Transport Impact Statement

Cuballing Feedmill Facility

CW1136800

Prepared for

Lynchborough-GPM Pty Ltd

14 August 2020

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Document Information

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1 Introduction

1.1 Background

Cardno was commissioned by Lynchborough-GPM Pty Ltd to prepare a Transport Impact Statement (TIS) for the proposed feedmill facility located within the Shire of Cuballing in the Wheatbelt region of Western Australia.

This TIS has been prepared in accordance with the *Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016)*, with the associated checklist included at **Appendix A**.

2 Existing Situation

2.1 Existing Site

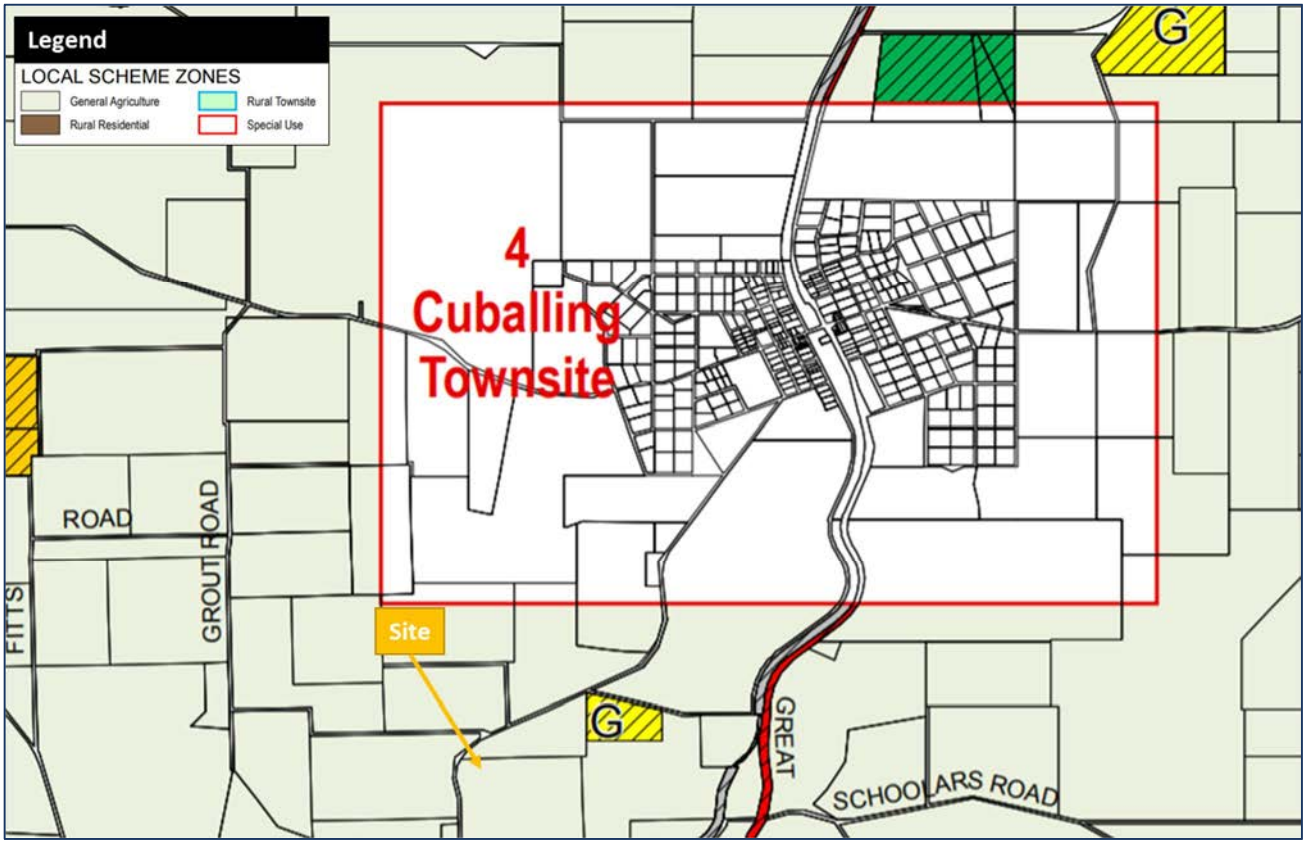
The Site is located to the east of Springhill Road, within the Shire of Cuballing. **Figure 2-1** shows an aerial image of the Site location.

