FINAL

Statement of Environmental Effects

Proposed S96 Modifications to Timber Manufacturing Facility

Borg Panels

124 Lowes Mount Road, Oberon NSW

Borg Panels Pty Ltd

19 January 2018

Revision History

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1 Introduction

1.1 Background

On 29 May 2017 Development Consent SSD 7016 was granted by the Minister for Planning to construct a Particle Board manufacturing facility, modify the existing Medium Density Fibreboard (MDF) manufacturing facility and undertake general site works (the Project) at the existing Borg Panels timber manufacturing facility located on 124 Lowes Mount Road, Oberon. The Project area is known as Lot 1 DP 1085563, Lot 2 DP 1085563, Lot 31 DP1230464, Lot 24 DP 1148073 and Lot 1 DP1228591.

This Statement of Environmental Effects (SEE) has been prepared for modifications to the timber manufacturing facility, approved by Development Consent SSD 7016, including:

- Reorientation of the Materials Handling Building;
- Extension of the Mouldings Warehouse Facility;
- Extension of the Particleboard Chipper/ Debarker Building;
- Extension of the Northern Noise Bund; and
- Design changes to the Surface Water Management System, namely realignment of the northern dirty water swale.

This SEE addresses the matters referred to in Section 79C of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2 Existing Development

Borg Panels operates an existing MDF manufacturing facility in Oberon, NSW. This facility manufactures a range of Customwood MDF products including:

- Standard MDF;
- Moisture Resistant MDF;
- E0 (Low Formaldehyde Emitting) MDF;
- Ultraprime MDF Mouldings;
- Decorative Laminated MDF and Particle Board; and
- Treated paper for the lamination of MDF and Particle Board.

The facility consists of an MDF manufacturing plant, mouldings plant, paper treatment process, decorative finishing and MDF press.

The approved maximum output of the MDF facility is 380,000m^3 of MDF board per calendar year.

1.3 Approved Development

The Project comprised the expansion of the Existing Development to include construction and operation of a particleboard facility, and alterations and additions to the Existing Development, including:

- Construction of a dedicated particle board manufacturing line, which includes:
    - Production of chips from fresh round wood;
    - Production of chips and flakes from waste wood;
    - Production of flakes from fresh produced chip;
    - Wood drying process;
    - Sorting and cleaning of dried chip;
    - Addition of resins and chemicals;
    - Forming, pre-pressing, and thickness pressing of chip;
    - Cutting, cooling and stacking; and
    - Final sanding and processing of finished product.
- Expansion and modernisation of the existing MDF and laminating operations, largely located within existing structures on site to include provision of additional infrastructure and value add to existing products.

1.4 Proposed S96 Modifications to Approved Development

The proposed S96 modifications to the approved particleboard and medium density fibreboard manufacturing facilities are shown in the accompanying S96 Drawing Package and include:

- Reorientation of the materials handling building in the south western corner of the site from an east west orientation to a north south orientation.
- Extension of the mouldings warehouse facility located near the Gate 6 entry, including installation of a fire rated egress tunnel.
- Extension and further enclosure of the new particleboard chipper/debarker building footprint.
- Extension of the existing 6 metre high noise bund on the northern boundary by approximately 150m in length and to approximately 8 metres in height at the eastern end.
- Design changes to the surface water management system, namely realignment of the northern dirty water swale.

A detailed description of the proposed modifications is provided in **Section 4** of this SEE.

1.5 Structure of the SEE

This SEE details the proposed S96 modifications and assesses the environmental impacts of those modifications, as follows:

- **Section 2** – Site Description
- **Section 3** – Planning Matters
- **Section 4** – Proposed S96 Modifications
- **Section 5** – Environmental Impact Assessment
- **Section 6** – Conclusion

2 Site Description

2.1 Location and Context

2.1.1 Regional Overview

The Oberon LGA covers an area of 3,626km² and lies approximately 195 kilometres to the west of Sydney in the NSW Central Tablelands. Refer **Figure 1**.

Figure 1 – Site Context

The LGA boarders the City of Lithgow to the north, Blue Mountains to the east, Wollondilly to the south-east, Goulburn/Mulwaree and Upper Lachlan to the south and Bathurst Regional to the south-west.

The LGA has a population of 5,270 with the majority of the population living in the Oberon township (being 2,459 people). In addition to the main settlement of Oberon there are a number of small villages (including Black Springs, Burraga and Mt David) as well as rural localities.

The primary industries within the LGA are agriculture (including sheep and beef farming, as well as plantation timber growing) and industries associated with logging, sawmilling and timber dressing along with the manufacture of wood products.

The subject land is located on the northern outskirts of Oberon, to the east of Lowes Mount Road. The Borg operations are part of the wider Oberon Timber Complex, with facilities operated by a number of separate companies, which generally involve timber product manufacture. The approved Project area is shown in **Figure 2**.

Figure 2 – Project Area

2.1.2 Surrounding Land Use

The Project is located within an existing industrial zoned area. Industrial zoned land adjoins the Project to the south and west. Rural zoned land adjoins the site to the north and east. Refer **Figure 3**.

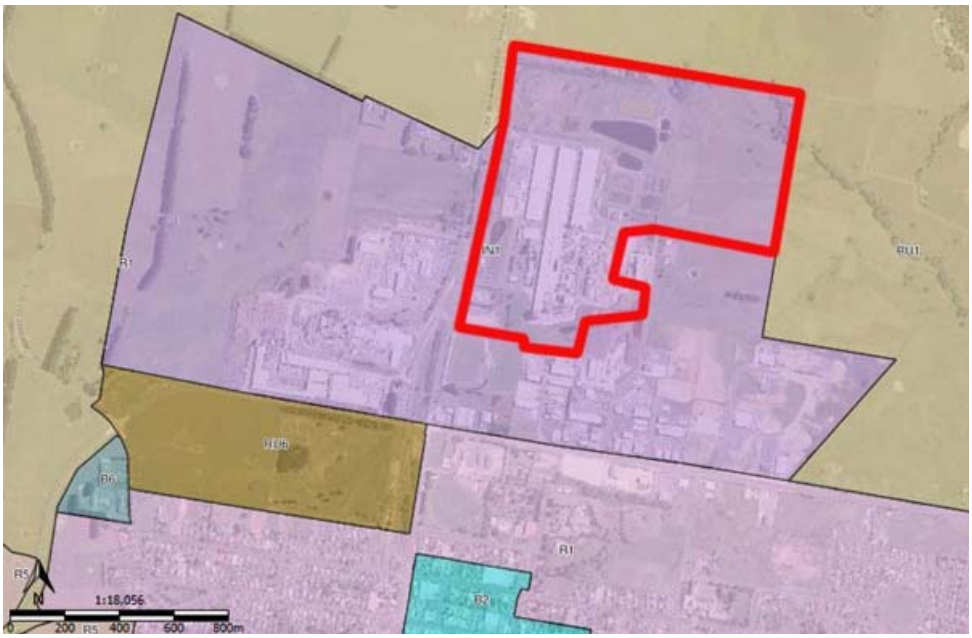


Figure 3 – Zoning Context

2.1.3 Site Description

The Project area is known as Lot 1 DP 1085563, Lot 2 DP 1085563, Lot 31 DP1230464, Lot 24 DP 1148073 and Lot 1 DP1228591. All land is under the ownership of Borg Panels.

2.2 History

After commencing the manufacture of thermolaminated vinyl doors in Charmhaven in the early 1990's, Borg has established itself as a leading Australian manufacturer of melamine panels and components for all joinery applications.

Borg manufactures a range of joinery materials including Polytec Doors (primarily for kitchen and bathroom use), white melamine panels, decorative melamine board products, shelving components, and Createc. With a commitment to Australian manufacturing, Borg focuses much of its activities on manufacturing plants throughout the East Coast (including a world class manufacturing plant at Charmhaven, the Oberon complex and a 45,000m^2 manufacturing and distribution centre at Somersby).

Experiencing significant growth over the past 2 decades, Borg has continued to invest in leading edge, world class machinery across its manufacturing sites. Ensuring the production of the highest quality product in the most cost effective manufacturing processes is integral to Borg's intent of delivering superior value to its customers.

In March 2010, Borg acquired the former Carter Holt Harvey Oberon Medium Density Fibreboard (MDF) facility at Oberon and a few months later, acquired the associated JeldWen factory located adjoining the MDF plant.

Since that time Borg have improved and modernised the existing plant through modifications to the original DA 27/95.

Application was made to DP&E in April 2015 to construct and operate a particleboard facility and make alterations and additions to the existing MDF facility. This application also sought to remove the Borg Panels operations from DA27/95 (that applies to the OTC) and consolidate all Borg operations under a new single development consent.

Project approval (Development Consent SSD 7016) was granted by the Minister for Planning on 29 May 2017 to construct a Particle Board manufacturing facility, modify the existing Medium Density Fibreboard (MDF) manufacturing facility and undertake general site works (the Project).

3 Planning Matters

This section deals with the proposal's consistency with the various statutory and non-statutory provisions. It also addresses the relevant matters for consideration under Section 79C(1) of the *Environmental Planning and Assessment Act 1979*.

3.1 Commonwealth Matters

3.1.1 Environment Protection and Biodiversity Conservation Act 1999

Ecological studies undertaken as part of the EIS (The Design Partnership, June 2016) for the Project determined the site has limited biodiversity value and the Project did not trigger any Matters of National Environmental Significance. Therefore no Referral was required. The proposed S96 modifications are within the assessed Project footprint.

3.2 State Matters

3.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) provide the framework for development and environmental assessment in NSW.

As stated in the EP&A Act, a project is classified as State Significant Development (SSD) pursuant to Part 4 Section 89C of the EP&A Act, if it is declared as SSD by a State Environmental Planning Policy or declared SSD by order of the Minister for Planning in the Government Gazette.

The Project was classified as State Significant Development (SSD) as set out in Clause 4 of Schedule 1 of State Environmental Planning Policy (State and Regional Development) (2011) (SEPPSRD).

Development Consent SSD 7016 was granted by the Minister for Planning on 29 May 2017 to construct the Particle Board manufacturing facility, modify the existing Medium Density Fibreboard (MDF) manufacturing facility and undertake general site works (the Project) at the existing Borg Panels facility located on 124 Lowes Mount Road, Oberon.

During detailed design of the Project a number of minor modifications have been identified to the plans approved with the consent. Application is made to modify Development Consent SSD 7016 as described in **Section 4**, and summarised as follows:

- Orientation and extension changes to approved building structures;
- Alignment changes to the surface water management system; and
- Extension of the northern noise bund.

These proposed modifications are predominantly to the built form and do not alter operational aspects of the Project.

The modifications are sought under *S96 (1A) Modifications involving minimal environmental impact* of the EP&A Act. This SEE demonstrates the proposed modifications are of minimal environmental impact, and that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted.

Section 79C of the EP&A Act sets out the matters for consideration. These are shown in **Table 1**.

Table 1 – Section 79C Matters for Consideration

(1) Matters for consideration—general **In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:**	
(a) (i) any environmental planning instrument, and	**Section 3**
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	No proposed instrument is applicable to this application.
(iii) any development control plan, and	Development Controls Plans do not apply to State Significant Development. However, consideration of the Oberon Council Industrial DCP was undertaken in the EIS (The Design Partnership, June 2016) for the Project. The proposed modifications are substantially the same as the approved Project.
(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and	No Planning Agreement has been entered into under Section 93F.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and	**Section 3**
(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979),	No Coastal Management Plans apply.
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	**Section 5**
(c) the suitability of the site for the development,	The site is already developed for the purposes of timber manufacturing with an approved particleboard plant under construction. The proposed modifications are substantially the same as the approved Project.

(1) Matters for consideration—general **In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:**	
(d) any submissions made in accordance with this Act or the regulations,	Any submissions made in accordance with the Act or the regulations will be addressed following any exhibition period.
(e) the public interest.	The Project is in the public interest as it minimises the current impacts from the development (in regards to both air and noise pollution) whilst increasing regional employment. The proposed modifications are substantially the same as the approved Project.

3.3.2 Environmental Planning and Assessment Regulation 2000

Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* sets out the criteria for designated development.

The Project was classified as a Wood Processing Facility, and approved to manufacture 380,000m^3 of MDF board per year and 500,000m^3 of particleboard per year. On this basis the Project is designated development.

3.3 State Environmental Planning Policies

3.3.1 State Environmental Planning Policy (State and Regional Development) 2011

The Project is 'State Significant Development' in accordance with Division 4.1 of Part 4 of the EP&A Act, as it is triggered as a timber processing facility under Clause 4, Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011. Specifically, the following provision triggers the proposal as State Significant Development:

Development that has a capital investment value of more than $30 million for any of the following purposes:

a) milling plants, sawmills, log processing works, wood-chipping or particle board manufacture

3.3.2 State Environmental Planning Policy 33 – Offensive and Hazardous Development

State Environmental Planning Policy 33 –Hazardous and Offensive Development (SEPP 33), clause 12 outlines that a Preliminary Hazard Analysis screening test must be undertaken to determine the risk of the proposal.

A potentially hazardous industry is defined within SEPP 33 as a development for the purpose of any industry which, if the development were to operate without employing any measures to reduce or minimise its impact, would pose a significant risk to human health, life or property, or to the biophysical environment.

An assessment of the Project in accordance with Hazardous and Offensive Development – Applying SEPP 33 was undertaken during preparation of the EIS (The Design Partnership, June 2016) for the Project and concluded that the Project is not offensive or hazardous.

3.4 Local Matters

3.4.1 Oberon Local Environmental Plan

The Project is located within the Oberon Council Local Government Area. As a result, the provisions of the Oberon Local Environmental Plan 2013 (LEP) need to be considered as part of this SEE.

The subject land is zoned IN1 – General Industrial (**Figure 3**). The proposed development is consistent with the objectives of the zone as set out under the provisions of the LEP.

