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12 April 2024

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Dear Bryce,

Re: Modification of consent request - DA2018/1 – Condobolin Wheat Siding – Lot 1 DP: 819480

GrainCorp applies to Lachlan Shire Council (**Council**) to modify GrainCorp's development consent DA2018/1 (**Consent**) to undertake development at the Condobolin Wheat Siding - Lot 1 DP: 819480 (**the Site**) under section 4.55(1A) of the *Environment and Planning Assessment Act 1979* (NSW) (**the Act**).

In submitting its modification application of the Consent, GrainCorp submits that the proposed modification:

1. Is of minimal, if any, environmental impact;
2. Is substantially the same development currently authorised by Council under the Consent and does not require public notification or exhibition;
3. Does not propose any changes to the conditions of the Consent and therefore no referral is required to any relevant referral bodies or public authorities;
4. Maintains the nature and character of the Site and the original development authorised in the Consent as a grain storage terminal;
5. Does involve a decrease in the number of structures proposed to be constructed on the Site, but the proposed modification is consistent with the original development authorised in the Consent;
6. Does not change the basis for Council issuing a development consent in the first instance and is consistent with the material or essential basis for the issuing of the Consent;
7. Continues to demonstrate it is consistent with the objectives of the rural zone for which the Site is located in and permitted to operate in; and
8. Can occur on the Site and remains suitable for the proposal and consistent with the rural character of the area, including occurring in the same vicinity of the Consent.

GrainCorp will detail further in Annexure 1 the proposed modification of the Consent for Council's consideration, which will include confirmation of minimal, if any, impact to the previously issued and approved Statement of Environmental Effects for the Site.

GrainCorp has also set out in Annexure 2 the documents it wishes to submit as part of this modification application and requests Council to consider.

Should Council have any questions that require clarification from GrainCorp in relation to this modification application, please contact Zeb Coxsedg, zeb.coxsedg@graincorp.com.au, that GrainCorp can provide assistance to resolve any queries.

Your Sincerely,



Annexure 1 – Modification of Consent application

Background

The Consent was issued in relation to the Site to facilitate GrainCorp's initiative under its Project Regeneration to enhance efficiency of country grain storage and transport network to improve grain receipt and transport efficiency at a number of sites across NSW.

Key goals GrainCorp seeks to achieve through the development of the Site under the Consent include:

- **Rail Siding Improvements:** Operate trains with less shunting and delays caused by current inadequate siding infrastructure.
- **Value Chain Reliability:** Prepositioning of multiple train loads batch weighed for load optimisation and reliable out loading.
- **Operational Efficiency:** Faster loading of trains in under 7 hours at an average 500tph.

The development of the Site under the Consent is designed to increase the volume of grain rail freight in NSW and deliver an efficient supply chain solution. This development brings together key stakeholders in NSW Rail to deliver improved rail loading infrastructure with the support of the Transport for NSW's (TfNSW) Fixing Country Rail (FCR) program and contribution from ATRC as part of the Inland Rail project. These objectives remain valid and unchanged under the proposed modification of the Consent.

The Consent was originally processed, advertised, tabled during a council meeting and approved during April 2018. GrainCorp assisted with appropriate assessment and designs for the intersections of local council roads. Agreements were made for GrainCorp to contribute to the upgrading of both intersections. GrainCorp and Council worked together to produce successful submissions for Fixing Country Roads and the Heavy Vehicle Safety and Productivity program, funds of which were allocated towards upgrading the two intersections. The development was then put on hold due to drought conditions and Covid 19.

In recent discussions (April 2024), Council confirmed COVID changes permitted by the NSW Government allowed a 2 year extension of development approvals granted prior to 25 March 2020 and that had not already lapsed by that date. This means that whilst the Consent was notionally due to expire in April 2023, Council has confirmed that the expiry date of the Consent is now April 2025.

Comparison of current Consent and proposed Modification

Current Consent

The Consent contains the following high-level descriptions of the development of the Site:

- Installation of two new 1500 tonne grain silos
- Installation of new dual 100 tonne train loading bins
- Installation of new conveyors and elevators between storage vessels
- Closure of Oppy Lane level crossing.
- Upgrading of Kiacatoo [sic] - Melrose Intersection and Silo-Melrose Intersection
- The rail siding upgrade by ARTC does not form part of this application
- Motor Control Centre

Description of Modification

The modification of the Consent proposes to make the following changes to the above high-level descriptions of the development of the Site marked up in red:

- ~~Installation of two new 1500 tonne grain silos~~
- Installation of new dual 100 tonne train loading bins
- Installation of new conveyors and elevators between storage vessels
- Closure of Oppy Lane level crossing.
- Upgrading of Kiacatoo [sic] - Melrose Intersection and Silo-Melrose Intersection
- The rail siding upgrade by ARTC does not form part of this application
- ~~Motor Control Centre~~

Minimal environmental impact – Statement of Environmental Effects

GrainCorp submits that there are minimal, if any, environmental impacts as a result of the modification application of the Consent.

Consultants GrainCorp has engaged can confirm that there are minimal, if any, adverse environment impacts as a result of the modification and attaches those reports with those conclusions in support of the modification application.

Substantially the same as the original development authorised under the Consent

1500 tonne grain silos, new conveyor and elevator

GrainCorp has been able to recommence its development of the Site following the ending of the more immediate COVID-19 impacts. This recommencement included undertaking a design review and optimisation consideration which concluded that there was no longer a need for the two 1500 tonne grain silos in order to achieve the same grain loading efficiency from the adjacent E400 shed to which these structures were originally projected to be connected to. These 1500 tonne grain silos were originally designed to enable pre-positioning of grain from the E400 Shed complex to enable a single train to be fully loaded.

As a result of this design optimisation process, the operational requirement of pre-positioning of the grain can now be achieved through the installation of a ground level conveyor only and so the 1500 tonne grain silos are no longer required. This design optimisation also negates the need for ancillary infrastructure such as multiple conveyors and elevators, so GrainCorp has optimised the design parameters to only require a new elevator and conveyor to connect to the existing infrastructure.

Motor Control Centre

As part of the design optimisation described above, the existing Motor Control Centre (**MCC**) will continue be utilised due to the reduction in electrical loads on site and does not need to be replaced.

Conditions that will need to be modified

As a result of the above design optimisation, the following conditions are proposed to be revised as follows:

Condition 2 Approved Plans

The table setting out the relevant approved plans in this condition will need to be updated to include revised plans relating to the Project Regeneration Scope of Work noted in Annexure 2.

Condition 7 Contributions

The proposed cost of development and total contribution needs to be updated to reflect the design optimisation, so that the **cost of development** is now **\$3,357,700** and the **total contribution** is **\$33,577** (the changes to this condition are set out in **red**).

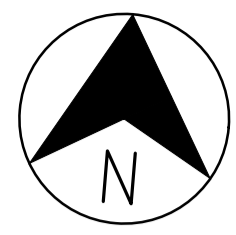
Summary

Given the nature of the above design optimisation, minimal, if any, environmental impact and the proposed modification is substantially the same as the original development which is the subject of the Consent, GrainCorp submits the proposed modification should be granted as it maintains the nature and character of the Site, the original development authorised in the Consent as a grain storage terminal and the objectives of the rural zone.

Further it is consistent with the original development authorised in the Consent and maintains the existing footprint of the development. The modification does not propose any changes to the conditions of the Consent and therefore no referral is required to any relevant referral bodies, public authorities nor require public exhibition.

Annexure 2 – List of documents provided in support of the Modification Application and Statement of Environment Effects


- 20170510-CON-DWG-Combined - Revised Set
- Air Quality and Noise Assessments GrainCorp Condobolin
- GrainCorp Condobolin Traffic Assessment
- Notice of Development Application-Lachlan Shire Council- 2018-1-Lot 1 DP 819480 Condobolin Upgrade



