



LIM Report

This information has been supplied by the Vendor or the Vendor's agents. Accordingly, Optimize Realty Limited cannot guarantee its accuracy and reliability.

All intending Purchasers are advised to conduct their own due diligence investigation into the same. To the maximum extent permitted by law, Optimize Realty Limited do not accept any responsibility to any person for the accuracy of the information herein.



Whangarei
District Council

Private bag 9088, Whangarei 0148, New Zealand
F +64 9 430 4200 | 0800 WDC INFO | 0800 932 463 F +64 9 438 7632
E mailroom@wdc.govt.nz www.wdc.govt.nz

LAND INFORMATION MEMORANDUM NO: LM2300968

Received: 22 Aug 2023

Issued: 30 Aug 2023

**Section 44A, Local Government Official Information
And Meetings Act 1987**

APPLICANT

C I A Guy
171A Tara Road
RD 2
Kaiwaka 0573

SITE INFORMATION

Property ID: 172212
Street Address: 41 Kaurinui Crescent One Tree Point 0118
Legal Description: LOT 407 DP 564989

This is a Land Information Memorandum only.

Full payment has been made for this Land Information Memorandum.

1: PROPERTY DETAILS.

- Location Map
- Deposited Plan: DP 564989
- Record of Title: 1009463

This property is subject to a Consent Notice, information attached.

- Interest Number 12201143.6. – Dated 03/11/2021

2: INFORMATION IDENTIFYING EACH (IF ANY) SPECIAL FEATURE OR CHARACTERISTIC OF THE LAND CONCERNED, INCLUDING BUT NOT LIMITED TO POTENTIAL EROSION, AVULSION, FALLING DEBRIS, SUBSIDENCE, SLIPPAGE, ALLUVION, OR INUNDATION, OR LIKELY PRESENCE OF HAZARDOUS CONTAMINANTS, BEING A FEATURE OR CHARACTERISTIC THAT IS KNOWN TO THE WHANGAREI DISTRICT COUNCIL.

Whangarei District Council holds indicative information on land stability hazard for Whangārei. Information on land stability, including an interactive web tool, can be found on the WDC website. The Whangarei District Council may require site-specific investigations before granting future subdivision or building consent for the property, the level of investigation or assessment would depend on the level of stability risk of the area the property is in.

See map attached indicating this property is located within low zone and refer:

<https://www.wdc.govt.nz/Services/My-property-and-rates/Natural-hazards>

Whangarei District Council notified Plan Change 1 - Natural Hazards (PC1) on the 31st of May 2023. The Plan Change proposes to replace the existing Natural Hazards chapter in the District Plan Operative in Part 2022 with a new Natural Hazards chapter and new rules for subdivision and land use in hazard prone areas.

For more information on the proposed plan change please visit:

<https://www.wdc.govt.nz/Services/Planning/District-Plan-changes/Current-plan-changes>

This property has been identified as having information available under Stormwater Catchment and Flood Management.

Any overland flow path shown provides an indicative understanding of routes where surface stormwater may flow during rainfall events.

Any depression storage area/surface depression ponding area shown provides an indicative extent of ponding that may form occur if the outlet to the ponding area is blocked or where the outlet capacity is exceeded eg a pipe is either blocked or the design capacity of the pipe is exceeded during a rainfall event.

Refer Pipeline Assets map attached and for further information please contact the Waste and Drainage Department on 09 430 4200

This property is in an area that has been identified to contain:

- Acid Sulphate Soil Risk

A copy of the Opus Acid Sulphate Soil guidance document dated August 2015 can be found on the Whangarei District Council website.

For information refer:

<https://www.wdc.govt.nz/Council/Council-documents/Policies/Acid-Sulphate-Soil-Planning-Policy>

Whangarei District Council holds information on the liquefaction vulnerability of the district. The site is located within an area classified as Liquefaction vulnerability category is possible.

The report was prepared by Tonkin & Taylor Ltd to provide WDC with a district wide liquefaction vulnerability assessment to help inform spatial planning and assessment of landuse, subdivision and building consents.

To view the report and access maps please use the following link:

<https://www.wdc.govt.nz/Services/My-property-and-rates/Natural-hazards>

Please note: To view the liquefaction layer your map scale must be greater than 1:5000.

3: INFORMATION ON COUNCIL AND PRIVATE UTILITY (SEWERAGE, WATER & STORMWATER) SERVICES.

Information relating to Council Utility Services for this property is attached.

- Pipeline Assets Map

As-Built, House Connection and/or Drainage Plan for this property from the building file is attached.

- As Built Services Plan – From BC2200495

Pursuant to Section 51 of the Building Act 2004 and Section 451 of the Local Government Act 1974, any future building work that encroaches upon any Council Pipe or Utility must obtain written consent from the Waste & Drainage and/or Water Services Manager/s prior to works commencing.

For information refer:

<https://www.wdc.govt.nz/Council/Council-documents/Policies/Building-Over-Public-Sewers-Policy>

This property is within the area of benefit of a pressure sewer system.

See map attached and for the Homeowners guide and key requirements for maintaining the system please refer:

<https://www.wdc.govt.nz/Services/Water-services/Wastewater/Pressure-Sewer-Systems>

4: INFORMATION RELATING TO VALUATION, LAND, AND WATER RATES. INFORMATION FROM WHANGAREI DISTRICT COUNCIL RECORDS.

Information on Valuation, Rates and Water Meter location (if applicable) for the current financial year, is attached.

Outstanding water balance as at today's date is \$0.00.
A final reading of the water meter will be required.

5: INFORMATION CONCERNING ANY PERMIT, CONSENT, CERTIFICATE, NOTICE ORDER, OR REQUISITION AFFECTING THE LAND OR ANY BUILDING ON THE LAND PREVIOUSLY ISSUED BY THE WHANGAREI DISTRICT COUNCIL OR BUILDING CERTIFIER (WHETHER UNDER THE BUILDING ACT 1991 AND/OR 2004 OR ANY OTHER ACT).

Copy of a Building Consent and Code Compliance Certificate issued for this property is attached.

- BC2200495 – New Dwelling
Building Consent – Issued 10/06/2022
Code Compliance Certificate – Issued 16/01/2023

Copy of Applications (e.g. Vehicle Crossing Permit and/or Public Utility Service) for this property are attached.

- Vehicle Crossing Permit
VC220104 – Issued 02/06/2022
- Pressurised Sewer, Relocation of Water Connection, and Installation of Water Meter
PU221209 – Approved 15/06/2022

6: INFORMATION RELATING TO THE USE TO WHICH THE LAND MAY BE PUT AND ANY CONDITIONS ATTACHED TO THAT USE.

This property is located in a General Residential Zone.
See map attached and refer to Part 3: Area Specific Matters - Chapters - Residential zones.

<https://www.wdc.govt.nz/Services/Property/Planning/Operative-District-Plan>

7: INFORMATION WHICH IN TERMS OF ANY OTHER ACT HAS BEEN NOTIFIED TO THE WHANGAREI DISTRICT COUNCIL BY ANY STATUTORY ORGANISATION HAVING THE POWER TO CLASSIFY LAND OR BUILDINGS FOR ANY PURPOSE.

This property is known to contain/or is in the vicinity of Archaeological site/s, information attached.

- Q07/1419 – Midden/Oven
- Q07/1420 – Midden/Oven
- Q07/1421 – Midden/Oven
- Q07/1422 – Midden /Oven

For further information contact the Area Archaeologist at Heritage New Zealand, Northland Area Office on ph. 09 407 0470 or infonorthland@heritage.org.nz

8: OTHER INFORMATION CONCERNING THE LAND AS WHANGAREI DISTRICT COUNCIL CONSIDERS, AT COUNCILS DISCRETION, TO BE RELEVANT.

Whangarei District Council recommends that all Whangarei District residents visit the Northland Regional Council website, <https://www.nrc.govt.nz/> for information on Civil Defence hazard response. This information includes Tsunami evacuation zones, maps and community response plans for flooding and extreme weather events etc.

Copies of site plan, floor plan and elevations are attached for your information.

A copy of a Ground Conditions Assessment Report by Wilton Joubert approved 09/06/2022 from BC2200495 is attached for your information.

9: INFORMATION RELATING TO ANY UTILITY SERVICE OTHER THAN COUNCILS SUCH AS TELEPHONE, ELECTRICITY, GAS AND REGIONAL COUNCIL WILL NEED TO BE OBTAINED FROM THE RELEVANT UTILITY OPERATOR.

Further information may be available from other authorities; Northpower; Spark; Vector Limited; etc.

DISCLAIMER

Land Information Memoranda (LIM) are prepared under the provisions of Section 44A of the Local Government Official Information and Meetings Act 1987. An inspection of the land or building(s) has not been completed for the purposes of preparing the LIM. It has been compiled from the records held by Whangarei District Council. The information contained in the LIM is correct at the date of issue.

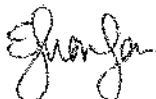
A LIM is prepared for the use of the applicant and may not be able to be relied on by other parties.

Advice from an independent professional such as a lawyer or property advisor should be sought regarding the contents of this LIM.

Additional information regarding the land or buildings (such as resource consents and other permissions and restrictions) not contained in this LIM may be held by Northland Regional Council. For further information contact Northland Regional Council on (09) 470 1200, 0800 002 004 or www.nrc.govt.nz.

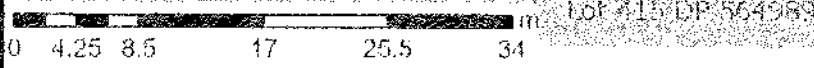
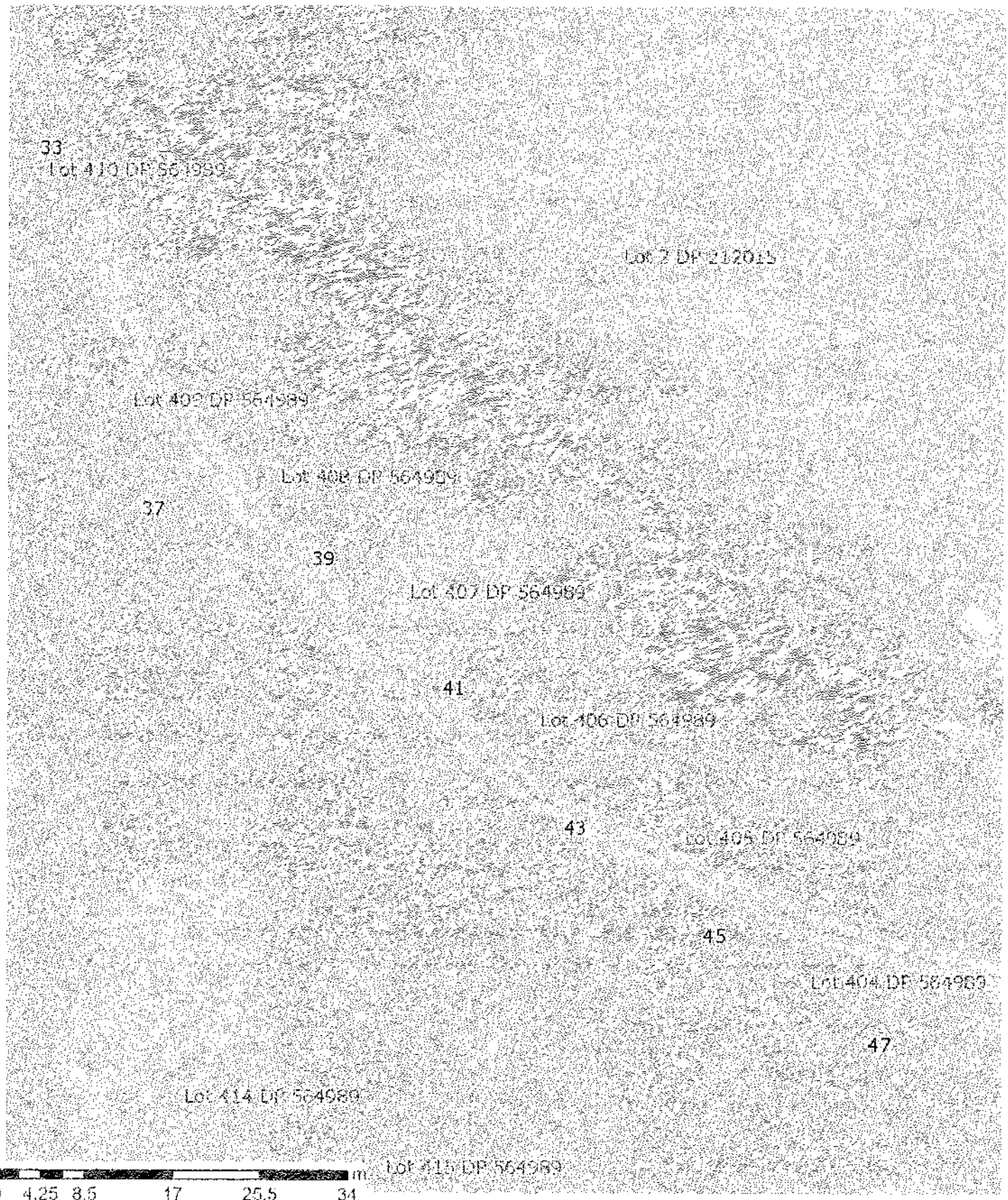
A LIM is not a suitable search of Council's records for the purposes of the National Environmental Standards (NES) for soil contamination of a potentially contaminated site.




Signed for and on behalf of Council:



Elle Swanson
Property Assessment Officer

Property Map



-  New Subdivisions
-  Proposed Pre 223
-  223 Certificates

New subdivisions: Proposed as accepted, pre-223 and 223 Certificate with set Conditions.

Land Parcel boundaries are indicative only and are not survey accurate. Area measurement is derived from the displayed geometry and is approximate. True accurate boundary dimensions can be obtained from 1:100 survey and title plans.

28 August 2023
Scale 1:500





Title Plan - DP 564989

Survey Number DP 564989
Surveyor Reference 14333- 004 - Stage 4 The Landings
Surveyor Donald Alistair Turner
Survey Firm CCL 2015 Ltd
Surveyor Declaration I Donald Alistair Turner, being a licensed cadastral surveyor, certify that:
(a) this dataset provided by me and its related survey are accurate, correct and in accordance with the Cadastral Survey Act 2002 and the Rules for Cadastral Survey 2010, and
(b) the survey was undertaken by me or under my personal direction.
Declared on 21 Feb 2022 07:51 AM

Survey Details

Dataset Description Lots 265-270, 319, 380- 428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to Vest in Whangarei District Council and Lot 2000 being a subdivision of Lot 1000 DP 548998 and Lot 2 DP 358186
Status Deposited
Land District North Auckland
Submitted Date 21/02/2022
Survey Class Class A
Survey Approval Date 21/02/2022
Deposit Date 21/02/2022

Territorial Authorities

Whangarei District

Comprised In

RT 942323
RT 237117

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Area J Deposited Plan 564989	Easement		
Lot 380 Deposited Plan 564989	Fee Simple Title	0.0707 Ha	1009366
Lot 381 Deposited Plan 564989	Fee Simple Title	0.0654 Ha	1009441
Lot 382 Deposited Plan 564989	Fee Simple Title	0.0652 Ha	1009367
Lot 383 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009368
Lot 384 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009369
Lot 385 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009370
Lot 386 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009442
Lot 387 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009443
Lot 388 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009444
Lot 389 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009445
Lot 390 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009446
Lot 391 Deposited Plan 564989	Fee Simple Title	0.0601 Ha	1009447
Lot 392 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009448
Lot 393 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009449
Lot 394 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009450
Lot 395 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009451
Lot 396 Deposited Plan 564989	Fee Simple Title	0.0609 Ha	1009452



Title Plan - DP 564989

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 397 Deposited Plan 564989	Fee Simple Title	0.0651 Ha	1009453
Lot 398 Deposited Plan 564989	Fee Simple Title	0.0771 Ha	1009454
Lot 399 Deposited Plan 564989	Fee Simple Title	0.0620 Ha	1009455
Lot 400 Deposited Plan 564989	Fee Simple Title	0.0696 Ha	1009456
Lot 401 Deposited Plan 564989	Fee Simple Title	0.0684 Ha	1009457
Lot 402 Deposited Plan 564989	Fee Simple Title	0.0639 Ha	1009458
Lot 403 Deposited Plan 564989	Fee Simple Title	0.0639 Ha	1009459
Lot 404 Deposited Plan 564989	Fee Simple Title	0.0643 Ha	1009460
Lot 405 Deposited Plan 564989	Fee Simple Title	0.0682 Ha	1009461
Lot 406 Deposited Plan 564989	Fee Simple Title	0.0671 Ha	1009462
Lot 407 Deposited Plan 564989	Fee Simple Title	0.0597 Ha	1009463
Lot 408 Deposited Plan 564989	Fee Simple Title	0.0550 Ha	1009464
Lot 409 Deposited Plan 564989	Fee Simple Title	0.0660 Ha	1009465
Lot 410 Deposited Plan 564989	Fee Simple Title	0.0601 Ha	1009466
Lot 411 Deposited Plan 564989	Fee Simple Title	0.0602 Ha	1009467
Lot 412 Deposited Plan 564989	Fee Simple Title	0.0596 Ha	1009468
Lot 413 Deposited Plan 564989	Fee Simple Title	0.0609 Ha	1009469
Lot 414 Deposited Plan 564989	Fee Simple Title	0.0577 Ha	1009371
Lot 415 Deposited Plan 564989	Fee Simple Title	0.0627 Ha	1009372
Lot 416 Deposited Plan 564989	Fee Simple Title	0.0549 Ha	1009373
Lot 417 Deposited Plan 564989	Fee Simple Title	0.0589 Ha	1009374
Lot 418 Deposited Plan 564989	Fee Simple Title	0.0551 Ha	1009375
Lot 419 Deposited Plan 564989	Fee Simple Title	0.0589 Ha	1009376
Lot 420 Deposited Plan 564989	Fee Simple Title	0.0551 Ha	1009377
Lot 421 Deposited Plan 564989	Fee Simple Title	0.0590 Ha	1009378
Lot 422 Deposited Plan 564989	Fee Simple Title	0.0550 Ha	1009379
Lot 423 Deposited Plan 564989	Fee Simple Title	0.0590 Ha	1009380
Lot 424 Deposited Plan 564989	Fee Simple Title	0.0589 Ha	1009381
Lot 425 Deposited Plan 564989	Fee Simple Title	0.0631 Ha	1009382
Lot 426 Deposited Plan 564989	Fee Simple Title	0.0585 Ha	1009383
Lot 427 Deposited Plan 564989	Fee Simple Title	0.0604 Ha	1009384
Lot 428 Deposited Plan 564989	Fee Simple Title	0.0651 Ha	1009385
Lot 265 Deposited Plan 564989	Fee Simple Title	0.0721 Ha	1009415
Lot 266 Deposited Plan 564989	Fee Simple Title	0.0604 Ha	1009416
Lot 267 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009417
Lot 268 Deposited Plan 564989	Fee Simple Title	0.0650 Ha	1009418
Lot 269 Deposited Plan 564989	Fee Simple Title	0.0652 Ha	1009386
Lot 270 Deposited Plan 564989	Fee Simple Title	0.0602 Ha	1009387
Lot 319 Deposited Plan 564989	Fee Simple Title	0.0600 Ha	1009431
Lot 713 Deposited Plan 564989	Fee Simple Title	0.0998 Ha	Multiple
Lot 551 Deposited Plan 564989	Vesting on Deposit for Local Purpose Reserve	1.1628 Ha	1009439
Lot 712 Deposited Plan 564989	Fee Simple Title	0.0118 Ha	Multiple
Lot 709 Deposited Plan 564989	Fee Simple Title	0.0282 Ha	Multiple



Title Plan - DP 564989

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 604 Deposited Plan 564989	Vesting on Deposit for Local Purpose Reserve Road	0.1014 Ha 1.5550 Ha	1009388
Lot 2000 Deposited Plan 564989	Fee Simple Title	26.6464 Ha	1009470
Area A Deposited Plan 564989	Easement		
Area B Deposited Plan 564989	Easement		
Area C Deposited Plan 564989	Easement		
Area D Deposited Plan 564989	Easement		
Area E Deposited Plan 564989	Easement		
Area F Deposited Plan 564989	Easement		
Area G Deposited Plan 564989	Easement		
Total Area		<hr/> 33.0640 Ha	

Schedule / Memorandum

North Auckland

DP 564989

Territorial Authority (the Council)

Whangarei District Council

Memorandum of Easements (Pursuant to s243 Resource Management Act 1991)			
Purpose	Shown	Servient Tenement (Burdened land)	Dominant Tenement (Benefited land)
Right to convey water	Lot 709	Lot 709	Lots 380, 381, 386 & 387 Hereon
	Lot 712	Lot 712	Lots 410 & 412 Hereon
	Lot 713	Lot 713	Lots 415, 417, 419, 421, 423, 424 & 425 Hereon

Memorandum of Easements in Gross (Pursuant to s243 Resource Management Act 1991)			
Purpose	Shown	Servient Tenement	Grantee
Right to drain water & sewage	Lot 709	Lot 709	Whangarei District Council
	Lot 712	Lot 712	
	Lot 713	Lot 713	
Right to convey electricity & telecommunications	Lot 709	Lot 709	Northpower Limited & Northpower Fibre Limited
	Lot 712	Lot 712	
	Lot 713	Lot 713	
Right to convey water	A	Lot 2000	Whangarei District Council
	B		
Right to drain sewage	A	Lot 2000	Whangarei District Council
	B		
Right of Way	B, C, D, E, F, G	Lot 2000	Whangarei District council

North Auckland

DP 564989

Territorial Authority (the Council)

Whangarei District Council

Schedule of Existing Easements in Gross			
Purpose	Shown	Servient Tenement (Burdened land)	Creating Document Reference
Right of Way	J	Lot 2000	EI 11747376.19
Right to convey electricity, telecommunications & water	J	Lot 2000	EI 11747376.19
Right to drain water & sewage	J	Lot 2000	EI 11747376.19

Amalgamation Conditions

The following amalgamations are required as part of this subdivision – LINZ Ref. 1693818

That Lot 709 hereon (Legal Access) be held as to four undivided one-fourth shares by the owners of Lots 380, 381, 386 and 387 hereon as tenants in common in the said shares and that Individual Computer Registers be issued in accordance herewith. (LINZ Ref. 1693818)

That Lot 712 hereon (Legal Access) be held as to two undivided one-half shares by the owners of Lots 410 and 412 hereon as tenants in common in the said shares and that Individual Computer Registers be issued in accordance herewith. (LINZ Ref. 1693818)

That Lot 713 hereon (Legal Access) be held as to seven undivided one-seventh shares by the owners of Lots 415, 417, 419, 421, 423, 424 and 425 hereon as tenants in common in the said shares and that Individual Computer Registers be issued in accordance herewith. (LINZ Ref. 1693818)

Notes

Lot 1000 is Road to Vest on Deposit with Whangarei District Council.

Lot 551 is to Vest on Deposit for Local Purpose Reserve (Drainage) with Whangarei District Council.

