

Upgrade of existing Concrete Batching Plant
28 Dimboola Road, Warracknabeal, VIC, 3393

Planning Permit Application

November 2022

Yarriambiack Shire Council



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Introduction:

CEA Consolidated Industries are acting on behalf of Wimmera Mallee Concrete Pty Ltd in relation to a proposed upgrade of an existing Concrete Batching Plant located at 28 Dimboola Road, Warracknabeal, VIC, 3393.

The Concrete Batch Plant is intended as a fixed Plant, set up to supply Concrete to the area of Warracknabeal and surrounding communities.

This written submission sets out the proposed upgrade layout, facilities, traffic management, environmental impacts along with any planning controls and site encumbrances that affect the land and the controls that will be put in place to satisfy the relevant planning schemes applicable.

Locality:

The site nominated for the development of the Concrete Batch Plant is approximately 12155m² in size located at 28 Dimboola Road, Warracknabeal, VIC, 3393 and is located within a Farming Zone.



Figure 1 subject site

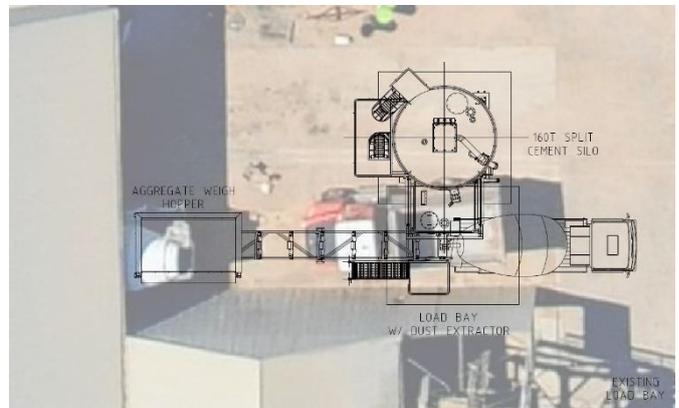


Figure 2 Proposal Overlay



Figure 3 Existing Batching Plant



Description of Existing:

The site consists of an existing Concrete Batch Plant, Office Building, Sheds, Car and Truck Parking. The existing Concrete Plant consists of 1 x Cement Silo, Conveyor, Aggregate Weigh Hopper, Material Storage Bins/Ground Bins and Water Tanks.

Hours of Operation:

Mondays to Friday 6.00am – 6.00pm
Saturdays 6.00am – 6.00pm
Sundays 6.00am – 12.00pm (only as required).

Plant design objectives

The objectives and design of the proposed Plant upgrade are to use and maintain appropriate guidelines and technology to minimise the impact to operations and on the environment by;

- Containing any waste water and contaminated stormwater within the confines of the Batching Plant and prevent any waste water from leaving the premises. The Plant upgrade will include a new Loading Bay to reduce any noise, dust or solids pollution during the batching process.
- Recovering and storing any waste water and/or contaminated storm water that is generated at the site and reuse it in the Concrete Batching Process.
- Control nuisance dust from leaving the premise. The Plant upgrade will include a new Loading Bay to reduce dust emissions during the Loading of the Truck. The Silo in which the Cement for the Concrete is stored is fitted with an independent Silo Filter System to prevent any dust emissions during the Silo filling process. The Cement Weigh Hopper which weighs the Cement for the Concrete Batching Process will also be fitted with an independent Jet Filter system to prevent dust emissions during the weighing process. All new equipment will be air tight and across the board represent an upgrade to the Environmental footprint of the Plant. The Load Bay will be fitted with an independent Dust Extractor system which will capture and store any fine particles created in the Batching process, these will then be reused in subsequent load, thus reducing waste on site.
- Ensure that noise emanating from the batching of Concrete and associated activities with the process comply with the prescribed limits. The Plant upgrade will include the installation of a new enclosed Load Bay to reduce the noise emanating from the Batching of Concrete.