The Project was designed to minimise adverse impacts on other land uses. The Project will also assist in ensuring the economic viability of the site, ensuring the continuation of employment for the local community and having obvious flow on effects in terms of economic benefits to local settlements (including the Oberon town itself as well as surrounding areas).

The Project as approved meets the definition of heavy industry as a permitted use within the zoning, and is identified as being part of the Oberon Timber Complex. This Section 96 Modification does not alter the use.

The Oberon Timber Complex has certain protections in the Oberon LEP. Clause 6.6 of the Oberon LEP notes requirements for land located within an industrial buffer zone, as shown on the Industrial Buffer Map in the OLEP 2013 (**Figure 4**).

The objectives of *Clause 6.6 Development within a Designated Buffer Area* of the OLEP 2013 are:

a) to protect the operational environment of industries operating within the Oberon Timber Complex,

b) to control development near the Oberon Timber Complex and waste disposal facilities to minimise land use conflict.

Before granting development consent to development on land to which this clause applies, the consent authority must consider the following:

a) the impact that any noise, odour or other emissions associated with existing land uses may have on the development,

b) any proposed measures incorporated into the development that limit the impact of such noise and other emissions associated with the existing land use,

c) any opportunities to relocate the development outside the land to which this clause applies,

d) whether the development is likely to adversely affect the operational environment of any existing development on the land to which this clause applies.

Figure 4 – Indicative Location of the Project Relative to the Industrial Buffer Zone

In this instance it is noted that the Project is located within the Industrial Buffer area, as illustrated above. However, the Project is part of the Oberon Timber Complex, rather than being development that may be affected by the ongoing operations of the Oberon Timber Complex.

Despite the above, it is important to note that mitigation measures have been put in place to minimise the impacts of the development on adjoining land uses, such as installation of appropriate noise reducing technology and buildings, air emissions reduction technologies, and the like.

The proposed S96 modifications are predominantly to built form and do not alter operational aspects of the Project.

3.4.2 Oberon Development Control Plan

Clause 11 of SEPP SSD states:

> *Development control plans (whether made before or after the commencement of this Policy) do not apply to:*
>
> *a. State significant development, or*
>
> *b. development for which a relevant council is the consent authority under section 89D (2) of the Act.*

As a result, no DCPs are relevant to the Project or proposed S96 modification. However, the Oberon Council DCP Part D – Commercial and Industrial Development was considered during assessment of the Project (The Design Partnership, June 2016). The proposed S96 Modifications are substantially the same development as the development for which the consent was originally granted.

3.5 Environment Protection Licence

Environment Protection Licence 3035 (EPL 3035) authorises the carrying out of the scheduled activities chemical production and wood or timber milling or processing at the Borg Panels facility in accordance with the requirements of the licence.

The proposed S96 modifications are predominantly to the built form and do not alter operational aspects of the Project.

4 Proposed S96 Modifications

The proposed modifications to the approved particleboard and medium density fibreboard manufacturing facilities are shown in the accompanying S96 Drawing Package and include:

- Reorientation of the materials handling building in the south western corner of the site from an east west orientation to a north south orientation. This change to orientation will allow for more efficient process connections when introducing recovered wood sources. The orientation change better suits the process making it more reliable, saving power and utilising the area available for plant more effectively.

  The change will include modification of the building construction material type from a short wall concrete panel (2400mm high) and colour bond building to a high wall concrete panel (9000mm high) and colour bond building. The building height will also increase from 8000mm to 12000mm.

- Extension of the mouldings warehouse facility located near the Gate 6 entry to improve in process material flow. This extension will allow conveyor transfer within the building between the laminating lines and storage warehouse, while retaining vehicular access around the periphery of the equipment within the buildings.

  This modification includes building extension, filling of land to match existing floor levels in the immediate vicinity and minimal modification to the surface water management system. A fire rated egress tunnel will also be installed.

- Extension and further enclosure of the new particleboard chipper/debarker building footprint to assist in transfer of wood materials and increase the storage volume for bark. The debarker and chipping plant are contained in concrete and or acoustic panelling, which is used for the building cladding. The extension would incorporate these design features.

- Extension of the existing 6 metre high noise bund on the northern boundary by approximately 150m in length using structurally unsuitable soil materials excavated from site. Height will be variable and up to approximately 8 metres at the eastern end of the bund.

- Design changes to the surface water management system resulting from detailed design outcomes to achieve required flow gradients. The dirty stormwater swale has been realigned to pass water through the existing stormwater first flush basin, prior to entering the new 9000m^3 first flush basin before being discharged to the unnamed creek.

5 Environmental Impact Assessment

5.1 Traffic and Transport

To inform the assessment of the original Project as unmodified, a Traffic Impact Assessment Report (SMEC, 06 May 2016) and subsequent Response to Request for Further Information (SMEC, 21 Sep 2016) was prepared to review the impacts of the Project, both during construction and for the ongoing operation. This assessment looked at both truck and light vehicle movements at the current facility, the anticipated levels of traffic generated during construction, and the estimated heavy vehicle movements post-construction, during the operation of the facility. The findings concluded that the existing road network was capable of absorbing the probable increase in traffic without any significant compromise.

This proposed S96 modification will result in a minor increase in construction traffic movements, for preparation of the pad for the mouldings warehouse facility extension, and extension of the noise bund. This minor increase in construction traffic movements is internal to site only, as it is expected that excavated material from construction of the swales, and other ongoing approved excavations, will provide the sufficient material for the pad and noise bund.

Construction traffic noise would be managed as detailed in **Section 5.4**.

The proposed modifications are not expected to create any change to operational traffic generation or timing of traffic movements. The internal road network and parking facilities plan has been updated to show internal site access during operation.

5.2 Air Quality

To inform the assessment of the original Project as unmodified, Todoroski Air Sciences (16 February 2017) prepared an Air Quality Impact Assessment Report for the Project. The report provided an assessment of the potential air quality impacts associated with the existing operations and proposed expansion of the facility.

The assessment concluded in-stack emission concentration limits are below the applicable POEO limits for the existing operations, and would remain so post construction of the Project. The results indicate that the Project is unlikely to lead to any exceedance of any criteria at any residential receptor at any time.

Overall, the study found that the Project would not lead to any unacceptable or harmful level of air pollutants off-site.

The proposed S96 modifications propose no change to predicted air quality impacts resulting from operation of the proposed modifications. The proposed modifications are predominantly to building design, process connections remain functionally the same, and therefore have not changed inputs or findings of the air dispersion modelling undertaken for the development (Todoroski Air Sciences, 16 Feb 2017).

The increase in building footprint to the bark storage shed will reduce fugitive dust generated by storage of wood products.

The noise bund will be constructed in accordance with the air quality (dust) management measures identified in the approved Project Construction Environmental Management Plan (Borg Construction, 31 May 2017). The bund will be stabilised with vegetation following construction to minimise ongoing dust generation.

5.3 Hazard and Risk

To inform the assessment of the original Project as unmodified, a Preliminary Hazard Analysis (PHA) was undertaken by Sherpa Consulting to assess the potential risk of the Project in accordance with the *Applying SEPP 33 Hazardous and Offensive Industry Development Application Guidelines* (DP&E, 1994). This assessment concluded that the site operations do not constitute a hazardous or offensive industry.

Pre-construction hazard studies have also been prepared and approved by DP&E for the Project, including:

- **Fire Safety Study** covering the relevant aspects of the Department's *Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines'* and the NSW Government's '*Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*'. During preparation of the study consultation was undertaken with FRNSW, and their requirements have been addressed in the final assessment.
- **Hazard and Operability Study (HAZOP)** for the Project, chaired by a qualified person, independent of the Development. This study was consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'*.
- **Final Hazard Analysis** of the Project, consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'*.
- **Construction Safety Study** for the Development, consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'*. This study identified and addressed the potential hazards arising from the interactions with the existing facility during construction.

The proposed S96 modifications are predominantly to building design. Process equipment and connections remain functionally the same, the location of equipment still remains a sufficient distance from the boundary, and therefore the proposed modifications have not changed findings and recommended actions of the hazard and risk studies.

Further hazard and risk studies for the Project, incorporating the proposed modifications once approved, are required pre-commissioning, pre-startup and post-startup of the plant.

5.4 Noise and Vibration

Global Acoustics (18 January 2018) prepared an acoustic assessment for the proposed S96 modifications described within this SEE. The report is included as **Appendix A**.

Acoustics implications associated with the proposed reorientation of the materials handling building include:

- Noise emission from sources within the building, breaking out through the building facades, will be reduced due to inclusion of building materials with better transmission loss characteristics;
- A higher degree of shielding will be provided to the west and south-west of site for some noise sources, due to increased height and building extension to the north; and
- Shielding to the south will be reduced for some noise sources relative to the previous design.

The site noise model was updated to incorporate the reorientated materials handling building. A minor 1 dB increase was predicted for the night period during noise enhancing meteorological conditions for receiver R09 (Albion Street), due to reduced shielding for sources located directly north of the original structure. Inclusion of an acoustic barrier was evaluated, and found to provide sufficient attenuation so as to mitigate the predicted noise increase. Compliance is predicted for all time periods with this barrier included.

The extension of the mouldings warehouse facility should have no significant acoustic implications to long term operational noise emission from the site. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

Extension of the new particleboard chipper/debarker building footprint should have no significant acoustic implications to long term operational noise emission from the site. The proposed increase to building dimensions will provide greater shielding in a southerly direction for noise sources located north of this plant item, and a change to precast concrete panel walls will reduce noise emission. Overall, noise emission should be reduced due to this modification.

The northern boundary bund extension should serve to reduce noise emission in a northerly direction due to increased shielding, with insignificant change in other directions. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

Proposed modifications to the surface water management system should have no significant acoustic implications to long term operational noise emission from the site. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

In summary, the Report concluded the proposed modifications to the Borg Panels Oberon timber manufacturing facility should not materially change from those predicted for the Project Environmental Impact Assessment, provided an acoustic barrier or other suitable attenuation measure is implemented to mitigate the predicted 1 dB increase resulting from reorientation of the materials handling building. Construction noise associated with the proposed modifications should be managed in accordance with the approved Construction Noise Management Plan.

5.5 Soil

As identified in the EIS (The Design Partnership, June 2016) prepared to inform the assessment of the original Project as unmodified, the facility is located on existing industrial zoned land and has been used for industrial land uses for a significant period of time.

The land in the vicinity of the proposed S96 modification for reorientation of the materials handling building was previously used as a fuel depot. Remediation of the fuel depot site has been undertaken and is complete (Envirowest Consulting, 20 June 2017).

Prior to construction of the proposed modifications, the Erosion and Sediment Control Plans for the Project will be updated to incorporate control measures for the modifications, and those measures are to be implemented.

On completion of construction, building modifications will be stabilised with hard surfaces, the surface water management system will be stabilised/vegetated in accordance with the design drawings, and the noise bund will be stabilised with vegetation to minimise ongoing dust generation.

During operation of the Project, all surfaces are to remain stabilised. Where maintenance works require soil disturbance, the area is to be revegetated or reinstated as soon as practicable following completion of the works.

5.6 Water

To inform the assessment of the Project as unmodified, a Water Cycle Impact Assessment was prepared by The Sustainability Workshop (12 May 2016) to review the impacts on both surface and ground water. The existing site stormwater system accepts stormwater from other parts of the Oberon Timber Complex and processes this water before discharge. This ensures that contaminants are significantly reduced.

As part of the Project, an extensive upgrade to the existing stormwater management system was approved to be implemented, which included additional retention and catchment basins. This design ensured that stormwater and any liquids from a potential event can be adequately retained on site prior to treatment, reuse or disposal. This significantly reduced the potential impacts on the surrounding environment in an emergency event.

Further information was also provided in the Response to Submissions (Sustainability Workshop, 12 Sep 2016) to further clarify information provided in the Water Cycle Impact Assessment.

Following approval of the Project, Borg have worked closely with The Sustainability Workshop to take the approved concept stormwater management system design and develop the detailed construction design. This process has required minor modifications to the approved system including realigning the route of the northern dirty water swale.

The Sustainability Workshop (18 December 2017) have assessed the impact of the proposed modification against the surface water management system approved by Development Consent SSD 7016. Refer to **Appendix B** for Sustainability Workshop's (18 December 2017) detailed assessment.

In summary, the assessment found that the proposed location and length of the swale is more preferable from a water quality perspective and should achieve a better result than was modelled and approved.

5.7 Waste

Any additional construction waste generated by the proposed modifications would be managed in accordance with the approved Construction Environmental Management Plan (Borg Construction, 31 May 2017) for the Project.

The proposed modifications are predominantly to building design, with process connections remaining functionally the same. Therefore it is not expected that operation of the modified development will create any change to waste generated.

5.8 Greenhouse Gas Emissions

To inform the assessment of the original Project as unmodified, Northmore Gordon (29 April 2016) undertook a Greenhouse Gas Assessment for the Project. The assessment considered relevant national and state policy and guidelines for GHG emissions and assessment. In addition, the GHG assessment followed the accounting standards for the GHG Protocol. Emissions were reported in terms of standardised carbon dioxide equivalent (CO_2-e) values, which account for a number of GHGs.

The proposed S96 modifications are predominantly to building design, with process connections remaining functionally the same. On this basis it is assumed there will be no change to GHG emissions from the proposed modifications when compared to those approved by the Project.

5.9 Visual Impacts

To inform the assessment of the original Project as unmodified, a Visual Impact Assessment (The Design Partnership, 19 May 2016) was prepared. This report found there are significant existing visual impacts on the area from the operations and infrastructure of the Oberon Timber Complex, including the Borg Panels site as well as other facilities in the Complex not associated with the Project.

The Project is located within a highly industrialised context. The wider Oberon Timber Complex has been an integral part of Oberon for many years. As such, the existing infrastructure has been a visible part of the Oberon skyline for many years. Large industrial buildings and chimneys are one of the key visual features.