Lot 604 is to Vest on Deposit for Local Purpose Reserve (Access Reserve) with Whangarei District Council

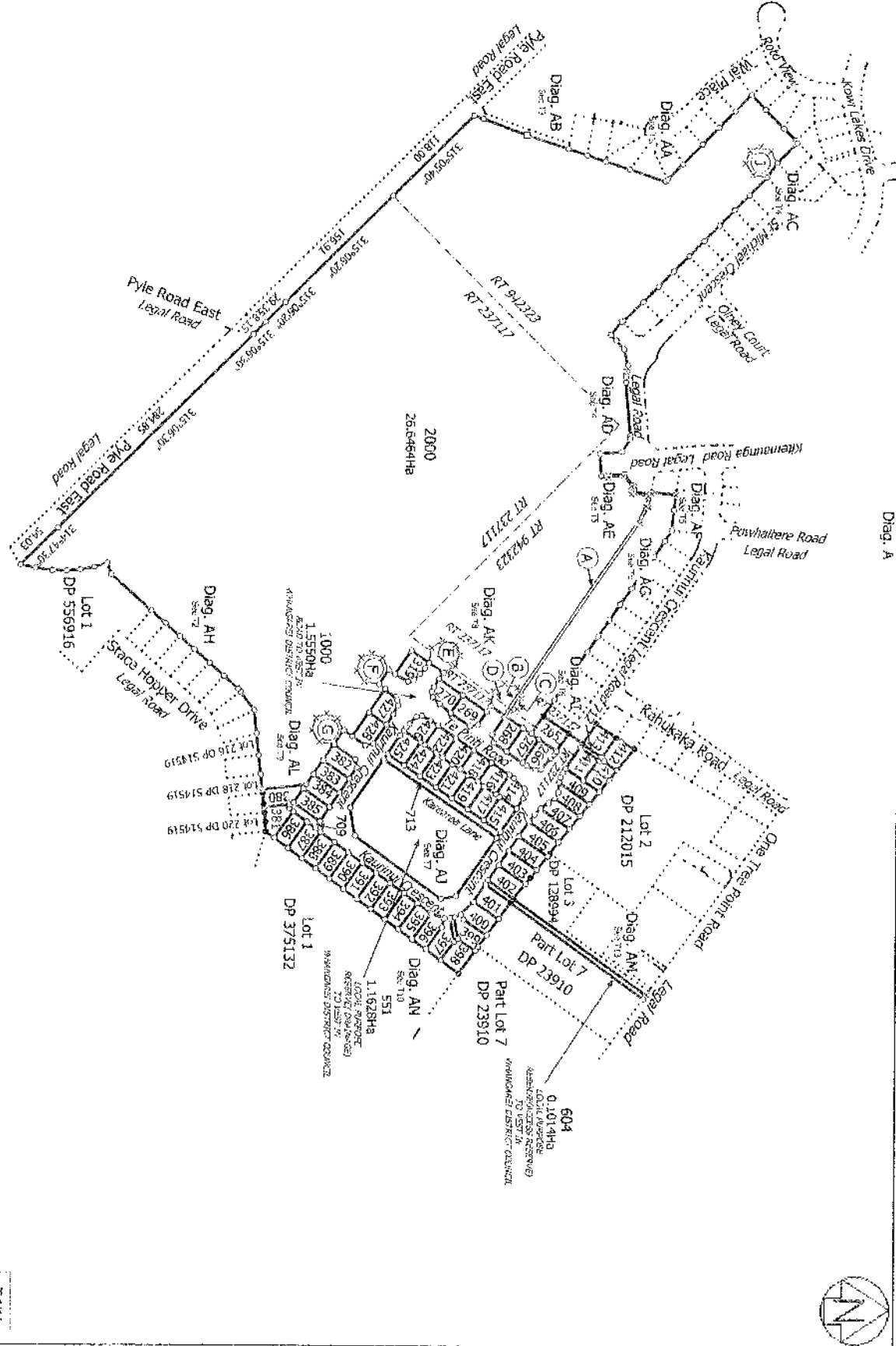
Land District: North Auckland
 Digitally Generated Plan
 Generated on: 22/09/2022 21:20:06 Page 6 of 19

Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve) 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whannapai District Council and Lot 2000 herein a

Surveyor: Donald Alistair Turner
 Firm: OCL 2015 Ltd

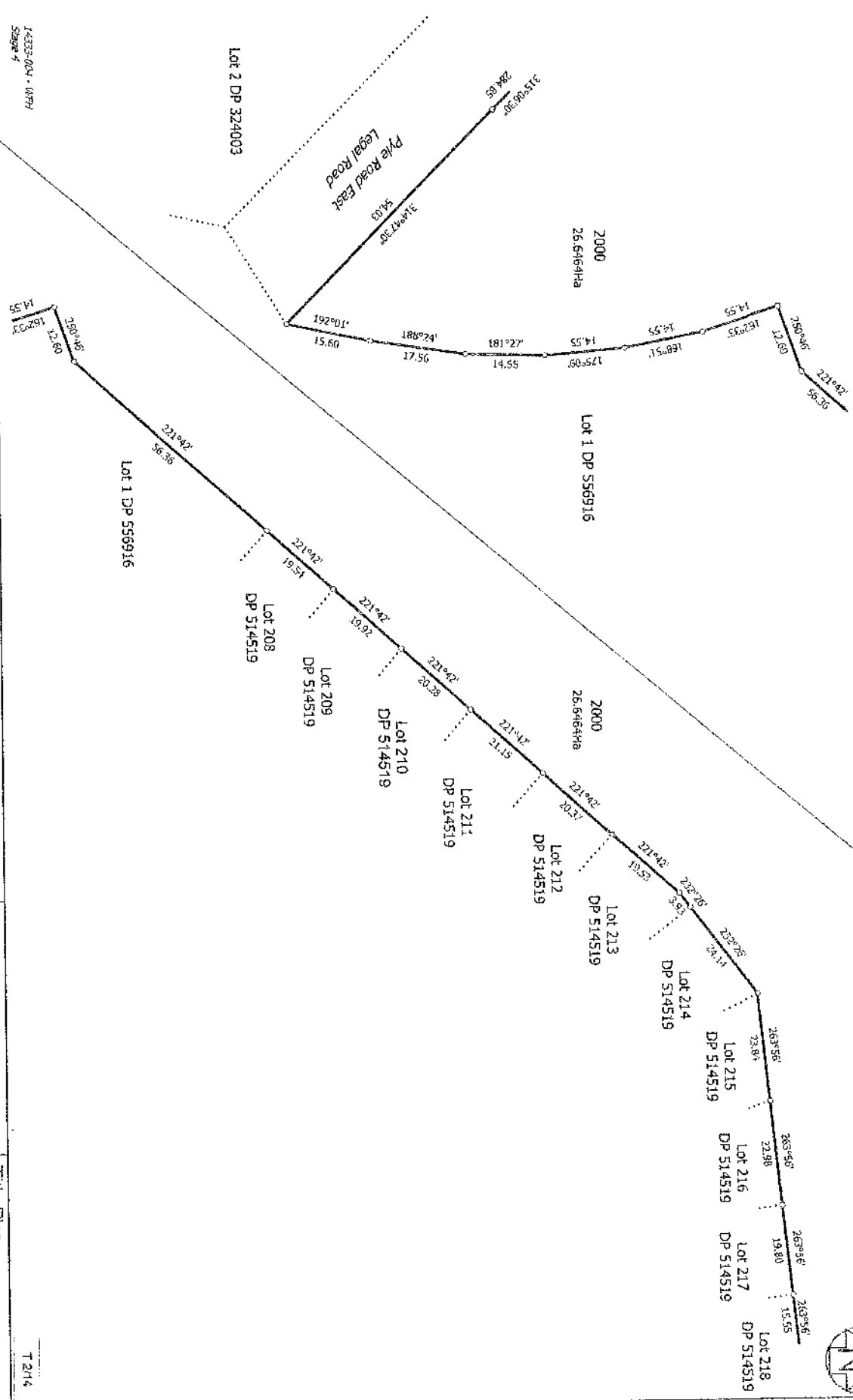
Title Plan
 DP 564989
 Deposited on: 21/02/2022

1:223-004 - WPH
 Stage 4



Diag. B

Diag. AH



Land District: North Auckland
 14333/004 - 0879
 Sheet 4

Digitally Generated Plan
 Generated on 28/03/2022 21:06m Page 7 of 10

Lot 208
 DP 514519

Lot 209
 DP 514519

Lot 210
 DP 514519

Lot 211
 DP 514519

Lot 212
 DP 514519

Lot 213
 DP 514519

Lot 214
 DP 514519

Lot 215
 DP 514519

Lot 216
 DP 514519

Lot 217
 DP 514519

Lot 218
 DP 514519

Lot 1 DP 556916

Lot 2 DP 324003

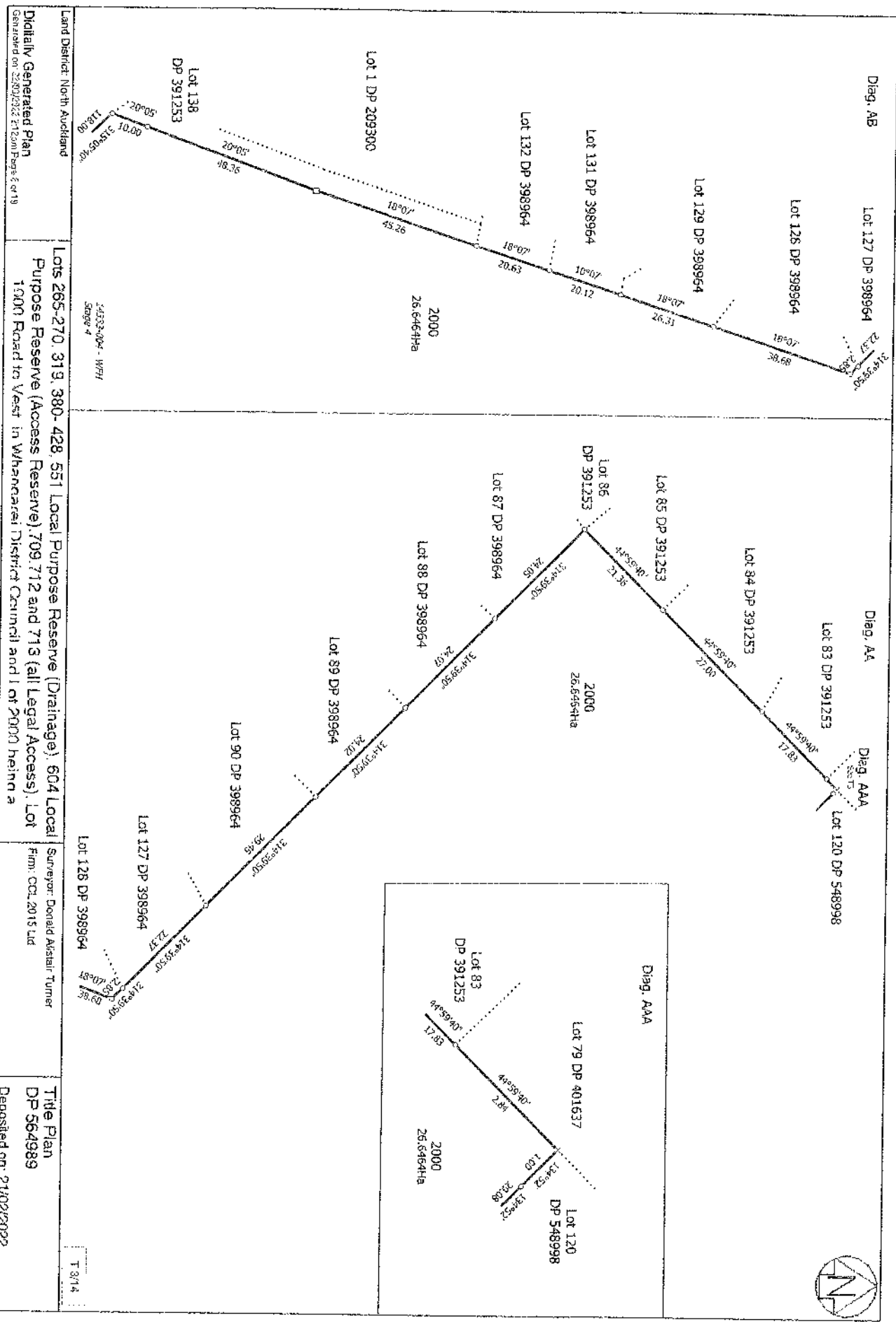
Lot 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whanareai District Council and 1 at 2000 being a

Surveyor: Donald Alister Turner
 Firm: CCL 2015 Ltd

Title Plan
 DP 564989

Deposited on: 21/02/2022

T 214



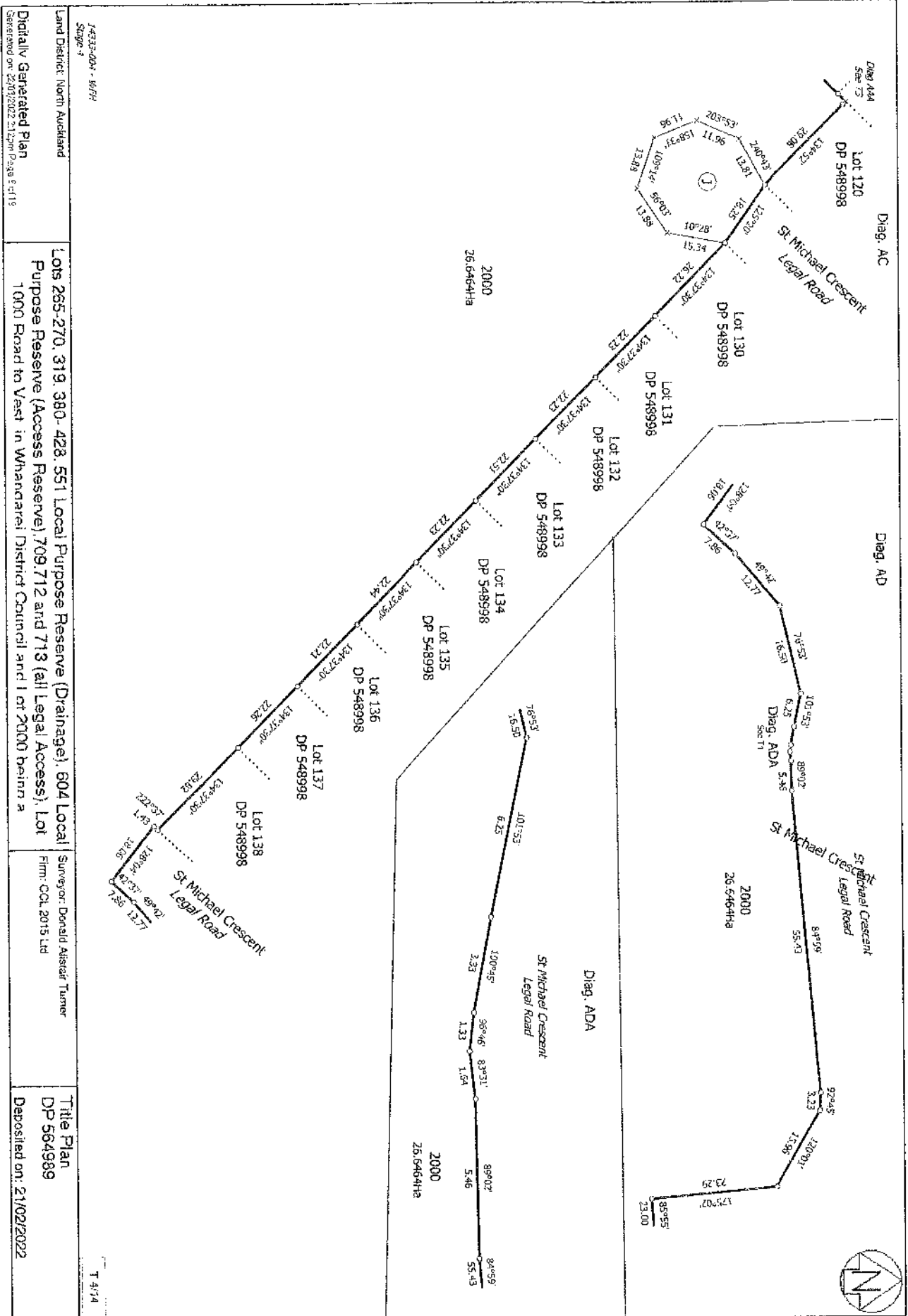
Land District North Auckland
 Digitally Generated Plan
 Generated on: 25/02/2022 21:22:00 Page 6 of 19

Lots 265-270, 313, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whangarei District Council and Lot 2000 being a

Surveyor: Donald Avstian Turner
 Firm: CCL 2015 Ltd

Title Plan
 DP 564989
 Deposited on: 21/02/2022

T 3714



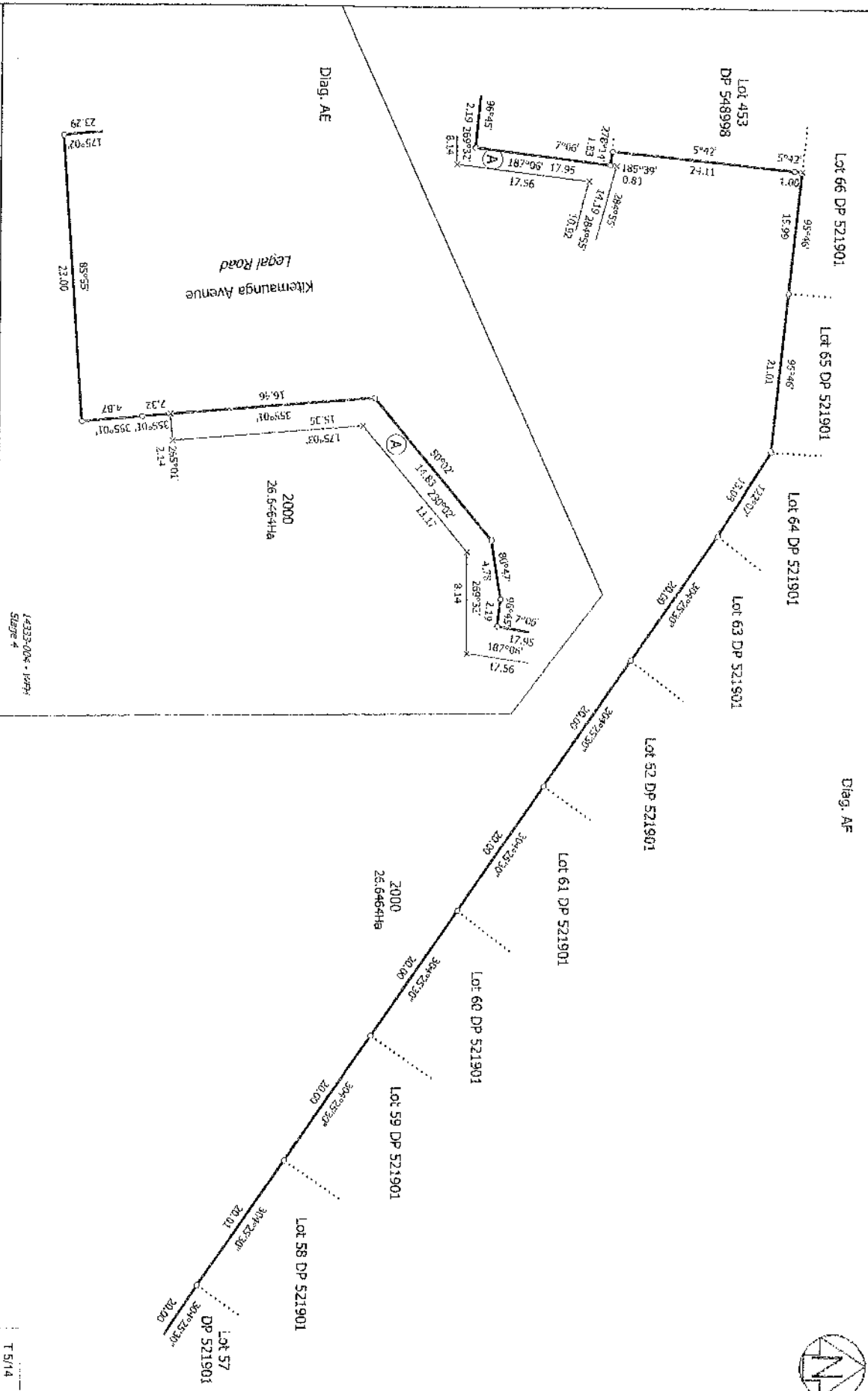
1:4333:00N - 16/11
 Stage 3
 Land District North Auckland

Digitally Generated Plan
 Generated on 22/07/2022 21:20:15 Page 5 of 15

Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whangarei District Council and 1 of 2000 being a

Surveyor: Donald Alistair Turner
 Firm: CCL 2015 Ltd

Title Plan
 DP 564988
 Deposited on: 21/02/2022



Land District: North Auckland

Digitally Generated Plan

Generated on: 22/02/2022 01:20m Page 10 of 15

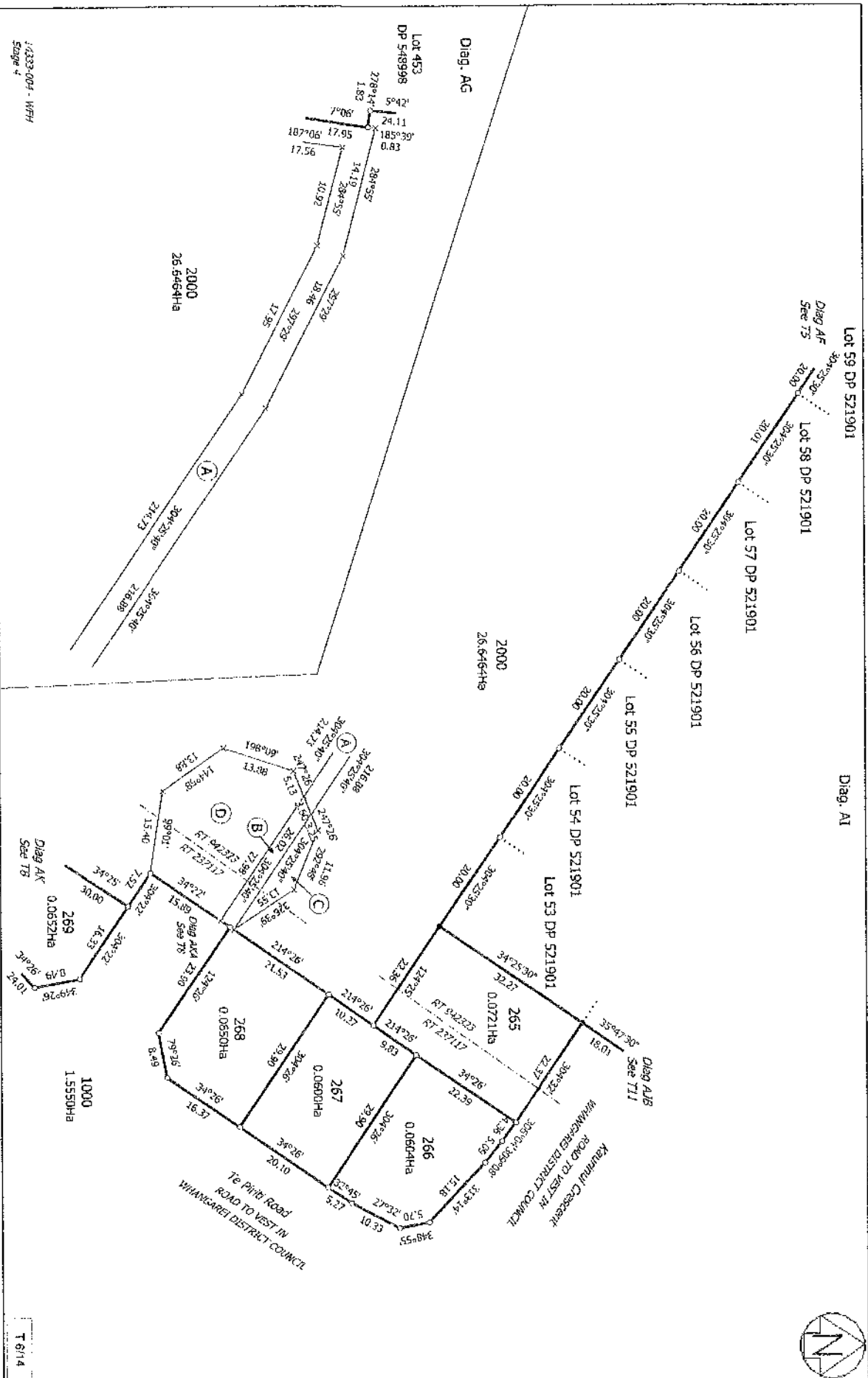
Lots 265-270, 319, 380, 428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whannara District Council and 1 of 2000 heina a

Surveyor: Donald Atstarr Turner
Firm: OCL 2015 Ltd

Title Plan
DP 564989

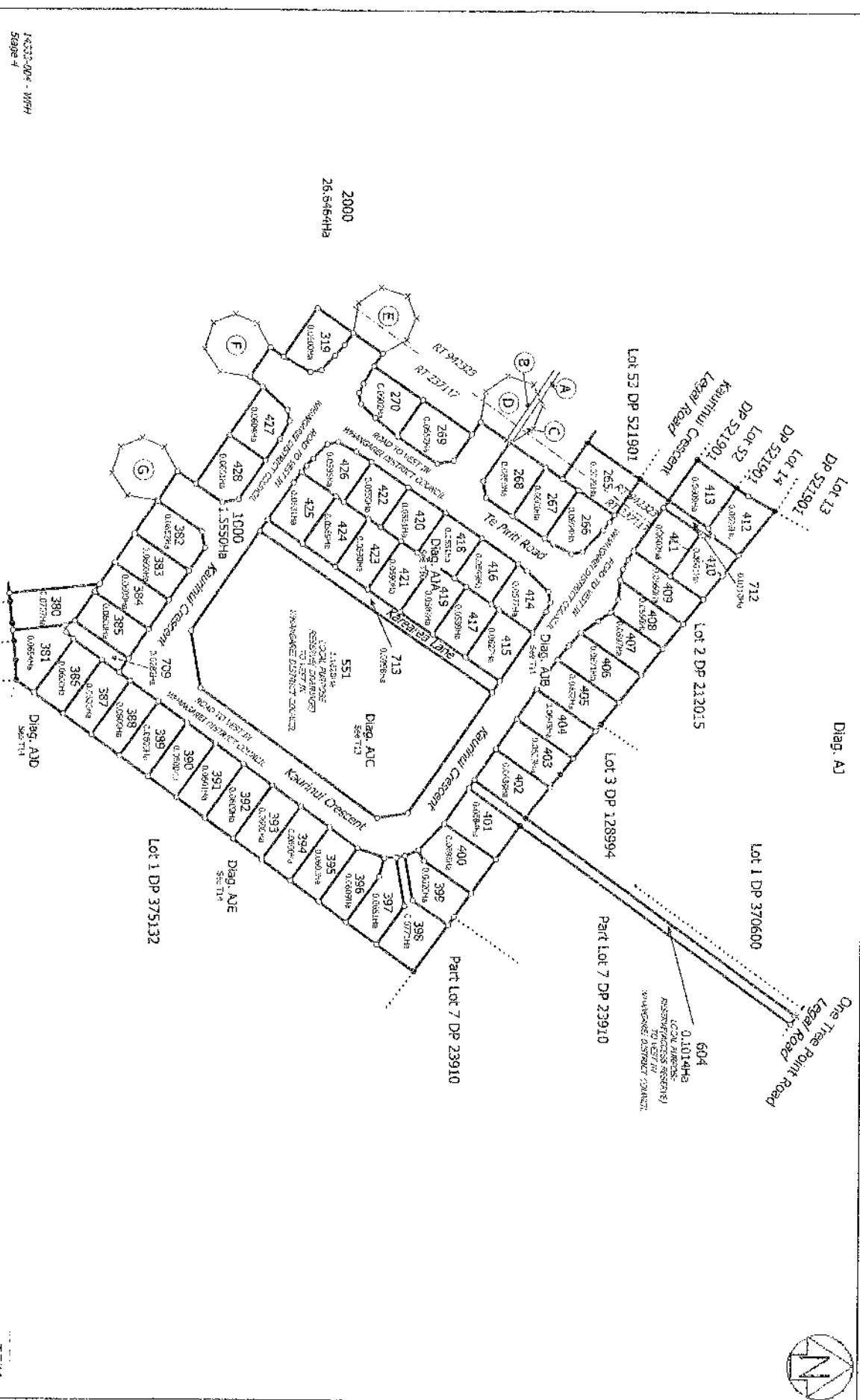
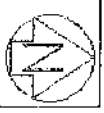
Deposited on: 21/02/2022

T 5/14



Land District: North Auckland 1/4233-004 - HFFH 500m ² 4	Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whangarei District Council and Lot 2000 being a	Surveyor: Donald Aitshall Turner Firm: COL 2015 Ltd	Title Plan DP 564988
Digitally Generated Plan Generated on: 20/01/2022 13:58:11 Page 11 of 13			Deposited on: 21/02/2022

T 6/14



14333-004 - WPH
 Stage 4

Land District: North Auckland

Digitally Generated Plan
 Generated on: 22/03/2022 2:12pm Page: 12 of 19

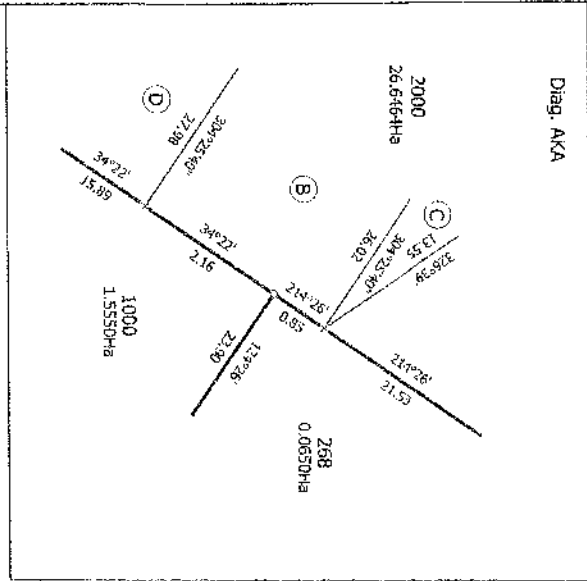
Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whannareai District Council and 1 of 2000 ha in a