Figure 2-1 Aerial Image

Base Map Source: Nearmap

The Site is zoned as 'General Agriculture' under the *Shire of Cuballing Local Planning Scheme No.2* as shown in **Figure 2-2.**

Figure 2-2 Zoning



Source: Shire of Cuballing Local Planning Scheme No. 2

2.2 Existing Road Network

The Site is bounded by Springhill Road to the north/west. The surrounding road network is further described in **Table 2-1** and **0** shows the road hierarchy as per the *Main Roads WA Road Information Mapping System.*

Table 2-1 Road Network Classification

Street Names	Road Hierarchy		Road Network			
	Road Hierarchy	Jurisdiction	No. of Lanes	No. of Footpaths	Width	Posted Speed (km/h)
Grout Road	Access Road	Local Govt.	2	0	~5m, unsealed	50
Springhill Road	Access Road	Local Govt.	2	0	~10m, sealed	110 (default)*

* Advisory speed signs of 80km/h have been installed along Springhill Road near the “bend” in the road, adjacent to the site.

Figure 2-3 Road Hierarchy

Source: Main Roads: Road Information Mapping System

2.3 Traffic Volumes

Daily traffic volumes were obtained from the *Shire of Cuballing* and are summarised in **Table 2-2** below. As can be seen in the table, the daily traffic volumes on Springhill Road are very low.

Table 2-2 Traffic Volumes

Road Name	Year	Average Weekday Daily Traffic Volume
Springhill Road (SLK 6.50)	2018/06	91
Springhill Road (SLK 6.50)	2018/09	75
Springhill Road (SLK 6.50)	2019/02	92

Source: Shire of Cuballing

2.4 Crash Assessment

A search of the *Main Roads WA Reporting Centre* for traffic crash data was carried out for reported crashes between 1 January 2015 and 31 December 2019 for the following road sections:

- Springhill Road (midblock);
- Grout Road (midblock); and
- Intersection of Springhill Road and Grout Road.

No crashes were reported at any of the above locations.

3 Transport Facilities

3.1 Existing Public Transport Facilities

There are currently no public transport facilities available in proximity of the Site.

3.2 Existing Pedestrian/Cycle Network Facilities

There are currently no pedestrian or cycling facilities available in proximity of the Site.

4 Proposed Development

4.1 Overview

The proposed development is for a major feedmill facility, which will operate by taking in raw materials to produce animal feed products.

Figure 4-1 shows the layout of the proposed development, while more detailed development plans are included in **Appendix B** of this report**.**

Figure 4-1 Proposed Development Layout

Source: LGPM

4.2 Development Access

Access to the development is proposed via 2 new crossovers as shown on **Figure 4-2**.

Access A will only be for heavy vehicles (60 tonne road-trains and 25-40 tonne semi-trailers) carrying the raw materials in to the site and carrying the animal feed products out of the site, while Access B is only for cars to access the staff and visitor car park.

Figure 4-2 Proposed Development Access

4.3 Sight-Line Review

While Springhill Road has a default speed limit of 110km/hr, advisory speed signs of 80km/hr have been erected near the “bend” on Springhill road as shown in **Figure 4-3**.

Figure 4-3 Advisory Speed Sign on Springhill Road

Assuming a design speed of 90km/hr, the Safe Intersection Sight Distance (SSID) for Access A is 214m as per Table 3.2 of the *Austroads guide to Road Design Part 4A.* Based on a desktop assessment, this appears to be achievable (refer **Figure 4-4**) if the vegetation on the southern road side verge is cleared (and kept clear) so it won’t obstruct the sight-lines. Cardno understands that the landowner/feedmill operator intends to maintain these areas to the appropriate standards on an ongoing basis to ensure that the sight-lines aren’t obstructed.

Figure 4-4 Desktop Sight-Line Assessment for Access A

4.4 Swept Path Analysis

Swept path analysis was conducted for the internal truck circulation area of the development for a B-double truck. The swept path plans for the internal truck circulation area are shown in **Figure 4-5** and **Figure 4-6**, while the swept path plans for the proposed Access A crossover on Springhill Road is shown in **Figure 4-7** and **Figure 4-8**.