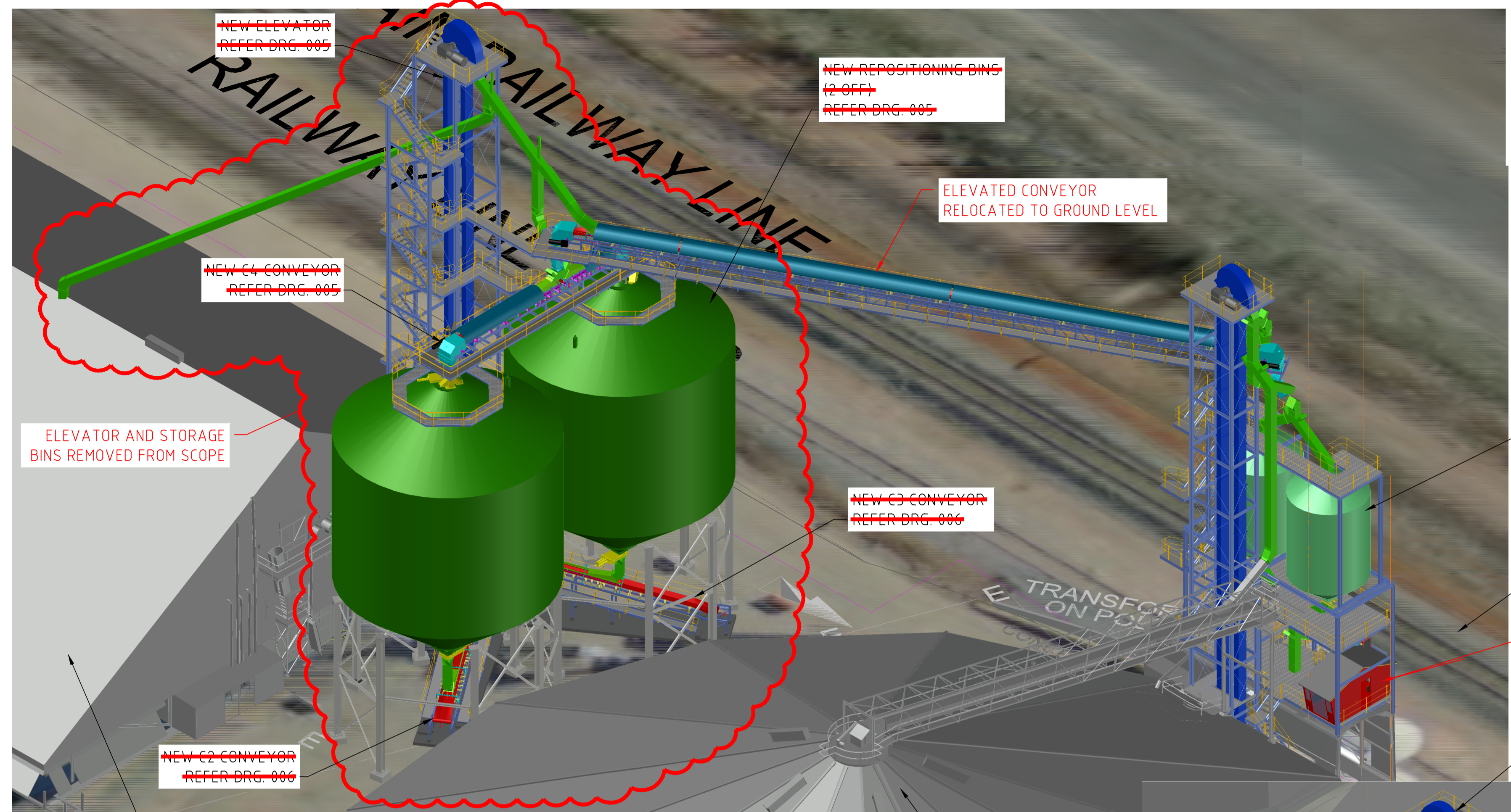
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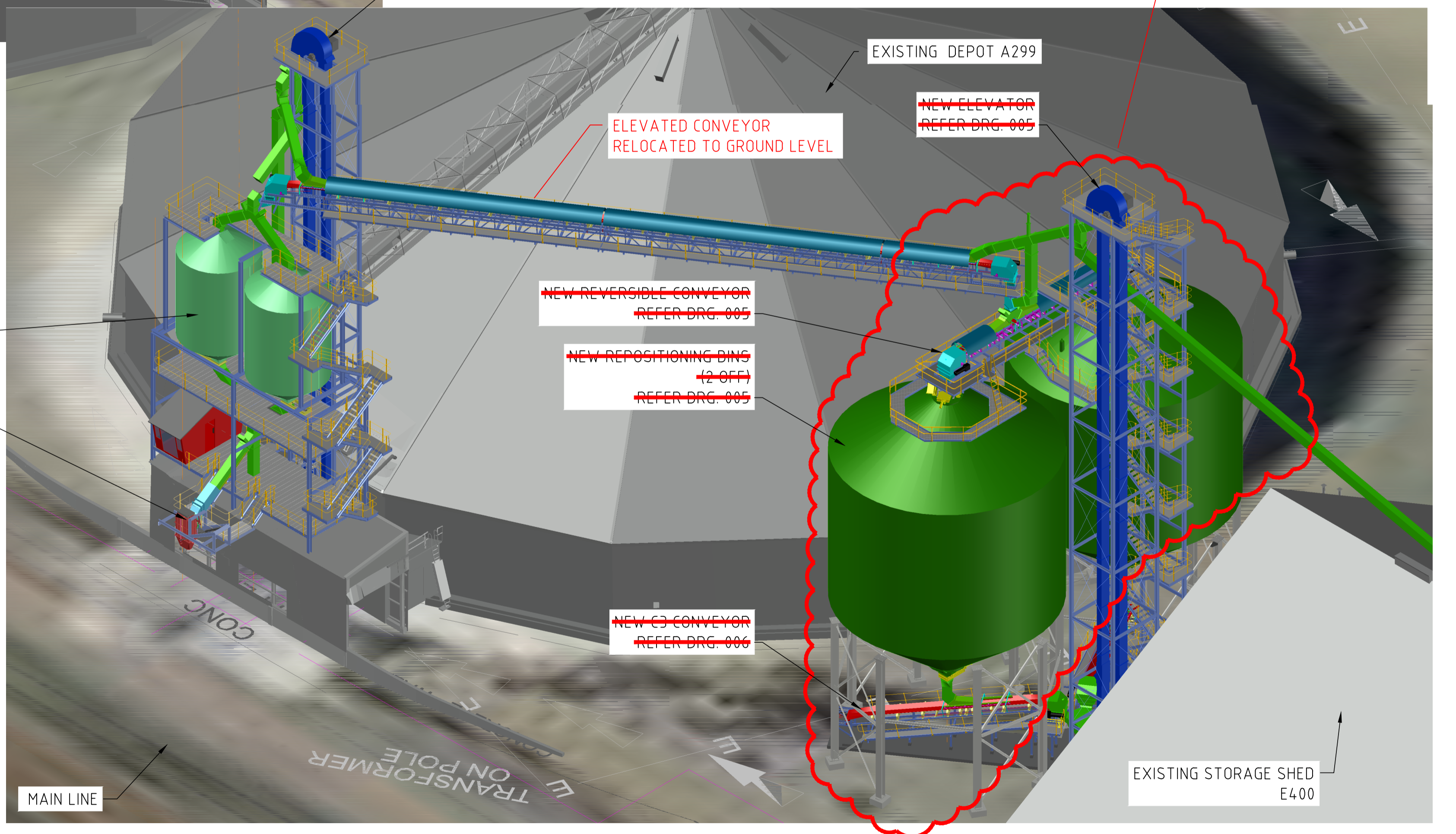
SITE LOCATION PLAN
 PROPOSED RAIL LOADING FACILITY
 SCALE 1:1000

PROJECT No.	SITE	REFERENCE DRAWINGS	DRG. NUMBER	CONTRACTORS PROJECT No:	CONTRACTORS FILENAME:	SCALE 1:	BY	DATE	APP.	SIGNATURE	DATE	ITEM	DESCRIPTION	MAT'L	No. OFF	REMARKS	
1	1	2	3							DRAWN	9.04.24	 GrainCorp Operations Limited ABN 52 003 875 401 www.graincorp.com.au <small>Head Office Level 17, Tower 1 201 Sussex Street Sydney NSW 2000 Telephone (02) 9325 9100</small> <small>eDMS PO Box 92 Doonan Victoria 3174 Phone (03) 9717 3257 edms@graincorp.com.au</small>			PROJECT REGENERATION CONDOBOLIN - PROPOSED RAIL LOADING CONCEPT SITE ARRANGEMENT PROJECT NUMBER DRAWING NUMBER 20170510-CON-DWG-001 REVISION B		
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NORTH-WESTERN VIEW
SCALE 1:200