Surveyor: Donald Alister Turner
 Firm: OCL 2015 Ltd

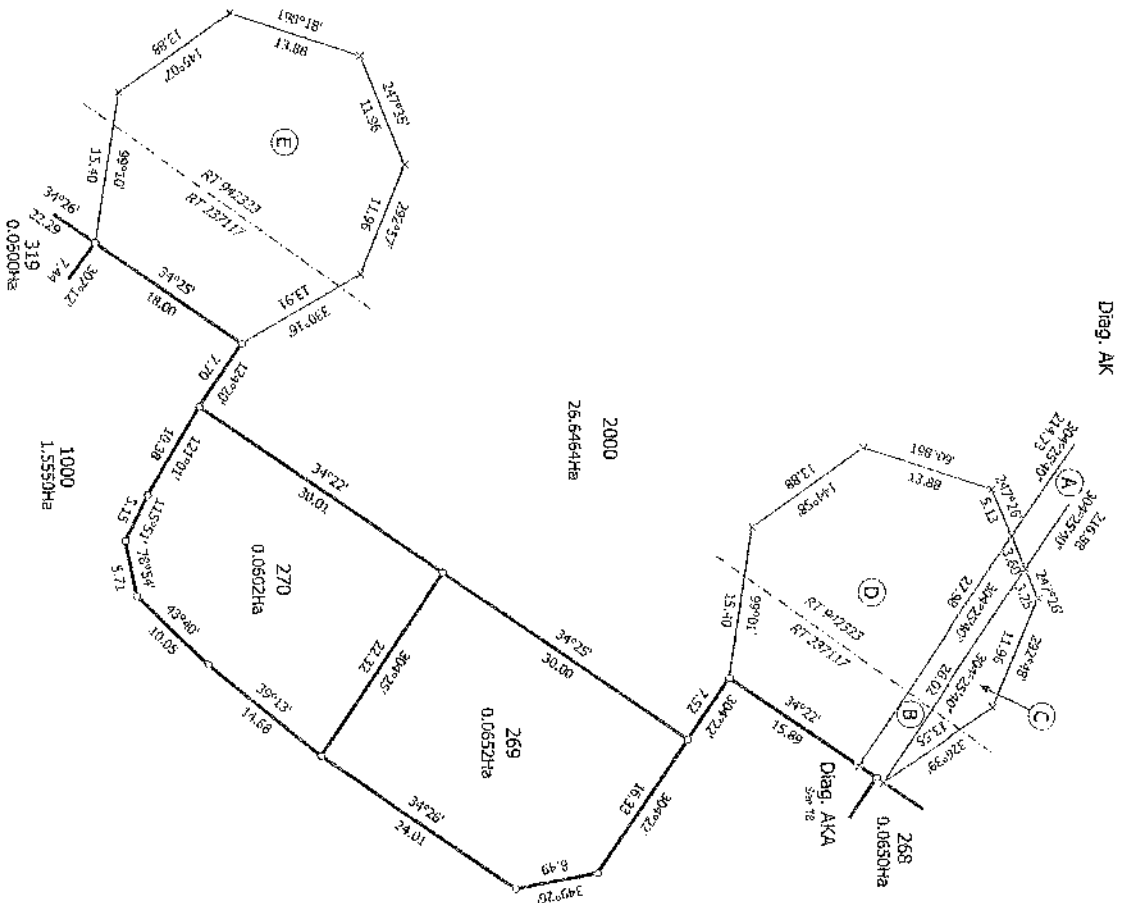
Title Plan
 DP 564989
 Deposited on: 21/02/2022

1/7/4

Diag. AKA



Diag. AK



L-1833-004 - 18/15
Stage 4

Land District: North Auckland

Digitally Generated Plan

Generated on: 20/03/2022, 11:58 AM Page 13 of 13

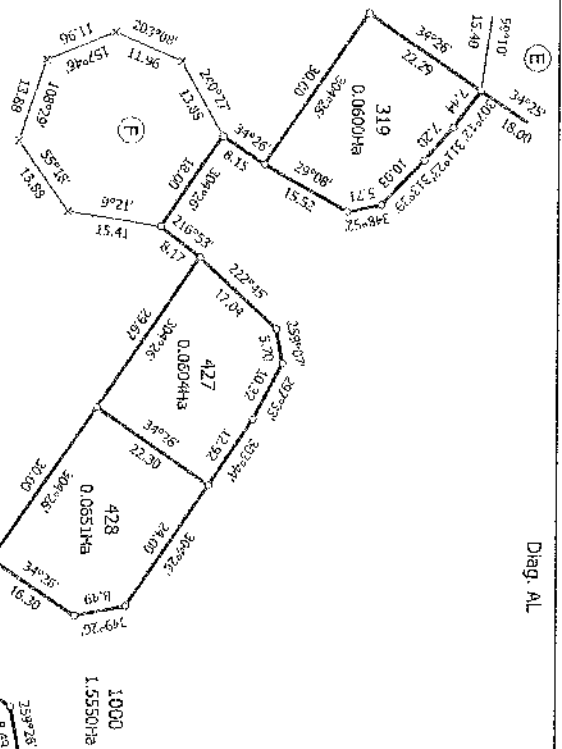
Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to Vest in Whangarei District Council and 1 of 2000 being a

Surveyor: Donald Aitkell Turner
Firm: CCL 2015 Ltd

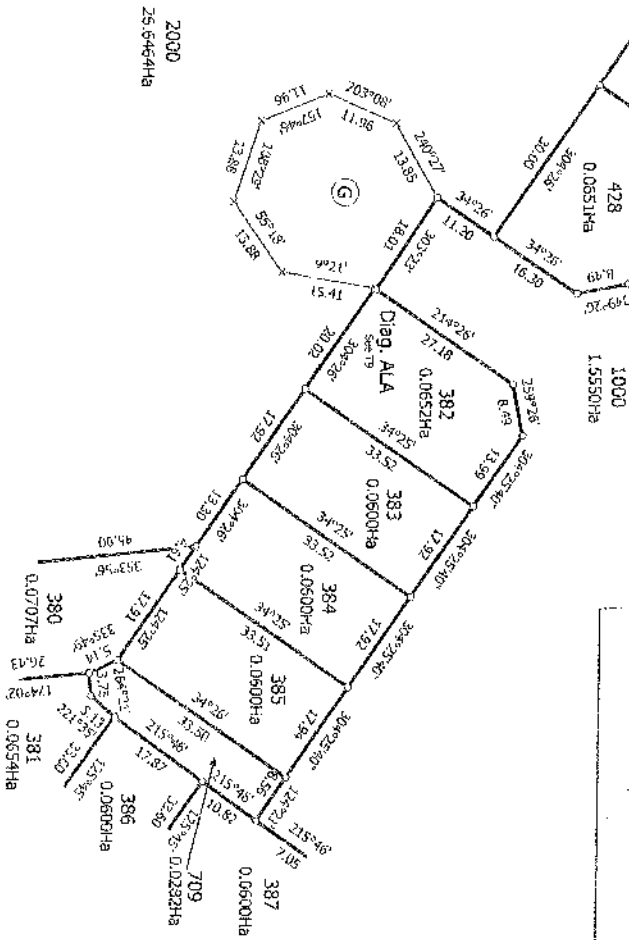
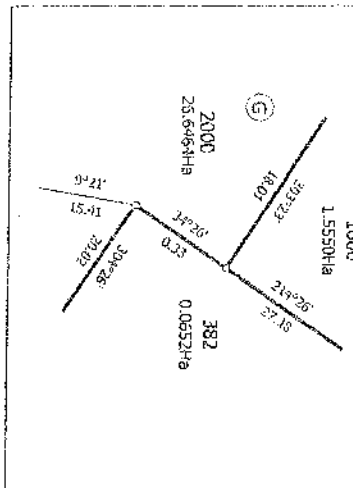
Title Plan
DP 564989

Deposited on: 21/02/2022

Diag. AL



Diag. ALA



L933-004 - WPH
Stage 4

Land District: North Auckland

Digitally Generated Plan
Generated on: 22/03/2022 01:18pm Page: 14 of 13

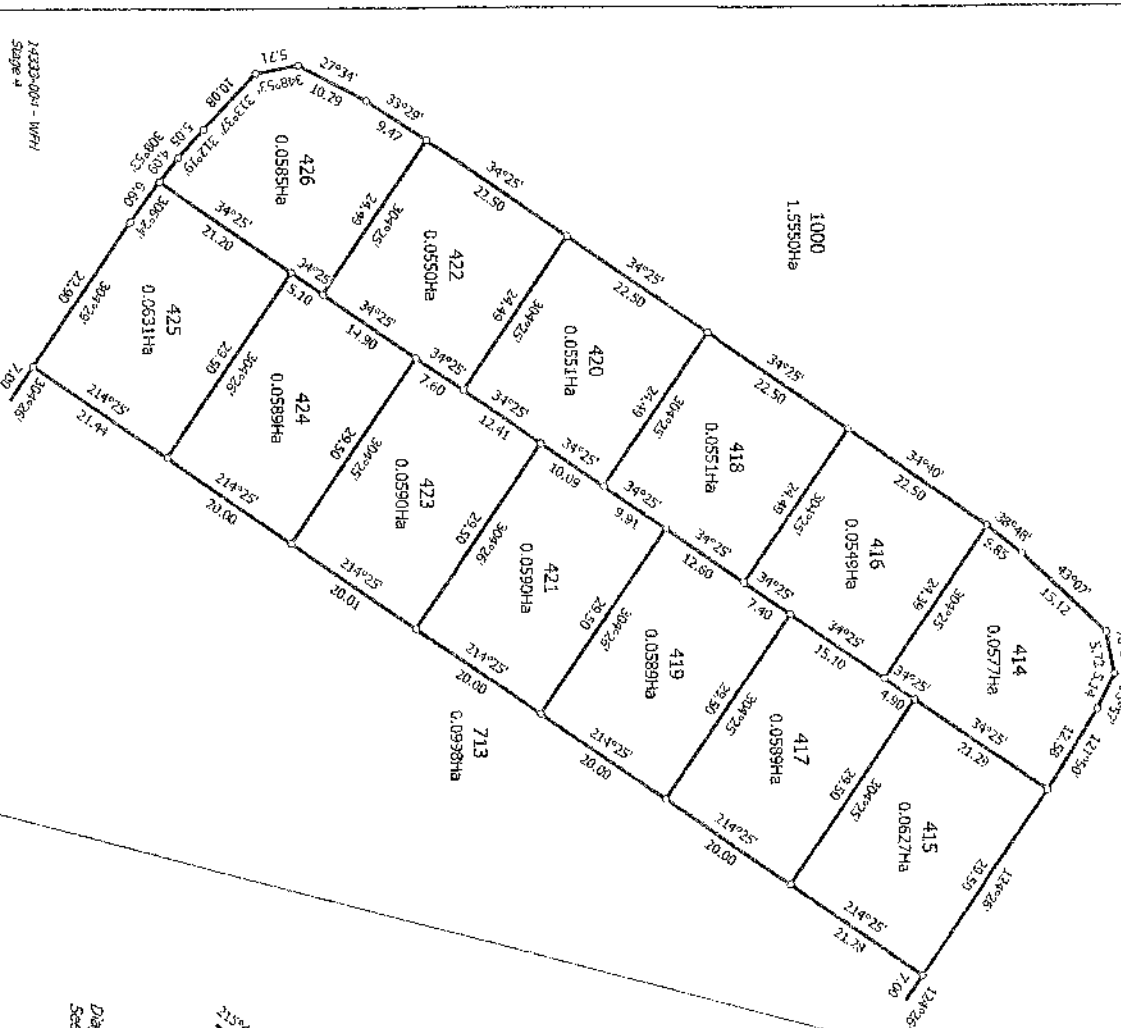
Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whanarewa District Council and 1 at 2000 being a

Surveyor: Donald Aulstair Turner
Firm: OCL 2015 Ltd

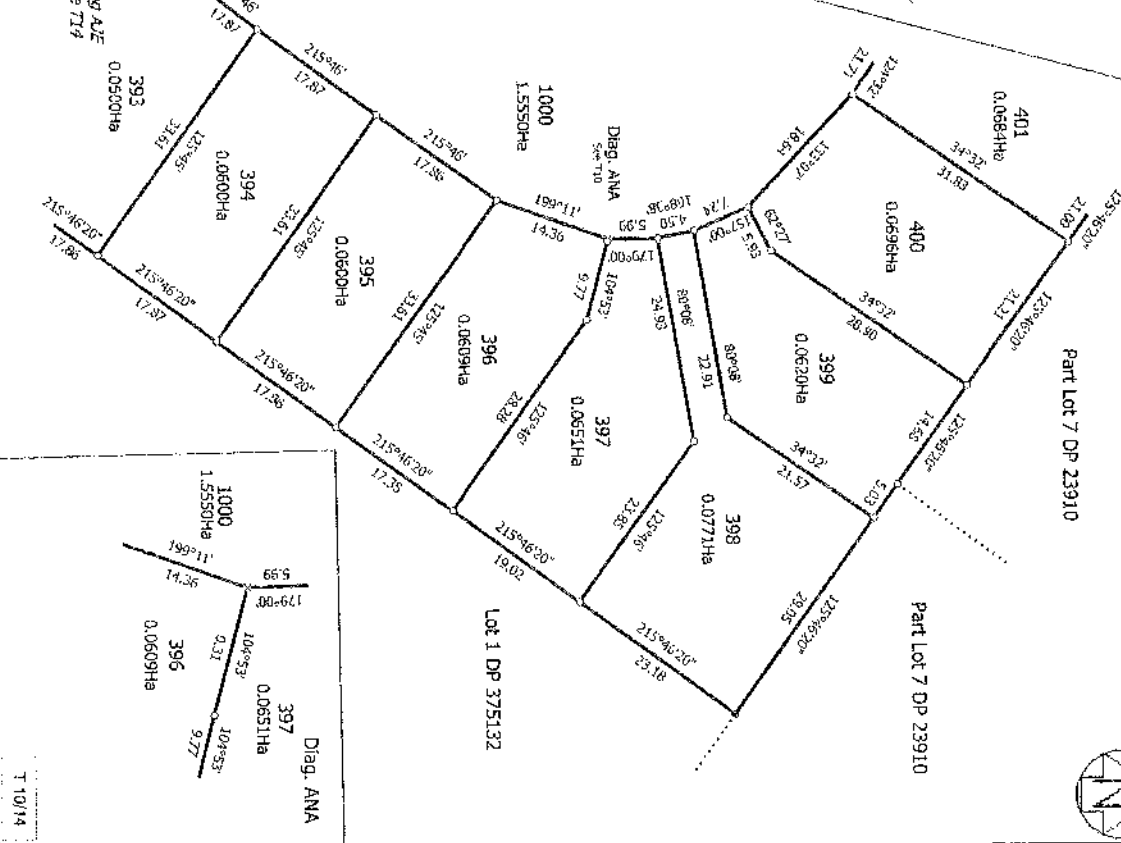
Title Plan
DP 564989
Deposited on: 21/02/2022



Diag. AJA



Diag. AN



Land District: North Auckland
 743233-004 - W/PH
 Stage 4

Diagrams Generated Plan
 Generated on: 13/01/2022 11:00:00 Page: 15 of 19

Diag. ANA
 See T14

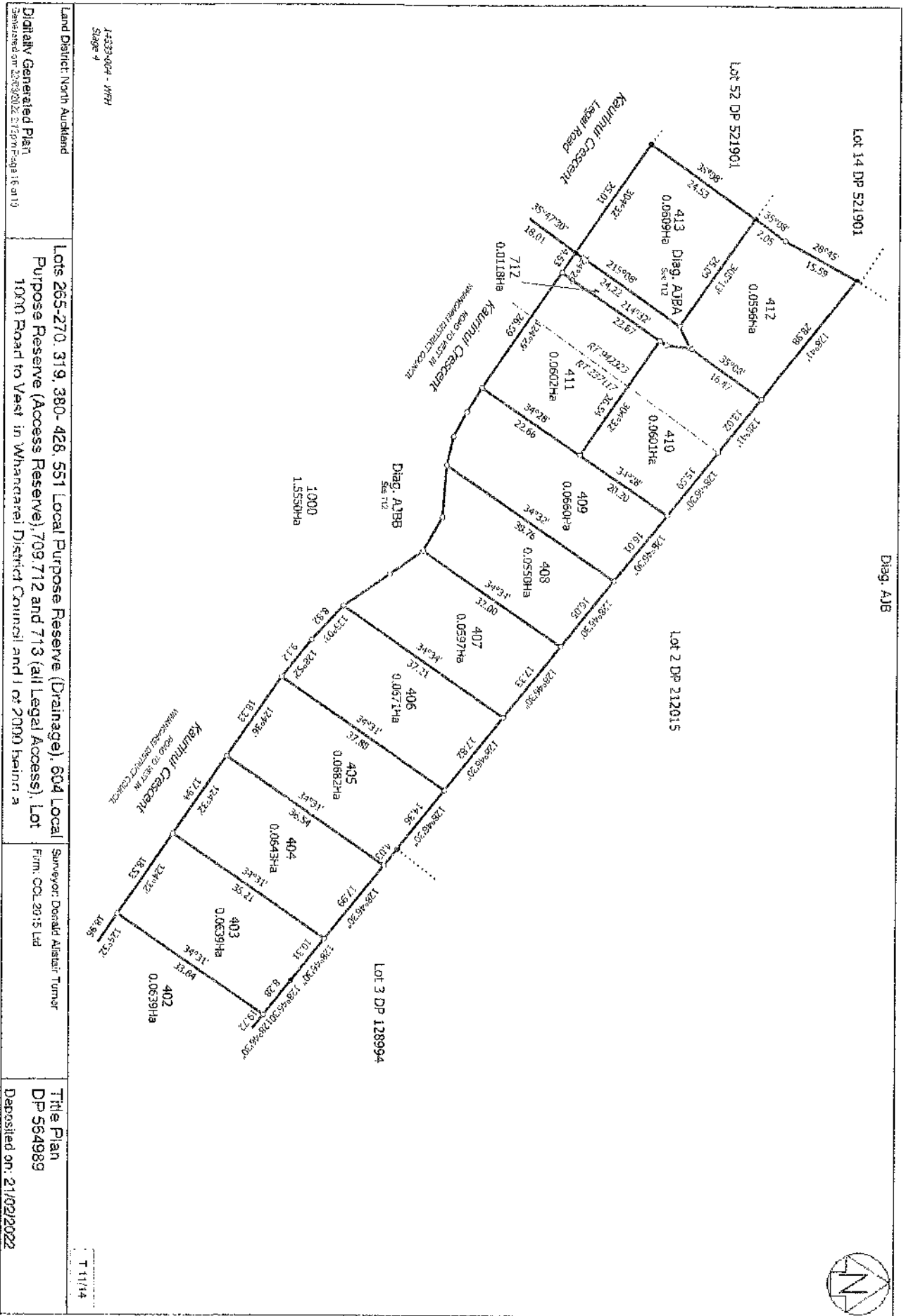
Diag. AJA
 See T14

Surveyor: Donald Aitken Turner
 Firm: COL 2015 Ltd

Title Plan
 DP 564986

Deposited on: 21/02/2022

T 10/14

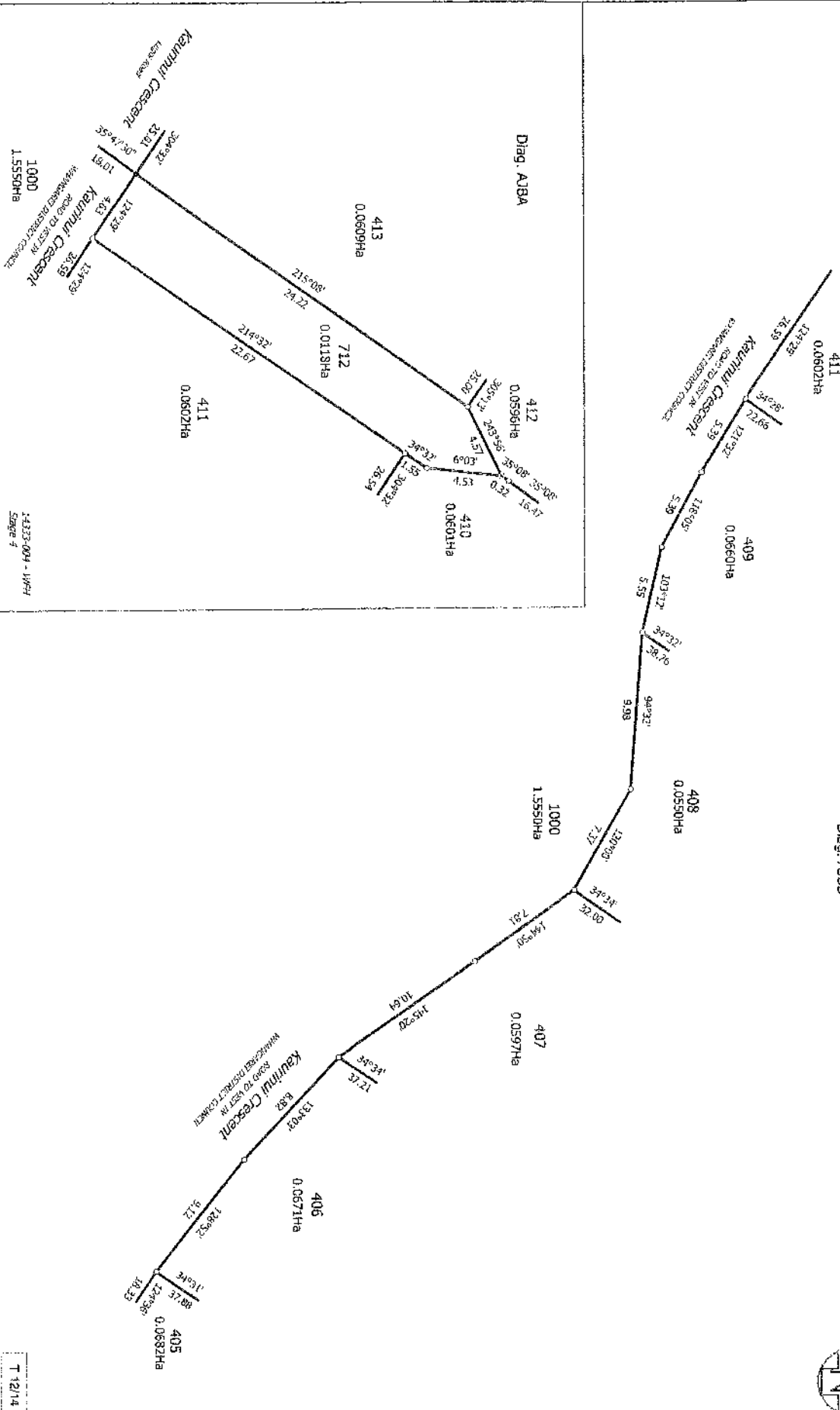


Land District: North Auckland
 Digitally Generated Plan
 Generated on: 20/02/2022 07:10pm Page 16 of 10

Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whangarei District Council and 1 of 2000 being a

Surveyor: Donald Alistair Turner
 Firm: OCL 2015 Ltd

Title Plan
 DP 564989
 Deposited on: 21/02/2022



Land District: North Auckland

Digitally Generated Plan
Generated on: 22/03/2022 2:13pm Page 17 of 19

Surveyor: Donald Alistair Turner
Firm: COL 2015 Ltd

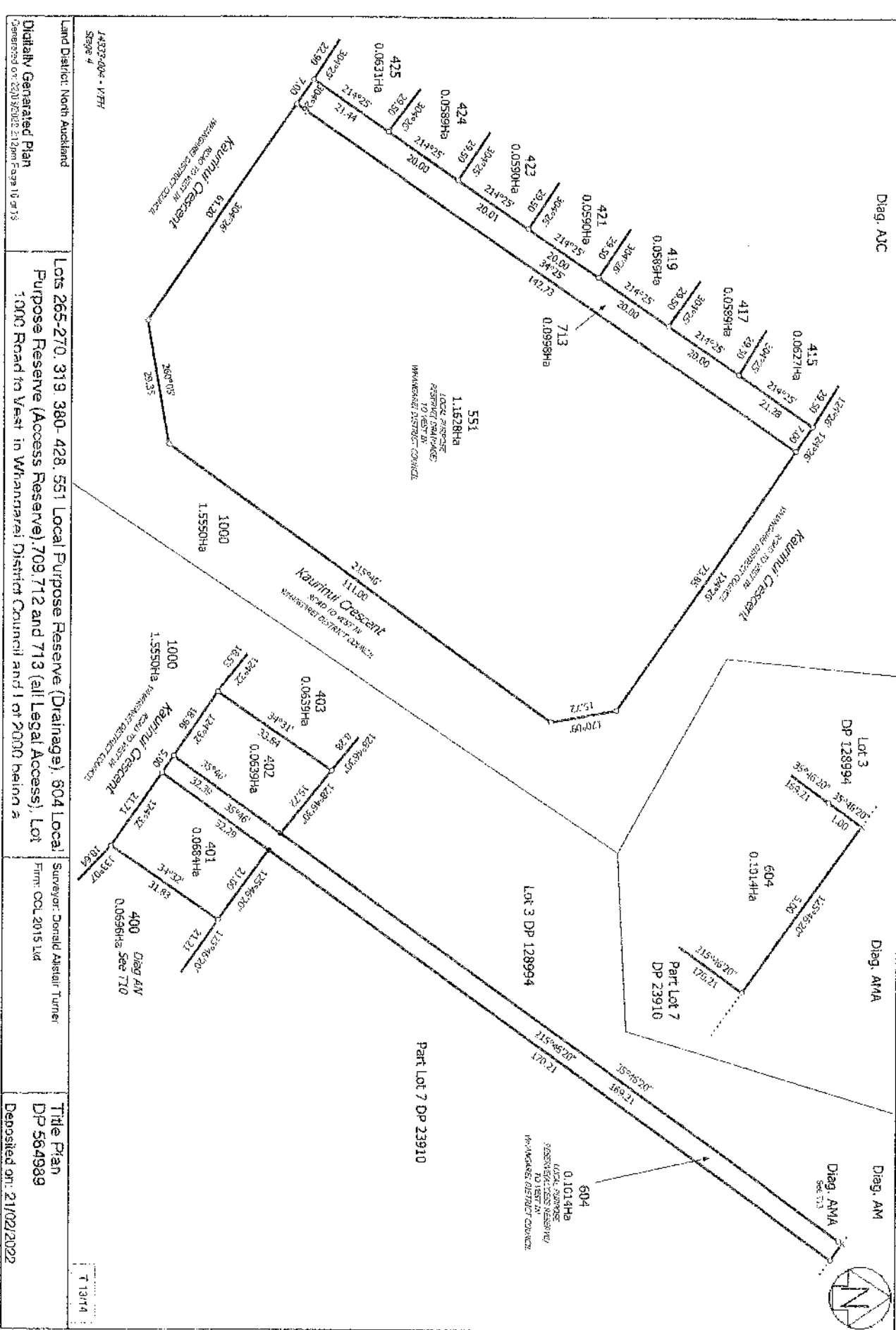
Title Plan
DP 564989
Deposited on: 21/02/2022

