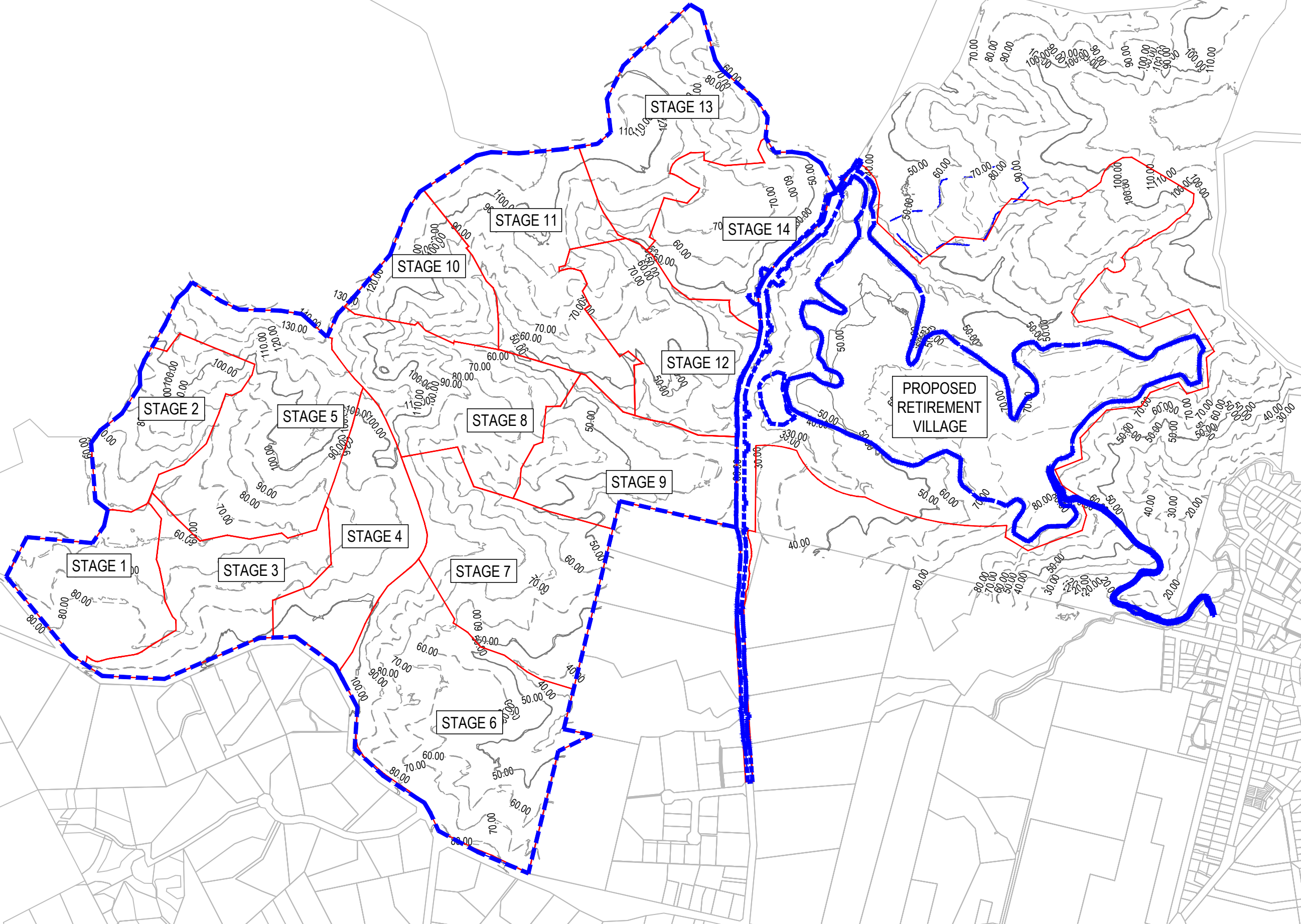


6. APPENDICES

6.i APPENDIX A – ENGINEERING DRAWINGS



- NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL STANDARDS.
 2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
 3. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT HEALTH AND SAFETY REQUIREMENTS.
 4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVAL FROM UTILITY OPERATORS BEFORE COMMENCING WORK UNDER OR NEAR THEIR SERVICES.
 5. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START ONSITE IN ACCORDANCE WITH COUNCIL STANDARDS.
 6. CONTRACTOR SHALL PROVIDE ASBUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECANT VOLUMES TO ENGINEER.
 7. SEDIMENT CONTROL TO COMPLY WITH GD05 STANDARDS.