SOUTH - EASTERN VIEW
SCALE 1:200

100T DUAL GARNER BIN AND RAIL LOADOUT TO REPLACE EXISTING SINGLE OVER RAIL GARNER BIN REFER DRG. 008 & 009

MAIN LINE

CONTROL ROOM LOCATION AND DESIGN REVISED

REPLACE EXISTING ELEVATOR AND SUPPORTING STEELWORK REFER DRG. 008

ELEVATOR AND STORAGE BINS REMOVED FROM SCOPE

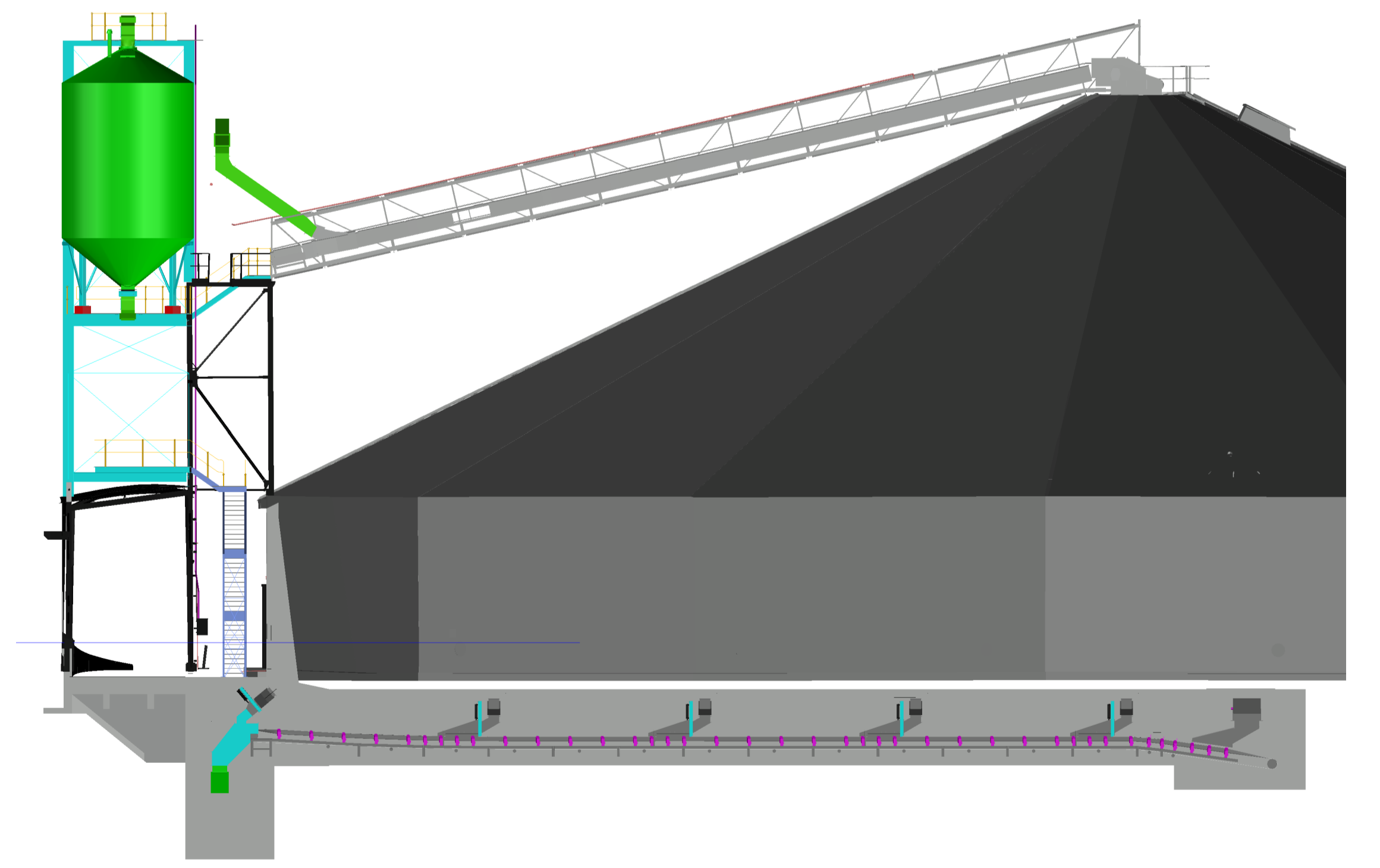
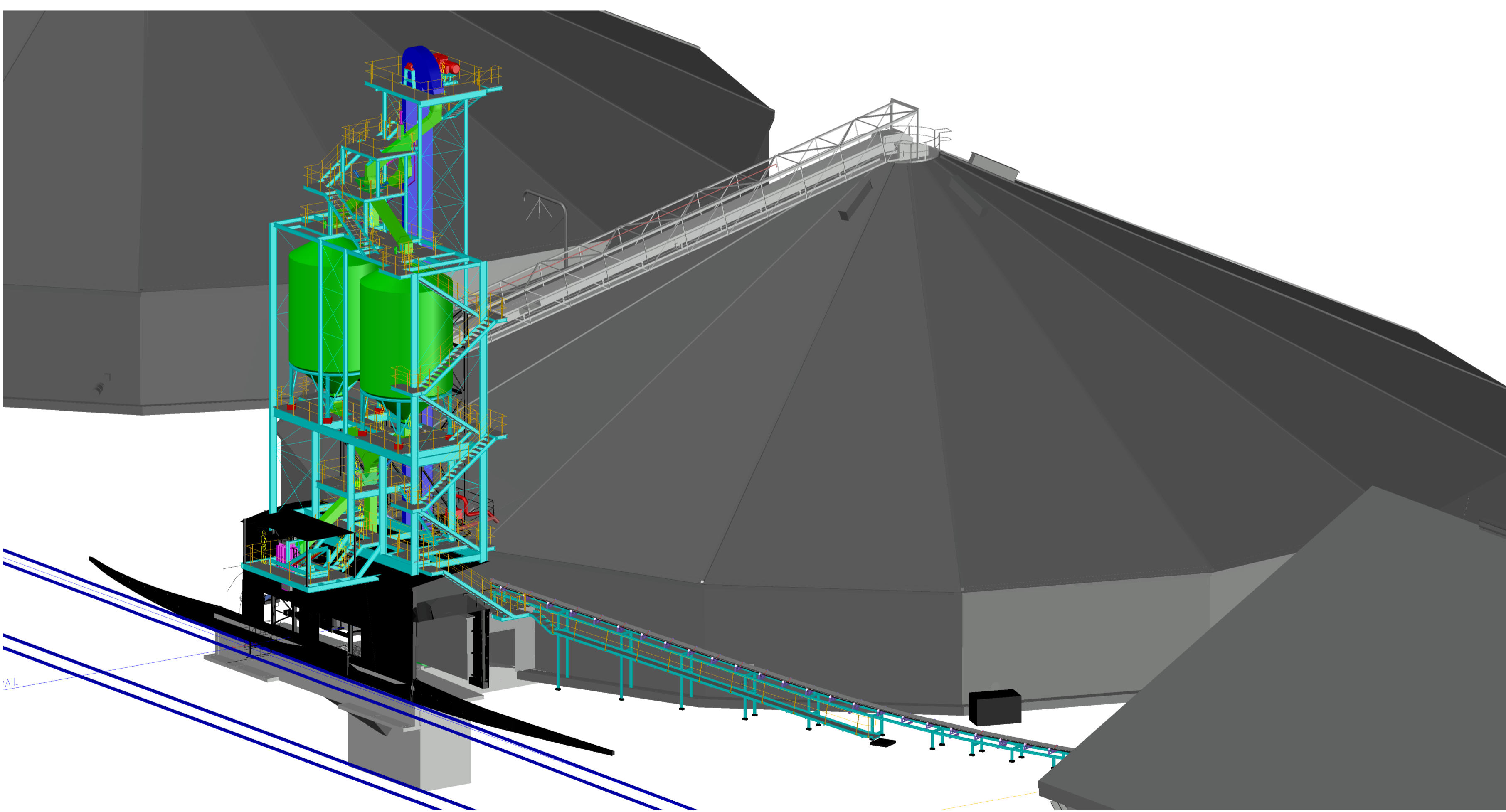
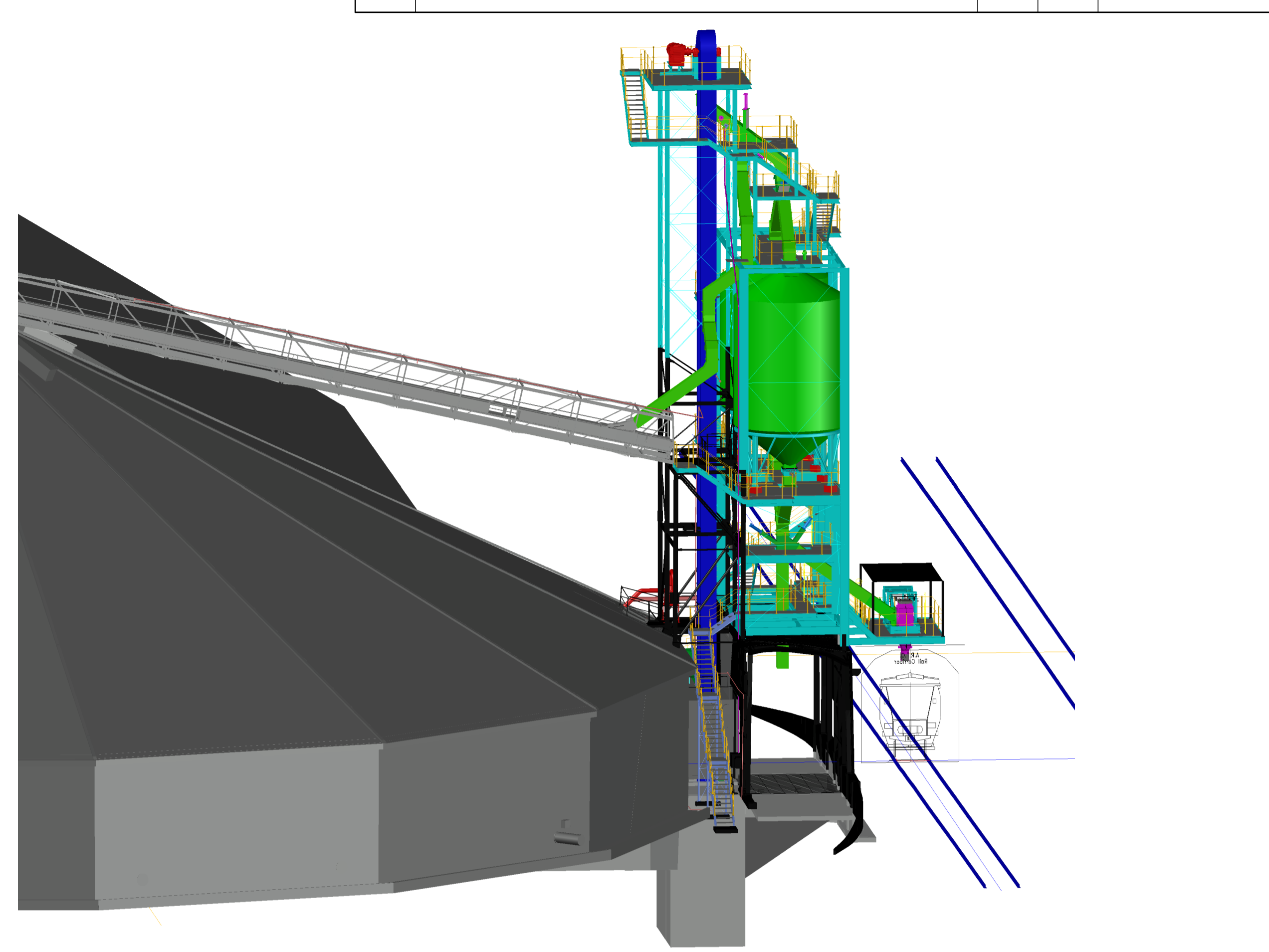
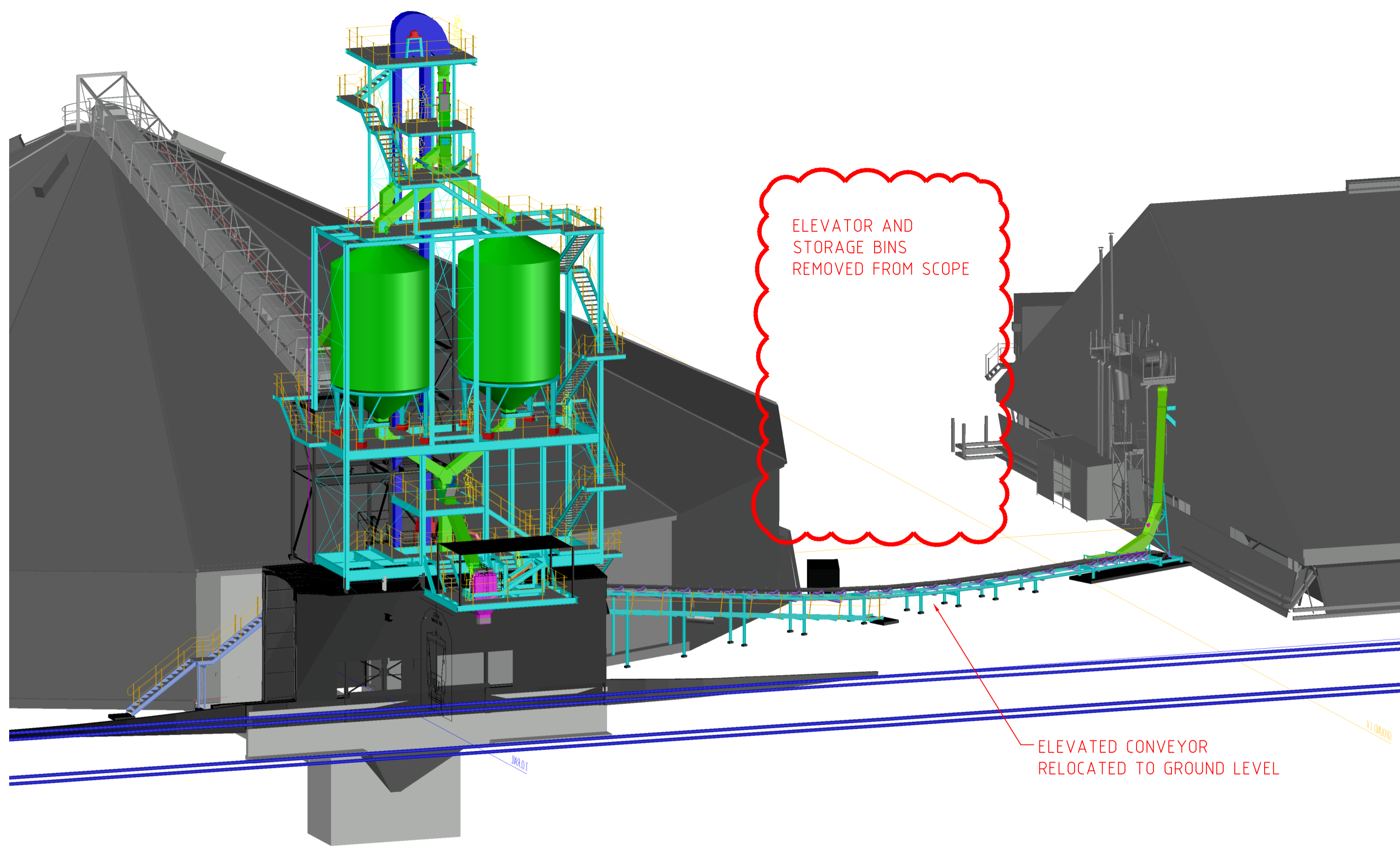
100T DUAL GARNER BIN AND RAIL LOADOUT TO REPLACE EXISTING SINGLE OVER RAIL GARNER BIN REFER DRG. 008 & 009


