EMS0099

Spring Fed Dam Reclamation Plan

Porta Products

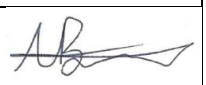
124 Lowes Mount Road, Oberon NSW

Porta Products Pty Ltd

14 August 2025

This document should be read in conjunction with EMS0060 Construction Environment Management Plan, EMS0006 Surface Water Management Plan and EMS0008 Erosion & Sediment Control Plan.

Revision History

Rev No.	Revision Date	Author	Comments	Details	Authorised	
					Name	Signature
0	29/03/19	Jacqueline Blomberg		Draft	Victor Bendevski	
0.1	28/05/19	J Blomberg	Following DILW/NRAR review	Draft	V Bendevski	
1	28/05/19	J Blomberg	For issue		V Bendevski	
2	24/08/22	Andrew Brady		As per MOD 4 condition B33B	V Bendevski	
3	25/08/23	A Brady		Review and update as per SSD 7016 condition C10(c)	V Bendevski	
4	5/09/24	A Brady	Name change, inclusion of MOD 5	Review as per SSD7016 C10 (a) & (c)	A Brady	
5	14/08/25	A Brady	A Brady	Review and update as per SSD 7016 condition C10(c) and name change	A Brady	

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1 INTRODUCTION

1.1 Background

This Management Plan has been prepared for the Porta Products Pty Ltd (Formally Borg Manufacturing, Borg Panels, Australian Panels) Oberon site (and will be referred to herein as the '**Development**')

The development operates as an existing Medium Density Fibre (MDF) and particleboard production facility in Oberon, NSW, manufacturing a range of Customwood MDF products and particleboard products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Standard particleboard;
- Moisture resistance particleboard;
- Particleboard flooring products for structural applications;
- Decorative Laminated MDF and particleboard; and
- Treated paper for the lamination of MDF and particleboard.

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a particleboard manufacturing facility, modify the existing MDF manufacturing facility and undertake general site works at the existing Australian Panels site located on 124 Lowes Mount Road, Oberon.

On 20 November 2018 modification of Development Consent SSD 7016 MOD 1 was approved by the Director, Industry Assessments as a delegate of the Minister for Planning under section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*. This modification included for the extension of the warehouse at the north-east area of the site which required reclamation of approximately 30% of the manmade spring fed dam to provide suitable structural footing for the building and driveway and allowed sufficient space for the changes to the surface water management system.

On 20 May 2022 modification of SSD 7016 (MOD 4) was approved by the Team Leader, Industry Assessments which included the reclamation of the remaining area of the spring fed dam to enable the increase in size of the hardstand at the north-eastern corner of the site to facilitate the relocation of the existing site mechanic's workshop.

1.2 Purpose and Objectives

The purpose of this Plan is to:

- Address the relevant conditions of Development Consent SSD 7016 including modifications and to manage the reclamation of the remaining area of the spring fed dam at the Development.

The objectives of the Plan are to:

- Identify potential impacts to the water resulting from construction activities, specifically the reclamation works;
- Implement appropriate mitigation and management measures as required, ensuring they meet relevant legislative requirements;
- Address comments received concerning the construction works approved in modification 4 to reclaim the remaining portion of the spring fed dam; and
- Define a protocol for reporting environmental incidents.

1.3 Structure of this Plan

This Spring Fed Dam Reclamation Plan (the Plan) was initially developed to manage potential impacts to the dam during the reclamation works to a portion of the dam, and to satisfy requirements set out in conditions SSD 7016 C1, C9 and B33A. Those works were completed in 2020.
The Development received approval from DPE on 20 May 2022 to undertake works to reclaim the remainder of the spring dam (MOD 4). Therefore, this Plan is now updated to include management & mitigation measures for these works as specified in condition B33B.

This is a sub plan to EMS0060 Construction Environmental Management Plan (CEMP) and includes information on the following:

- Section 2 – Legislative, Regulatory & License Compliance
- Section 3 – Overview
- Section 4 – Environmental Impact Assessment
- Section 5 – Mitigation & Management Measures
- Section 6 – Fill Design & Methodology
- Section 7 – Inspections & Reporting
- Section 8 – Plan Review

1.4 Consultation

Consultation with the NSW EPA, the Department of Planning and Environment (DPE), the Natural Resources Access Regulator (NRAR) and DPE Water was undertaken during the assessment of SSD 7016 modification 4 application.

