

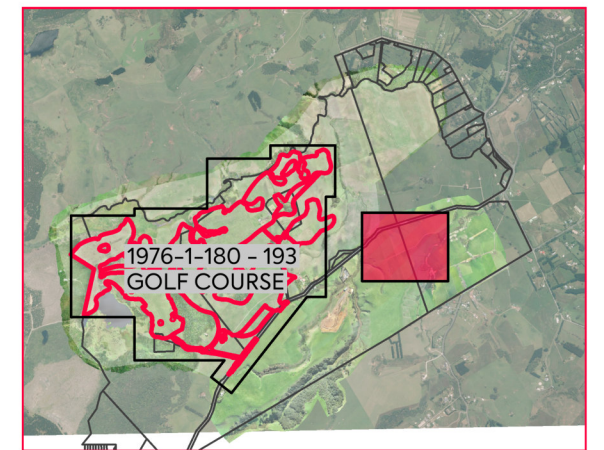


NOTES:

1. LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946 (MSL). THE CONTOUR INTERVAL IS: 1.0m
2. ALL TREES AND ASSOCIATED FENCING NOT IDENTIFIED FOR RETENTION WITHIN THE WORKS AREA ARE TO BE REMOVED.
3. TREES THAT ARE NOTED TO BE RETAINED SHALL BE IDENTIFIED ON SITE AND FENCED AROUND THE DRIPLINE FOR PROTECTION.
4. WILLOWS AND NOXIOUS WEEDS WITHIN THE RIPARIAN MARGIN ARE TO BE CUT BACK AND TREATED TO PREVENT REGROWTH.
5. THE CONTRACTOR IS TO REMOVE ANY SEPTIC TANKS AND FIELDS PRIOR TO EARTHWORKS. THE AREA IS TO BE ASBUITED AND CERTIFIED BY THE GEOTECHNIC ENGINEER PRIOR TO BACKFILLING.
6. ANY ASBESTOS OR CONTAMINATED MATERIAL IS TO BE REMOVED FROM SITE IN ACCORDANCE WITH THE COUNCIL APPROVED REMEDIATION ACTION PLAN.
7. NATIVE VEGETATION WITHIN WATER COURSE / ESPLANADE RESERVE TO REMAIN. UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVAL FROM LOCAL AUTHORITIES FOR THE DIS-ESTABLISHMENT OF POWER LINES AND POLES.

LEGEND:

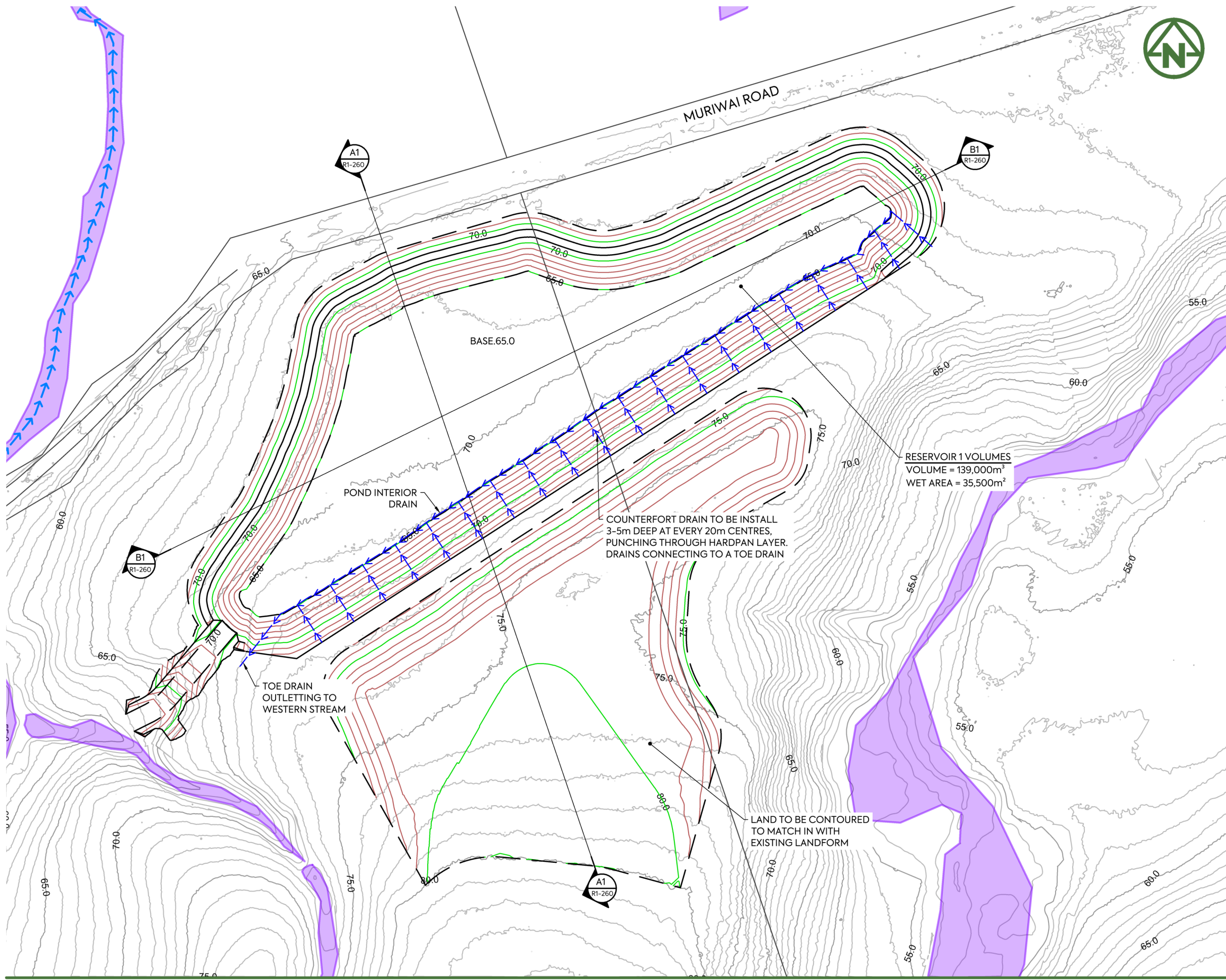
EXISTING CONTOUR (1.0m CONTOUR)		70.0
PROPOSED MAJOR CONTOUR (5.0m CONTOUR)		70.0
PROPOSED MINOR CONTOUR (1.0m CONTOUR)		
PROPOSED TOP OF BANK		
PROPOSED BOTTOM OF BANK		
EXISTING WETLANDS (TO BE PROTECTED)		



CLIENT:	PROJECT:	TITLE:	PURPOSE OF ISSUE:
THE BEARS HOME PROJECT MANAGEMENT LTD	MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY	EXISTING TOPOGRAPHY SITE CLEARING LAYOUT PLAN	FOR CONSENT
			SCALE: 1:2000 DO NOT SCALE
			DRAWING NO: 1976-R1-150 REV: B

B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21
REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE





- NOTES:**
1. ALL LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946 (MSL). THE CONTOUR INTERVAL IS: 1.0m
 2. ALL EARTHWORKS SHALL COMPLY WITH COUNCIL'S EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION GD 2016/005.
 3. ALL UNSUITABLE MATERIALS AS DEFINED IN THE CONTRACT SPECIFICATION IS TO BE REMOVED AND STRIPPED AREAS INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY FILLING TAKING PLACE.
 4. EARTHWORKS SHALL NOT EXTEND PAST THE AREA SHOWN ON THE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 5. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND PROTECTING EXISTING SERVICES AND DRAINAGE ON SITE.

LEGEND:

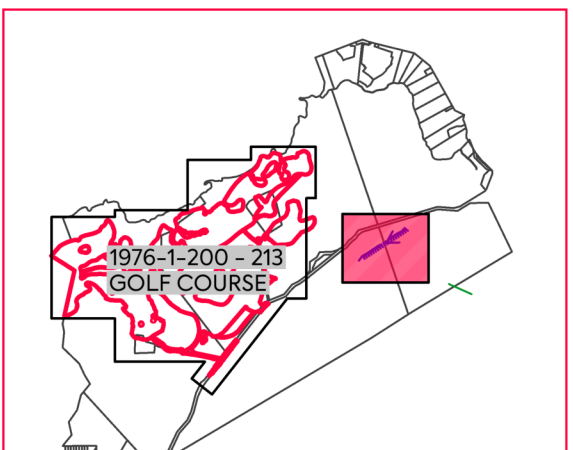
EXISTING CONTOUR (1.0m CONTOUR)	— 70.0 —
PROPOSED MAJOR CONTOUR (5.0m CONTOUR)	— 70.0 —
PROPOSED MINOR CONTOUR (1.0m CONTOUR)	— 70.0 —
PROPOSED TOP OF BANK	— —
PROPOSED BOTTOM OF BANK	- - - -
PROPOSED COUNTERFORT DRAINS AS SPECIFIED BY GEOTECHNICAL ENGINEER	→ → → →
EXISTING STREAM/WETLANDS	■

RESERVOIR 1 VOLUMES
 VOLUME = 139,000m³
 WET AREA = 35,500m²

COUNTERFORT DRAIN TO BE INSTALL 3-5m DEEP AT EVERY 20m CENTRES, PUNCHING THROUGH HARDPAN LAYER. DRAINS CONNECTING TO A TOE DRAIN

TOE DRAIN OUTLETING TO WESTERN STREAM

LAND TO BE CONTOURED TO MATCH IN WITH EXISTING LANDFORM



DRAWING LAYOUT PLAN

	<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: PROPOSED EARTHWORKS CONTOURS PLAN</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p>
				<p>SCALE: 1:2000m DO NOT SCALE</p>
				<p>DRAWING NO.: 1976-R1-200</p>
				<p>REV: B</p>