EXISTING ROAD HOPPER

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1										DRAWN	17.07.17		GrainCorp Operations Limited ABN 92 003 875 401 www.graincorp.com.au Head Office: Level 17, Tower 1, 201 Sussex Street, Sydney NSW 2000 eDMS: PO Box 92 Doonan, Victoria 3174 Phone (03) 9717 3257 edms@graincorp.com.au			PROJECT REGENERATION CONDOBOLIN - PROPOSED RAIL LOADING CONCEPT 3D SITE ARRANGEMENT PROJECT NUMBER: 20170510-CON-DWG-002 DRAWING NUMBER: 20170510-CON-DWG-002	
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SUPERSEDED

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															20170510-CON-DWG-002	B					

Air Quality and Noise Assessment

Condobolin Rail Loadout Upgrade

12-Apr-2024

Air Quality and Noise Assessment

Condobolin Rail Loadout Upgrade

Client: GrainCorp Limited

ABN: 52 003 875 401

Prepared by

AECOM Australia Pty Ltd

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12-Apr-2024

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Quality Information

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 Date 12-Apr-2024
 Originator Julian Ward / Jack Robinson
 Verifier/s David Rollings/ Gale Greer

Revision History


Rev	Revision Date	Details	Approved	
			Name/Position	Signature
A	12-Apr-2024	Draft Report for Client Review	David Rollings Technical Director - Air Quality	
B	12-Apr-2024	Final Report for Issue to Client	David Rollings Technical Director - Air Quality	

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1.0 Introduction

AECOM Australia Pty Ltd was engaged by GrainCorp Limited (GrainCorp) to undertake Air Quality and Noise assessments for modifications to the proposed rail loadout (the Project) at GrainCorp's grain loading facility in Condobolin, New South Wales.

A Development Application (DA) for the Project which included Air Quality and Noise components has already been submitted and approved for the upgrade of grain handling equipment and train loading infrastructure. Since the approval of the DA however, GrainCorp has made some minor modifications to the approved plans which necessitates re-examination of the potential impacts from an air quality and noise perspective.

This report outlines the details of the modifications and identifies any changes in potential emissions of air pollution and noise in comparison with the approved plans.

The existing environment in terms of air quality, meteorology and noise levels are defined to assist in the determination of any adverse effects due to the modifications.

1.1 Project Scope

The scope of the Air Quality and Noise assessments are described as follows.

1.1.1 Air Quality

- Identification of relevant legislation and Air Quality criteria relevant to the Project.
- Description of the existing environment in terms of meteorology, air quality and location of sensitive receptors
- Identification of potential sources of pollution for the Project
- Undertake a qualitative assessment of potential changes in air emissions from the Project in comparison with the existing infrastructure and the approved DA plans.
- Identify and mitigation measures or operational constraints that may be applicable to the modified Project in terms of air emissions.

1.1.2 Noise

- Determine appropriate operational noise limits at nearby sensitive receivers in accordance with the EPA's Noise Policy for Industry (NPfI), based on minimum background noise levels;
- Identification of nearby noise sensitive receivers;
- Review of proposed equipment and likely sound power levels;
- Calculate noise levels from proposed new plant at nearby noise sensitive receivers. Provide discussion if noise levels from proposed new plant are likely to have a significant impact on existing noise levels at receivers; and
- Provide indicative noise control recommendations where required to meet the environmental noise limits. This may include specification of the maximum allowable sound power levels or recommendation of enclosures or barriers etc.

2.0 Project Description

2.1 Location

The Condobolin site is located on Lot 1 DP 81948, on Kiacatoo Road, Condobolin, New South Wales. The location of the site in relation to the town of Condobolin is shown in Figure 1.



Figure 1 Site location

2.2 Proposed Project Infrastructure

The Project consists of an upgrade to the rail loadout to a maximum throughput of 500 tonnes per hour. To achieve this new higher throughput, the following significant changes were proposed as part of the approved DA:

- Installation of two new 1500 tonne grain silos
- Installation of new dual 100 tonne train loading Garner bins
- Installation of a new elevated conveyor and elevators
- Installation of a newly designed over-rail outload spout
- Installation of two new energy-efficient electric motors to drive the elevator and ground conveyor:
 - Elevator Drive 110kW, SEW gearmotor, Rigid coupling, VSD powered.
Elevator belt type EP 800, width 0.635m, belt speed 3.57 m/s
Elevator bucket type 22x8 STD.
 - Linking conveyor 22kW, SEW Gearmotor, Torqloc, soft start powered
Belt type EP630, width 750mm, belt speed 3.5m/s
Troughing angle 35 degrees, idler length 250m

The modifications to the originally approved DA are as follows:

- The two new 1500 tonne grain silos have been removed from the plans.
- The new elevator servicing the grain silos from the storage shed has been removed from the plans.
- The new elevated conveyor has been changed to a ground level conveyor.

In addition to the new loadout infrastructure, the rail siding is also proposed to be increased in length, allowing trains to be loaded continuously without a break. Environmental impacts of the construction of the siding are addressed in separate assessments and is therefore are not included in this report.

Overall, the new (modified) infrastructure will enable GrainCorp to reduce train loading and cycle times compared with the existing infrastructure. This is expected to have a positive effect on air and noise impacts to nearby sensitive receptors.

The proposed layout of the Project (as modified compared with the approved DA) is presented in Figure 2 and an elevated view of the new modified layout relevant to this assessment is presented in Figure 3.