The Final Plan will be submitted to the Secretary DPE for approval prior to the commencement of construction works associated with the reclamation of the remaining section of the spring fed dam.

1.5 Responsibilities

Name	Title	Responsibility
Zac Kay Zac Kay	Construction Coordinator (CM)	• Instruct employees/contractors on how to comply with environmental procedures including this Plan and requirements relevant to their respective work activities • Ensure SS is aware of and complies with the environmental obligations as detailed in this Plan • Evaluate effectiveness of environmental controls associated with the works detailed in this Plan • Implement and support remedial measures as recommended by the EM • Engage with EM and environmental consultants where required to provide support in implementing this Plan • Investigate any environmental incidents or complaints with EM where required, and ensure corrective action is implemented • Manage employees/contractors and construction activities on a daily basis to ensure the appropriate environmental controls are implemented and maintained • Undertake daily site inspections of environmental controls • Implement actions identified as a result of site inspections or reported environmental issues • Report any environmental management concerns or incidents immediately to the Environmental Manager
Andrew Brady	Environmental Manager (EM)	• Train employees/contractors on how to comply with environmental procedures including this Plan • Undertake regular site inspections, documented at least monthly to ensure environmental issues are identified and managed and controls are adequate • General environmental compliance observations and recommend actions where necessary • Investigate any environmental incidents or complaints with CM or SS where required, and ensure corrective action is implemented • Track compliance against the Conditions of Consent for the scope of works detailed in this Plan • Provide necessary support CM/SS • Conduct review as per Section 8 of this Plan

2 Legislative, Regulatory & Licence Compliance

2.1 Relevant Legislation

Key environmental legislation for the Existing Development includes:

- *Protection of the Environment Operations Act 1997*; *and*
- *Environmental Planning and Assessment Act 1979.*

Other relevant legislative framework associated with the spring dam reclamation works is the *Water Management Act 2000.* The NSW Aquifer Interference Policy is the governing policy for licensing and assessment of aquifer interference activities under this Act and therefore is considered for this activity.

2.2 Conditions of Consent

The development operations pertaining to this Plan are subject to the conditions contained in Development Consent SSD 7016 MOD 1 approved 20 November 2018 and SSD 7016 MOD 4 approved 20 May 2022.

The specific requirement for a Spring Fed Dam Reclamation Management Plan were first described in Schedule 2, condition B33A of modification 1 as follows:

> *The Applicant must prepare a Spring Fed Dam Reclamation Management Plan for the Project. The plan must form part of the CEMP as required by Condition C1 and be prepared in accordance with Condition C9 and must:*
> - *Be prepared in consultation with DILW;*
> - *Be submitted to the Secretary for approval prior to commencement of the spring fed dam reclamation works;*
> - *Include details of the reclamation materials and reclamation methodology for the spring fed dam reclamation works;*
> - *Detail the management measures to mitigate water quality impacts during the spring fed dam reclamation works; and*
> - *Incorporate the recommendations outlined in Appendix A of Borg Construction Pty Ltd's Letter to Department of Industry, dated 2 August 2018 as described in Modification Assessments.*

This Plan has been updated to include modification 4 condition B33B which states that:

> *Prior to commencement of the construction works associated with SSD-7016-Mod-4, the Applicant must update the Spring Fed Dam Reclamation Management Plan required under Condition B33A, to incorporate the dam reclamation works described under SSD-7016-Mod-4 and its management, to the satisfaction of the Secretary. The updated plan must be prepared in accordance with the requirements of Condition B33A, and must incorporate the following:*
>
> *(a) description of additional infrastructure that would be installed to facilitate permanent groundwater collection and storage of groundwater inflows from the Spring Fed Dam; and*
>
> *(b) details of the measures and procedures to be implemented, including quality testing procedures, to ensure backfill material used for the reclamation works does not contaminate groundwater.*

2.3 Water Access Supply Licence

The existing development has approval from the Department of Primary Industries Water (DPI) for water supply works under approval 80WA715797 allocating 28 units per financial year to be extracted from the aquifer (spring dam). The Statement of Approval issued under the *Water Management Act 2000,* must be referred to during the reclamation works to ensure the conditions of approval are met, including nil exceedance of extraction limits.

If it is determined during design (or similar investigations) that the current water allocation is not sufficient, an application to DPI will be submitted requesting a temporary increase to the approved allocation units for the duration of the reclamation works.