Diag. AUBA

Diag. AUBB

1000 Road to West in Whangarei District Council and Lot 2000 being a

1:4333:004 - 1/1000
Scale 3



Diag. AJC

Diag. AMA

Diag. AM



Land District: North Auckland
 Stage 4
 144323-004 - V1777

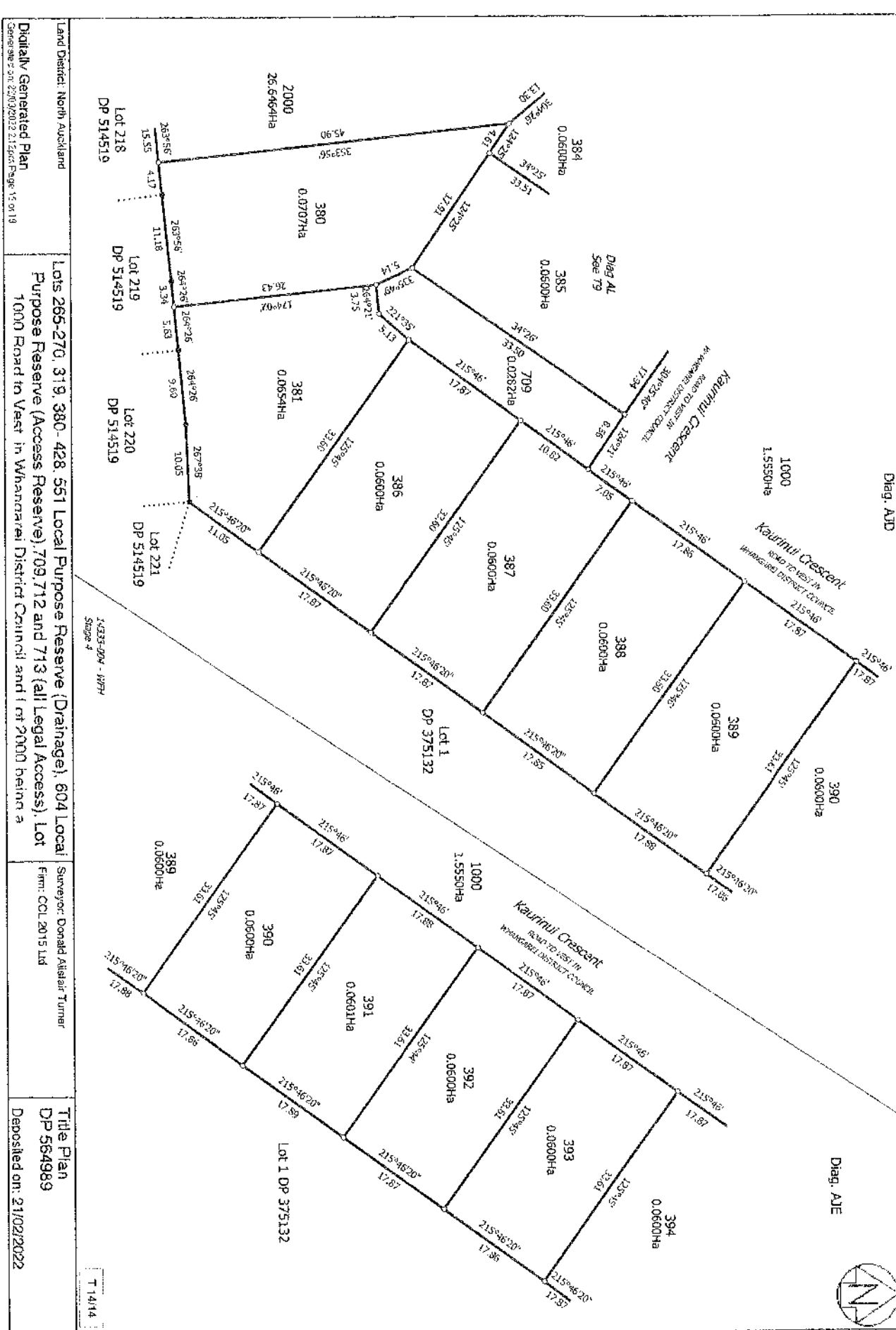
Digitally Generated Plan
 Generated on: 23/10/2022 21:20pm Page 16 of 13

Lots 265-270, 319, 380, 428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whangarei District Council and 1 of 2000 being a

Surveyor: Donald Aulstein Turner
 Firm: OCL 2015 Ltd

Title Plan
 DP 564989
 Deposited on: 21/02/2022

T 13474



Diag. A1D

Diag. A1E



Land District: North Auckland

Digitally Generated Plan
 Generated on: 21/02/2022 11:14:07 Page: 15 of 19

Lot 1 DP 375132
 Lots 265-270, 319, 380-428, 551 Local Purpose Reserve (Drainage), 604 Local Purpose Reserve (Access Reserve), 709, 712 and 713 (all Legal Access), Lot 1000 Road to West in Whanarua District Council and Lot 2000 being a

Surveyor: Donald Allair Turner
 Firm: COL 2015 Ltd

Title Plan
 DP 564989

Deposited on: 21/02/2022

1:433-004 - 187H
 Stage 4

T 14/14



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**




R. W. Muir
Registrar-General
of Land

Identifier 1009463
Land Registration District North Auckland
Date Issued 21 February 2022

Prior References
237117

Estate Fee Simple
Area 597 square metres more or less
Legal Description Lot 407 Deposited Plan 564989
Registered Owners
ATK Developments Limited

Interests

12201143.6 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 21.2.2022 at 4:16 pm
Land Covenant in Covenant Instrument 12201143.7 - 21.2.2022 at 4:16 pm
Land Covenant (in gross) in favour of WFH Properties Limited created by Covenant Instrument 12201143.7 - 21.2.2022 at 4:16 pm
Land Covenant in Covenant Instrument 12201143.8 - 21.2.2022 at 4:16 pm

IN THE MATTER of the Resource Management Act 1991 ("the Act")

AND

IN THE MATTER of a subdivision consent as evidenced by Land Transfer Plan No. 564989

AND

IN THE MATTER of a Consent Notice issued pursuant to Section 221 of the Act by WHANGAREI DISTRICT COUNCIL ("the Council")

IT IS HEREBY CERTIFIED that the following conditions to be complied with on a continuing basis by the subdividing owner and subsequent owners was imposed by the Council as a condition of approval for the subdivision as effected by Land Transfer Plan No. 564989 ("the plan")


In relation to lots 265-270, 319 and 360-428.

1. At the time of building consent provide suitable evidence/design to illustrate that stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IOP.
2. Any development shall comply with the restrictions and recommendations identified in the Earthworks Completion Report by Cook Costello – The Landing Stages 4 and 5 – Project Number 1433-004 dated 21 October 2021, available from Council under file reference SD1800110, unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.
3. At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manager, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.
4. At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in

accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

DATED at Whangarei this 3rd day of November 2021.

SIGNED for WHANGAREI DISTRICT COUNCIL,
pursuant to the authority of the Council given
pursuant to the Local Government Act 2002 and the
Resource Management Act 1991

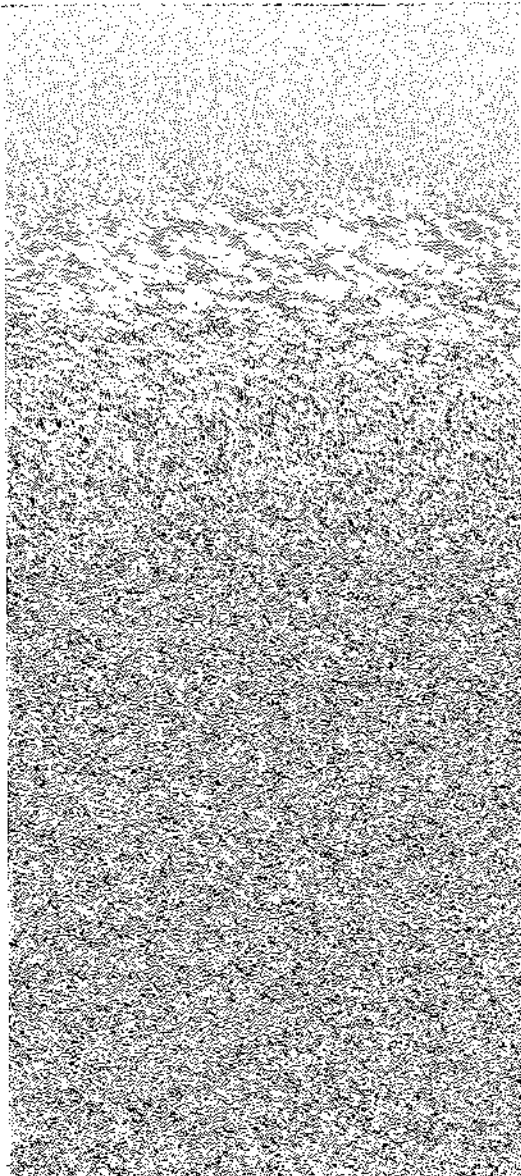


Authorised Signatory
Karen Toni Satherley
Post Approval RMA Officer



The Landing Stage 4 & Stage 5 Earthworks Completion Report

WFH PROPERTIES LIMITED



One Tree Point
The Landing
Stage 4 & Stage 5

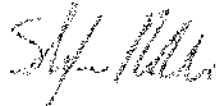


Project Number: 14363-004

Date: 23/10/2021

COOK COSTELLO
DOCUMENT CONTROL RECORD

Client: WFH PROPERTIES LIMITED
Project description: The Landing Stage 4 & 5 - Earthworks Completion Report
Document name: 14333 - Stage 4 & Stage 5 - Earthworks Completion report_saved.docx
Address: One Tree Point, Stage 4 & 5
Date of issue: Thursday, 21 October 2021
Status: For Issue



Originator: **Stefano Rotatori – Chartered Professional Engineer (Geotechnical)**
ME, IntPE (NZ), CMEngNZ, CPEng



Approved for issue: **Philip Cook – Chartered Professional Engineer**
BE(hons), Dip Ag, CPEng, CMEngNZ, IntPE(NZ),
MACENZ, MInstD



Office of origin: Whangarei

Version	Date	Comment	By
1.0	14 September 2021	Review	P. Cook
2.0	17 September 2021	Issue	S. Rotatori
3.0	21 October 2021	Issue	S. Rotatori

Table of Contents

1. Limitations.....	5
2. Executive Summary.....	5
3. Introduction.....	6
4. Site Description.....	6
5. Geology.....	7
6. Construction Methodology.....	7
6.1. Earthworks.....	7
6.2. Roading.....	8
7. Testing & Inspection Methodology.....	8
7.1. Fill Testing.....	8
7.2. Undercut Testing.....	9
7.3. Laboratory Testing.....	10
8. Foundation Design.....	10
8.1. Ultimate Bearing Capacity.....	10
8.2. Static Settlements.....	11
8.3. Subsoil Class.....	11
8.4. Liquefaction Potential.....	11
8.4.1. Previous Liquefaction Analysis.....	11
8.4.2. CPT Investigations.....	12
8.4.3. Peak Ground Acceleration.....	12
8.4.4. Method of Analysis.....	13
8.4.5. Liquefaction Severity Number (LSN).....	13
8.4.6. Ultimate Limit State.....	14
8.4.6.1. Liquefaction Severity Number.....	14
8.4.6.2. Liquefaction Induced Subsidence.....	14
8.4.6.3. Lateral Displacement.....	15
8.4.7. Serviceability Limit State.....	15
8.4.7.1. Liquefaction Severity Number.....	15
8.4.7.2. Liquefaction Induced Subsidence.....	15
8.4.8. Liquefaction Summary.....	15
8.5. Acid Sulphate Risk.....	15

The Landing – Stage 4 & 5

8.5.1.	Acid Sulphate Testing Discussion.....	15
8.5.2.	Mitigation measure for Shallow Foundations.....	17
8.5.3.	Mitigation measure for Deep Foundations.....	17
8.5.3.1.	Concrete.....	17
8.5.3.2.	Steel.....	17
8.5.3.3.	Timber.....	18
8.6.	Proposed Building Foundations.....	18
9.	Conclusions.....	19
10.	Limitations.....	22
	Appendix 1 – Scheme Plan.....	24
	Appendix 2 – Finished Contours Plan.....	25
	Appendix 3 – Site Testing Locations.....	26
	Appendix 4 – Site Testing Results.....	27
	Appendix 5 – Liquefaction Results.....	28
	Appendix 6 – Statement of Professional Opinion on Suitability of Land for Building Construction - Form EES-PO1.....	29
	List of Figures:	
	Figure 1: LSN results summary (ULS).....	14
	Figure 2: LSN results summary (SLS).....	15
	Figure 3: Damp-Proof Membrane Detail.....	17
	List of Tables:	
	Table 1: Bearing capacity summary for Stage 4 & Stage 5 of The Landing Subdivision.....	11
	Table 2: CPT Investigation results.....	12
	Table 3: Seismic parameters.....	13
	Table 4: LSN Ranges and damage classifications.....	14

1. Limitations

This report, and the stated or inferred professional opinions found within, relating to the suitability of the areas being ready for building development, shall not be construed as a guarantee.

This report, and the inferred professional opinions found within does not remove the necessity for site-specific geotechnical investigation, normal inspection and design of foundations for each lot, as would be made in natural ground and NZS3604 for standard residential building foundations.

2. Executive Summary

Cook Costello was engaged by WFH Properties Ltd, to provide technical advice for earthworks and be the geo-professional for the Landing Stage 4 & 5 subdivision at One Tree Point, Northland. Cook Costello designed earthwork cuts and placement of controlled sand engineered fill, in order to enable construction of the building platforms within the proposed development.

A requirement of the consenting authority WDC (Whangarei District Council) is that a "Statement of Professional Opinion on Suitability of Land for Building Construction" (Statement of Suitability) is made by the geo-professional at the end of construction (prior to building developments). This process requires "WDC form EES-PO1" to be completed, and requires a geotechnical completion report. The completion report summarises the situation and is used to describe any departure from the standard foundation conditions expected by the building industry and outline any restrictions or recommendations if required. The purpose of this report is to provide the supporting details required for the Statement of Suitability.

The Statement of Professional Opinion on Suitability of Land for Building Construction - Form EES-PO1 has been attached to Appendix 6.

3. Introduction

Cook Costello was engaged by WFH Properties Ltd, to provide technical advice for earthworks and be the geo-professional for the Landing Stage 4 & 5 subdivision at One Tree Point, Northland. Cook Costello designed earthwork cuts and placement of controlled sand engineered fill, in order to enable construction of the building platforms within the proposed development.

Previous reports and geotechnical information at the site comprise of:

- Ormiston Associates Ltd. Geotechnical Report (dated September 2005).
- Cook Costello Earthworks Specification (dated October 2018).

This report is for completion of the subdivision works in relation to the developed sections and covers the information required by the Whangarei District Council for preparing consent notices for the future property titles and provides geotechnical information to the future lot owners. It covers the requirements of the Whangarei District Council Engineering Standards (Issue 1, operative from 1 July 2010) for subdivision completion and is an addendum to the Form EES-PO1 certificate.

On completion of the works, the developer shall provide the following:

- Geotechnical reports and plans,
- All limitations on the development of the properties, including hazards, easement requirements etc.

This report relates to the lots in Stages 4 & 5 of the subdivision. The lot numbers for Stage 4 & 5 (as shown on the Scheme Plan appended to Appendix 1) covered by this report are:

Stage 4:

- 56 Residential Lots (lots 265 – 270; 319; – 452; 380 - 428).
- Roads 4, 5, and 8.

Stage 5:

- 45 Residential Lots (lots 250 – 264; 447 – 452; 271 – 291; 316-318).
- Roads 6, 7, 10 and 19.

The subdivision has been designed and constructed to satisfy Whangarei District Council Environmental and Engineering Standards 2010.

4. Site Description

The Landing subdivision is situated at One Tree Point, approximately 17 km southeast of Whangarei Central Business District. The subdivision consists of 9 stages, with Stage 1, Stage 2, Stage 3, Stage 4 and Stage 5 completed and Stage 6 and Stage 7 currently under construction. The scheme plan for Stages 4 & 5 can be seen in Appendix 1.

5. Geology

The property is regionally placed as part of the Marsden Point Barrier Spit, a broad peninsula, comprised of coastal SAND dunes, estuarine and alluvial sediments, that partly encloses Whangarei Harbour. These are considered young soils.

The spit has been built up by a prograding (seaward advancing) foreshore depositional process in the vicinity of the harbour entrance with sequences of aeolian influenced coastal SAND dunes and alluvial and estuarine sediments.

The GNS Science online geology map defines the underlying geology of the site as comprised of Late Pleistocene stable dune deposits. Weakly cemented sand in fixed transverse dune ridges.

The soil type in the area is defined on NZMS290 Sheet Q06/07 Hukerenui - Whangarei (SOILS) as a combination of Ruakaka Loamy Peat, One Tree Point Peaty Sand and Tangitiki Sandy Loam and Sand (imperfectly to poorly drained).

The rock type in the area is defined on NZMS290 Q06/07 Hukerenui - Whangarei (ROCK TYPES) as Sand: felspathic with some quartz, minor dark minerals and clay forming fixed dunes, minor swamp deposits; unconsolidated to very soft. Unweathered or weathered to brown-stained very soft clayey sand to depths of 5m.

6. Construction Methodology

The earthworks were carried out under Cook Costello as the supervising engineering consultants with Geocivil Ltd carrying out the physical testing. The general methodology consisted of a removal of organic material (peat and topsoil) stripped ground inspection, cut to fill, with fill being tested, and covering complete fill with organic topsoil peat.

A bulk earthworks plan showing the finished earthworks and contours is included in Appendix 2.

6.1. Earthworks

A bulk earthworks operation was carried out over the site to improve the drainage and contour of the Lots. Earthworks were also carried out to establish reasonable building platforms. Stage 4 & 5 of the Landing used the following methodology:

1. The topsoil and the peat were stripped off using motor scrapers and 50 ton Moxy dump trucks (Cat 725) with 20 – 30 ton excavators (Cat 320).
2. Cut to fill in the old sand dune complex using Sand fill was undertaken to bring the lots up to finished level.
3. Testing was undertaken to achieve a medium dense compacted sand with an allowable bearing capacity of greater than 100 kPa (Ultimate Bearing Capacity of 300kPa). This meets the requirements of the New Zealand Standard 4404 and the New Zealand Building Code.

4. Once the desired contours were achieved topsoil was spread from the temporary stockpile using Motor scrapers. This was track rolled with a D6 dozer and levelling bar.
5. Grassing of Stage 4 & 5 occurred very shortly after the top soiling process was completed.

6.2. Roothing

A standard industrial/commercial rooding operation was undertaken on Stage 4 & 5. The rooding has been achieved using the following methodology:

1. Trim subgrade sand layer to level using Motor Scrapers and graders.
2. Check the subgrade CBR by Scala Penetrometer analysis.
3. Place lay and spread AP65 subbase layer using a Grader and 10 ton dynamic and static rollers to achieve optimum density.
4. Prepared Kerb lines using a grader and a 4 ton Dynapac roller.
5. Place, Laid, and formed slip form kerb and channels.
6. Backfilled kerb & channel using 12 Ton excavator.
7. Place lay and spread AP40 basecourse layer using a grader and 10 ton dynamic and static rollers to achieve optimum density, using a 9 ton PTR to tighten the top layer ready for sealing.
8. Check the compaction of the basecourse layer by Nuclear Densometer Readings and Benkelman Beam testing.
9. Sweep / clean the road of loose material and debris ready for seal.
10. Seal the street with waterproofing seal coat and single coat chip seal (grade 5) using automatic pressurised bitumen sprayer 6-wheel trucks with chip spreading boxes on to spread both the bitumen and chip over the surface evenly.
11. Apply asphaltic concrete over waterproofing layer using paving machine and rollers. Asphaltic concrete to be DG10 or AC10 (refer to paving plan) to comply with NZTA M/10 Specification.

7. Testing & Inspection Methodology

The relevant quality control testing for the bulk earthworks was undertaken by Cook Costello and Geocivil Ltd at the required intervals. Testing locations are appended in Appendix 3, results of the tests can be found in Appendix 4.

Supervision by the Engineers was required at key critical stages, and a series of hold points were identified and agreed with the Contractor.

7.1. Fill Testing

The Cook Costello Earthworks Specification (dated October 2018) initially suggested testing consisting of Light Weight Deflectometer (LWD), Scala Penetrometers (DCP) and Nuclear Densometers (NDM).

However, during compaction of the material, it was discovered that there was a delay of approximately 4 – 5 weeks between compaction and achieving the desired compaction results. This is due to pore-pressure build up in the compacted fill material caused by the compaction process. The delay between testing and receiving results was unacceptable in terms of constructability.

As a result, it was decided to test the fill material using Static Plate Load Tests (PLT) where fill to undercut levels was deeper than 1.5m. This allowed the testing to be conducted at the finished level, speeding up the construction process. DCPs, NDMs and LWDs were conducted at the finished level after the excess pore pressure was allowed to dissipate where fill depth to undercut was less than 1.5m depth.

Frequency of testing has been set up to be not less than:

- 1 test per layer or 200 mm thickness per material type per 2500 m²; or
- 1 test per 500 m³ distributed reasonably evenly throughout full depth and area; or
- 3 tests per visit; whichever requires the most tests.

As a result, the following testing has been carried out on the sand FILL areas:

- No. 103 Plate Load Tests
- No. 93 Scalas/NDMs/LWDs
- No. 5 CPTs

Locations of testing on the fill areas are shown on Drawing G01, appended to Appendix 3.

To be noted that the 300kPa ultimate bearing capacity has been calculated according to DIN 18134:2012-04 at 5mm vertical settlement (DIN 18134:2012-04: German Standard Soil Testing procedures and testing equipment – Plate load test, English translation of DIN 18134:2012-04).

7.2. Undercut Testing

The Cook Costello Earthworks Specification (dated October 2018) suggested testing consisting of Light Weight Deflectometer (LWD), Scala Penetrometers (DCP) and Nuclear Densometers (NDM). Prior to fill placement, the area was stripped of vegetation and topsoil and inspected by Cook Costello and Geocivil Ltd. Site testing with DCPs was conducted to identify areas and depths that required further undercutting. Undercutting terminates on the consolidated sand layers (i.e. hard pan) and/or at the bottom of the peat or sandy peat layer.

Enabling works, undercut and benching to competent material were inspected and approved by the supervising Engineer prior to filling.

Approximately 100 Scala penetrometer tests were carried out to assess the suitability of the undercut areas.

Locations of testing on the undercut areas are shown in Drawing G02, appended to Appendix 3.

7.5. Laboratory Testing

Laboratory testing was undertaken during construction to determine the following characteristics for the sand fill and for enabling site testing procedures. Laboratory testing is attached to Appendix 3. An Exhaustive list of laboratory testing is reported below:

- Determination of the Dry density/water content relationship – New Zealand Standard Compaction - NZS 4402: 1986 Test 4.1.1
- Determination of the particle size distribution-Dry sieving method - NZS 4407:2015 Test 3.8.2
- Determination of the Dry density/water content relationship – New Zealand Heavy Compaction - NZS 4402: 1986 Test 4.1.2
- Determination of Organic Content.
- Determination of PH(f) and PH(ox) in soil.

8. Foundation Design

8.1. Ultimate Bearing Capacity

Investigations have been carried out by or under the supervision of Geocivil Ltd or Cook Costello. The locations of tests are shown in Appendix 3. Test results are shown in Appendix 4.

In accordance with the Whangarei District Council Environmental Engineering Standards dated 2010 clause 2.7 The Councils Report on Completion of Construction undertook testing as the excavation or filling was carried out. The following testing was undertaken to support the statement of professional opinion as to the compliance of the filled/cut ground to the specification and the suitability of the land for Building Construction. (WDC Form EES-PO1). The testing undertaken in our view provides sufficient information to allow identification of any specific design requirements that necessitate the building foundation design to deviate from NZS 3604 and NZS 4229 and design parameters for detailed design of the foundations (such as bearing capacity, suitable founding depth etc).

The testing approach has been to test and demonstrate that the bearing capacity requirements of NZS3604 and NZS 4229 have been met or exceed the requirements of the definition of "Good Ground" where the tests were undertaken. It is assumed that the extent of testing represents that 300kPa ultimate bearing capacity is exceeded over the entire building platform even though not every piece of that ground/soil has been tested.

The existing depth of peat/peaty sand was determined by the Geotechnical Investigation Report carried out by Ormiston Associated Ltd for the residential subdivision (ref. # 1600/2114, dated September 2005). 51 CPTs, 25 Flight Augers, and 4 test pits were carried out on site. These tests showed a depth generally up to 5.5m of inferred organic peat, peaty sand and organic silts with good sand bearing below, over the majority of the site. Due to the ongoing long term settlement and shrinkage properties of the peat and organic soils, it was decided to remove this material as part of the bulk earthworks operations.

Scala Penetrometer and Plate Load testing were carried out to identify the compaction and ultimate bearing capacity of the sand fill layers. Scala Penetrometers were used to determine ultimate bearing capacity in cut areas. The bearing capacity results are summarised in Table 1. The provided ultimate bearing capacity of 300kPa is available below any topsoil that has been spread on site after the completion of the earthworks. To be noted that between 100 – 300 mm of topsoil has been spread throughout the site with an average of 200 mm.

Table 1: Bearing capacity summary for Stage 4 & Stage 5 of The Landing Subdivision.

Area	Depth (m/bgl)	Ultimate Static Bearing Capacity (kPa)	Dependable Static Bearing Capacity (kPa)
Stage 4 & 5 (All Lots)	0.1 - 0.3	300	150

The Statement of Professional Opinion on Suitability of Land for Building Construction - Form EES-PO1 is included within Appendix 6.

8.2. Static Settlements

Foundation design should limit the probable maximum differential settlement over a horizontal distance of 6 m to no more than 25 mm under serviceability limit state load combinations of AS/NZS 1170 Part 0, unless the structure is specifically designed to prevent damage under a greater settlement.

8.3. Subsoil Class

Generally, across the entire site, the soils are consistent with site subsoil classification Class C – Shallow Soil sites as per NZS1170.5, based on estimated shear velocity (V_s) values from the CPTs presented within Ormiston Associated Ltd (ref. # 1600/2114, dated September 2005) and the calculated natural period of the site was less than 0.6 seconds.

8.4. Liquefaction Potential

8.4.1. Previous Liquefaction Analysis

As stated in the Geotechnical Investigation Report carried out by Ormiston Associated Ltd (ref. # 1600/2114, dated September 2005). The site presents a low risk for the development of liquefaction during an earthquake. The investigations at the property presented in the Ormiston Geotechnical report, in particular the CPT tests, indicates that the site is underlain by upper dense sands (q_c varying from 8MPa to 20MPa) overlying a layer of loose to medium dense sands.

Groundwater is variable across the site, varying between 3.04m and 5.9m. Liquefaction does not occur above the groundwater table and this relatively deep groundwater decreases the potential of liquefaction within the shallow layers that have been cut up to the consolidated sands (hardpan) or filled using compacted sands.

In the sand-filled areas, where the unsuitable materials have been removed, sand fill has been compacted, increasing the relative density of the sands. Subsequently, further CPTs testing have been carried out to assess the liquefaction potential of the compacted sand fill. Liquefaction analysis is discussed in the next Section 1.1.1.

