

**MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
RISE AND SHINE PIT - CREEK DIVERSION
TECHNICAL REPORT**

Prepared for:

08 August 2025

Matakanui Gold Limited

EXECUTIVE SUMMARY

Diversion of the Rise and Shine (RAS) Creek around the southern wall of the RAS Open Pit is required to:

- Maintain the baseflow in RAS Creek.
- Minimise flood waters entering the RAS Pit. This has three purposes:
 - minimise mixing of RAS catchment water with Shepherds catchment water
 - maintaining a water balance deficit for the operation
 - reduce negative impacts on RAS open pit wall stability.

This report presents two options for the diversion of RAS Creek around RAS Open Pit.

- Option 1 involves the construction of a 3.9 m high detention bund with culvert and spillway located in RAS Creek upstream of the RAS Open Pit and an open channel along a pit berm to allow water to reenter the undisturbed RAS Creek downstream of the RAS Open Pit
- Option 2 involves a more significant open channel (with no upstream bund) along a pit berm to allow water to pass between undisturbed sections of RAS Creek upstream and downstream of the RAS Open Pit.

In both options, some water reporting from the upstream portion of the RAS Creek catchment is predicted to spill into RAS Open Pit during extreme rainfall events.

Option 1 open channel has a design depth of 0.9 m, total width of 4.8 m and allows passage of water at maximum flow rate of 5 m³/sec, equivalent to the predicted peak flow in a 1 in 2 year annual exceedance probability (AEP) event. During higher rainfall events water also backs up behind the detention bund and is predicted to spill water into RAS Open Pit during the peak of a 1 in 10 year AEP event.

Option 2 open channel has a design depth of 1.6 m (concrete lined) or 1.8 m (rip rap lined) depth, total width of 8.9 m (concrete lined) or 13.7 m (riprap lined) and allows passage of water at a maximum flow rate of 22 m³/sec, equivalent to the predicted peak flow in a 1 in 100 year AEP event.

Both options are technically feasible and, in both cases, open channel designs are conservative. Channel designs in both options allow 0.3 m free board at peak flows. AEP peak flow rates have been modelled from runoff analysis for flood conditions. Flows up to 0.2 m³/ sec have been measured in RAS Creek near the planned location of RAS Open Pit over a 2 year period. These flows are notably less than modelled and there are opportunities to refine the channel sizes with more detailed assessment.

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Document applicability and disclaimers

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**MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
RISE AND SHINE PIT - CREEK DIVERSION
TECHNICAL REPORT**

1.0 INTRODUCTION

Engineering Geology Limited (EGL) was engaged by Matakanui Gold Limited (MGL) to size options for the Rise and Shine (RAS) Pit diversion of RAS Creek for the Bendigo-Ophir Gold Project (BOGP). MGL are proposing to establish the BGOP, which comprises a new gold mine, ancillary facilities and environmental mitigation measures on Bendigo and Ardour Stations in the Dunstan Mountains of Central Otago.

The BOGP involves mining the identified gold deposits at RAS, Come in Time (CIT), Srek (SRX) and Srek East (SRE). Both open pit and underground mining methods will be utilised within the project site to access the gold deposits. Infrastructure to support the project will be constructed in the lower Shepherds Valley.

This report provides sizing and preliminary details for two diversion options for the RAS Creek around the RAS Pit. The purpose of the diversion is to maintain the base flow of the creek and in flood minimise water entering the pit.

This technical report has been prepared for an application for Fast Track Approval. Final details, design drawings and specification for construction is required in addition to this report.

2.0 PROPOSED DIVERSION OF RISE AND SHINE CREEK

2.1. Site Location

The project site is located approximately 20 km northeast of Cromwell. The RAS and CIT gold deposit is located within a ridge between Shepherds Creek to the northeast and RAS Creek to southwest. The Srex gold deposit is located on the southern slopes of RAS Valley. Watercourses in both valleys flow from a divide in the southeast to outlets in the northwest.

The general location of the proposed site is shown in Figure 1.

2.2. Rise and Shine Creek

Surface water discharges from mining areas in Rise and Shine Valley will be to RAS Creek. RAS Creek flows into Clearwater Creek, which flows into Bendigo Creek. Bendigo Creek is a tributary of the Clutha River. However, under normal flows there is no wet connection between Bendigo Creek and the Clutha River.

Flow gauge measurements of RAS Creek within the valley indicate base flow rates of approximately 3.5 l/s (median value). The flow is derived from a catchment of approximately 4 km². Flows up to 0.2 m³/s (200 l/s) have been recorded over an approximately 2 year period. These measured flows are notably less than flows predicted from runoff type analysis for flood conditions. The 1 in 2 year, 1 in 10 year, and 1 in 100 year peak flood flows are estimated to be 6.4 m³/s, 11 m³/s and 22 m³/s, where RAS Creek joins Clearwater Creek. Estimates use the simplified rational method. Run-off coefficients are summarised in Table 2.

Based on the observed 2 year peak flows in Shepherds Creek and RAS Creek, it is possible that the peak flood flows are significantly less than estimated using simplified assessment methods for more intense rainfall. This means the runoff coefficients are likely conservative for this site. Continued monitoring in operation and calibration of more detailed estimation approaches will continue to develop this knowledge. Standard methods for assessing run-off coefficients are recommended initially.

2.3. Creek diversion around pit

The diversion design aims to manage runoff from RAS Creek and divert water around the RAS Pit. Two design concepts are considered: one involving the construction of a 3.9 m high detention bund and a diversion channel, and the other with only an open channel around the pit.

The diversion around the pit is required to:

- Maintain the baseflow in RAS Creek
- Minimise flood waters entering the RAS Pit. This has three purposes. Minimise the mixing of RAS catchment water with Shepherds catchment water, maintaining a water balance deficit for the operation, and reducing impacts on RAS open pit wall stability.

3.0 RUNOFF ASSESSMENT

The runoff assessment applies a unit hydrograph approach (Ref. 1). The estimation of runoff coefficients for different rainfall durations are summarised on Table 2. Two catchments were considered. The catchment area to the point of the potential detention bund is approximately 409 hectares and the second smaller catchment for the channel above pit is approximately 6 hectares as shown in Figure 03.

Routing of flow through the proposed solutions has been modelled in HEC-HMS (4.12) (Ref. 2).

4.0 WIND AND WAVE RUN-UP

Wind and wave run-up estimations are required for freeboard calculations for the detention bund.

The significant wave height (H_s), wave run-up, and wind set-up have been calculated using the procedures in Fell et al. (Ref. 4). Wave run-up has been estimated for the highest 10% of the waves (R10%). The results are summarised in Table 3.

5.0 DESIGN SOLUTIONS

5.1. OPTION 1 – DETENTION BUND AND OPEN CHANNEL

5.1.1. Sizing of detention bund and culverts

The layout of Option 1, including a detention bund, box culvert, channel at pit and auxiliary spillway are shown in Figure 04. The detention bund is designed to collect and reduce the release of storm water in RAS catchment. The detention bund would be an earthfill embankment.

The general layout is to have a detention bund, where RAS catchment water will flow through the pond area and the culvert then into the natural drainage way (grassed swale or natural channel) before entering the channel at pit. There is no pond under normal flows. A pond only forms under flood flows. The aim of the detention bund is to reduce the peak flows in the channel around the pit. An auxiliary spillway for a 1 in 1,000 AEP storm event would be incorporated into the design of the detention bund.

The elevation-storage curve for the detention bund pond is shown in Figure 13. The detention bund is approximately 66 m wide. The downstream embankment has a height of 3.9 m, with maximum pond depth of 3.4 m. The embankment has side slopes of 2H:1V.

Two different storm events were considered for the detention bund:

- 1 in 2 AEP storm event
- 1 in 10 AEP storm event

For the 1 in 2 AEP storm event, inflows into the detention pond are estimated at 6.4 m³/s. To pass the 1 in 2 AEP storm event without overtopping the spillway a 1.5 m high by 1.5 m wide box culvert was required. The peak outflow from the culvert is 5.0 m³/s.

For the 1 in 10 AEP storm event, inflows into the detention pond are estimated at 10.9 m³/s. To pass the 1 in 10 AEP storm event without overtopping the spillway a 1.5 m high by 2.5 m wide box culvert gives a peak outflows of 9.3 m³/s.

The calculations indicate that the proposed detention bund 3.9 m high does not have sufficient volume to provide any real benefit for the 1 in 10 AEP event.

A 1 in 2 AEP storm event was adopted as the design basis for Option 1. This means that, for an event smaller than a 1 in 2 AEP, flows would pass through the culvert and into the channel, and for larger storms flows would also pass the spillway and into the pit. Figures 07 shows typical details for the detention bund and culvert. The location of the culvert is shown in Figures 04 and 05. At the culvert outlet, armour rock (i.e. riprap) D50 size of 200 mm is required. The apron length is $5D$ and depth is $3.0D_{50}$. The apron entry width is 3 m and exit width is 8 m. The apron spreads the flow and transitions to the natural drainage way.

5.1.2. Sizing of open channel

The channel around the pit was assumed to be a concrete lined open channel. The water will flow through the culvert, then enter the natural drainage area before flowing into the concrete diversion channel at the pit. The proposed design alignment of the diversion channel at pit is shown on the site plan in Figures 04 and 05. Typical cross sections are shown in Figure 07. The size of the channel is selected based on the flow and peak water level. The diversion channel has a slope gradient of 8m / 300m or approximately 1 in 40. The total channel length is approximately 300 m. The roughness coefficient of the flow path was assumed to be Manning's n value of 0.025 and considers the base surface roughness of concrete.

The channel is assumed to have side slopes of 1V:2H and its bottom width is 2 m (refer to Figure 07). Under the 1 in 2 AEP storm event routing results show the peak flow of $5.0 \text{ m}^3/\text{s}$ and the water depth in the channel is 0.51 m. Assumed a freeboard of 0.3 m the channel depth would be approximately 0.9 m. Detail A on Figure 07 shows the channel to pass $5.0 \text{ m}^3/\text{s}$.

Under the 1 in 10 AEP storm event the peak flow is $9.30 \text{ m}^3/\text{s}$. The routing results show the water depth in the channel is 0.70 m. Assuming a freeboard of 0.3 m, the required total channel depth is 1.0 m.

5.1.3. Sizing of overflow spillway

An overflow spillway is incorporated on the upstream of the detention bund and the detention bund embankment crest as shown in Figure 05. There are two different sizes of spillway weir (refer to Table 6.). The adopted spillway weir consists of a 15 m wide with 2H:1V slope on the sides reinforced concrete inlet weir. The weir depth is 1.5 m deep. Riprap will be placed at the downstream end of the spillways to dissipate energy and prevent erosion. Details of the spillway are shown in Figures 08. The reinforced concrete weir formed by excavation into natural ground which controls the flow discharged from the weir into the excavated ground channel.

The stage-discharge curve of the spillway is shown in Figure 16.

5.2. OPTION 2 – OPEN CHANNEL

Option 2 is an open channel only (no detention bund). The diversion channel functions to divert the RAS creek water around the RAS Pit RL700 bench.

The open channel is designed to accommodate a 1 in 100 AEP storm event. The 1 in 100 AEP peak flow is 22 m³/s.

The design conservatively assumes a fall gradient of at least 1 in 100. This is flatter than what can be achieved onsite (i.e., approximately 1 in 40) and a smaller channel with higher flows is likely to be achievable following detailed design.

Two typical open channel designs were evaluated: a concrete channel and a riprap channel, both with a side slope of 2H:1V. For the concrete open channel, a Manning's n value of 0.025 was used, and for the riprap channel, a Manning's n value of 0.065 was applied. The two channel types and design criteria are summarized below.

For a concrete open channel, a base width of 2.5 m was selected, with a water rise of 1.28m. Allowing 0.3 m of freeboard the channel depth is 1.60 m. The total top width of the concrete channel is 8.9 m.

For the riprap open channel, a base width of 6.5 m was selected, with a water rise of 1.47 m. Allowing 0.3 m of freeboard the channel depth is 1.80 m. The total top width of the riprap channel is 13.7 m. The riprap channel has armour rock D50 size of 150 mm in a layer 350 mm thick.

The RAS pit bench will need to be designed to have the required fall and width. Space will need to be allowed for access and for any localized rock fall to not block the channel.

Flows exceeding 1 in 100 AEP events would spill to the pit. However, note the allowance for freeboard does provide some additional capacity.

6.0 CONCLUSIONS

This report presents two options for the diversion of RAS Creek around RAS Pit. The first includes a detention bund to reduce channel flows around the pit to 5.0 m³/s and minimising channel size. The second is a channel only option on the pit bench sized to pass 1 in 100 AEP flows of 22 m³/s. This requires a more notable channel; however, it is also practical with adjustments to the RAS pit bench width and gradient. Both options are feasible, and which option is used depends on operation decisions around the pit and desired closure outcomes.

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TABLE 1. Design Rainfall Depth Duration Frequency (Unit: mm)

AEP	Duration (hr)									
	0.17	0.33	0.5	1	2	6	12	24	48	72
1 in 2	3.9	5.7	7.1	10.4	14.9	25.6	34.9	46.3	59.2	67.1
1 in 10	7.4	10.5	12.8	18.2	25.4	41.9	55.6	71.6	89.2	99.6
1 in 100	14.9	20.4	24.5	33.5	45.4	71.0	91.1	113.0	137.0	149.0
1 in 1000	26.6	35.5	42.1	56.2	74.2	110.4	137.1	156.3	214.3	248.8

TABLE 2. Adopted Runoff Coefficients

AEP	Runoff Coefficient
1 in 2	0.555
1 in 10	0.555
1 in 100	0.694
1 in 1,000	0.715

Note: Ref. 1

TABLE 3. Estimates of Wave Run-up and Wind Set-up

AEP	Gust Wind Speed (m/s)	Fetch (km)	Average Site Wind Speed of Minimum Wind Duration (m/s)	Significant Wave Heights, Hs (m)	Wave Run-up, R10% (m)	Wind Setup (m)	Wave Run-up and Wind Setup (m)
1 in 10	37	0.13	44.7	0.073	0.093	0.002	0.12
1 in 100	42	0.13	50.8	0.085	0.108	0.003	0.14

TABLE 4. Routing Results – Option 1: Detention Bund – Culvert Section

Culvert Sizing	Rainfall Event	Peak Reservoir Level (RL)	Peak Inflow (m³/s)	Peak Outflow (m³/s)	Freeboard (m)
Culvert 1 Hynds Box Culvert (H*W = 1.5m * 1.5 m)	1 in 2 AEP - 1 Hr	710.725	6.013	4.588	0.875
	1 in 2 AEP - 2 Hr	711.043	6.395	5.009	0.557
	1 in 2 AEP - 6 Hr	710.514	4.530	4.282	1.086
	1 in 2 AEP - 12 Hr	710.057	3.585	3.528	1.543
	1 in 2 AEP - 24 Hr	709.600	2.599	2.594	2.000
	1 in 2 AEP - 48 Hr	709.513	2.394	2.388	2.087
	1 in 2 AEP - 72 Hr	709.454	2.254	2.25	2.146

Culvert Sizing	Rainfall Event	Peak Reservoir Level (RL)	Peak Inflow (m³/s)	Peak Outflow (m³/s)	Freeboard (m)
Culvert 2 Hynds Box Culvert (H*W = 1.5m * 2.5 m)	1 in 10 AEP - 1 Hr	710.972	10.490	8.688	0.628
	1 in 10 AEP - 2 Hr	711.232	10.864	9.249	0.368
	1 in 10 AEP - 6 Hr	710.392	7.433	7.272	1.208
	1 in 10 AEP - 12 Hr	709.873	5.710	5.684	1.727
	1 in 10 AEP - 24 Hr	709.438	4.015	4.013	2.162
	1 in 10 AEP - 48 Hr	709.342	3.603	3.601	2.258
	1 in 10 AEP - 72 Hr	709.284	3.351	3.349	2.316

TABLE 5. Routing Results – Option 1: Detention Bund – Channel Section

Channel Sizing for Different Culverts	Rainfall Event	Side Slope (H:V)	Manning's n	Slope Gradient	Channel Invert Width (m)	Peak Flow (m³/s)	Peak Water Depth (m)	Channel Depth (m)
Hynds Box Culvert 1 (H*W = 1.5m * 1.5 m)	1 in 2 AEP - 2 Hr	2:1	0.025	8/300	2	5.03	0.51	0.90
Hynds Box Culvert 2 (H*W = 1.5m * 2.5 m)	1 in 10 AEP - 2 Hr	2:1	0.025	8/300	2	9.30	0.70	1.00

TABLE 6. Routing Results – Option 1: Detention Bund – Overflow Weir

Weir Type	Rainfall Event	Side Slope (H:V)	Bottom Width (m)	Weir Depth (m)	Peak Inflow (m³/s)	Peak Outflow (m³/s)	Peak Reservoir Level (RL)	Freeboard (m)
Weir 1	1 in 1,000 AEP – 2 Hr	2:1	15	1.5	40.837	40.773	711.260	0.34
Weir 2	1 in 1,000 AEP – 2 Hr	2:1	7	2.0	40.837	40.723	711.277	0.32