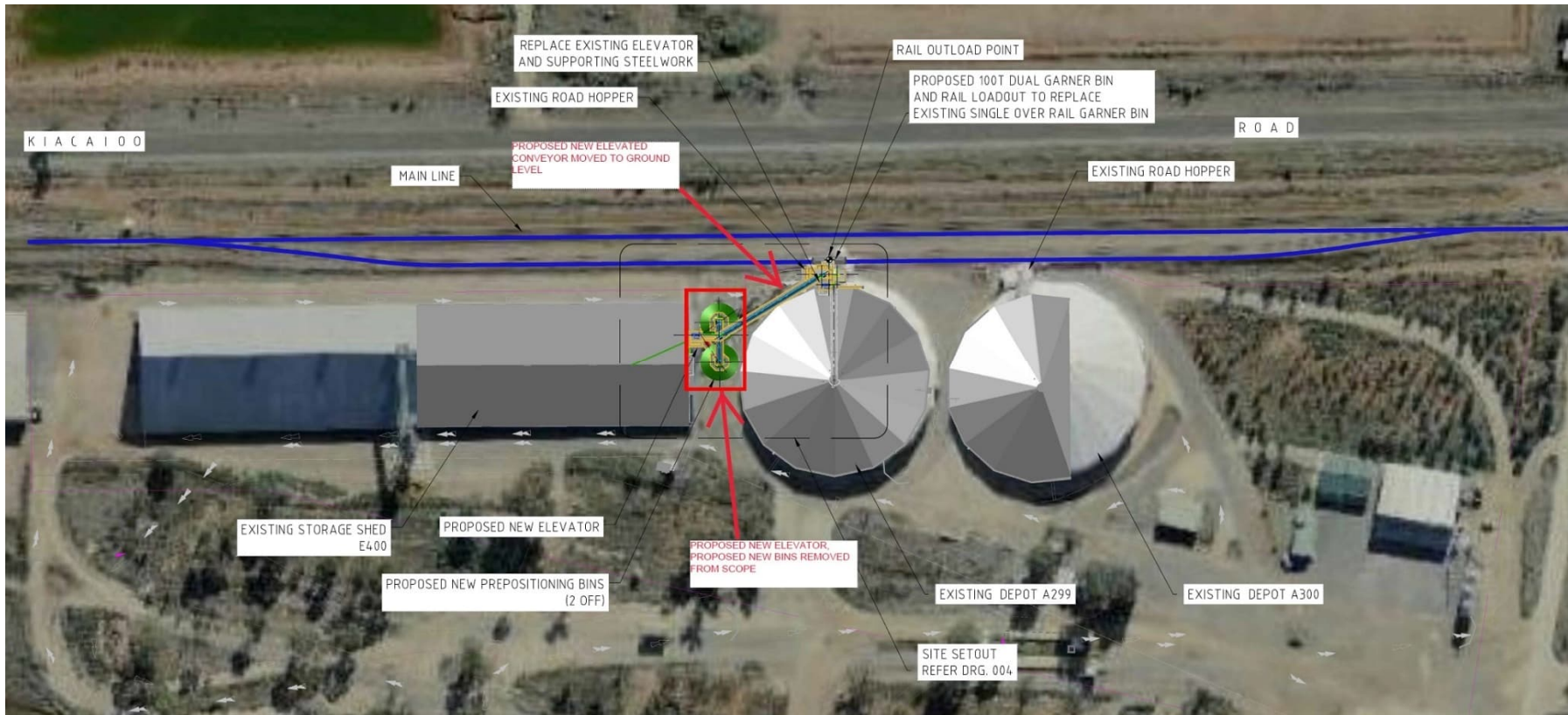


Figure 2 Proposed Project layout – showing the new elevator and two grain silos that were part of the approved DA plans

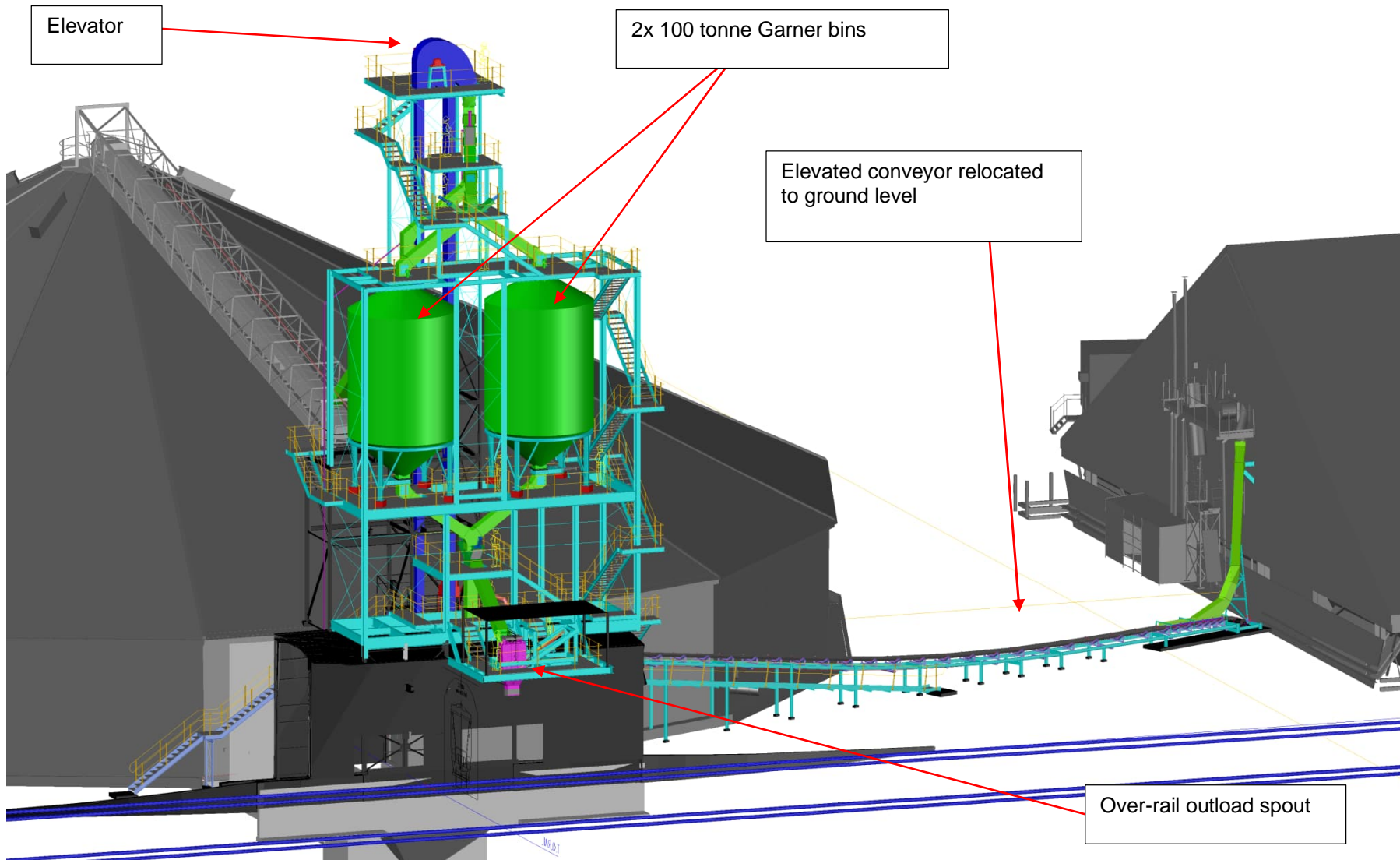


Figure 3 Elevated view of proposed modified Project infrastructure

3.0 Air Quality Assessment

3.1 Potential Sources of Air Pollution

Potential emissions to air is primarily dust, in the form of particulate matter. Potential sources of dust are:

- Loading of grain from trucks to the storage shed hoppers.
- Movement of grain between storage locations by conveyor.
- Loading grain to trains via the loadout spout.
- Dust generated from vehicle movements on unsealed surfaces.

In addition to dust emissions, there may also be minor vehicle exhaust emissions from trucks and light vehicles entering and exiting site. These emissions are expected to be very minor and would remain essentially unchanged from the existing facility and are therefore not considered further in this assessment.

3.2 Relevant Legislation

The NSW EPA has released a range of air pollution assessment criteria as part of their *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, 2022*. The pollutant specific criteria and corresponding averaging period for individual particulates are listed in Table 1. Note that PM_{2.5} has not been included here as fugitive dust sources tend to comprise only a very small fraction of PM_{2.5} and any offsite concentrations would be expected to be negligible.

Table 1 Air quality impact assessment criteria

Pollutant	Basis	Averaging Period	Applicability	Criteria (µg/m ³)	Source
TSP	Health	Annual	Offsite Receptors	90	Approved Methods
PM ₁₀	Health	24-hour	Offsite Receptors	50	Approved Methods
		Annual	Offsite Receptors	25	Approved Methods

3.3 Sensitive Receptors

Sensitive receptors relevant to air quality are shown in Figure 4 (as purple dots). Residential and commercial buildings have been included.

The nearest residential receptors are about 600 m from the rail outload point. In general, receptors more than 500 m from fugitive dust sources such as those at the site (i.e. no large-scale excavation or earthworks) are not impacted as the relatively coarse particle size drops from suspension relatively quickly. Given the spacing between the residential receptors and the grain handling facilities, adverse effects from the minor particulate emissions are considered to be unlikely (i.e. no exceedances of the criteria listed in Table 1 and concentration changes unlikely to be discernible from background dust).

The nearest commercial receptor is about 300 m from the rail outload point, behind the storage shed. Workers at commercial sties tend to be present for a smaller period of time as compared with residential receptors. As a result, even though there is a smaller distance to the commercial receptor, the likelihood of adverse dust effects from the GrainCorp facility would be low¹. On this basis the workers at the commercial receptor location are not expected to be adversely impacted by dust generated by the GrainCorp facility.

¹ Exposure would only be for a fraction of the PM₁₀ criteria 24-hour averaging period



Figure 4 Sensitive receptors

3.4 Meteorology

The nearest automated weather station to the Project is the BOM-operated station at Condobolin Aerodrome, about eight km east of the Project site.

Average monthly rainfall and minimum/ maximum temperatures are presented in Figure 5. Rainfall is consistently low across the year, with less than about 60mm on average per month. Dry days are very common, increasing the potential for wind-blown dust, or emissions of dust from mechanical disturbance of dry materials, e.g. farming activities. Temperatures generally range between daily minimums of less than 5 °C in winter to daily maximums around 34 °C in summer.

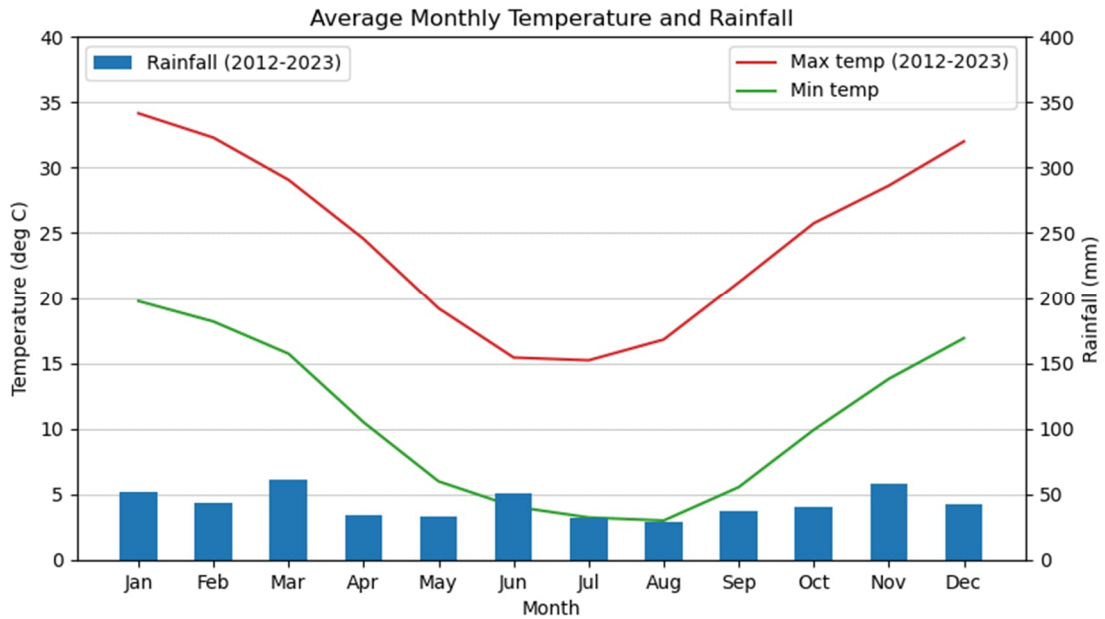


Figure 5 Rainfall and temperature averages, Condobolin BOM 2012-2023

Wind roses show the frequency of occurrence of winds in terms of direction and strength at a given location. The bars in the wind rose represent winds blowing from that direction – e.g. the bar facing due north indicates winds blowing from north to south. The different colours represent the different wind strengths. The length of the bars and each coloured segment represent the frequency of occurrence; the longer the bar or segment, the more frequent that wind condition is.

