

Baiada Poultry
1 Out St,
Tamworth
NSW 2340.
Attention: Dan Ware.

03-07-2020.

Ref: Baiada Poultry – Mareeba water retaining pond number # 5.
STRUCTURAL REPORT
(Reference Z 20441CS)

Hello Dan,

As requested, I have done a design on the proposed dam/pond at the above location.

The following are the recommended construction methods.

1. Design Criteria, Codes and references:

- Loads as per AS 1170 (All parts).
- AS1289 – Testing Soils for Engineering Purposes.
- Bowles – Foundation design.

2. COMPACTION EQUIPMENT AND TECHNIQUES

The compaction of the soil is essential to avoid the tendency for excessive settlement under steady and repeated loading. In the construction, following correct compaction techniques are probably as important as choosing the correct materials.

Where laboratory analysis is not available the following guidelines should be adhered to:

- The soil to be compacted must be damp but not too wet and it must be layered along the full length of the embankment in depths appropriate to the equipment used.
- Plant such as sheepfoot rollers (ideal for clayey soils), vibratory and smooth wheeled rollers (ideally for sandy soils) can work with layers up to 200 mm thick and obviously are preferable where in this case, large quantities and widths require compaction. Where soil moisture content is low, uniform additional distribution of water is to be added to the soil to be compacted. It is also more economic than adding water to the construction surface and often assists working of the soil by the excavators. Time will be saved on the embankment by avoiding having to water the surface between layers.

2. COMPACTION EQUIPMENT AND TECHNIQUES (contd).

Always adopt compaction techniques that will reduce the gross depth of any layer by at least 25 percent to achieve the desired compactive effort as described below.

(a) Sheepsfoot rollers can compact layers of soil up to 200 mm deep gross (i.e. about 150 mm after compaction) and satisfactory densities can normally be obtained with 6-12 passes at a roller speed of 3-6 km/h when the soil moisture content is right. It is important to keep these rollers clean as soil collecting between the feet will reduce compacting ability. Sheepsfoot rollers are more effective than other rollers in compacting drier clay (but will require more passes) and will churn and blend the soil which is useful in distributing water throughout the construction surface when borrow pit irrigation is not possible.

Vibrating rollers are more suited to the compaction of sandy soils and where resulting very high densities are required. Rammers and plates have much the same application and are used where space is a limitation and in specialised work such as trenches, behind concrete and around pipe work. Smooth wheeled rollers are more efficient at reducing air spaces and continue the compaction of lower layers of the embankment through new layers to a greater extent than comparable sheepsfoot rollers. On similar layer depths, and at the same speed, a smooth wheeled roller would probably require slightly fewer passes to obtain similar soil densities when compared with sheepsfoot rollers. However, the latter often proves more appropriate in use for dam construction as their lighter weight and versatility allow them to be pulled by farm machinery on a variety of surfaces. On clay soils, smooth-wheeled rollers are preferable.

3. SPILL WAY (Downstream side)

Natural spillways are generally best for all earth dams but often some degree of cut is required to obtain the necessary design slopes. In all cases the movement of machinery over the spillway area should be minimised to avoid over compacting the existing soil, establishing water track ways (which could lead to erosion later) and destroying any existing grass cover. Where a cut is required it should be kept to a minimum and, unless unavoidable, should not involve complete removal of the topsoil. If the latter does occur, over cut will be necessary, the additional depth being required because good quality topsoil and grass cover will have to be placed once the desired profile has been attained.

This is shown on the attached sketches.

4. CONSTRUCTING THE EMBANKMENTS/WALLS.

(a) Construction techniques.

The core/cut-off trench is the most important part of any embankment, great care is necessary in the excavation, fill and use of material. Width and depth should have been determined at the design stage. Width (1.50 m minimum) will often depend on the equipment used in the excavation and on the size of the pond/dam. The minimum depth necessary will depend on site conditions but in all excavations the cut-off trench must be taken down to good quality impermeable material such as clay or to a minimum of three-quarters of the dam's crest height. (RL 402.00). If an impermeable layer of sufficient thickness has not been reached and the trench depth is to the required $0.75H$, the cut-off trench excavation can stop only if the material encountered is not of a coarse or gravelly nature. ($H = 6.70\text{m}$).

If permeable material is found (ie Sand) it is vital that the cut-off is taken through it to a depth sufficient to find more impermeable material. (ie Clay).

Before backfilling, the excavation should be checked to ensure that the above conditions above have been complied with. This is to ensure the optimum compaction of the base material has been achieved. This is essential to later avoid seepage through the embankment can become excessive if the correct depth into the correct material is not achieved.

An assessment of the site conditions, prior to the construction stage would allow such special provisions to be included. Once the excavation has been checked (ie density and moisture content) and found satisfactory, backfilling and subsequent compaction can commence.

It is recommended that more test pits be done, and density checks carried out to check the base parent material.

The in-situ clay soil should be used and compacted in layers no more than 200 mm thick throughout the length of the pond walls. Although compaction can be achieved by staggered wheels, where thicker layers are permissible, this is to obtain the highest design/compaction levels required. (Described below).

If broader cores are to be used, sheepsfoot rollers or vibrating compacters may be more economical. Water trucks or irrigation equipment should be used in assisting compaction with the optimum moisture content.

This usually is of the order of 9-11 %.

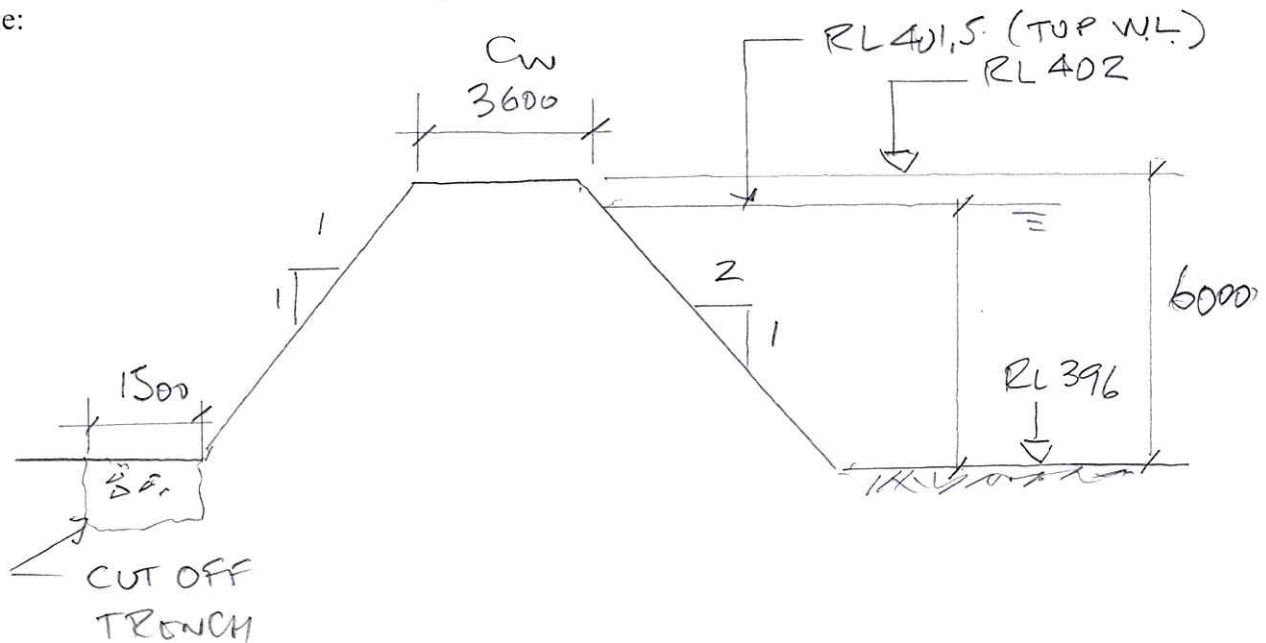
(b) Embankment.

Once the cut-off has been brought up to ground level, the embankment/walls can be constructed. If necessary, and usually because of time limitations, it may prove prudent to construct the cut-off some time before the rest of the dam (i.e. during the previous dry season ensuring the works are protected from erosion).

The embankment can proceed with careful and continuous monitoring of the soil types being used to check that the right soil is placed in the appropriate section. The core is continued up through the centre of the wall as the other sections are placed. Because of the width involved, hand compaction will not be feasible and other methods as described will have to be used.