6.4.2. CPT investigations

Geocivil Ltd conducted three CPTs to a 20 m target depth on 10 June 2020 where the sand fill depths were more significant within Stage 4 and Stage 5 subdivisions. To be noted that between 100 – 300 mm of topsoil has been spread throughout the site. In fact, the top 300 mm layer encountered within the CPTs records show a cone resistance between 2 and 6 MPa as recorded within the topsoil layer. However, all the test results show Dense / Very Dense Sand below the topsoil with a cone resistance qc between 10 and 20 MPa.

CPT investigations carried out on site are summarised in Table 2. Detailed testing results are shown in Appendix 4, CPTs test locations are shown in Appendix 3.

Table 2: CPT investigation results.

Test ID	Depth (m)	Groundwater Table (m)	Depth (m)	qc (MPa)	Interpreted Soil Description
CPTF	1.36	Not Encountered	0 – 0.25	3	Silty SAND and Sandy SILT
			0.25 – 1.36	18	SAND and Silty SAND
CPTG	0.86	Not Encountered	0 – 0.45	5	SAND and Silty SAND
			0.45 – 0.86	20	SAND
CPT I	3.46	Not Encountered	0.0 – 0.35	4.5	Silty SAND and Sandy SILT
			0.35 – 0.80	12	SAND and Silty SAND
			0.80 – 1.70	16	SAND
			1.70 – 3.20	13	SAND and Silty SAND
			3.18 – 3.46	20	SAND
CPTL	15.6	5.2	0.0 – 2.6	9.5 - 12	SAND and Silty SAND
			2.6 – 3.0	5	Silty SAND and Sandy SILT
			3.0 – 9.5	6 - 20	SAND and Silty SAND
			9.5 -	4 - 9	Silty SAND and Sandy SILT

1. Cone tip resistance

6.4.3. Peak Ground Acceleration

According to NZS 1170.5:2004, Importance Level 2 buildings are required to be designed to resist earthquake shaking with an annual probability of exceedance of 1/500 (i.e. a 500-year return period).

This is the ultimate limit state (ULS) design seismic loading. Structures are expected to retain their structural integrity during the ULS earthquake, and not collapse or endanger life.

Peak horizontal ground accelerations (PGA) have been calculated in accordance with MBIE/NZGS Module 1 (2016) using the following formula:

$$PGA = C_{0,1000} R f g / 1.3$$

$$C_{0,1000} = 0.13 \text{ for Whangarei (NZTA Bridge Manual Commentary (2018) Table C6)}$$

$$R = 1.0 \text{ for a 500-year return period event (NZS 1170.5)}$$

$$f = 1.33 \text{ for Class C}$$

Thus, the $PGA = 0.13 \times 1.0 \times 1.33 \text{ g} / 1.3 = 0.13 \text{ g}$ for ULS.

The seismic parameters are summarised in Table 3.

Table 3: Seismic parameters.

Importance Level	Limit State	Peak Ground Acceleration, PGA or CLT	Effective Magnitude, M_w
2	ULS ¹	0.13	5.8
2	SLS ²	0.03	5.8

1. Ultimate Limit State
2. Serviceability Limit State

3.4.4. Method of Analysis

CPT results have been analysed using CLiQ software to assess the potential soil liquefaction and settlement. Boulanger & Idriss (2014) was used to evaluate the liquefaction potential (triggering) of the soil strata at the site, the method proposed by Zhang et al. (2002) was used for settlement calculations.

Liquefaction analysis results are attached in Appendix 5.

The assessment of liquefaction has been undertaken under ultimate limit state design (ULS) criteria and serviceability limit state design (SLS) criteria. The serviceability limit state is the point where a structure can no longer be used for its intended purpose but would still be structurally sound. The tolerances for serviceability depend on the intended use of the structure and can vary significantly (Section 2 of NZS 1170.5:2004).

A groundwater level of 3.0 mbgl was conservatively considered during earthquake events for the liquefaction analysis which is the shallowest recorded value within the Geotechnical Investigation Report carried out by Ormiston Associated Ltd.

3.4.5. Liquefaction Severity Number (LSN)

The Liquefaction Severity Number (LSN) is a method developed by Van Ballegooy et al (2013) which provides an estimate of liquefaction damage manifesting at the ground surface. The LSN parameter

refines the calculated settlement by including a depth weighting function and can be used to differentiate the most severe damage land from the least affected land. Table 4 provides the LSN ranges and associated damage classifications.

Table 4: LSN Ranges and damage classifications

LSN Range	Damage Classification
0 – 10	Little to No expression of liquefaction
10 – 20	Minor expression of liquefaction
20 – 30	Moderate expression of liquefaction
30 – 40	Moderate to severe expression of liquefaction
40 – 50	Major expression of liquefaction
50+	Severe damage

8.4.5. Ultimate Limit State

A PGA value of 0.13 g and an earthquake magnitude (M_w) of 5.8 have been used for liquefaction analysis in accordance with NZGS Module 1 and the NZTA Bridge Manual guidelines.

8.4.5.1. Liquefaction Severity Number

The LSN for the ULS design case was 2.6 only for CPTL and nil for CPTF, G and I. This indicates *Little to no expression of liquefaction* according to Table 4. Refer to Figure 1 below.

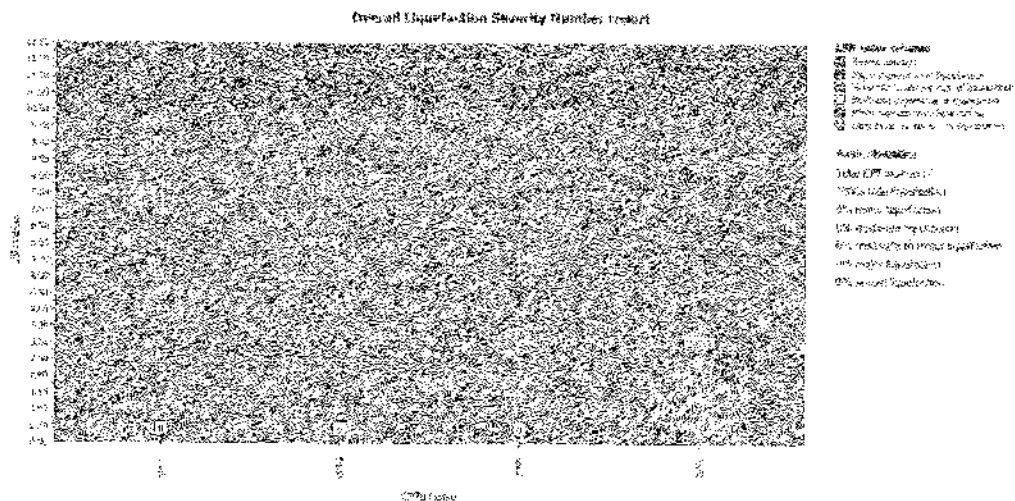


Figure 1: LSN results summary (ULS).

8.4.5.2. Liquefaction Induced Subsidence

up to 20 mm of settlement has been noted under the ULS design earthquake parameters for CPTL. Refer to the liquefaction results attached in Appendix 5.

8.4.6.3. Lateral Displacement

Lateral displacement is not considered to be an issue on site due to the presence of relatively flat ground.

8.4.7. Serviceability Limit State

A PGA value of 0.03 g and an earthquake magnitude (Mw) of 5.8 have been used for liquefaction analysis for the SLS case in accordance with NZGS Module 1 and the NZTA Bridge Manual guidelines.

8.4.7.1. Liquefaction Severity Number

The LSN for the SLS design case was nil. This indicates *Little to no expression of liquefaction* according to Table 4. Refer to Figure 2 below.

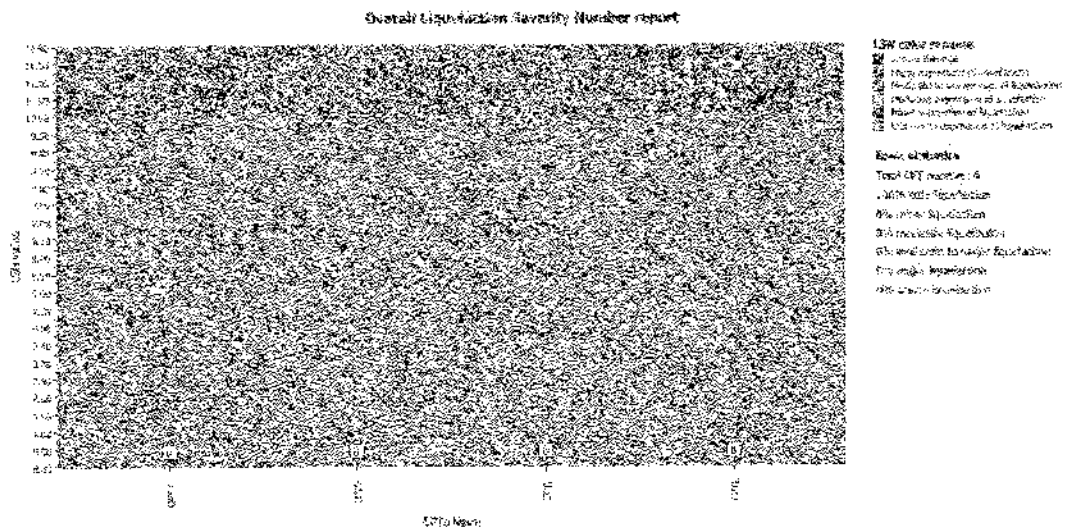


Figure 2: LSN results summary (SLS).

8.4.7.2. Liquefaction Induced Subsidence

No settlement has been noted under the SLS design earthquake parameter. Refer to the liquefaction results attached in Appendix 5.

8.4.8. Liquefaction Summary

Liquefaction potential is considered to be low. Little to no expression of liquefaction is expected within Stages 4 & 5 subdivision. Liquefaction analysis results are attached in Appendix 5. Up to 20 mm of settlements could be expected under the ULS earthquake case that are within the tolerance of the building code that is 25 mm over 6 m according to Clause B1/VM1 for static settlements.

8.5. Acid Sulphate Risk

8.5.1. Acid Sulphate Testing Discussion

The Landing Stage 4 & 5 subdivision is mapped on the Whangarei District Council Map to be in the Acid Sulphate Risk Area. Acid Sulphate Soil Field PH Tests have been conducted on site following the Acid

Sulfate Soils Laboratory Methods Guidelines, Version 2.1, Section H, published by Department of Natural Resources, Mines and Energy, Indooroopilly, Queensland, Australia, June 2004. This Australian guide applies to soils below an RL of 5.0m.

Given the vicinity with Stage 3, no further testing was carried out for Stages 4 & 5. Outcomes of further testing would not have changed the conservative approach the mitigation measures for foundation design recommended in Sections 8.5.2 and 8.5.3.

Field pH (pH_F) recording has been undertaken on site at the invert level (Test B) of proposed infrastructures (i.e. stormwater and sewer pipes) and 1 m above the invert level (Test A) in 10 different locations. Field testing is appended to Appendix 4.

For both Test A and Test B cases, field pH peroxide test (pH_{ox}) was performed on each of the 10 samples adding 30% of H₂O₂ (Hydrogen peroxide) to the 10 samples taken from the field in order to determine soil pH following complete oxidation.

After the reaction, the rate of the reaction indicates the level of sulfides present. The reaction is characterised by heat and gas evolution. A soil containing very little sulfides only rate an 'X' (Slight Reaction) however a soil containing high levels of sulfides is likely to rate an 'XXXX' (Very Vigorous Reaction). All the soil reaction of the pH_{ox} tests undertaken by Geocivil are characterised by an "X", therefore soils are likely to contain very little sulfides. Also, according to the ASS Sampling & Analysis Guidelines, 1998, a pH_{ox} value at least one unit below field pH_F indicates potential presence of acid sulphate soils. The greater the difference between the two measurements, the more indicative the value is of a PASS (Potential Acid Sulphate Soils). The lower the final pH_{ox} value is, the better the indication of a positive result. The lab testing generally shows a pH_{ox} value less than one unit below field pH_F, therefore the presence of acid sulphate soils could be little. Another qualitative indication of little sulphides is that if the measured pH_{ox} < 3. The more the pH_{ox} drops below 3, the more positive the presence of sulfides is. There is one pH_{ox} value recorded below 3.

These results are consistent with local observations of good quality concrete that had been in the ground for a long time and has been excavated and shows no sulphate acid damage.

However, the pH_F and pH_{ox} values are comprised between 2.92 and 5.22. According to NZS 3101:Part 1:2006 Section 3.4.3.2, an acidity represented by a PH of 5.0 to 5.5 may be considered as a practical limit of tolerance of high-quality concrete in contact with any acids. For pH lower than 5.0, the environment shall be assessed as exposure classification U. As per Section 3.8, NZS 3101, Exposure Classification U represents an exposure environment not specified in Table 3.1 of NZS 3101 for which the degree of severity should be assessed by the designer. Concrete in members subject to exposure classification U shall be specified to ensure durability under the particular exposure environment and for the chosen design life. Protective coatings may be taken into account in the assessment of concrete requirements.

Alternatively, as reported in the Acid Sulphate Soil Planning Policy Basic Guide prepared for WDC by Opus International Consultants, Australian Standard AS 2159 – 2009 Section 6 is relevant when

designing concrete and steel structures to withstand corrosive environments. This standard refers to piles, however the knowledge can be transferred to other structures.

8.5.2. Mitigation measure for Shallow Foundations

Given the acid sulphate soils risk and low pH values recorded on site, it is recommended installing a waterproof membrane underneath any shallow foundations, the membrane should be extended up to the edge of the foundations. If the above recommendations are followed, concrete exposure class can be A1 according to NZS3101. A typical detail is shown in Figure 3 showing the damp-proof membrane for a typical foundation detail.

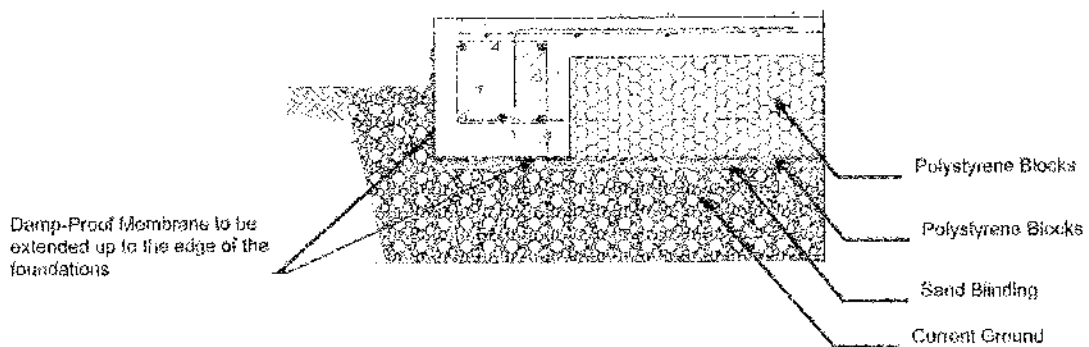


Figure 3: Damp Proof Membrane Detail

8.5.3. Mitigation measure for Deep Foundations

8.5.3.1. Concrete

In case of deep concrete foundations were used on site, it is recommended referring to the Australian Standard AS 2159 – 2009 Section 6 when designing concrete and steel structures to withstand corrosive environments.

The exposure classification of concrete is *Very Severe* according to Table 6.4.2 (C) of AS 2159 – 2009, considering a pH less than 4 and soil Conditions A (high permeability soils). It is recommended to refer to Table 6.4.3 of AS 2159 – 2009 to select the minimum strength of concrete and concrete cover relevant for the *Very Severe* Exposure Classification and design life.

8.5.3.2. Steel

If steel elements are used in the ground (i.e. driven H-steel piles, etc.), it is recommended adopting the *Severe* Exposure Classification shown in Table 6.5.2 (C) of AS 2159 – 2009, considering a pH less than 3 and soil Conditions A (high permeability soils).

A uniform corrosion allowance of 0.04-0.1 mm/year should be adopted during the design of any underground steel structure.

3.5.3.3. Timber

No precautions are required to be taken for timber piles. Timber is not susceptible to corrosion by acid.

3.6. Proposed Building Foundations

The test results indicate that the sites (once the peat / topsoil layer is removed) are suitable for standard foundations for buildings.

If a shallow concrete strip footing or concrete slab on grade is to be used, any organic soil such as peat and topsoil in the building footprint is to be excavated and replaced with an engineered hard fill layer of compacted aggregate in accordance with NZS 4431 or AS 3798:2007.

The Sandy material for all lots in Stage 4 & 5 is consistent with a Class A site as defined by AS 2870:2011 indicating little to no ground movement from moisture changes is expected.

This means that the finished ground within the lots is suitable for the erection of buildings on "Good Ground" in terms of NZS 3604:2011 (Timber Framed Buildings) & NZS 4229:2013 (Concrete Masonry Buildings Not Requiring Specific Engineering Design) and related documents providing that:

- Standard check of excavated foundations is carried out at time of construction.
- Buildings subject to heavy loads or vibrations will require specific design.
- Buildings not meeting the criteria for NZS3604:2011 and NZS4229:2013 will require specific design.

This report and the inferred professional opinions found within does not remove the necessity for normal inspection and design of foundations, as would be made in natural ground.

For the additional investigation, test sites should be situated under the building areas for each site and should be selected to give adequate information about the soil over the entire plan area of the proposed building. There shall be a minimum of four test sites for a building up to 200 m², with at least one additional test site for each additional 100 m² plan area of building as recommended by NZS3604.

9. Conclusions

Cook Costello was engaged by WFH Properties Ltd, to provide technical advice for earthworks and be the geo-professional for the Landing Stage 4-5 subdivision at One Tree Point, Northland. Cook Costello designed earthwork cuts and placement of controlled sand engineered fill, in order to enable construction of the building platforms within the proposed development.

All lots have been subject to bulk earthworks to provide sites suitable for standard foundations for typical residential buildings. Any heavy structures or heavy industry users will require specific design and further investigations. A layer of topsoil was spread over the lots to ensure moisture is retained and grass will grow to prevent wind-blown erosion.

Based on our investigations we make the following conclusions and recommendations:

- The test results indicate that the sites (once the peat/topsoil layer is removed) are suitable for standard foundations for buildings.
- An ultimate bearing capacity of 300kPa is available below any peat / topsoil that has been spread on site after the completion of the earthworks. To be noted that between 100 – 300 mm of topsoil has been spread throughout the site with an average of 200 mm.
- The site is consistent with Subsoil Class C – Shallow Soil sites as per NZS1170.5.
- Liquefaction potential is low. Little to no expression of liquefaction is expected within Stage 4 and Stage 5 subdivisions.
- Up to 20 mm of settlements could be expected under the ULS earthquake case that are within the tolerancy of the building code that is 25 mm over 6 m according to Clause B1/VM4 for static settlements.
- Foundation design should limit the probable maximum differential settlement over a horizontal distance of 6 m to no more than 25 mm under serviceability limit state load combinations of AS/NZS 1170 Part 0, unless the structure is specifically designed to prevent damage under a greater settlement.
- The Landing Stages 4 & 5 subdivisions are mapped on the Whangarei District Council Map to be in the Acid Sulphate Risk Area that is a well-known hazard in the area and well addressed with standard construction measures (i.e. waterproof membrane for shallow foundations).

Acid Sulphate Soil Field PH Tests have been conducted. Results of lab testing suggest that soils are likely to contain very little sulfides.

- However, the PH_f and pH_{ox} values are comprised between 2.92 and 5.22. According to NZS 3101:Part 1:2006 Section 3.4.3.2, an acidity represented by a PH of 5.0 to 5.5 may be considered as a practical limit of tolerance of high-quality concrete in contact with any acids.

- For pH lower than 5.0, the environment shall be assessed as exposure classification U as per NZS 3101.
 - Alternatively, as reported in the Acid Sulphate Soil Planning Policy Basic Guide prepared for WDC by Opus International Consultants, Australian Standard AS 2159 – 2009 Section 6 is relevant when designing concrete and steel structures to withstand corrosive environments.
 - It is recommended installing a waterproof membrane underneath any shallow foundations, the membrane should be extended up to the edge of the foundations to mitigate the presence of corrosive environment. If the above recommendations are followed, concrete exposure class can be A1 according to NZS3101.
 - In case of deep concrete foundations were used on site, it is recommended referring to the Australian Standard AS 2159 – 2009 Section 6 when designing concrete and steel structures to withstand corrosive environments. The exposure classification of concrete is *Very Severe* according to Table 6.4.2 (C) of AS 2159 – 2009, considering a pH less than 4 and soil Conditions A (high permeability soils). It is recommended to refer to Table 6.4.3 of AS 2159 – 2009 to select the minimum strength of concrete and concrete cover relevant for the *Very Severe* Exposure Classification and design life.
 - If steel elements are used in the ground (i.e. driven H-steel piles, etc.), it is recommended adopting the Severe Exposure Classification shown in Table 6.5.2 (C) of AS 2159 – 2009, considering a pH less than 3 and soil Conditions A (high permeability soils). A uniform corrosion allowance of 0.04-0.1 mm/year should be adopted during the design of any underground steel structure.
 - No precautions are required to be taken for timber piles. Timber is not susceptible to corrosion by acid.
- If a shallow concrete strip footing or concrete slab on grade is to be used, any organic soil such as peat and topsoil in the building footprint is to be excavated and replaced with an engineered hard fill layer of compacted aggregate in accordance with NZS 4431 or AS 3798:2007.
 - The Sandy material for all lots in Stage 4-5 is consistent with a Class A site as defined by AS 2870:2011 indicating little to no ground movement from moisture changes is expected.
 - The finished ground within the lots is suitable for the erection of buildings on "Good Ground" in terms of NZS 3604:2011 (Timber Framed Buildings) & NZS 4229:2013 (Concrete Masonry Buildings Not Requiring Specific Engineering Design) and related documents providing that:
 - Standard check of excavated foundations is carried out at time of construction.
 - Buildings subject to heavy loads or vibrations will require specific design.
 - Buildings not meeting the criteria for NZS3604:2011 and NZS4229:2013 will require specific design.
-

- This report and the inferred professional opinions found within does not remove the necessity for site-specific geotechnical investigation, normal inspection and design of foundations, as would be made in natural ground.

10. Limitations

This report has been prepared for the benefit of WFH Properties Limited as our client & The Whangarei District Council with respect to a geotechnical completion report for Stage 4 & 5 of The Landing Subdivision, One Tree Point. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

Opinions and judgments expressed herein are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions. Where opinions or judgments are to be relied on they should be independently verified with appropriate legal advice. Any recommendations, opinions, or guidance provided by Cook Costello in this report are limited to technical engineering requirements and are not made under the Financial Advisers Act 2008.

Recommendations and opinions in this report are based on data from testing undertaken on site. The nature and continuity of subsoil conditions away from the tests are inferred and it must be appreciated that actual conditions could vary considerably from the assumed model.

During excavation and construction the site should be examined by a Cook Costello Engineer or Engineering Geologist to judge whether the exposed subsoil's are compatible with the inferred conditions on which the report has been based. It is possible that the nature of the exposed subsoil's may require further investigation and the modification of the design based on this report. In any event it is essential that the firm is notified if there is any variation in subsoil conditions from those described in the report as it may affect the design parameters recommended in the report.

Cook Costello have performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

There is no investigation which is thorough enough to preclude the presence of materials at the site which presently, or in the future, may be considered hazardous. Because regulatory evaluation criteria are constantly changing, concentrations of contaminants present and considered to be acceptable now may in the future become subject to different regulatory standards which cause them to become unacceptable and require further remediation for this site to be suitable for the existing or proposed land use activities.

This report is generally appropriate for engineering use for five years, however it should be considered that future seismic events may change soil parameters and as a result, a new assessment of the site may be necessitated. Local changes in groundwater tables may also necessitate a reassessment of the site. It is recommended that if an interpretive report is more than two years old, or the proposed building that the report originally applied to have changed significantly, (e.g., layout, height, weight of building materials, foundation loads etc.) and/or design loadings have changed (e.g., design PGA levels), then the report is reviewed by the geotechnical engineer for current applicability.

**Appendix 6 – Statement of Professional Opinion on Suitability of
Land for Building Construction - Form EES-P01**



Statement of Professional Opinion on Suitability of Land for Building Construction Form EES-PO1

Development The Landing – Stage 4 and Stage 5, One Tree Point
Developer WFH PROPERTIES LIMITED
Location One Tree Point
I (full name) Stefano Rotatori
of (Name and address of firm) Cook Castello Ltd, Norfolk House, 2 Norfolk Street, Whangarei, Northland

Hereby confirm that _____

1 I am a geo-professional as defined in **Section 1.2** of the WDC EES and was retained by the developer as the geo-professional on the above development

2 The extent of my preliminary investigations are described in my Report(s) number 14333-004 dated 21/10/2021 & the conclusions and recommendations of that/those document(s) have been re-evaluated in the preparation of this report. The extent of my inspections during construction, & the results of all tests and/or re-evaluations carried out are as described in my geotechnical completion report dated 21/10/2021.

3 In my professional opinion, not to be construed as a guarantee, I consider that:

a The earth fills shown on the attached Plan No AS EW 1D, AS EW 2D appended within Appendix 2 of the Completion Report dated 21/10/2021 have been placed in compliance with the requirements of Council & my specification

b The completed works take into account land slope & foundation stability considerations, subject to the appended foundation recommendations and earthworks restrictions, (*which should be read in conjunction with the appended final site contour plan AS EW 1D, AS EW 2D*).

c Subject to 3(a) and 3(b) above, the original ground not affected by filling satisfies the description of 'good ground' as described in NZS3604/NZS4229

d Subject to 3(a) & 3(b) above, the filled ground satisfies the description of 'good ground' as described in NZS3604/NZS4229

e The original ground not affected by filling & the filled ground are not subject to erosion, subsidence, or slippage in accordance with the provisions of section 106 of the Resource Management Act 1991 provided that:

- (i) Site-specific geotechnical investigation and design of foundations are to be carried out at the detailed design of buildings.
- (ii) Standard inspection of excavated foundations is to be carried out at time of construction
- (iii) Buildings subject to heavy loads or vibrations will require specific design.

4 This professional opinion is furnished to the TA & the developer for their purposes alone on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any building.