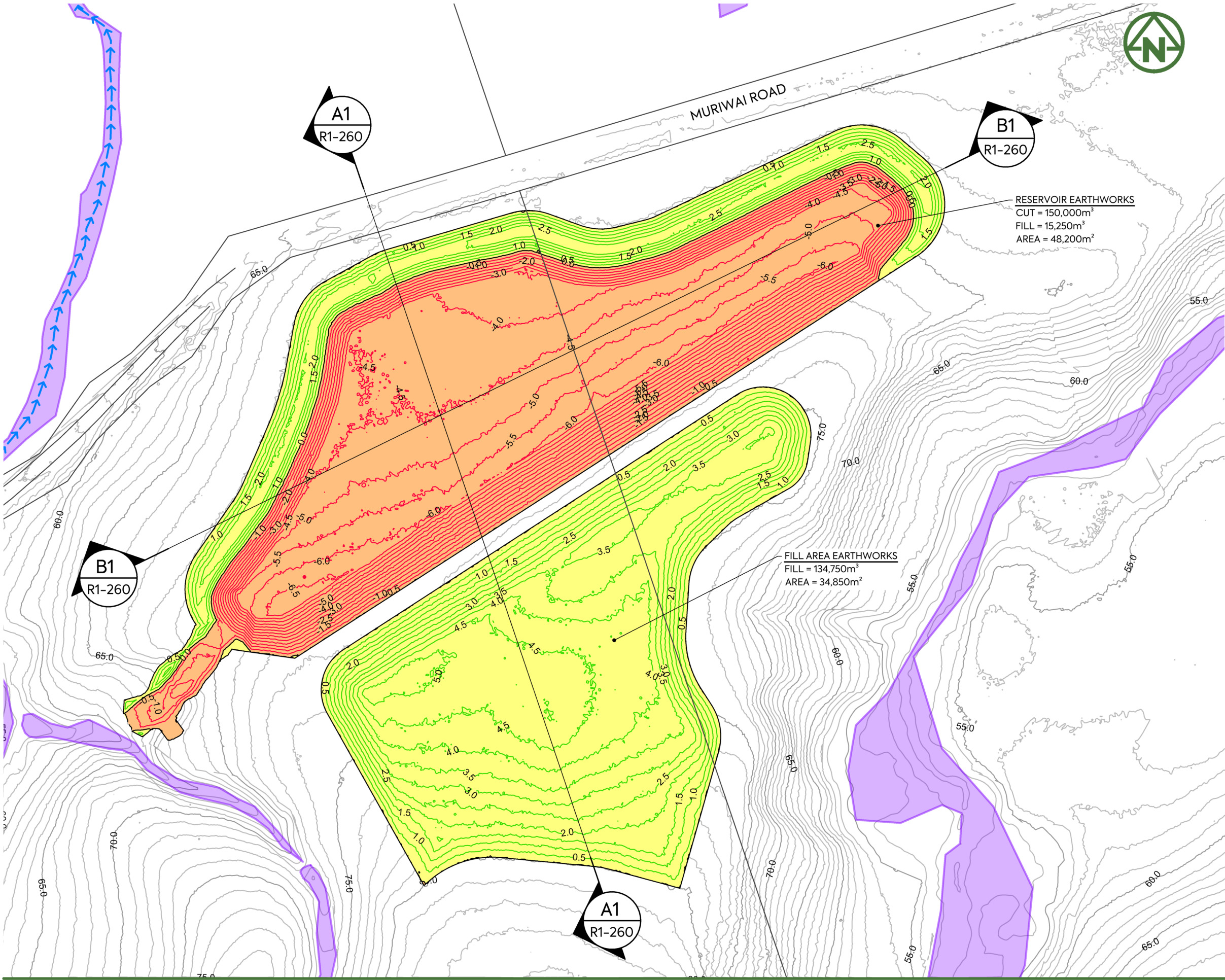
MCKENZIE & CO.

REV DESCRIPTION DRN BY CHK BY APP BY DATE

B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21

PLOT DATE: 2021-11-23 14:07:50 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE

C:\1205\DATA\MCKFS01\1976 610 MURIWAI ROAD_766\DRAWINGS\2. RESERVOIR CONSENT\1976-R1-200.DWG



NOTES:

1. ALL LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946 (MSL). THE CONTOUR INTERVAL IS: 1.0m
2. CUT / FILL BETWEEN EXISTING SURFACE AND FINISHED DESIGN SURFACE.
3. VOLUME OF EARTHWORKS IS SOLID MEASURE VALUES:

RESERVOIR
 CUT: 150,000m³
 FILL: 15,250m³

AREA: 48,200m²

EARTHWORKS
 CUT: 0m³
 FILL: 134,750m³

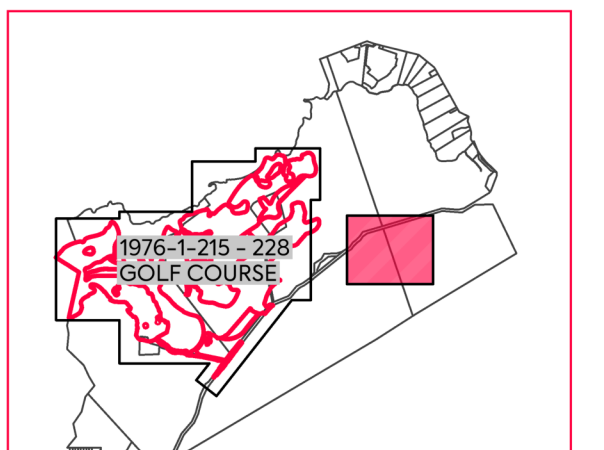
AREA: 34,850m²

LEGEND:

EXISTING CONTOUR (1.0m CONTOUR)	— 70.0 —
PROPOSED FILL CONTOUR (1.0m CONTOUR)	— 2.0 —
PROPOSED CUT CONTOUR (1.0m CONTOUR)	— -2.0 —
PROPOSED TOP OF BANK	— —
PROPOSED BOTTOM OF BANK	- - - -
EXISTING STREAM/WETLANDS	
EXISTING (GIS) FLOOD LEVEL	

RESERVOIR EARTHWORKS
 CUT = 150,000m³
 FILL = 15,250m³
 AREA = 48,200m²

FILL AREA EARTHWORKS
 FILL = 134,750m³
 AREA = 34,850m²



DRAWING LAYOUT PLAN

	<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: PROPOSED EARTHWORKS CUT/FILL PLAN</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p> <p>SCALE: 1:2000m DO NOT SCALE</p> <p>DRAWING NO: 1976-R1-210</p>
<p>REV DESCRIPTION DRN BY CHK BY APP BY DATE</p> <p>B ISSUED FOR CONSENT MO CIM JSD 26/11/21</p> <p>A FIRST ISSUE MO CIM JSD 17/09/21</p>				
<p>PLOT DATE: 2021-11-23 14:55:41 WWW.MCKENZIEANDCO.CO.NZ THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE</p>		<p>C:\12DS\DATA\MCKFS01\1976 610 MURIWAI ROAD_766\DRAWINGS\2. RESERVOIR CONSENT\1976-R1-210.DWG</p>		

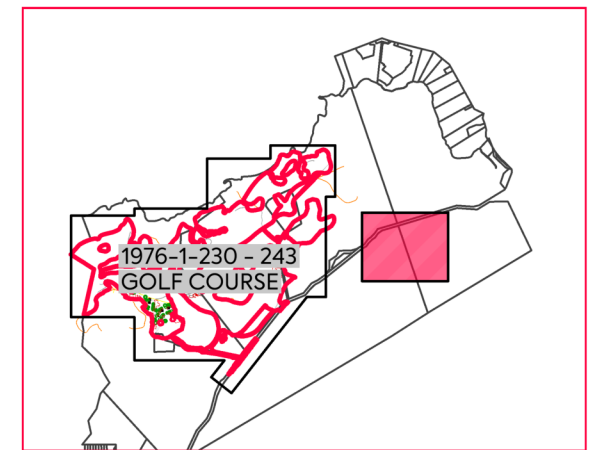
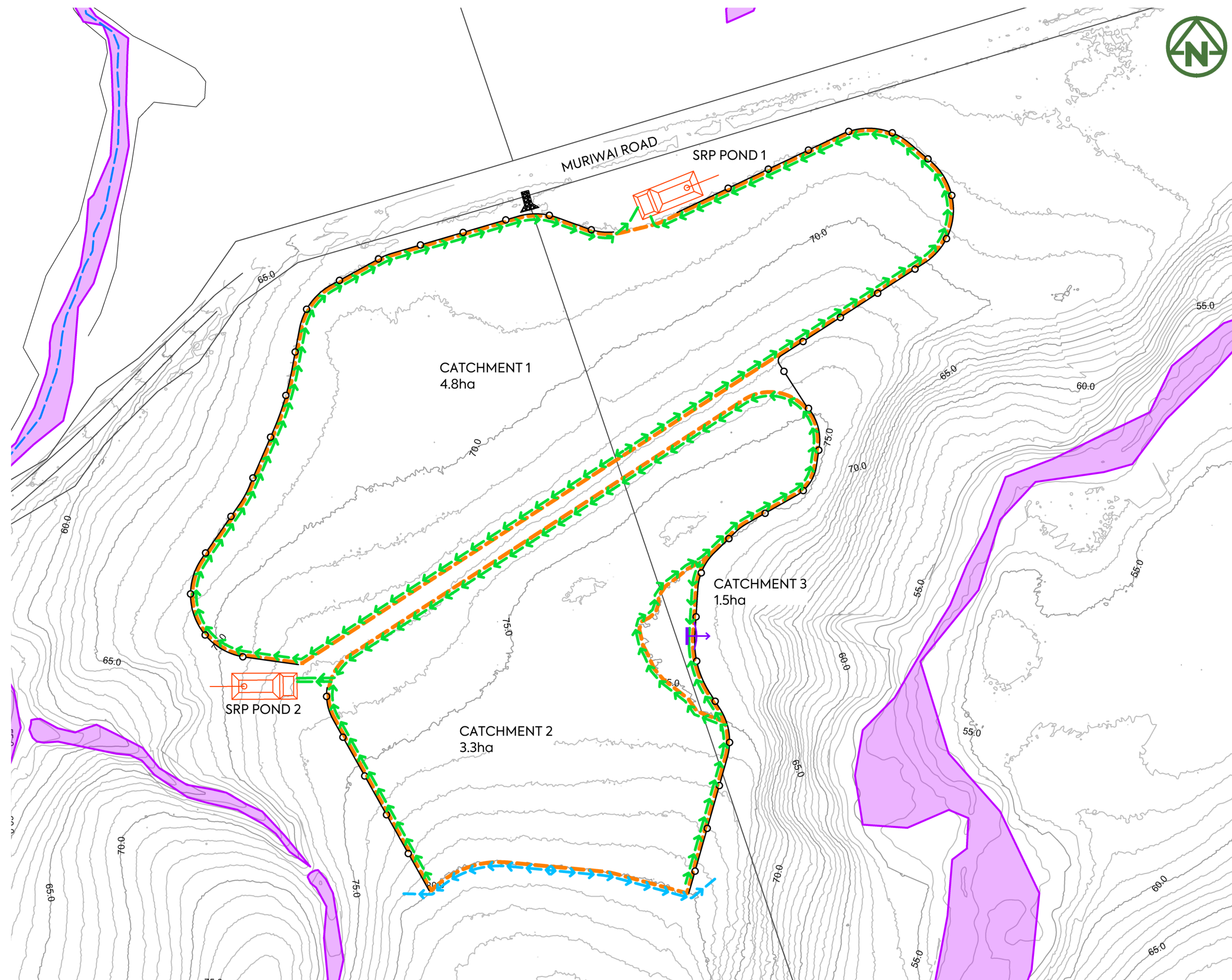


NOTES:

1. ALL LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946 (MSL). THE CONTOUR INTERVAL IS: 1.0m
2. ALL EARTHWORKS SHALL COMPLY WITH COUNCIL'S EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION GD 2016/005.
3. ALL UNSUITABLE MATERIALS AS DEFINED IN THE CONTRACT SPECIFICATION IS TO BE REMOVED AND STRIPPED AREAS INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY FILLING TAKING PLACE.
4. EARTHWORKS SHALL NOT EXTEND PAST THE AREA SHOWN ON THE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND PROTECTING EXISTING SERVICES AND DRAINAGE ON SITE.