TABLE 7. Routing Results – Option 2: Open Channel

Type	1 in 100 AEP Rainfall Period	Side Slope (H:V)	Manning's n	Slope Gradient	Bottom Width (m)	Top Width (m)	Peak Flow (m ³ /s)	Peak Flow Depth (m)	Channel Depth (m)
Concrete	1 Hr	2:1	0.025	1/100	2.5	8.9	20.711	1.239	-
	2 Hr	2:1	0.025	1/100	2.5	8.9	22.200	1.282	1.60
	6 Hr	2:1	0.025	1/100	2.5	8.9	15.552	1.074	-
	12 Hr	2:1	0.025	1/100	2.5	8.9	11.710	0.929	-
	24 Hr	2:1	0.025	1/100	2.5	8.9	8.015	0.761	-
	48 Hr	2:1	0.025	1/100	2.5	8.9	6.975	0.711	-
	72 Hr	2:1	0.025	1/100	2.5	8.9	6.377	0.677	-
Riprap	1 Hr	2:1	0.065	1/100	6.5	10.9	20.640	1.412	-
	2 Hr	2:1	0.065	1/100	6.5	10.9	22.200	1.465	1.80
	6 Hr	2:1	0.065	1/100	6.5	10.9	15.545	1.210	-
	12 Hr	2:1	0.065	1/100	6.5	10.9	11.706	1.009	-
	24 Hr	2:1	0.065	1/100	6.5	10.9	8.015	0.813	-
	48 Hr	2:1	0.065	1/100	6.5	10.9	6.975	0.758	-
	72 Hr	2:1	0.065	1/100	6.5	10.9	6.336	0.724	-

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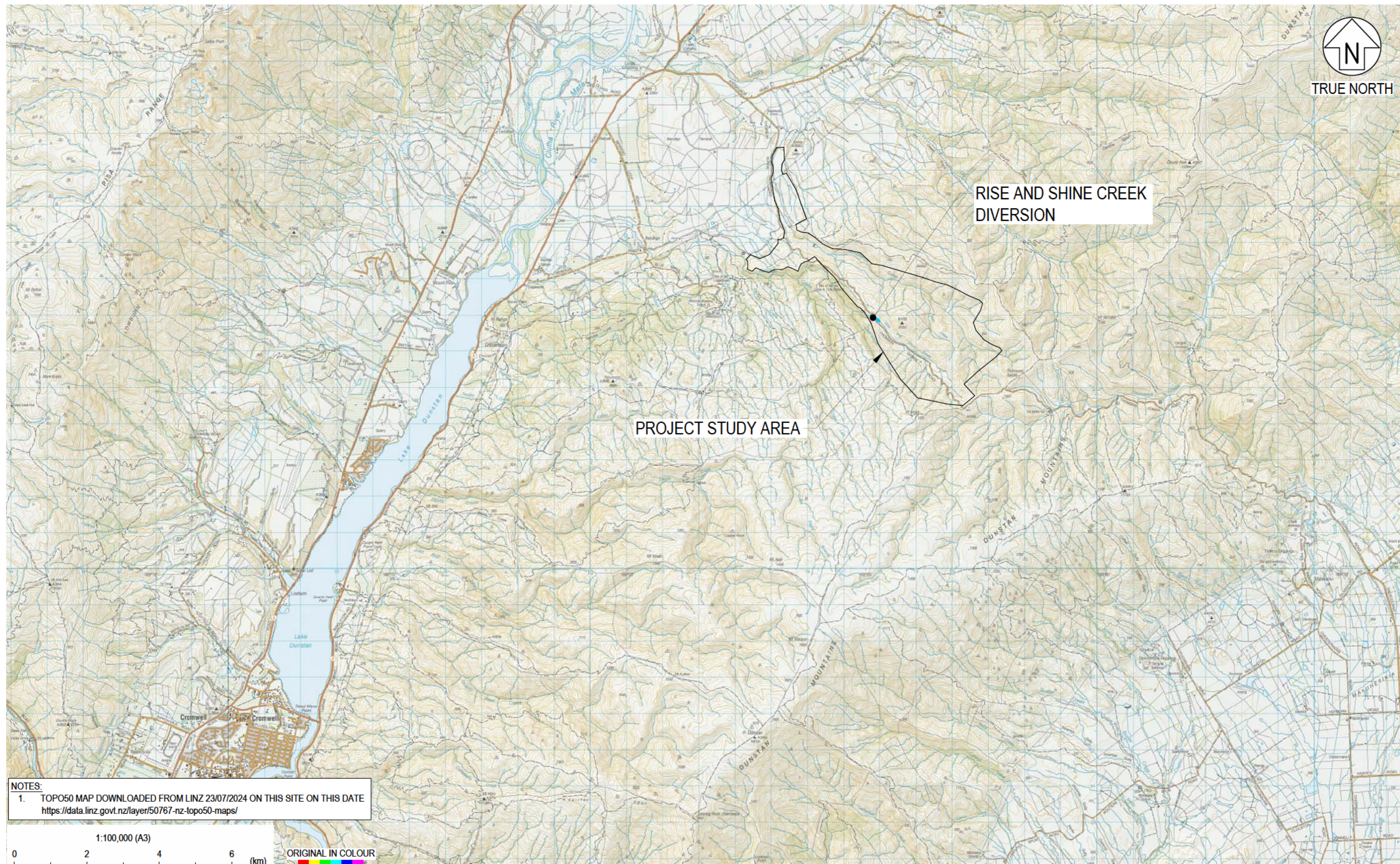


FIGURE 01

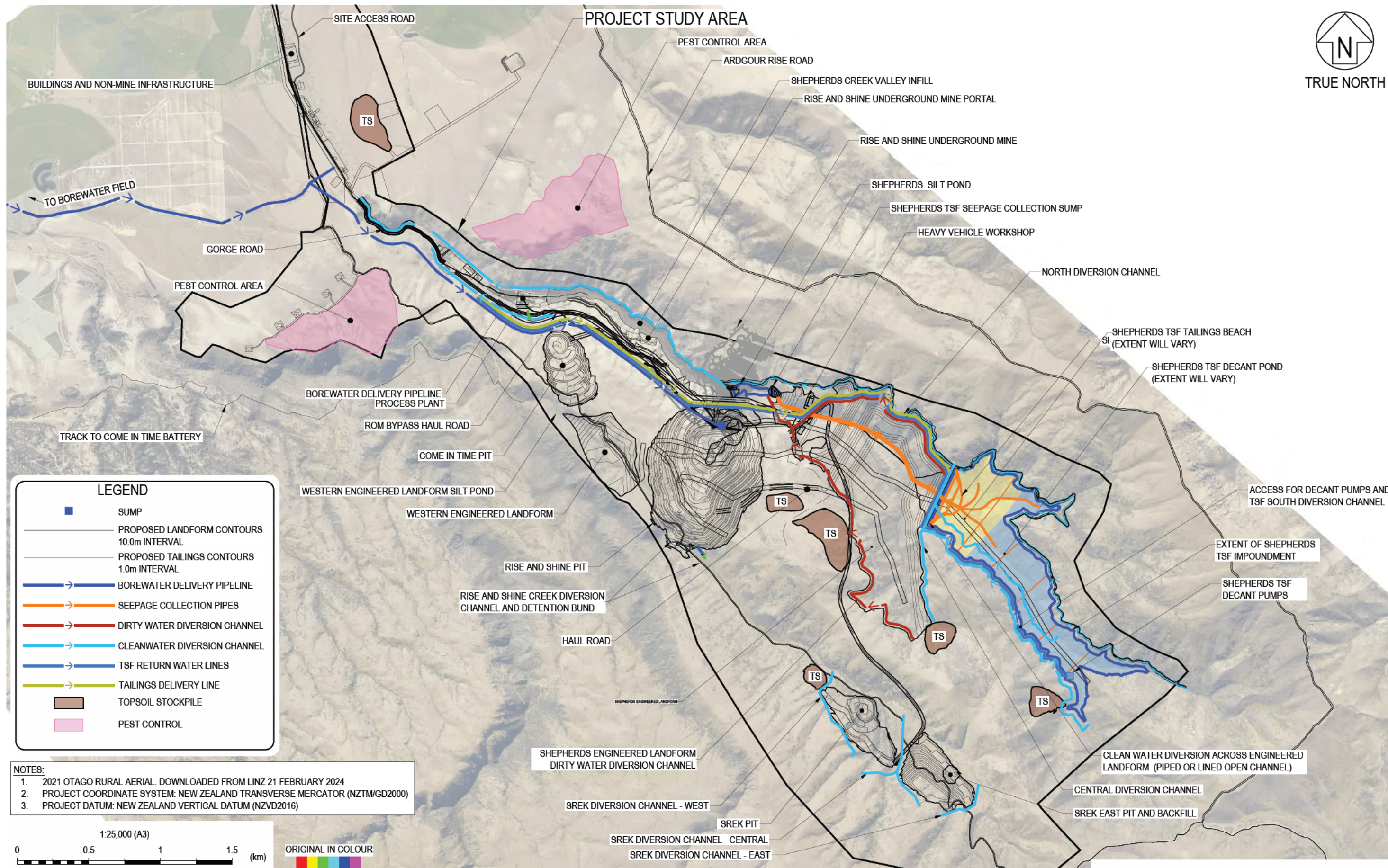


FIGURE 02

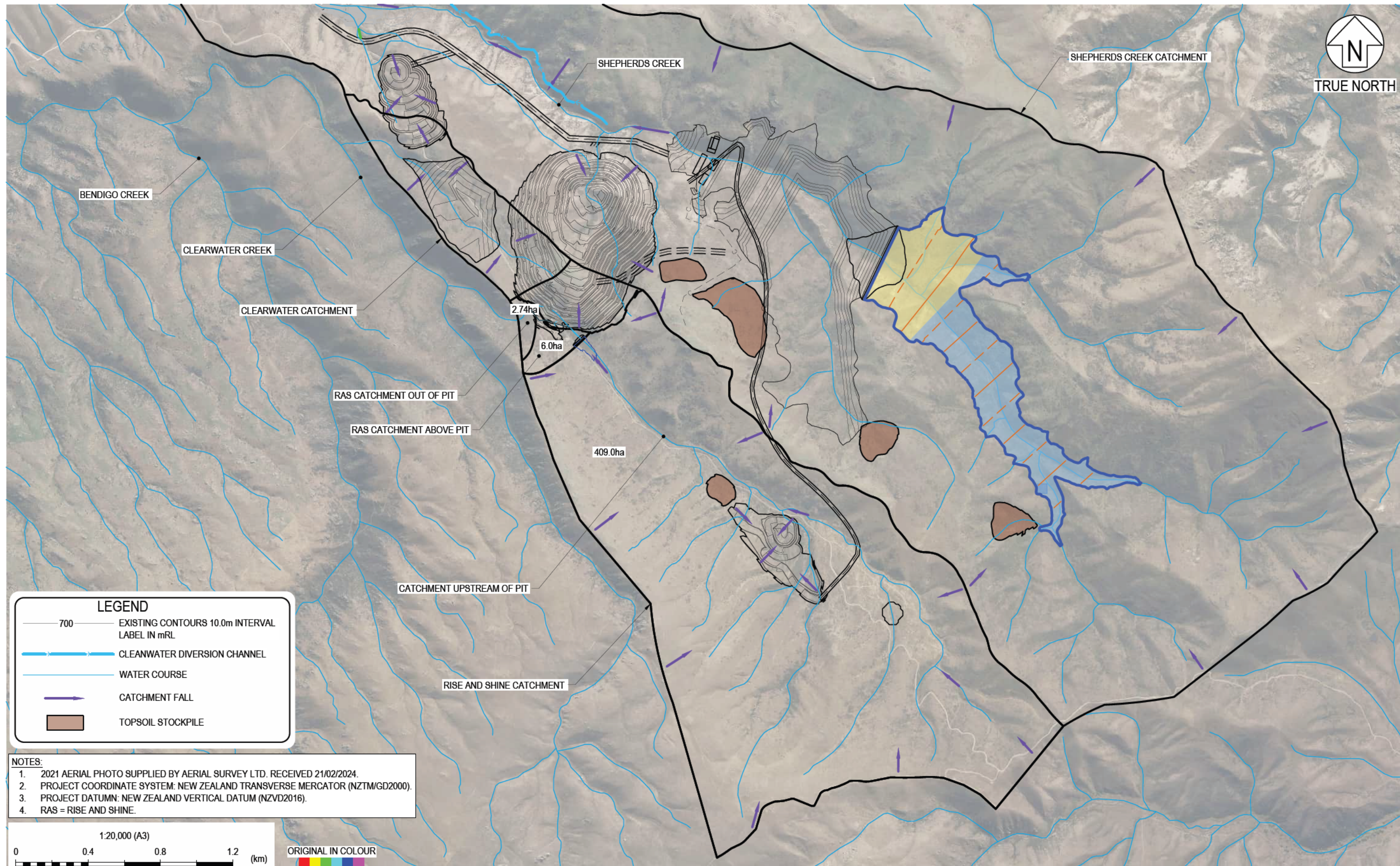
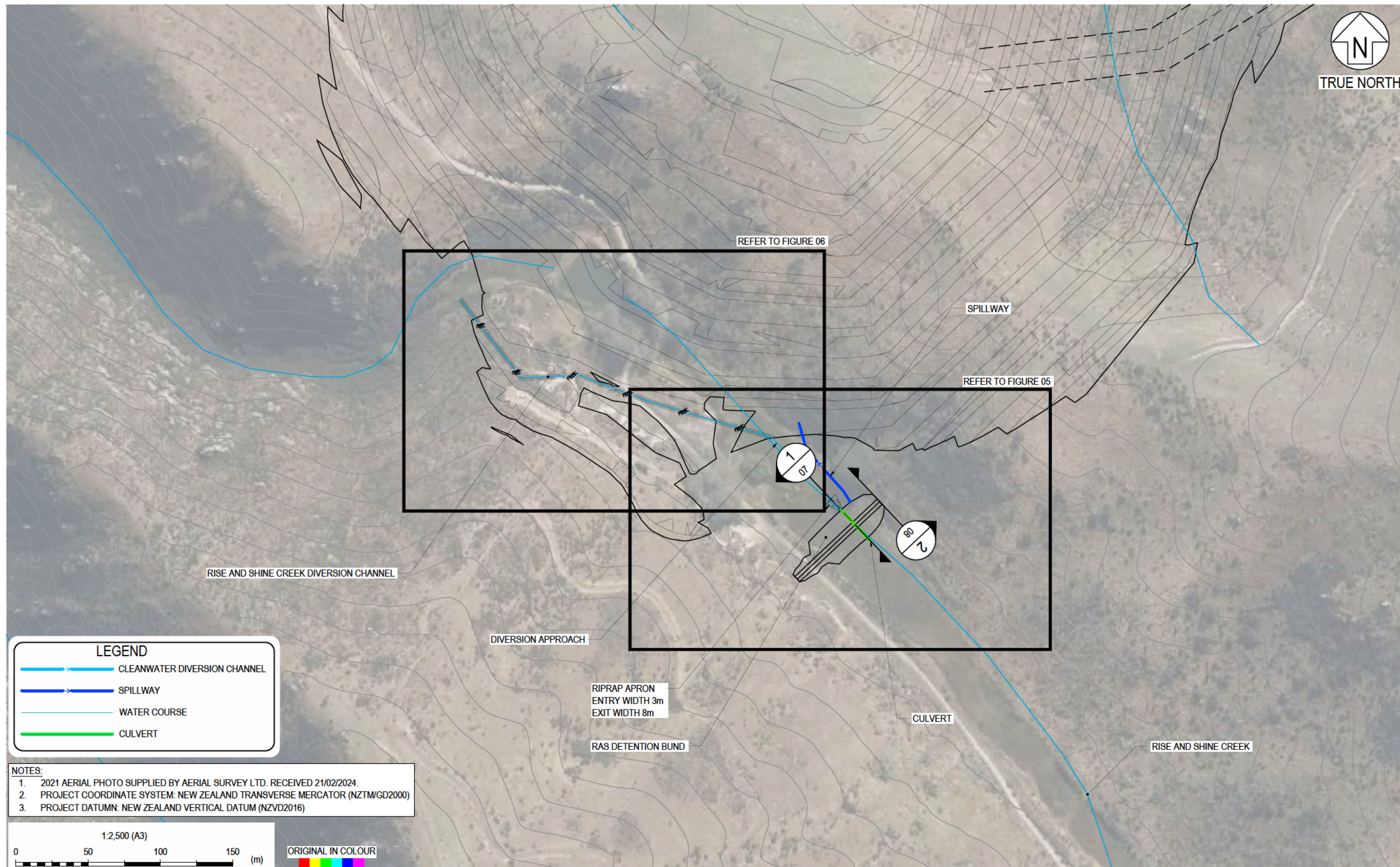


FIGURE 03



LEGEND

- CLEANWATER DIVERSION CHANNEL
- SPILLWAY
- WATER COURSE
- CULVERT

- NOTES:**
- 2021 AERIAL PHOTO SUPPLIED BY AERIAL SURVEY LTD. RECEIVED 21/02/2024.
 - PROJECT COORDINATE SYSTEM: NEW ZEALAND TRANSVERSE MERCATOR (NZTM/GD2000)
 - PROJECT DATUM: NEW ZEALAND VERTICAL DATUM (NZVD2016)