Figure 4-5 Swept Path Analysis for a B-double (Internal Circulation)

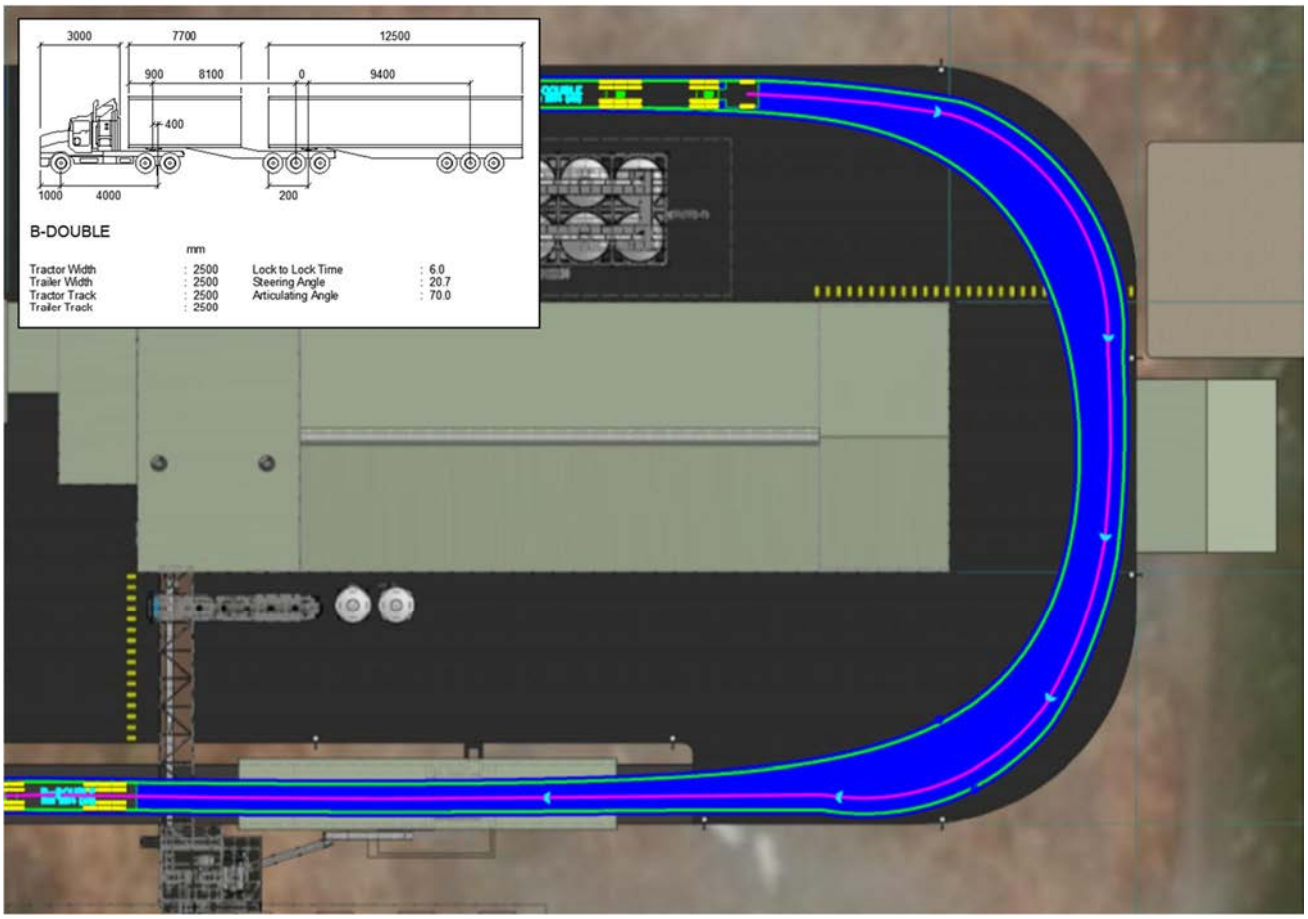


Figure 4-6 Swept Path Analysis for a B-double (Internal Circulation)