LEGEND:

- STANDARD SILT FENCE
- DIVERSION BUND/ CONTOUR DRAIN
- CLEANWATER DIVERSION
- CATCHMENT BOUNDARIES
- DECANTING EARTH BUND
- STABILISED ENTRANCE
- SEDIMENT RETENTION POND
- EXISTING (5m) MAJOR CONTOUR
- EXISTING (1m) MINOR CONTOUR
- EXISTING WETLANDS (TO BE PROTECTED)



DRAWING LAYOUT PLAN

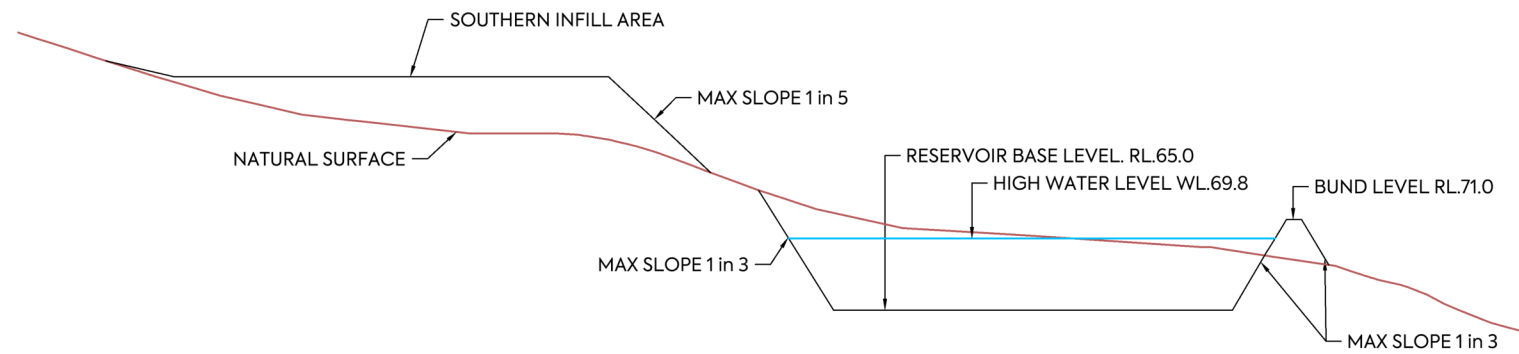
CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD PROJECT: MURIWAI DOWNS GOLF PROJECT TITLE: PROPOSED EARTHWORKS CONTOURS PLAN PURPOSE OF ISSUE: FOR CONSENT

SCALE: 1:2000 DO NOT SCALE

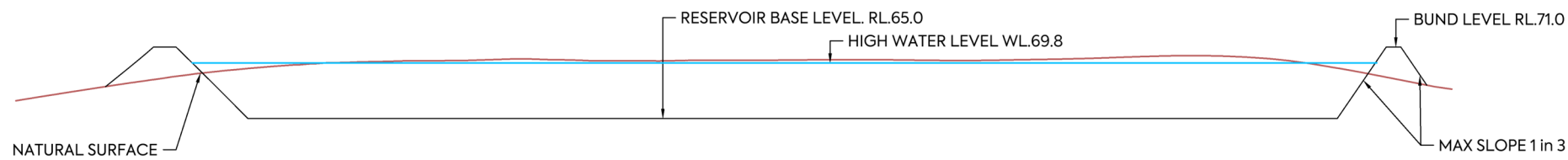
DRAWING NO: 1976-R1-230 REV: B



REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21



A1 TYPICAL SECTION A1 - A1
 R1-200 SCALE HOR = 1:250 VERT = 1:50



B1 TYPICAL SECTION B1 - B1
 R1-200 SCALE HOR = 1:250 VERT = 1:50

B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21
REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE



CLIENT:
 THE BEARS HOME
 PROJECT MANAGEMENT LTD

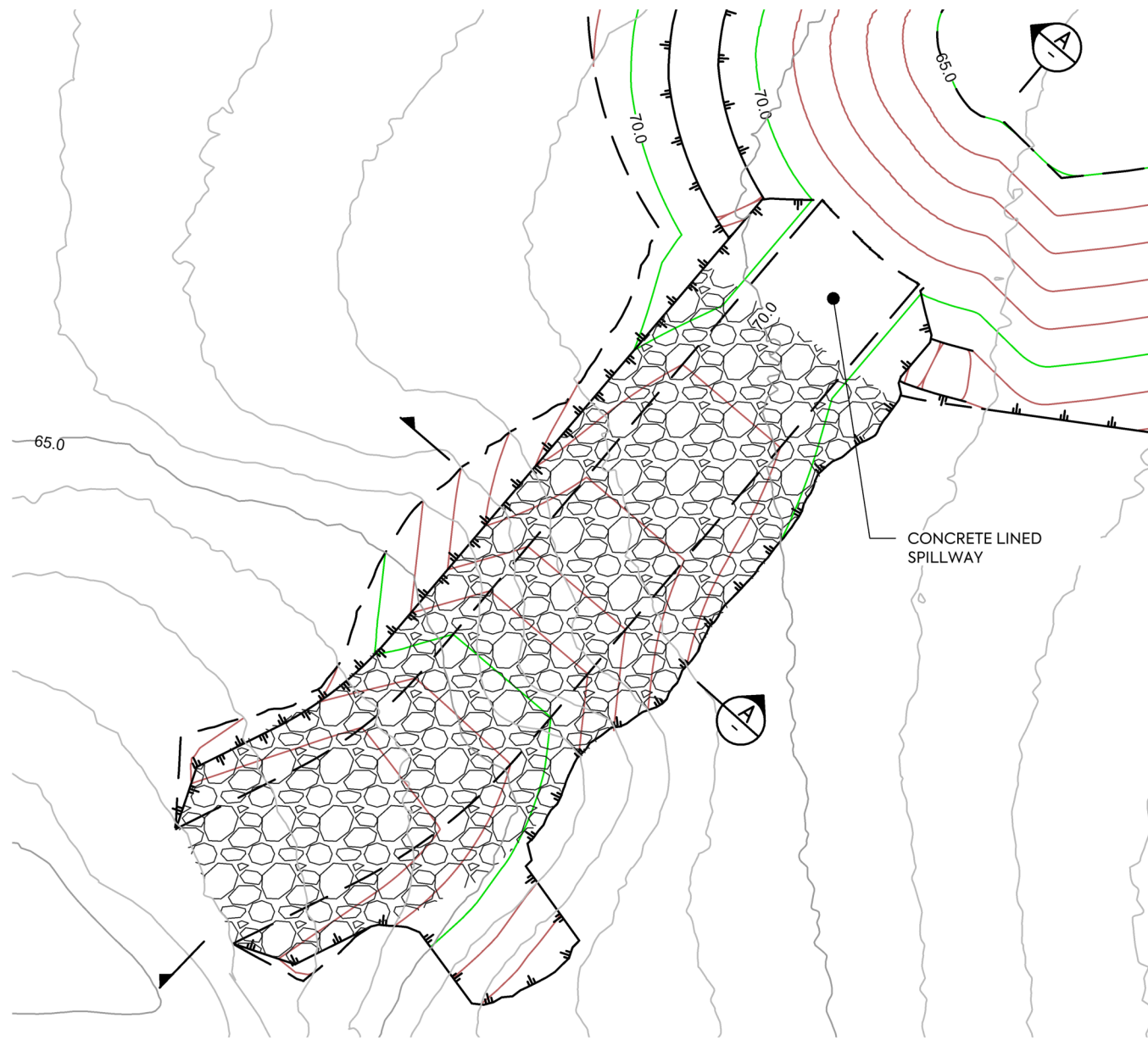
PROJECT:
 MURIWAI DOWNS GOLF PROJECT
 PROPOSED RESERVOIR
 610 & 697 MURIWAI ROAD
 MURIWAI VALLEY