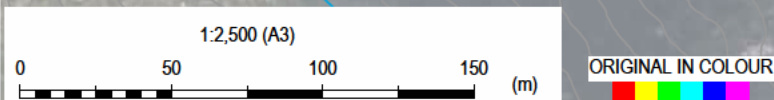
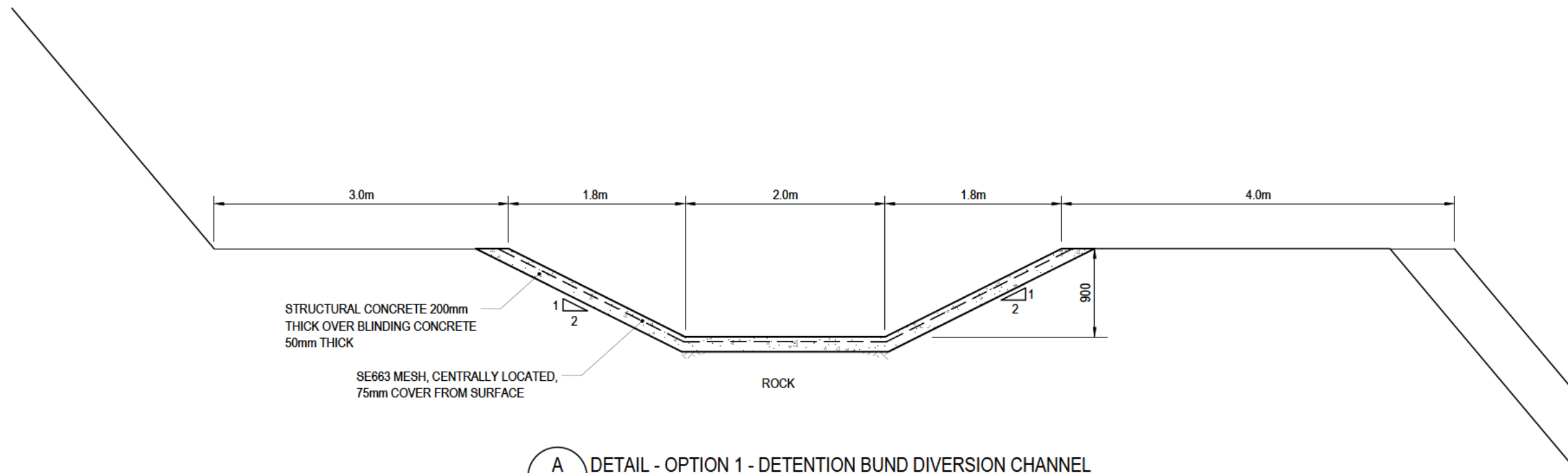


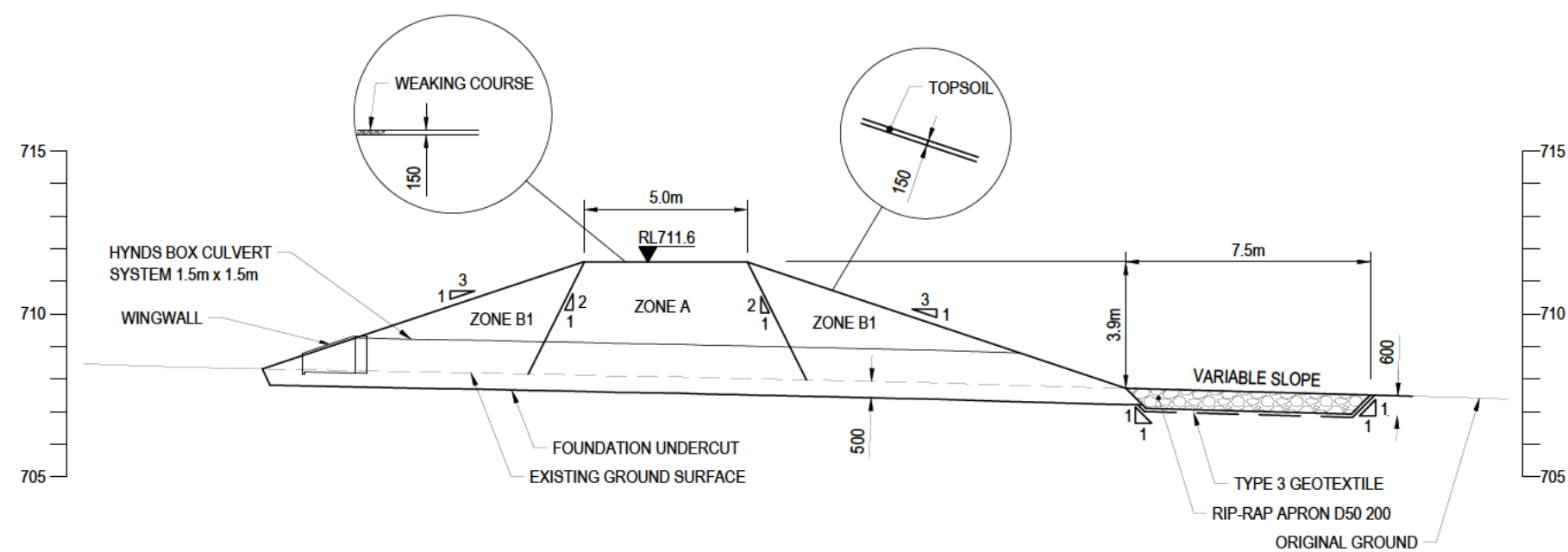
FIGURE 04



FIGURE 06



A DETAIL - OPTION 1 - DETENTION BUND DIVERSION CHANNEL
04 SCALE (A3) - 1:50



1 SECTION - OPTION 1 - DETENTION BUND DIVERSION CHANNEL
04 SCALE (A3) - 1:200

- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 2. PROJECT DATUM: NEW ZEALAND VERTICAL DATUM (NZVD2016)
 3. HYNDS BOX CULVERT SYSTEMS = HEIGHT = 1.5m x WIDTH = 1.5m

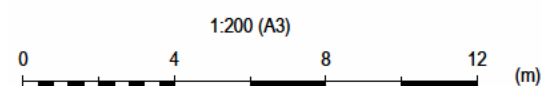
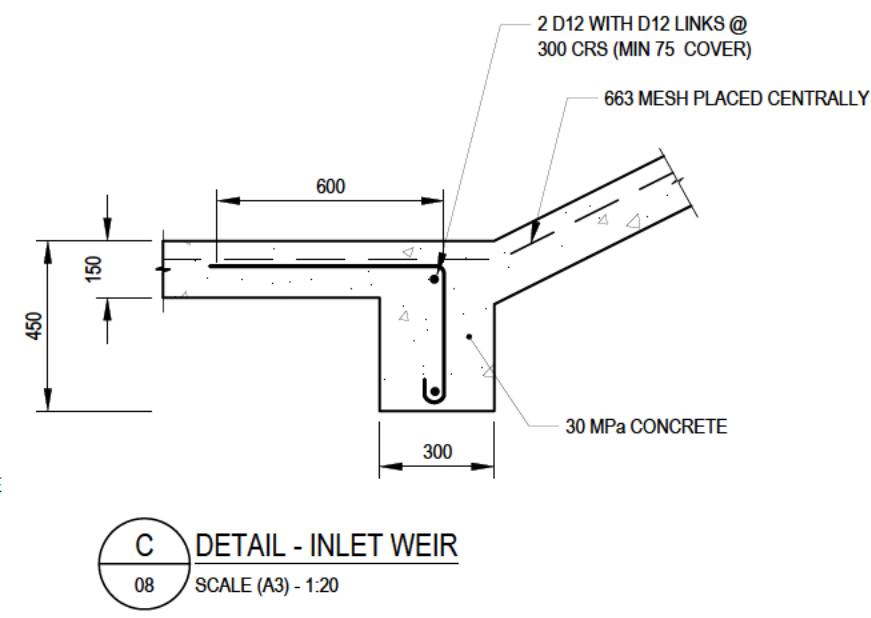
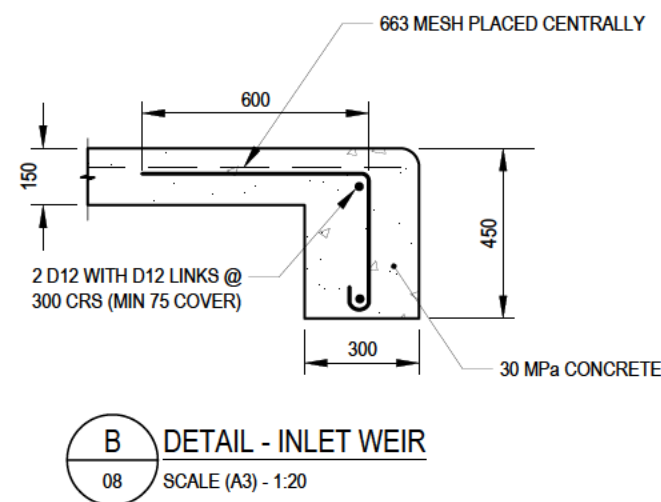
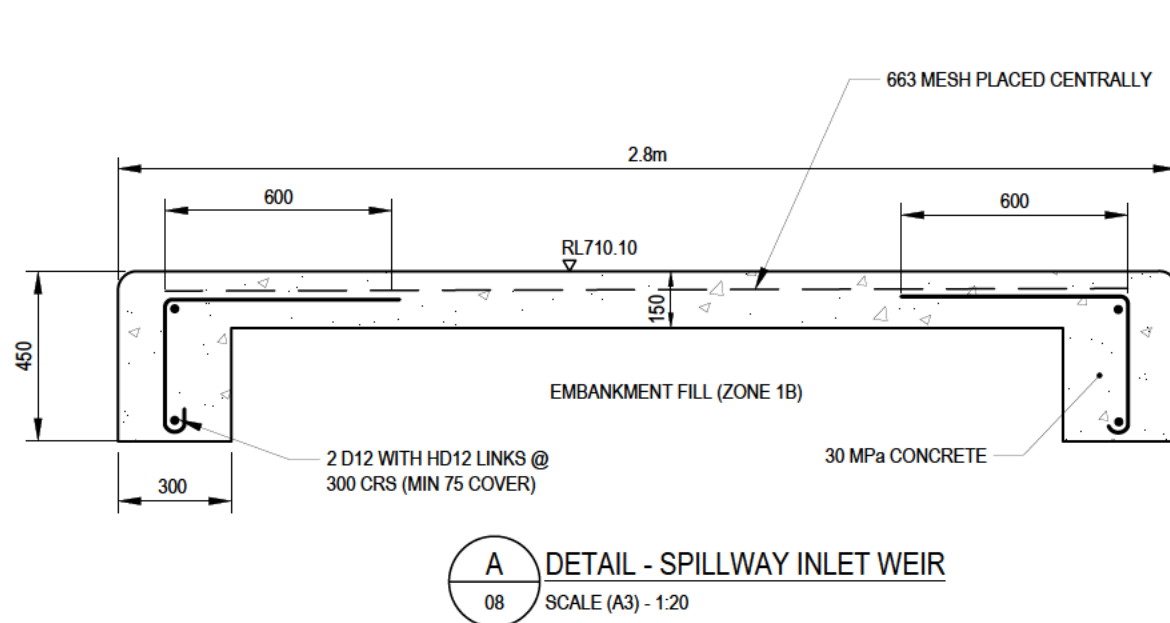
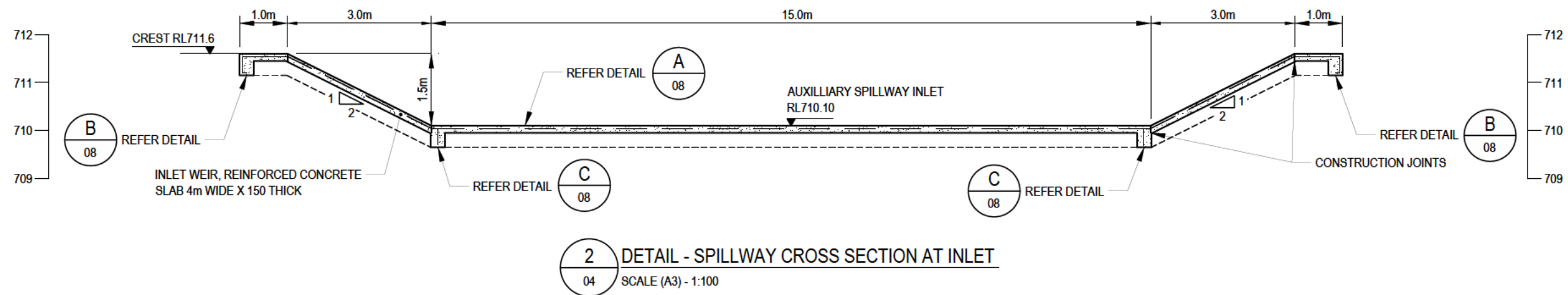


FIGURE 07



NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. PROJECT DATUM: NEW ZEALAND VERTICAL DATUM (NZVD2016)

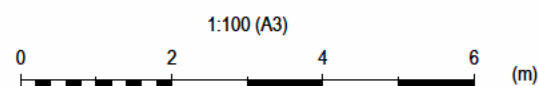


FIGURE 08

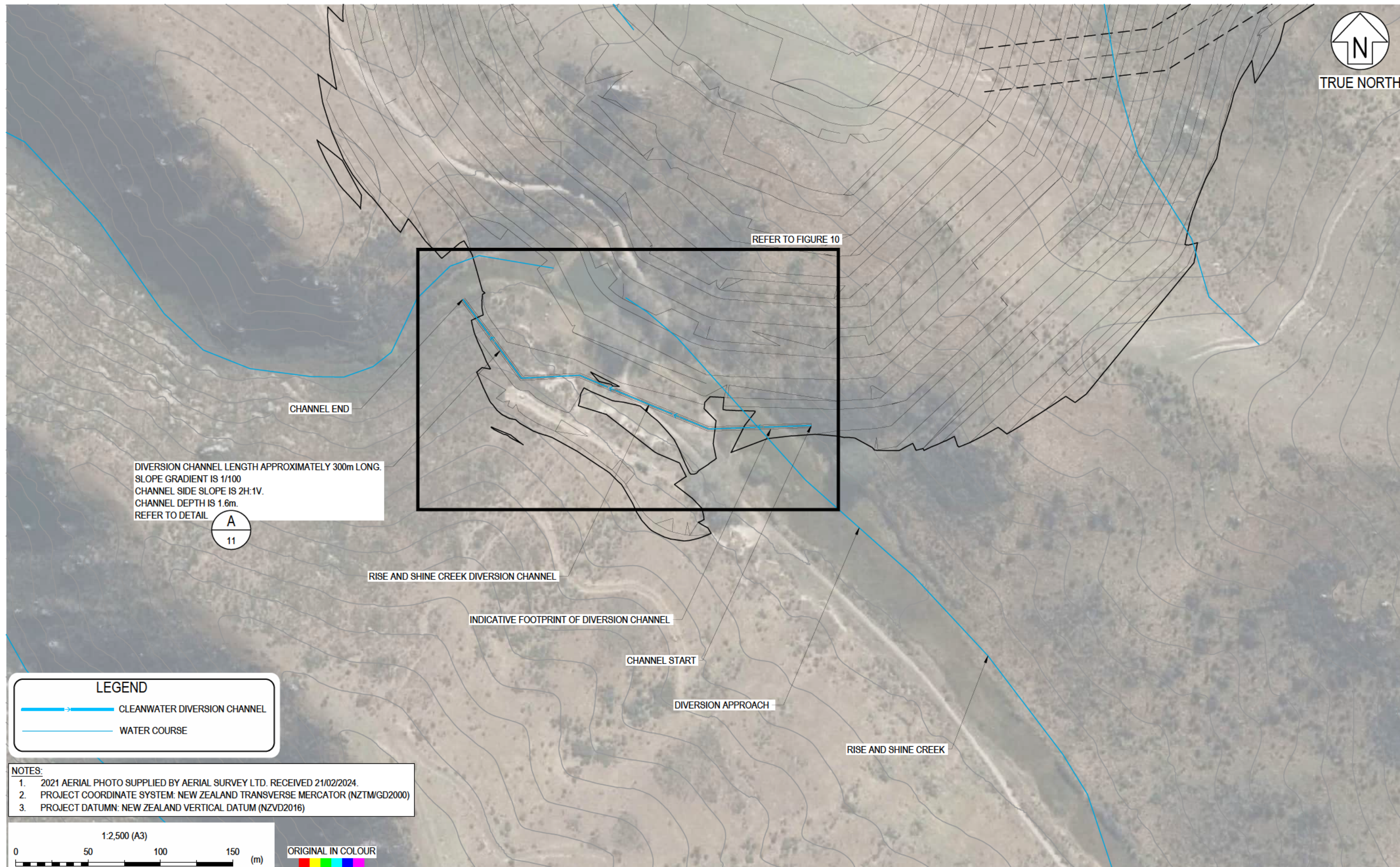


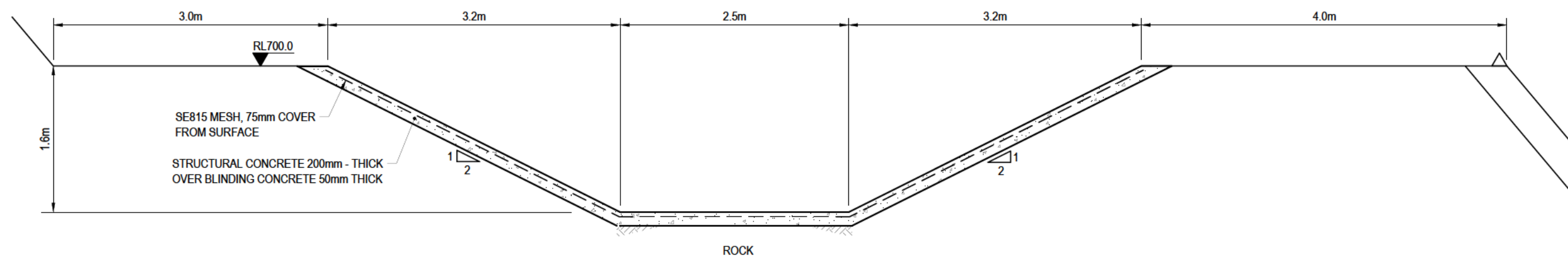
FIGURE 09



PRINTED: 2025-07-09 16:43:52

Z:\Mining - jobs\Bendigo\9702 - Matakani Gold L19105 CAD\FIG20250120 RAS Detention Bund\9702-FIG-10.dwg

FIGURE 10



DETAIL - OPTION 2 - CONCRETE CHANNEL
SCALE (A3) - 1:50

- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 2. PROJECT DATUM: NEW ZEALAND VERTICAL DATUM (NZVD2016)
 3. THE PIT BENCH WILL NEED TO ADJUST ACCORDINGLY TO THE DESIGN.