The S96 modification includes reorientation of the materials handling building and increasing the building height, extension of the mouldings warehouse facility, and extension of the particleboard chipper/debarker building. These building extensions will have minimal impact on the visual amenity of the locality, given the approved significant visual impacts in the area from the operations and infrastructure of the Oberon Timber Complex.

While the building façade along Lowes Mount Road will be larger as a result of the reorientation of the materials handling building, it will not further detract from the visual amenity of the site, which already consists of large buildings and tall process structures.

Extension of the noise bund along the northern boundary will provide an increased visual screen to residences located in Clover Lane from the existing facility, approved Project and proposed modifications included in this application. Established vegetation along the northern boundary in the vicinity of the surface water swales would be retained during construction of extensions to the noise bund.

The proposed S96 modifications to the surface water management system include realignment of the dirty water swale. This realignment is unlikely to be noticeable beyond the site boundary.

In summary, the proposed S96 modifications are considered to have an overall low impact on the visual character of the area. The approved mitigation measures for the Project have been incorporated into the design of the modifications where appropriate, including landscaping/vegetation of swale, materials and colours to match the existing buildings, and minimising lighting impacts on surrounding residential development and local roads.

5.10 Social and Economic

Assessment of social and economic impacts, during preparation of the EIS (The Design Partnership, June 2016) prepared for the original Project as unmodified, found the development to have positive impacts on local employment levels and resultant positive social impacts.

The proposed S96 modifications are not expected to create any change to the findings of the EIS.

5.11 Ecology

A Biodiversity Assessment (Peak Land Management, May 2016) was prepared to inform the assessment of the original Project as unmodified. This report concluded that the Project site is severely disturbed, with most native vegetation under and around the existing facility being cleared, and exotics or planted species occurring around the northern, western and parts of the eastern sides of the site.

The proposed S96 modification is to:

- realign the northern dirty water swale flowing from the western side of the site to connect with the Existing Stormwater Flush Basin; and
- on the eastern side of the site connect the Existing Stormwater Flush Basin with the newly approved 9,000m^3 First Flush Basin.

These proposed modifications are anticipated to have no significant impact to ecological matters. Although Apple Box – Yellow Box Dry Grassy Woodland of the SE Highlands Bioregion is recorded on the eastern parts of the site, the proposed S96 modifications do not impact the area of this Endangered Ecological Community (EEC).

It is also proposed to extend the noise bund located along the northern boundary of the site. Established vegetation along the northern boundary in the vicinity of the surface water swales would be retained during construction of extensions to the noise bund and therefore no impact is proposed to this established vegetation.

The remaining building extensions and reorientation are in already disturbed areas void of vegetation and therefore there is no predicted impact to flora or fauna.

5.12 Indigenous Heritage

To inform the assessment of the original Project as unmodified, an assessment of indigenous heritage matters was undertaken as part of the EIS (The Design Partnership, June 2016).

Four artefacts have previously been recorded on the site in a 1986 archaeological survey carried out by Brayshaw and Associates prior to the construction of the Borg Panels MDF manufacturing plant. The Brayshaw and Associates report concluded that:

> *In view of the disturbance sustained to the area, the apparent sparseness of the artefacts, and the clay deposit which would make excavation and accurate provenance extremely difficult, excavation of the area is not appropriate.*

This EIS concluded that given the scatted nature of artefacts identified during the previous study carried out, the soil type and general topography of the site and the conclusions of that report, no further studies are considered to be necessary.

However, if any indigenous artefacts are uncovered during earthworks, then work will be stopped, and a suitable representative from the indigenous community contacted. Works would only recommence when an appropriate and approved management strategy has been agreed to by all of the relevant stakeholders.

It is recommended that the Aboriginal and European Heritage Management and Mitigation Measures outlined in the approved Construction Environmental Management Plan (Borg Construction, 31 May 2017) for the Project be adopted for the proposed modifications. The CEMP includes an unexpected finds protocol for heritage items.

5.13 European Heritage

To inform the assessment of the original Project as unmodified, an assessment of European heritage matters was undertaken as part of the EIS (The Design Partnership, June 2016). No heritage items were located within close proximity to the Project, the closest being the Oberon Station Precinct, which is approximately 500m from the site.

The EIS concluded, given the distance from the site of the items of European heritage, no mitigation measures are considered to be necessary. Existing Oberon Timber Complex activities (not part of the Borg Panels operations) are located on a lot adjoining these items, and although the Project brings the Borg activities closer to the heritage item there is still significant physical separation.

It is recommended that the Aboriginal and European Heritage Management and Mitigation Measures outlined in the approved Construction Environmental Management Plan (Borg Construction, 31 May 2017) for the Project be adopted for the proposed modifications. The CEMP includes an unexpected finds protocol for heritage items.

5.14 Cumulative Impacts

Overall, the proposed S96 modifications will have minimal impact on the immediate area and surrounding environment when compared to the approved Project as unmodified. The proposed modifications are predominantly to building design, with process connections remaining functionally the same, and therefore process impacts remain largely unchanged.

With the mitigation and management measures proposed in this SEE, it is considered that the potential impacts of the proposed S96 modification will have minimal environmental impact.

6 Conclusion

The assessment of potential environmental impacts of the proposed S96 modification concludes the proposed modifications to the approved development are of minimal environmental impact. Furthermore, the modified development remains substantially the same as the development for which the consent was originally granted. Based on this information we request the Department assesses this application as a Section 96 (1A) Application, as defined in the *Environmental Planning and Assessment Act 1979*.

Appendices

Appendix A – Global Acoustics S96 Modifications Assessment

Global Acoustics

Noise and Vibration Analysis and Solutions

18 January 2018

Borg Manufacturing Pty Ltd
2 Wella Way
Somersby NSW 2250
Attention: Victor Bendevski

Dear Victor,

Regarding: Borg Panels Oberon, S96(1A) modification to Development Consent SSD 7016

1 INTRODUCTION

This letter provides acoustics advice regarding proposed modifications to the Borg Panels timber manufacturing facility in Oberon, NSW, owned and operated by Borg Manufacturing (Borg). Borg are preparing a Statement of Environmental Effects for a proposed S96(1A) modification to Development Consent SSD 7016, the Borg Panels Oberon Project Approval. Proposed modifications include:

1. reorientation of the materials handling building in the south western corner of the site from an east west orientation to a north south orientation;

2. extension of the mouldings warehouse facility located near the Gate 6 entry to improve in process material flow;

3. extension of the new particleboard chipper/debarker building footprint to assist in transfer of wood materials and increase the storage volume for bark;

4. extension of the existing 6 metre high noise bund on the northern boundary by approximately 150 metres in length using structurally unsuitable soil materials excavated from site; and

5. design changes to the surface water management system resulting from detailed design outcomes to achieve required flow gradients.

Plans illustrating proposed changes are included as Attachment A.

2 ACOUSTICS ADVICE

The following sections provide acoustics advice regarding each of the proposed modifications.

2.1 Materials Handling Building

Borg propose to reorientate the materials handling building in the south western corner of the site from an east west orientation to a north south orientation. This change to orientation will allow for more efficient process connections when introducing recovered wood sources. The orientation change better suits the process making it more reliable, saving power and utilising the area available for plant more effectively.

The change will include modification of the building construction material type from a short wall concrete panel (2400mm high) and sheet metal building to a high wall concrete panel (9000mm high) and sheet metal building. The building height will also increase from 8000mm to 12000mm.

Acoustics implications associated with this proposed modification include:

- noise emission from sources within the building, breaking out through the building facades, will be reduced due to inclusion of building materials with better transmission loss characteristics;
- a higher degree of shielding will be provided to the west and south-west of site for some noise sources, due to increased height and building extension to the north; and
- shielding to the south will be reduced for some noise sources relative to the previous design.

The site noise model was updated to incorporate the proposed materials handling building. A minor 1 dB increase was predicted for the night period during noise enhancing meteorological conditions for receiver R09 (Albion Street), due to reduced shielding for sources located directly north of the original structure. Inclusion of an acoustic barrier was evaluated, and found to provide sufficient attenuation so as to mitigate the predicted noise increase. Minimum dimensions for the barrier are 30 metres long and 7.8 metres high. The north-east corner of the barrier should align with the north-east corner of the original building. The modelled barrier location is shown as a blue rectangle in Figure 1.

Compliance is predicted for all time periods with this barrier included. Borg may investigate other options for mitigating noise from the affected noise sources, which could include construction of a suitable building on the southern site boundary and/or providing further attenuation at the source for key plant items. In this case, suitable evaluation will be undertaken to ensure predicted compliance with relevant noise criteria is maintained.

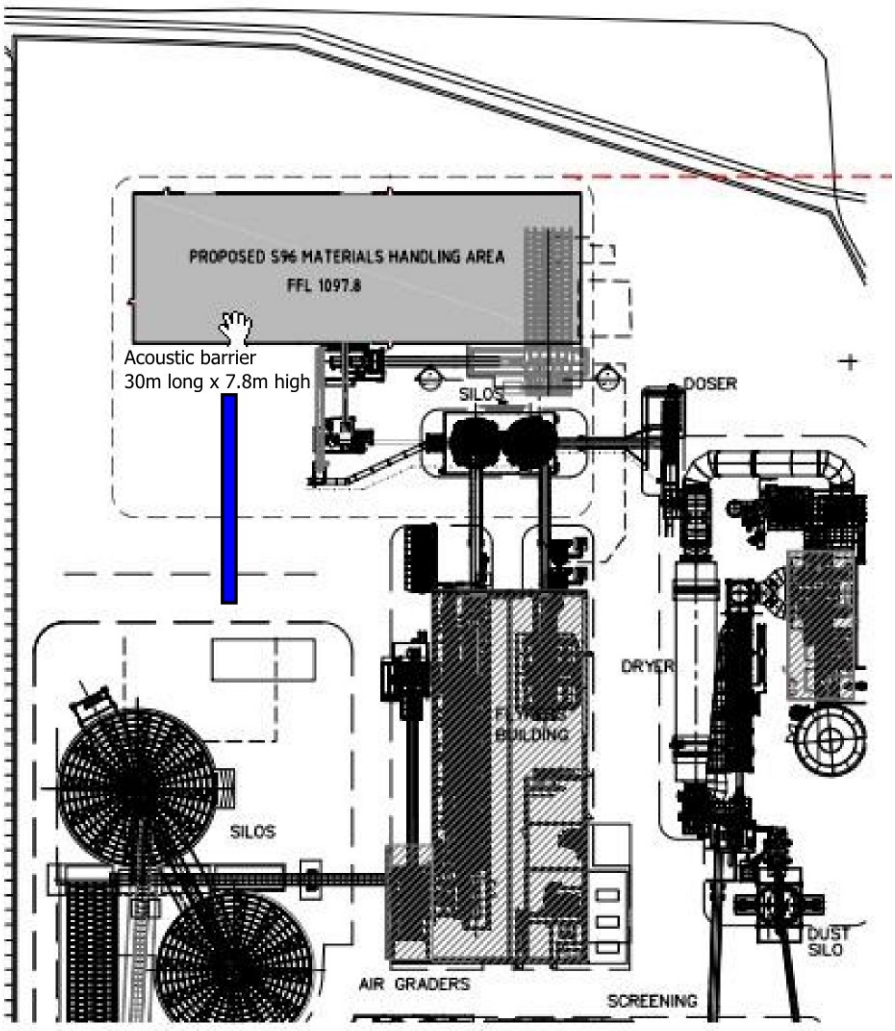


Figure 1: Materials Handling Building, Modelled Barrier Location

2.2 Mouldings Warehouse Facility

Borg propose to extend the mouldings warehouse facility located near the Gate 6 entry to improve in-process material flow. This extension will allow conveyor transfer within the building between the laminating lines and storage warehouse, while retaining vehicular access around the periphery of the equipment within the buildings.

This modification includes building extension, filling of land to match existing floor levels in the immediate vicinity and minimal modification to the surface water management system. A fire rated egress tunnel will also be installed.

This proposed modification should have no significant acoustic implications to long term operational noise emission from the site. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

2.3 New Particleboard Chipper/Debarker Building

Borg propose to extend the new particleboard chipper/debarker building footprint to assist in transfer of wood materials and increase the storage volume for bark. The debarker and chipping plant will be contained in a precast concrete and acoustic panel clad building. An important modification is a change from acoustic panel walls to precast concrete, which will improve transmission loss characteristics and reduce noise emission from this significant plant item.

This proposed modification should have no significant acoustic implications to long term operational noise emission from the site. The proposed increase to building dimensions will provide greater shielding in a southerly direction for noise sources located north of this plant item, and a change to precast concrete panel walls will reduce noise emission. Overall, noise emission should be reduced due to this modification.

2.4 Northern Boundary Bund Extension

Borg propose to extend the existing 6 metre high noise bund on the northern boundary by approximately 150 metres in length using structurally unsuitable soil materials excavated from site. Height will be variable and up to approximately 8 metres on the eastern end of the bund.

This proposed modifications should serve to reduce noise emission in a northerly direction due to increased shielding, with insignificant change in other directions. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

2.5 Surface Water Management System

Borg propose design changes to the surface water management system resulting from detailed design outcomes to achieve required flow gradients. The dirty storm water swale will be realigned to pass water through the existing storm water first flush basin, prior to entering the new 9000m^3 first flush basin before being discharged to an unnamed creek.

This proposed modification should have no significant acoustic implications to long term operational noise emission from the site. Construction noise associated with this modification should be managed in accordance with the approved Construction Noise Management Plan.

3 CONCLUSION

Based on the above it is my opinion that proposed modifications to the Borg Panels Oberon timber manufacturing facility should not materially change from those predicted for the Project Environmental Impact Assessment, provided an acoustic barrier or other suitable attenuation measure is implemented to mitigate the predicted 1 dB increase resulting from reorientation of the material handling building. Construction noise associated with the proposed modifications should be managed in accordance with the approved Construction Noise Management Plan.