TITLE:
 PROPOSED EARTHWORKS
 TYPICAL SECTIONS

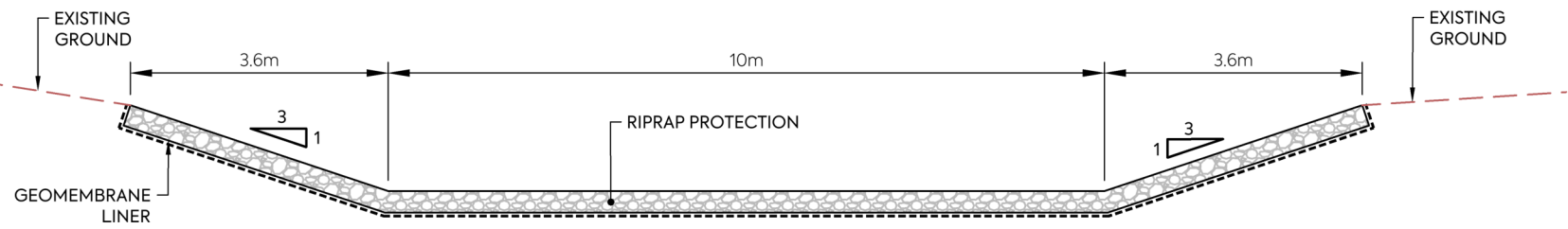
PURPOSE OF ISSUE:
 FOR CONSENT

SCALE:
 AS SHOWN
 DO NOT SCALE

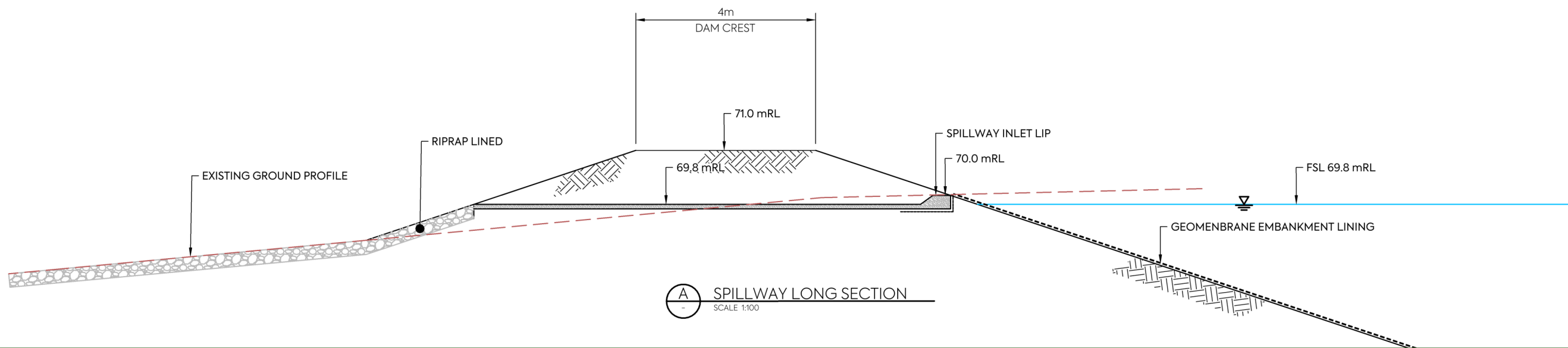
DRAWING NO.: 1976-R1-260
 REV: B



SPILLWAY PLAN VIEW
SCALE 1:100



A SPILLWAY CROSS SECTION
SCALE 1:100



A SPILLWAY LONG SECTION
SCALE 1:100



CLIENT:
THE BEARS HOME
PROJECT MANAGEMENT LTD

PROJECT:
MURIWAI DOWNS GOLF PROJECT
PROPOSED RESERVOIR
610 & 697 MURIWAI ROAD
MURIWAI VALLEY

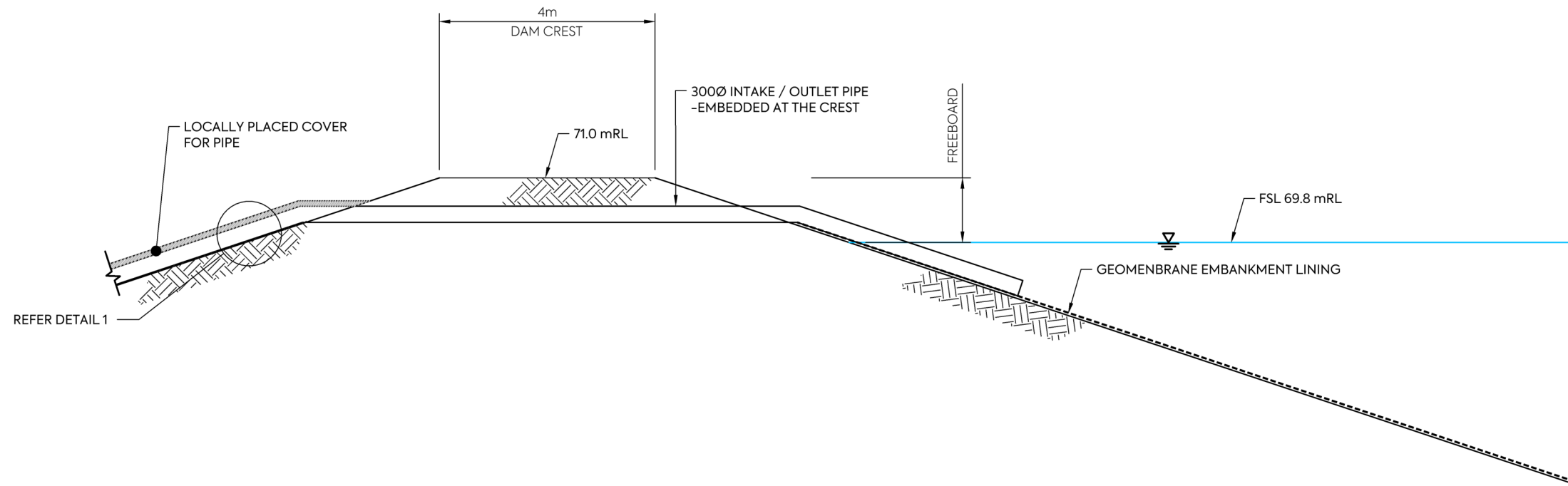
TITLE:
WATER RESERVOIR
SPILLWAY DETAIL
SHEET 1

PURPOSE OF ISSUE:
FOR CONSENT

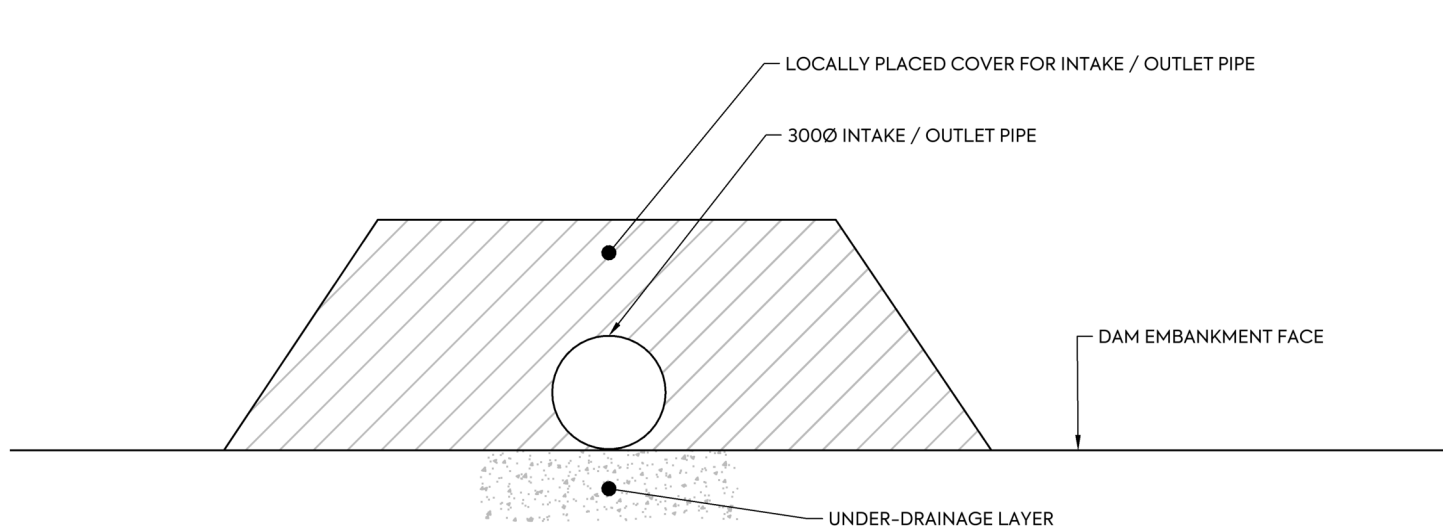
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AS SHOWN
DO NOT SCALE

DRAWING NO.: 1976-R1-350
REV: B

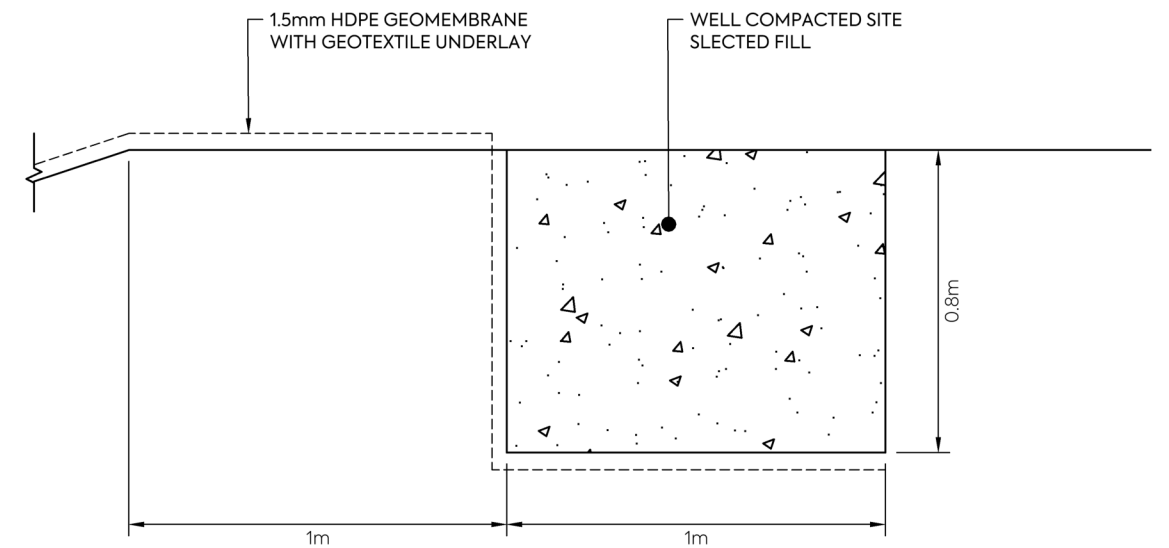
REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21



1 INTAKE / OUTLET PIPE DETAILS
SCALE 1:100

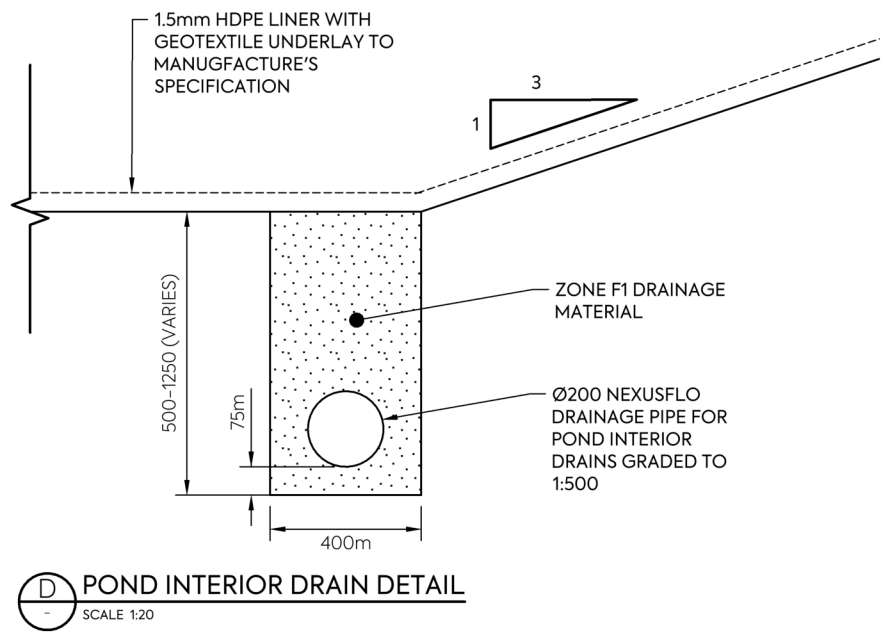
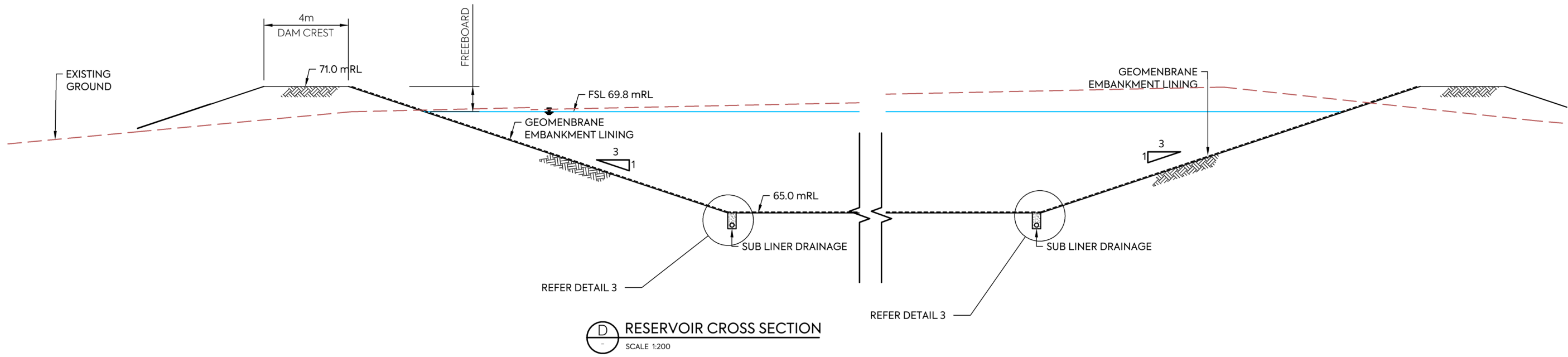