3 OVERVIEW

3.1 Site Environment

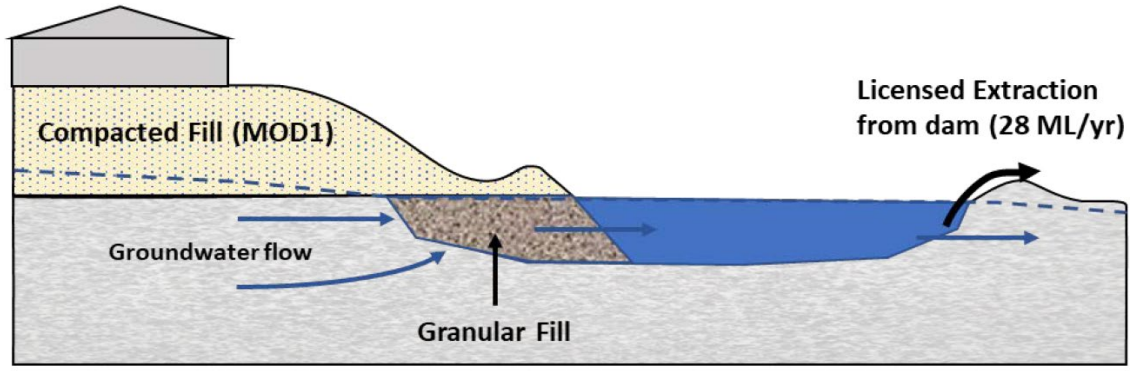
The site is currently developed for the purposes of a manufacturing facility for Medium Density Fibreboard (MDF) and particleboard. This includes:

- A number of large scale industrial buildings which contain various processes involved with the manufacture of MDF and MDF products
- Concrete hard stand areas between the buildings
- A two-story administration/amenity building with associated staff car parking
- Various necessary items of infrastructure including venting, dust collection and wood particle conveyors, other facilities/buildings associated with the use of the land (including maintenance areas, security entry/exit gates and weigh bridges)
- Fencing, landscaping, surface water drainage and other site facilities

The expansion works that have been undertaken under SSD 7016 allowed for the construction of a dedicated particleboard manufacturing line, whilst providing additional infrastructure including within existing buildings, to value add existing products.

Reclamation of a portion of the spring fed dam for extension of the northern warehouse under modification 1 was completed in 2020. Figure 1 illustrates this work.

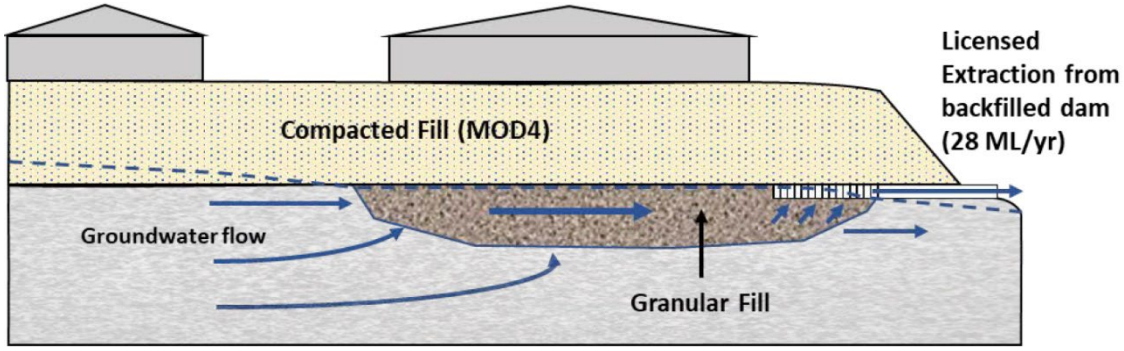
Figure 1 Spring Fed Dam 30% reclamation with granular fill (MOD1)



Source: Geosyntec Consultants February 2022

Further extension of the hardstand area at the north-east of the site has now reclaimed the remainder of the spring dam. Figure 2 shows the remainder of the reclamation works.

Figure 2 Spring Fed Dam 100% reclamation with granular fill (MOD 4)



Source: Geosyntec Consultants February 2022

3.2 Identification of Issues

Additional works as approved under SSD 7016 MOD 4, namely extension of the northern hardstand and relocation and expansion of the existing mechanic's workshop, has affected the spring fed dam.