I trust this information meets your requirements. If you have any questions or need further details please contact me.

Prepared: Jeremy Welbourne
Civil Engineer (Acoustics)

QA review: Tony Welbourne
Director

Attachment A

DRAWING LIST	
No.	Drawing Title
S96 00	COVERSHEET
S96 05	PROPOSED S96 MODIFICATION
S96 06	SURFACE WATER MANAGEMENT SYSTEM
S96 07	NOISE MOUND EXTENSION
S96 08	INTERNAL ROAD NETWORK AND PARKING FACILITIES
S96 210	MATERIAL HANDLING (SHT 1)
S96 211	MATERIAL HANDLING (SHT 2)
S96 212	MATERIAL HANDLING (SHT 3)
S96 213	MATERIAL HANDLING (SHT 4)
S96 240	DEBARKER and CHIPPER PLAN EXTENSION
S96 241	DEBARKER and CHIPPER PLAN EXTENSION
S96 242	DEBARKER and CHIPPER PLAN EXTENSION
S96 320	EXTENSION TO PRODUCTION BLDG'S.
S96 321	EXTENSION TO PRODUCTION BLDG'S.
S96 322	EXTENSION TO PRODUCTION BLDG'S.

BORG CONSTRUCTION

PROPOSED SECTION 96 MODIFICATION

BORG PANELS TIMBER MANUFACTURING FACILITY

AT 124 LOWES MOUNT ROAD, OBERON

LOCATION MAP

No.	Description	Date	Drawn	Checked
B	SECTION 96 MODIFICATION	09/12/11	JS	VB

BORG CONSTRUCTION

OFFICE

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
COVER SHEET

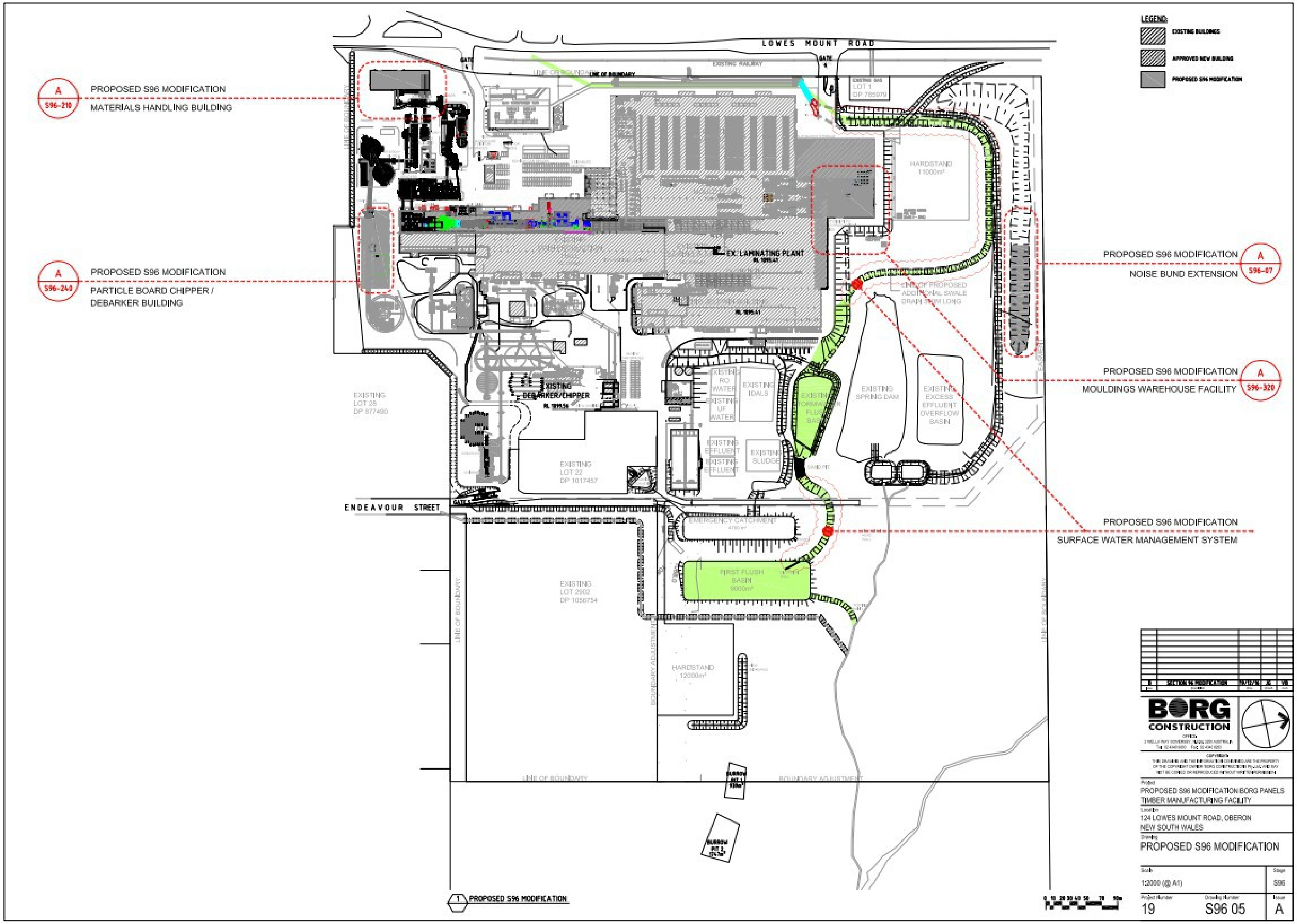
Scale: NTS (@ A1)

Stage: S96

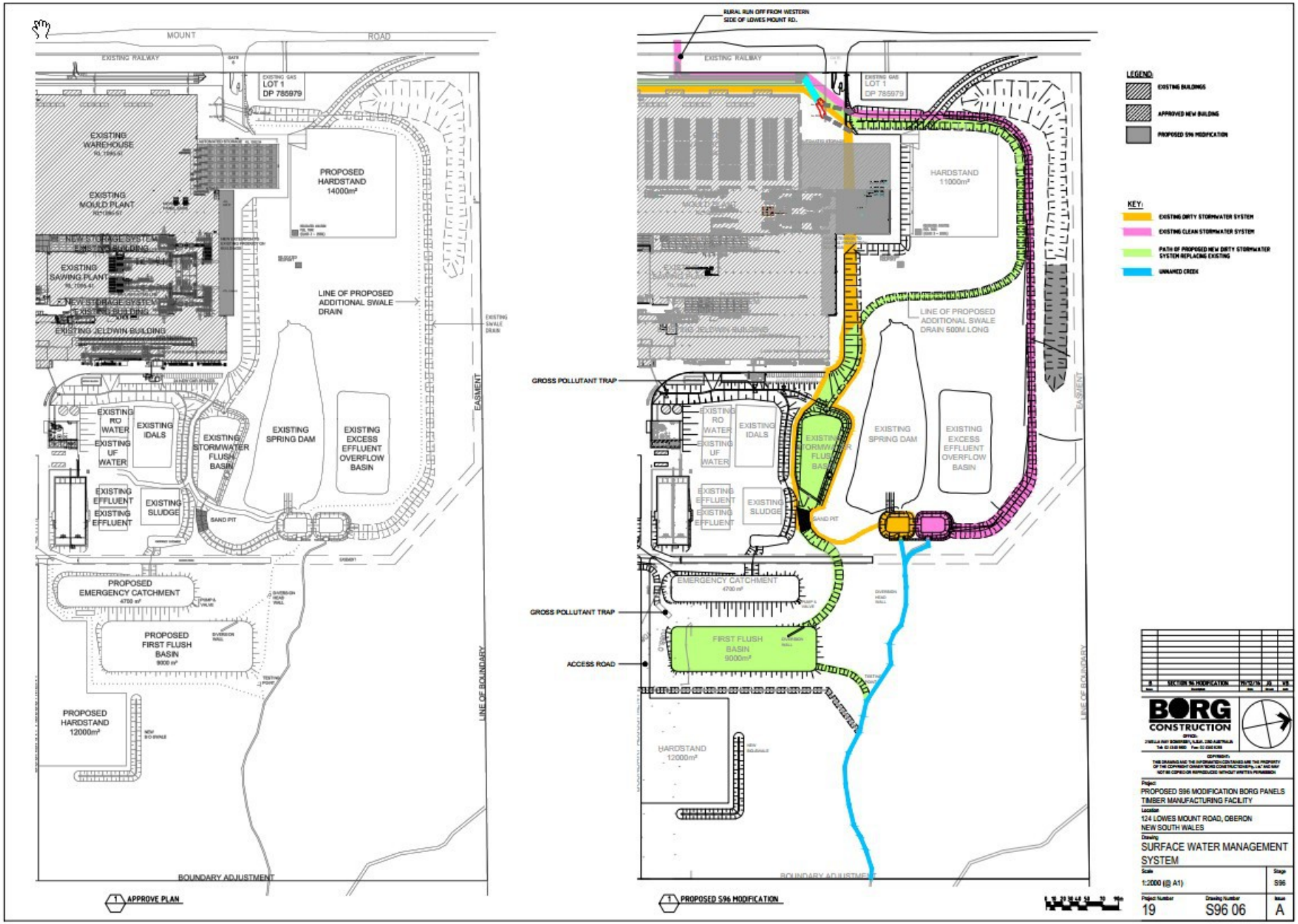
Project Number: 19

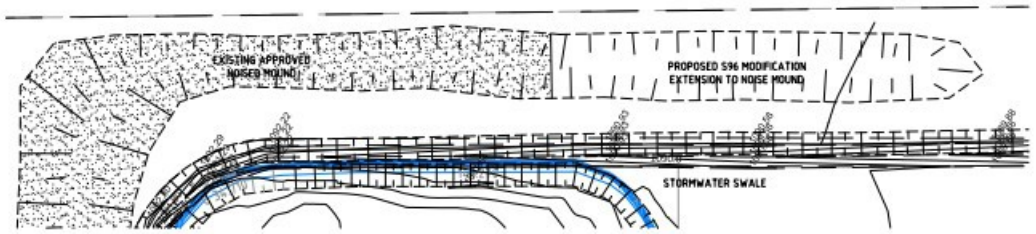
Drawing Number: S96 00

Issue: A



LEGEND:
EXISTING BUILDINGS
APPROVED NEW BUILDING
PROPOSED S96 MODIFICATION
LOWES MOUNT ROAD
EXISTING RAILWAY
LINE OF BOUNDARY
A
S96-210
PROPOSED S96 MODIFICATION
MATERIALS HANDLING BUILDING
A
S96-240
PROPOSED S96 MODIFICATION
PARTICLE BOARD CHIPPER / DEBARKER BUILDING
HARDSTAND 11000m²
EX. LAMINATING PLANT
PROPOSED S96 MODIFICATION
NOISE BUND EXTENSION
A
S96-07
LINE OF PROPOSED ADDITIONAL SWALE DRAIN 580M LONG
PROPOSED S96 MODIFICATION
MOULDINGS WAREHOUSE FACILITY
A
S96-320
EXISTING LOT 28 DP 877490
EXISTING DEBARKER/CHIPPER
EXISTING RO WATER
EXISTING IDALS
EXISTING UF WATER
EXISTING SPRING DAM
EXISTING EXCESS EFFLUENT OVERFLOW BASIN
EXISTING EFFLUENT
EXISTING SLUDGE
EXISTING LOT 22 DP 1017457
ENDEAVOUR STREET
EMERGENCY CATCHMENT
PROPOSED S96 MODIFICATION
SURFACE WATER MANAGEMENT SYSTEM
FIRST FLUSH BASIN 9000m²
EXISTING LOT 2902 DP 1056754
HARDSTAND 12000m²
BOUNDARY ADJUSTMENT
LINE OF BOUNDARY
BORROW PIT
1 PROPOSED S96 MODIFICATION
BORG CONSTRUCTION
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY
Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES
Drawing
PROPOSED S96 MODIFICATION
Scale
1:2000 (@ A1)
Stage
S96
Project Number
19
Drawing Number
S96 05
Issue
A


MOUNT
ROAD
EXISTING RAILWAY
EXISTING GAS
LOT 1
DP 785979
EXISTING WAREHOUSE
EXISTING MOULD PLANT
EXISTING SAWING PLANT
EXISTING JELDWIN BUILDING
PROPOSED HARDSTAND 14000m²
LINE OF PROPOSED ADDITIONAL SWALE DRAIN
EXISTING SWALE DRAIN
EASEMENT
EXISTING RO WATER
EXISTING UF WATER
EXISTING IDALS
EXISTING STORMWATER FLUSH BASIN
EXISTING SPRING DAM
EXISTING EXCESS EFFLUENT OVERFLOW BASIN
EXISTING EFFLUENT
EXISTING SLUDGE
SAND PIT
PROPOSED EMERGENCY CATCHMENT 4700 m²
PROPOSED FIRST FLUSH BASIN 9000 m²
PROPOSED HARDSTAND 12000m²
LINE OF BOUNDARY
BOUNDARY ADJUSTMENT
1 APPROVE PLAN
RURAL RUN OFF FROM WESTERN SIDE OF LOWES MOUNT RD.
HARDSTAND 11000m²
LINE OF PROPOSED ADDITIONAL SWALE DRAIN 500M LONG
GROSS POLLUTANT TRAP
EMERGENCY CATCHMENT 4700 m²
FIRST FLUSH BASIN 9000m²
ACCESS ROAD
HARDSTAND 12000m²
1 PROPOSED S96 MODIFICATION
LEGEND:
EXISTING BUILDINGS
APPROVED NEW BUILDING
PROPOSED S96 MODIFICATION
KEY:
EXISTING DIRTY STORMWATER SYSTEM
EXISTING CLEAN STORMWATER SYSTEM
PATH OF PROPOSED NEW DIRTY STORMWATER SYSTEM REPLACING EXISTING
UNNAMED CREEK
B SECTION 96 MODIFICATION
BORG CONSTRUCTION
COPYRIGHT:
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY
Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES
Drawing
SURFACE WATER MANAGEMENT SYSTEM
Scale
1:2000 (@ A1)
Stage
S96
Project Number
19
Drawing Number
S96 06
Issue
A



