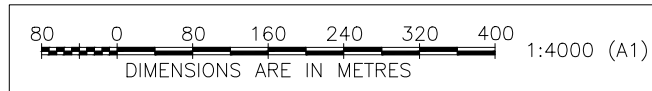


LEGEND:

- PRINCIPAL FAULT (REF: GNS MAP22)
- - - SECONDARY POSSIBLE INACTIVE FAULT (REF: GNS MAP22)
- EXTENT OF STAGE 4 LANDFILL
- STORMWATER SWALE
- HEAD SCARP (SITE OBSERVATIONS 2011 AND 2010 AERIAL PHOTOGRAPHS)
- SCREE SLOPE
- PROPOSED DAM



Slopes Table				
Definition	Minimum Slope	Maximum Slope	Colour	Area [m ²]
Soils With Marginal Stability Angles	25°	40°		793408
Soils With Unstable Angles	40°	55°		339736
Areas of Potential Rock Slope Instability	68°	90°		2209

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						Tab G-004
						Scales
						1:4,000 (A1)
						1:8,000 (A3)
						Original Size A1
Rev	Revision Description	Designed	Drawn	Checked	Approved	Date
C	FOR RESOURCE CONSENT	ER	IMM	DF	GH	19/06/13
B	DRAFT	ER	BJMM	DF	GH	29/03/11
A	DRAFT	ER	BJMM	DF	GH	29/03/11

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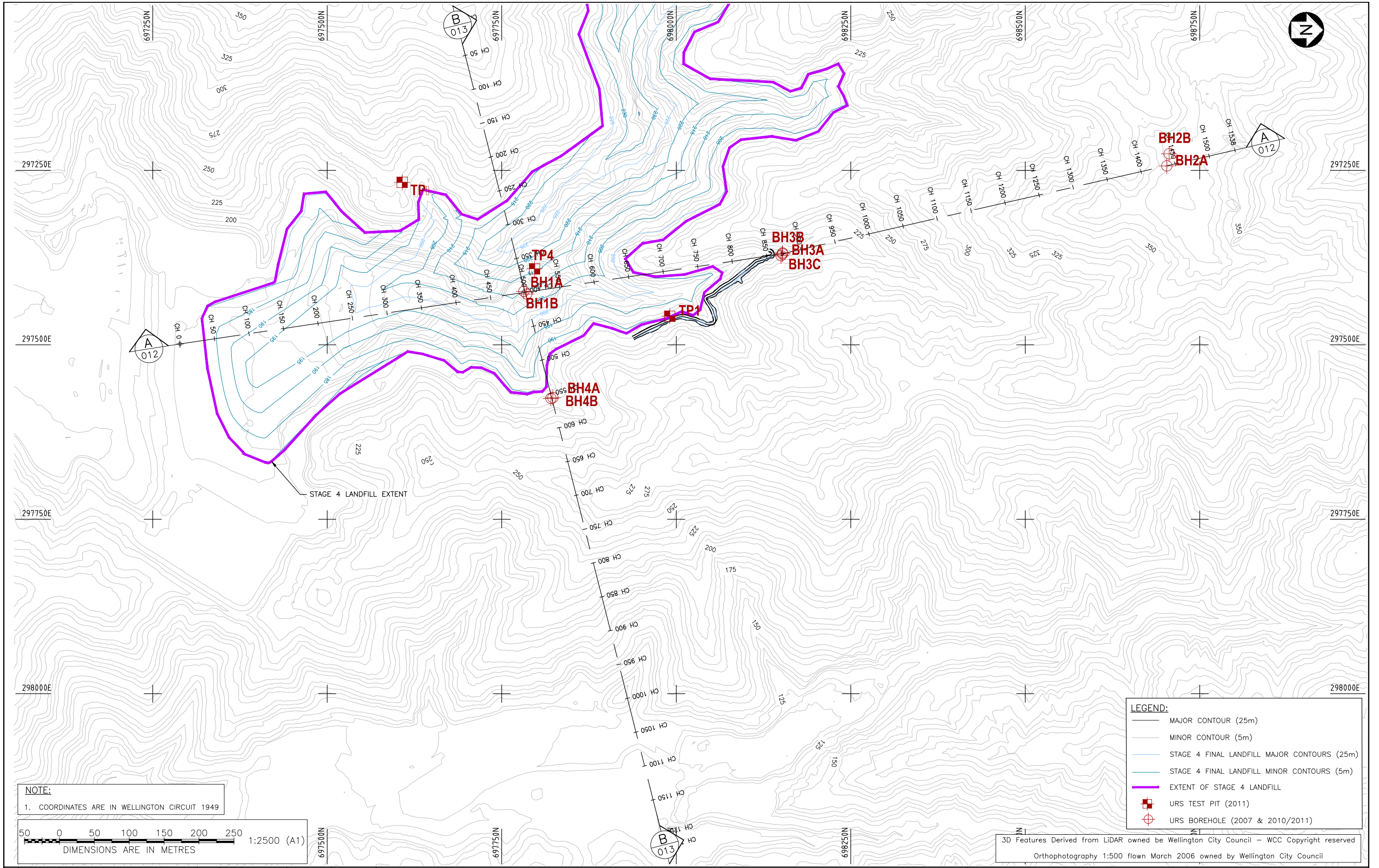
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SOUTHERN LANDFILL