Potential issues associated with the additional reclamation works included:

- whether material disturbed during construction or material placed for the reclamation may be contaminated;
- will groundwater flow paths change as a result of the reclamation;
- how Australian Panels will retain access to groundwater from the spring fed dam;
- are the works an aquifer interference activity; and
- potential for polluted stormwater runoff to contribute to the water levels in the spring dam.

The Development engaged Edge Geotechnical to review the Developments proposal to reclaim of the remainder of the spring fed dam, providing advice on the impact of reclamation on the groundwater (see Appendix A).

Geosyntec Consultants were engaged to review Edge Geotechnical advice and provide hydrological advice regarding the influence of the local groundwater resource of the reclamation, addressing comments raised by DPE and NRAR (see Appendix B).

Fill design was provided by Envirowest Consulting who also provided design advice for part reclamation works undertaken under modification 1 (see Appendix C).

These issues are discussed in section 4 below.

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Existing Environment

The spring dam was created as a result of an excavation for a source of clean fill during development of the site (by others) in the late 1990s. The source of water in the dam is primarily groundwater inflow from the surrounding shallow aquifer, with a component of precipitation that falls directly on the dam. The spring dam continuously overflows via a spillway located at the eastern end, even when the licensed allocation is extracted. With the

exception of direct rainfall, stormwater runoff from the site is captured in a separate stormwater drainage system at the site and is prevented from entering the spring dam by a perimeter bund around the dam. In 2020 approximately 30% of the dam footprint was reclaimed as part of site development works approved under modification 1. The pre reclamation groundwater flow yield was maintained in the remaining portion of the dam, and the dam continued to overflow as it did prior to the partial reclamation.

4.2 Potential Impacts

Potential impacts from the activity could occur during both construction and operational phases.

4.2.1 Construction

Identified issues during the construction or 'reclamation' phase of works include the following:

1. whether material disturbed during construction or material placed for the reclamation may be contaminated;
2. are the works an aquifer interference activity; and
3. potential for polluted stormwater runoff to contribute to the water levels in the spring dam.

The expansion works requires fill placement plus additional fill for reclamation of the remainder of the spring dam. Similar to the reclamation of the initial 30% portion of the dam, reclamation will be carried out using a granular or crushed rock fill (or blend of both) which has a high permeability thus having minimal impact on local groundwater flow paths, and can be placed below the water line and compacted sufficiently when the new surface level is achieved. Any fill material imported for this activity will be suitably verified prior to coming to site to ensure it will be geotechnically suitable and it will not degrade the environmental values of the local groundwater resource. It is not expected that any material will be excavated/removed from the dam for the reclamation works.

With regards to aquifer interference, Geosyntec Consultants provided the following advice:

> *With respect to the Aquifer Interference Policy, reclamation of the SFD will not interfere with the local groundwater flow system (as it will be more permeable than the surrounding aquifer), will not degrade the quality of the local groundwater resource, and licensed extraction from the reclaimed SFD (in accordance with the current WAL) will have an equivalent effect to the current extraction from the SFD. Reclamation of the SFD does not directly meet the definitions of a high-risk activity as listed in the NSW Aquifer Interference Policy. A cumulative pressure head decline is not anticipated.*

As discussed above in section 4.1 Existing Environment, stormwater runoff from the site is captured in a separate stormwater drainage system at the site and is prevented from entering the spring dam by a perimeter bund around the dam. Therefore, the potential for polluted stormwater runoff to contribute to the spring dam water is low.