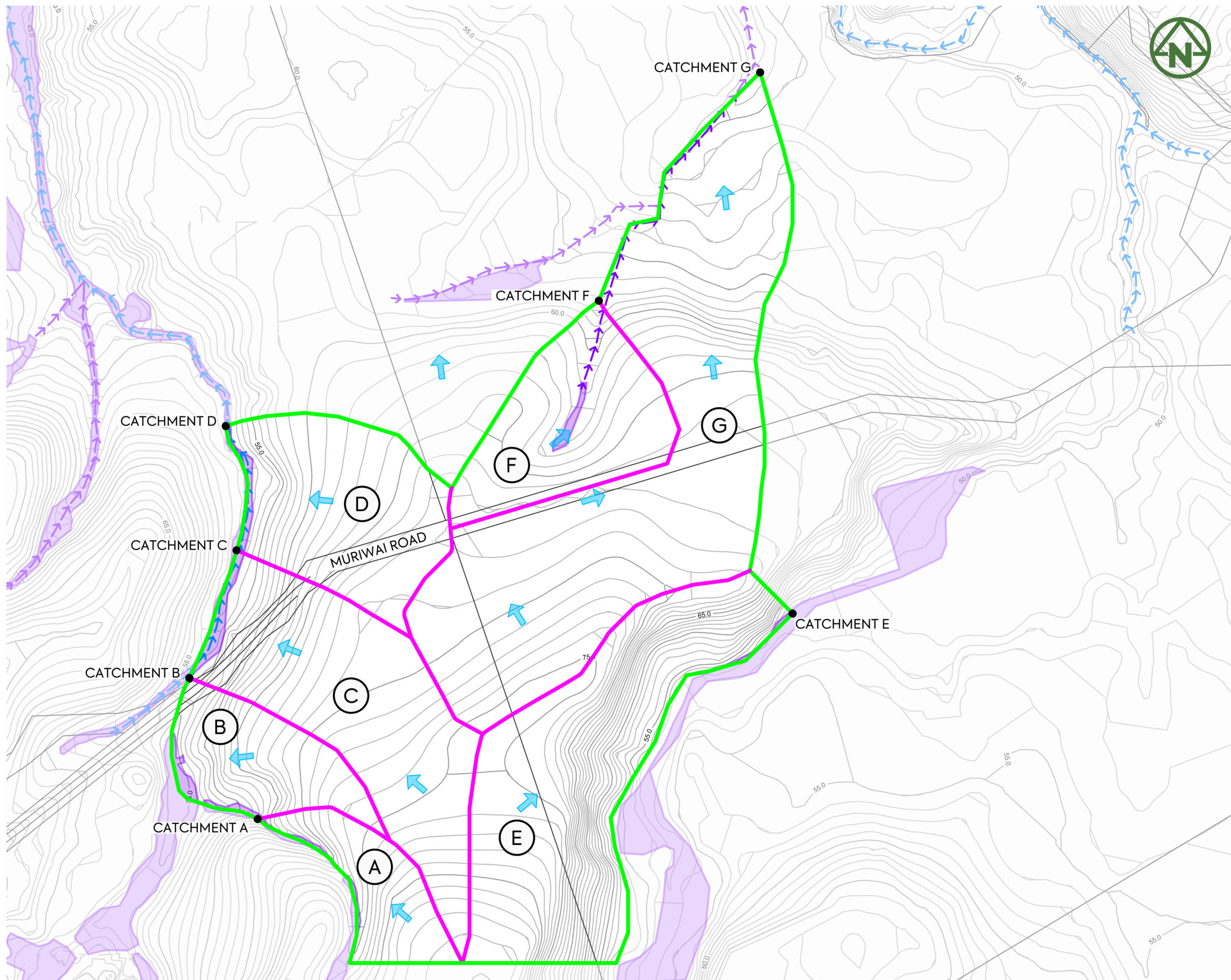
1 INTAKE PIPE COVER DETAILS
SCALE 1:100



1 ANCHOR TRENCH DETAILS
SCALE 1:100

		CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD	PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY	TITLE: WATER RESERVIOR INTAKE/OUTLET PIPE DETAIL SHEET 2	PURPOSE OF ISSUE: FOR CONSENT
B ISSUED FOR CONSENT MO CIM JSD 26/11/21 A FIRST ISSUE MO CIM JSD 17/09/21	DRN BY CHK BY APP BY DATE	SCALE: AS SHOWN DO NOT SCALE			
DRAWING NO: 1976-R1-351					REV: B



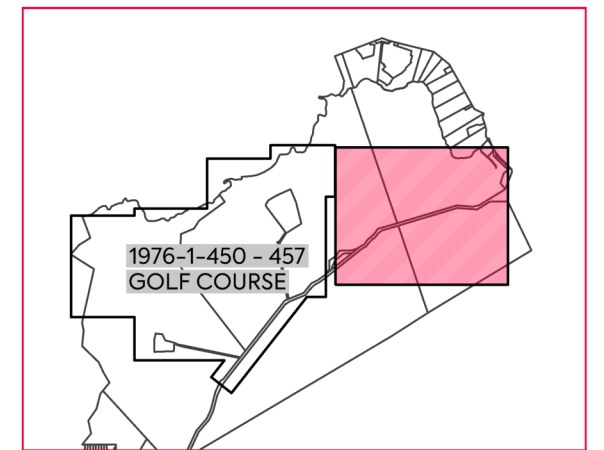


NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
2. REFER TO DRAWING R1-455 FOR Q100 POST-DEVELOPMENT CATCHMENTS.

LEGEND:

- CATCHMENT BOUNDARY (PRE DEVELOPMENT) —
- SUB-CATCHMENT BOUNDARY (PRE DEVELOPMENT) —
- OVERLAND FLOW PATH → →
- CATCHMENT NAME B
- OVERLAND FLOW DESIGN POINT DESIGN POINT
- EXISTING (5m) MAJOR CONTOUR — 75.0
- EXISTING (1m) MINOR CONTOUR —
- PERMANENT STREAM →→→→→
- INTERMITTENT STREAM →→→→→
- EXISTING WETLANDS (TO BE PROTECTED)

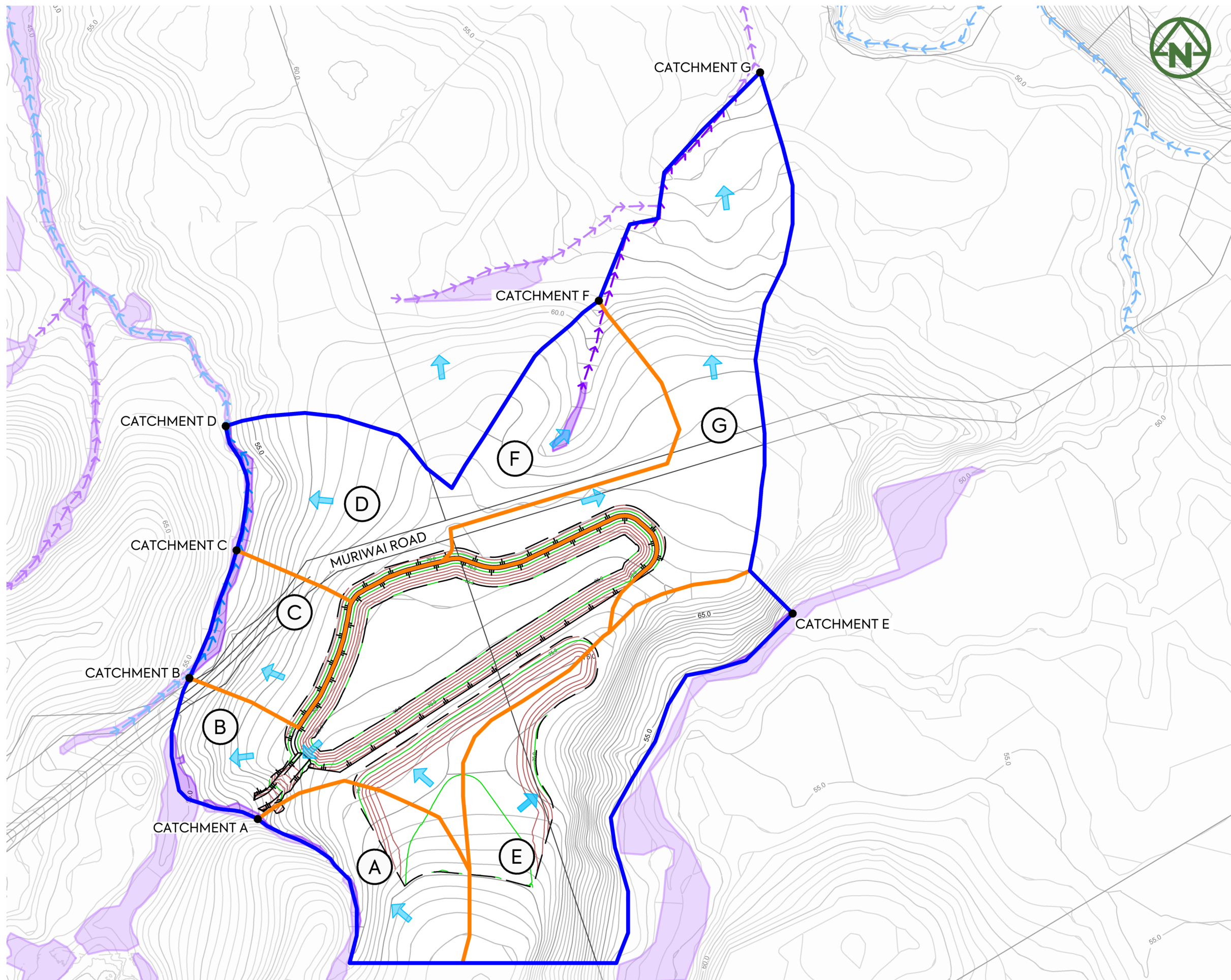


DRAWING LAYOUT PLAN

<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: PROPOSED DRAINAGE Q100 PRE DEVELOPMENT STORMWATER CATCHMENT</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p> <p>SCALE: 1:4000m @ A3 DO NOT SCALE</p> <p>DRAWING NO: 1976-R1-450 REV: B</p>
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<p>B ISSUED FOR CONSENT MO CIM JSD 26/11/21</p> <p>A FIRST ISSUE MO CIM JSD 17/09/21</p>	<p>REV DESCRIPTION DRN BY CHK BY APP BY DATE</p>
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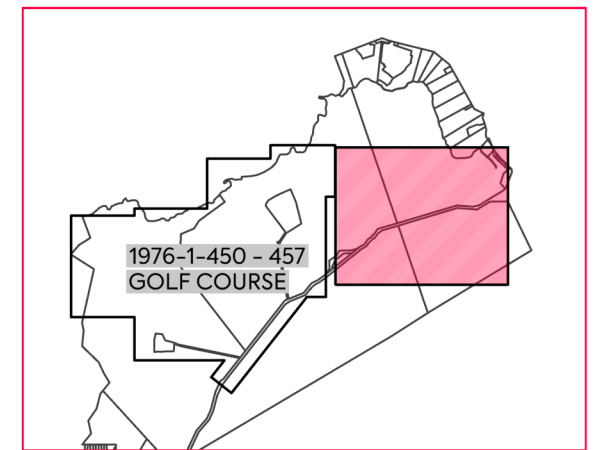


NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING INFRASTRUCTURE AND SERVICING REPORT.
2. REFER TO DRAWING R1-450 FOR Q100 PRE-DEVELOPMENT CATCHMENTS.