As mentioned, no layer should exceed the recommended depth and, if the tractor/scrapper operative proves incapable of maintaining such a standard, graders may be needed. The removal of the soil from the borrow areas can be assisted by ripping or irrigating the area involved (avoid over-watering which could lead to traction problems). The latter is especially desirable for core and upstream sections where the soil, if used wet, may be more readily compacted. At stages determined by the designer/supervisor, the embankment as constructed should be surveyed to check that the slopes conform to design limits.

These are 2:1 on the water retaining side and 1:1 on the downstream side.
ie:



TYPICAL EXTERNAL WALL

C_w = CREST WIDTH (CALCS ATTACHED)

N.T.S.

(b) Embankment (contd).

If the slopes are too flat a berm could be constructed to allow an overall slope closer to the design. If the slopes are too steep, rectification will be more difficult as, before earth can be placed to flatten the slopes, keys are required in the existing face to reduce the formation of slip surfaces between the older and newer material. In the latter case, although the slope may be corrected in this way the stability of the dam is never as good as it should be, since it is difficult to obtain the same compaction levels and cohesion as in the original structure. It is better therefore to avoid such problems by careful and frequent monitoring of the structure as it takes shape, especially at the beginning of the work when operators and other staff are more prone to make mistakes. Guide boards and pegs can assist at this time with boards cut to the correct angle to be laid on the slope with a spirit level or plumb bob to show horizontal or vertical.

When the embankment is at the correct height it must be surveyed to check that the crest has been built slightly convex with more soil laid in the centre where the most settlement will occur. The crest should have a slight slope (crossfall) towards the upstream side of the embankment to permit the safe drainage of rainwater to the dam/pond rather than the downstream slope.

Over the next few months, and finally after one year, the embankment should be rechecked to assess settlement and to allow the placement of soil at any sections that settle to below horizontal. The spillway should be checked to prove the design slopes were adhered to. If large flood flows occur, or are expected, stone pitching or concreting of the end of the embankment and one or both sides of the spillway channel may be necessary to reduce the risk of erosion.

If possible, it is important that good grass cover, (such as bituminous spray-grass) is established on both the embankment and the spillway before the likelihood of heavy rains. This could mean constructing most of the spillway before work on the embankment itself starts, ideally at the end of the previous rainy season when water for establishing grass is available.

On the inside of the pond, a lining is to be used. This will need to be specified.

(c) SUMMARY : Geometry and compactive efforts of the earth dam embankments (walls).

As shown in the attached sketches, the following are the geometric and compaction requirements:

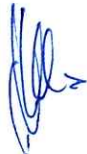
- Overall height = 6.00 metres.
- Top of embankment = RL 402.00.
- Top water level = RL 401.50.
- Base RL = 396.00.
- Crest width = 3.60 metres.
- Wall slope on the water side = 2(H) to 1 (V).
- Wall slope on the downstream side = 1:1 (45 degrees maximum).
- Compaction required on the base is 100% MDD as per AS 1289.
- Compaction required on the wall structure is 95% MDD as per AS1289.
- Compaction layers not to exceed 200mm.
- All compaction to be done at optimum moisture content (9-11%).

4. CONCLUSION.

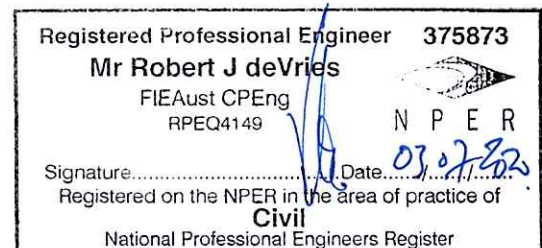
In conclusion, the above pond will be satisfactory to accept the imposed water pressures if the construction and compaction methods as outlined above are used.

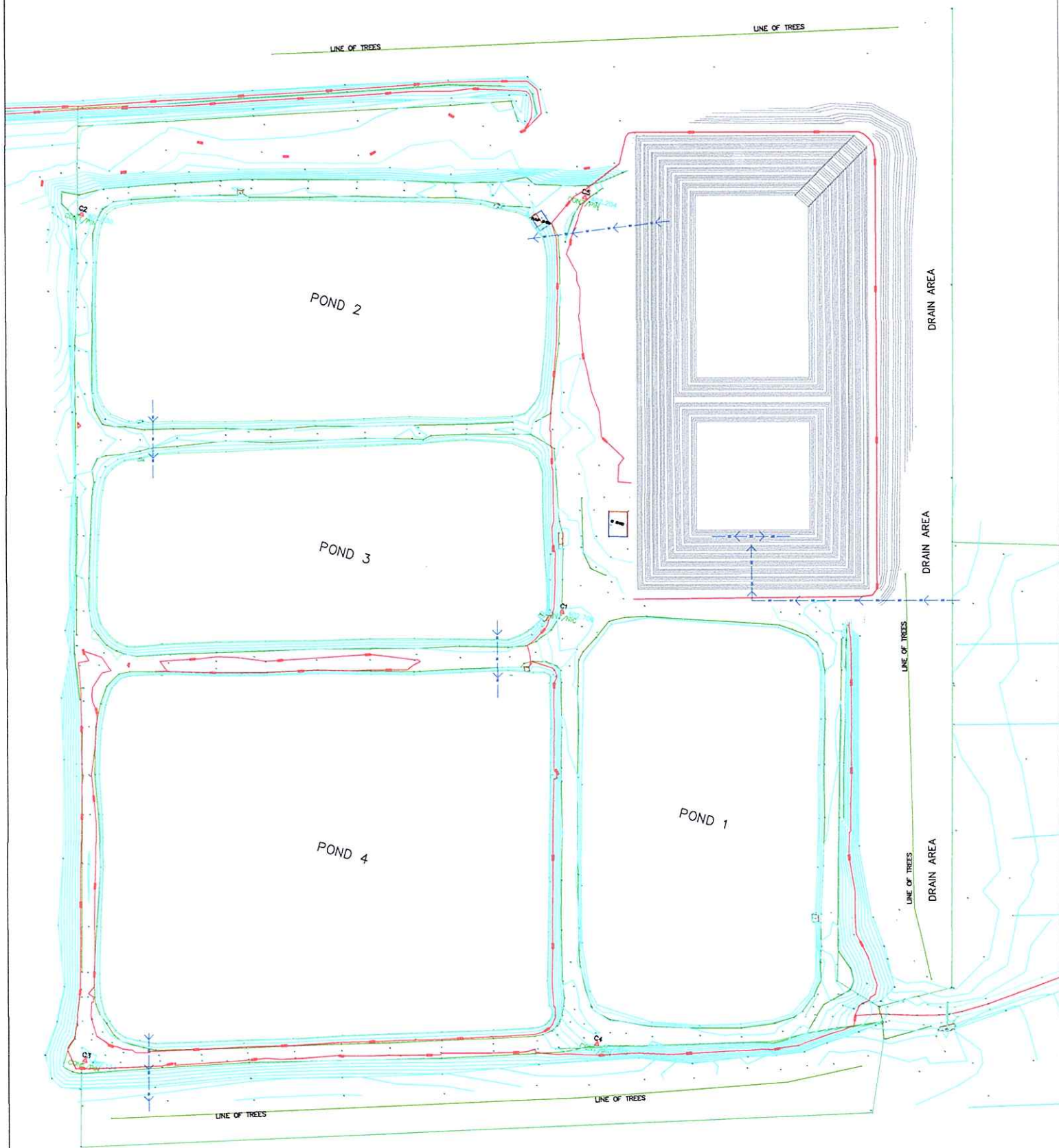
Should you require further clarification please call.



Regards,



Robert J. de Vries, CPEng
B.E., M.E., FIE(Aust),
NPER3, RPEQ 4149.
APEC, IntPE (Aust).
Chartered Professional Engineer.