LEGEND

EX BDY	EX MAJOR CONTOUR
PROP BDY	EX MINOR CONTOUR
PR MAJOR CONTOUR	PR MINOR CONTOUR
PROP EXTENT WORK	PROP CLEANWATER
PROP DIRTYWATER	PROP SILT FENCE
PROP STOCKPILE	PROP DECANT
PROP DECANT BAR	STAGE BOUNDARY

A	RESOURCE CONSENT	MA	03/2025
Rev	Description	By	Date
Survey	LANDPRO		03/2023
Design	MA		03/2025
Drawn	MA		03/2025
Checked	RW/KH		03/2025

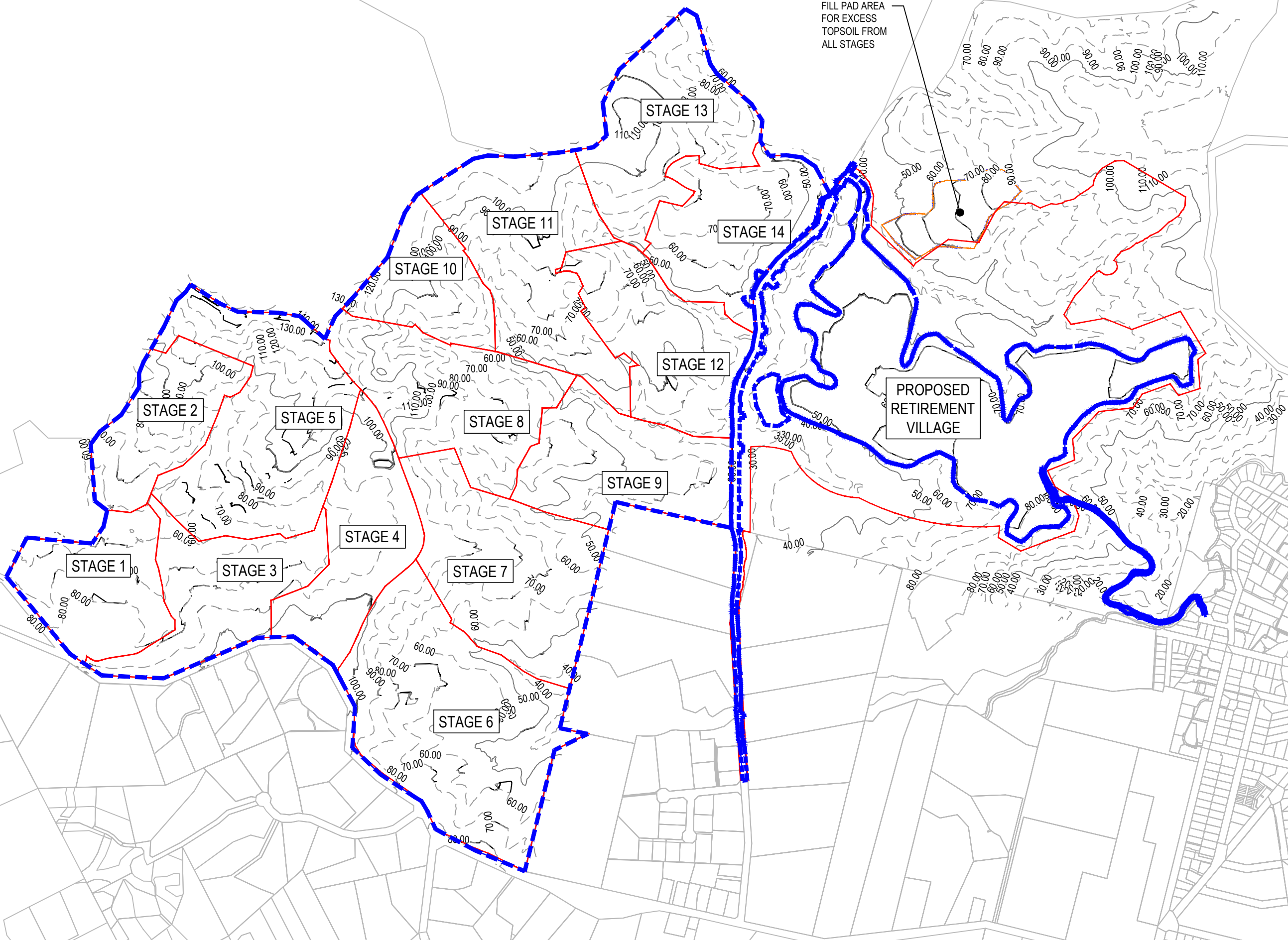
M **Maven Associates**
09 571 0050
info@maven.co.nz
www.maven.co.nz
5 Owens Road, Epsom
Auckland 1023