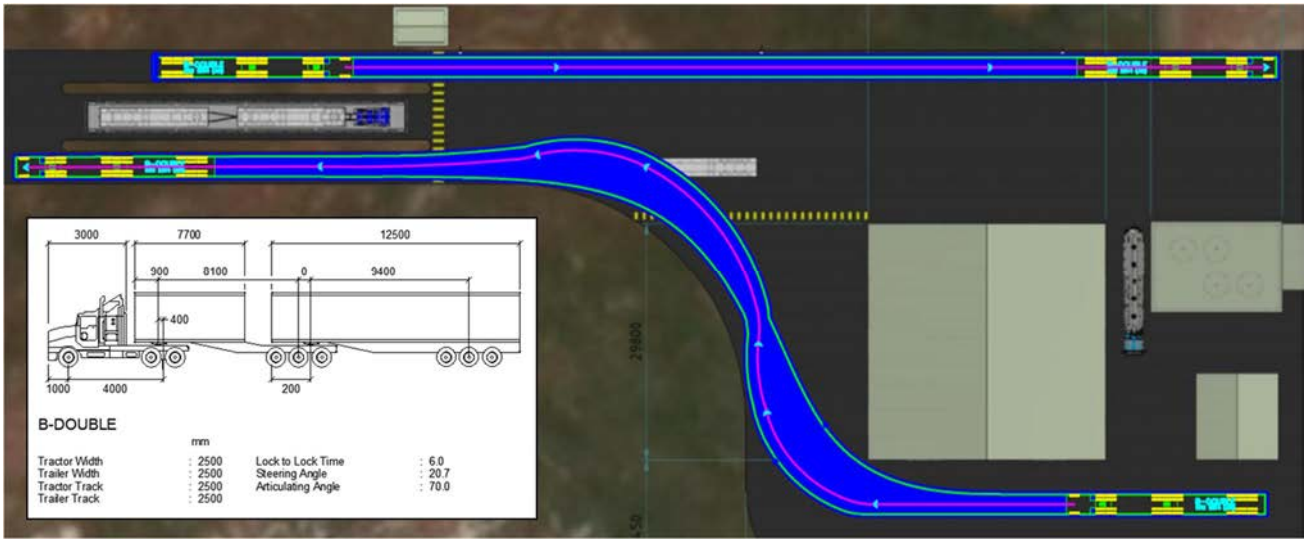


Figure 4-7 Swept Path Analysis for a B-double (Access A) for Right-in and Right-out

Figure 4-8 Swept Path Analysis for a B-double (Access A) for Left-in and Left-out

The swept path plans confirm that the B-double trucks can sufficiently manoeuvre within the truck circulation area within the site and that the proposed cross-over is sufficiently wide to accommodate the turning movements for the B-doubles at the crossover.

4.5 Traffic Generation

Based on information provided by the LGPM, the proposed development is expected to generate the following traffic volumes:

- Maximum of 20 staff on site at any one time: a maximum of 40 daily car trips (20 in, 20 out)
- An average of 19.2 road-trains (60T capacity) per day: 40 daily road-train trips (20 in, 20 out)
- Semi-trailers with 25-30T capacity, anticipated to be approximately 4 daily semi-trailer trips (2 in, 2 out)

Based on the above information, it is estimated that the site will generate approximately 84 vehicle trips per day at maximum.

4.6 Proposed Parking

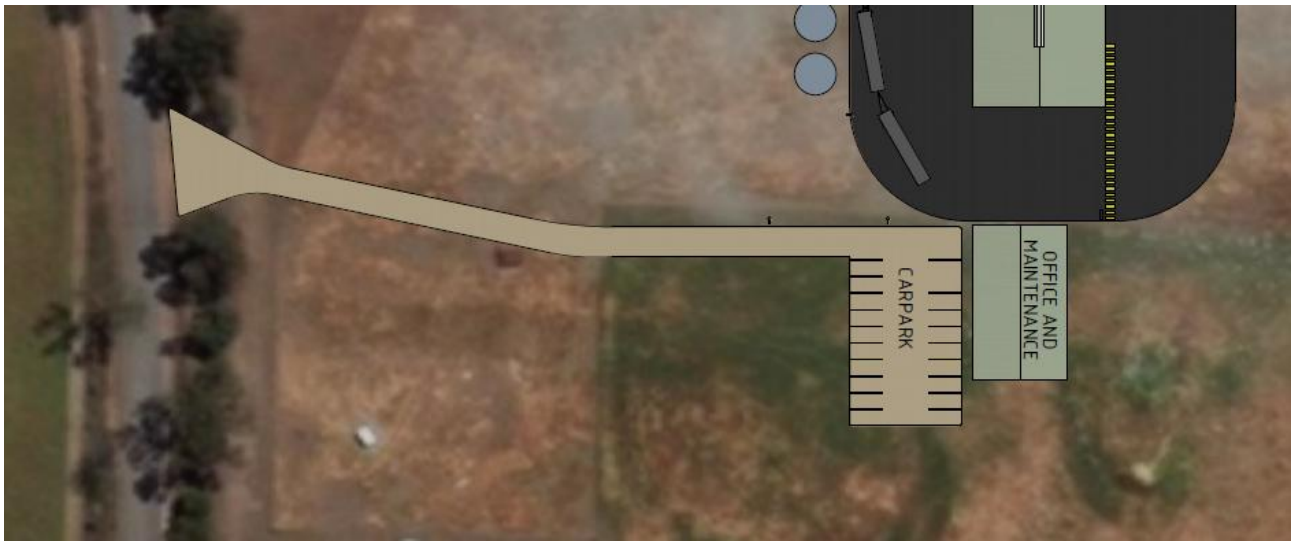
The statutory parking requirements for the Shire of Cuballing are described in the Shire of Cuballing Town Planning Scheme No. 2.