GEOTECHNICAL HARD PLAN OPTION 1 - TOP DOWN	Status FINAL
G-004	Drawing Number G-004
	Revision C



						Tab	G-011
						Scales	1:2,500 (A1) 1:5,000 (A3)
B	FOR RESOURCE CONSENT	AK	IMM	DF	GH	19/06/13	Original Size A1
A	DRAFT	AK	BJMM	DF	GH		
Rev	Revision Description	Designed	Drawn	Checked	Approved	Date	

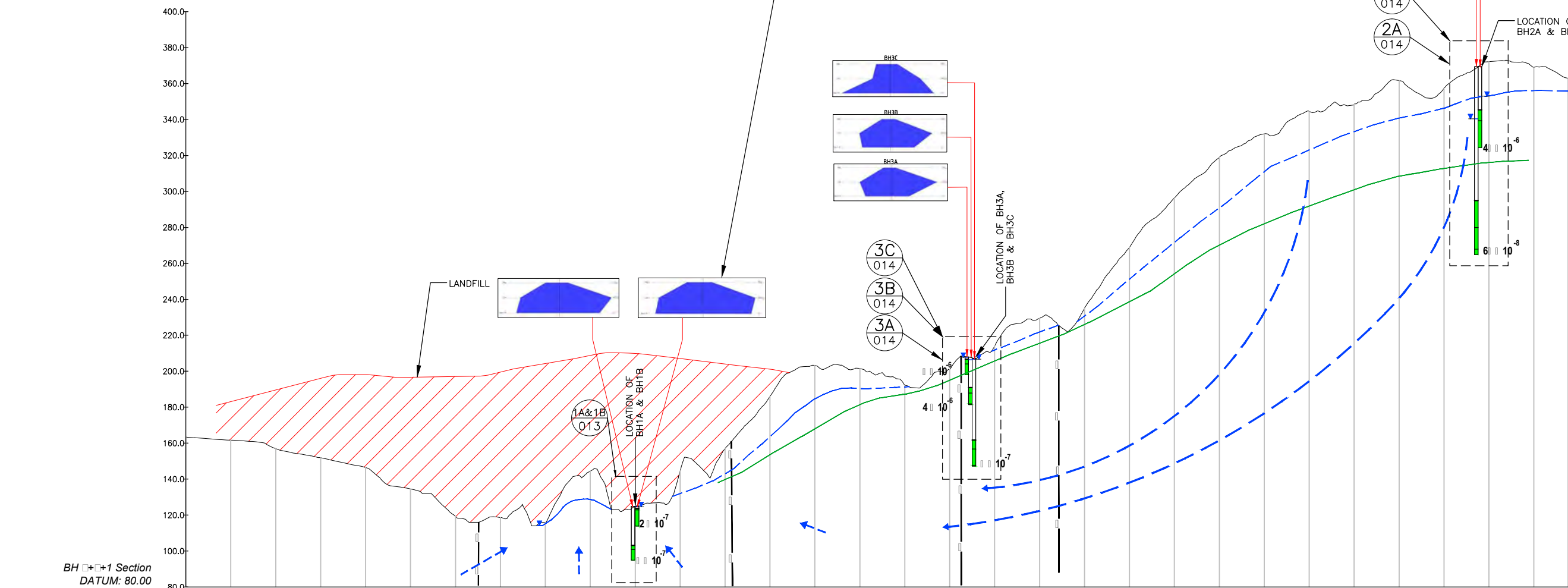
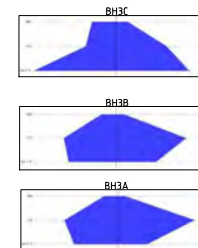
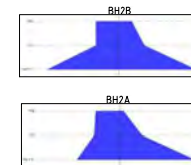
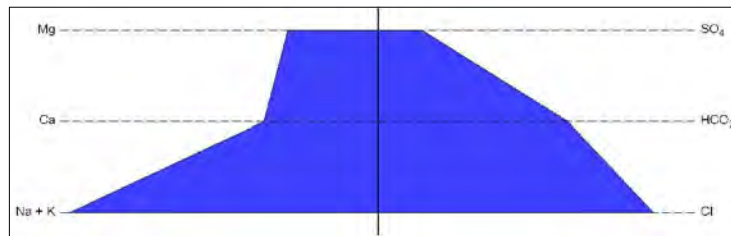
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SOUTHERN LANDFILL - STAGE 4 EXTENSION