During the design phase of the development careful consultation and consideration has been undertaken to ensure all processes associated with the development comply with all legislative requirements of the relevant responsible authorities ensuring the plant is constructed and operated using the latest technologies minimising any adverse impact on the environment and surrounding neighbourhood. Consideration has been given to the location of the Plant in relation to nearby special use zones to ensure that the new Plant will not increase in any way the Noise, Dust, Waste or emissions of the Plant in any way from what is existing.

Description of Development:

Concrete Batching Facility

It is proposed to construct a new modernised Plant behind the existing Plant with upgraded Noise, Dust and Water technological advances to allow Wimmera Mallee Concrete to continue to serve the Warracknabeal and surrounding communities for the next 20 plus years. Once the upgraded Plant has been installed the existing outdated Plant will be removed to ensure that no disruptions to the surrounding industries dependent on the Plants production.

The existing Plant was designed and installed roughly 40 years ago has reached the end of its service life, the facade has faded, rusted and become unsightly. To improve the streetscape of the Plant the new Load Bay will now be enclosed with Colourbond corrugated sheeting. All of the new equipment will be painted white and all safety equipment will be painted yellow in accordance with the relevant Australian Standards, meaning the appearance of the Plant will be greatly improved. The Load Bay will operate with a Dust Extraction System with independent Filter Cartridges to reduce any dust emissions into the Environment. The new Load Bay will be fully enclosed on 3 Sides and on the Roof to reduce any potential noise emissions into the Environment.



The new Silo will increase the Storage Capacity on site reducing the need for Cement deliveries across the day and during peak hours. The new Silo and corresponding Cement Weigh Hopper will each be fitted with independent Filter Systems with an automatic Fill Control System, Overflow System and Ducting, the new System will represent a significant upgrade to the existing Filter system and ensure the Plant complies with all regulations prescribed under the EPA Guidelines.

A Silo Structure and reverse in type Load Bay will be constructed to deliver all of the required raw materials to batch Concrete into the Concrete Agitators. A new Aggregate Weigh Hopper will be installed to deliver a measured amount of Aggregate to the waiting Concrete Agitators, the new Aggregate Weigh Hopper will be upgraded with new Load Cells and all other relevant ancillary items.

The existing Water Management System and Ground Bin system will remain. The existing Water Management System comprises an FEL Pit, Washout Boxes and Water Storage Tanks. The Ground Bin system comprises 16 x Ground Storage Bins manufactured from Precast Concrete Panels and Blocks. All Bins are fitted with sprayers to prevent dust during deliveries and during the Batching process.

Trucks will continue to be washed down prior to leaving site to ensure no contaminated water or solids are left on public roads. The reuse of water waste emanating from sources such as truck agitator washout, slumping & vehicle cleaning, accumulated storm water and run off from the "contaminated catchment area" will be retained and reused in the concrete producing process.

The existing Batch Office in the South Eastern corner of the site is to remain as the location where the Batching will be controlled from.

The current Plant currently produces up to 700m³ of Concrete on any given week during peak periods, based on 7.6m³ loads equivalent of appx 90 truckloads per week. The Upgrade will not increase the output or production of the Plant. The Upgrade is intended to extend the existing use of the site and allow Wimmera Mallee Concrete to continue to serve the surrounding community.

Environmental Issues

Waste Management Systems:

As detailed above, waste water is accumulated within the contaminated catchment area and reused.

Waste water collected in the "recycled water tanks" will be used in the batching process wherever possible. Fresh water will only be used in the process when there is an inadequate supply of waste water available.

Wherever possible waste water will be reused to wash out concrete agitators.

All waste water generated in the "contaminated catchment area" will be collected in the settlement pits, prior to entering the recycle stirrer pit and on to the recycle water tank from where it will be reused in the process of batching concrete or yard and truck wash down.

Using the processes above, concrete waste is rarely a problem on site. However, spillages (when they occur) are collected. Concrete from delivery trucks returning from job sites are stock piled in the washout box and transported offsite to a concrete recycling premises for processing.