A wind rose for all hours in 2012 to 2023 at the BOM Condobolin station is shown in Figure 6. Winds blow from all directions but are slightly more common from the north and southwest. Strong winds above 5 m/s (capable of raising dust) are common and can blow from any direction.

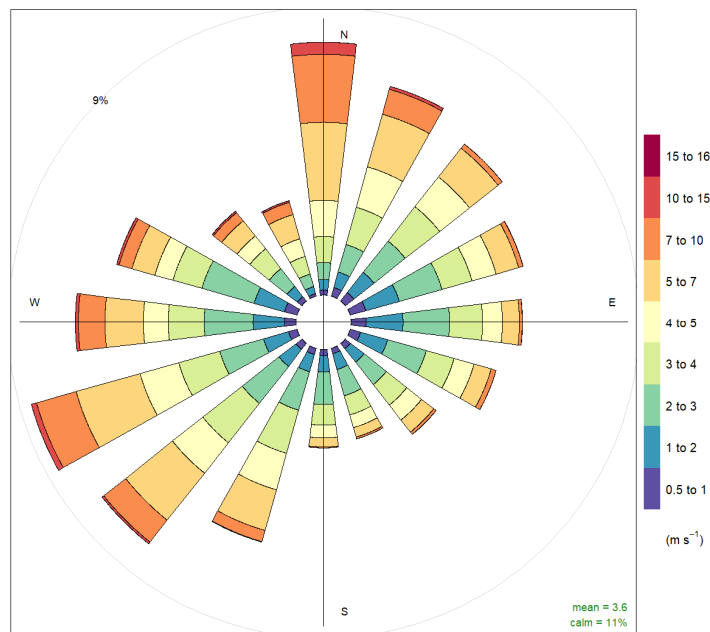


Figure 6 All hours wind rose, Condobolin BOM 2012-2023

Although operations at the facility are expected to occur mostly during daylight hours, day/ night wind rose for the 2012-2023 period at BOM Condobolin are also examined and are shown in Figure 7.

Winds are generally stronger during the day, with fewer hours of calm conditions. Winds at night are lighter, with a much higher frequency of calms. Lighter winds and calm conditions generally do not favour quick dispersion of air pollutants, so any air emissions generated at night would be more likely to remain at higher concentrations as they drift on the light winds towards receptors. Stronger winds in the day, combined with more vertical air movement generated by convection typically disperse air emissions to lower concentrations before they reach the receptors.

Winds during the day are most frequent from the north and southwest, with wind speeds averaging around 4.5 m/s. Wind speeds over 5 m/s are typically strong enough to raise dust from areas of exposed material or stockpiles and occur quite frequently at Condobolin during the day.

Winds at night are lighter, with an average wind speed of around 2.7 m/s. The frequent southwest winds seen during the daytime are less prevalent at night, with winds from the northwest and northeast more common.

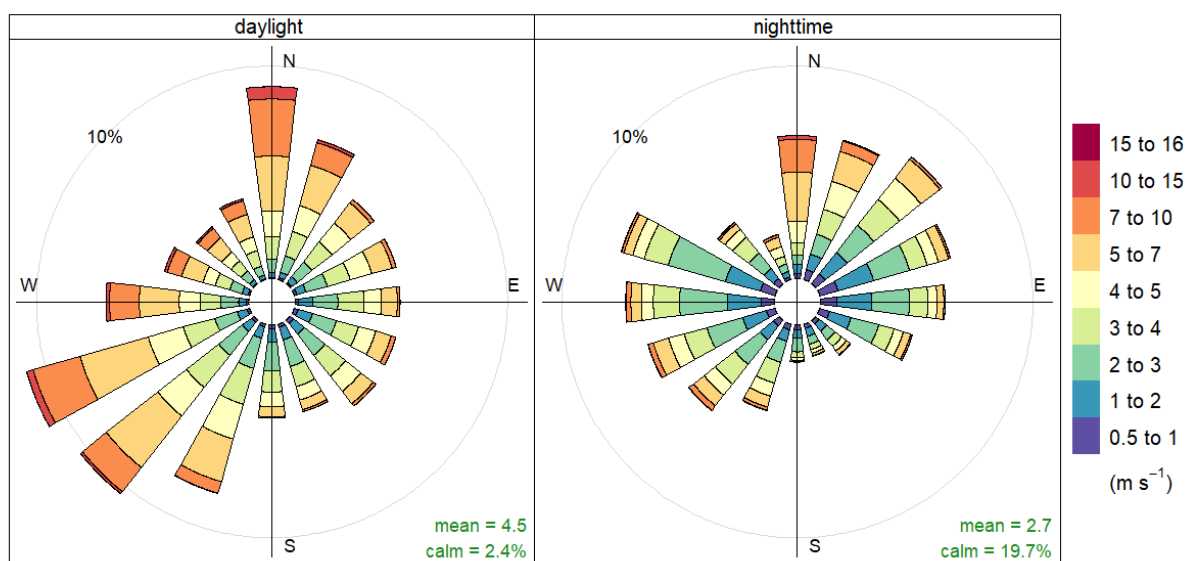


Figure 7 Day/night wind roses, Condobolin BOM 2012-2023

3.5 Existing Air Quality

A dust monitoring station is operated as part of the NSW DustWatch network at the Condobolin Department of Primary Industries Research Centre site, about 9 km east of the project. Particulate matter as PM₁₀ is monitored using a non-Australian Standard which provides indicative measurements only. The nearest station in the NSW Air Quality Monitoring Network, which uses Australian Standard methods, is located almost 200 km to the east at Orange. The indicative data at Condobolin DPI is likely to provide a better estimation of local particulate concentrations due to the much closer distance to the Project.

A summary 24-hour average PM₁₀ and annual average PM₁₀ for the years 2020 to 2023 are presented in Figure 8 and Figure 9, respectively. There have been several 24-hour periods of elevated PM₁₀ concentrations during the monitoring period, in late 2020 and early 2021. No elevated concentrations were measured in the second half of 2021, 2022 or 2023, most likely due to the wetter conditions brought by a La Nina event. Annual average concentrations were relatively low, with the highest full year concentration around 10 µg/m³ measured in 2021 (only part of 2020 was covered by the data, so this 2020 average is only for the August to December period). Again, lower average concentrations in 2022 and 2023 were likely due to wetter conditions, reducing the potential for dust liftoff. Concentrations during years of drought or high bushfire activity are likely to be higher than those measured in these years.

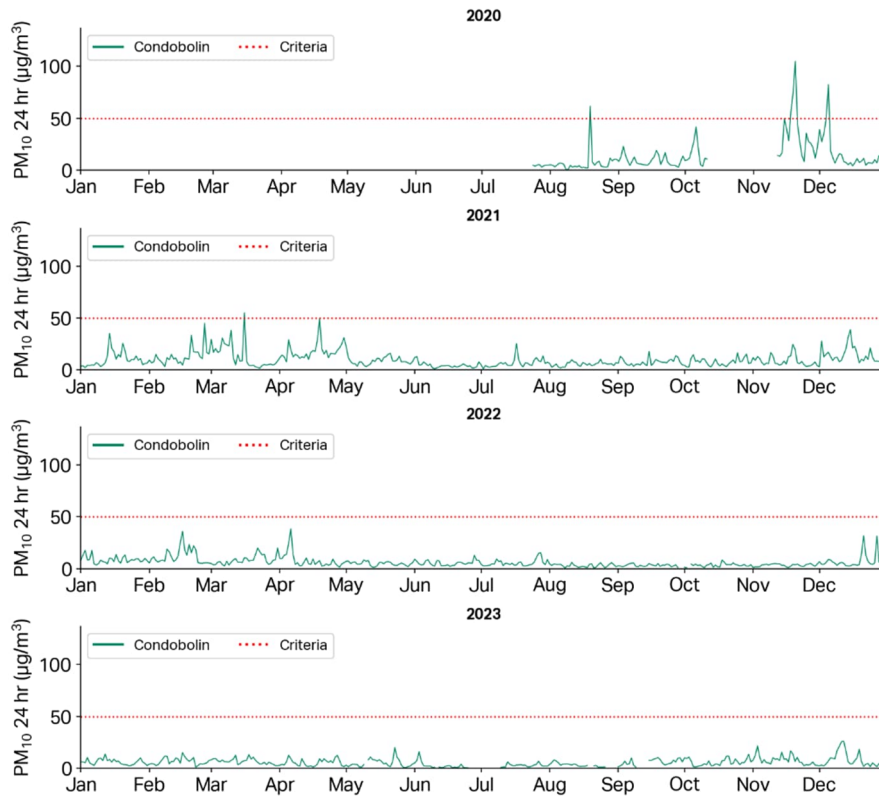


Figure 8 24-hour average PM₁₀ data measured at Condobolin DPI

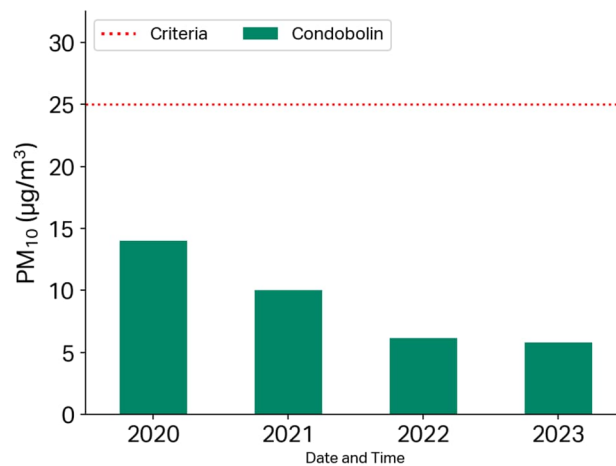


Figure 9 Annual average PM₁₀ data measured at Condobolin DPI

3.6 Potential Air Quality Impacts

Potential changes in air emissions for the Project (as modified from the approved DA plans) are discussed in comparison with the existing infrastructure and the approved DA plans are discussed in the following sections.