LEGEND:

- CATCHMENT BOUNDARY (POST DEVELOPMENT) ———
- SUB-CATCHMENT BOUNDARY (POST DEVELOPMENT) ———
- OVERLAND FLOW PATH → →
- CATCHMENT NAME B
- OVERLAND FLOW DESIGN POINT ● DESIGN POINT
- FINISHED (5m) MAJOR CONTOUR ——— 75.0
- FINISHED (1m) MINOR CONTOUR ———
- PERMANENT STREAM →→→→→
- INTERMITTENT STREAM →→→→→
- EXISTING WETLANDS (TO BE PROTECTED)

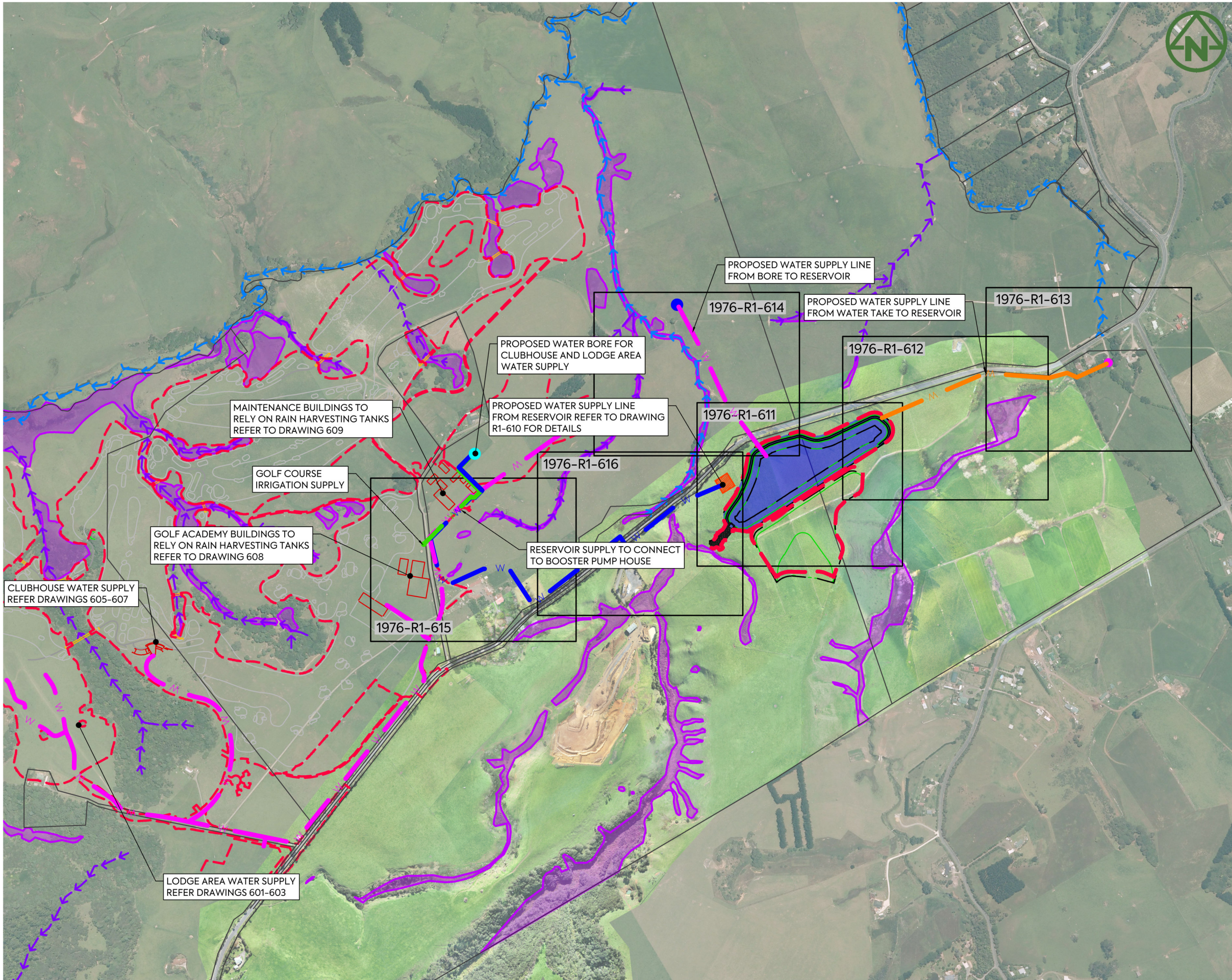


DRAWING LAYOUT PLAN

<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: PROPOSED DRAINAGE Q100 POST DEVELOPMENT STORMWATER CATCHMENT</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p> <hr/> <p>SCALE: 1:4000m @ A3</p> <p>DO NOT SCALE</p> <hr/> <p>DRAWING NO.: 1976-R1-455 REV: B</p>
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REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21



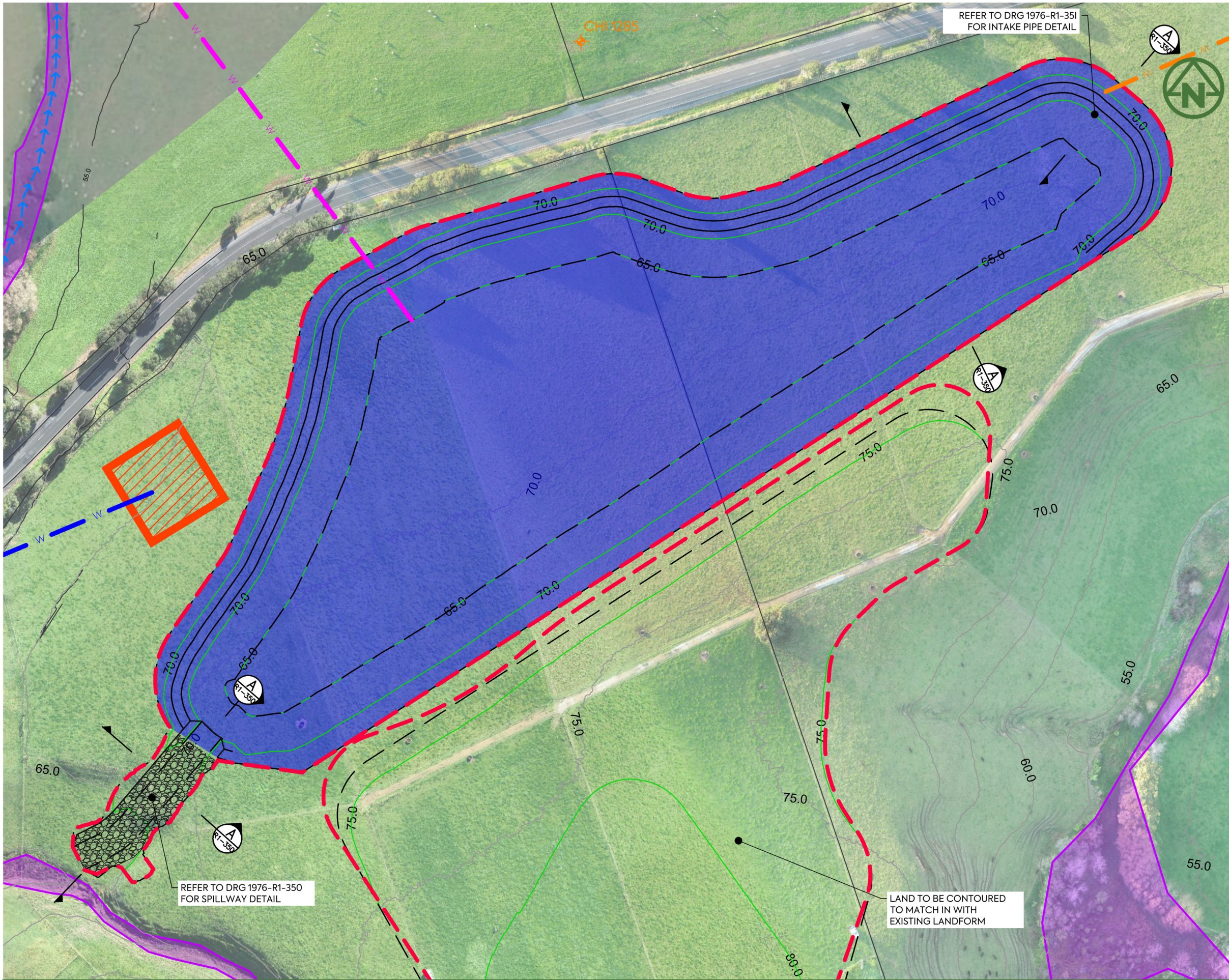
NOTES:

1. ALL WATERMANS ARE TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD LAY POSITIONS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWINGS 360-365.
2. BEDDING AND SURROUND FOR ALL PIPES TO BE IN ACCORDANCE WITH WATERCARE CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION.
3. CONNECTIONS TO EXISTING COUNCIL WATERMANS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY WATERCARE AND AUCKLAND COUNCIL.
4. ALL TRENCHES UNDER CARRIAGEWAYS TO BE BACKFILLED WITH HARDFILL.
5. THESE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.
6. THE CONTRACTOR IS TO ACCURATELY FIX BY SURVEY ALL CHANGES IN DEPTH AND DIRECTION OF THE PROPOSED WATERMAIN.