 INDICATES NEW PIPE LOCATION & SIZE
 INDICATES FLOW DIRECTION

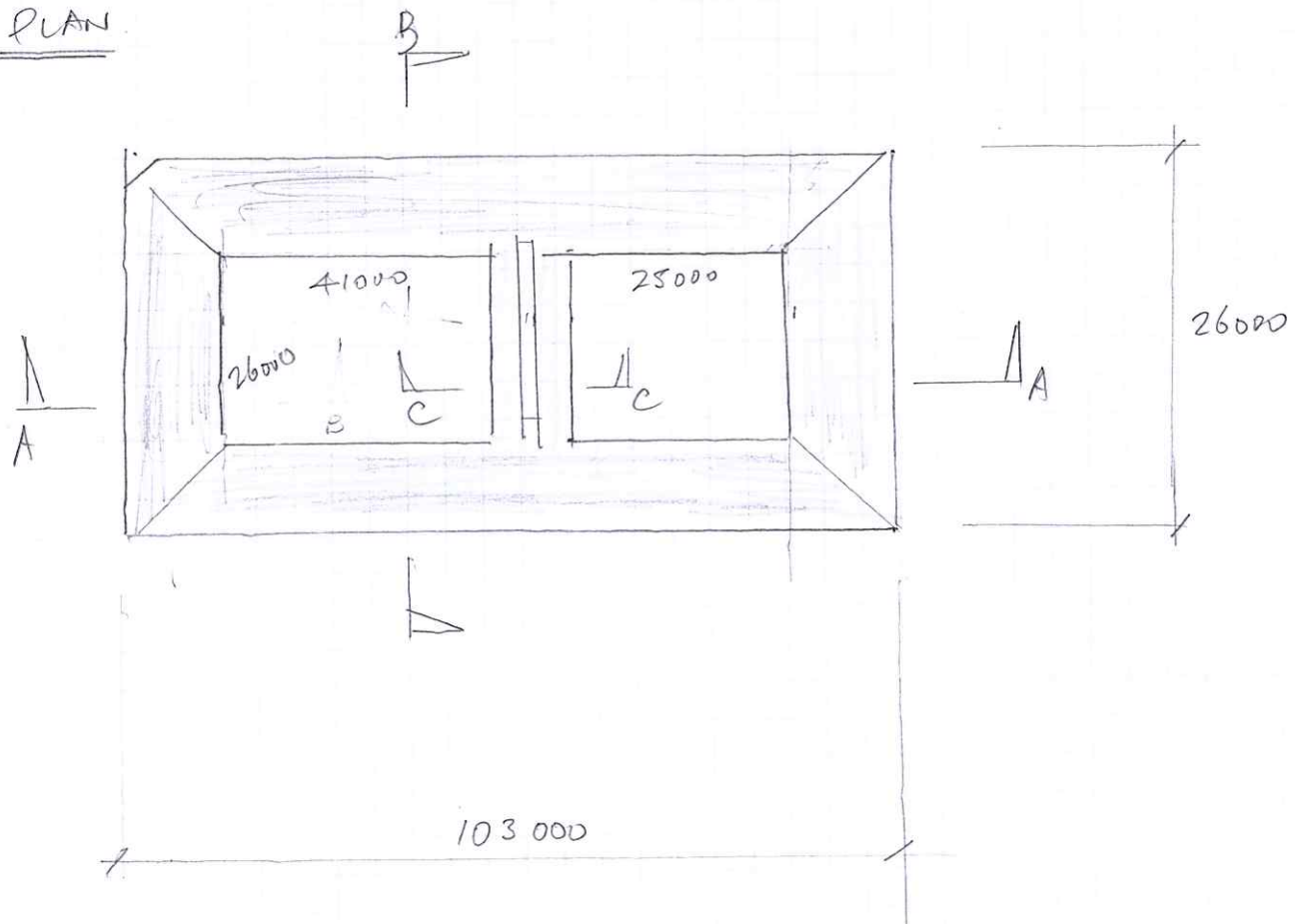


BAIADA POULTRY
 MAREEBA PROCESSING
 SITE LAYOUT AND TRANSFER PIPE LOCATIONS



SHEET 2 OF 1

REV 1 - 18/5/20
SCALE: AS NOTED
205314_MAR_WAU_V1.0

MAZUZA - WWTP - POND #1PLAN

DESIGN CRITERIA:

- DATUM RL = 402.00 (TOP)
 - MAX TWL = 401.50
 - BAK RL = 396.00
 - 3 A 500 mm RIPPED BOARD.
- DEPTH = 6.0 m

DESIGN SHEET

Work Ref Z20441 CS

Attn BALADA

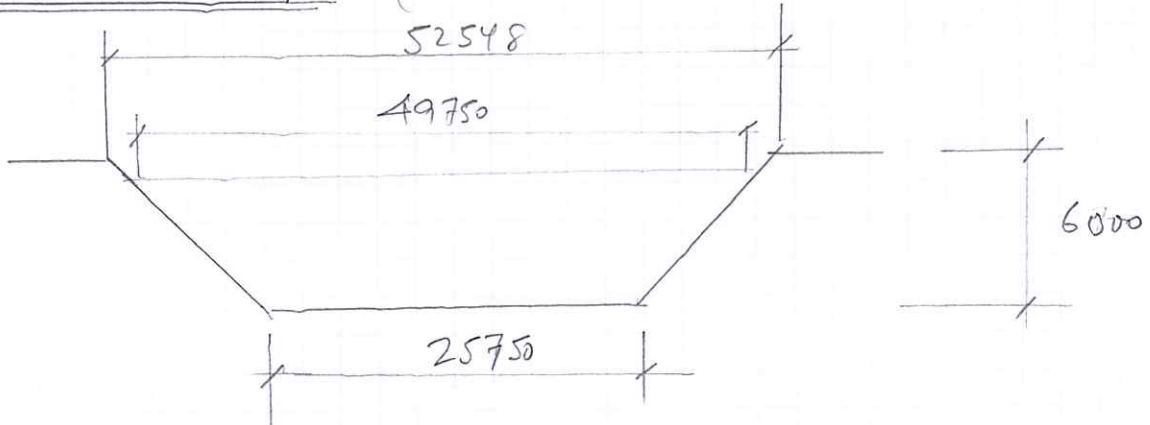


Date 01-07-23

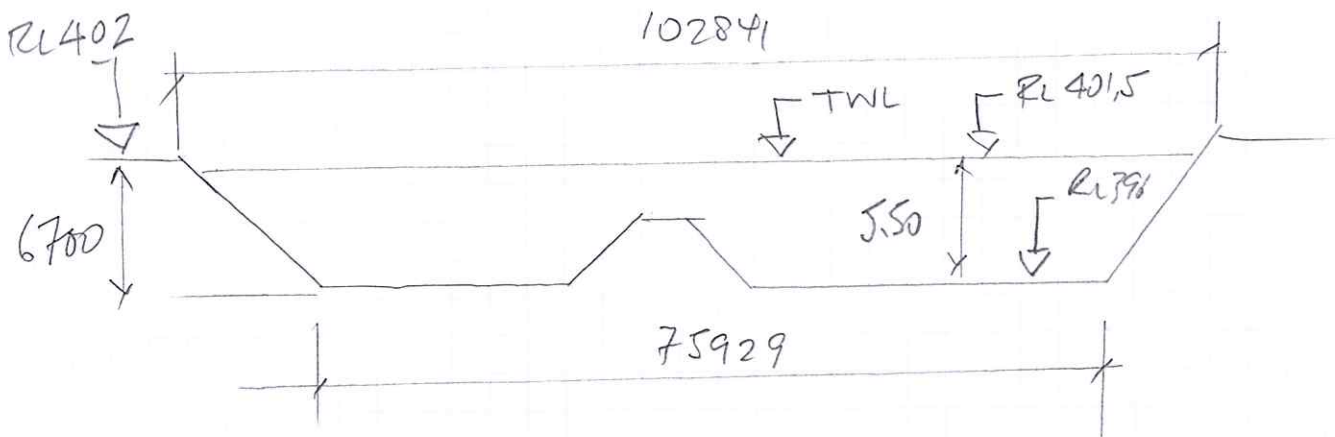
Sheet 2 of

Client Rioy

POND SECTION BB ('SHORT' SIDE)



SECTION AA (LONG SIDE)



POSSIBLE SEEPAGE.

(SOIL PERMEABILITY)

$$\text{RATE OF SEEPAGE} = v = kl/m(1.13) \text{ (SMREKORE)}$$

$$\text{OR } v = kl(1.14)$$

$$= 0.01 \times 1.0$$

$$= 0.01 \times 1.0 / 1.5 \times 1.13$$

$$= 0.0059$$

OK (WITHIN LIMITS)

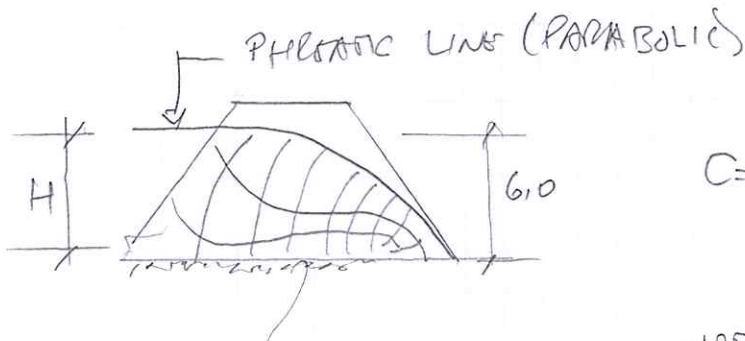
$$m = 1.5$$

$$k = \text{Perm Coeff}$$

$$= 0.01$$

$$L = \text{GRADIENT}$$

$$= 1.0$$



IMPERMEABLE
BASE
(CLAY)

WITH HAZEN'S FORMULA

$$C = 15.0$$

$$k = CD^2$$

$$= 15 \times 0.17^2$$

$$= 0.43 \text{ mm/sec}$$

NOTE:

PHREATIC SURFACE MUST BE
KEPT BELOW DOWNSTREAM FLOW.