1 NOISE MOUND PLAN - A

2 NOISE MOUND ELEVATION - A

B	SECTION 96 MODIFICATION	15/07/19	JC	VB

BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

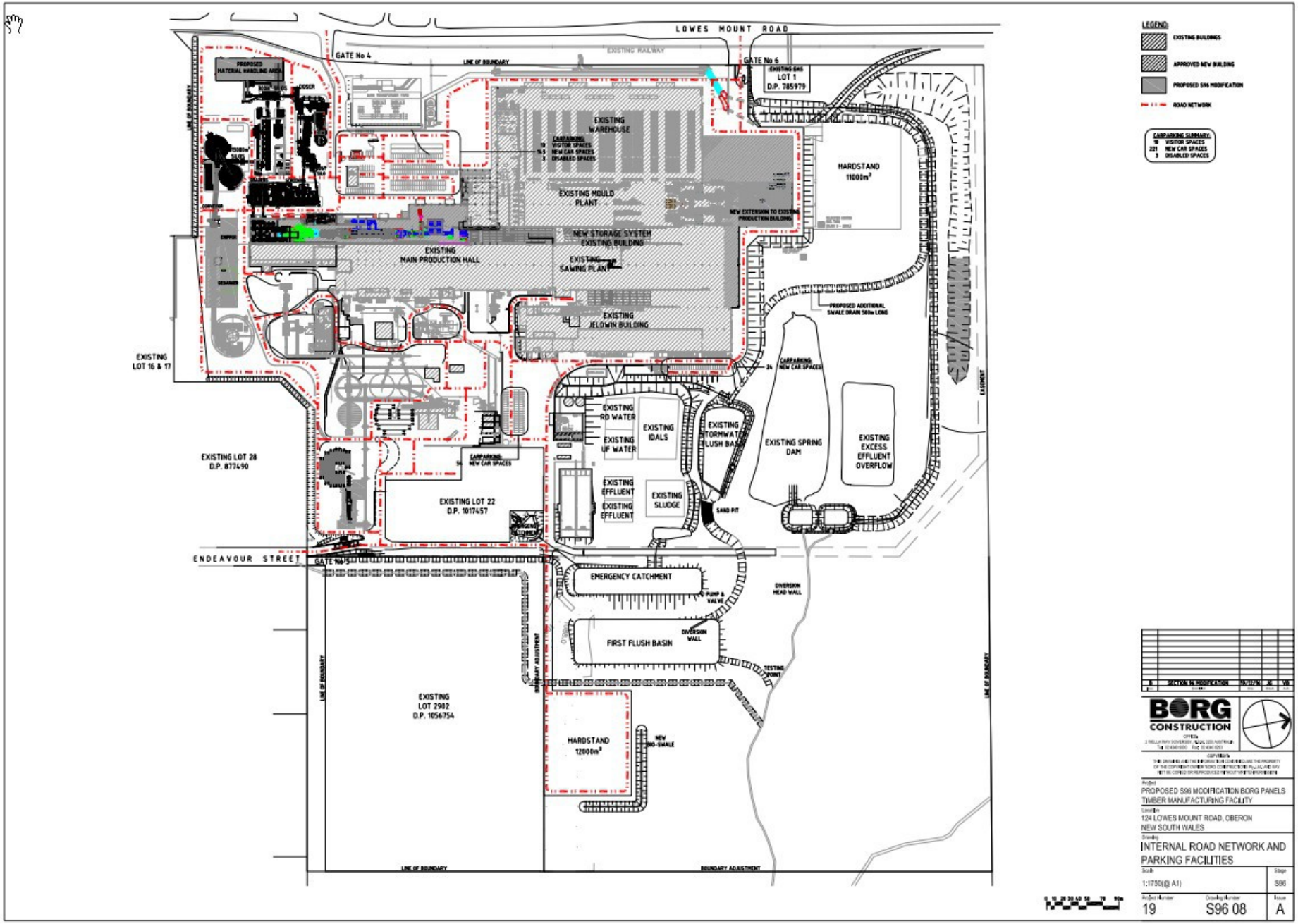
Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

Drawing
NOISE MOUND EXTENSION

Scale	Stage
1:300 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 07	A

0 10 20 30 40 50 70 90m



B	SECTION 96 MODIFICATION	28/11/07	JK	VB

BORG CONSTRUCTION

OFFICE
2 NELLA WAY SOUTHERN HIGHLANDS NSW 2575 AUSTRALIA
Tel 02 4340 1000 Fax 02 4340 1010

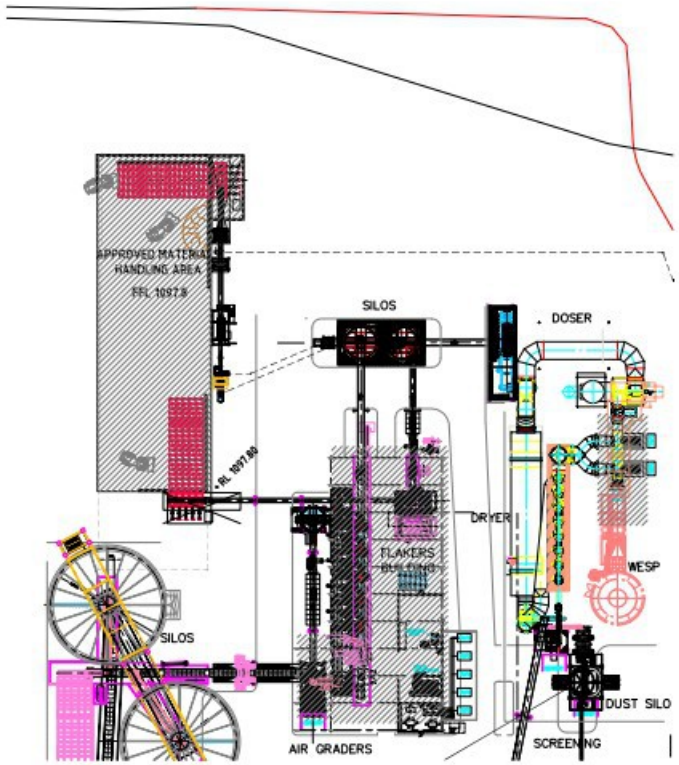
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
INTERNAL ROAD NETWORK AND PARKING FACILITIES

Scale	Stage
1:1750(@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 08	A



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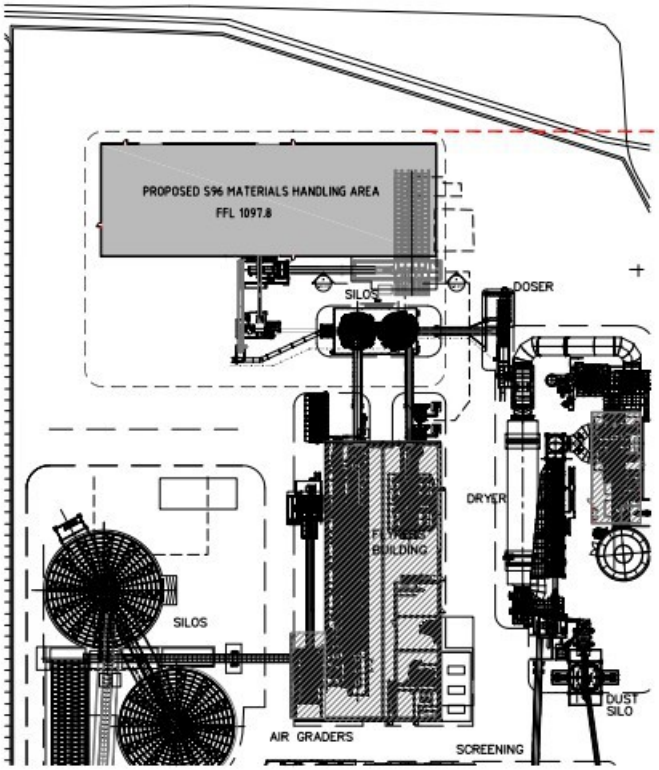


2 PROPOSED S96 MODIFICATION

LEGEND

APPROVED

PROPOSED S96 MODIFICATION

PROPOSED S96 MODIFICATION
MATERIAL HANDLING
1
S96-211

A	SECTION 96 MODIFICATION	30/10/17	JM	VB

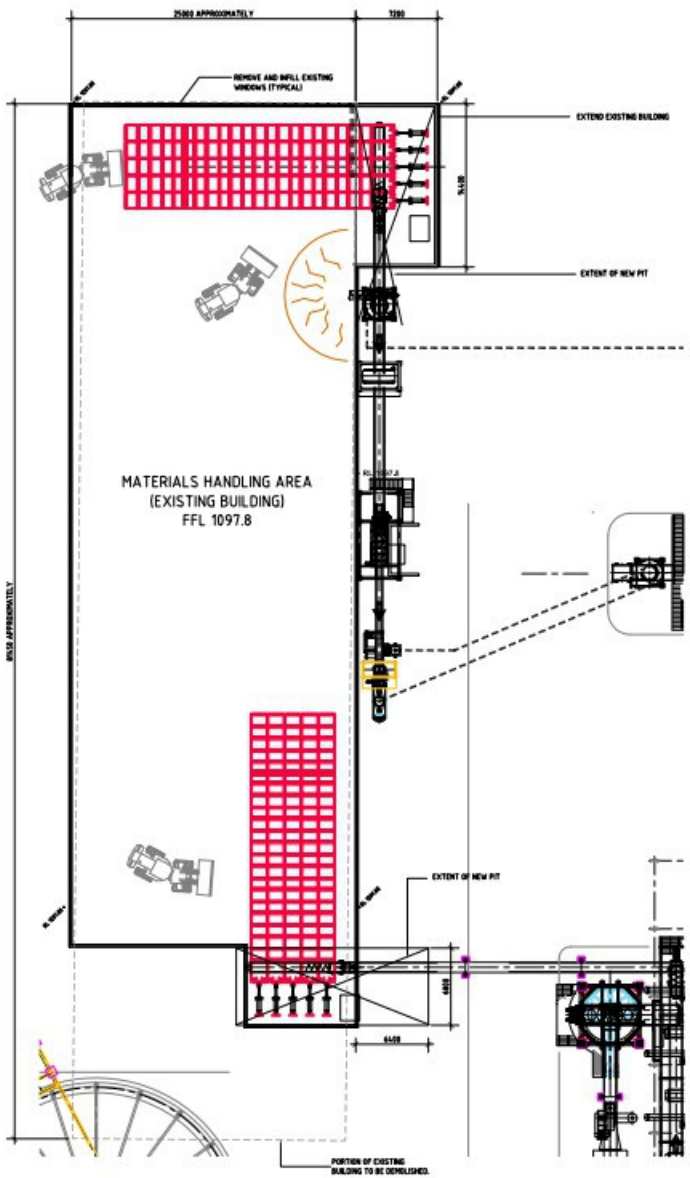
BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS
TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

Drawing
MATERIALS HANDLING (SHT 1)

Scale	Stage
APPROX 1:500 (@ A1)	S96
Project Number: 19	Drawing Number: S96 210
	Issue: A



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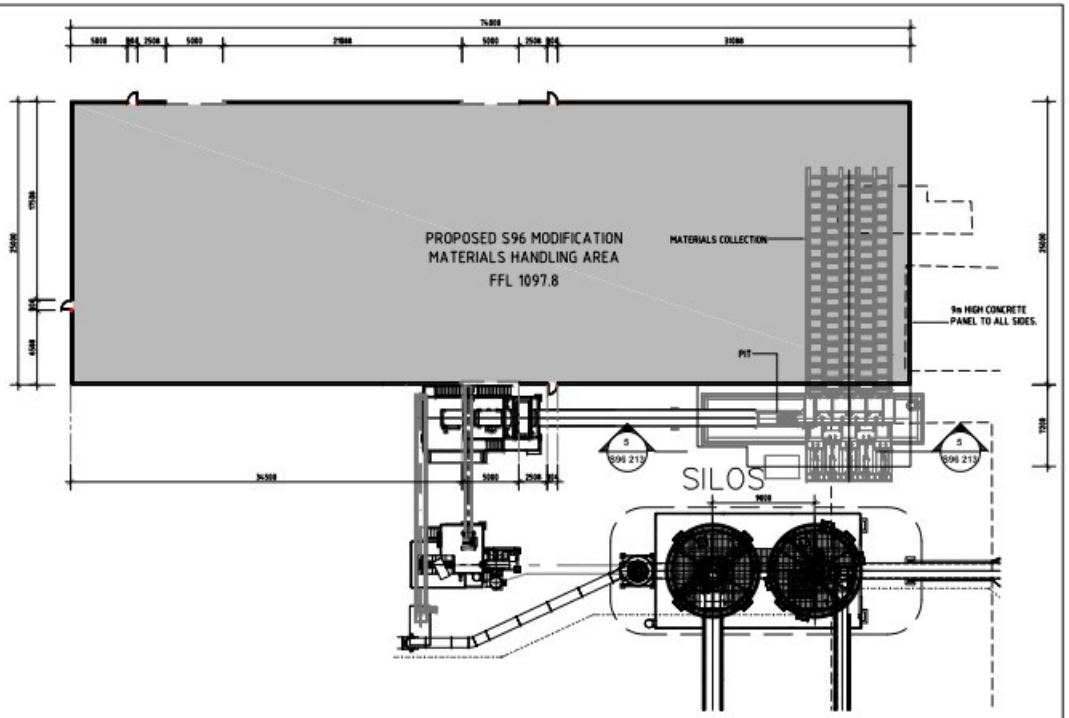