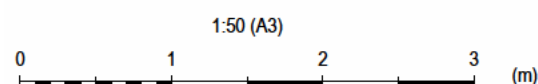
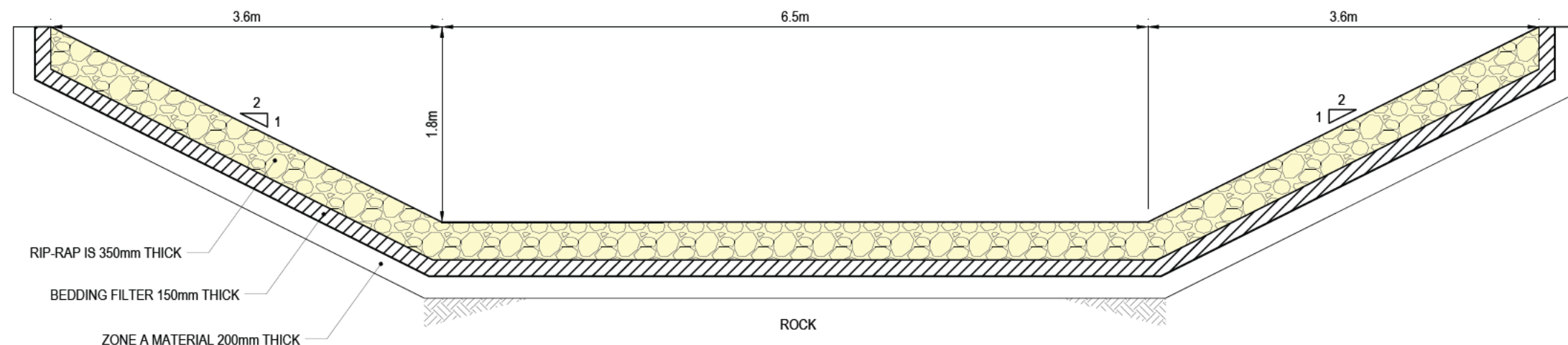


FIGURE 11



B DETAIL - OPTION 2 - TYPICAL RIPRAP CHANNEL
SCALE (A3) - 1:50

ARMOUR ROCK
(SOURCED FROM SLIGHTLY WEATHERED TO FRESH GREYWACKE)
(ALSO REFER TO THE GRADING PLOT)

PERCENTAGE PASSING (%)	APPROX. MINIMUM DIMENSION (mm)
15	100-150
50	150-200
100	200-250

BEDDING (FILTER)

TYPE B DRAINAGE MATERIAL OR OTHERWISE APPROVED

NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- PROJECT DATUM: NEW ZEALAND VERTICAL DATUM (NZVD2016).
- THE PIT BENCH WILL NEED TO ADJUST ACCORDINGLY TO THE DESIGN.

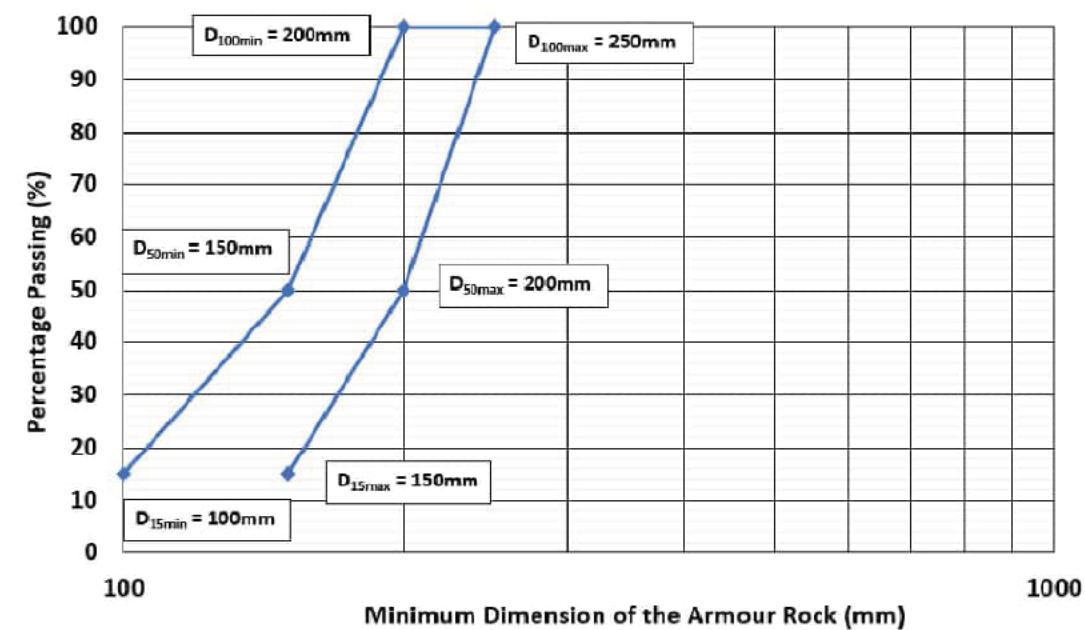


FIGURE 12

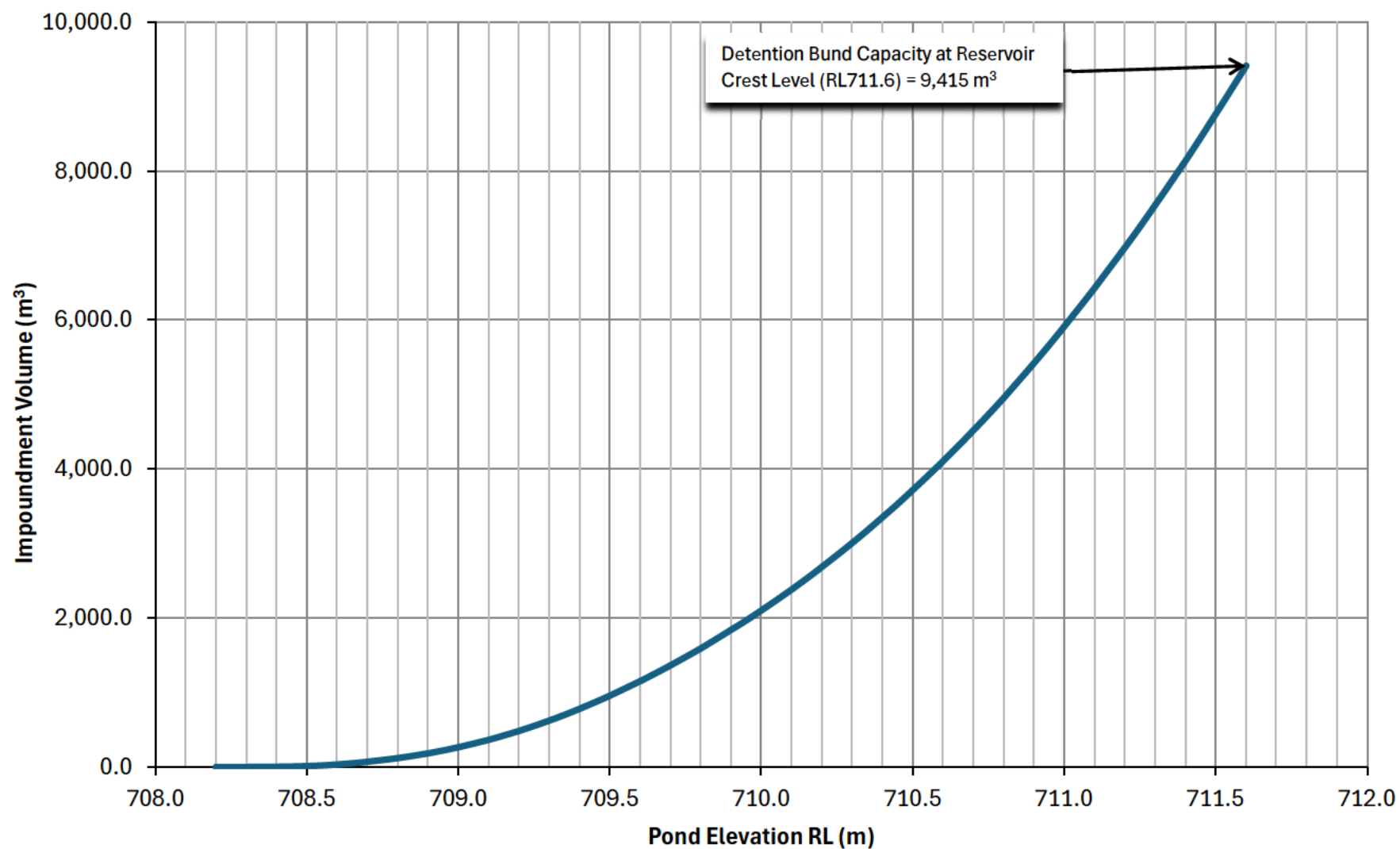


Figure 13



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 Phone: +64 9 485 2546
 Email: info@egl.co.nz
 Unit 7C, 331 Rosedale Road, Albany, Auckland
 PO Box 301054, Albany, Auckland 0752
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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Raise and Shine Detention Bund
 Height Storage Curve

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

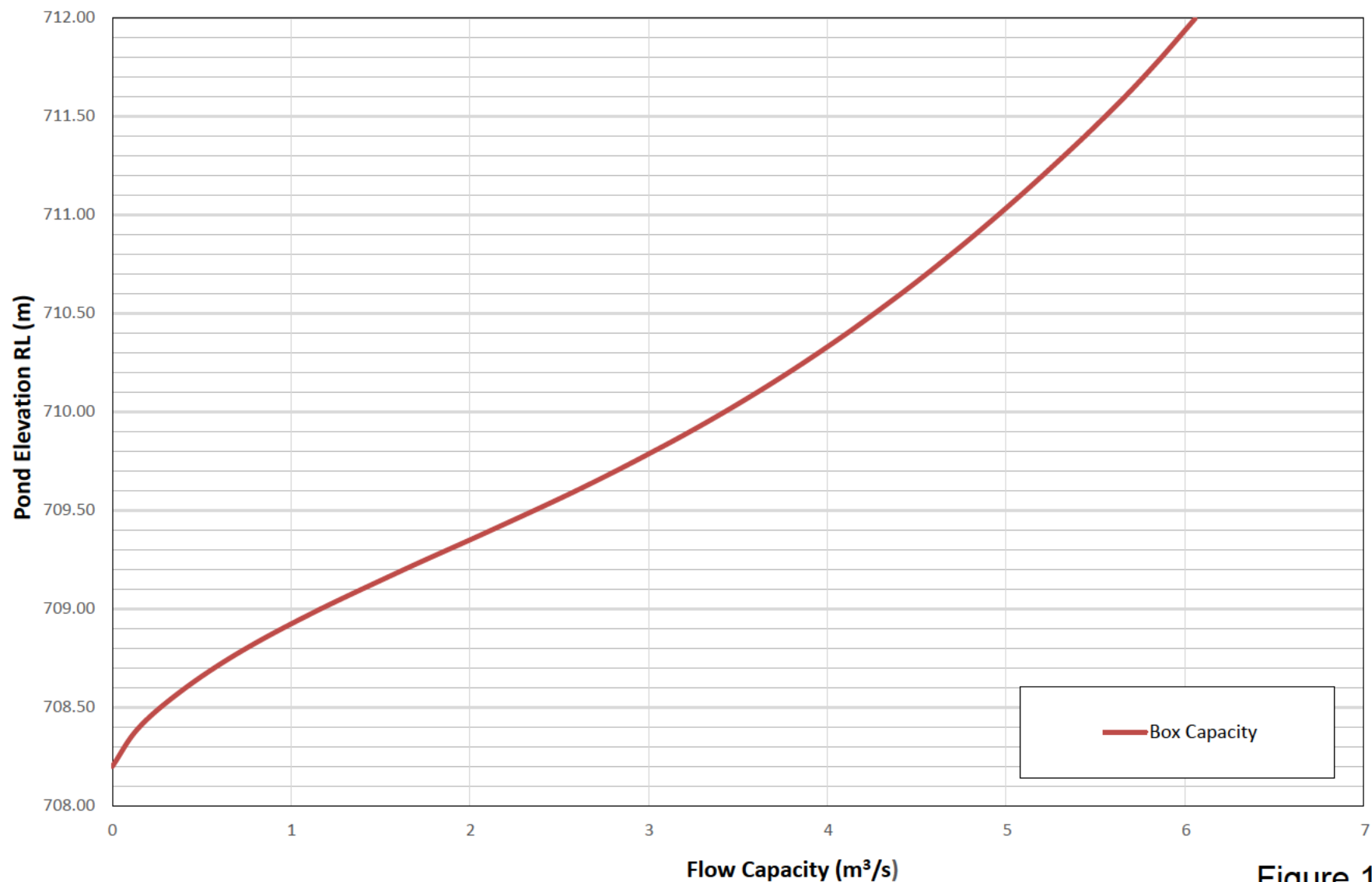


Figure 14



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MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
 Raise and Shine Detention Bund for 1/2AEP
*Stage Discharge Curve of the Hydns Box Culvert (H*W = 1.5m*1.5m)*

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

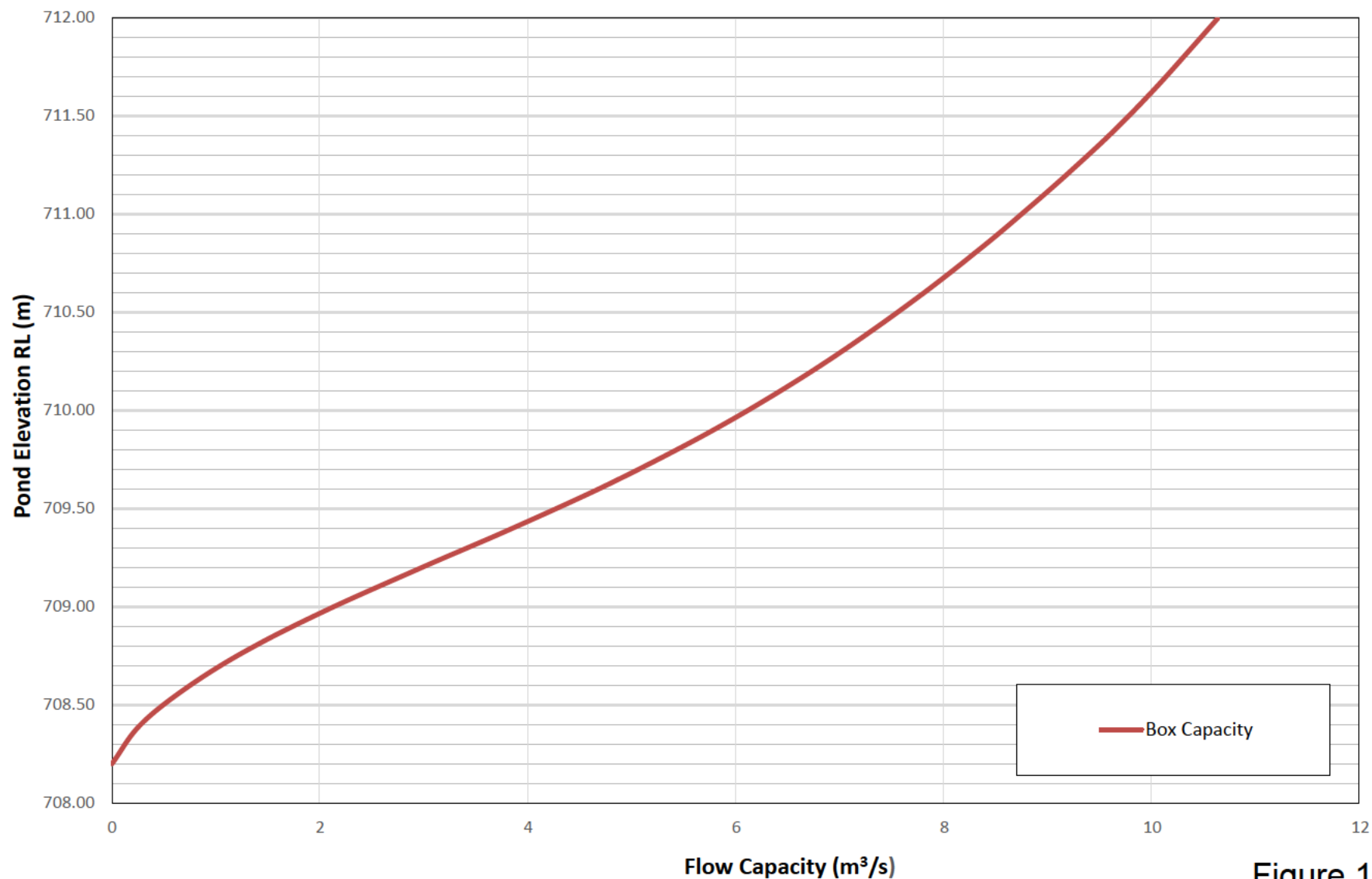


Figure 15



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 🌐 www.egl.co.nz

MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
 Raise and Shine Detention Bund for 1/10 AEP
*Stage Discharge Curve of the Hydns Box Culvert (H*W = 1.5m*2.5m)*