Air Emissions:

Dust emissions from the batching plant may result during aggregate & cement deliveries, transfer & storage of these raw materials & during the course of the batching process itself. The emissions will be controlled from leaving the plant and associated facilities by implementing the available technology in the following manner:

- All duct work will be air tight.



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- Sand aggregate will be delivered in a moist state.
- Belt scraping devices on the head pulleys of conveyor.
- Cement storage silo is dust tight with reverse pulse filter fitted on top of the silo.
- Cement weigh hopper is dust tight with reverse pulse filter.
- Cement silo will have high level indicator 700mm below the silo lid and in the event of a high level being reached it will shut down the feed line stopping flow.
- The silo is fitted with airtight inspection hatches.
- The truck loading area will be enclosed by smooth composite sheeting.
- Cement deliveries will be made by airtight industry approved bulk cement transport vehicles. Such vehicles are equipped with fully enclosed pneumatic conveying systems. The deliveries into the silos will be made through sealed delivery pipes.
- An industry approved dust extraction system is positioned above the loading bay and ducted to dust hood; all materials removed via the Dust Extraction system will be reused in the following Concrete Batches.
- The new Load Bay will be enclosed with an independent Dust Collector to contain all dust from the Batching Process. The Dust extractor is fitted with Filter Cartridges to trap all dust and prevent it from escaping to the atmosphere.

Noise Emissions:

Possible sources of noise emissions from the proposed operations include unloading of aggregates and cementitious materials, operation of the front-end loader, batching operations, including those in the vicinity of the slump stands.

Noise controls incorporated in the proposal include:

- Batching plant prime movers are new type trucks, which have air bag suspension reducing noise levels, and are fitted with noise reducing exhaust systems to further reduce noise.
- Aggregates are stored in storage bins, and then fed by loader on the transfer conveyor.
- The Load Bay will be enclosed to muffle any noises from the Motors of the Concrete Agitators.

Solids:

Any large amounts of returned concrete not being able to be catered for by washing into the primary settlement pit are disposed of by any or a combination of the following methods –

- Immediate reuse in low quality pre-mixed concrete.
- Production of concrete blocks for resale.
- Delivered free of charge to various sites within a close proximity for use in pavements that would otherwise remain unsealed.
- Any surplus or off-spec concrete produced at the batching plant will be transported offsite in solid state and directed to a concrete recycling premises for processing.

Traffic:

The installation of the proposed Plant Upgrade is not expected to have adverse impacts on the traffic in the area as the production of Concrete will not be increased. Traffic considerations pertaining to the installation of the additional Silo are listed below;

- Typically Cement Bulklers will make deliveries to site after hours to avoid adversely impacting local traffic during working hours. The Storage Silo will have increased Storage Capacity to prevent the necessity for urgent deliveries during peak hour in the event that they run out of Cement in busier periods.
- Cement Silo will be used for additional storage only, the output of the Plant and associated traffic will not increase due to the installation of the Silo.
- The additional Cement Silo will reduce the frequency with which Bulker deliveries are required as the plant will have extra capacity to store Cement on site.



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Batching Process:

All batching operations will be controlled from the control room shown on the drawings as the office. A single operator using both automatic and manual controls will control the batching process.

The raw material storage bins are at ground level, enclosed on three sides, being filled with aggregate and sand by delivery trucks. The sand and aggregates are then moved by a loader from the storage bins to Aggregate Weigh Hopper where a pre-determined volume of Aggregates are then transferred onto the Batching Conveyor to be transferred to the Load Bay.

The aggregates are then transferred by gravity into the agitator of a waiting delivery truck, via a rubber-loading sock extended into the agitator receiving chute. All transfer points are fully enclosed.

The loading process is begun by the plant operator, who, when satisfied that the agitator is positioned correctly, starts an automated loading sequence which is computer programmed via a PLC controlled computer batching system. The measured volume of aggregate and cement powder is fed through a gob hopper, fully enclosed, into a rubber loading sock, which is now resting inside the truck's load chute. Prior to the raw materials being gravity fed into the agitator, a Dust Extractor system is engaged to remove any dust and floating particles from the Load Bay. The extracted dust is then re-used in the next truck's batching sequence.