2 PROPOSED S96 MODIFICATION (FLOOR PLAN)

B	SECTION 96 MODIFICATION	19/12/17	JM	VB

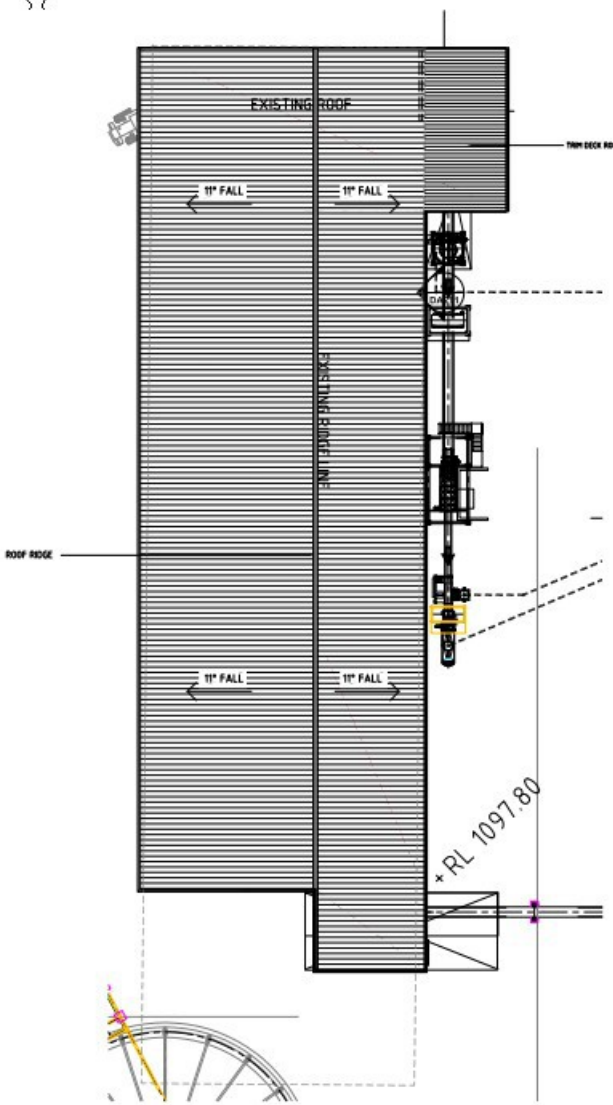
BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS
TIMBER MANUFACTURING FACILITY

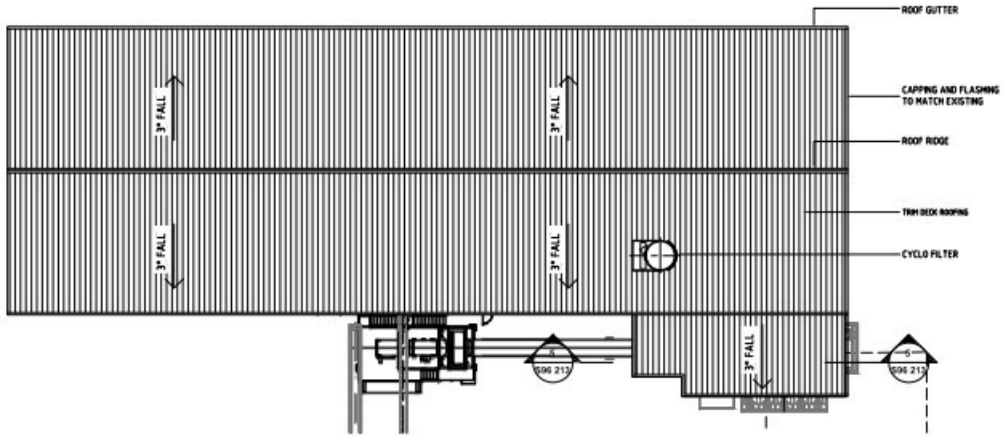
Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

Drawing
MATERIALS HANDLING (SHT 2)

Scale	Stage
APPROX 1:200 (@ A1)	S96
Project Number: 19	Drawing Number: S96 211
	Issue: A



1 APPROVED ROOF PLAN



2 PROPOSED S96 MODIFICATION (ROOF PLAN)

B	SECTION 96 MODIFICATION	06/12/21	JM	VB

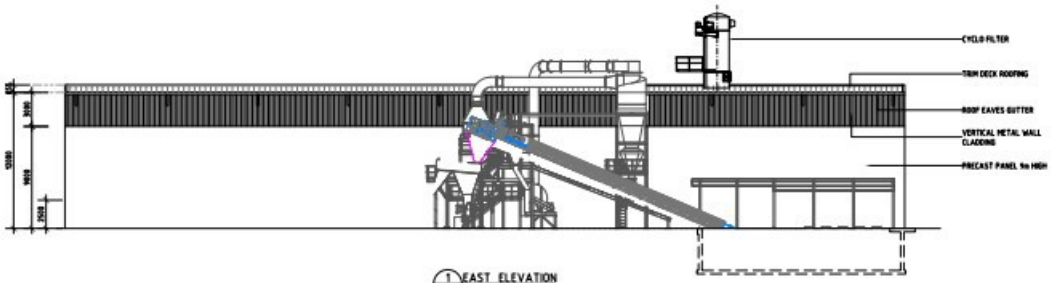
BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

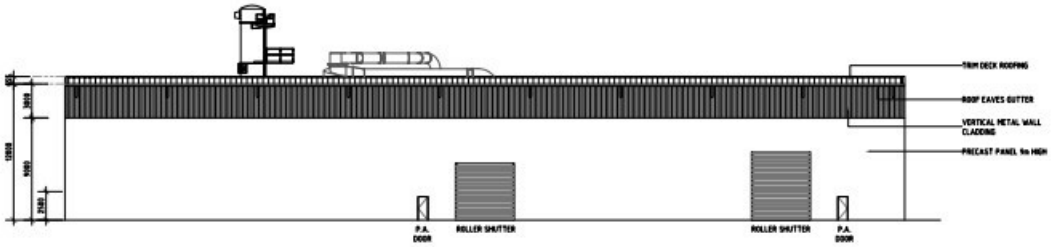
Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
MATERIALS HANDLING (SHT 3)

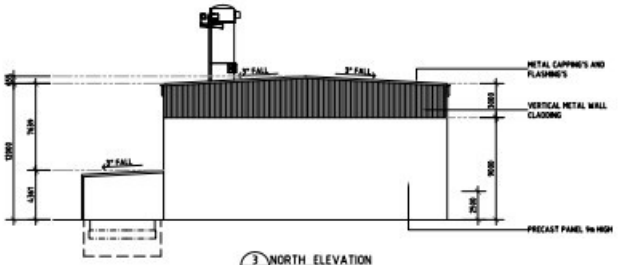
Scale	Stage
APPROX 1:200 (@ A1)	S96
Project Number: 19	Drawing Number: S96 212
	Issue: A



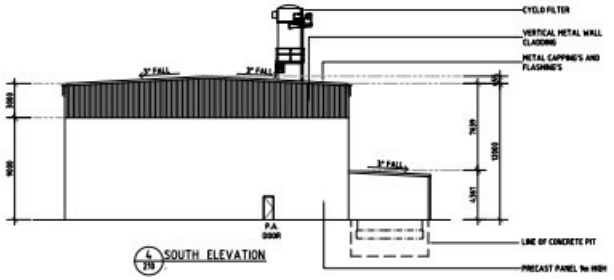
1/210 EAST ELEVATION



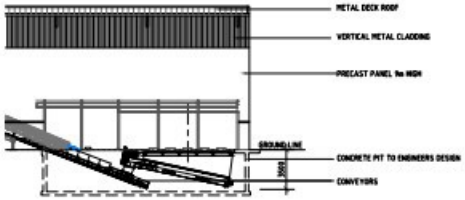
2/210 WEST ELEVATION



3/210 NORTH ELEVATION



4/210 SOUTH ELEVATION



5/210 SECTION A-A

B	SECTION 96 MODIFICATION		JM	VB

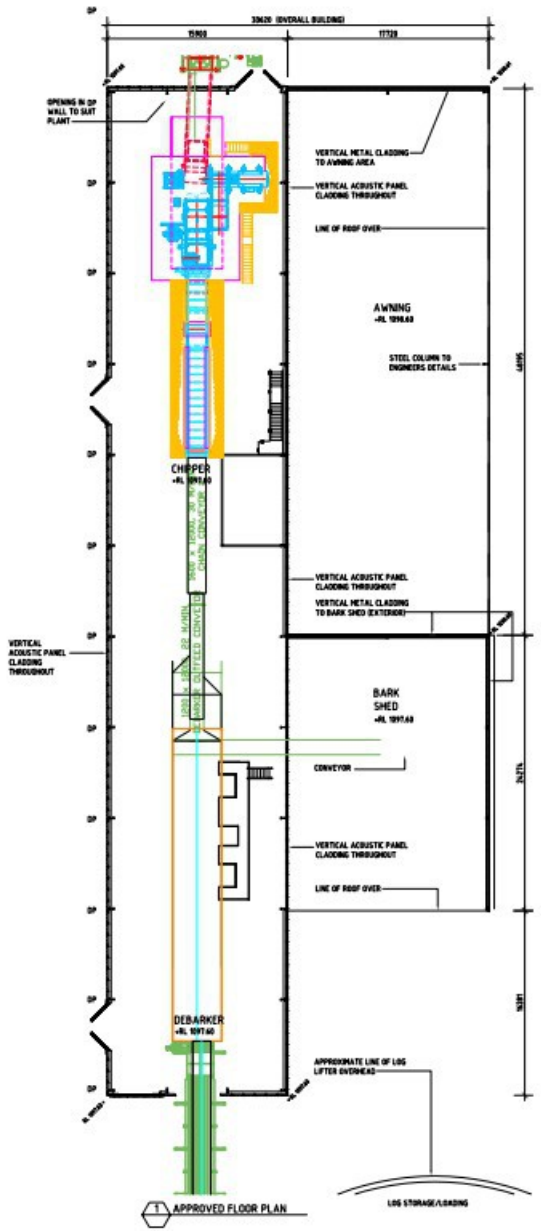
BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

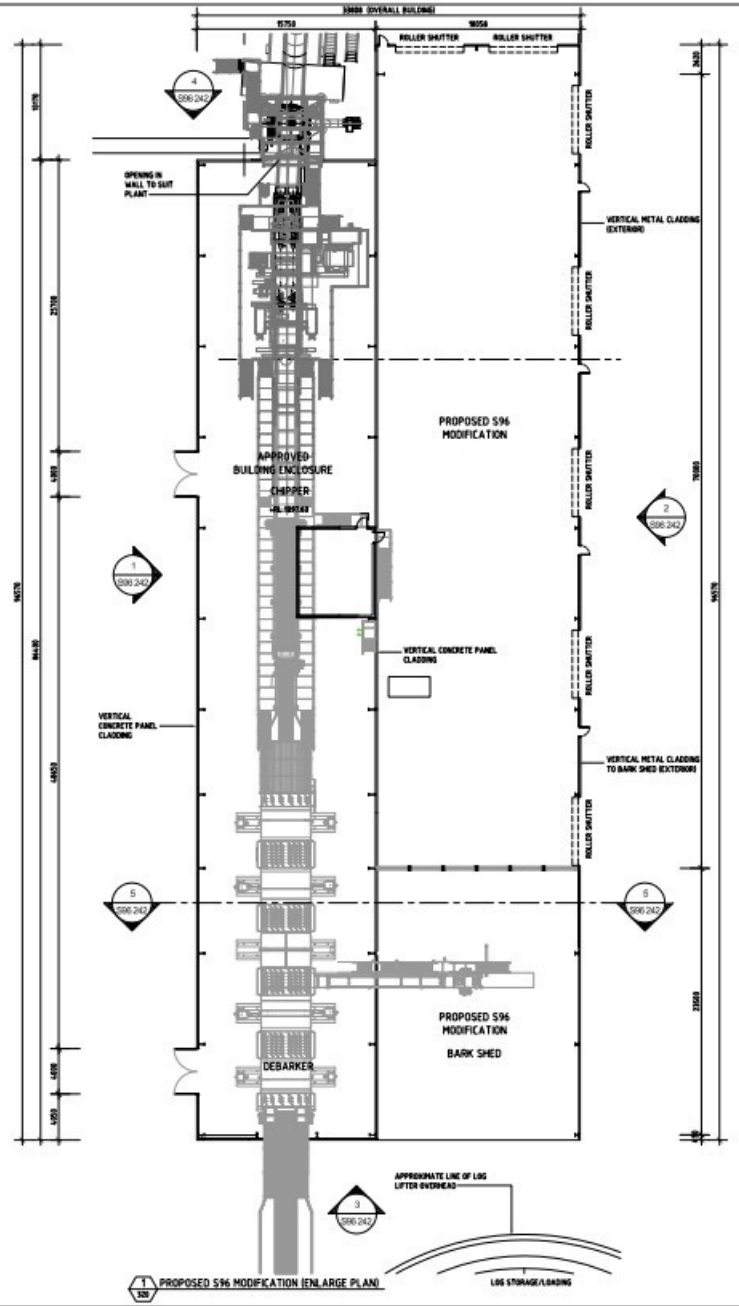
Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
MATERIALS HANDLING (SHT 4)

Scale	Stage
APPROX 1:200 (@ A1)	S96
Project Number: 19	Drawing Number: S96 213
	Issue: A



1 APPROVED FLOOR PLAN



1 PROPOSED S96 MODIFICATION (ENLARGE PLAN)

NOTE:

EXISTING GROUND LINES ARE SHOWN AT SITE BOUNDARY UNLESS NOTED OTHERWISE

PLANT IN BACKGROUND IS SHOWN DIAGRAMATICALLY ONLY

B	SECTION 96	15/07/19	JS	VB

BORG CONSTRUCTION

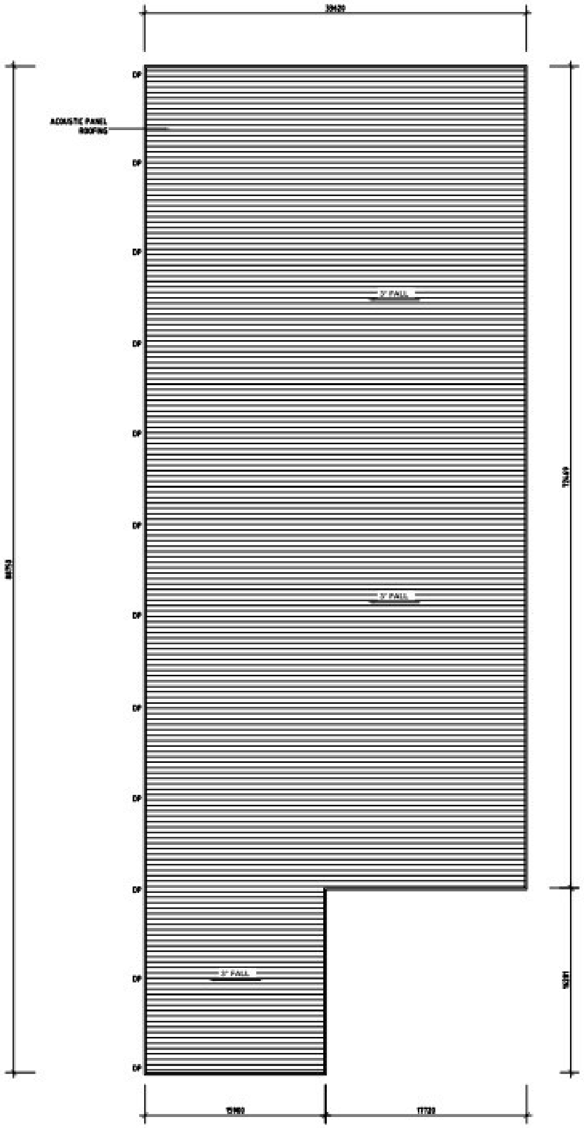
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

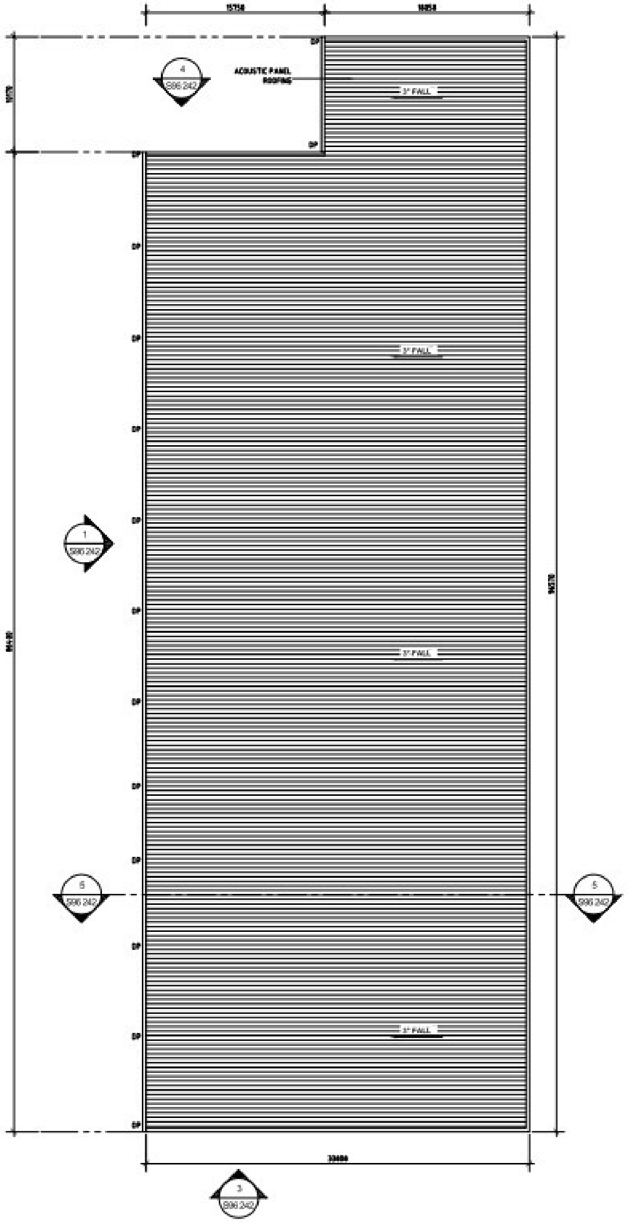
Drawing
DEBARKER and CHIPPER PLAN EXTENSION

Scale	Stage
1:200 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 240	A



1/241 APPROVED ROOF PLAN



2/241 PROPOSED S96 MODIFICATION (ROOF PLAN)

BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

Drawing
DEBARKER and CHIPPER PLAN EXTENSION

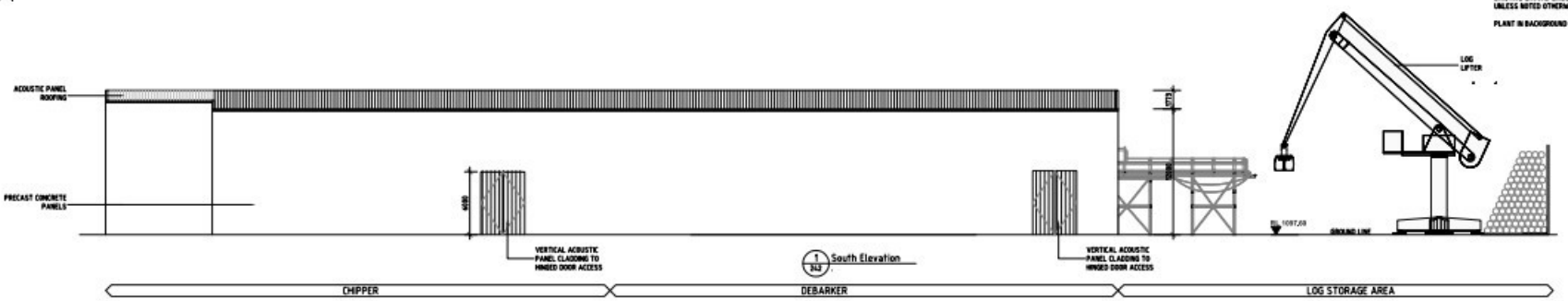
Scale	Stage
1:200 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 241	A

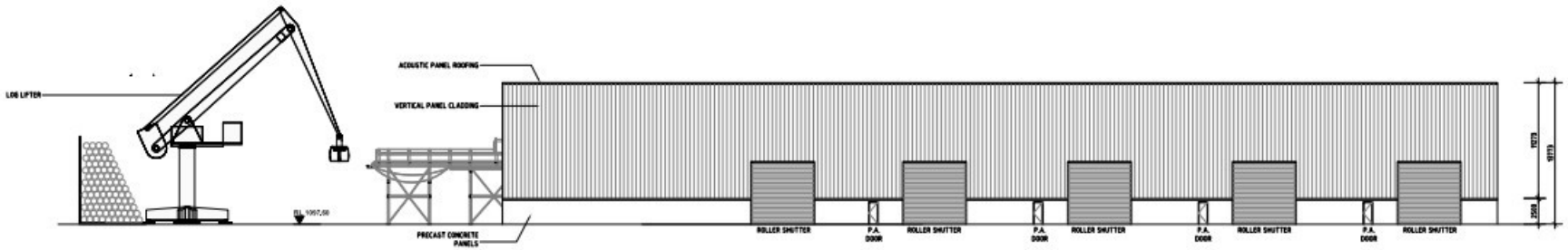
NOTE:

EXISTING GROUND LINES ARE SHOWN AT SITE BOUNDARY UNLESS NOTED OTHERWISE

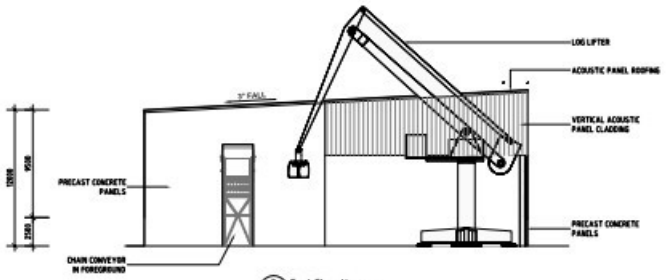
PLANT IN BACKGROUND IS SHOWN DIAGRAMATICALLY ONLY



1/242 South Elevation

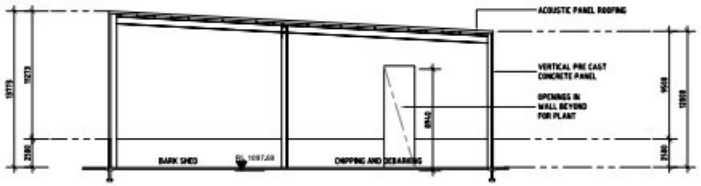


2/242 North Elevation



3/242 East Elevation

4/242 West Elevation



5/242 SECTION

B	SECTION 96	06/10/17	JB	VB

BORG CONSTRUCTION

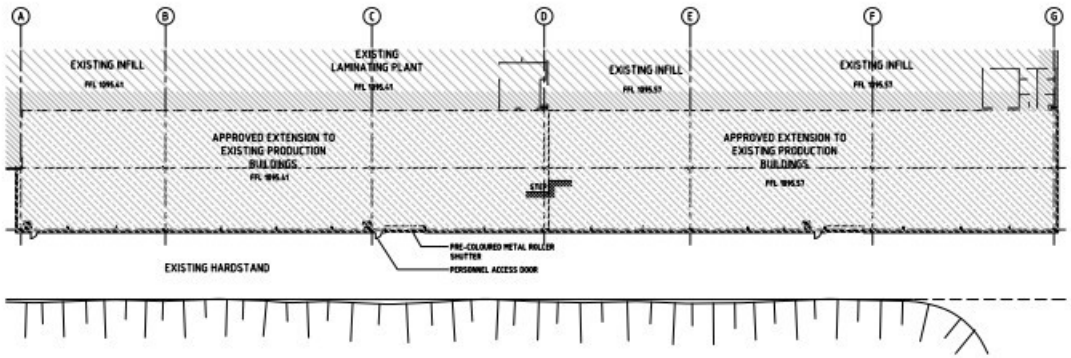
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON
NEW SOUTH WALES

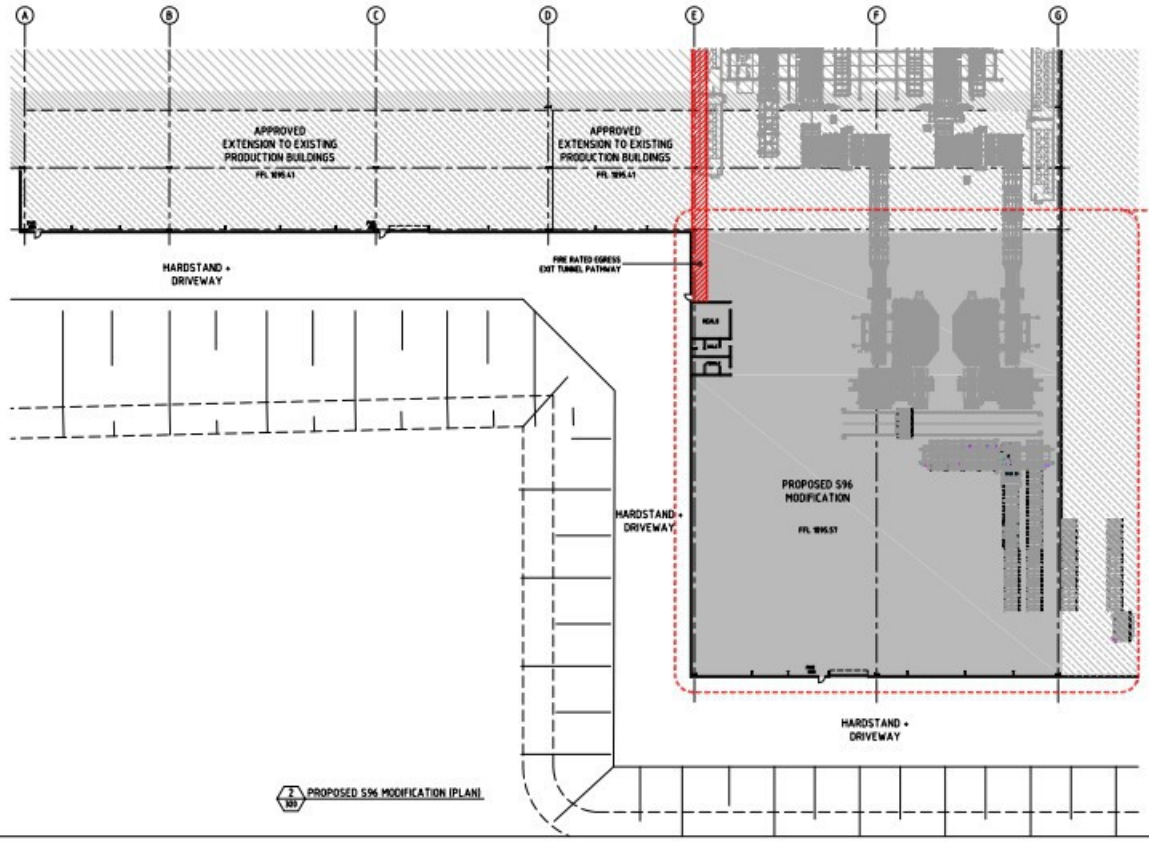
Drawing
DEBARKER and CHIPPER PLAN
EXTENSION