Project
**DEVELOPMENT OF
RIVERHEAD FOREST
FOR RANGITOOPUNI
DEVELOPMENTS LIMITED
PARTNERSHIP**

Title
**EXISTING EARTHWORKS
CONTOUR TOPSOIL STRIP
350mm - WHOLE SITE**

Project no.	147007
Scale	1:10,000 @ A3
Cad file	147007-M-C200 EARTHWORKS - WHOLE SITE SUBGRADE.DWG
Drawing no.	C200-W-1
Rev	A

RESOURCE CONSENT



- NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL STANDARDS.
 2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
 3. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT HEALTH AND SAFETY REQUIREMENTS.
 4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVAL FROM UTILITY OPERATORS BEFORE COMMENCING WORK UNDER OR NEAR THEIR SERVICES.
 5. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START ONSITE IN ACCORDANCE WITH COUNCIL STANDARDS.
 6. CONTRACTOR SHALL PROVIDE ASBUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECANT VOLUMES TO ENGINEER.
 7. SEDIMENT CONTROL TO COMPLY WITH GD05 STANDARDS.

LEGEND	
	EX BDY
	PROP BDY
	EX MAJOR CONTOUR
	EX MINOR CONTOUR
	PR MAJOR CONTOUR
	PR MINOR CONTOUR
	PROP EXTENT WORK
	PROP CLEANWATER
	PROP DIRTYWATER
	PROP SILT FENCE
	PROP STOCKPILE
	PROP DECANT
	PROP DECANT BAR
	STAGE BOUNDARY

A		RESOURCE CONSENT	MA	03/2025
Rev	Description	By	Date	
Survey	LANDPRO		03/2023	
Design	MA		03/2025	
Drawn	MA		03/2025	
Checked	RW/KH		03/2025	



Maven Associates
09 571 0050
info@maven.co.nz
www.maven.co.nz
5 Owens Road, Epsom
Auckland 1023

Project
**DEVELOPMENT OF
RIVERHEAD FOREST
FOR RANGITOOPUNI
DEVELOPMENTS LIMITED
PARTNERSHIP**

Title
**PROPOSED EARTHWORKS
CONTOUR PGL SUBGRADE
- WHOLE SITE**

Project no.	147007
Scale	1:10,000 @ A3
Cad file	147007-M-C200 EARTHWORKS - WHOLE SITE SUBGRADE.DWG
Drawing no.	C200-W-2
Rev	A

RESOURCE CONSENT

DATE: 02/25 FILE PATH: F:\Maven\PROJECTS\147007 RIVERHEAD FOREST\DWG\147007-M-C200 EARTHWORKS - WHOLE SITE SUBGRADE.DWG



Cut/Fill Table			
Number #	Minimum Elevation	Maximum Elevation	Color
1	-12.000	-10.000	
2	-10.000	-8.000	
3	-8.000	-6.000	
4	-6.000	-4.000	
5	-4.000	-2.000	
6	-2.000	0.000	
7	0.000	2.000	
8	2.000	4.000	
9	4.000	6.000	
10	6.000	8.000	
11	8.000	10.000	
12	10.000	12.000	
13	12.000	14.000	

EARTH WORKS (PROPOSED PGL SUBGRADE COMPARISON WITH SURFACE EGL -350mm STRIPPED)