4.2.2 Operation

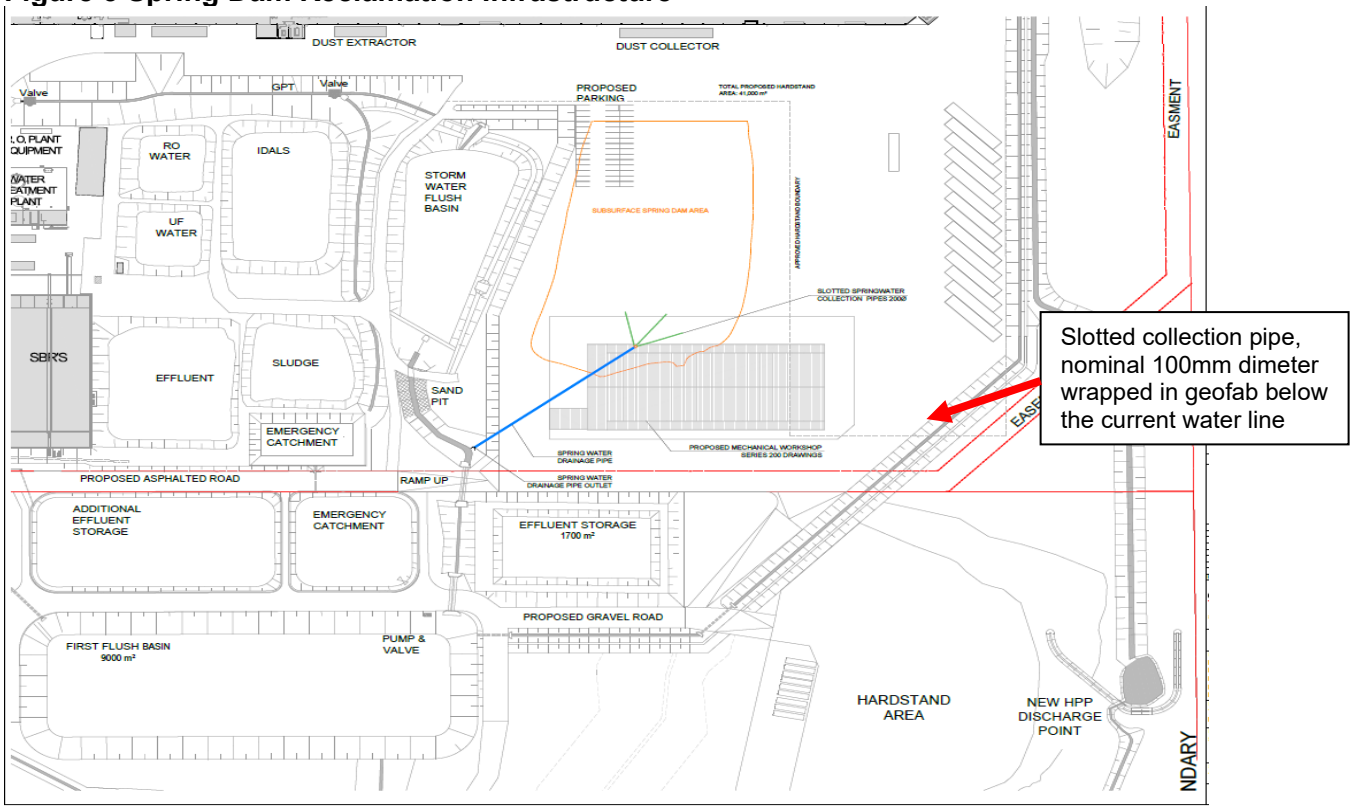
Issues identified that may affect the operational phase of the development include the following:

1. will groundwater flow paths change as a result of the reclamation; and
2. how the Development will retain access to groundwater from the spring fed dam.

Figure 2 in section 3.1 Site Environment illustrates the groundwater flow path with 100% of the spring dam reclaimed. Backfilling the dam with course permeable material will result in the dam having a higher permeability than the surrounding formation and act as a preferential flow path for groundwater in the surrounding shallow aquifer. Geosyntec (2022) concluded that it is likely that the reclamation works will have no impact to the closest water supply works (which are located >2km from the spring dam) or to the base water flows of Kings Stockyard Creek. Groundwater in the backfilled dam that is not captured by the collection system (described in the below paragraph) will flow back into a shallow aquifer and continue towards the east, as it currently does from the spring dam.

The infilled dam will serve as a groundwater collection and storage system. The design will include a buried overflow collection pipe network (see Figure 3) at the height of the existing water surface table that will act as a groundwater drain which will facilitate access to the groundwater at the same volume and rate as the current licensed extraction from the spring fed dam. Gravity will direct water to a pit and pipe system connected to a constructed embankment to the east of the dam which will allow flows to be pumped to the water treatment plant with overflow being directed into the stormwater drainage system.