Scale	Stage
1:200 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 242	A



1 APPROVED PLAN
1:300



2 PROPOSED S96 MODIFICATION (PLAN)
1:300

PROPOSED S96 MODIFICATION
MOULDINGS WAREHOUSE FACILITY
1
S96-321

LEGEND:
- EXISTING BUILDINGS (FLOOR PLAN)
- APPROVED EXTENSION (FLOOR PLAN)
- PROPOSED S96 MODIFICATION (FLOOR PLAN)

B	SECTION 96 MODIFICATION	19/10/21	JM	VB

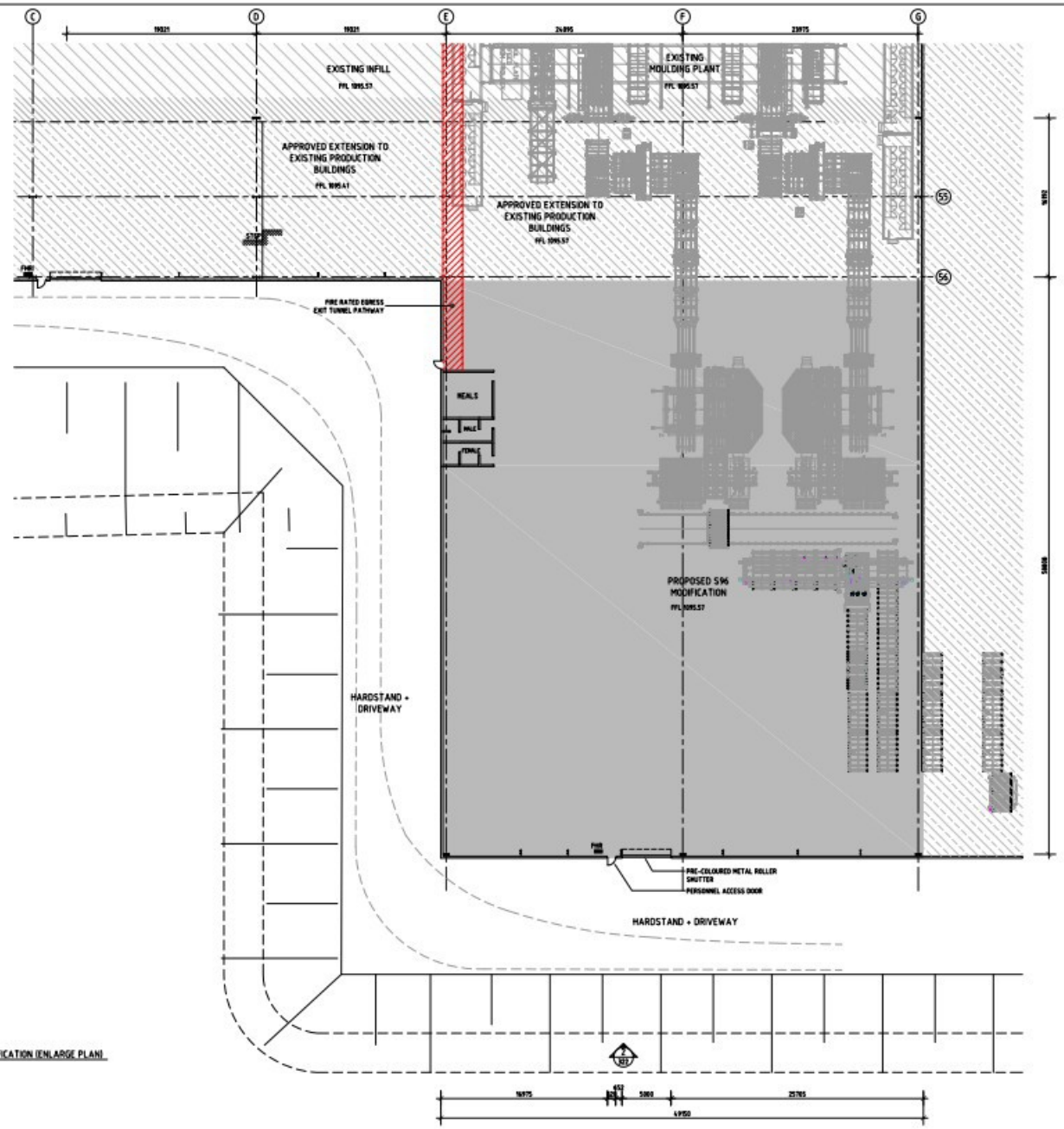
BORG CONSTRUCTION

Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
EXTENSION TO PRODUCTION BUILDINGS

Scale	Stage
1:300 (@ A1)	S96
Project Number: 19	Drawing Number: S96 320
	Issue: A



NOTE:

NEW ROOF PITCH TO MATCH EXISTING (TYPICAL)

LEGEND:

- EXISTING BUILDINGS (FLOOR PLAN)
- APPROVED EXTENSION (FLOOR PLAN)
- PROPOSED S96 MODIFICATION (FLOOR PLAN)

No	REVISION TO MODIFICATION	DATE	DR	VB

BORG CONSTRUCTION

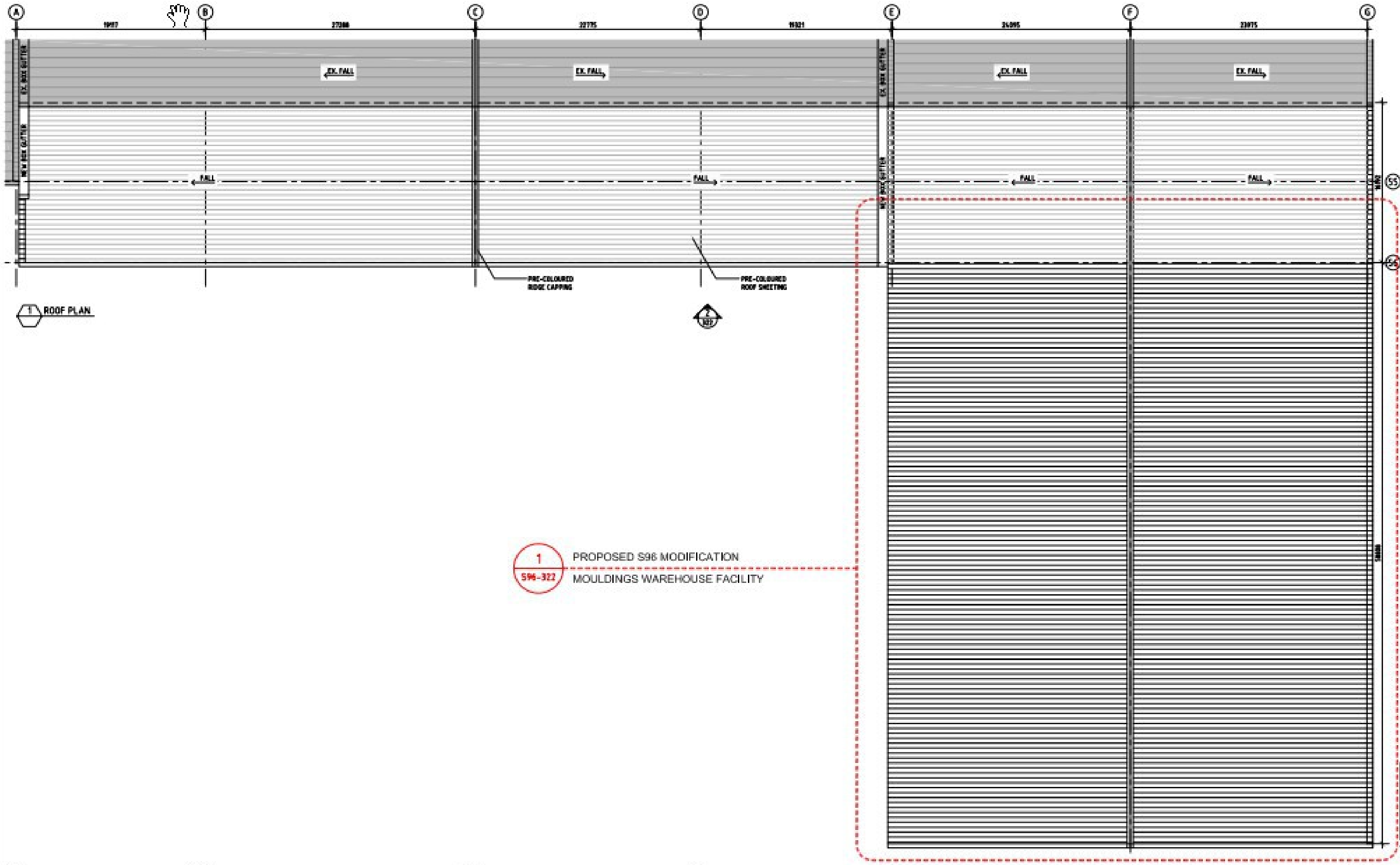
Project
PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

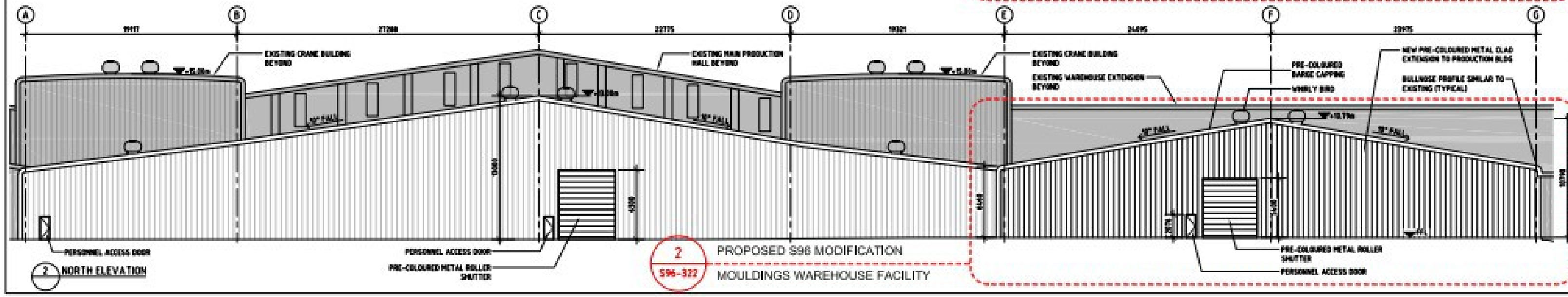
Located in
124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing
EXTENSION TO PRODUCTION BUILDINGS

Scale	Stage
1:200 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 321	A





NOTE:

NEW ROOF PITCH TO MATCH EXISTING (TYPICAL)

LEGEND:

- EXISTING BUILDINGS (ROOF PLAN)
- APPROVED NEW BUILDINGS (ROOF PLAN)
- EXISTING BUILDINGS (ELEVATIONS)
- APPROVED NEW BUILDINGS (ELEVATIONS)
- PROPOSED S96 MODIFICATION (ROOF PLAN)
- PROPOSED S96 MODIFICATION (ELEVATION)

BORG CONSTRUCTION

Project: PROPOSED S96 MODIFICATION BORG PANELS TIMBER MANUFACTURING FACILITY

Location: 124 LOWES MOUNT ROAD, OBERON NEW SOUTH WALES

Drawing: EXTENSION TO PRODUCTION BUILDINGS

Scale	Stage
1:200 (@ A1)	S96

Project Number	Drawing Number	Issue
19	S96 322	A

Appendix B – Sustainability Workshop Modification of Proposed Swale

18 December 2017

Head Office
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Blackheath, NSW, 2785
Australia
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T +61 (2) 4787 8428
www.sustainabilityworkshop.com

Dear Victor,

RE: Section 96 Application for Modification of Proposed Northern Swale

We understand Borgs wish to amend the proposed route of the northern swale which is to accept flows from CHH and some of the Borgs site. You requested that we assess the impact of this proposal when compared with the proposal that was lodged for DA.

We have found that the proposed location and length of swale is more preferable from a water quality perspective and should achieve a better result than was modelled and submitted as part of the DA process.

We explain the reasons for this in more detail:

1) The length of the northern inner swale (called the dirty water inner swale in MUSIC model) was modelled as being 300m in length for DA purposes.
2) The modified location and detailed design of the swale as per the Surface Water Management Plan, Issue A, Sheet 8, in fact shows the swale is 500m which more than a 60% increase compared to what was modelled for DA purposes.
3) In the DA MUSIC model, the proposed hardstand, the "northern carpark" node, was modelled as being directed straight to the existing treatment pond, without any pre-treatment in the swale. In the proposed design, the hardstand is set above the top of bank level of the swale, and to be graded to the north such that is will flow for at least 200m in the swale before being discharged into the existing pond, thereby receiving more treatment than was modelled.
4) The cross-sectional size of the swale proposed is larger than what was modelled and assumed for DA purposes, with a proposed 9m top width and 1m depth, compared with the modelled 5m top width and 0.5m depth, providing additional capacity and treatment.
5) Furthermore, approximately 130m of the existing dirty water swale (which is routed close to main production building) is proposed to be retained with a large part of the warehouse and production hall draining to it. In the MUSIC model, this existing swale was not included, and the warehouse /production hall catchment was directed straight to the existing treatment pond. In the proposed design, the retention of part of the existing swale will add water quality treatment benefit beyond what was modelled.

In summary, the MUSIC model which underpinned the DA was conservative in its assumptions. The detailed design by comparison is more extensive and robust. The detailed design exceeds the conservative assumptions made in the MUSIC model, and would therefore certainly result in improved water quality outcomes beyond what was modelled for DA purposes.

Yours sincerely,

Mark Liebman

Director, Principle Engineer