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

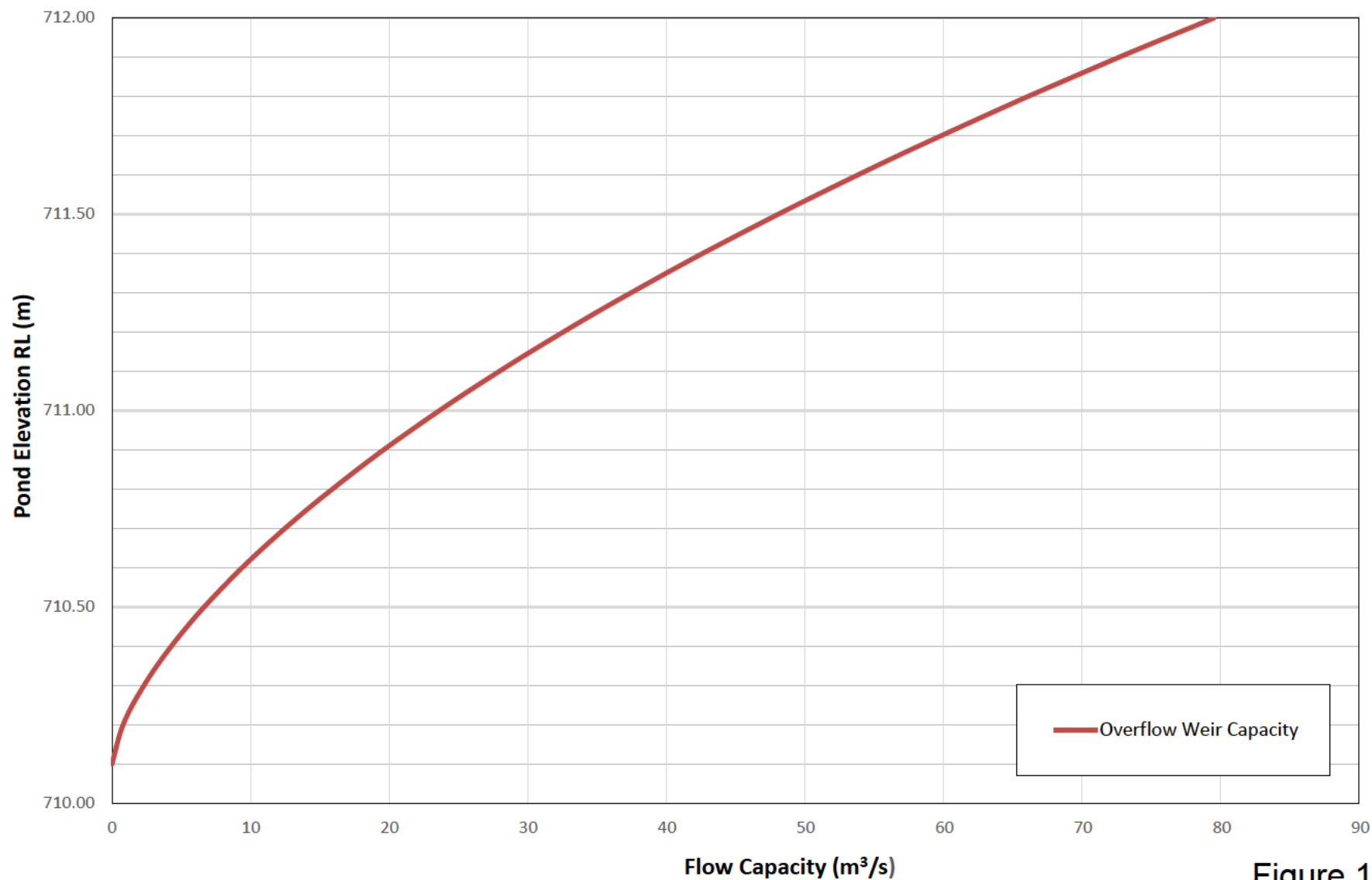


Figure 16



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 +64 9 486 2546
 info@egl.co.nz
 Unit 7C, 331 Rosedale Road, Albany, Auckland
 PO Box 301054, Albany, Auckland 0752
 www.egl.co.nz

MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
 Raise and Shine Detention Bund
Stage Discharge Curve of the Overflow Spillway for 1/1,000 AEP

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

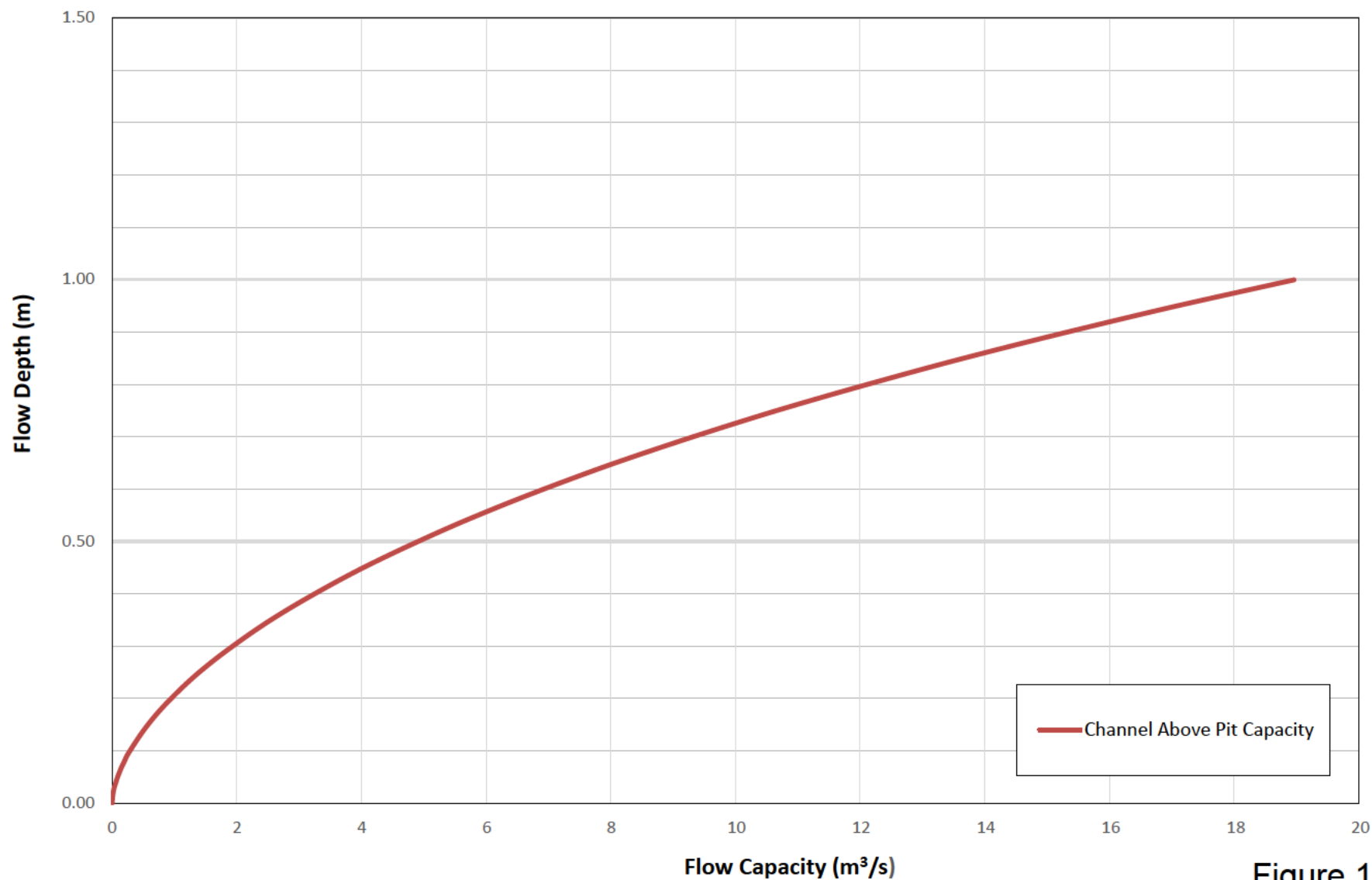


Figure 17



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MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
 Raise and Shine Detention Bund
Stage Discharge Curve of the Channel Above Pit

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

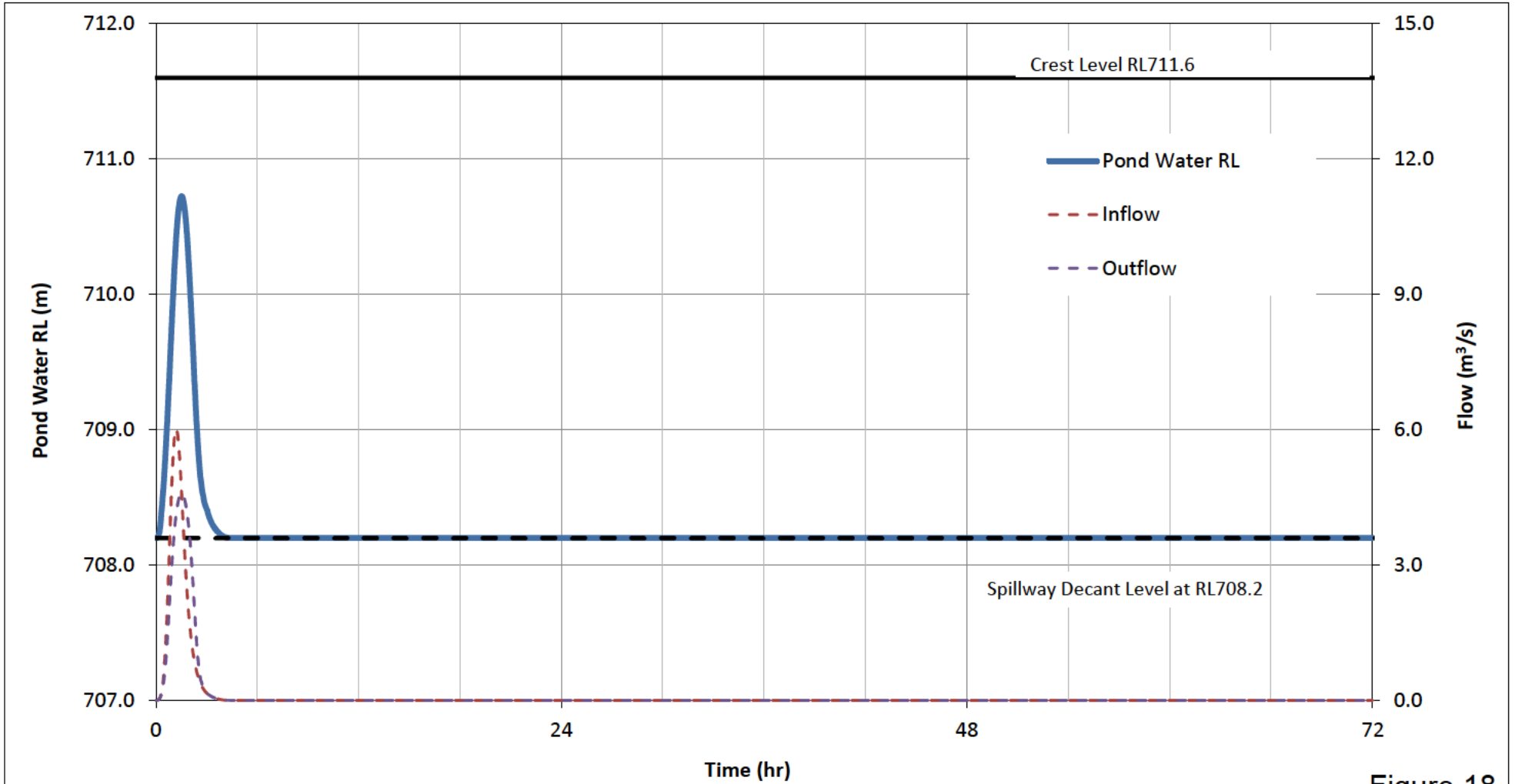


Figure 18



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 J +64 9 486 2546
 E info@egl.co.nz
 U Unit 7C, 331 Rosedale Road, Albany, Auckland
 P O Box 301054, Albany, Auckland 0752
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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 1 - Detention Bund Hydns Box Culvert
 Hydraulic Routing Curves - 1 hr - 1/2 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