3.6.1 Comparison with Approved DA Plans

The Project modifications to the approved DA plans and the likely effect on dust emissions are as follows:

- The two new 1500 tonne grain silos have been removed from the plans:

- This will have very little effect as the silos are enclosed vessels and dust emissions would be negligible.
- The new elevator servicing the grain silos from the storage shed has been removed from the plans:
 - This will have very little effect as the elevator is an enclosed vessel and dust emissions would be negligible.
- The new elevated conveyor has been changed to a ground level conveyor:
 - The approved elevated conveyor was proposed to be at a height of greater than 30 m above ground level. As wind speed increases with height, due to less surface friction and fewer obstacles, the likelihood of wind-blown dust from an elevated conveyor also increases. The modified Project conveyor is at ground level and exposure to strong winds is likely to be much lower than the approved elevated conveyor. This means that potential dust emission are also likely to be lower.

Based on the point listed above, overall dust emissions from the Project compared with the approved DA plans are likely to be slightly lower, based on the changed conveyor plans.

3.7 Mitigation Measures

In general, the design of the newly modified Project infrastructure is a form of dust mitigation itself, with the removal of trucks to transport grain between storage locations, and the re-design of the over-rail outload spout likely to offset any increases in grain throughput. Additional mitigation measures are therefore not recommended at this point. However, should dust liftoff from the ground-based conveyor become apparent, the installation of a cover on at least one side of the conveyor may be considered.

4.0 Noise Assessment

4.1 Environment and assessment receivers

The grain loading facility is located in a rural environment, approximately 1.1 km from the edge of Condobolin, NSW. The nearest sensitive receivers are located approximately 570 m north and 900 m west-south-west of the facility. An overview of noise sensitive receivers is shown in Figure 10 below.



Figure 10 Sensitive receivers

4.2 Environment Protection Authority – NSW Noise Policy for Industry

Industrial noise has the potential to affect nearby noise sensitive receivers. The *Noise Policy for Industry* sets out a procedure to determine project noise trigger levels relevant to a development. If it is predicted that the development is likely to cause the project noise trigger level to be exceeded at existing noise sensitive receivers, then management measures need to be considered to reduce the predicted noise level.

The assessment procedure for industrial noise sources has two components that must be satisfied:

- Controlling intrusive noise impacts in the short term for residences
- Maintaining noise level amenity for residences and other land uses.

Both components are assessed at the boundary of the noise sensitive receiver site. These criteria apply to environmental noise emissions from any plant installed as part of the Project, and for residential receivers, represent the lower of the intrusive or amenity criteria.

4.2.1 Intrusive noise impacts

The *Noise Policy for Industry* states that the intrusiveness of an industrial noise source may generally be considered acceptable if the level of noise from the source (L_{Aeq} level), measured over a 15 minute period, does not exceed the background noise level measured by more than 5 dB. The rating background level (RBL) is the background noise level to be used for assessment purposes.

The Project intrusive noise criteria are shown in Table 2 and have been taken to be the minimum assumed RBLs as outlined in the NPfI in lieu of noise monitoring.

Table 2 Recommended LAeq, 15 minute intrusive noise criteria levels from industrial noise sources

Time of day ¹	RBL (L _{A90} , 15 minute)	Intrusive criterion RBL + 5 (L _{Aeq} , 15 minute)
Day	35	40
Evening	30	35
Night	30	35

Notes:

- Day is defined as 7:00 am to 6:00 pm, Monday to Saturday and 8:00 am to 6:00 pm Sundays and Public Holidays. Evening is defined as 6:00 pm to 10:00 pm, Monday to Sunday and Public Holidays. Night is defined as 10:00 pm to 7:00 am, Monday to Saturday and 10:00 pm to 8:00 am Sundays and Public Holidays.

4.2.2 Protecting noise amenity

To limit continuing increases in noise levels, the maximum ambient noise level resulting from industrial noise sources should not normally exceed the acceptable noise levels specified in Table 2.1 of the *Noise Policy for Industry*. The receivers are located in a rural environment, so therefore amenity noise levels for an urban area were chosen.

The relevant amenity criteria are shown in Table 3.

Table 3 Recommended LAeq amenity noise levels from industrial noise sources

Type of Receiver	Time of Day	Recommended L _{Aeq} Noise Level dB(A)
Residence - Rural	Day	48
	Evening	43
	Night	38

According to Section 2.4 of the *Noise Policy for Industry*, the amenity level applicable to the Project is equal to the recommended level minus 5 dB(A). This takes into account the cumulative impacts of other industrial noise sources in the area.

As per the *Noise Policy for Industry*, the project amenity level is converted to a 15 minute period by adding 3 dB(A).

4.2.3 Project specific noise criteria

A summary of the environmental noise criteria for the Project is presented in Table 4 and is taken to be the lower of the intrusive noise level and the recommended amenity noise level.

Table 4 Project specific noise levels

Receiver area	Period ¹	RBL (L _{A90} , 15 min)	Intrusive criterion (L _{Aeq} , 15 min)	Amenity criterion (L _{Aeq} , Period)	Project specific noise criteria, (L _{Aeq}) ²
Residents	Day	35	40	48	40
	Evening	30	35	43	35
	Night	30	35	38	35

Notes:

- Day is defined as 7:00 am to 6:00 pm, Monday to Saturday and 8:00 am to 6:00 pm Sundays and Public Holidays. Evening is defined as 6:00 pm to 10:00 pm, Monday to Sunday and Public Holidays. Night is defined as 10:00 pm to 7:00 am, Monday to Saturday and 10:00 pm to 8:00 am Sundays and Public Holidays.
- Project specific noise levels determined as the lowest of the intrusive and amenity criteria.

4.3 2017 Statement of Environmental Effects

In order to determine operational noise impacts from the proposed rail loadout upgrade, AECOM has additionally referred to a previously approved Statement of Environmental Effects (SEE) completed in November 2017 for the upgrade of the grain handling facility which did not ultimately take place. This previously proposed upgrade featured two elevators, one grain conveyor, and predicted cumulative operational noise levels for the completed project. The table of predicted operational noise levels has been reproduced in Table 5 below. There were two residential receivers considered for the proposed development. Receiver 1 is located approximately 570 m north of the proposal, and Receiver 2 is located approximately 1.1 km north west of the proposal. Predicted noise levels from the SEE have been rounded to the nearest decibel in order to reflect standard industry practice.

Table 5 2017 SEE predicted operational noise levels

Scenario	Source	Cumulative noise level at Receiver 1 (dB(A))	Cumulative noise level at Receiver 2 (dB(A))
1	Existing elevators	30	23
2	1 Proposed elevator	30	23
3	2 Proposed elevators	33	26
4	Proposed conveyor, 2 proposed elevators	35	27

4.4 Predicted noise levels

Noise from the proposed conveyor has been sourced from previous AECOM projects. Conveyor sound power levels are provided in Table 6 below. In addition, the measured noise level from the existing elevator as provided in the SEE is also listed below.

Table 6 Conveyor Sound Power Levels

Source	Octave Band Sound Power Level, dB, Hz							Total, dB(A)
	63	125	250	500	1000	2000	4000	
Existing Elevator	-	-	-	-	-	-	-	85
Conveyor	99	99	93	85	84	80	79	88/metre

A 'flat ground' environmental noise model was used based on hemispherical spreading, conservatively assuming no topographical shielding or directivity. The CONCAWE noise propagation algorithm was utilised for the calculation. A ground absorption factor of 0.6 was employed.

Calculated noise levels at each receiver location are presented in Table 7 for noise enhancing meteorological conditions as outlined in the NSW EPA's *Noise Policy for Industry, 2017* (NPfI).

Table 7 2024 Predicted operational noise levels

Scenario	Source	Cumulative noise level at Receiver 1 (dB(A))	Cumulative noise level at Receiver 1 (dB(A))
1	Existing elevator and proposed conveyor	35	27

Results of noise modelling in Section 4.4 have demonstrated that predicted operational noise levels would be no greater than the predicted noise levels from the 2017 SEE. In addition, these predicted noise levels would be compliant with the relevant project noise trigger levels for day, evening and night-time as outlined in 4.2.3. Therefore, it can be concluded that operational noise levels would not have a significant impact on nearby sensitive receivers.

5.0 Conclusion

Air Quality and Noise assessments were undertaken to determine whether there would be any material change in potential offsite impacts due to the proposed modifications to the Project.

The air quality assessment was undertaken qualitatively by comparing the potential for dust emissions from the Project plans with the existing infrastructure and the approved DA plans. No material change is expected compared with the existing infrastructure, with a higher throughput being offset by certain design changes in the Project. A small reduction in air emissions is likely for the Project compared with the approved DA plans, due to the elevated conveyor between the storage shed and Depot A299 being moved from an elevated position to ground level, reducing potential wind-blown grain dust emissions. Overall, the modified Project plans are acceptable from an air quality perspective.

The noise impact assessment was undertaken by predicting future operational noise levels from the existing infrastructure and the proposed new equipment. Results of noise modelling in Section 4.4 have demonstrated that predicted operational noise levels would be no greater than the predicted noise levels from the 2017 SEE. In addition, these predicted noise levels would be compliant with the relevant project noise trigger levels for day, evening and night-time as outlined in Section 4.2.3. Therefore, it can be concluded that operational noise levels would not have a significant impact on nearby sensitive receivers.