• SURFACE AREA (WATER) (NEGLECT CANAL)

$$\div 102 \times 52 = 5304 \text{ m}^2$$

$$= 0.53 \text{ ha.}$$

$$\cdot \text{DEPTH} = 5.50 = H$$

$$Q = H \times A / 3$$

$$= 5.50 \times 5304 / 3$$

$$\div 10,000 \text{ m}^3$$

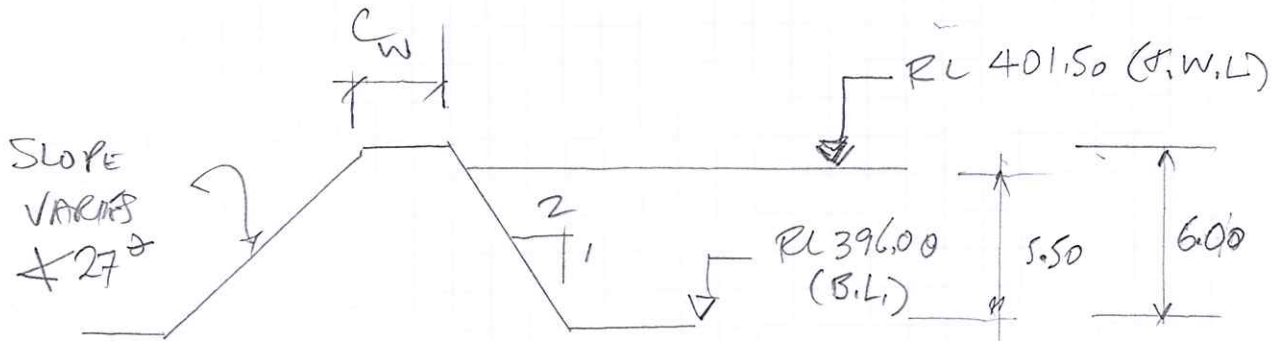
FROM HAZEN

$$\text{CAPACITY} = 10,000 / 20,000 = 0.50 \text{ ha}$$

CHECKS O.K.

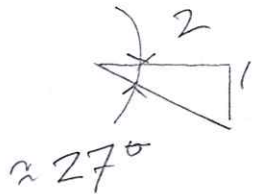
Align of cross section:

(NTS)



$$\therefore C_w = 3.6 \text{ m}$$

ADOPT THIS FOR EXTERNAL
EMBANKMENTS.



$C_w = \text{CROSS WIDTH}$

$$\begin{aligned} C_w &\neq 0.4H + 1 \\ &\neq 0.4 \times 6.7 + 1 \\ &\neq 3.6 \text{ m} \end{aligned}$$

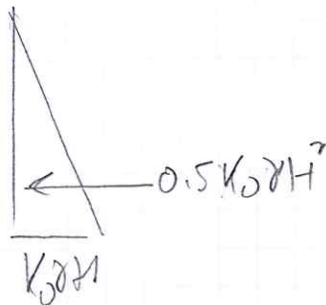
• BACKFILL MATERIAL = CLAY.

(HEAVY RED CLAY ASSUME)

$$\begin{aligned} \text{M.C.} &= 13.1\% \\ \text{M.D.D} &= 1.86 \text{ t/m}^3 \end{aligned}$$

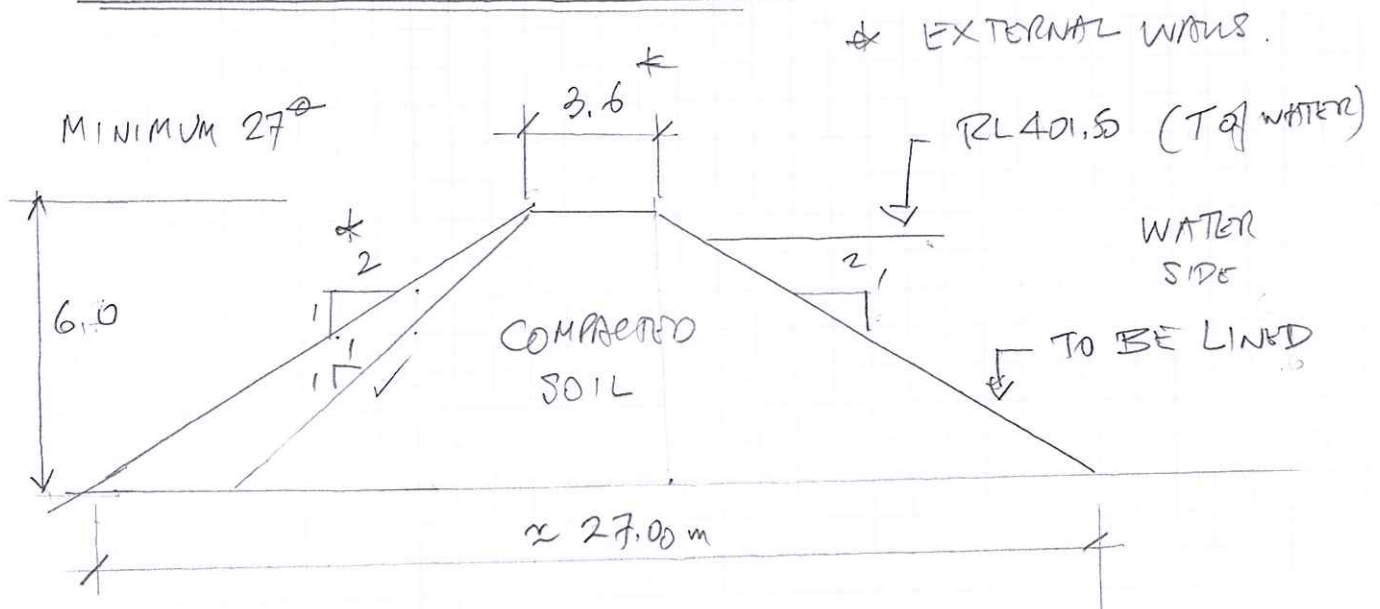
CHECK IMPOSED PRESSURES.

(1) ACTIVE.



$$\begin{aligned} H &= 6.70 \text{ m} \\ \gamma &= 10 \text{ kN/m}^3 \\ K_0 &= 1.0 \end{aligned}$$

$$\begin{aligned} \therefore 0.5K_0\gamma H^2 &= 0.5 \times 10 \times 10 \times 6.70^2 \\ &= 2241 \text{ kN} \end{aligned}$$