5 This certificate shall be read in conjunction with my geotechnical report referred to in clause 2 above & shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

Signature

Qualifications

Date

ME, IntPE (NZ), CMEngNZ, CPEng # 1027758

21/10/2021

Land Stability

33

37

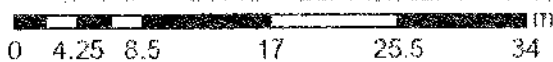
39

41




43

45

47



Landslide Susceptibility Zone

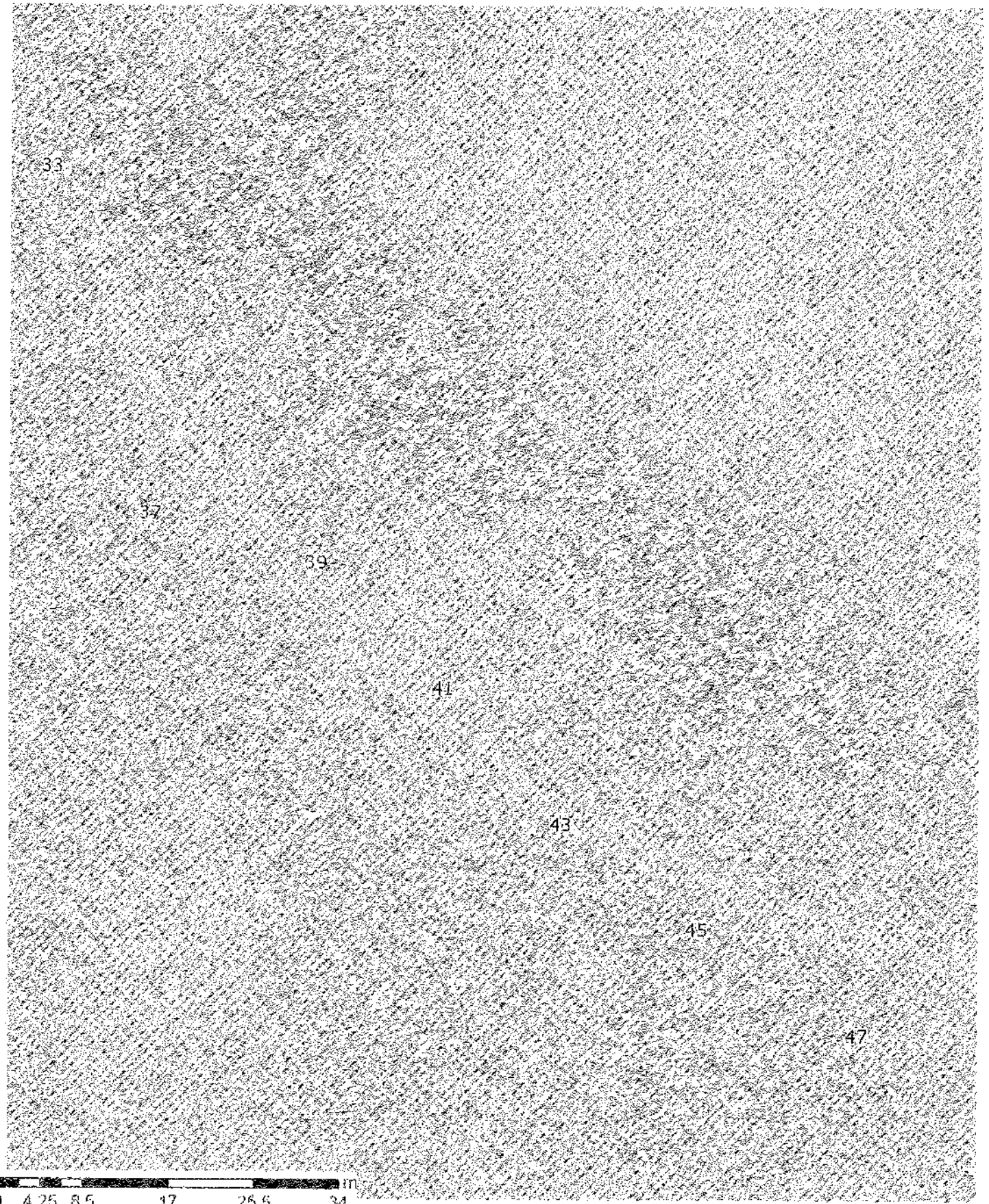
-  High
-  Moderate
-  Low



Whangārei District Council holds indicative information on land stability hazard for Whangārei. The Whangārei District Council may require site-specific investigations before granting future subdivision or building consent for the property, depending on the level of stability risk of the area the property is in. Tonkin + Taylor Ltd Landslide Susceptibility assessment report. <https://www.wdc.govt.nz/files/assets/public/documents/council/reports/hazard-reports/land-stability/landslide-susceptibility-technical-report.pdf>

29 August 2023
Scale 1:500



Acid Sulphate Soil (Risk/Confirmed)

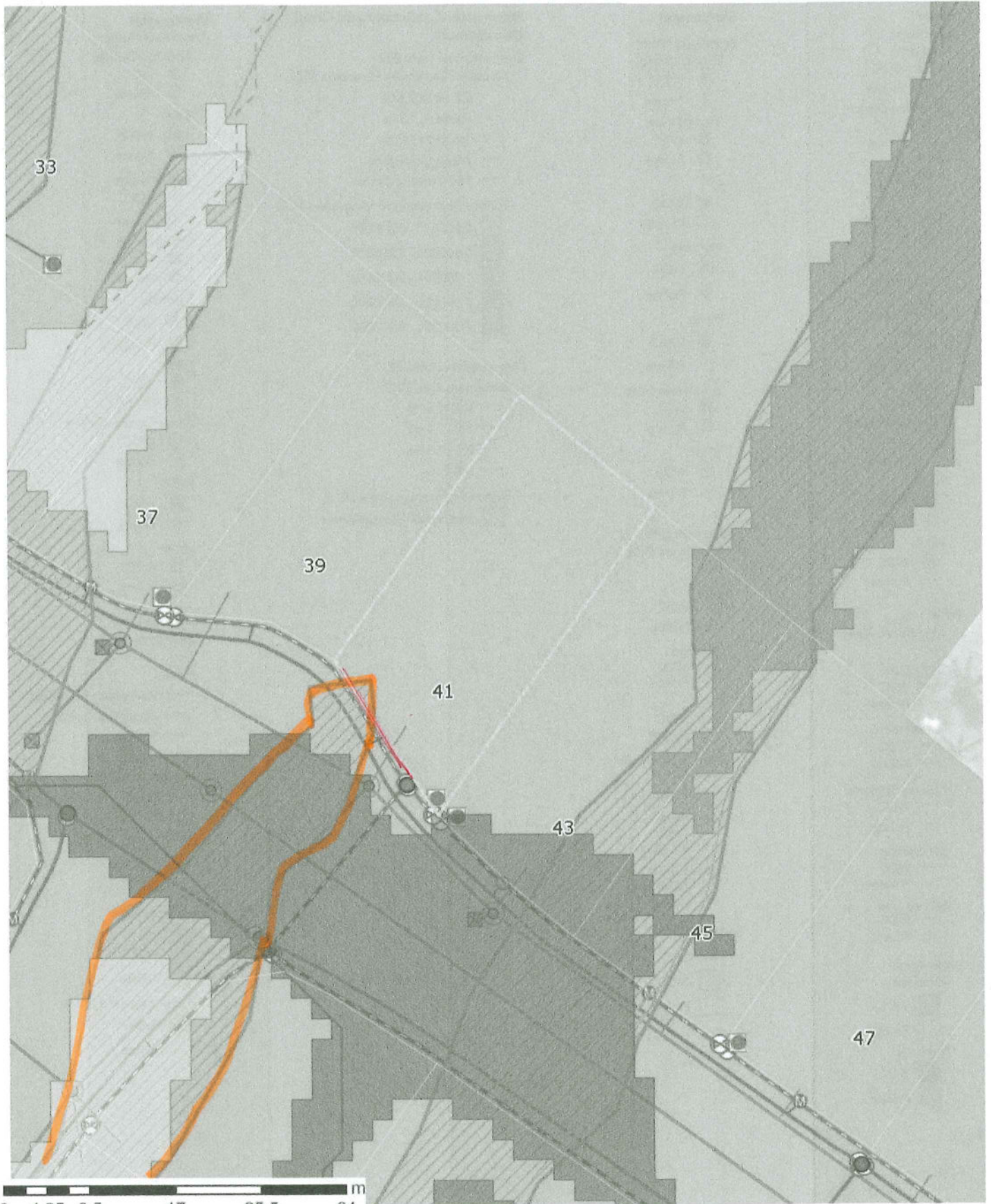


-  Confirmed Acid Sulphate Soil These soils, where present, can generate acidic groundwater and may require consideration with regard to land drainage and selection of building materials for buried structures.
-  Acid Sulphate Soil Risk

28 August 2023
Scale 1:500



Pipeline Assets



This information is generalized and shows the approximate location of the Public pipeline services. For digging, the As-Built engineering drawings must be used to accurately locate the services. See WDC Customer Services.

28 August 2023
Scale 1:500



The information displayed is schematic only and serves as a guide. It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed. Parcel Information is sourced from the Land Information New Zealand (LINZ) Data Service. CROWN COPYRIGHT RESERVED. © Copyright Whangarei District Council.

Pipeline Assets – Map Legend

Water

- Water Point**
- Activator
 - WDC
 - Private
 - Backflow Device
 - WDC
 - Private
 - Bore
 - WDC
 - Private
 - End Structure
 - WDC
 - Private
 - Fitting Node
 - WDC
 - Private
 - Hydrant
 - WDC
 - Private
 - Meter
 - WDC
 - Private
 - Meter Manifold
 - WDC
 - Private
 - Pump
 - WDC
 - Private
 - Valve
 - WDC
 - Private
- Water Line**
- Abandoned Pipe
 - Trunk Main
 - WDC
 - Private
 - Other Main
 - WDC
 - Private
 - Process Pipework
 - WDC
 - Private
 - Reticulation
 - WDC
 - Private
 - Service Line
 - WDC
 - Private
- Water Area**
- Chamber
 - WDC
 - Private
 - Reservoir
 - WDC
 - Private

Stormwater

- Stormwater Point**
- End Structure
 - WDC
 - Private
 - Fitting Node
 - WDC
 - Private
 - GPT
 - WDC
 - Private
 - Manhole
 - WDC
 - Private
 - Pump
 - WDC
 - Private
 - Stormwater Inlet
 - WDC
 - Private
 - Valve
 - WDC
 - Private
- Stormwater Line**
- Abandoned Pipe
 - Culvert
 - WDC
 - Private
 - Drainage
 - WDC
 - Private
 - Main
 - WDC
 - Private
 - Process Pipework
 - WDC
 - Private
 - Service Line
 - WDC
 - Private
 - Surface Drain
 - WDC
 - Private
- Stormwater Area**
- Chamber
 - WDC
 - Private

Stormwater Catchment and Flood Management

- Overland Flow Paths 2021**
- Modelled Catchment Flowpaths 2021**
- 0.2 ha to 0.4 ha
 - 0.4 ha to 1.0 ha
 - 1.0 ha to 3.0 ha
 - 3.0 ha to 100.0 ha
 - 100.0 ha and above
- Surface Depression Ponding Areas 2021**
- 0.200000 - 0.600000
 - 0.600001 - 1.200000
 - 1.200001 - 2.000000
 - 2.000001 - 4.000000
 - 4.000001 - 9.910000
- Overland Flow Paths 2017**
- Catchment Area 2017**
- 0.2 - 1.0 Ha
 - 1.0 - 2.0 Ha
 - 2.0 - 5.0 Ha
 - > 5.0 Ha
- Depression Storage Areas 2017**
- Depression Storage Areas

Wastewater

- Wastewater Point**
- Backflow Device
 - WDC
 - Private
 - Bore
 - WDC
 - Private
 - End Structure
 - WDC
 - Private
 - Fitting Node
 - WDC
 - Private
 - Manhole
 - WDC
 - Private
 - Meter
 - WDC
 - Private
 - Motor Control Centre
 - WDC
 - Private
 - Pump
 - WDC
 - Private
 - Valve
 - WDC
 - Private
- Wastewater Line**
- Abandoned Pipe
 - Main
 - Rising Main (Pressure)
 - Sewer Gravity Main
 - Private
 - Other
 - Process Pipework
 - WDC
 - Private
 - Service Line
 - WDC
 - Private
- Wastewater Area**
- Chamber
 - WDC
 - Private
 - Pressure Sewer System
 - Public
 - Private



Whangarei District Council
Private Bag 9023, Te Mai
Whangarei 0143
Ph:0-9-430 4200
Email: mailroom@wdc.govt.nz

Rates LIM Report

As at: Monday, 28 August, 2023

Property Number 172212
Legal Description LOT 407 DP 564989
Assessment Number 0029002166
Address 41 Kaurinui Crescent One Tree Point 0118
Record of Title(s) 1009463
Land Value \$380,000
Capital Value \$980,000
Date of Valuation 01-July-2021
Effective Date (used for rating purposes) 01-July-2023
Meter Location

Rates Breakdown (up to 30 June 2024)

Rates Charge	Charge Total
General Residential	\$886.39
Sewage Disposal - Residential	\$902.00
Uniform Annual General Charge	\$701.00
Regional Council Services	\$180.61
Regional Economic Development	\$8.13
Regional Emergency & Hazard Management	\$50.50
Regional Emergency Services Rate	\$11.44
Regional Flood Infrastructure	\$36.56
Regional Land and Fresh Water Management	\$106.48
Regional Pest Management	\$88.06
Regional Sporting Facilities	\$16.37
Regional Transport Rate	\$43.17
Annual Charge Total	\$3,030.71

Opening Balance as at 01/07/2023 **\$0.00**

Rates Instalments	Total
20/07/2023 Instalment	\$759.71
20/10/2023 Instalment	\$757.00
20/01/2024 Instalment	\$757.00
20/04/2024 Instalment	\$757.00
Rates Total	\$3,030.71
Balance to Clear	\$2,271.00

Form 5
Building Consent - BC2200495
Section 51, Building Act 2004

Forum North, Private Bag 9023
Whangarei 0148, New Zealand
P +64 430 4200
E mailroom@wdc.govt.nz
www.wdc.govt.nz

The Building

Street address of building: 41 Kaurinui Crescent
One Tree Point 0118
Legal description of land where building is located: LOT 407 DP 564989
Building name: N/A
Location of building within site/block number: N/A
Level/unit number: N/A

The Owner

Name of owner: ATK Developments Limited
Contact person: Anna Trainina-Knapp
Mailing address: PO Box 35266
Browns Bay
Auckland 0753
Street address/registered office: N/A
Phone number: Landline: N/A Mobile: 0212279012
Daytime: N/A
After hours: N/A
Facsimile number: N/A
Email address: anna@atkdevelopments.co.nz
Website: N/A

First point of contact for communications with the building consent authority:
Emma Thacker (A1 Homes Northland); Mailing Address: PO Box 183
Ruakaka 0151; Phone: 094330200; Email: emmathacker@a1homes.co.nz

Building Work

The following building work is authorised by this building consent:
New Dwelling

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building). This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction,

alteration, demolition, or removal would be in breach of any other Act.

Conditions

This building consent is subject to the following conditions:

Section 90 - Inspections by Building Consent Authorities: (1) Every building consent is subject to the condition that agents authorised by the building consent authority for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect-

- (a) land on which building work is being or is proposed to be carried out; and
- (b) building work that has been or is being carried out on or off the building site; and
- (c) any building.

(2) The provisions (if any) that are endorsed on a building consent in relation to inspection during the carrying out of building work must be taken to include the provisions of this section.

(3) In this section, inspection means the taking of all reasonable steps to ensure that building work is being carried out in accordance with a building consent.

Construction monitoring requirements

Please contact the following consultants directly to arrange the construction monitoring identified which they have been engaged to carry out.

- Cook Castello or suitably qualified engineer:
Confirm ground conditions and bearing

Copies of all site reports/records must be provided to the Building Consent Authority as work proceeds for their records. Please forward these to mailroom@wdc.govt.nz referencing the building consent number.

Inspections

The following inspections are required:

- Siting and Site Scrape Inspection
- Wastepipes
- Framing / Pre-wrap
- Half High Brick
- Preline Building
- Drainage
- Prepour
- Floor Slab
- Post Wrap / Cavity
- Preline Plumbing
- Post Line
- Final

Documents Required

Prepour

- B1: Foundations - Construction monitoring records

Wastepipes

- G12: Pipework pressure test documentation
- G13: Underslab plumbing as-built & plumbers details

Floor Slab

- B1: Slab - Construction monitoring records

Framing / Pre-wrap

- B1: Truss certification

Preline Building

- G12: Pipework pressure test documentation

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test

Final

- LBP Memorandum For All Restricted Building Work Carried Out
- PS4 From Structural Engineer And A Copy Of All Site Notes From Inspections
- G9: Energy works certificate

Compliance Schedule

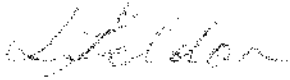
A compliance schedule is not required for this building.

Attachments

Copies of the following documents are attached to this building consent:

Information page: Now you have your Building Consent

- Advice notes



Signature: Letitia Feldon

Position: Building Control Officer

On behalf of: Whangarei District Council

Issue Date: 10 June 2022

APPROVED DOCUMENTS - WEIC
SC 220045
24/05/2022

Cautionary Note:
BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH.
NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

NZBC FE:
Construction and Demolition Hazards Acceptable Solution (S/AS1)

1.0 Work-Site Barriers

1.0.1 The necessity for barriers will depend mainly on the site location.
The need will be greater in areas with high levels of pedestrian traffic (i.e. in Central Business Districts), than in industrial or rural areas.
Barriers are not necessary for domestic dwellings up to 2 storeys above ground level unless specific hazards exist.

All work-sites hazard evaluation will take account of:
1. Pedestrian counts adjacent to the site.
2. Car parking adjacent to the site.
3. Location of neighbouring buildings.

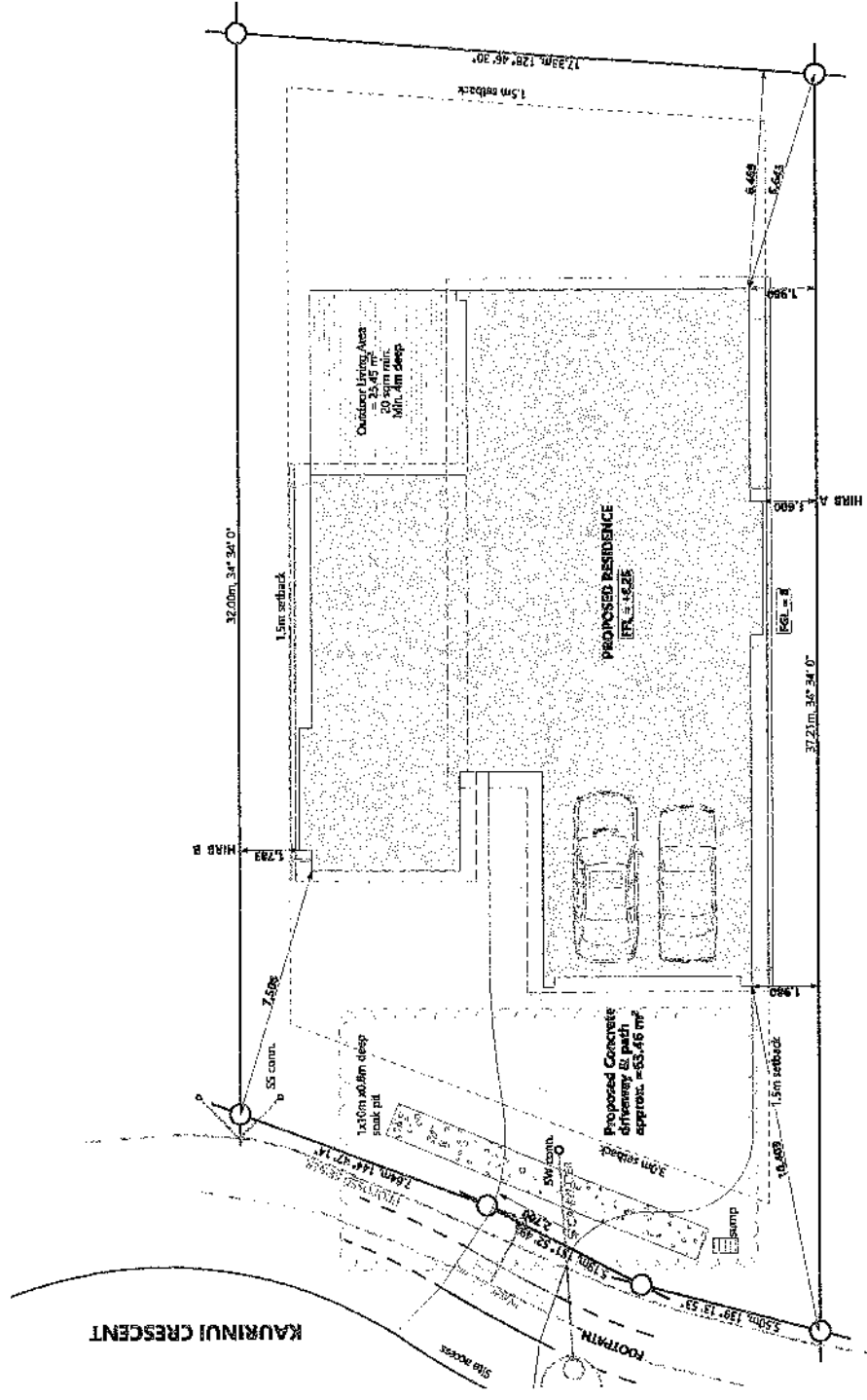
4. Presence of neighbouring work-sites or recreation areas.
5. Proximity to schools or early childhood centres.
6. Proximity to housing.
7. The depth of a water hazard.
8. The period of time for which ponded water will be present.
9. The accessibility and visibility of the site.

1.0.2 If a work-site is not completely enclosed, and unauthorised entry by children is likely, it is acceptable for specific hazards to be fenced only when workers are absent from the immediate vicinity.

1.1 Site fences and hoardings

1.1.1 Fences and hoardings shall extend at least 2.0 m in height from ground level on the side accessible to the public.

1.1.2 An acceptable fence may be constructed with galvanneal chainlink fencing having a minimum sized grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m, and the gap between the bottom of the fence and ground no greater than 100 mm.

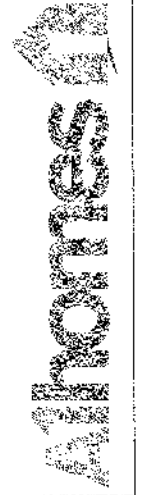


Lot: 407 of Lot 2
DPC: 564889
Site Area: 557 m²
Gross Plot Area: 216.13 m²
Site Coverage: 26.2 % (40% maximum)
Maximum Building Str. Hm
Technical Building: 90 (warded) District Council
Planning Zone: General Residential

Qualified Floor Level (FRL) shall be:
a) For sites level with or above the road, no less than 150 mm above the road crown on at least one cross-section through the building and roadway.
b) For sites below the road, no less than 150 mm above the lowest point on the site boundary.

Settlement Control:
• No building work will be started on this project until the construction of an approved stormwater outlet has been completed for this proposed lot.
• All erosion and sediment control structures are to be inspected and maintained daily.
• Prevent any backfill or debris from washing onto council or neighbouring properties.
• All ground cover vegetation outside the immediate building area to be preserved during the building phase.
• All erosion and sediment control measures are to be installed prior to commencement of earthworks.
• Stockpiles of clay and materials are to be covered with impermeable sheeting.
• Roof water downpipes to be connected to the main stormwater system as soon as roof sheeting & spouting is installed.

HRB = Height in Relation to Boundary



Job ref: **P0782**
15/02/05

Client Details:
ATK Developments LTD
Address:
Lot 407 Kaurini Crescent
One Tree Point, Whangarei

Scale: 1:150
Sheet No: 2
Date: 24/05/2022
Call 0800 AllHomes 214653
www.AllHomes.co.nz

Check: 45/-
LP: -
D (RS): 1
NO 1

SITE PLAN
Designer: A1 | Drafter: SW/TH | Checker: A5/-
Barb: 1 | Erosion: SW/TH | What: HIGH

DO NOT scale off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately by email or phone. NO construction or site works are to commence until building consent becomes unconditional.
COPYRIGHT: Any and all drawings, commissions remain the property of A1 Homes Limited. No part of these drawings, and are hereby for use as described in the drawings, and may not be used for any other purpose or reproduced in whole or in part without written permission obtained from A1 Homes Limited.

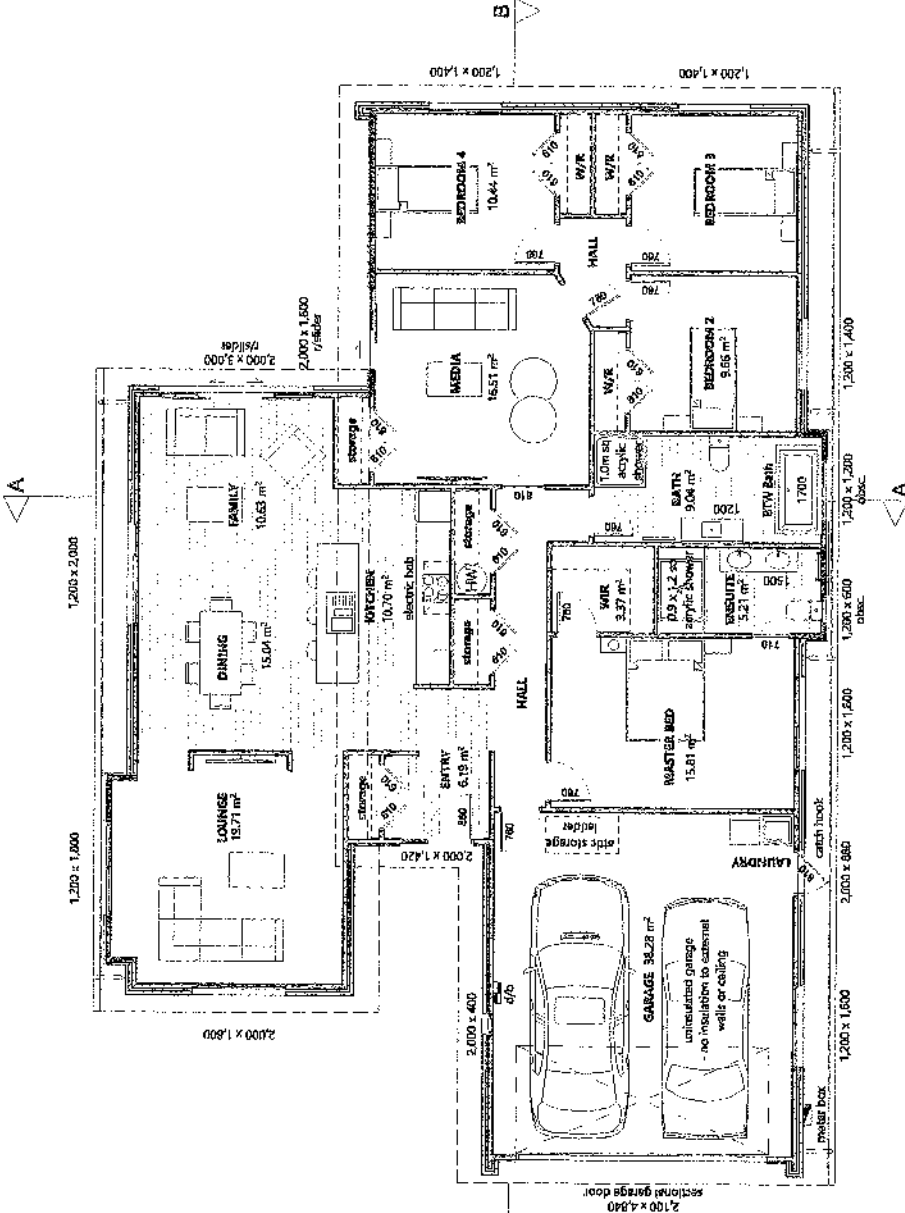


APPROVED DOCUMENTS - WDC
 50 2200493
 2/28/2022

Notes:
 - Ebbchen layout diagrams and only to be used for drainage reference, refer to kitchen plans for exact design.