LEGEND:

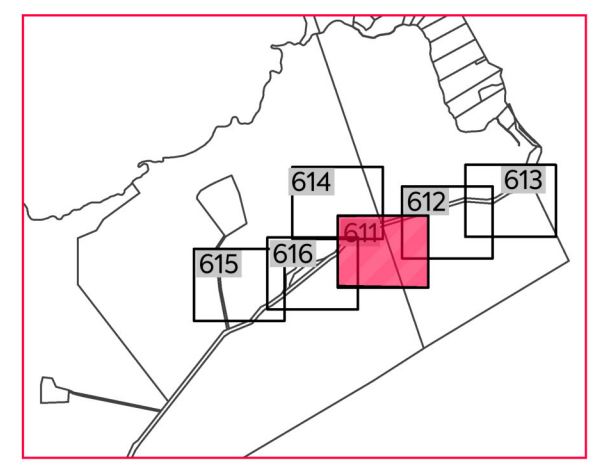
- PROPOSED WATERMAIN (WATER TAKE) — W —
- PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
- PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
- PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
- PERMANENT STREAM → → → → →
- INTERMITTENT STREAM → → → → →
- PROPOSED BULK WATER RESERVOIR
- PROPOSED HIGH-FLOW STREAM TAKE ●
- EXISTING DEEP GROUNDWATER BORE ●
- INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE ●
- PROPOSED WATER TREATMENT PLANT AND PUMP STATION
- EXISTING WETLANDS —

	<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: RESERVOIR PLAN AND WATER TAKE LOCATION OVERALL PLAN</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p>																		
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C	KEY UPDATED	MO	CIM	SM	26/04/22																	
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A	FIRST ISSUE	MO	CIM	JSD	17/09/21																	
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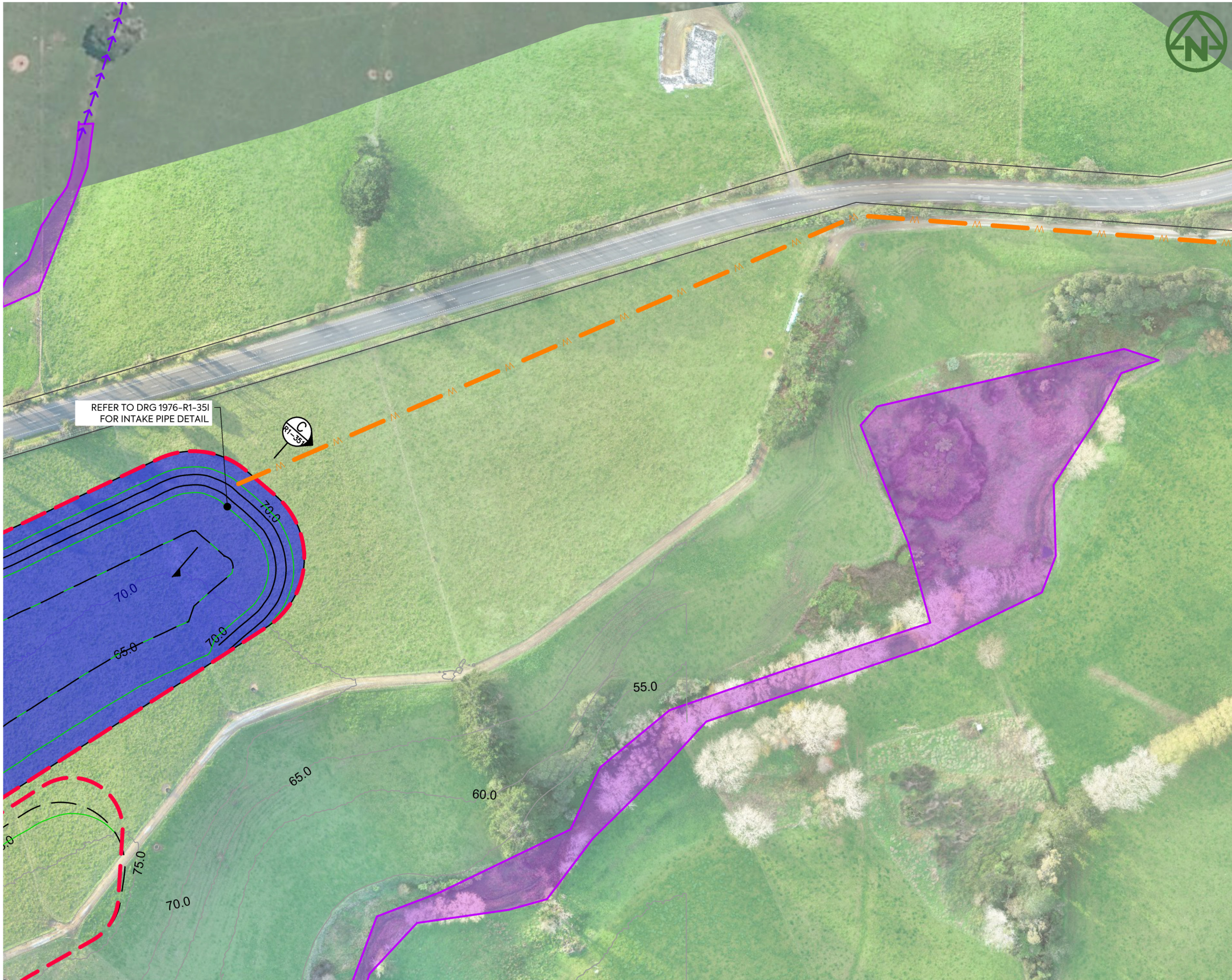
- NOTES:**
1. ALL WATERMAINS ARE TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD LAY POSITIONS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWINGS 360-365.
 2. BEDDING AND SURROUND FOR ALL PIPES TO BE IN ACCORDANCE WITH WATERCARE CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION.
 3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY WATERCARE AND AUCKLAND COUNCIL.
 4. ALL TRENCHES UNDER CARRIAGEWAYS TO BE BACKFILLED WITH HARDFILL.
 5. THESE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.
 6. THE CONTRACTOR IS TO ACCURATELY FIX BY SURVEY ALL CHANGES IN DEPTH AND DIRECTION OF THE PROPOSED WATERMAIN.

- LEGEND:**
- PROPOSED WATERMAIN (WATER TAKE) — W —
 - PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
 - PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
 - PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
 - PERMANENT STREAM —>>>>>>
 - INTERMITTENT STREAM —>>>>>>
 - PROPOSED BULK WATER RESERVIOR
 - PROPOSED HIGH-FLOW STREAM TAKE
 - EXISTING DEEP GROUNDWATER BORE
 - INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE
 - PROPOSED WATER TREATMENT PLANT AND PUMP STATION
 - EXISTING WETLANDS



DRAWING LAYOUT PLAN

<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p> <p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p> <p>TITLE: RESERVIOR PLAN AND WATER TAKE LOCATION SHEET 1</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p> <p>SCALE: 1:1500</p> <p>DO NOT SCALE</p> <p>DRAWING NO: 1976-R1-611</p> <p>REV: C</p>																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DRN BY</th> <th>CHK BY</th> <th>APP BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>KEY UPDATED</td> <td>MO</td> <td>CIM</td> <td>SM</td> <td>26/04/22</td> </tr> <tr> <td>B</td> <td>ISSUED FOR CONSENT</td> <td>MO</td> <td>CIM</td> <td>JSD</td> <td>26/11/21</td> </tr> <tr> <td>A</td> <td>FIRST ISSUE</td> <td>MO</td> <td>CIM</td> <td>JSD</td> <td>17/09/21</td> </tr> </tbody> </table>	REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE	C	KEY UPDATED	MO	CIM	SM	26/04/22	B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21	A	FIRST ISSUE	MO	CIM	JSD	17/09/21		
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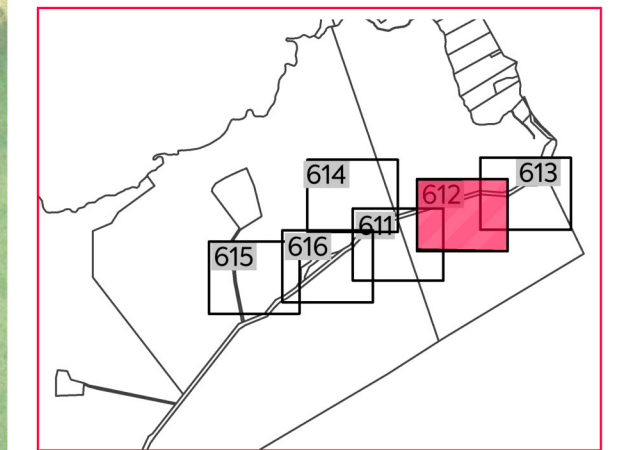


NOTES:

1. ALL WATERMAINS ARE TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD LAY POSITIONS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWINGS 360-365.
2. BEDDING AND SURROUND FOR ALL PIPES TO BE IN ACCORDANCE WITH WATERCARE CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION.
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY WATERCARE AND AUCKLAND COUNCIL.
4. ALL TRENCHES UNDER CARRIAGEWAYS TO BE BACKFILLED WITH HARDFILL.
5. THESE DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING SERVICES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE AND PROTECT ALL EXISTING SERVICES DURING THE CONSTRUCTION PERIOD.
6. THE CONTRACTOR IS TO ACCURATELY FIX BY SURVEY ALL CHANGES IN DEPTH AND DIRECTION OF THE PROPOSED WATERMAIN.

LEGEND:

- PROPOSED WATERMAIN (WATER TAKE) — W —
- PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
- PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
- PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
- PERMANENT STREAM → → → → →
- INTERMITTENT STREAM → → → → →
- PROPOSED BULK WATER RESERVIOR
- PROPOSED HIGH-FLOW STREAM TAKE ●
- EXISTING DEEP GROUNDWATER BORE ●
- INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE ●
- PROPOSED WATER TREATMENT PLANT AND PUMP STATION
- EXISTING WETLANDS —



DRAWING LAYOUT PLAN

	<p>CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD</p>	<p>PROJECT: MURIWAI DOWNS GOLF PROJECT PROPOSED RESERVOIR 610 & 697 MURIWAI ROAD MURIWAI VALLEY</p>	<p>TITLE: RESERVIOR PLAN AND WATER TAKE LOCATION SHEET 2</p>	<p>PURPOSE OF ISSUE: FOR CONSENT</p>																		
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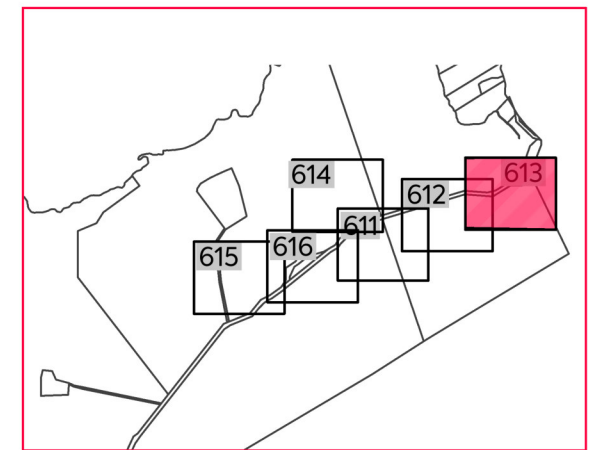


NOTES:

1. ALL WATERMAINS ARE TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD LAY POSITIONS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWINGS 360-365.
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6. THE CONTRACTOR IS TO ACCURATELY FIX BY SURVEY ALL CHANGES IN DEPTH AND DIRECTION OF THE PROPOSED WATERMAIN.