CROSS SECTION OF EXTERNAL WALL

AT 1:2 (DOWNSTREAM) BASE LENGTH \div 27.000 m —

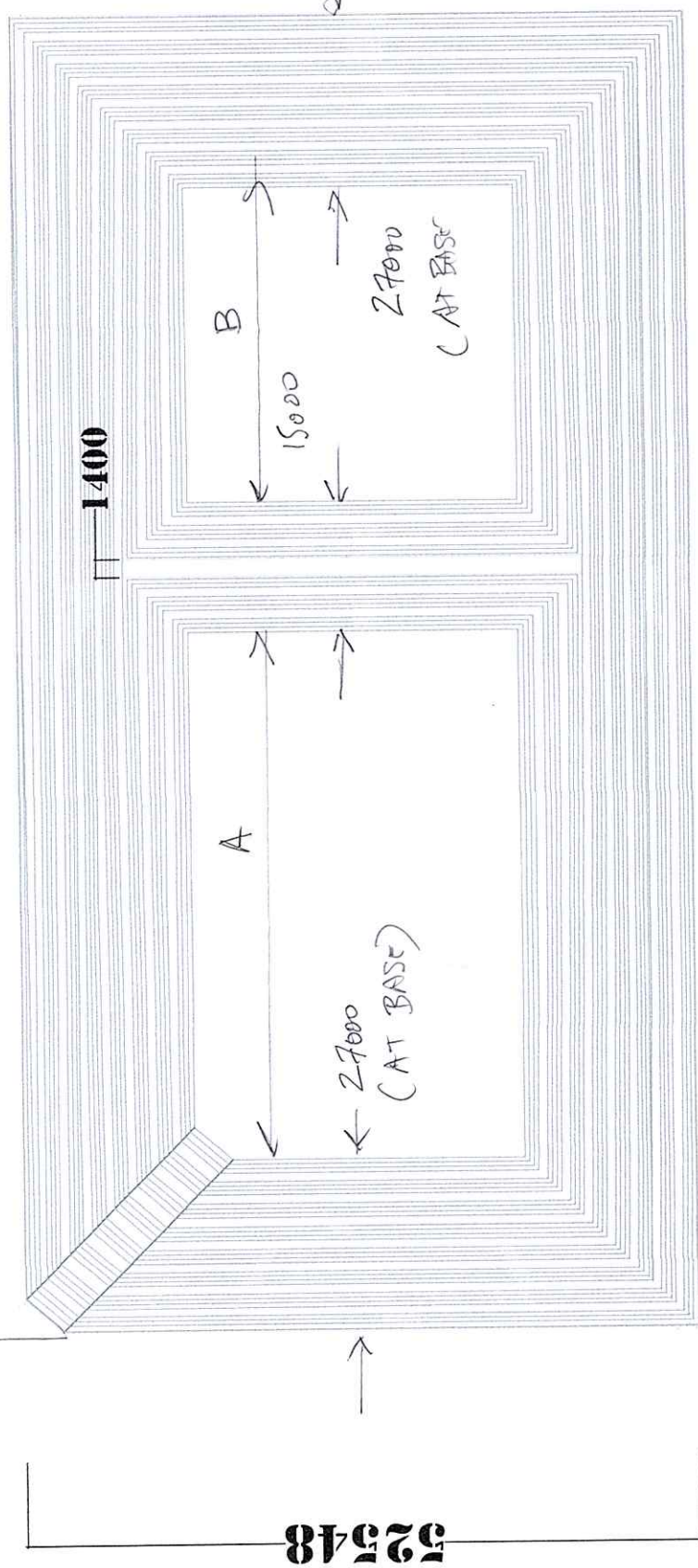
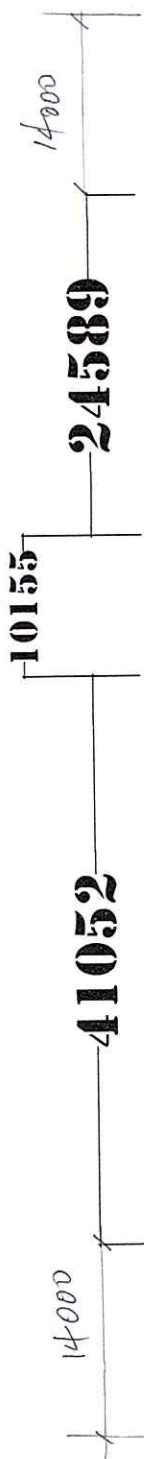
\therefore LONG DIM = $27 + 41 + 1.0 + 25 + 27 = 135$ m

AT 1:1 (DOWNSTREAM) BASE LENGTH = 21.0000

\therefore LONG DIMN = $21 + 41 + 1.0 + 25 + 21 = 118$ m

(ASSUMING DOWNSTREAM SIDE
= 1:1 (45°))

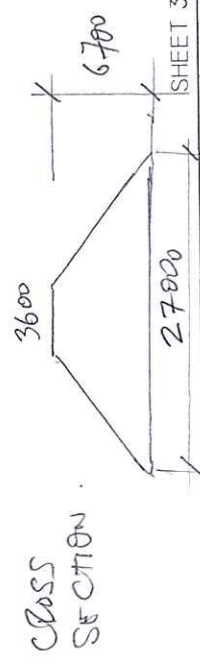
2 = 750mm



(1:100)
102000 ± 19
25

102841

$$\begin{aligned} \text{LONG DIM} &= 27000 + 41000 + 15000 + 25000 + 27000 \\ &= 135000 \end{aligned}$$

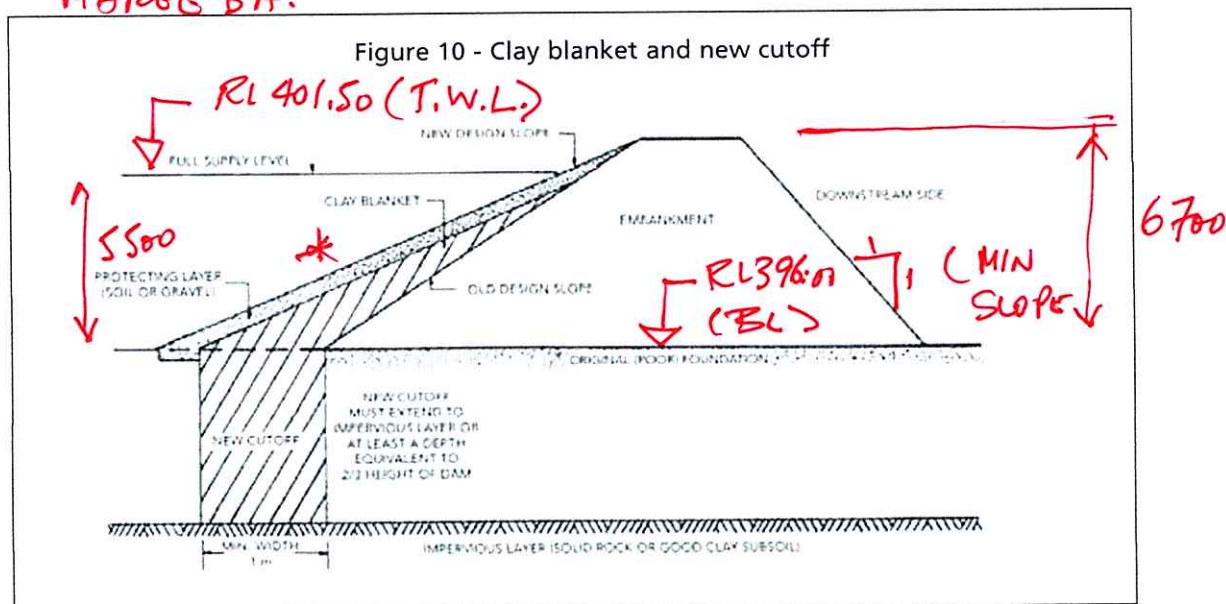


EXAMPLE ONLY

More details on seepage and countermeasures can be found in FAO guidelines on small dams and weirs in earth and gabion materials (FAO, 2001).

Advice on drainage from an expert is always recommended as the capacity and spacing of drains and the ratio of coarse to fine materials in the filters can be important.

MATEUS BA.



6.16 ENVIRONMENTAL ISSUES

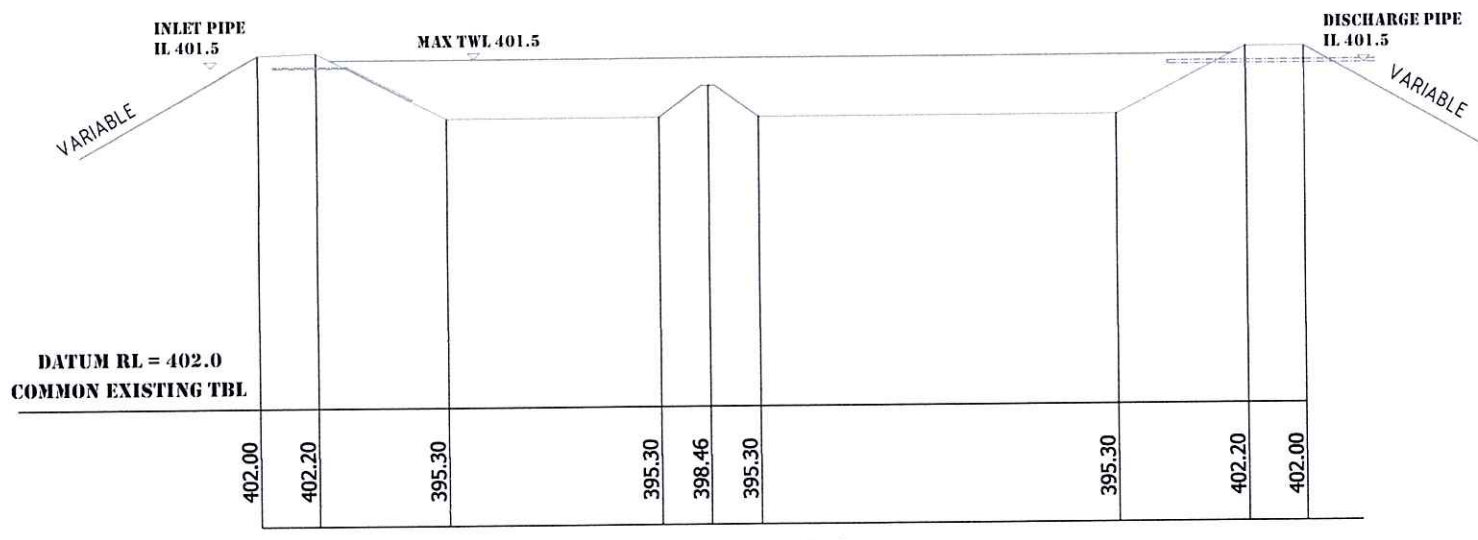
It is at this stage that any environmental impact-assessment reports should be completed and any works required to mitigate such impacts be designed and costed. For small dams impacts are usually correspondingly small and may not require significant works. Including a small percentage of the total cost in the bill of quantities and costings (under other works) may suffice to cover any likely costs.

