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1410 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1411

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1411 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1412

Terra Firma Laboratories was engaged by *Kingbird Developments* as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 *Guidelines for Earthworks for Commercial and Residential Development*.

Lot 1412 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1413

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1413 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1414

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1414 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1415

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1415 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1416

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1416 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1417

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1417 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1418

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1418 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1419

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1419 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1420

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1420 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1421

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1421 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1422

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1422 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1423

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1423 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager

14 May 2021

TO WHOM IT MAY CONCERN

Re: Kingbird Estate Stage 14
Cranbourne
Lot 1424

Terra Firma Laboratories was engaged by Kingbird Developments as the Geotechnical and Inspection Testing Authority (GITA) to provide Level 1 supervision and testing on the earthworks component for Kingbird Estate, Stage 14, Cranbourne in accordance with Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Development.

Lot 1424 as defined in drawing Ref 010 P1 from *Beveridge Williams*, provided by the contractor, was included in the scope of works.

With regard to any fill placement please consider the following:

- Controlled fill was placed up to 300mm below finished surface level. The final 300mm material is considered top soil and organic matter and not controlled fill.
- Verification of finished surface level to design levels is outside of the scope of the GITA Inspection and Verification report.
- Compaction tests results documented in a level 1 GITA report verify the construction methods observed on site are satisfactory. Testing is conducted with random sampling across an area of work that is defined in the Australian Standard as a "lot" which is "an area of work that is essentially homogenous in relation to material type and moisture condition, rolling response and compaction technique, and which has been used for the assessment of the relative compaction of an area of work" (AS 3798-2007). As such, any test completed is representative of an area that may be up to 2500m² in area and across several house lots.

A GITA Inspection Verification report (Reference: P21553A) has been published on 14 May 2021 and documents that the allotment earthworks were carried out in accordance with AS3798 and in compliance with the project specification provided by the contractor.

For and on behalf of

Terra Firma Laboratories



C Caulfield
Project Manager