BOREHOLE LOCATIONS AND GEOLOGICAL SECTIONS

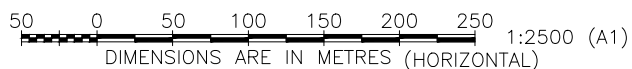
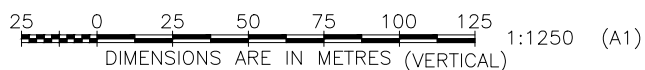
Status	FINAL
Drawing Number	G-011
Revision	B



EXISTING LEVELS	163.44	161.70	157.02	151.90	146.46	134.57	119.28	118.68	115.97	144.46	124.90	144.60	157.09	185.98	203.21	201.51	192.38	201.05	214.09	229.48	235.02	268.90	296.37	318.94	332.00	344.51	348.42	361.63	357.39	372.17	369.05	362.93
CHAINAGE	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1538

A GEOLOGICAL SECTION A
 011 SCALE: 1:2500 (A1)
 1:5000 (A3)

NOTE: VERTICAL SCALE IS EXAGGERATED BY 2x



KEY:

- GROUNDWATER
- EXTENT OF WEATHERING
- HYDRAULIC CONDUCTIVITY (m/s)
- APPROXIMATE FAULT LOCATION
- SCREEN & GRAVEL PACK
- GROUNDWATER FLOW DIRECTION

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						Tab	G-012
						Scales	1:2,500 (A1) 1:5,000 (A3)
B	FOR RESOURCE CONSENT	AK	IMM	IJ	GH	19/06/13	Original Size A1
A	DRAFT	GH	BJMM				
Rev	Revision Description	Designed	Drawn	Checked	Approved	Date	



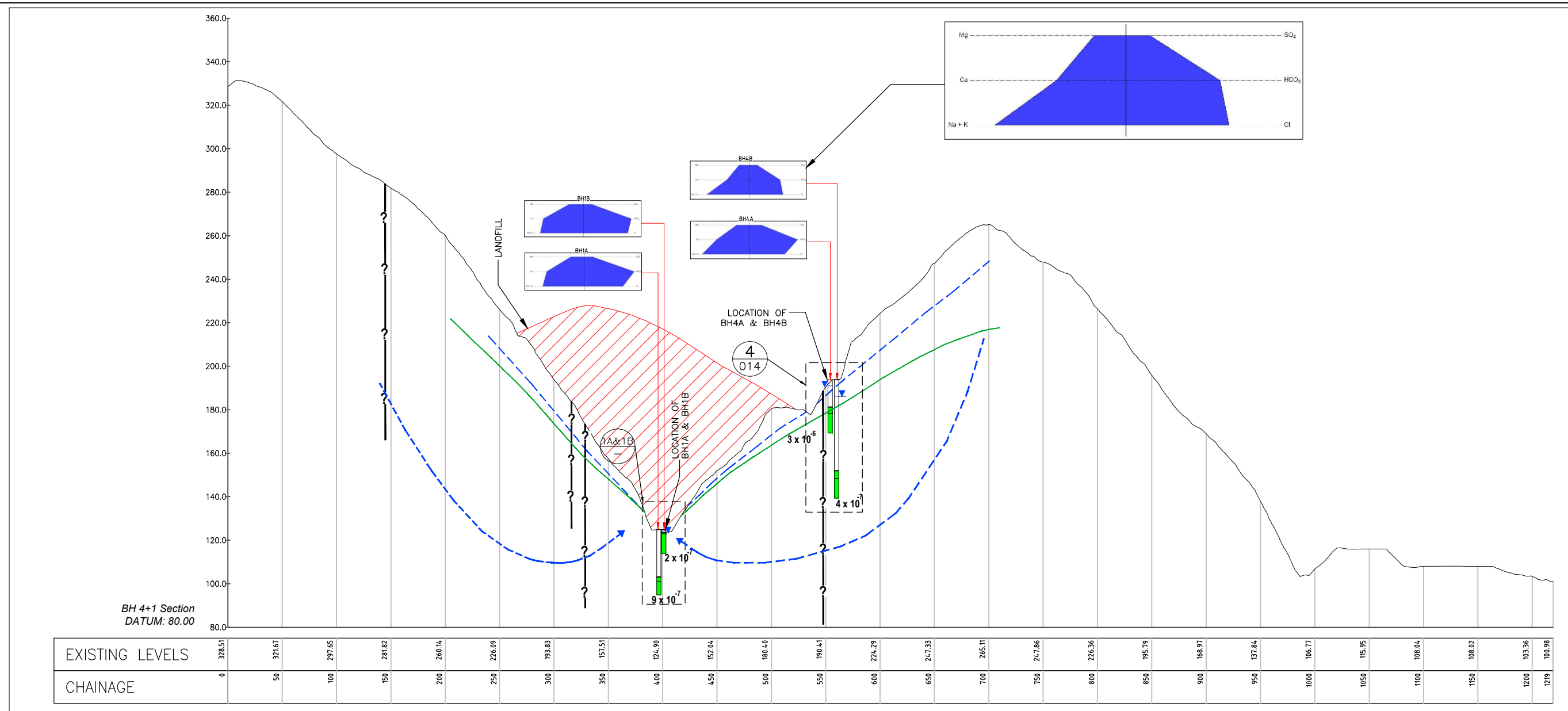
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SOUTHERN LANDFILL