Conserving the catchment before works commence to allow vegetative cover to become well established and thus reduce sedimentation can be considered.

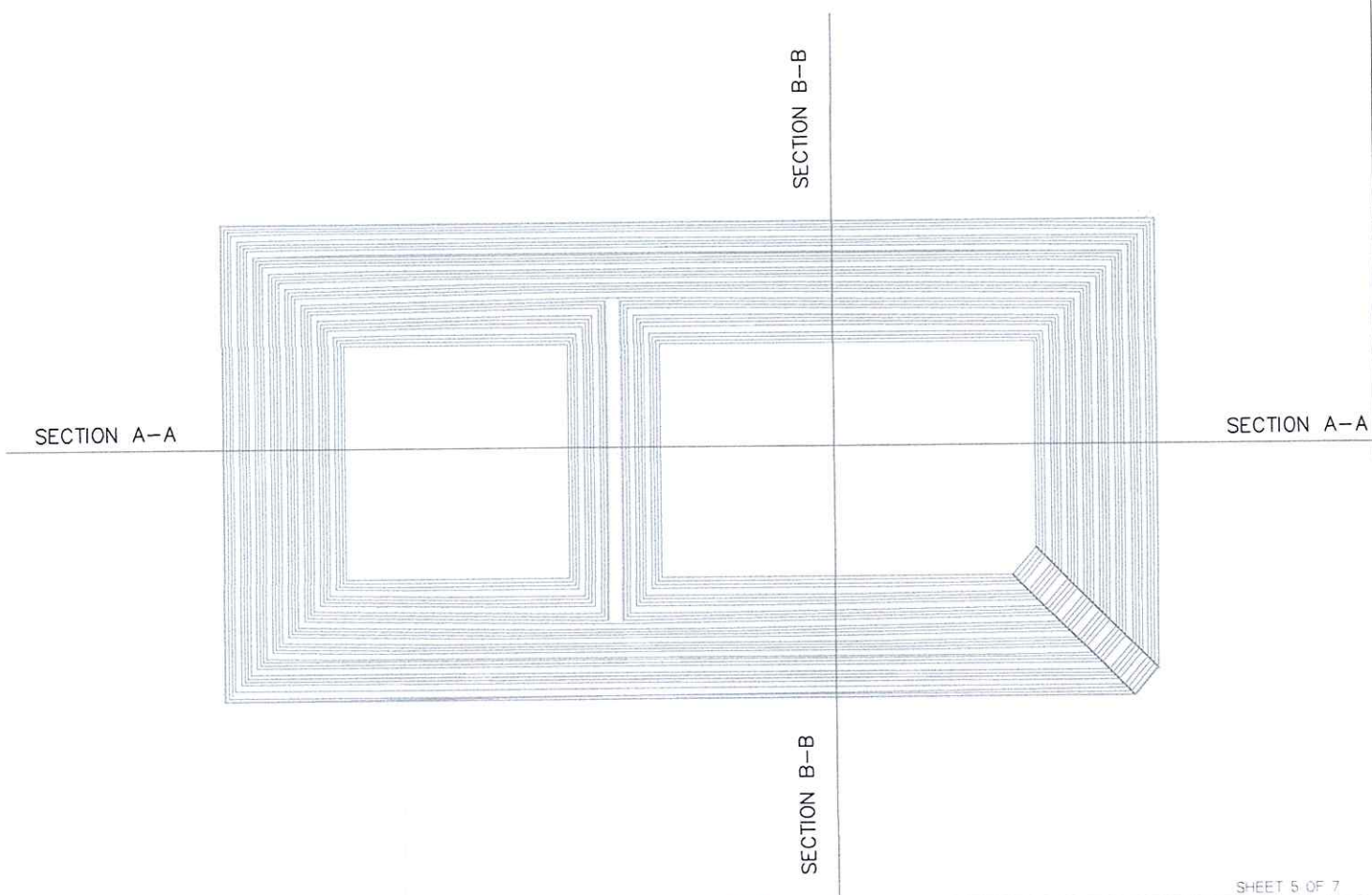
Even if an environmental impact assessment is not required, at the design stage for any new dam, consider the need for environmental flows and releases from the dam – usually in the dry season – to maintain the downstream watercourse in as natural condition as possible.

Provision of drinking water supplies downstream of the dam (using pipes under or through the embankment and simple, sand filters and stand pipes under gravity pressure) will reduce access to the reservoir by people and livestock. Alternatively, wells and hand pumps in the same area may prove suitable and allow local people access to water that may otherwise be lost to seepage.

Fencing the dam and reservoir may be required to prevent access to the embankment and reservoir. Where this is not possible and to reduce the incidence of shistosomiasis, malaria and other water-borne diseases by keeping grass cover around the reservoir and in flowing channels to a minimum (including regular cutting), raising and lowering reservoir levels and removing the possibilities of standing water in and around the dam will help.