Cautionary Notes:
 Always cross reference the foundation plan with the framing plan prior to setting out.
 Joinery sizes shown are box sizes & are preliminary only.
 Site measure and confirm all joinery sizes, reporting any changes PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.
 Refer to all written dimensions, DO NOT scale off drawings.

Construction Notes:
 Electric hobs with vented r/hood.
 Mains pressure 150L HWC with tempering valve & seismic restraint in accordance with NZBC 2004 section G12.
 The delivered hot water temperature at any sanitary fixture used for personal hygiene shall not exceed 55°C.
 Topsoil edge joints in ceilings
 To reduce the risk of cracks caused by substrate movement, back-bolting of tapered edge joints is required in the following situations:
 - When timber battens have been used.
 Any area containing 3 or more tapered joints
 - When steel battens have been used.
 Any area containing 6 or more tapered joints
 Please confirm layout & fittings of kitchen & bathrooms etc before foundation commences.



FLOOR FINISHES:

- Carpet
- Master Bedroom
- Bedroom 2
- Bedroom 3
- Bedroom 4
- Lounge
- Media
- Storage
- Halls
- WIR

- Vinyl
- Kitchen
- Dining
- Family
- Entry
- Bath
- Etc.
- Storage

- Concrete
- Garage
- Laundry

FLOOR AREAS:

g/frame area Living = 169.61 m²
 g/frame area Garage = 39.97 m²
 g/frame area Total = 209.58 m²
 g/brick area Total = 215.95 m²

CLADDING KEY:

- 70 Series brick veneer
- JH Linea weatherboard
- Absolute Vulcan shipping

Notes:

2.4m stud ht. throughout



DO NOT scale off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately before commencing works or materials. NO construction or fit works are to commence until Building Consent is issued. Unconditional.
 COPYRIGHT: Any and all drawings commissioned remain the property of A1 Homes Limited, including all copyright and similar rights subsisting in those drawings and are solely for use as distributed on this drawing, and may not be used for any other purpose or reproduced in whole or in part without written permission obtained from A1 Homes Limited.

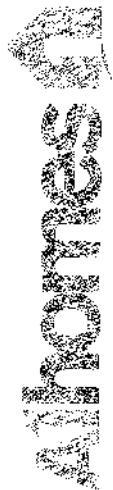
GROUND FLOOR PLAN

Design: A1
 Drawn: SM/TH
 Check: AGJ - LP
 Date: 30/05/2022
 Bathing: Enclosed Shower
 1 D (S) R6 1
 NIGEH

Scale: 1:100
 Sheet No: 9
 Date: 30/05/2022
 Call 0800 A1Homes
 214663
 www.A1Homes.co.nz

Client Details:
 ATK Developments LTD
 Address:
 Lot 407 Gairimu Crescent
 One Tree Point, Whangarei

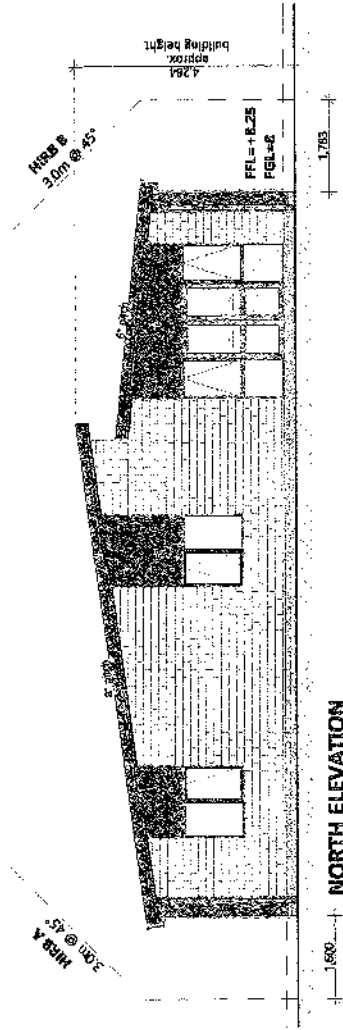
Job No: P0782
 13/03/2015



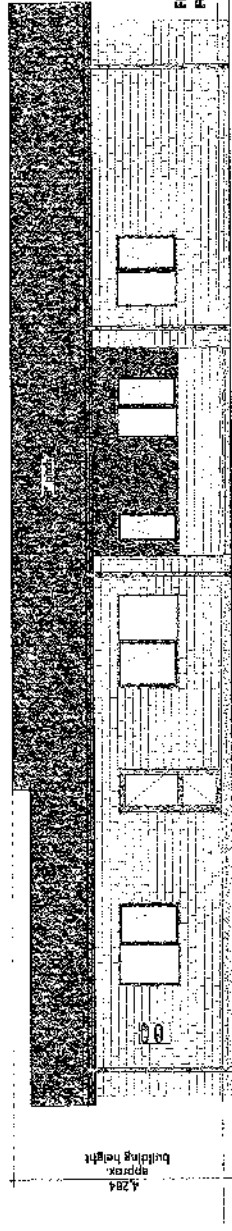
BS7AS1
 1.1.3 Food preparation surfaces shall be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate and tiles are examples of suitable materials for these surfaces.
 1.6 Wall linings:
 Wall linings adjacent to appliances and fixtures shall have surfaces that can be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, tiles, wallboards with painted or applied impervious coating or tiles, are examples of suitable materials for these surfaces.

Separation between electric hob and the GIB lined wall:
 Cut out for hob: min. 35mm from back of bench top.
 Overhead clearances: not less than 650mm from hob surface to range hood.
 See drawings: Where dimension to any vertical combustible surface is less than 150 mm, surface shall be protected to a min. height of 150 mm above hob for full dimension (width or depth) of cooking surface area.
 Protection of combustible surfaces: 5mm thick ceramic tiles or graphic glass & suitable to protect 100mm GIB board.

Approved Drawings - W00
 BC 2206085
 9/18/2022



NORTH ELEVATION



EAST ELEVATION

Steel Lintels Required
 Refer to sheet 39

BUILDING ENVELOPE RISK MATRIX	
ALL ELEVATIONS	
Risk Factor	Risk Severity, Risk Score
Wind zone (per NZS 3804)	High risk 1
Number of storeys	Low risk 0
Roof/wall intersection design	Very high risk 5
Eaves width	Very high risk 5
Envelope complexity	High risk 3
Deck design	Low risk 0
Total Risk Score:	14

General Notes:
 Any encasements shown are to be confirmed by a registered surveyor prior to commencement of foundations. No liability shall be held by designer with this confirmation.

Conditionary Notes:
 BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH.
 NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:
 Glazing in accordance with NZS 4223:2006/2016 plus amendments
 All glazing low-e clear float except for obscure glass to bathrooms & WC.

Double glazing to all window and door joinery excluding garage
 Aluminium joinery head heights to be 2.0m (excludes entry box unit).
 Refer to floor plan for door & window sizes, joinery schedule & sizes to be confirmed by meet manufacturer & joinery fabricator PRIOR to manufacture by way of communication via e-mail, phone or other.

MIR = Height in relation to Boundary

NZS 3101/AS1 Access Recess
 Concrete (min 150mm below FFL or HS timber step to all access points downwards)
 Compatible Slip Resistance for Walking Surfaces:
 • Portland cement concrete
 • Exposed (Class 5 or 6) or wood float finish (Class U2)
 • Concrete surface finishes complying with NZS 3114.
 • Coated and sealed/tinted impregnated
 The sandlight, which is spalled over the concrete surface of the final paint coating, should be a hard angular material such as silica sand or calcium boards. The particle size should not be less than 0.2 mm and that it is not submerged by the coating and not greater than about 2-3 mm so that it remains tightly bound to the surface.
 - Exposed aggregate finish
 - Crushed aggregate
 - Asphaltic concrete
 - Concrete pavers
 - Dry press concrete
 - Interlocking concrete block paving to NZS 3116.
 - Anti-slip tapes
 - will normally require regular replacement to remain effective. To ensure foot contact, tapes should be placed at right angles to the line of travel and be spaced at top more than 150 mm centres.

Foundation:
 Fifth Ribcraft Foundation
Wall Cladding:
 Brick Veneer 70 Series
 James Hardie Linea weatherboard - 180 mm
 Abodo Vulcan "Resilience" 190mm x 190 mm
Roof Cladding:
 6 to 8" pitch NZS Corrosion Resistant Macpac Trapezoidal profile
Fascia and Soffits:
 Continuous 180 Corrosion Resistant
 Continuous 1/4 round capping
 Marley PVC 80mm round downpipes
Joinery:
 AFR Residential sub Aluminium Joinery



ELEVATIONS

Scale: 1:100
 Sheet no: 10
 Job ref: P0782

Client Details:
 ATK Developments LTD
 Address:
 Lot 407 Kaurimu Crescent
 One Tree Point, Whangarei

Design: A1 Homes
 Check: N6
 UP: 1
 Date: 30/05/2022

Drawn: 1
 Check: N6
 Down: 1

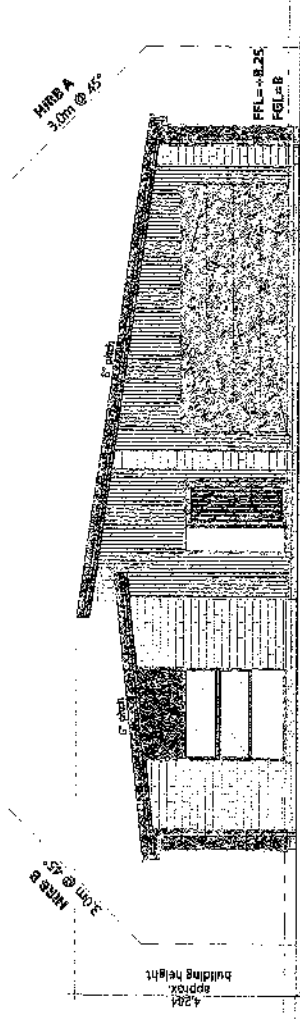
Web: HIGH

Call 0800 A1 Homes
 2 14 6 6 3
 WWW.A1HOMES.CO.NZ

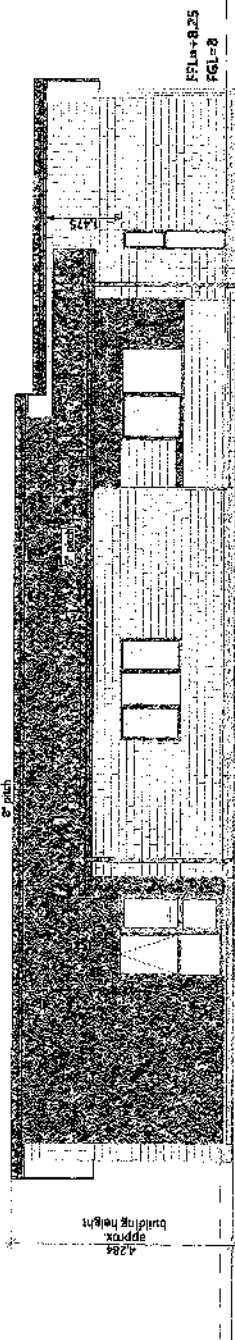
ALPHAS

DO NOT take off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately before commencing works or ordering. NO construction or alterations are to commence until Building Consent becomes unconditional.
 Copyright: Any and all drawings commissioned remain the property of A1 Homes Limited. Including all copyright and similar rights subsisting in these drawings, and are either used as described on the drawings, and may not be used for any other purpose or reproduced in whole or in part without written permission obtained from A1 Homes Limited.

Approved Documents - W03
 BC 2200485
 5/06/2022



SOUTH ELEVATION



WEST ELEVATION

Steel Lintels Required
 Refer to sheet 39

General Notes:
 Any encumbrances shown are to be confirmed by a registered surveyor prior to commencement of foundations. No liability shall be held by designer with this confirmation.

Customer Notes:
 BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH.
 NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:
 All glazing in accordance with NZS 4223:2009/2016 plus amendments
 All glazing low-e clear float except for obscure glass to bathrooms & WC.

Double glazing to all windows and door joinery excluding garages

Aluminium joinery head heights to be 2.0m (excludes entry box unit).

Refer to floor plan for door & window sizes, joinery schedule & sizes to be confirmed by pre-cut manufacturer & joinery fabricator PRIOR to manufacture by way of communication via e-mail, phone or other.

HIRE = Heights in relation to Boundary

NZSBC D1/AST Access Routes:
 Concrete (min 150mm below FFL) or HS timber step to all access points (owners care)
 Acceptable Slip Resistance for Walking Surfaces:
 Portland cement concrete
 Formed (Class 5 or 6) or wood float finish (Class 1/2)
 Concrete surface finishes complying with NZS 3114.
 Coated and sand/grit impregnated
 The sand/grit, which is sprinkled over the complete surface of the final coat coating, should be a hard angular material such as silica sand or calcined bauxite. The particle size should not be less than 0.2 mm so that it is not submerged by the coating and not greater than about 2-3 mm so that it remains lightly bound to the surface.
 Exposed aggregate finish
 Crushed aggregate
 Asphaltic concrete
 Concrete pavers
 Dry press concrete
 Interlocking concrete brick paving to NZS 3116.
 Anti-slip tapes
 Will normally require regular replacement to remain effective. To ensure foot contact, tapes should be placed at right angles to the line of travel and be spaced at no more than 150 mm centres.

Foundation:
 Fresh Ribbed Foundation


Wall Cladding:
 Rock Veneer 70 Series
 James Hardie Linear weatherboard - 180 mm
 Abode Vulcan 'Theiler' W672F - 180 mm

Roof Cladding:
 6 x 6 pitch, NZS Colansteel Max Trapezoidal profile

Fascia and Spouting:
 Continuous 180 Colansteel fascia
 Continuous 1/4 round spouting
 Halfley PVC 80mm round downpipes

Joinery:
 API Residential suite Aluminium Joinery

BUILDING ENVELOPE RISK MATRIX	
A3 Elevation	Risk Severity Risk Score
Wind zone (per NZS 3804)	High risk 1
Number of storeys	Low risk 0
Roof/wall interaction design	Very high risk 5
Eaves width	Very high risk 5
Envelope complexity	High risk 3
Deck design	Low risk 0
Total Risk Score:	14



	Job no: PG782	
Scale: 1:100	Sheet no: 11	Client Details: ATX Developments LTD
Date: 30/07/2022	Draw: SH/TN	Address: Lot 407 Kauri Hill Crescent
Drawn: SH/TN	Exposure: Storm	Call 0800 A1 Homes 2 1 4 6 6 3
Wind: FRSH	D (SS): NO	www.a1homes.co.nz
D (SS): NO	D (SS): NO	One Tree Point, Whangarei

ELEVATIONS

DO NOT scale off drawings. Cross references of drawings. Any discrepancies MUST be clarified with the designer immediately before printing. NO consideration of air vents are to commence until Building Consent becomes unconditional.

Copyright: Any and all drawings commissioned remain the property of A1 Homes Limited, including all copyright and similar rights subsisting in those drawings and are solely for use as described on the drawings, and may not be used for any other purpose or reproduced in whole or in part without written permission obtained from A1 Homes Limited.



Consulting Engineers

A1 Homes Northland
Steve.hart@a1homes.co.nz

Tel: 021 080 12351
shaun@wjl.co.nz
Job No: 115018
24 February 2022

NORTHLAND
Po Box 8130
Kerikeri
Whangarei 0145
T: +64 9 945 4188

AHIMANGA
WAIKATO
Po Box 11881
Gisborne
Auckland 1547
T: +64 9 527 0196

SOUTHERN LAKES
Po Box 159
Wanaka 9343
T: +64 3 443 6209

CANTERBURY
T: +64 21 824 069

Dear Steve,

**Ground Conditions Assessment Report for Proposed New Residential Dwelling at:
Proposed Lot 407 Kaurinui Crescent, Stage 4 The Landing, One Tree Point**

1.0 INTRODUCTION

Based on your instruction, we have prepared this Ground Conditions Assessment Report regarding the central construction of a new single-level residential dwelling at the above address. The purpose of this report was to assess the ground conditions at the property for foundation design purposes in general accordance with Section 3 of NZS3604.

The subject proposed allotment does not currently have title; however, it is our understanding that the wider Stage 4 area of 'The Landing' that the proposed development is to reside within, is currently in the Resource Management Act S.223 and S.224 certification processing phase. The proposed Lot location is currently displayed on the Whangarei District Council (WDC) GIS Property Map.

2.0 SITE DESCRIPTION

The proposed subject 597m² urban property, is to be located off the northern side of Kaurinui Crescent, accessed directly north of the roundabout intersection of Kaurinui Crescent and Te Piriti Road, within Stage 4 of 'The Landing' subdivision development, in the suburb of One Tree Point.

Topographically speaking, the property and wider surrounding land is flat natured, having been formed level through an engineered cut/fill earthworks operation during the subdivision stage of the property. The 'Bulk Earthworks Plan – Finished Earthwork Contours, Stage 4 (ref: AS EW 1D)' of the Earthworks Completion Report (ECR - see section 3.0 below), indicates that the site has largely been filled up to approximate heights ranging between 1.0m to 2.0m. Contours on the plan indicate that existing ground level (EGL's) across the site range between approximately RL8.0 (southeast boundary) to RL8.4 (northwest boundary).



Site photograph of the proposed building site (northwest direction). Orange cones outline the building site.

3.0 PREVIOUS GEOTECHNICAL REPORT

At the time of preparing this report, we have reviewed the following Geotechnical Report, which we understand was prepared for Stages 4 and 5 of the 'The Landing' subdivision development:

- Earthworks Completion Report (ECR), One Tree Point, The Landing Stage 4 & Stage 5 (ref: 14333-004), dated 21 October 2021, by Cook Costello Ltd, for WFH Properties Ltd.

In reviewing the ECR, we note the following surmised conclusions and recommendations regarding future residential development at the proposed property:

- The test results indicate that the sites (once the peat/topsoil layer is removed) are suitable for standard foundations for buildings,
- An ultimate bearing capacity of 300kPa is available below any peat/topsoil that has been spread on-site after the completion of the earthworks. To be noted that between 100mm to 300mm of topsoil has been spread throughout the site, with an average of 200mm,
- The site is consistent with Subsoil Class C – Shallow Soil sites as per NZS1170.5,
- Liquefaction potential is low. Little to no expression of liquefaction is expected within Stage 4 and Stage 5 subdivisions,
- Up to 20mm settlements could be expected under the Ultimate Limit State (ULS) earthquake case that are within the tolerancy of the New Zealand Building Code (NZBC), that is 25mm over 6m according to Clause B1/VM4 for static settlements,
- Foundation design should limit the probable maximum differential settlement over a horizontal distance of 6m to no more than 25mm serviceability limit state load combinations of AS/NZS1170 Part 0 unless the structure is specifically designed to prevent damage under a greater settlement,
- Acid Sulphate Soil Field PH Tests have been conducted. Results of lab testing suggest that soils are likely to contain very little sulphides. However,
 - It is recommended installing a waterproof membrane underneath any shallow foundations. The membrane should be extended up to the edge of the foundations to mitigate the presence of corrosive environment. If the above recommendations are followed, concrete exposure Class can be A1 according to NZS3101, and
 - No precautions are required to be taken for timber piles. Timber is not susceptible to corrosion by acid,
- If a shallow concrete strip footing or concrete slab-on-grade is to be used, any organic soil such as peat and topsoil in the building footprint, is to be excavated and replaced with an engineered hardfill layer of compacted aggregate in accordance with NZS4431 or AS3798,
- The sandy material for all Lots in Stage 4-5, is consistent with a Class A site as defined by AS2870, indicating little to no ground movement from moisture changes is expected,
- The finished ground within the Lots, is suitable for the erection of buildings on 'Good Ground' in terms of NZS3604 and NZS4229 and related documents, providing that:
 - Standard check of excavated foundations is carried out at the time of construction,
 - Buildings subject to heavy loads or vibrations, will required specific design, and
 - Buildings not meeting the criteria for NZS3604 or NZS4229, will require specific design, and
- This report and the inferred professional opinions found within, does not remove the necessity for site-specific Geotechnical investigation, normal inspection, and design of foundations, as would be made in natural ground.

NORTHLAND
Po Box 8130
Kensington
Whangarei 0145
T: +64 9 945 4188

AUCKLAND
WAIKATO
Po Box 11381
Ellerslie
Auckland 1542
T: +64 9 577 0196

SOUTHERN LAKES
Po Box 169
Wahaka 9803
T: +64 3 443 6209

CANTERBURY
T: +64 21 824 063

4.0 DEVELOPMENT PROPOSAL

At the time of preparing this report, the client has provided their own set of preliminary architectural drawings (16 sheets), dated 11 February 2022 (ref: PO782). In reviewing the drawings, we note that it is proposed for a new 216m² single-level residential dwelling to be constructed centrally at the property. The drawings indicate that the dwelling is to be founded on a raft type slab, supporting lightweight framing, predominantly brick veneer cladding, and a longrun Colorsteel roof.

The architectural drawings indicate the proposed finished floor level is at RL8.25 and in assuming an approximate 0.30m thick raft slab, it is envisaged that the building platform will be founded mainly atop cut ground of less than approximately 0.50m in height.

5.0 FIELDWORK INVESTIGATION

WJL carried out a walkover inspection of the property and surrounding area, and shallow ground investigation at the proposed building site, on 23 February 2022. Subsoil testing involved the following:

- The excavation of two hand auger boreholes (HA) of 75mm diameter, both to a near refusal depth of 0.80m below existing ground level (BEG), at the south-western (HA1) and north-eastern (HA2) ends of the building site, and
- Three dynamic cone - scala penetrometer Tests (DCP), were extended from existing ground level (EGL) to depths ranging between 0.60m to 0.70m BEGL, at the south-eastern, central, and north-western areas of the building site.

Both HA's encountered a 0.10m to 0.20m thick surficial topsoil layer, overlying dense engineered fill comprising of fine sand, until termination of both HA's. The fill material was consistent with the GNS Science Geology Web Map description of the property, which is noted as Karioitahi Group Stable Dune Deposits.

Groundwater was not encountered at either of our HA testing locations, which were both extended to a maximum tested depth of 1.2m BEGL. In reviewing the ECR, we note that Section 8.4.1 indicates that groundwater levels across the wider development area range between depths of 3.04m to 5.9m BEGL.

Measured blow counts per 0.10m ground penetration from below cleared ground levels (BCGL) during the three DCP's, ranged between 8 to 18 blows, to a maximum tested depth of 0.70m BEGL.

Based on the above, we conclude that 'Good Ground' soil conditions in accordance with NZS3604, underlies the proposed building site from BCGL. The fieldwork investigation data is appended to this report and the HA and DCP locations are noted on the appended site plan.

NORTHLAND
P.O. Box 8130
Kensington
Whangarei 0145
T: +64 9 945 4188

AUCKLAND
WAIKATO
P.O. Box 11881
Eberslie
Auckland 1542
T: +64 9 327 0196

SOUTHERN LAKES
P.O. Box 169
Waikato 3543
T: +64 3 443 6289

CANTERBURY
T: +64 3 321 063



Consulting Engineers

6.0 SITE STABILITY

At the time of preparing this report, we note that the property is not currently mapped by the WDC GIS Hazards Map in terms of Land Instability Risk Hazard Zonation.

We consider that the risk of moderate to deep-seated slope instability impacting on the proposed development as outlined in this report, to be significantly low, based on the following:

- No obvious evidence of instability at the property and greater surrounding area,
- Flat natured topography of the property and greater surrounding area which averages less than 5°,
- Encountered 'Good Ground' soil conditions in accordance with NZS3604, underlying the building site from BCGL's,
- Absence of elevated groundwater levels at our HA testing locations and indicative depths noted in Section 5.0 above, and
- The property has been encompassed within previous geotechnical investigations and reporting which did not identify the site as being at unsatisfactory stability risk.

NORTHLAND
Po Box 9130
Kensington
Whangarei 0145
T: +64 9 945 4188

BAY OF PLENTY
WAIKATO
Po Box 11361
Eberle
Auckland 1542
T: +64 9 927 0196

SOUTH ISLAND
Po Box 169
Wanaka 9343
T: +64 3 443 6200

CANTERBURY
T: +64 3 624 065

Based on the above and provided the recommendations and guidance of this report are adhered to, we assess the property as a Low-Risk Land Instability Zone in accordance with the WDC definitions.

Provided the recommendations and guidance of this report are adhered to, with regard to the Building Act 2004; Sections 71-72, we believe on reasonable grounds that:

- i. The current proposed site development and associated building work for which an application of Building Consent (BC) must be made to WDC, should not accelerate, worsen, or result in slippage or subsidence on the land on which the building work is to be carried out or any other property; and
- ii. The land beneath the building footprint and surrounding immediate amenity area is not likely to be subject to slippage and surface manifestation.

7.0 LIQUEFACTION SUSCEPTIBILITY

The noted ECR in Section 3 above, provided a detailed liquefaction assessment, ultimately concluding the following:

- *"Liquefaction potential is low. Little to no expression of liquefaction is expected within Stage 4 and Stage 5 subdivisions."*

Further information and guidance may be found in the August 2020 Tonkin & Taylor Ltd Liquefaction Vulnerability Study – Whangarei District (ref: 10112.149.3001.v2) and other relevant documents as specified by WDC, the NZ Building Code, and MBIE/NZGS Earthquake Geotechnical Engineering Guidance, Module 3.