Figure 3 Spring Dam Reclamation Infrastructure



5 MITIGATION & MANAGEMENT MEASURES

The following will be implemented for the spring fed dam reclamation works:

- Implement the Spring Fed Dam Reclamation Management Plan (this Plan) for the site
- Implement erosion and sediment control measures over the development site whilst construction works are underway as part of CEMP
- Fill imported to site to be suitably certified
- Engage a geotechnical engineer to review subsurface conditions during construction stages and to confirm that subsurface conditions are consistent with design assumptions (see section 6. Fill Design), and provide advice on fill placement methodology
- Ensure flow path for groundwater is maintained
- Daily monitoring to ensure no discharge of dam water off site, pump into the existing stormwater flush basin to be used as site process water
- Follow the fill design (including reclamation materials) provided by Envirowest Consulting and outlined in this Plan in Section 6. Fill Design & Methodology
- Undertake daily site inspection to maintain and ensure ERSED controls are working effectively
- Undertake (at least monthly) environmental inspections using a checklist to record site condition, monitor environmental performance of the construction works, and capture required actions to address identified adverse environmental impacts

Provided that a 'closed site' approach is adopted during construction to ensure no dam water leaves the site, the risk of causing pollution under the POEO Act will be minimised.

6 FILL DESIGN & METHODOLOGY

The remaining section of the spring fed dam shown in Figure 3 was filled utilising the same methodology employed for the part reclamation works under MOD 1. Thus, permeability of the dam void was maintained in the filling process. The fill comprised boulders, ballast, general fill and stabilised fill (Table 1). Geotextile, geogrid will assist the stabilisation process.

Boulders were placed in the base of the dam to provide a stable layer for compaction. The fill material in the dam void is crushed coarse cobbles or ballast comprising gravel, concrete and ceramic tile (Figure 4). The aggregate was placed from the base of the dam to the water level. The aggregate was placed on the edge of the dam and pushed into the dam filling approximately half of the dam. The estimated depth of the dam is 5m. The aggregate does not contain fines. Voids between the cobbles enable movement of water and ensure the permeability is maintained and spring remains active to maintain flows.

At the water level a layer of geotextile matting was placed above the cobbles. Subsequent layers consist of a sandy clay fill material with gravel. The fill contains two layers of geogrid geotextile and geotextile matting which bridge the aggregate above the dam. Advice was provided from geotextile suppliers for the optimum product for the bank and pad area.

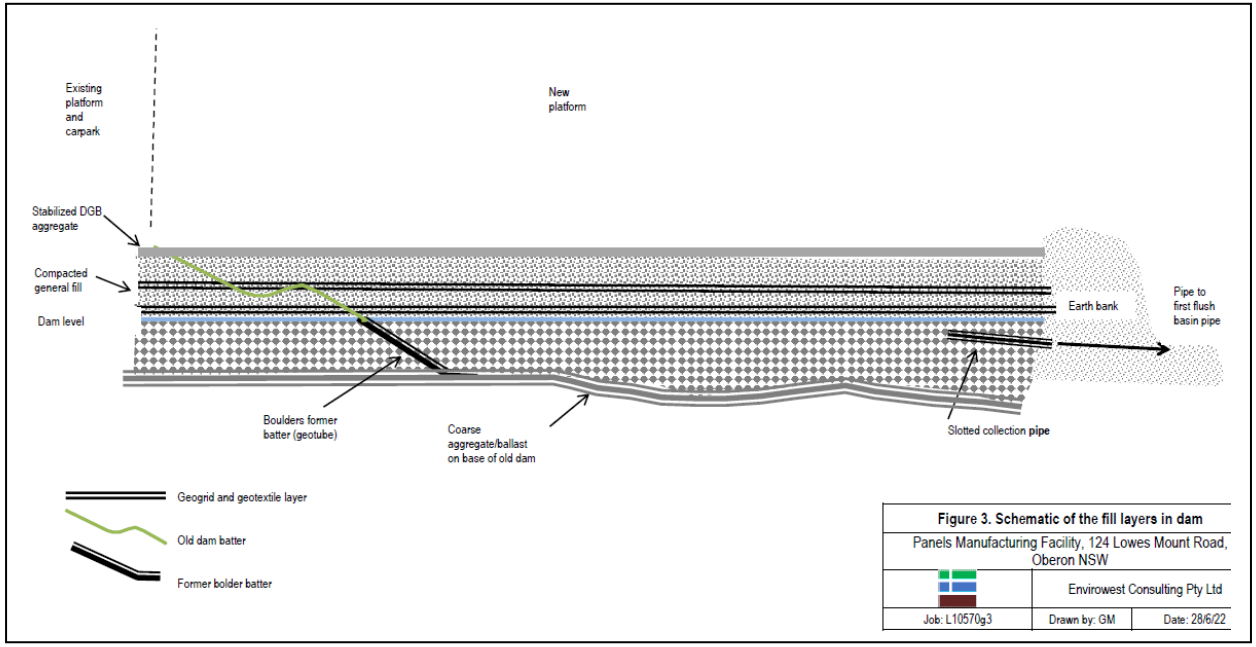
The final fill level is approximately 10 m above the dam water level and the geotextile.
The upper 300mm of fill comprises DGB 20mm gravel stabilised with 5% cement. The final wearing surface layer will be steel reinforced concrete and the thickness determined by the expected loads.