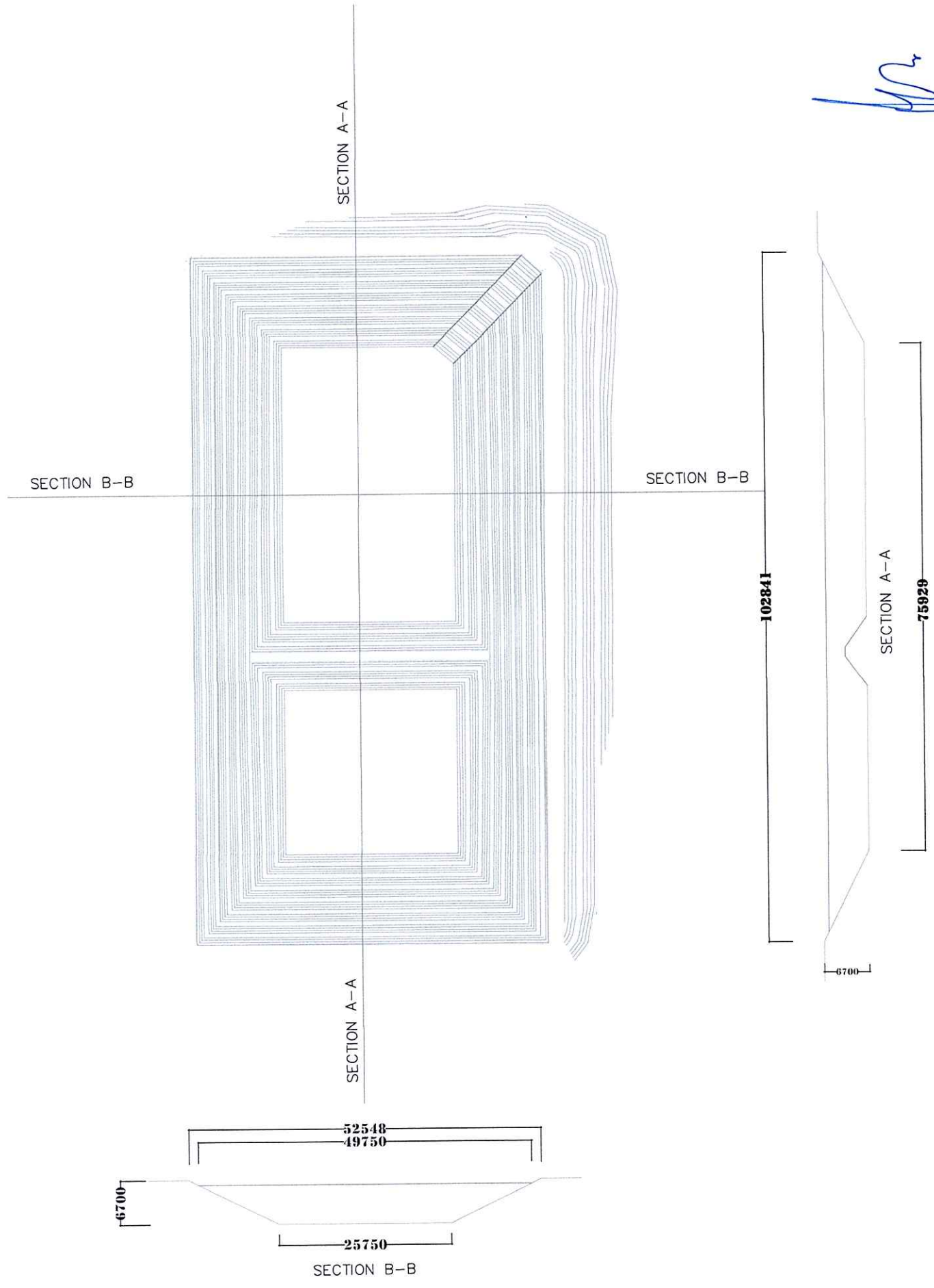


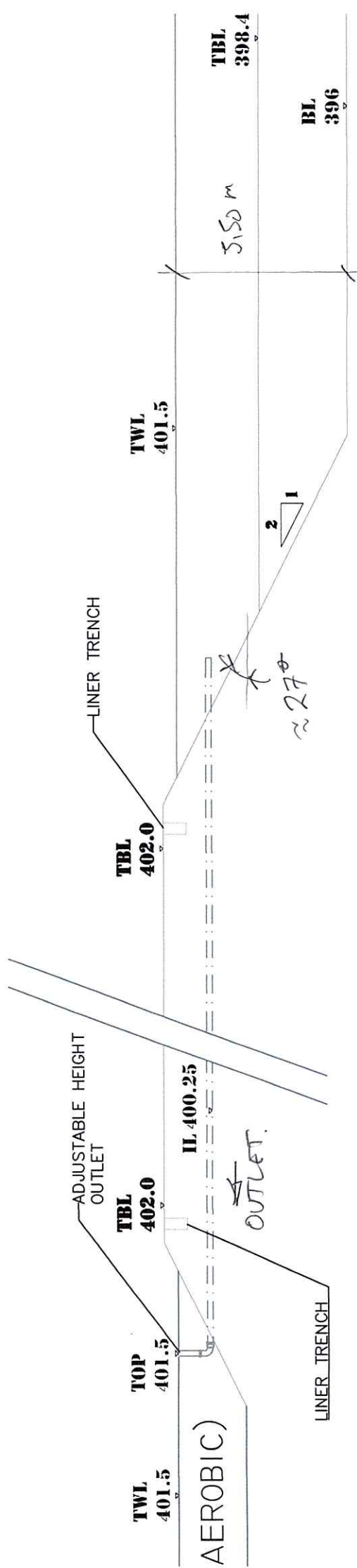
SECTION A-A



SHEET 5 OF 7

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LINER TRENCH DETAIL

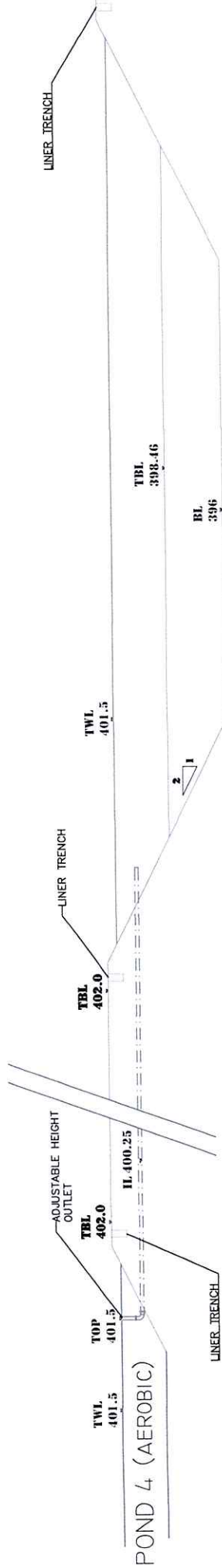
(TO SCALE)

APPROX
1/500

POND 5 (ANAE

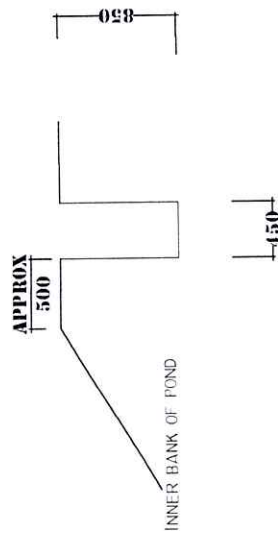
SECTION I

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POND 5 (ANAEROBIC) SECTION B-B

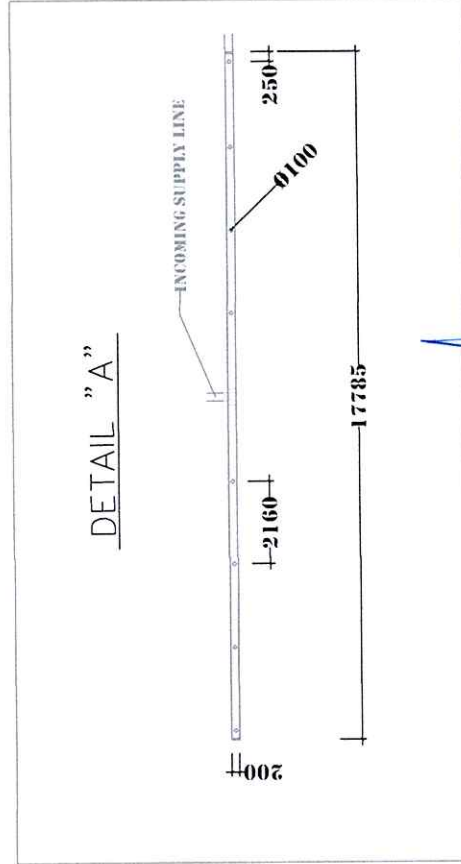
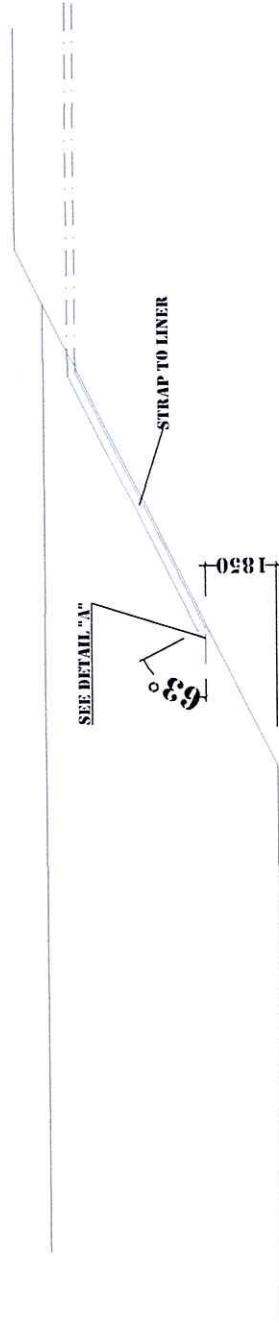
LINER TRENCH DETAIL
(NOT TO SCALE)



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	BAIADA POULTRY MAREEBA PROCESSING ANAEROBIC LAGOON TRANSFER POND 5 TO 4		
	Scale	0 5 10	REVISED SCALE IN METERS DATE: 10/10/10

POND 5 INLET PIPE DETAIL



SHEET 7 OF 7

DA Form 1 – Development application details

Approved form (version 1.2 effective 7 February 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	Bartter Enterprises Pty Limited
Contact name (only applicable for companies)	Warren Cossgrove
Postal address (P.O. Box or street address)	PO BOX 152
Suburb	MAREEBA
State	QLD
Postcode	4880
Country	Australia
Contact number	07 4092 9500
Email address (non-mandatory)	Warren_cossgrove@baiada.com.au
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	

2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
<input type="checkbox"/> Yes – the written consent of the owner(s) is attached to this development application	
x <input checked="" type="checkbox"/> No – proceed to 3)	

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

3.1) Street address and lot on plan

- ☒ Street address **AND** lot on plan (all lots must be listed), **or**
☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		1	Moody St	Mareeba
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4880	69	SP108023	Mareeba Shire
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row.