The internal walls of the truck Load Bay, located behind the existing Cement Silo/open Loading Area, will be lined with smooth composite sheeting to eliminate dust emissions and noise, the Load Bay is lined on three sides.

Prior to loading, cement is weighed in a sealed cement weigh hopper that is enclosed and ducted to the cement storage silos to eliminate dust emissions to the atmosphere. A reverse pulse filter is located on the Roof of the Cement Weigh Hopper with 2 x polyester filter cartridges. The Filter has an electronic control board which activates the filter whenever the Cement Weigh Hopper is being filled.

Concrete additives are then dispensed into the waiting agitator via electric pump. The ingredients (aggregate, cement, water and additives) are then mixed in the truck agitator until the required consistency is reached. This is checked at the slump stand.

Trucks are washed down with recycled water at the slump stand, to ensure contaminated waste does not leave the plant site. This all takes place in the contaminated catchment area, which is concrete paved, and sloped aggressively, directing all water to the FEL pit, where it is fed through a water recycle and treatment process, before being reused in the Batching process. The reuse of waste water emanating from sources such as truck agitator washout, slumping, vehicle cleaning, accumulated storm water and run off from the "Contaminated catchment area" will be retained and reused in the concrete producing process.

Planning Controls:

Clause 35.07 Farming Zone

The site is located within the Farming Zone (FZ). The purpose of the FZ is "to provide for the use of the land for agriculture and to encourage the retention of employment and population to support rural communities".

Pursuant to Clause 35.07-1 a permit is required to construct a building or carry out works.

A permit is not required to use the land for the purpose of industry if the use satisfies the following conditions:

- Must not be a purpose shown with a Note 1 or note 2 in the table to Clause 53.10.
- The land must be at least the following distances from land (not a road) which is in a residential zone, business 5 zone, Capital City Zone or Docklands Zone, land used for a hospital or an education centre or land in a Public Acquisition Overlay to be acquired for a hospital or education centre:
 - The threshold distance, for a purpose listed in the table to Clause 53.10.



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- 30 metres, for a purpose not listed in the table to Clause 53.10.
- Must not adversely affect the amenity of the neighbourhood, including through the:
 - Transport of materials, goods or commodities to or from the land.
 - Appearance of any stored goods or materials.
 - Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.

The construction or works associated with the upgrade of the Concrete Plant do not qualify from an exception to a Secondary Consent Application.

Clause 42.01 Environmental Significance Overlay (ESO)

The site is occupied by the existing Concrete Batching Plant which is to be upgraded. The purpose of the Environmental Significance Overlay is “to identify areas where the development of land may be affected by environmental constraints and to ensure that development is compatible with identified environmental values”.

Pursuant to Clause 42.01-2 a permit is required to construct a building or carry out works. This does not apply if a schedule (schedules 1 & 2) to this overlay specifically mentions a permit is not required.

The locality of the proposed Batch Plant and ancillary items meet the requirements nominated in Clause 42.01. The upgrade to the Plant will not have any adverse effects on the production, output or environmental footprint of the surrounding community.

Clause 52.06 Car Parking

The subject site is to be used primarily for the purpose of a Concrete Batching Plant.

The purpose of Clause 52.06 of the Car Parking Section of Planning Scheme is to ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, these activities on the land and the nature of the locality and to promote the efficient use of car parking spaces through the consolidation of car parking facilities.

Clause 52.06-5 Table 1 nominates the number of car parks required for the site based on the use of the site. For industry other than listed in the table (note: Batching Plants are not listed in Clause 52.06-5 Table 1) the required number of car parks for the site is 2.9 car parks per 100m² of net floor area. The existing office has a net floor area of 99m² thus the minimum requirements for car parks is 3.0 car parks.

The existing Footprint of the Office and the site will not be affected by the Upgrade the Batching Plant. The site has ample parking at the front and the rear of the property where the Trucks and Cars are able to be parked.