LEGEND:

PROPOSED WATERMAIN (WATER TAKE)		W
PROPOSED WATERMAIN (RESERVOIR SUPPLY)		W
PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION)		W
PROPOSED WATER SUPPLY (WATER BORE SUPPLY)		W
PERMANENT STREAM		
INTERMITTENT STREAM		
PROPOSED BULK WATER RESERVIOR		
PROPOSED HIGH-FLOW STREAM TAKE		
EXISTING DEEP GROUNDWATER BORE		
INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE		
PROPOSED WATER TREATMENT PLANT AND PUMP STATION		
EXISTING WETLANDS		



DRAWING LAYOUT PLAN

CLIENT:

**THE BEARS HOME
PROJECT MANAGEMENT LTD**

PROJECT:

**MURIWAI DOWNS GOLF COURSE
PROPOSED RESERVIOR
610 & 697 MURIWAI ROAD
MURIWAI VALLEY**

TITLE:

**RESERVIOR PLAN
AND WATER TAKE LOCATION
SHEET 3**

PURPOSE OF ISSUE:

FOR CONSENT

SCALE:
1:1500

DO NOT SCALE

DRAWING NO:
1976-R1-613

REV:
C

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
C	KEY UPDATED	MO	CIM	SM	26/04/22
B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21



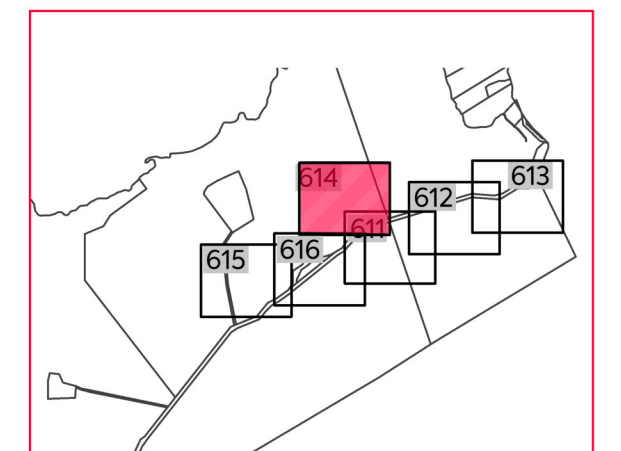


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LEGEND:

- PROPOSED WATERMAIN (WATER TAKE) — W —
- PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
- PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
- PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
- PERMANENT STREAM → → → → →
- INTERMITTENT STREAM → → → → →
- PROPOSED BULK WATER RESERVIOR
- PROPOSED HIGH-FLOW STREAM TAKE ●
- EXISTING DEEP GROUNDWATER BORE ●
- INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE ●
- PROPOSED WATER TREATMENT PLANT AND PUMP STATION
- EXISTING WETLANDS —



DRAWING LAYOUT PLAN

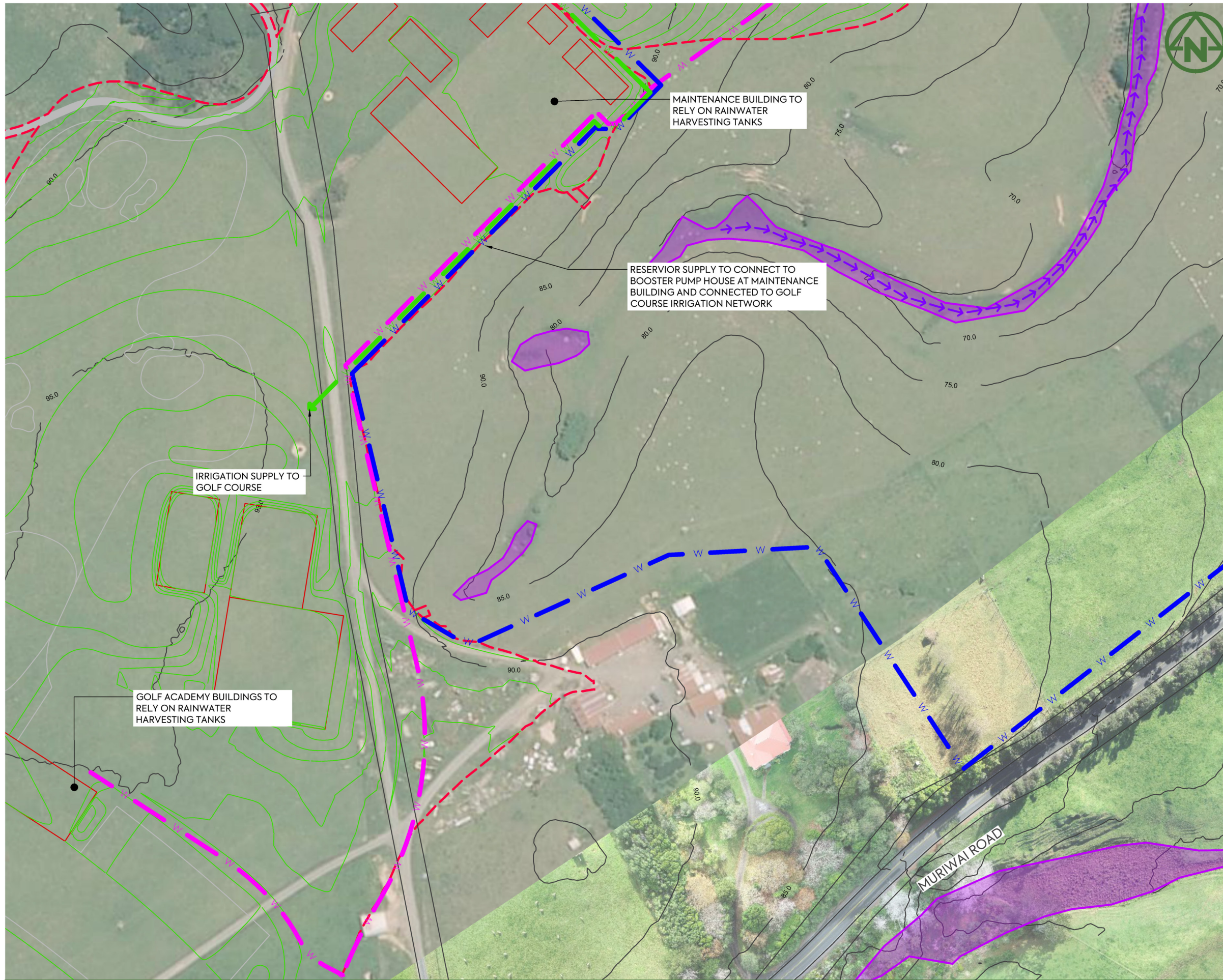
CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD PROJECT: MURIWAI DOWNS GOLF PROJECT TITLE: RESERVIOR PLAN AND WATER TAKE LOCATION SHEET 4 PURPOSE OF ISSUE: FOR CONSENT

SCALE: 1:1500 DO NOT SCALE

DRAWING NO: 1976-R1-614 REV: C

REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
C	KEY UPDATED	MO	CIM	SM	26/04/22
B	ISSUED FOR CONSENT	MO	CIM	JSD	26/11/21
A	FIRST ISSUE	MO	CIM	JSD	17/09/21



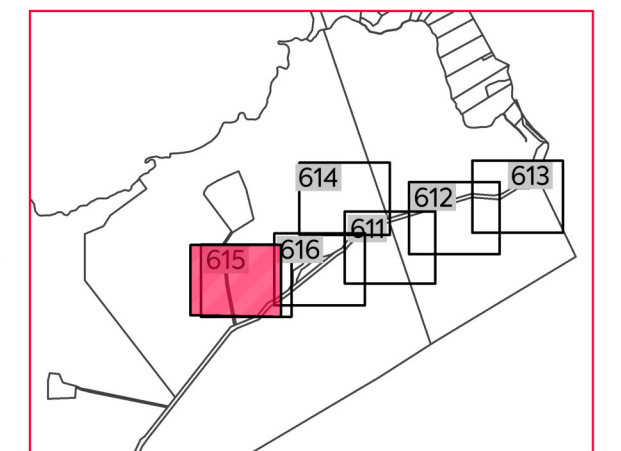


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LEGEND:

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- PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
- PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
- PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
- PERMANENT STREAM → → → → →
- INTERMITTENT STREAM → → → → →
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- PROPOSED WATER TREATMENT PLANT AND PUMP STATION
- EXISTING WETLANDS —



DRAWING LAYOUT PLAN

CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD

PROJECT: MURIWAI DOWNS GOLF PROJECT
PROPOSED RESERVOIR
610 & 697 MURIWAI ROAD
MURIWAI VALLEY

TITLE: RESERVOIR PLAN
AND WATER TAKE LOCATION
SHEET 5

PURPOSE OF ISSUE: FOR CONSENT

SCALE: 1:1500
DO NOT SCALE

DRAWING NO: 1976-R1-615
REV: C

MO	CIM	SM	26/04/22		
MO	CIM	JSD	26/11/21		
MO	CIM	JSD	17/09/21		
REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE





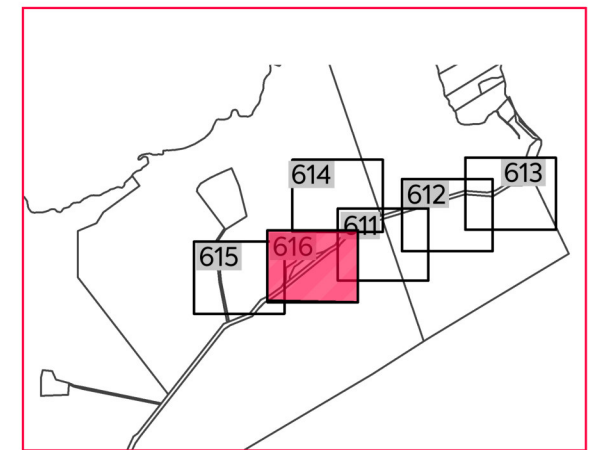
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- PROPOSED WATERMAIN (RESERVOIR SUPPLY) — W —
- PROPOSED WATER SUPPLY (GOLF COURSE IRRIGATION) — W —
- PROPOSED WATER SUPPLY (WATER BORE SUPPLY) — W —
- PERMANENT STREAM → → → → →
- INTERMITTENT STREAM → → → → →
- PROPOSED BULK WATER RESERVIOR
- PROPOSED HIGH-FLOW STREAM TAKE ●
- EXISTING DEEP GROUNDWATER BORE ●
- INDICATIVE PROPOSED SECOND DEEP GROUNDWATER BORE ●
- PROPOSED WATER TREATMENT PLANT AND PUMP STATION
- EXISTING WETLANDS —

REFER TO DRG 1976- FOR SPILLWAY DETA



DRAWING LAYOUT PLAN

CLIENT: THE BEARS HOME PROJECT MANAGEMENT LTD

PROJECT: MURIWAI DOWNS GOLF PROJECT
PROPOSED RESERVOIR
610 & 697 MURIWAI ROAD
MURIWAI VALLEY

TITLE: RESERVIOR PLAN
AND WATER TAKE LOCATION
SHEET 6

PURPOSE OF ISSUE: FOR CONSENT

SCALE: 1:1500
DO NOT SCALE

DRAWING NO: 1976-R1-616
REV: C



REV	DESCRIPTION	DRN BY	CHK BY	APP BY	DATE
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