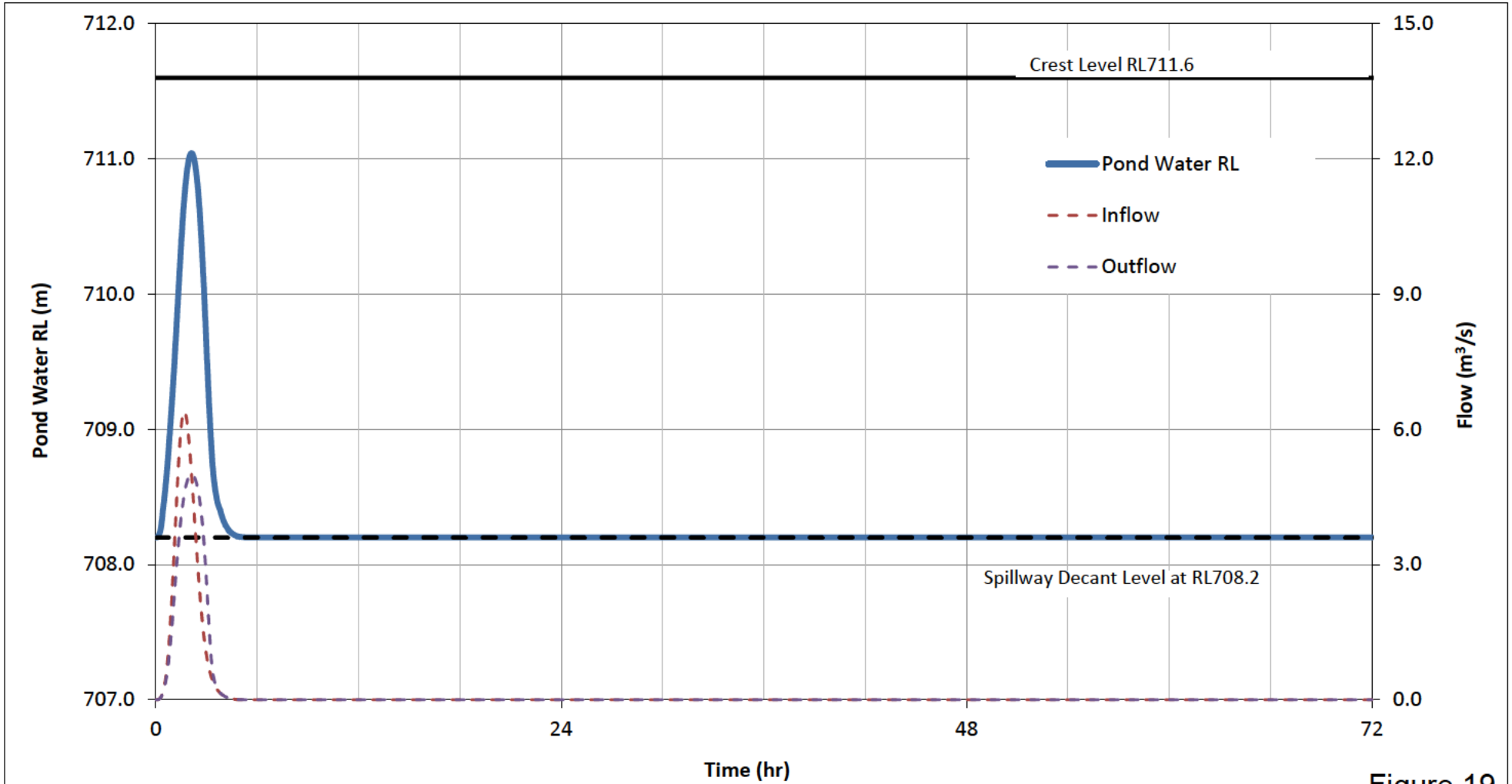


Figure 19

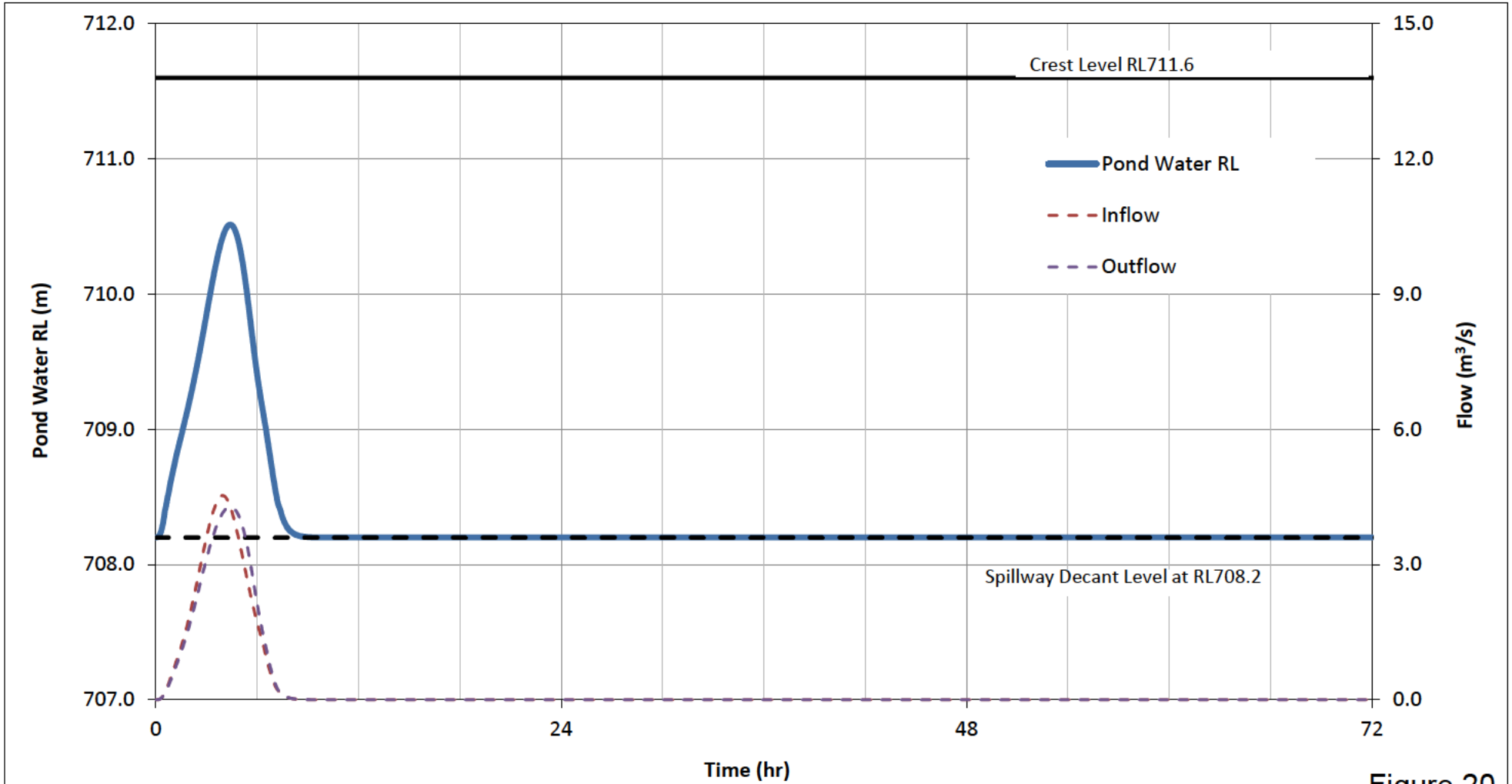


Figure 20

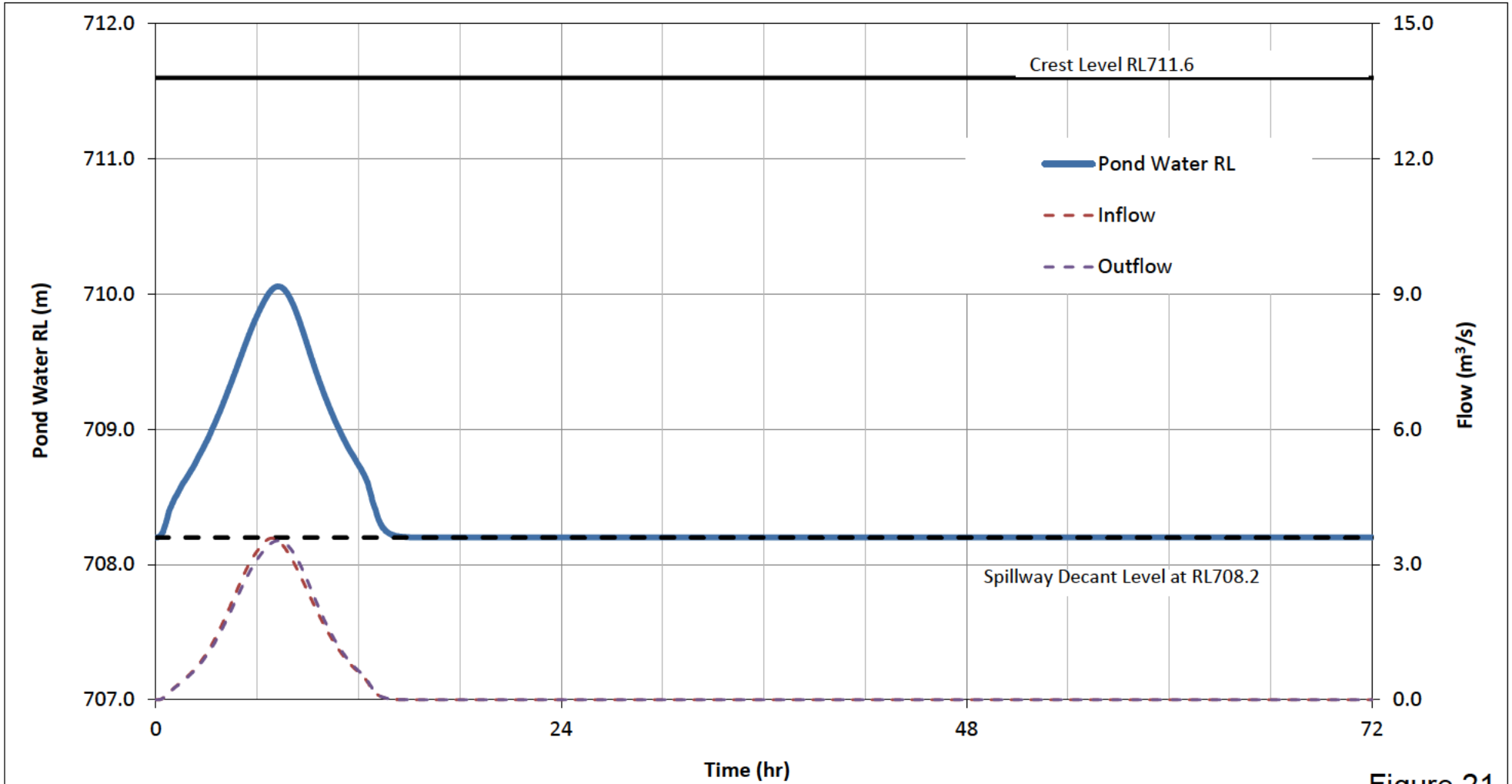


Figure 21

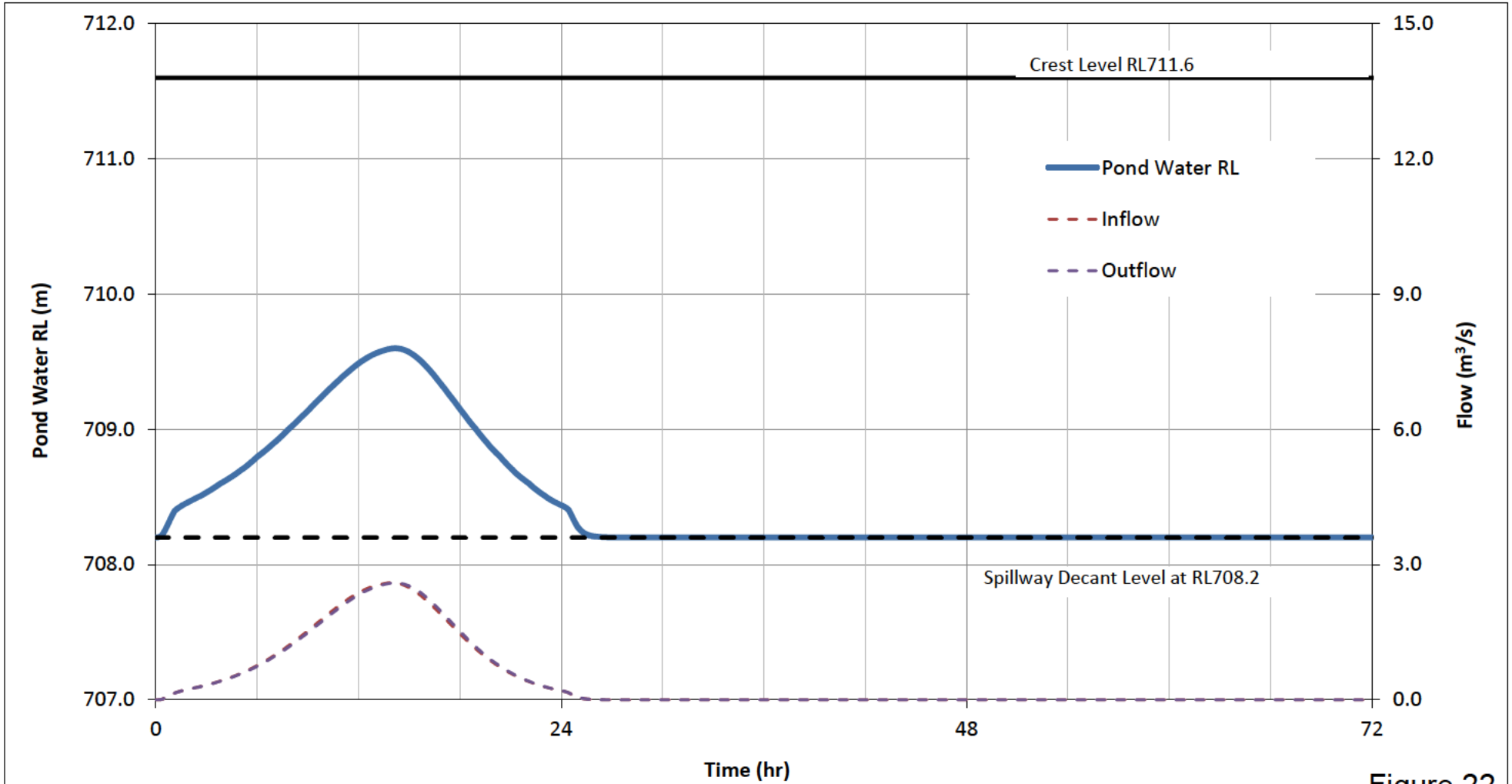


Figure 22

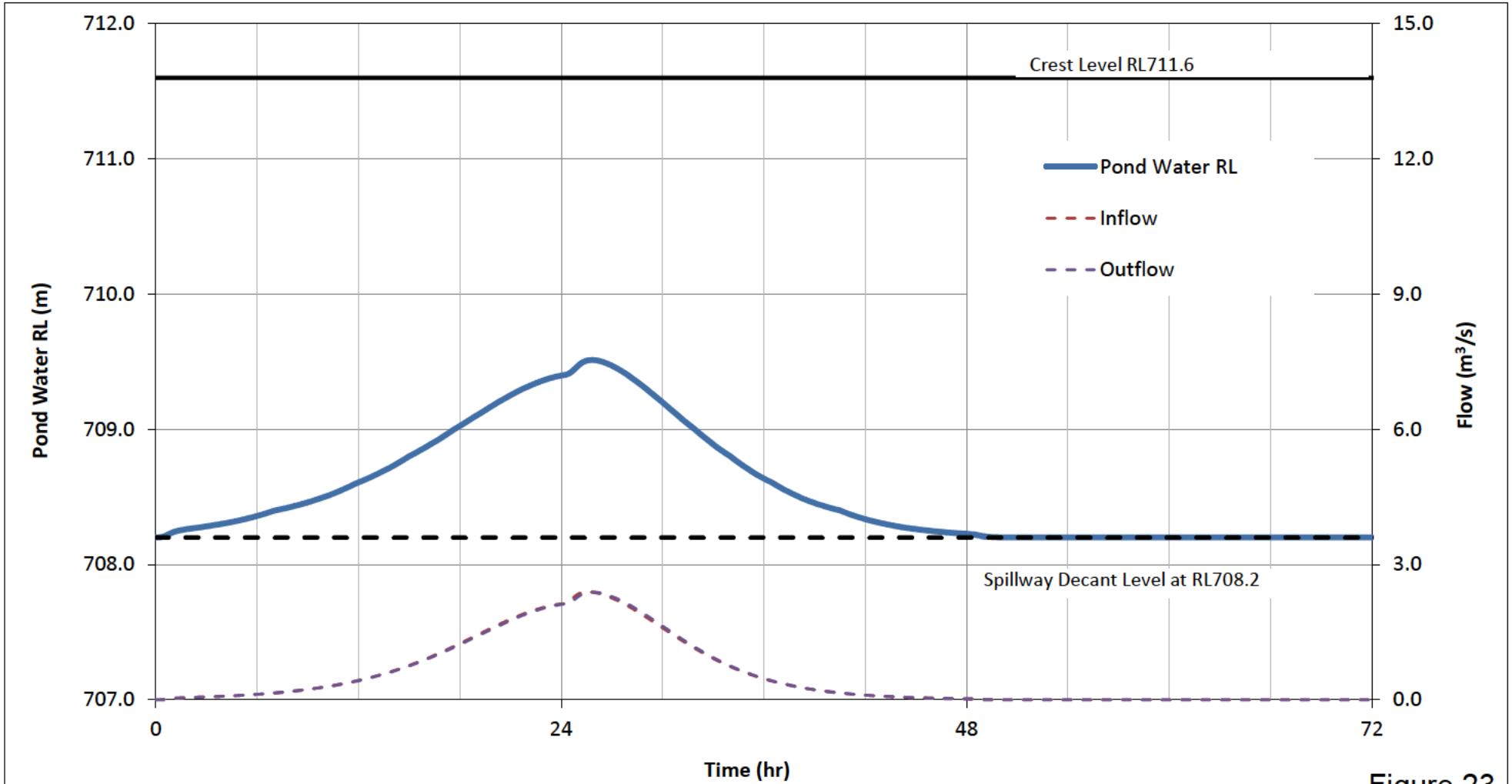


Figure 23



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 J +64 9 486 2546
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 U Unit 7C, 331 Rosedale Road, Albany, Auckland
 P O Box 301054, Albany, Auckland 0752
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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 1 - Detention Bund Hydns Box Culvert
 Hydraulic Routing Curves - 48 hr - 1/2 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

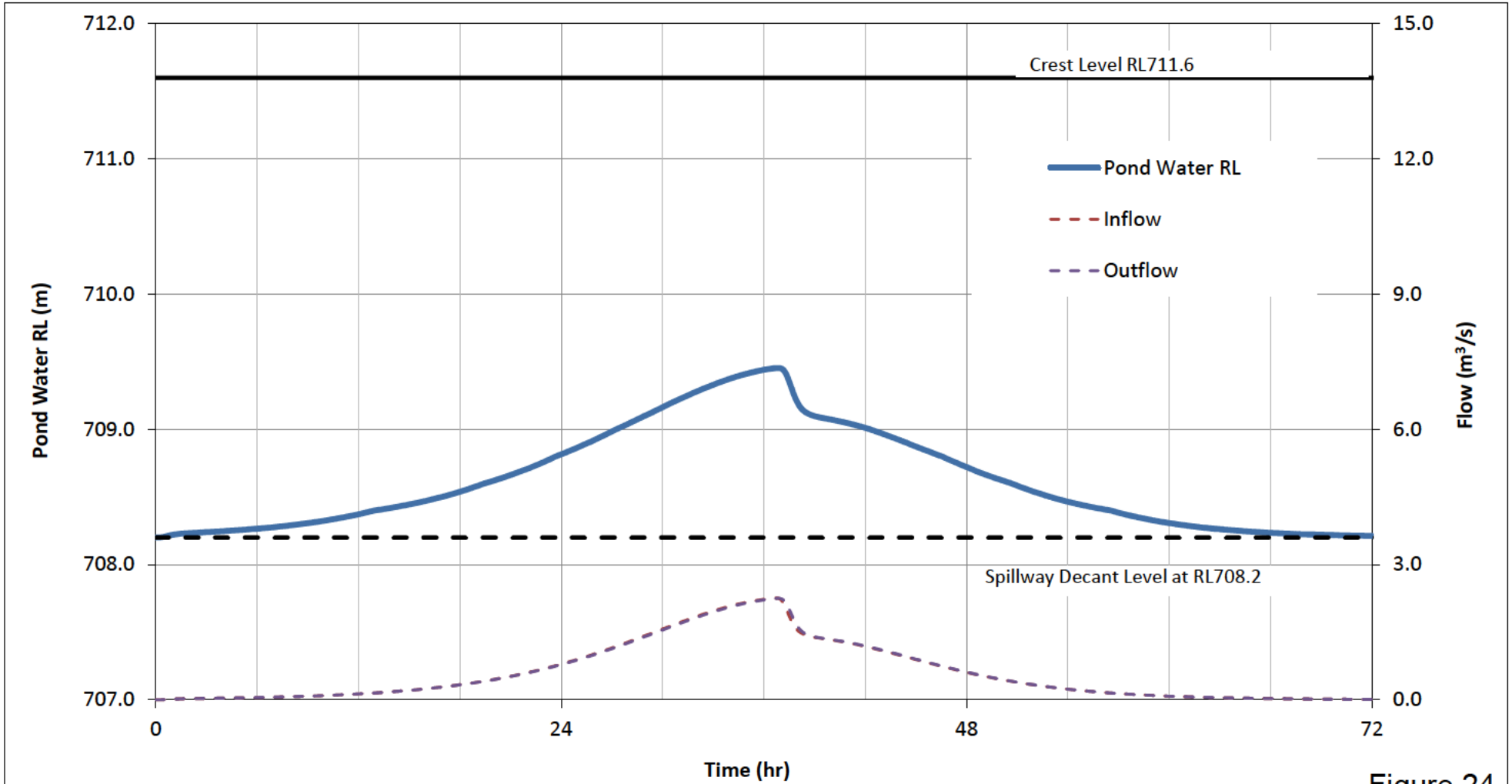


Figure 24



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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 1 - Detention Bund Hydn Box Culvert
 Hydraulic Routing Curves - 72 hr - 1/2 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