Clause 52.07 – Loading and Unloading of vehicles

The proposal provides sufficient space for the loading and unloading of vehicles to ensure that there is no loss of amenity or adverse impact on traffic flow and road safety in the surrounding area.

Clause 53.10 – Uses with Adverse Amenity Potential

This clause requires a threshold of 300m from the site to land in a residential zone, Business 5 Zone Capital City Zone or Docklands Zone, land used for a hospital or an education centre or land in a Public Acquisition Overlay to be acquired for a hospital or education centre.

There is a public use zone within the 300m threshold from the nearest point of the site. The hospital which occupies the Public Use Zone was opened in 1999, roughly 20 years after the Concrete Plant was commissioned. The Plant Upgrade will incorporate the latest technological advances in Concrete Batching to reduce the Noise and Dust emissions from what exists currently. The upgrade will not cause any adverse effects on the neighbouring and surrounding communities.





Figure 4: 300m threshold Radius



Figure 5: Surrounding zoning map

Clause 63 – Existing Uses

This Clause provides the policy basis for existing use rights. Under Clause 63.01 an existing use right is established in relation to use of land under this scheme if any of the following apply;

- The use was lawfully carried out immediately before the approval date.
- A permit for the use had been granted immediately before the approval date and the use commences before the permit expires.
- A permit for the use has been granted under clause 63.08 and the use commences before the permit expires.
- Proof of continuous use for 15 years is established under clause 63.11.
- The use is a lawful continuation by a utility service provider or other private body of a use previously carried on by a minister, government department or public authority, even where the continuation of the use is no longer for a public purpose.

The Batch Plant was established on the subject site over 40 years ago, it is understood that the records for the previous permit are not able to be located in Councils records. Given that the Plant has been in operation for well over the 15 years required by clause 63.01, the basis for existing use rights is established.

Clause 63.05 provides guidelines for which an existing use right is established and may continue

- The amenity of the area is not damaged or further damaged by a change in the activities beyond the limited purpose of the use preserved by the existing use right.

The Plant upgrade is will not change the amenity or streetscape of the area. The upgrade is intended to replace the equipment which has become unsightly and has reached the end of its service life with new modern equipment. The output of the Plant will not increase as part of the upgrade, it will become more efficient and environmentally friendly.

The purpose of the proposal is to extend the existing use of the site and allow the Plant to continue to serve the Warracknabeal and surrounding communities into the future.



Summary

The proposed Plant Upgrade will replace the existing Batch Plant which has reached the end of its service life. The existing Plant has deteriorated and become unsightly. The Plant upgrade will improve the Streetscape along Dimboola Road and allow the Plant to service Warracknabeal and the industries in the surrounding communities for the next 20 plus years.

The new Plant will be constructed behind the existing Plant to allow the existing Plant to continue to service the surrounding communities during the construction process. The Plant Upgrade will include improvements to the Noise, Dust and Waste emissions from the site and allow for more efficient batching of Concrete.

For any queries or further clarification, please contact me on 9309 1500 or via email matthewd@ceatradng.com.au