For General Agricultural developments, the minimum car parking requirements are described as “As determined by Local government”. The proposed development will include a total of 18 car parking bays, as well as 2 ACROD parking bays, to be used for staff and visitors. The proposed parking supply is considered sufficient to accommodate the site staff and visitors.

The proposed car park and associated access is shown in **Figure 4-9**.

It is noted that the car park will be physically separated from the truck circulation area in order to avoid any conflicts between the trucks and the cars.

Figure 4-9 Proposed Parking Area and Access



5 Summary

This Transport Impact Statement outlines the transport aspects of the proposed development focusing on traffic operations, access and provision of car parking.

This statement has been prepared in accordance with the *WAPC Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016).*

Based on the assessment undertaken, the following conclusions have been reached with regards to the proposed development:

- The swept path plans confirm that the B-double trucks can sufficiently manoeuvre within the truck circulation area within the site and that the proposed cross-over is sufficiently wide to accommodate the turning movements for the B-doubles at the crossover.
- A total of 20 car parking bays will be provided as part of the development, which is considered sufficient to accommodate the site staff and visitors.
- The proposed development is expected to have a maximum total trip generation of approximately 84 trips per day, which will have a negligible impact on the adjacent road network.
- The SSID requirements can be achieved for Access A based on an assumed design speed of 90 km/hr if the southern side of Springhill Road can be kept clear of vegetation that would obstruct the sight-lines.
    - It is understood that the landowner/feedmill operator intends to maintain these areas to the appropriate standards on an ongoing basis to ensure that the sight-lines aren't obstructed.

Cuballing Feedmill Facility

APPENDIX A

WAPC CHECKLIST

Item	Status	Comments/Proposals
Proposed development		
proposed land use	Section 3	
existing land uses	Section 1	
context with surrounds	Section 1	
Vehicular access and parking		
access arrangements	Section 3	
public, private, disabled parking set down / pick up	Section 3	
Service vehicles (non-residential)		
access arrangements	Section 3	
on/off-site loading facilities	N/A	
Service vehicles (residential)		
Rubbish collection and emergency vehicle access	N/A	
Hours of operation (non-residential only)	N/A	
Traffic volumes		
daily or peak traffic volumes	Section 1	
type of vehicles (e.g. cars, trucks)	N/A	
Traffic management on frontage streets	N/A	
Public transport access		
nearest bus/train routes	Section 2	
nearest bus stops/train stations	Section 2	
pedestrian/cycle links to bus stops/train station	Section 2	
Pedestrian access/facilities		
existing pedestrian facilities within the development (if any)	Section 2	
proposed pedestrian facilities within development	N/A	
existing pedestrian facilities on surrounding roads	N/A	
proposals to improve pedestrian access	N/A	
Cycle access/facilities		
existing cycle facilities within the development (if any)	Section 2	
proposed cycle facilities within the development	N/A	
existing cycle facilities on surrounding roads	N/A	
proposals to improve cycle access	N/A	
Site specific issues	Section 4	
Safety issues		
identify issues	Section 1	
remedial measures	N/A	