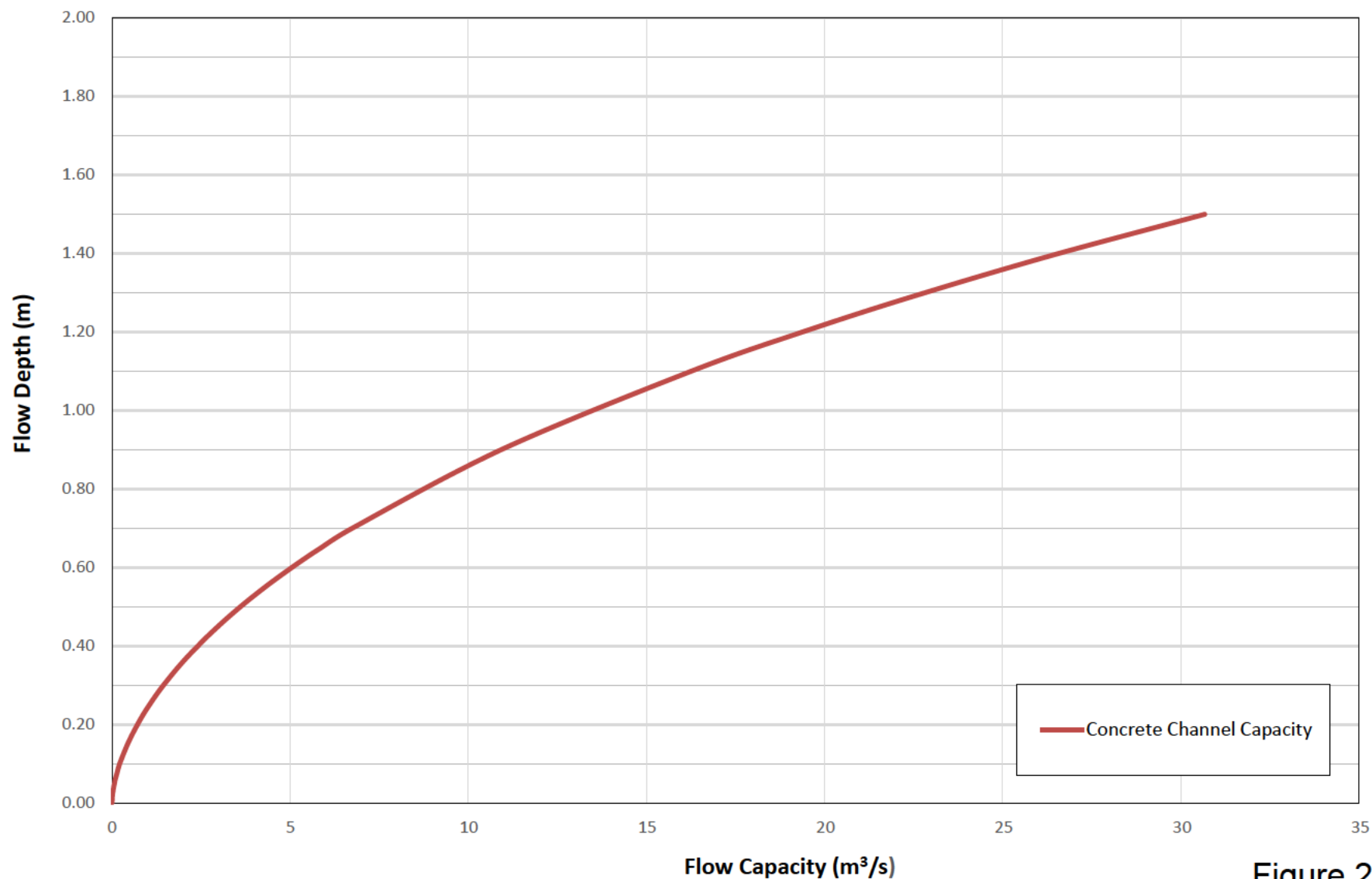


Figure 25



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MATAKANUI GOLD LIMITED
BENDIGO-OPHIR GOLD PROJECT
 Raise and Shine Detention Bund for 1/100 AEP
Stage Discharge Curve of the Concrete Open Channel

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

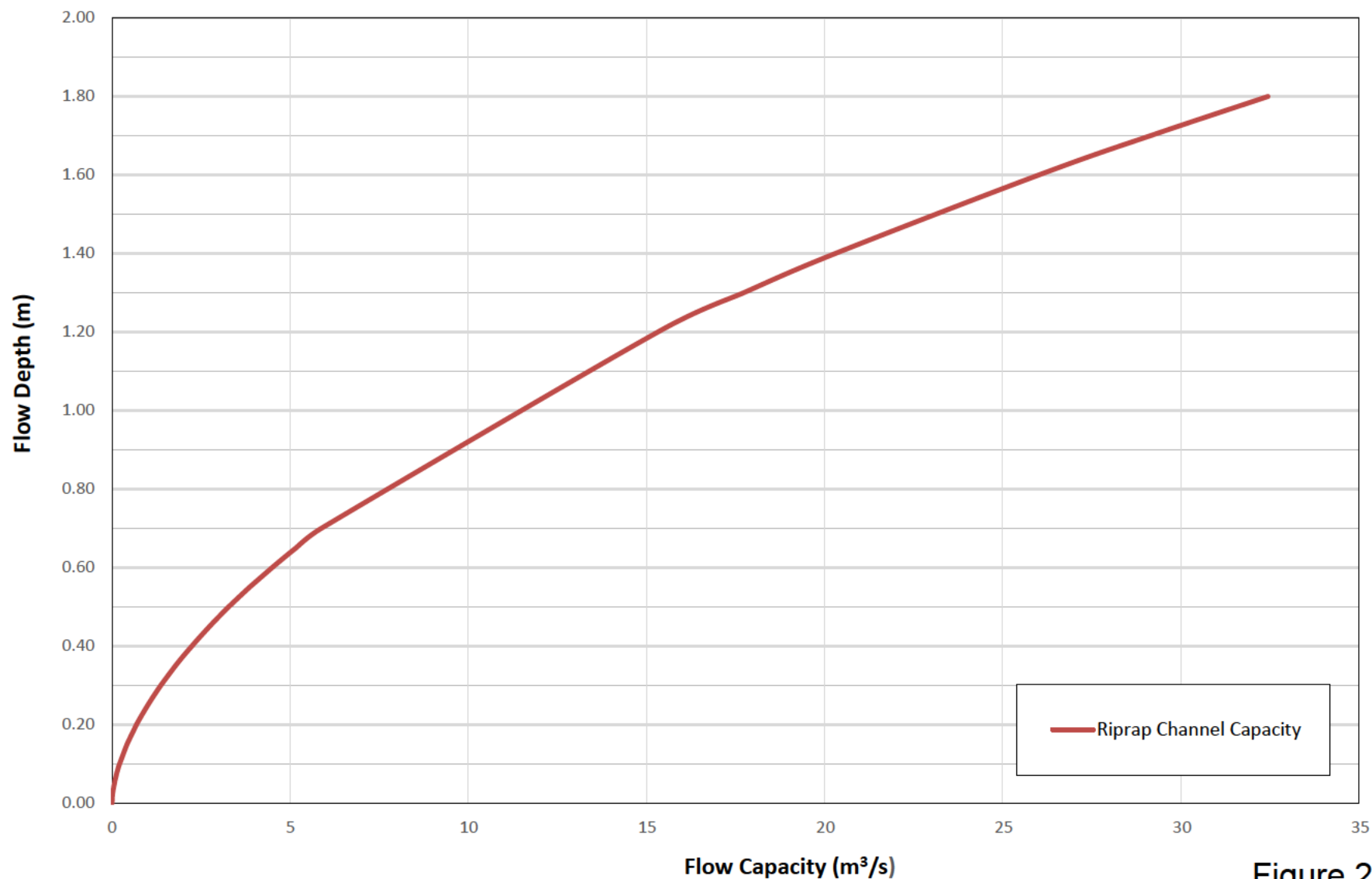


Figure 26

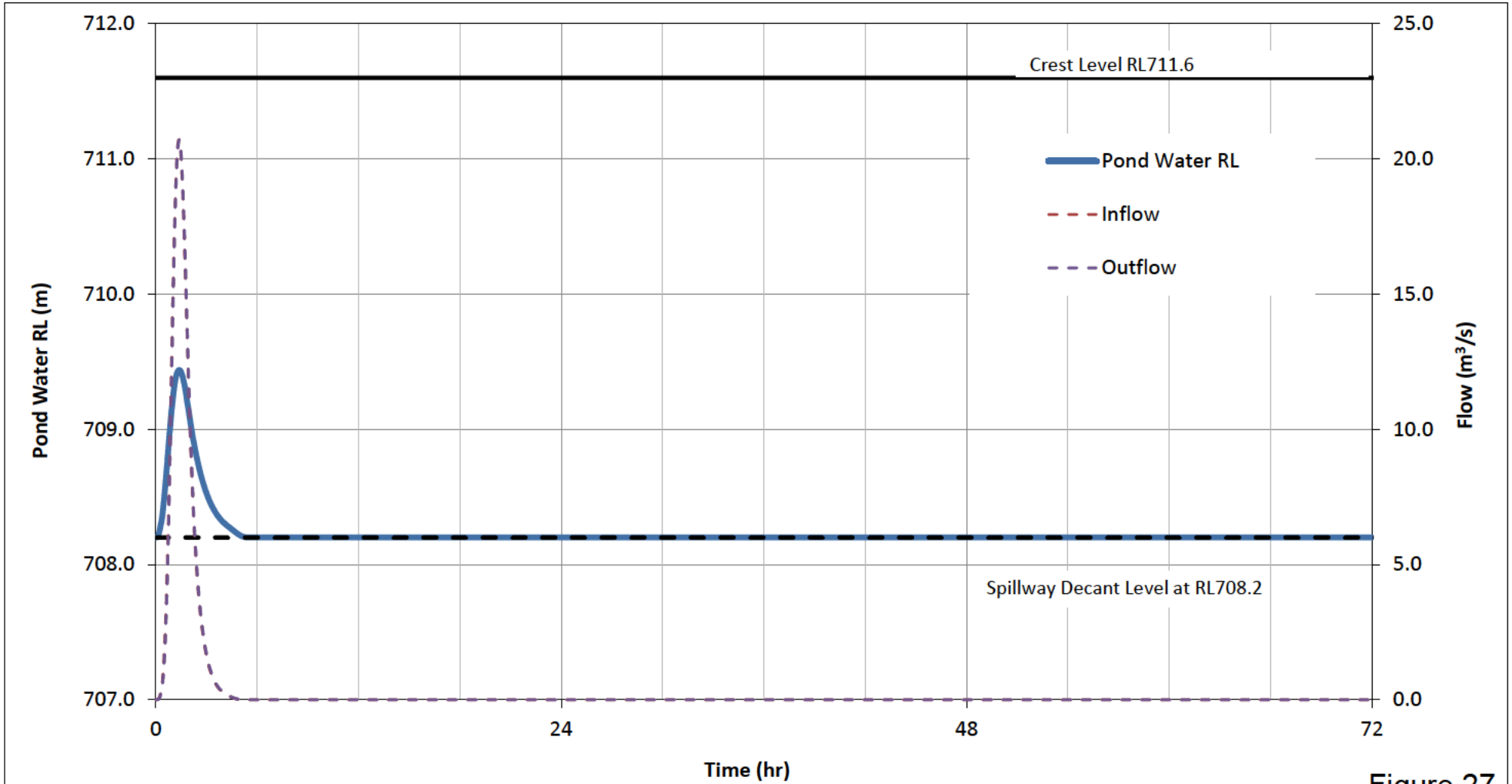


Figure 27



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 Phone: +64 9 486 2546
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 Unit 7C, 331 Rosedale Road, Albany, Auckland
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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 2 - Concrete Open Channel
 Hydraulic Routing Curves - 1 hr - 1/100 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

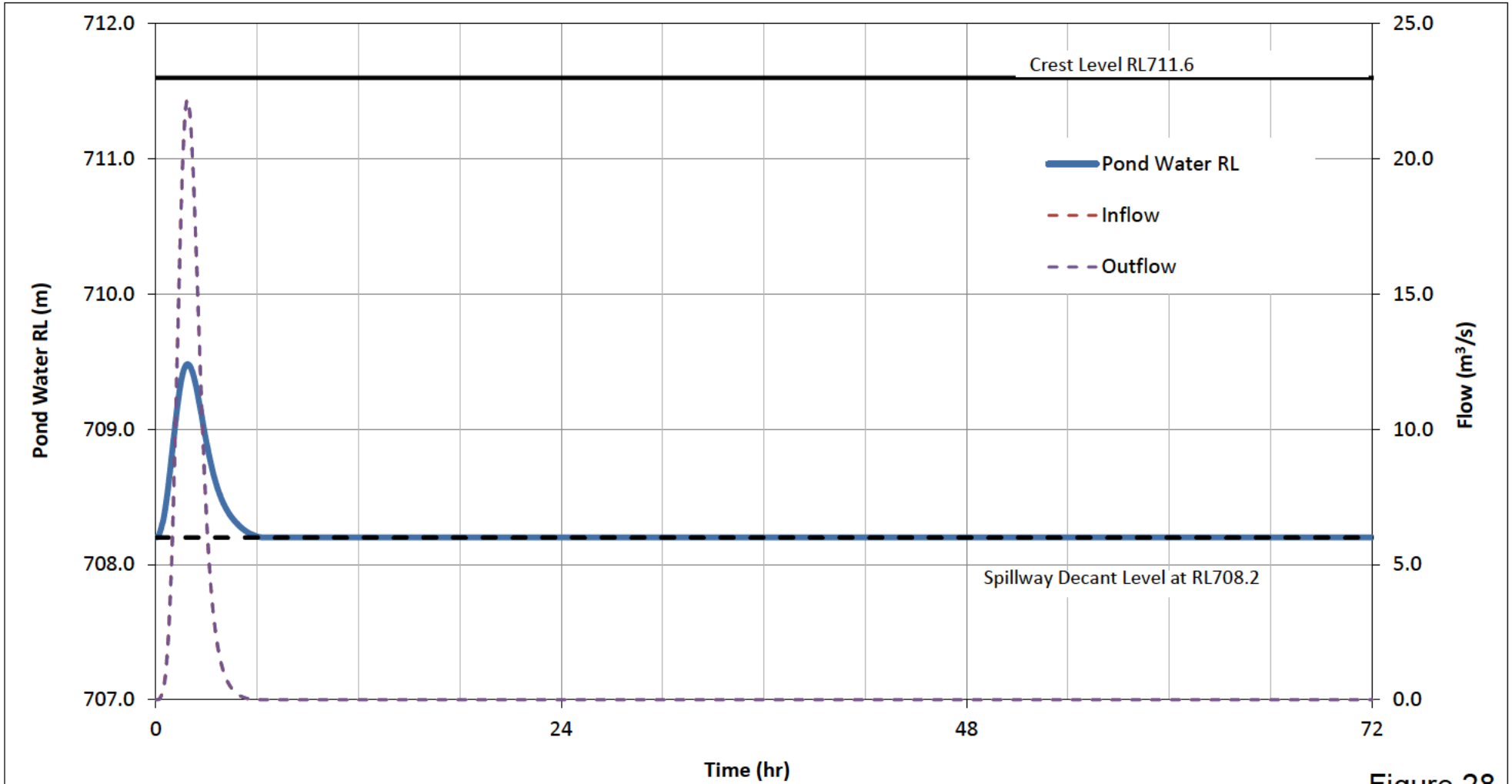


Figure 28



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MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 2 - Concrete Open Channel
 Hydraulic Routing Curves - 2 hr - 1/100 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ

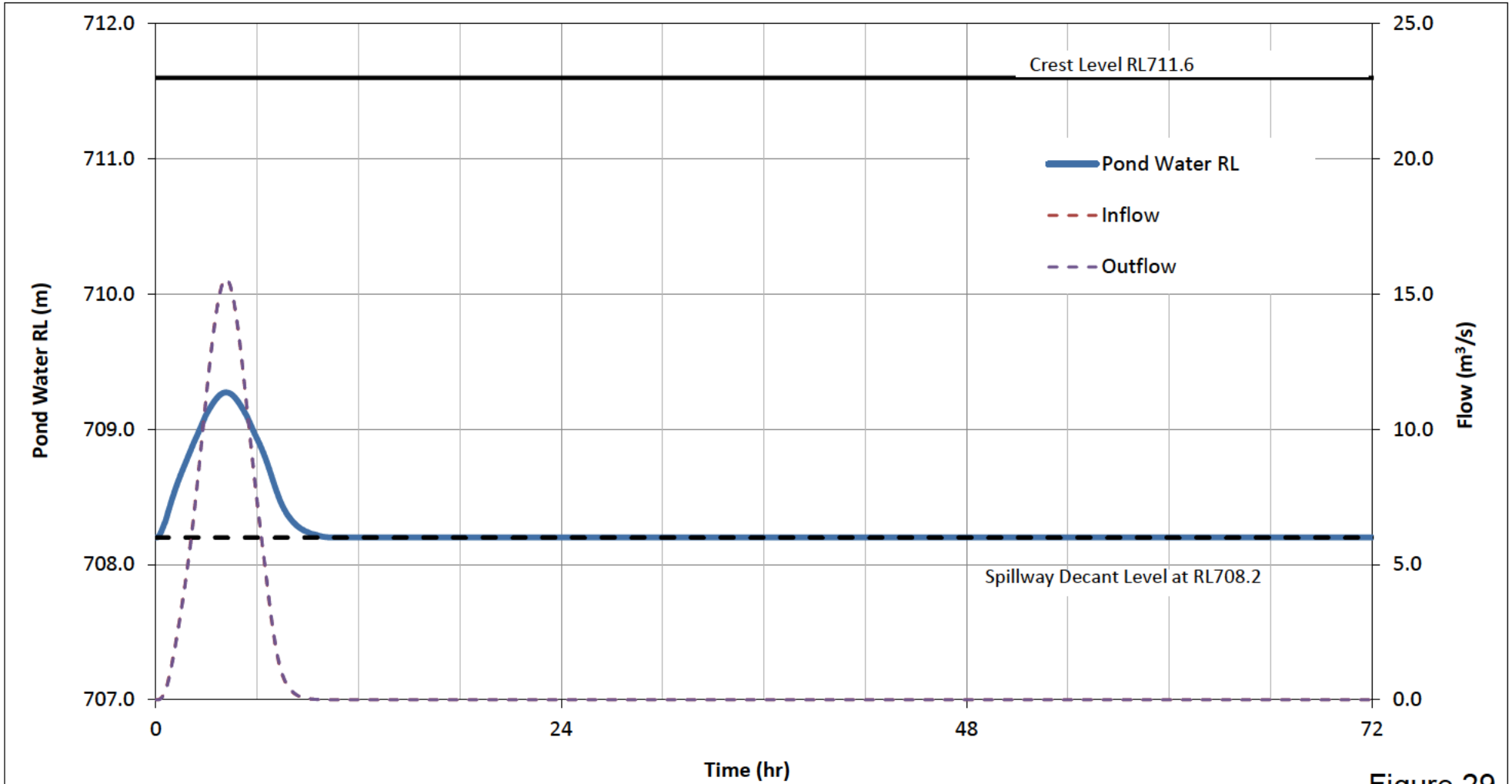


Figure 29

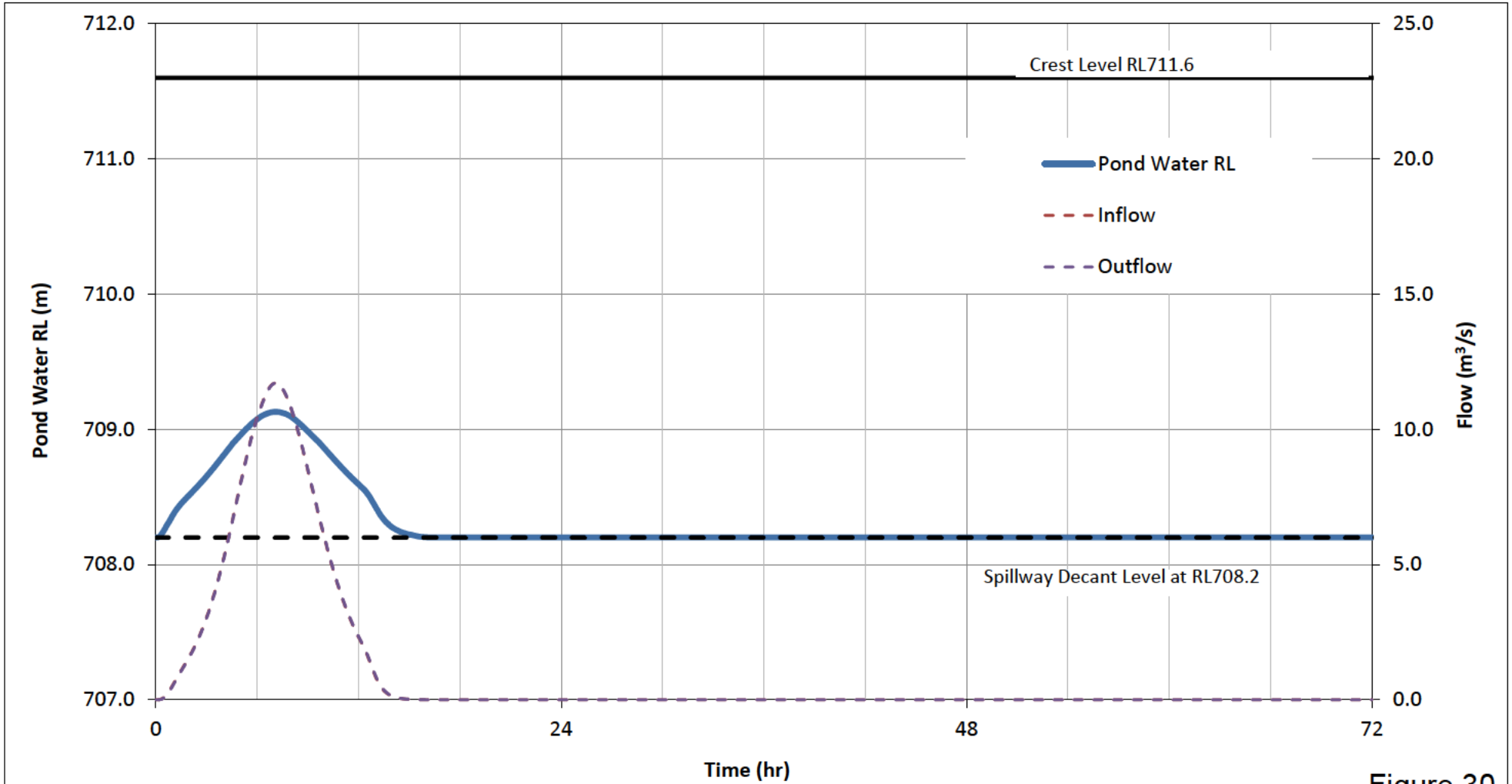


Figure 30

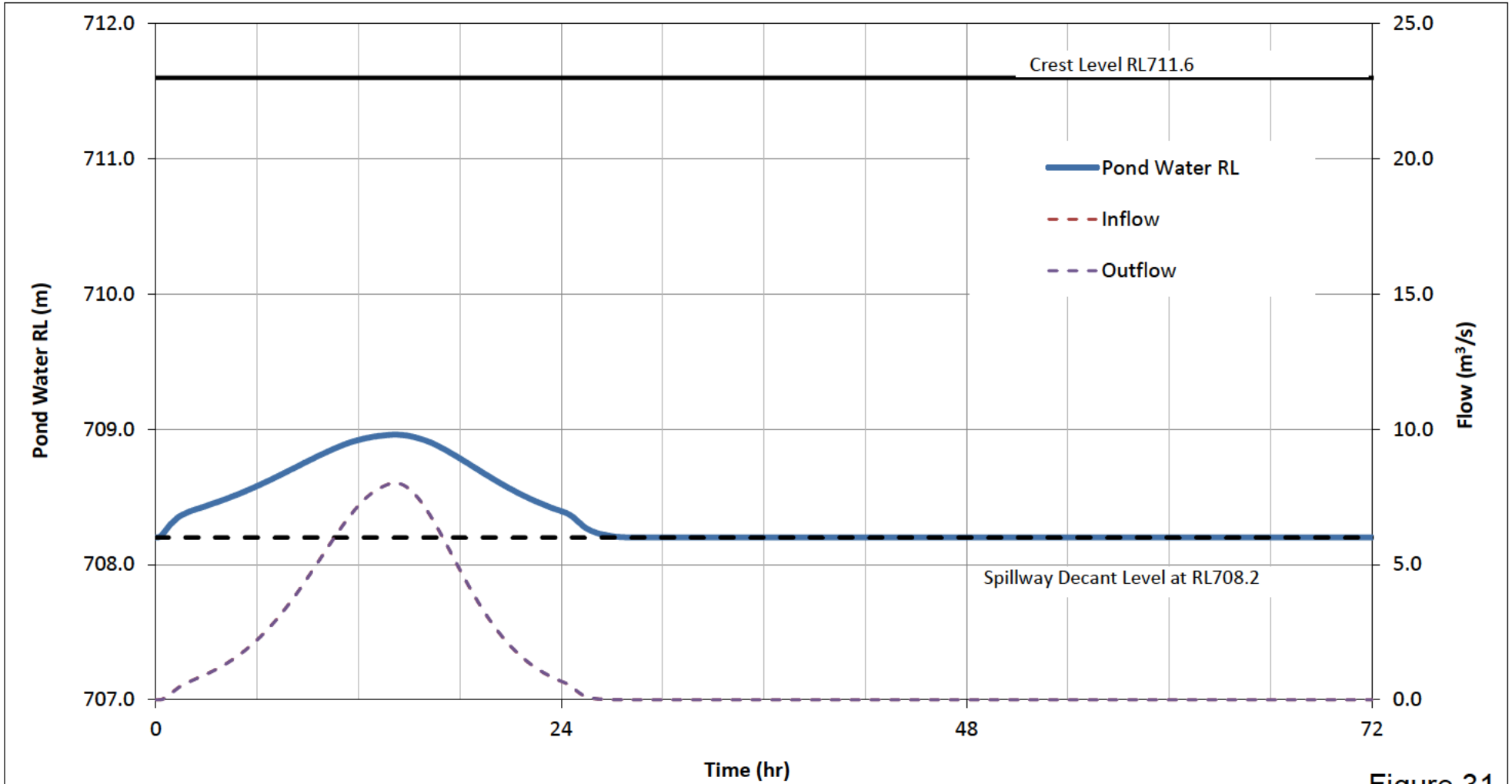


Figure 31

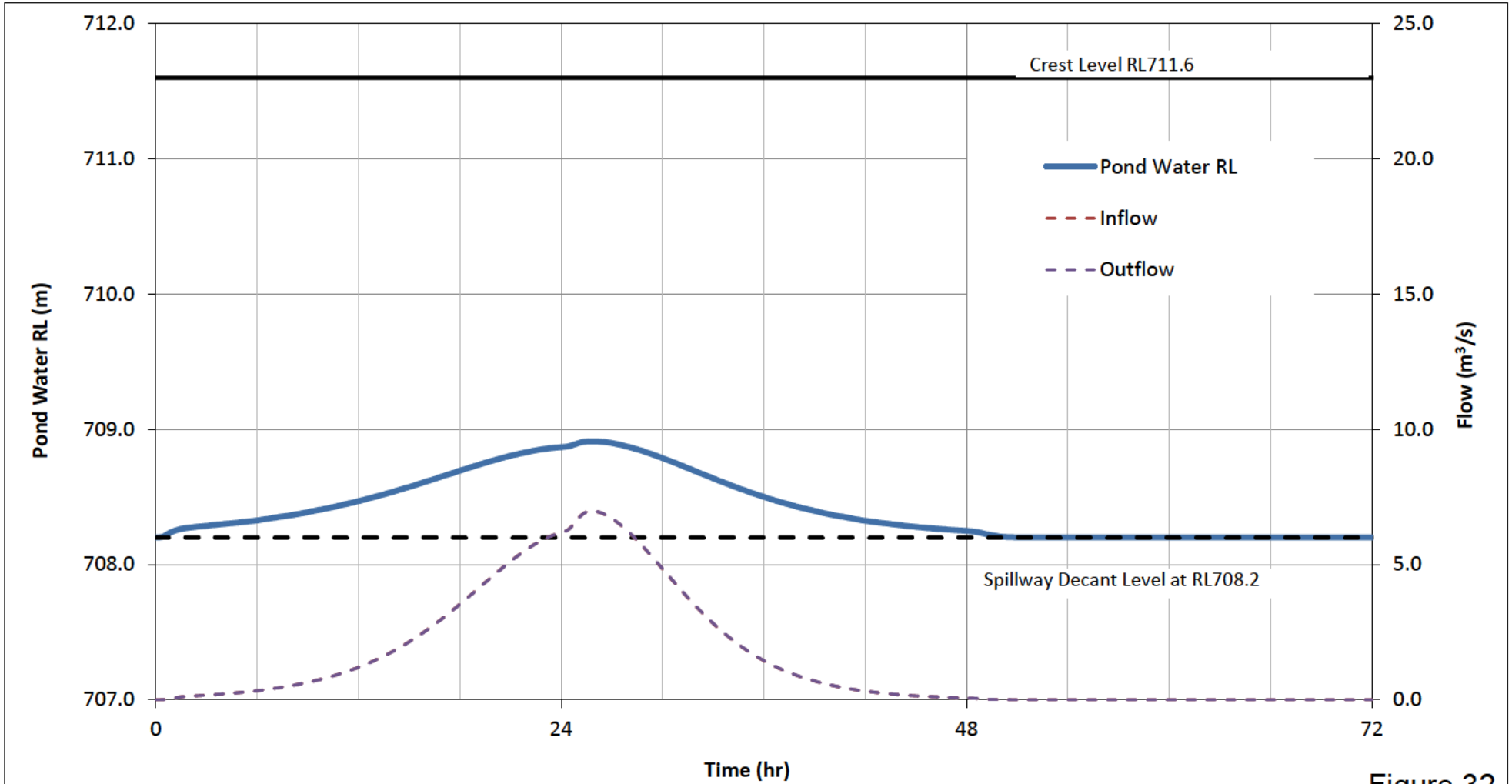


Figure 32

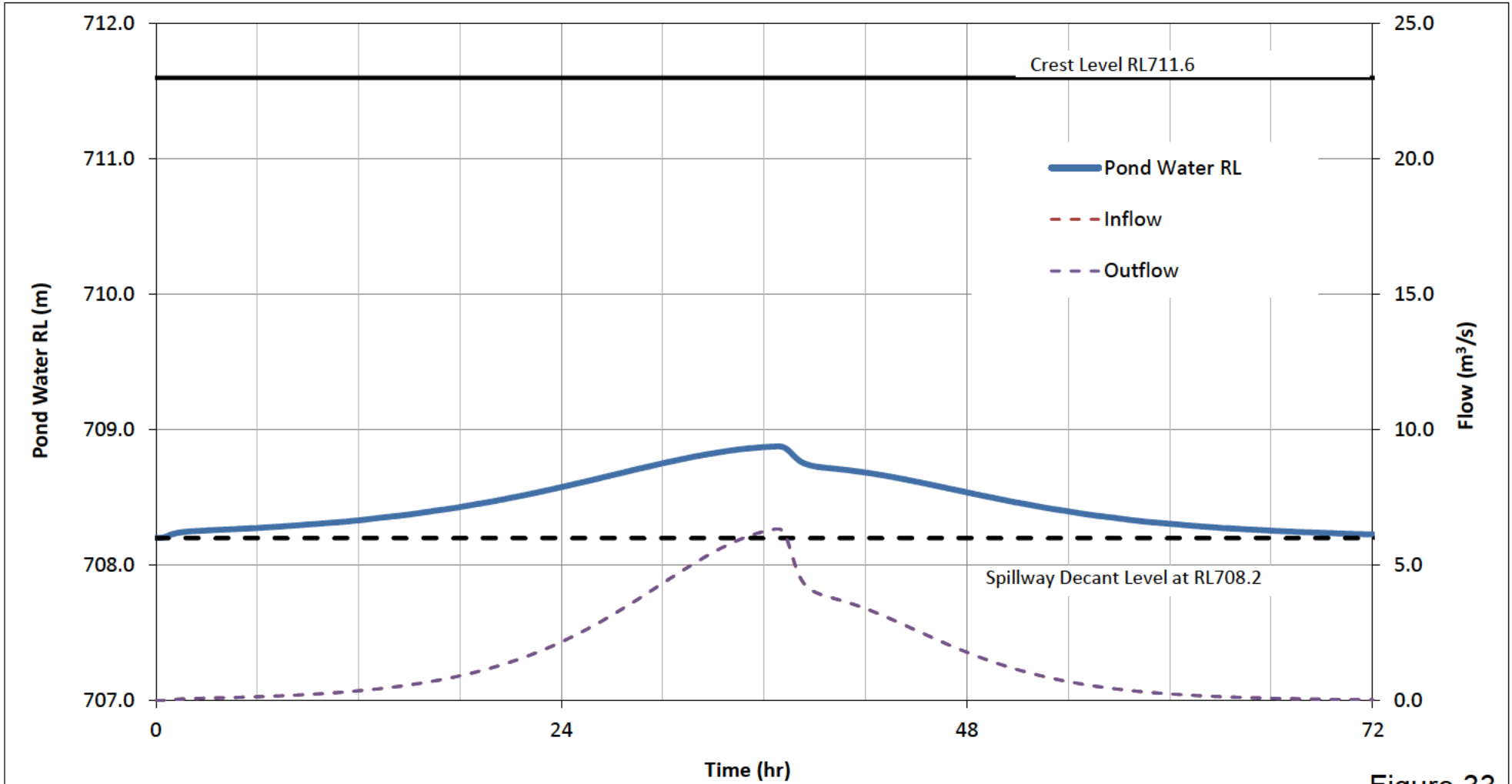


Figure 33



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 W www.egl.co.nz

MATAKANUI GOLD LIMITED
BENDIGO - OPHIR GOLD PROJECT
 Option 2 - Concrete Open Channel
 Hydraulic Routing Curves - 72 hr - 1/100 AEP Rainfall Event

Ref. No: 9702
 Date: Feb 2025
 Drawn: PQ