Sincerely

Matthew Dadd
Civil Engineer



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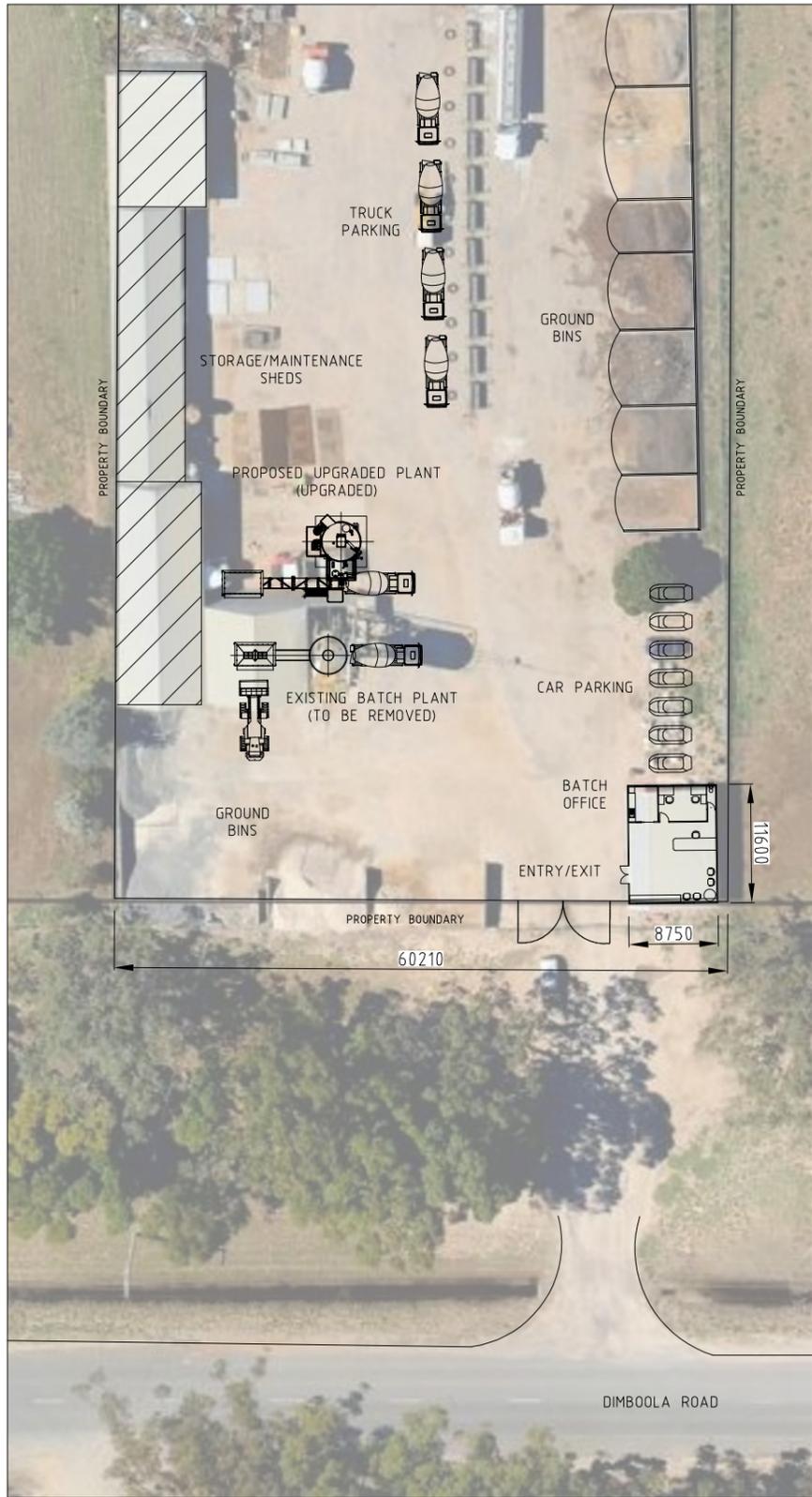
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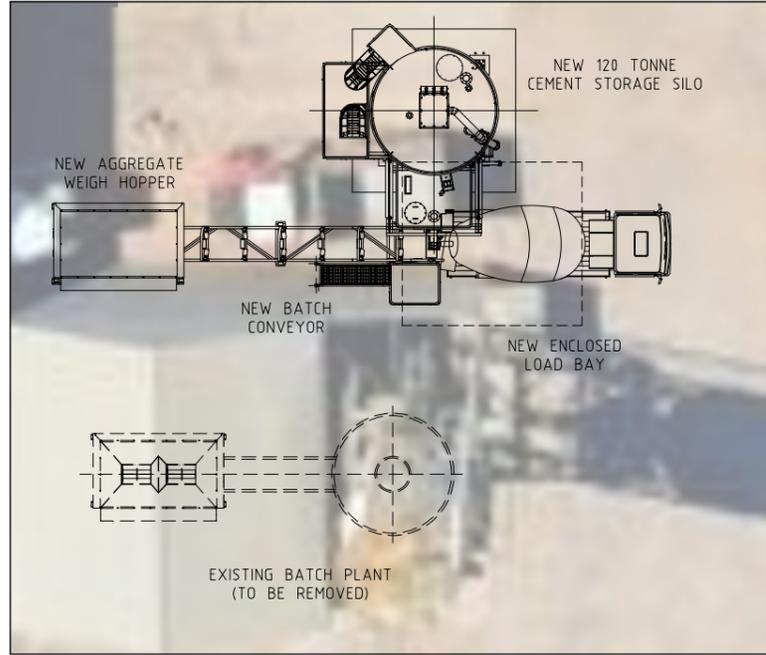
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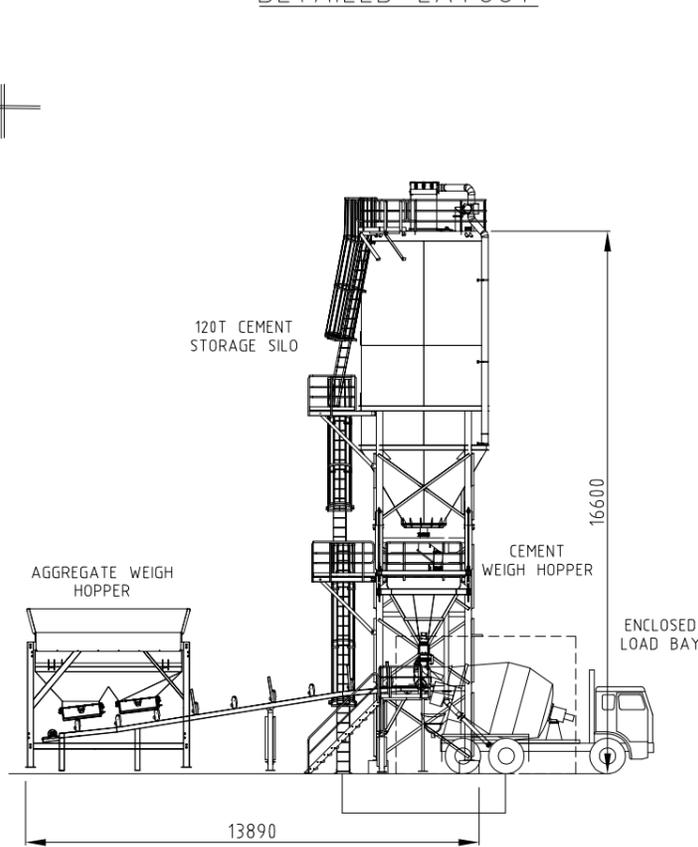
SITE LAYOUT - PLANT UPGRADE



- NOTES:
1. ALL EQUIPMENT PAINTED SURFMIST, SAFETY EQUIPMENT SAFETY YELLOW.
 2. BATCH OFFICE FOOTPRINT, 11.6M X 8.8M.
 3. PLANT OUTPUT, UP TO 700M3 PER WEEK, NO CHANGE FROM EXISTING.



PLANT UPGRADE
DETAILED LAYOUT



SITE ELEVATION



EXISTING SILO AND TRUCK
LOADING



PROPOSED SILO AND TRUCK
LOADING (ENCLOSED LOAD BAY
NOT SHOWN)

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| MATERIAL | SCALE NTS | REFERENCE N/A | | ADDRESS 28 DIMBOOLA ROAD, WARRACKNABEAL |
| FINISH | CONSOLIDATED INDUSTRIES 136-140 MAFFRA ST, BROADMEADOWS, VIC, 3047 P.O. BOX 3200, BROADMEADOWS, VIC, 3047 PH: 61 3 93091500 FAX: 61 3 93091566 ABN 58 723 446 515 | | DRAWING NAME BATCH PLANT UPGRADE | |
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