8.0 ACID SULPHATE SOIL RISK

The noted ECR in Section 4 above, provided a detailed acid sulphate soil risk assessment, ultimately concluding the following:

- *"Acid Sulphate Soil Field PH Tests have been conducted. Results of lab testing suggest that soils are likely to contain very little sulphides. However,*
 - *It is recommended installing a waterproof membrane underneath any shallow foundations. The membrane should be extended up to the edge of the foundations to mitigate the presence of corrosive environment. If the above recommendations are followed, concrete exposure Class can be A1 according to NZS3101, and*
 - *No precautions are required to be taken for timber piles. Timber is not susceptible to corrosion by acid."*

NORTHLAND
Po Box 8120
Kensington
Whangarei 0115
T: +64 9 945 4188

AUCKLAND
WAIKATO
Po Box 11381
Eberslie
Auckland 1542
T: +64 9 527 0136

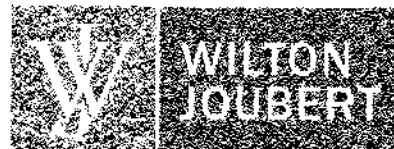
SOUTHERN LAKES
Po Box 169
Wanaka 9343
T: +64 3 443 0209

9.0 FOUNDATION / EARTHWORKS RECOMMENDATIONS

We recommend the following design and construction recommendations regarding foundations for the new dwelling and all proposed earthworks in forming the building site:

- All surficial deleterious material should be appropriately stripped from the building site. Stripping should extend a minimum horizontal distance of 1.0m beyond the edge of the raft slab foundation. A Geo-Professional inspection of the stripped/compacted subgrade should be undertaken prior to any filling works,
- All cuts should be battered back at gradients no steeper than 1V:4H as well as being appropriately dressed and planted,
- All fills up to a vertical height of 0.30m should be battered back at grades no steeper than 1V:3H. Any fills that exceed a vertical height of 0.30m and up to a vertical height of 0.60m should be appropriately laterally constrained (e.g., deepened edge beam, foundation, wall, appropriate toe protection, etc). Any proposed fills outside the imposed limits noted above, should be referred to a Chartered Geotechnical Engineer,
- Imported hardfill compacted in accordance with NZS4431 should be utilised for all fills beneath the building footprint. The compaction of hardfill should be undertaken using either a heavy plate compactor or a steel wheeled roller with low frequency dynamic compaction. Hardfill layers should not exceed 0.15m at a time,
- All exposed soils should be re-grassed and/or planted as soon as practicable to reduce the risk of erosion,
- All foundations should be designed for a geotechnical ultimate bearing capacity of 300kPa and Non-Expansive soil conditions,
- Standard NZS3604 type foundations will be suitable for isolated foundations provided they are embedded either a minimum of 0.40m below finished engineered ground levels or BCGL, and
- When finalising the development proposals, it should be checked that all foundations lie outside 45° envelopes rising from 0.50m below the invert of service trenches and in accordance with the WDC requirements (policy #0022).

CANTERBURY
T: +64 3 324 0611



Consulting Engineers

Should you have any further queries concerning the above, please contact me directly.

Yours faithfully,
Wilton Joubert Ltd.

S. Page
Engineering Technician

D. Soric
BE, CPEng, CMEngNZ

NEWBLAND
Po Box 5130
Kerikeri
Whangarei 0145
T: +64 9 945 4166

AUCKLAND
WAIKATO
Po Box 11381
Eberle
Auckland 1542
T: +64 9 577 0196

SOUTHERN LAKES
Po Box 169
Wanaka 9345
T: +64 3 443 6209

CANTERBURY
T: +64 31 824 063

REPORT ATTACHMENTS

- Site Plan (1 sheet),
- HA Logs (2 sheets), and
- DCP Logs (1 sheet)



Form 7
Code Compliance Certificate
Section 95, Building Act 2004

Forum North, Private Bag 9023
Whangarei 0148, New Zealand
P +64 430 4200
E mailroom@wdc.govt.nz
www.wdc.govt.nz

The Building

Street address of building: 41 Kaurinui Crescent, One Tree Point 0118
Legal description of land where building is located: LOT 407 DP 564989
Building name: N/A
Location of building within site/block number: N/A
Level/unit number: N/A
Current, lawfully established, use: 2.0 Housing: 2.0.2 Detached Dwelling with 4 occupants
Year first constructed: 2022

The Owner

Name of owner: ATK Developments Limited
Contact person: Anna Trainina-Knapp
Mailing address: PO Box 35266, Browns Bay, Auckland
Street address/registered office: N/A
Phone number: Landline: N/A Mobile: 0212279012
Daytime: Landline: N/A Mobile: 0212279012
After hours: Landline: N/A Mobile: 0212279012
Facsimile number: N/A
Email address: anna@atkdevelopments.co.nz
First point of contact for communications with the council/building consent authority:
Emma Thacker (A1 Homes Northland); Mailing Address: PO Box 183
Ruakaka 0151; Phone: 094330200; Email: emmathacker@a1homes.co.nz

Building Work

Building consent number: BC2200495
Description: New Dwelling
Issued by: Whangarei District Council

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that -
the building work complies with the building consent.

Signature: Mike Broeshart
Position: Building Control Officer - Snr - Inspections

On behalf of: Whangarei District Council

Date: 16 January 2023



FORUM NORTH PRIVATE BAG 9023, WHANGAREI, NEW ZEALAND TELEPHONE 09 430 4200 FAX 09 438 7632

Vehicle Crossing Permit

VEHICLE CROSSING PERMIT APPLICATION NO: VC220104
Whangarei District Council Public Places ByLaw
Received: 19 May 2022
Issued: 02 June 2022

Applicant

ATK Developments Limited
PO Box 35266
Browns Bay
Auckland 0753

Agent

A1 Homes Northland

Site Information

Property ID: 172212
Street Address: 41 Kaurinui Crescent
One Tree Point 0118
Legal Description: LOT 407 DP 564989

Project Information

THIS IS A VEHICLE CROSSING PERMIT APPLICATION ONLY

Fees

COUNCIL'S TOTAL CHARGES FOR THIS VEHICLE CROSSING PERMIT
ARE: \$428.00
PAYMENTS RECEIVED TO DATE: 02/06/2022 AMOUNT: \$428.00

In reply please quote PU221209
Or ask for PU221209 - Appointment

15 June 2022

A1 Homes Northland
P O Box 35-266
Browns Bay
Auckland 0753

Dear Sir/Madam

Public Utility Service Application No. PU221209

Site Address: 41 Kaurinui Crescent, One Tree Point – Lot 407

The application at the above address has been approved as at **15/06/2022**.

Conditions:

- The work shall be undertaken by **certified drainlayer approved to install and commission the pressure sewer product** by an approved pressure sewer product supplier.
- The pumping unit to be installed shall be **an approved pressure sewer product supplied by an approved supplier**. This includes the tank, pump and the alarm panel.
- The pumping unit shall be commissioned by the technology supplier or their agent.
- Installation shall be in accordance with the Environmental Engineering Standards
- Consent from the Waste and Drainage Engineering Officer is required to use compression couplings.

The following information shall be supplied to Council within one month after the commissioning of the new pressure sewer pumping unit.

- Final As-built plans. The as built plan will have to comply with the Council's Environmental Engineering Standards.
- Technology supplier's commissioning checklist.
- Proof of warranty for pump equipment (minimum 24 months warranty period).
- Information for installation testing e.g pump chamber waterproof test.

The applicant must arrange for the Waste and Drainage Engineering Officer to carry out an inspection prior to backfilling the new drainage and pump unit a minimum of 48 hours ahead of time required. To arrange for an inspection please contact us on Council's main number **09 430 4200** to ensure that the request reaches the appropriate person.

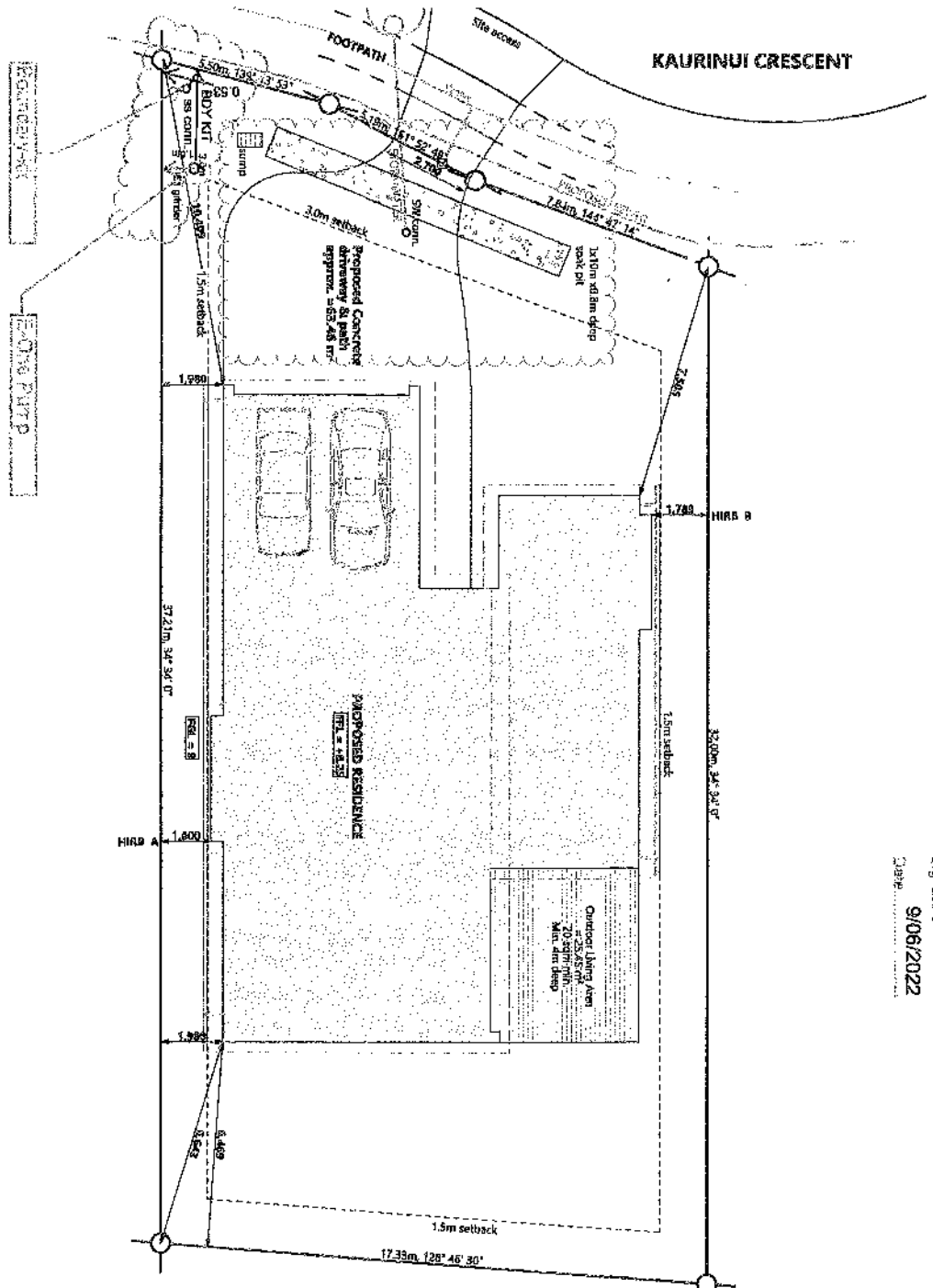
Final sign off for the Public Utility consent will occur after the passing of Council's inspection, and provision of approved as built plans provided that:

Engineering Standards and any **Special Conditions** are complied with as noted above.

Please keep this letter and the approved plans on site, as the contractor and the inspector will require verification of Council's approval. Thank you.

Yours faithfully

Infrastructure and Services Support Assistant



REGISTERED: SURVEYOR (NO. 0135)
 Signature
 9/06/2022
 Title

DO NOT scale off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately before commencing works or conditions. NO construction or other works are to commence until Building Consent becomes unconditional.

Copyright: All and all drawings commissioned remain the property of All Homes Limited. No part of these drawings, including all copyright and design rights subsisting in these drawings, and are hereby used as a guide or in part without written permission obtained from All Homes Limited.

SITE PLAN			
Drawn: A1	Client: SWM	Check: A1	APP -
Version: 1	Exposure: D (SS)	Scale: 1:150	Drawn: A
Drawn: A1	Client: SWM	Check: A1	APP -
Version: 1	Exposure: D (SS)	Scale: 1:150	Drawn: A
Drawn: A1	Client: SWM	Check: A1	APP -
Version: 1	Exposure: D (SS)	Scale: 1:150	Drawn: A

Client Details
 ATR Development Ltd
 Ltr 407 Kaurinui Crescent
 One Tree Point, Whangarei



Job No: P0782
 K13205
ATR

Ltr 407 of Ltr 2
 Site Area: 597 m²
 Gross Plot Area: 216.13 m²
 Site Coverage: 36.7 % (44% maximum)
 Maximum Building Set Back
 (Towards Aotearoa Whangarei District Council Planning Zone: General Residential)

1.0.1: The necessary for horizons will depend mainly on the site location.
 The need will be greater in areas with high levels of pedestrian traffic (i.e. in Central Business Districts), than in industrial or rural areas.
 Barriers are not necessary for domestic dwellings up to 2 storeys above ground level unless specific hazards exist.

1.1.1 Fences and boundaries:
 1.1.1 Fences and boundaries shall extend at least 2.0 m in height from ground level on the side accessible to the public.

1.1.2 Air acceptable fence:
 1.1.2 Air acceptable fence may be constructed with galvanized diamond mesh having a 50 mm plastic maximum sized grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m and the gap between the bottom of the fence and ground no greater than 100 mm.

1.1.3 Site fences and boundaries:
 1.1.3 A work-site is not completely enclosed, and unauthorised entry by children (5 m high) is restricted for specific hazards to be fenced only when workers are absent from the immediate vicinity.

1.2.1 Site fences and boundaries:
 1.2.1 A work-site is not completely enclosed, and unauthorised entry by children (5 m high) is restricted for specific hazards to be fenced only when workers are absent from the immediate vicinity.

1.2.2 Site fences and boundaries:
 1.2.2 A work-site is not completely enclosed, and unauthorised entry by children (5 m high) is restricted for specific hazards to be fenced only when workers are absent from the immediate vicinity.

2.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

3.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

4.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

5.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

6.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

7.0.1 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.
 Construction Methods:
 Before building is erected on site, all rubbish, building material and organic matter shall be removed from the area to be covered by the building.

Or ask for Infrastructure Projects and Support



15 June 2022

Forum North, Private Bag 9023
Whangarei 0148, New Zealand
t +64 9 430 4200
e mailroom@wdc.govt.nz
www.wdc.govt.nz

A1 Homes Northland
P O Box 35-266
Browns Bay
Auckland 0753

Dear Sir/Madam

Utility Services Application No. PU221209

Site Address: 41 Kaurinui Crescent One Tree Point 0118 – Lot 407

The application at the above address has been approved as at 15/06/2022.

Condition:

Council approved contractor to;

- Relocate water service connection

as per Water Services approved drawings in accordance with manufacturer's instructions and WDC Bylaws and Standards.

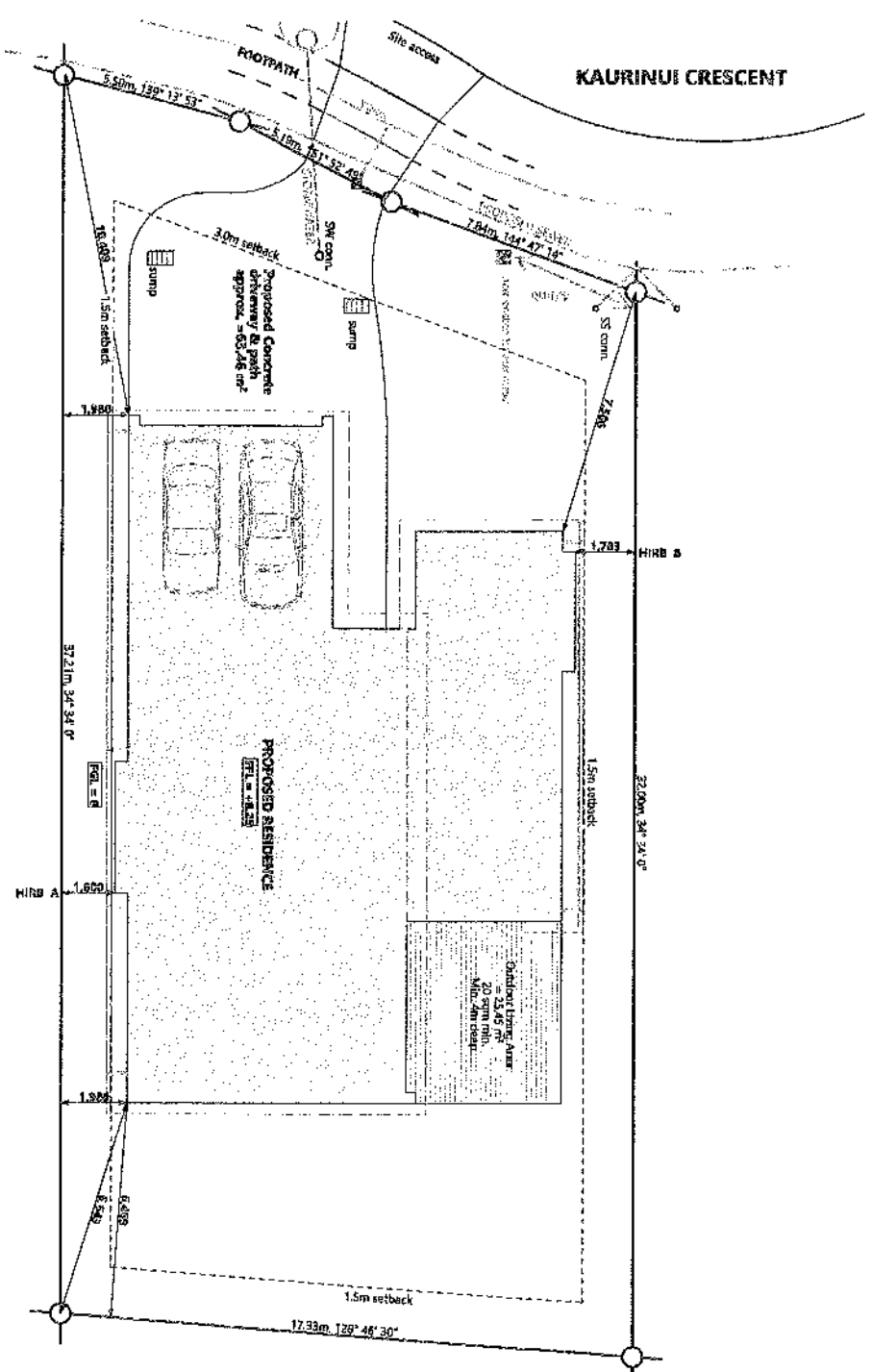
Please have this letter and the approved plans on site at time of inspection, as the inspector will require verification of Council's approval.

To arrange for an inspection please contact the Infrastructure Projects and Support Administration Team on (09) 470 3137. Requests for inspections requiring WDC presence are to be made a minimum of 24hrs ahead of time. The contractor may complete the connection and backfill if the inspection was booked but not attended by the Inspector at the time requested.

It is the applicant's responsibility to ensure the final 'as-built' drawing is supplied within one month of inspection. The as-built will have to comply with the Council's current Environmental Engineering Standards.

Yours faithfully

Infrastructure Support



Kaurinui Crescent

SITE PLAN

Design: A1	Drawn: S/N/N	Checked: M/G	UFB: -	Date: 6/20/2022
Version: 1	Sheet: 2	Scale: 1:150	Rev: 1	Project: ATK Developments LTD
Author: MHE1	Client: Call 0650 Aithomas 214663	Project: WWW.AITHOMAS.CO.NZ	Address: Lot 407 Kaurinui Crescent, One Tree Flat, Whangarei	Job no: P0782

Scale: 1:150
Sheet no: 2

Client Details:
ATK Developments LTD
Address:
Lot 407 Kaurinui Crescent
One Tree Flat, Whangarei

Job no: P0782



Lot 407 of Lot 2
DP 564699
Site Area 577 sq m
Gross Plot Area 214.12 sq m
Site Coverage 38.2 % (40% maximum)
Maximum Building the 8m
Terraced Avenues: Whangarei District Council
Planning Zone: General Residential

19/2/2025

50 NOT scale of drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately. Issues concerning works or ordering. NO construction or site visits are to commence until building Consent has been received unconditionally.

COPYRIGHT: Any and all drawings commissioned remain the property of A1 Homes Global including all copyright and similar rights subsisting in those drawings and are neither to be used, copied, reproduced, or otherwise used in any way for any other purpose or reproduced in whole or in part without written permission provided from A1 Homes Limited.

- NZBC PE**
Construction and Demolition Hazards
Asbestos Solution F3/761
- 1.0 Work-Site Barriers**
- 1.0.1 The necessity for barriers will depend mainly on the site location.
The road will be greater in areas with high levels of pedestrian traffic (i.e. in Central Business District), than in residential or rural areas.
Barriers are not necessary for domestic dwellings up to 2 storeys above ground level unless specific hazards exist.
- 1.1 All work-sites hazard evaluation will take account of:
1. Pedestrian counts adjacent to the site
2. Car parking adjacent to the site
3. Location of neighbouring buildings
4. Presence of neighbouring work-sites or recreation areas.
5. Proximity to schools or early childhood centres.
6. Proximity to housing.
7. The depth of a water hazard.
8. The period of time for which ponded water will be present.
9. The accessibility and visibility of the site.
- 1.0.2 If a work-site is not completely enclosed, and unauthorised entry by children is likely, it is acceptable for specific hazards to be fenced only when visitors are absent from the immediate vicinity.
- 1.1 Site fences and barriers**
- 1.1.1 Fences and barriers shall extend at least 2.0 m to height from ground level on the site accessible to the public.
- 1.1.2 An acceptable fence may be constructed with galvanized steel fencing having a 50 mm x 50 mm medium steel grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m and the gap between the bottom of the fence and ground no greater than 100 mm.
- 1.2 Air acceptable fences may be constructed with galvanized steel fencing having a 50 mm x 50 mm medium steel grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m and the gap between the bottom of the fence and ground no greater than 100 mm.**
- 1.3 Site fences and barriers**
- 1.3.1 Fences and barriers shall extend at least 2.0 m to height from ground level on the site accessible to the public.
- 1.3.2 An acceptable fence may be constructed with galvanized steel fencing having a 50 mm x 50 mm medium steel grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m and the gap between the bottom of the fence and ground no greater than 100 mm.

- Construction Notice**
- before building is erected on site, all rubbish, masonry, timber and organic matter shall be removed from the area to be covered by the building.
- Construction Notice**
- confirm ground has adequate bearing to comply with NZS 3904, 2011, except on the coast of SED design, or when using First Ribbed Floor System (refer relevant manual).
locate all services connections points on site prior to commencement of work. Check invert level, or pipes and manholes.
confirm parking route and feature problems on site prior to commencement of work.
locate all electrical and water services on site.
confirm on site all boundary bearings, lengths & peg locations on site prior to commencement of works to ensure house position is correct.
- HRB = Height in Relation to Boundary
- Sealant Contact**
- No building work will be started on this project until the construction of an approved stormwater outfall has been completed for this proposed lot.
 - All erosion and sediment control structures are to be inspected and maintained daily.
 - Prevent any silt/cliff or debris from washing onto road or neighbouring properties.
 - All ground cover vegetation outside the immediate building site to be preserved during the building phase.
 - All erosion and sediment control measures are to be installed prior to commencement of earthworks.
 - Structures of clay and materials are to be covered with impervious sheeting.
 - Koof water downpipes to be connected to the main stormwater system as soon as roof sheeting & purling is installed.
- Finished Floor Level (FFL) shall be:**
- For sites level with or above the road, no less than 150 mm above the road crown or at least one cross-section through the building and carway.
 - For sites below the road, no less than 150 mm above the lowest point on the site boundary.

Operative District Plan - Area Specific Matters



33

37

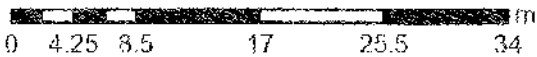
39

41

43

45

47



The information displayed is schematic only and serves as a guide. It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed.

25 August 2023
Scale 1:500



















Parcel information is sourced from the Land Information New Zealand (LINZ) Data Service
CROWN COPYRIGHT RESERVED © Copyright Whangarei District Council.









Operative District Plan – Map Legend

District Wide Matters







Energy, Infrastructure and Transport

-  Airport Runway
-  Indicative Road
-  National Road
-  Regional Road
-  Arterial Road
-  Primary Collector Road
-  Secondary Collector Road
-  Access Road
-  Low Volume Road
-  Strategic Road Protection Area
-  Strategic Railway Protection Line
-  Rescue Helicopter Flight Path
-  National Grid Tower
-  Northpower Tower CEL-Cat1
-  National Grid Line
-  Northpower Overhead Critical Line Cel-Cat1
-  Northpower Critical Overhead Lines CEL
-  Northpower Critical Underground Lines CEL

Hazards and Risks

-  Coastal Erosion Hazard 1
-  Coastal Erosion Hazard 2
-  Flood Susceptible Areas
-  Mining Hazard Area 1
-  Mining Hazard Area 2
-  Mining Hazard Area 3










Historical and Cultural Values

-  Notable Tree
-  Heritage Item Overlay
-  Heritage Area
-  Sites of Significance to Maori
-  Areas of Significance to Maori
-  Papakāinga

Natural Environment Values




-  Esplanade Priority Area
-  Coastal Marine Area (CMA) boundary
-  Goat Control Areas
-  QRA Quarrying Resource Area
-  QRA Mining
-  QRA Buffer
-  QRA 500m Indicative Setback
-  Outstanding Natural Feature
-  Outstanding Natural Landscape

General District Wide Matters





-  Air Noise Boundary
-  Outer Control Boundary
-  Helicopter Hovering Area
-  Noise Control Boundary Overlay
-  Rail noise alert area
-  Rail vibration alert area
-  Coastal Environment Overlay
-  Outstanding Natural Character Area
-  High Natural Character Area

Area Specific Matters

Multi Title Site

-  Designation
-  Precinct
-  Development Area

Residential Zones

-  Large Lot Residential Zone
-  Low Density Residential Zone
-  General Residential Zone
-  Medium Density Residential Zone



Rural Zones

-  Settlement Zone Residential Sub-Zone
-  Settlement Zone Centre Sub-Zone
-  Settlement Zone Industry Sub-Zone
-  Rural Production Zone
-  Rural Lifestyle Zone
-  Future Urban Zone
-  Strategic Rural Industries Zone
-  Fonterra Kauri Milk Processing SRIZ - Ancillary Irrigation Farms




Commercial and Mixed Zones

-  Local Centre Zone
-  Neighbourhood Centre Zone
-  Commercial Zone
-  Mixed Use Zone
-  Town Centre Zone
-  City Centre Zone
-  Waterfront Zone
-  Shopping Centre Zone





Industrial Zones

-  Light Industrial Zone
-  Heavy Industrial Zone

Open Space and Recreation Zones

-  Natural Open Space Zone
-  Open Space Zone
-  Sport and Active Recreation Zone

Special Purpose Zones

-  Airport Zone
-  Hospital Zone
-  Port Zone
-  Ruakaka Equine Zone

The information displayed is schematic only and serves as a guide.

It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed.

Parcel Information is sourced from the Land Information New Zealand (LINZ) Data Service.

CROWN COPYRIGHT RESERVED. © Copyright Whangarei District Council.



Eagle Technology, Land Information New Zealand, GBCO, Community maps contributors

Archaeological Sites

Tuesday, August 29, 2023

Scale 1:1,000



Projection: NZGD2000 / NZTM 2000

Original Sheet Size 210x297mm



The information displayed is schematic only and serves as a guide. It has been compiled from Whangarei District Council records and is made available in good faith but its accuracy or completeness is not guaranteed.

Parcel Information is sourced from the Land Information New Zealand (LINZ) Data Service. CROWN COPYRIGHT RESERVED. © Copyright Whangarei District Council.