The level of stabilised layer will be verified for no deformation by proof rolling with a 10t truck or similar prior to installation of concrete layer or building construction activities. Compaction testing should be undertaken at each lift above the water level to check for compaction density.

Table 1: Fill Layers in the Spring Fed Dam

Layer	Description	Comments
Surface layer	Concrete	-
Base and subbase (300mm)	Stabilised DGB gravel	Compacted
General fill (5m)	Sandy clay with gravel with two layers of geogrid separated by 2m	Compacted
Water level	Geotextile	-
Dam void (5m)	Ballast/cobbles (>75mm dia)	Washed with no fines
Base of dam	Boulders (>200mm dia)	Base of dam in sediment

Figure 4 Schematic of fill layers in dam



7 INSPECTIONS & REPORTING

The Development will continue to manage all internal and external reporting requirements in accordance with EMS0060 Construction Environment Management Plan (CEMP). Any environmental concerns regarding the reclamation works will be immediately reported to the Construction Manager and/or the Environmental Manager.

7.1 Inspections

Either the Environmental Manager or Site Supervisor will perform daily inspections of the construction area during site activities. Any environmental issues identified such as ineffective erosion or sediment controls will be addressed immediately. A monthly site inspection will be conducted and recorded by the Environmental Manager. Checklists will be used to report on activities for compliance with this Plan and to identify issues specific to the reclamation works that require attention.

Pre-rainfall and post-rainfall inspections will also be undertaken and recorded by the Environmental Manager to ensure erosion and sediment control devices are adequate, working effectively and replaced if necessary.

All workers will be responsible for reporting identified environmental issues immediately to the Site Supervisor and implementing the requirements of this Plan as they conduct their works.

7.2 Unlicensed discharge

In the event of an unlicensed discharge during the reclamation works, The Development will notify the EPA immediately and undertake an investigation of the discharge event. In the unlikely event that a discharge poses a threat to the health of surrounding property owners and occupiers, The Development will implement the Pollution Incident Response Management Plan (PIRMP), which includes notification with those likely to be affected. A list containing surrounding property owner's and occupier's contact details is held by The Development.

The notification procedure is to be initiated by the Environmental Manager for The Development. In the absence of the Environmental Manager, the notification procedure is to be initiated by the person designated as fulfilling the responsibilities of the Environmental Manager.

An investigation report on the unlicensed discharge will be prepared and provided to the EPA or other relevant agency, including the DPE.

7.3 Annual Review

In accordance with Development Consent SSD 7016 an Annual Review report is prepared and submitted to the Secretary Department of Planning and Environment on an annual basis. The review will be prepared in accordance with Condition C11.

8 PLAN REVIEW

In accordance with Development Consent SSD 7016 Condition C10, this Plan will be reviewed and if necessary revised within 3 months of an:

- Approval of a modification;
- Submission of an incident report under Condition C13;

- Approval of an Annual Review under Condition C11; or
- Completion of an audit under Condition C15.

The Plan will also be updated as required to reflect any change to on-site management or monitoring programs referred to in this document, or any changes to Development Consent SSD 7016 or EPL 3035.

Revisions to the Plan will be submitted to the Secretary DPE for approval.

Appendix A
Edge Geotechnical *Borg Panels Timber Processing Facility Modification 1 (MOD 4) Comments on Full Reclamation of Spring Fed Dam (17 May 2021)*

Appendix B
Geosyntec *Review of Groundwater Access associated with the Spring Fed Dam Reclamation, Borg Panels Timber Processing Facility, Oberon NSW (21 February 2022)*

Appendix C
Envirowest Consulting *Partial filling of Spring Dam 124 Lowes Mount Road, Oberon NSW (28 June 2022)*