CONCEPTUAL HYDROGEOLOGICAL SECTION A

Status	FINAL
Drawing Number	G-012
Revision	B



B GEOLOGICAL SECTION B
011 SCALE: 1:2000 (A1)
1:4000 (A3)

KEY:

- GROUNDWATER
- EXTENT OF WEATHERING
- 2×10^{-7} HYDRAULIC CONDUCTIVITY (m/s)
- ? APPORXIMATE FAULT LOCATION
- SCREEN&GRAVEL PACK
- ← GROUNDWATER FLOW DIRECTION

NOTE: VERTICAL SCALE IS EXAGGERATED BY 2x

20 0 20 40 60 80 100 1:1000 (A1)
DIMENSIONS ARE IN METRES (VERTICAL)

40 0 40 80 120 160 200 1:2000 (A1)
DIMENSIONS ARE IN METRES (HORIZONTAL)

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						Tab	G-013 (2)
						Scales	1:2,000 (A1) 1:4,000 (A3)
B	FOR RESOURCE CONSENT	AK	IMM	IJ	GH	19/06/13	Original Size A1
A	DRAFT	GH	BJMM				
Rev	Revision Description	Designed	Drawn	Checked	Approved	Date	

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SOUTHERN LANDFILL - STAGE 4 EXTENSION