<input type="checkbox"/> Coordinates of premises by longitude and latitude				
Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)	
145.412E	16.979S	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	69 SP108023	
<input type="checkbox"/> Coordinates of premises by easting and northing				
Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	

3.3) Additional premises

- ☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application
☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

<input type="checkbox"/> In or adjacent to a water body or watercourse or in or above an aquifer	
Name of water body, watercourse or aquifer:	<input type="text"/>
<input type="checkbox"/> On strategic port land under the <i>Transport Infrastructure Act 1994</i>	
Lot on plan description of strategic port land:	<input type="text"/>
Name of port authority for the lot:	<input type="text"/>
<input type="checkbox"/> In a tidal area	
Name of local government for the tidal area (if applicable):	<input type="text"/>
Name of port authority for tidal area (if applicable):	<input type="text"/>
<input type="checkbox"/> On airport land under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i>	
Name of airport:	<input type="text"/>

<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>
EMR site identification: <input type="text"/>
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>
CLR site identification: <input type="text"/>

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).

- ☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- x ☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☐ Reconfiguring a lot x ☒ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

Earthwork to dam structure

e) Relevant plans

Note: *Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms guide: Relevant plans](#).*

x ☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

e) Relevant plans

Note: *Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).*

☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

- ☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- ☐ Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	<input type="checkbox"/> Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	<input type="checkbox"/> Yes – complete division 2
Operational work	X <input type="checkbox"/> Yes – complete division 3
Building work	<input type="checkbox"/> Yes – complete DA Form 2 – Building work details

Division 1 – Material change of use

Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m ²) (if applicable)
8.2) Does the proposed use involve the use of existing buildings on the premises?			
<input type="checkbox"/> Yes			
<input type="checkbox"/> No			

Division 2 – Reconfiguring a lot

Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?	
9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)	
<input type="checkbox"/> Subdivision (complete 10))	<input type="checkbox"/> Dividing land into parts by agreement (complete 11))
<input type="checkbox"/> Boundary realignment (complete 12))	<input type="checkbox"/> Creating or changing an easement giving access to a lot from a constructed road (complete 13))

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				
10.2) Will the subdivision be staged?				
<input type="checkbox"/> Yes – provide additional details below				
<input type="checkbox"/> No				
How many stages will the works include?				
What stage(s) will this development application apply to?				

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?	
<input type="checkbox"/> Road work <input type="checkbox"/> Drainage work <input type="checkbox"/> Landscaping <input type="checkbox"/> Other – please specify:	<input type="checkbox"/> Stormwater <input checked="" type="checkbox"/> Earthworks <input type="checkbox"/> Signage <input type="checkbox"/> Water infrastructure <input type="checkbox"/> Sewage infrastructure <input type="checkbox"/> Clearing vegetation
14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)	
<input type="checkbox"/> Yes – specify number of new lots:	
<input checked="" type="checkbox"/> No	
14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)	
\$87,000	

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
Carl Ewin
16) Has the local government agreed to apply a superseded planning scheme for this development application?
<input type="checkbox"/> Yes – a copy of the decision notice is attached to this development application <input type="checkbox"/> The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached <input type="checkbox"/> No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?

Note: A development application will require referral if prescribed by the Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Act 2016:**

- ☐ Clearing native vegetation
- ☐ Contaminated land (*unexploded ordnance*)
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- ☐ Infrastructure-related referrals – designated premises
- ☐ Infrastructure-related referrals – state transport infrastructure
- ☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
- ☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure-related referrals – near a state-controlled road intersection
- ☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- ☐ Koala habitat in SEQ region – key resource areas
- ☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- ☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
- ☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
- ☐ Ports – Brisbane core port land – hazardous chemical facility
- ☐ Ports – Brisbane core port land – taking or interfering with water
- ☐ Ports – Brisbane core port land – referable dams
- ☐ Ports – Brisbane core port land – fisheries
- ☐ Ports – Land within Port of Brisbane's port limits (*below high-water mark*)
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ Tidal works or works in a coastal management district
- ☐ Reconfiguring a lot in a coastal management district or for a canal
- ☐ Erosion prone area in a coastal management district
- ☐ Urban design
- ☐ Water-related development – taking or interfering with water
- ☐ Water-related development – removing quarry material (*from a watercourse or lake*)
- ☐ Water-related development – referable dams
- ☐ Water-related development – levees (*category 3 levees only*)
- ☐ Wetland protection area

Matters requiring referral to the **local government:**

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government*)

<input type="checkbox"/> Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:
<input type="checkbox"/> Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to:
<ul style="list-style-type: none"> • The Chief Executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual
<input type="checkbox"/> Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council:
<input type="checkbox"/> Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the <i>Transport Infrastructure Act 1994</i>:
<input type="checkbox"/> Ports – Brisbane core port land <i>(where inconsistent with the Brisbane port LUP for transport reasons)</i>
<input type="checkbox"/> Ports – Strategic port land
Matters requiring referral to the relevant port operator , if applicant is not port operator:
<input type="checkbox"/> Ports – Land within Port of Brisbane's port limits <i>(below high-water mark)</i>
Matters requiring referral to the Chief Executive of the relevant port authority:
<input type="checkbox"/> Ports – Land within limits of another port <i>(below high-water mark)</i>
Matters requiring referral to the Gold Coast Waterways Authority:
<input type="checkbox"/> Tidal works or work in a coastal management district <i>(in Gold Coast waters)</i>
Matters requiring referral to the Queensland Fire and Emergency Service:
<input type="checkbox"/> Tidal works or work in a coastal management district <i>(involving a marina (more than six vessel berths))</i>

18) Has any referral agency provided a referral response for this development application?		
<input type="checkbox"/> Yes – referral response(s) received and listed below are attached to this development application		
<input type="checkbox"/> No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application <i>(if applicable)</i> .		

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application <input type="checkbox"/> I do not agree to accept an information request for this development application
Note: By not agreeing to accept an information request I, the applicant, acknowledge: <ul style="list-style-type: none"> • that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties • Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.
Further advice about information requests is contained in the DA Forms Guide .

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)

☐ Yes – provide details below or include details in a schedule to this development application

x ☒ No

List of approval/development application references	Reference number	Date	Assessment manager
<input type="checkbox"/> Approval			
<input type="checkbox"/> Development application			
<input type="checkbox"/> Approval			
<input type="checkbox"/> Development application			

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

☐ Yes – a copy of the receipted QLeave form is attached to this development application

☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid

☐ Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached

X ☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

x ☒ No

Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application

x ☒ No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.
2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

Note: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the Water Act 2000**?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works

23.7) Does this application involve **waterway barrier works**?

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

☐ Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
x ☐ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
x ☐ No

Note: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the *Water Supply Act*)?

- ☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application
x ☐ No

Note: See guidance materials at www.dnrme.qld.gov.au for further information.

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- ☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - ☐ A certificate of title
- x ☐ No

Note: See guidance materials at www.des.qld.gov.au for further information.

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- ☐ Yes – details of the heritage place are provided in the table below
x ☐ No

Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:		Place ID:	
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Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

- ☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
x ☐ No

Decision under section 62 of the Transport Infrastructure Act 1994

23.15) Does this development application involve new or changed access to a state-controlled road?

- ☐ Yes - this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
x ☐ No

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 <i>Note: See the Planning Regulation 2017 for referral requirements</i>	<input type="checkbox"/> Yes
If building work is associated with the proposed development, Parts 4 to 6 of DA Form 2 – Building work details have been completed and attached to this development application	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application <i>Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.</i>	<input type="checkbox"/> Yes
Relevant plans of the development are attached to this development application <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.</i>	<input checked="" type="checkbox"/> Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (see 21)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable

25) Applicant declaration	
<input checked="" type="checkbox"/> By making this development application, I declare that all information in this development application is true and correct <input checked="" type="checkbox"/> Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the <i>Electronic Transactions Act 2001</i> <i>Note: It is unlawful to intentionally provide false or misleading information.</i>	
<p>Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.</p> <p>Personal information will not be disclosed for a purpose unrelated to the <i>Planning Act 2016</i>, Planning Regulation 2017 and the DA Rules except where:</p> <ul style="list-style-type: none"> such disclosure is in accordance with the provisions about public access to documents contained in the <i>Planning Act 2016</i> and the Planning Regulation 2017, and the access rules made under the <i>Planning Act 2016</i> and Planning Regulation 2017; or required by other legislation (including the <i>Right to Information Act 2009</i>); or otherwise required by law. <p>This information may be stored in relevant databases. The information collected will be retained as required by the <i>Public Records Act 2002</i>.</p>	

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager

Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work	
QLeave project number	
Amount paid (\$)	Date paid (dd/mm/yy)
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

E:330979.16
N:8122203.70

E:330723.01
N:8122137.24

E:330797.77
N:8121849.10

E:331053.92
N:8121915.55

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