CUT VOLUME 899,200 m³
CUT TO FILL VOLUME (INCLUDE FILL COMPACTION FACTOR OF 10%) 908,900 m³
NET FILL 9,700 m³

EARTHWORKS AREA = 1,006,600 m² / 100.6 Ha
TOPSOIL STRIPPED (350mm) = 352,310 m³
TOPSOIL RE-SPREAD (200mm) = 201,320 m³
TOPSOIL EXCESS = 150,990 m³

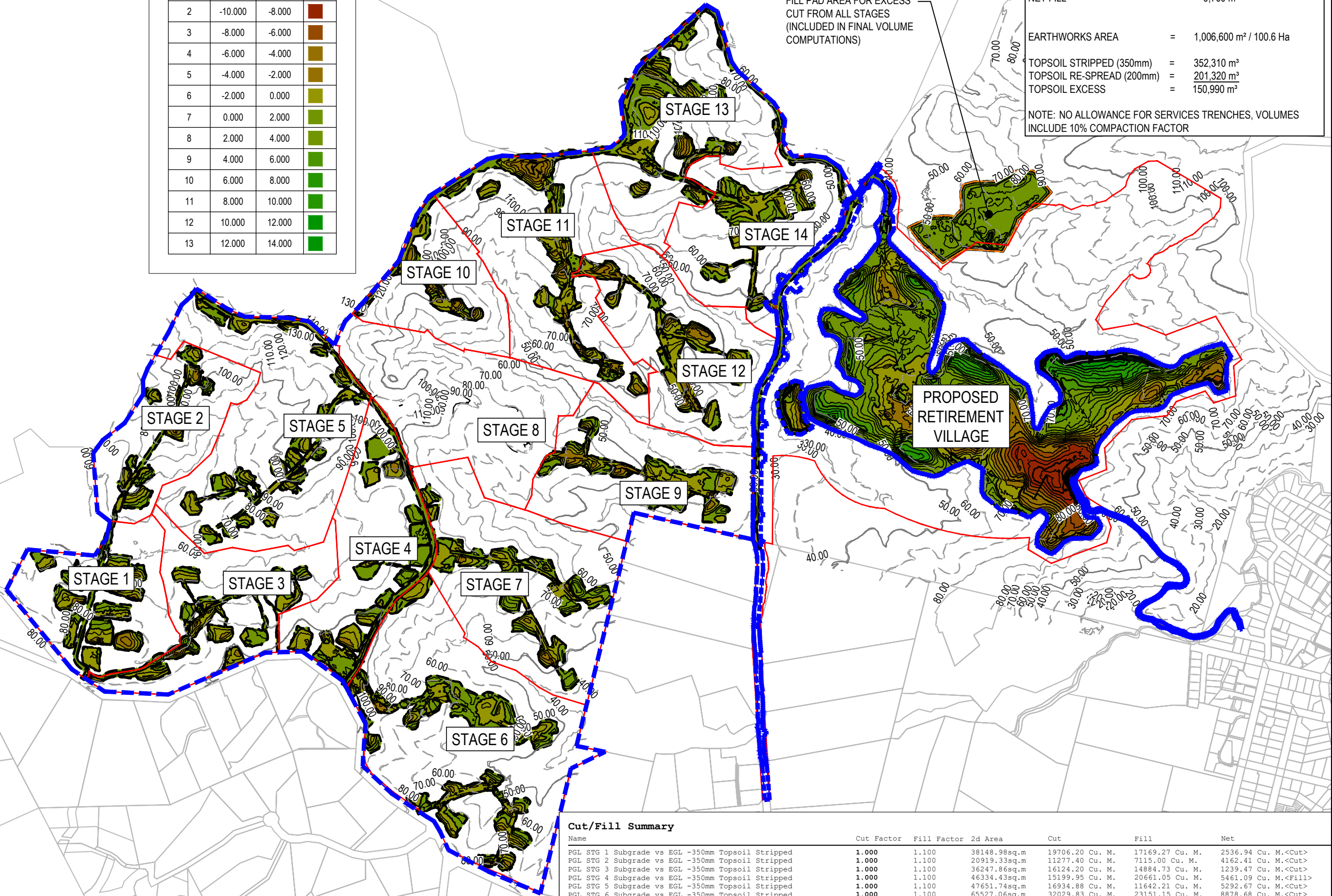
NOTE: NO ALLOWANCE FOR SERVICES TRENCHES, VOLUMES INCLUDE 10% COMPACTION FACTOR

FILL PAD AREA FOR EXCESS CUT FROM ALL STAGES (INCLUDED IN FINAL VOLUME COMPUTATIONS)

- NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH AUCKLAND COUNCIL STANDARDS.
 2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.
 3. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT HEALTH AND SAFETY REQUIREMENTS.
 4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVAL FROM UTILITY OPERATORS BEFORE COMMENCING WORK UNDER OR NEAR THEIR SERVICES.
 5. SEDIMENT CONTROL SHALL BE INSTALLED AND OPERATIONAL BEFORE EARTHWORKS START ONSITE IN ACCORDANCE WITH COUNCIL STANDARDS.
 6. CONTRACTOR SHALL PROVIDE ASBUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECANT VOLUMES TO ENGINEER.
 7. SEDIMENT CONTROL TO COMPLY WITH GD05 STANDARDS.

LEGEND

EX BDY
PROP BDY
PROP EXTENT WORK



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
PGL STG 1 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	38148.98sq.m	19706.20 Cu. M.	17169.27 Cu. M.	2536.94 Cu. M.<Cut>
PGL STG 2 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	20919.33sq.m	11277.40 Cu. M.	7115.00 Cu. M.	4162.41 Cu. M.<Cut>
PGL STG 3 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	36247.86sq.m	16124.20 Cu. M.	14884.73 Cu. M.	1239.47 Cu. M.<Cut>
PGL STG 4 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	46334.43sq.m	15199.95 Cu. M.	20661.05 Cu. M.	5461.09 Cu. M.<Fill>
PGL STG 5 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	47651.74sq.m	16934.88 Cu. M.	11642.21 Cu. M.	5292.67 Cu. M.<Cut>
PGL STG 6 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	65527.06sq.m	32029.83 Cu. M.	23151.15 Cu. M.	8878.68 Cu. M.<Cut>
PGL STG 7 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	40747.37sq.m	15978.23 Cu. M.	20390.09 Cu. M.	4411.86 Cu. M.<Fill>
PGL STG 8 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	34477.51sq.m	31106.67 Cu. M.	7528.43 Cu. M.	23578.24 Cu. M.<Cut>
PGL STG 9 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	36500.49sq.m	25623.56 Cu. M.	9011.51 Cu. M.	16612.05 Cu. M.<Cut>
PGL STG 10 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	17759.36sq.m	15548.20 Cu. M.	2052.92 Cu. M.	13495.28 Cu. M.<Cut>
PGL STG 11 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	83385.06sq.m	83746.18 Cu. M.	9981.27 Cu. M.	73764.91 Cu. M.<Cut>
PGL STG 12 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	33930.30sq.m	31582.75 Cu. M.	2421.94 Cu. M.	29160.81 Cu. M.<Cut>
PGL STG 13 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	57187.51sq.m	20381.97 Cu. M.	17765.83 Cu. M.	2616.14 Cu. M.<Cut>
PGL STG 14 Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	44653.06sq.m	16510.56 Cu. M.	13223.79 Cu. M.	3286.78 Cu. M.<Cut>
PGL RV Subgrade vs EGL -350mm Topsoil Stripped	1.000	1.100	402637.97sq.m	547483.15 Cu. M.	731886.02 Cu. M.	184402.87 Cu. M.<Fill>
Totals			1006104.03sq.m	899233.73 Cu. M.	908885.21 Cu. M.	9651.48 Cu. M.<Fill>

RESOURCE CONSENT



Project
DEVELOPMENT OF RIVERHEAD FOREST FOR RANGITOOPUNI DEVELOPMENTS LIMITED PARTNERSHIP

Title
PROPOSED CUT/FILL WHOLE SITE

Project no.	147007
Scale	1:10,000 @ A3
Cad file	147007-M-C200 EARTHWORKS - WHOLE SITE SUBGRADE.DWG
Drawing no.	C220-W-1
Rev	A