5/04/2024

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GrainCorp

20 White Street

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Attention: Zeb Coxsedge

GrainCorp Condobolin Development Application

Traffic Review

Dear Zeb,

1 Introduction

arc traffic + transport has been engaged by GrainCorp to prepare a Traffic **Review** in regard to the proposed upgrade of the existing grain rail loader at GrainCorp's Condobolin facility north of Silo Road (the **Site**). The Proposal is to be submitted as a **Modification** to Development Application 2018/1 (**DA 2018/1**) to Lachlan Shire Council (**Council**).

In and of itself, the Proposal would have no impact on the operation of the Site's access roads or the broader road network. However, it is important to note that DA 2018/1 was approved by Lachlan Shire Council (**Council**) provided for additional works at the Site, and specifically:

- The closure of the existing rail level crossing immediately south of the intersection of Kiacatoo Road & Oppy Lane, such that no access would be available along Oppy Lane between Kiacatoo Road to the north of the rail line and Silos Road to the south of the rail line;
- In turn, the need for GrainCorp trucks to transfer grain from storage areas north of the railway line to the rail loading facilities south of the railway line with no Oppy Lane connection.
- Further then to the redistribution of Site trips associated with the closure of the level crossing, an upgrade of the intersection of Melrose Street & Kiacatoo Road to provide access to the northern part of the Site, and an upgrade of the intersection of Melrose Street & Silos Road to provide access to the southern part of the Site. In both instances the intersections would be upgraded to provide Basic Left (**BAL**) and Basic Right (**BAR**) treatments in accordance with Austroads warrants.

At this time, the upgrade works at the Melrose Street intersections have been undertaken, but Oppy Lane remains open; Oppy Lane will be closed as part of the Proposal, i.e. prior to the construction of the new rail loader.

Council had recent suggested that the new rail loader proposal be submitted as a new DA; however, it is our understanding that they have since indicated that the DA 2018/1 approval remains valid (i.e. the timeframe for the works – and specifically the closure of Oppy Lane - has not elapsed) and in turn the Proposal can be submitted as a Modification to DA 2018/1.

As stated, the provision of a new rail loader in and of itself will have no bearing on approved traffic conditions. However, given the time that has lapsed between the DA 2018/1 approval, this Review provides an assessment of current local traffic conditions to ensure that the upgrades of the Melrose Street intersections remain consistent with Austroads warrants further to any increases in background traffic volume increases, or increase Site trip generation.

Finally, it is important to note that the Modification does not provide for any changes to the existing traffic generation/distribution characteristics of the Site, nor for any additional storage capacity, and in turn addition trip generation.

2 Approved Upgrades

As discussed, the upgrade of the Melrose Street & Kiacatoo Road and Melrose Street & Silos Road intersections was approved under DA 2018/1, and have since been completed by Council.

2.1 Redistributed Truck Movements

These upgrade requirements were determined in a report titled Proposed Intersection Design at GrainCorp's Condobolin Site prepared by KME Civil and dated 4/7/2017 (**JME Report**). Based on the available on-site storage and a transfer truck carrying capacity of approximately 26t, the JME Report estimated that there would be:

- 1670 yearly movements of a loaded grain truck from the northern bunker to the southern rail loader;
- 1670 yearly movements of an empty grain truck from the rail loader to northern bunker; and
- Approximately 420 yearly general truck movements between the north and south of the Site (i.e. across the railway crossing via Oppy Lane).

Overall, DA 2018/1 would result in an additional 3,760 truck movements per year using the Melrose Street & Kiacatoo Road and Melrose Street & Silos Road intersections between the northern and southern parts of the Site. On average, the JME Report determined that this would result in an average of 10 – 11 grain truck trips per day, noting that GrainCorp is specifically able to spread rail loading over the year rather than needing to be undertaken in a short period of time, i.e. increasing daily truck trips.

2.2 Traffic Surveys

Traffic surveys were undertaken in Melrose Street, Kiacatoo Road and Silos Road in 2013 to determine two-way Average Daily Traffic (**ADT**) volumes in each road; these surveys are provided in the Annexures to the JME Report. Further to the addition of the peak number of grain truck trips (as discussed above), the JME Report determined ADT of approximately:

- 465vph in Melrose Street;
- 510vpd in Kiacatoo Road; and
- 315vpd in Silos Road.

As a worst case, the JME Report then assigned 15% of ADT to a single peak hour, resulting in:

- 70 vehicle trips per hour (vph) in Melrose Street;
- 78vpg in Kiacatoo Road; and
- 48vph in Silos Road.

Finally, noting that these are two-way movements, the JME Report assigned 50% of trips approaching each of the intersections.

2.3 Warrants Assessment

The assessment of upgrade requirements then references Section 4.8 of Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (**GRD4A**) which provides warrants for upgrade treatments based on the speed in the major road (Melrose Street) and traffic volumes for each of the key movements. The resulting requirements are shown in the figure on Page 2 of the JME Report, and convincingly show that only BAL and BAR treatments were required.

As discussed, BAL and BAR treatments have been subsequently provided further to upgrades of both intersections by Council.

3 Current Upgrade Warrants

3.1 Overview

As discussed, the JME Report was prepared in 2017, and references traffic surveys undertaken in 2013; as such, it is important to determine whether there have been any increases in traffic volumes such as would warrant higher order treatments at the intersection, as discussed in sections below.

3.2 JME Report Warrants Assessment

It is our interpretation of the JME Report warrants assessment that all inbound trips from Melrose Street to both Kiacatoo Road and Silos Road were considered as either left turn trips or right turn trips, which provides for a worst case assessment. If these trips were distributed to both the left and right turn movements from Melrose Street, there would be an even lower 'warrant' of BAL and BAR treatments, i.e. the BAL and BAR treatments provided more than appropriately accommodate the peak traffic volumes at the intersections.

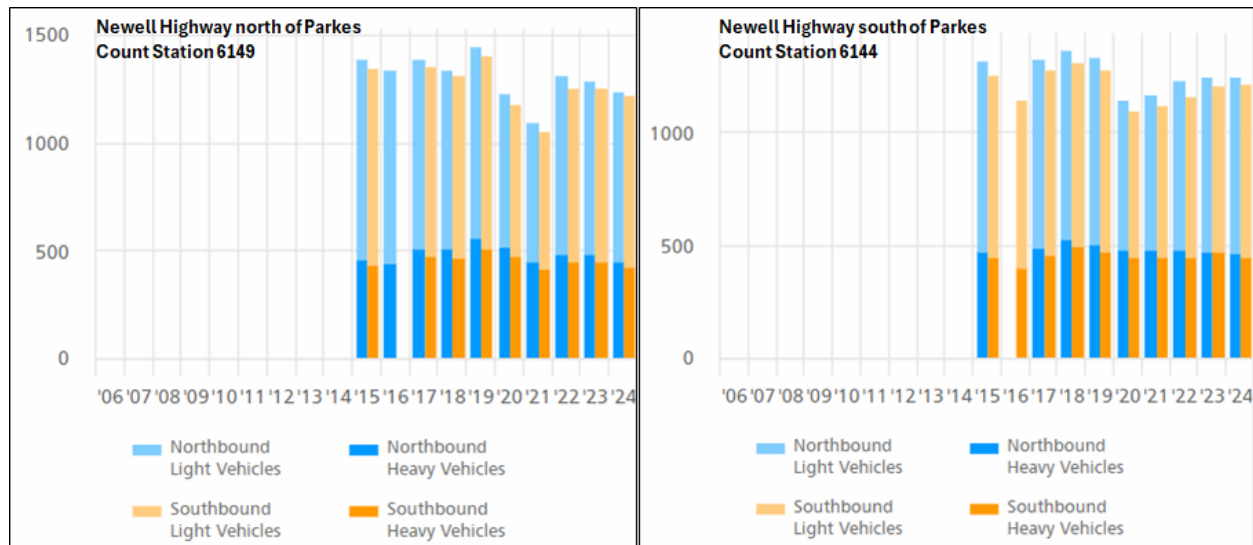
3.3 Melrose Street Traffic Volume Increases

While more recent survey data for ADT in Melrose Street it is available, arc traffic + transport has undertaken numerous studies in recent years examining average annual growth in the NSW regional road network, in many instances as part of assessment of other GrainCorp facilities.

In this regard, we have referenced available TfNSW Count Station data for the sub-region, and moreover the Permanent Count Stations in Newell Highway north and south of Parkes to the west of Condobolin. These Permanent Count Stations provide data Average Annual Daily Traffic (**AADT**) volumes for the period 2006 – 2024, which show that traffic volumes are at most static in Newell Highway, but realistically are reducing over time.

A summary of the AADT volumes at these Permanent Count Stations is provided in Table 1.

Table 1: Newell Highway Permanent Count Stations AADT Volumes



Source: TfNSW

With reference to this AADT data, and moreover the fact that there has been little if any trip generating development to the north (Melrose Street) or west (Kiacatoo Road) since the 2013 surveys, arc traffic + transport can only conclude that traffic volumes through the two key intersections would at worst be unchanged since the 2013 surveys were undertaken.

As such, we can only conclude that the BAL and BAR treatments provided at the intersections will continue to appropriately accommodate peak volumes at the intersections in accordance with the Austroads warrants.

4 Summary

Further to our assessment of the Modification, arc traffic + transport has concluded that the Modification is entirely supportable further to traffic considerations. In summary:

- The Modification for the new rail loader itself has no traffic implications.
- The DA 2018/1 upgrades at the Melrose Street intersections have been completed.
- There is no information to indicate that traffic volumes in Melrose Street or Kiacatoo Road may have increased since the warrants assessment provided in the JME Report in 2017, upon which the approval of the upgrades was based.

Should you or Council officers require any further information in regard to the issues discussed in this Review, please do not hesitate to contact the undersigned.

Yours sincerely,



Anton Reisch
Director, arc traffic + transport