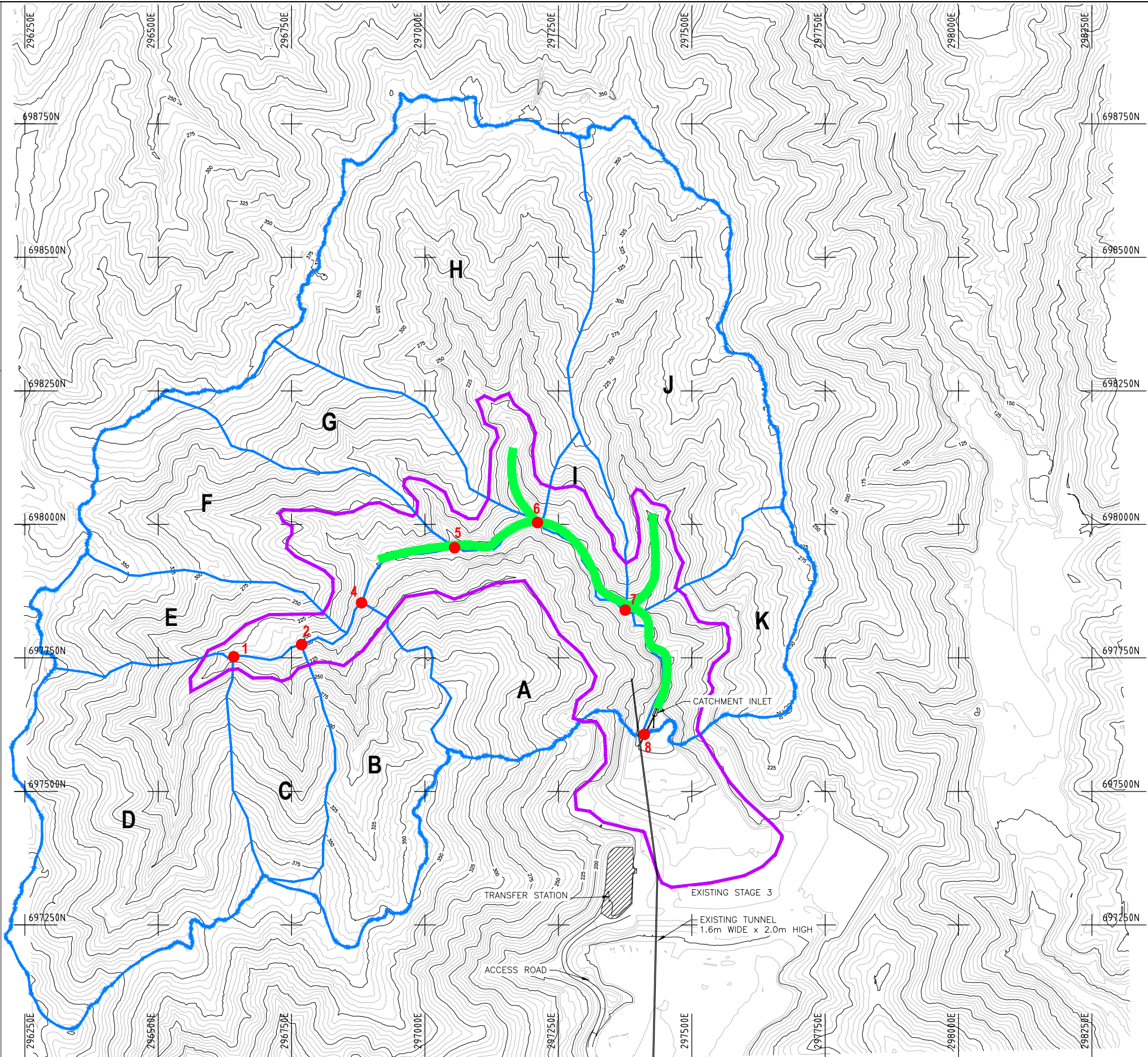
CONCEPTUAL HYDROGEOLOGICAL SECTION B

Status: **FINAL**

Drawing Number: **G-013**

Revision: **B**

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Catchment	Area Within Landfill (m2)	Area Clean (m2)	Total Area (m2)
A	71505	83894	155399
B	7993	103431	111424
C	5231	62744	67974
D	3052	225568	228620
E	13018	70498	83517
F	33430	122126	155556
G	14685	80096	94781
H	18461	273846	292307
I	16701	11144	27845
J	15625	215138	230763
K	27343	59485	86828

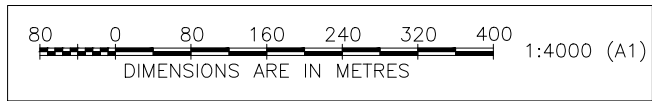
FLOW LOCATION	ESTIMATED SUMMER BASE GW FLOW (L/min)
1	70
2	90
3	115
4	150
5	245
6	365
7	445
8	470

LEGEND:

- MAJOR CONTOUR (25m)
- MINOR CONTOUR (5m)
- EXTENT OF STAGE 4 LANDFILL
- CATCHMENT BOUNDARY
- INFERRED EXTENT OF PERENNIAL STREAM FLOW BASED ON FIELD OBSERVATIONS

NOTE:

1. CONCEPT ONLY, SUBJECT TO DETAILED DESIGN
2. COORDINATES ARE IN WELLINGTON CIRCUIT 1949
3. REFER TO CATCHMENT STUDY FOR CATCHMENT CALCULATIONS



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Rev	Revision Description	Designed	Drawn	Checked	Approved	Date
B	FOR CONSENT	RC	IMM	RC	GH	08/2013
A	DRAFT	RC	BJMM	RC	GH	

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SOUTHERN LANDFILL - STAGE 4 EXTENSION

INTERPRETED GROUNDWATER FLOW TO STREAM - SUMMER BASE FLOW

Status **CONSENT**
 Drawing Number **G-014**
 Revision **B**