Cuballing Feedmill Facility

APPENDIX B

DEVELOPMENT PLANS

LGPM
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CHK		
APP		

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SCALE 1 : 500

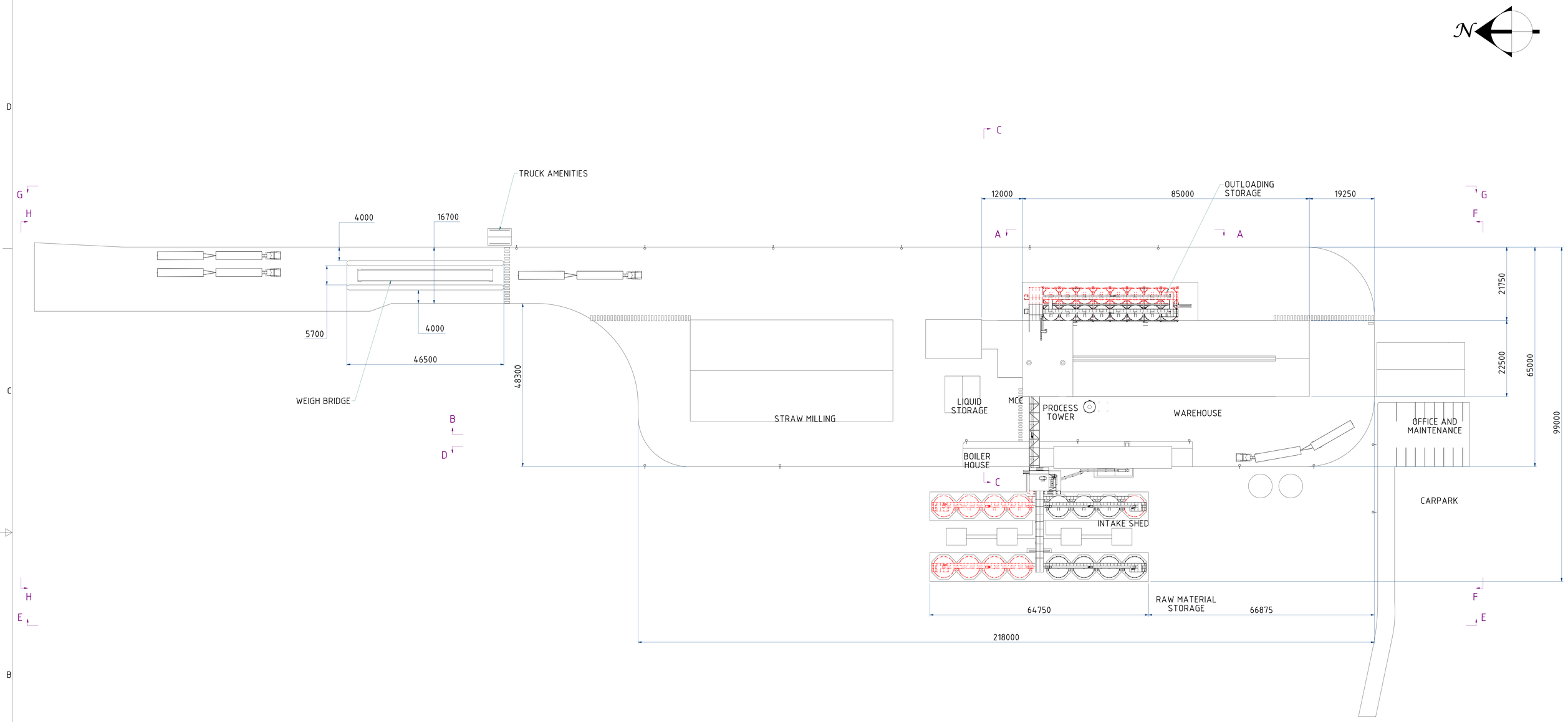
THIRD ANGLE PROJECTION

A0

CLIENT & PROJECT LOCATION
PATMROE FEEDS – CUBALLING, W.A.

FEED MILL
GENERAL ASSEMBLY
SITE LAYOUT

P&ID ITEM No.	ORG No.	REV.	SHT
	9751-00003	0	1 OF 8



LAYOUT PLAN

NOTE: ITEMS IN RED ARE TO BE INSTALLED APPROXIMATELY 1.5 YEARS FROM COMMENCEMENT OF OPERATION

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SCALE 1:400

THIRD ANGLE PROJECTION

A0

CLIENT & PROJECT LOCATION
PATMORE FEEDS - CUBALLING, W.A.

FEED MILL
GENERAL ASSEMBLY
LAYOUT PLAN

P&ID ITEM No.	DRG No.	REV.	SHT
	9751-00003	0	2 OF 8

OUTLOADING SIDE VIEW

SECTION A-A

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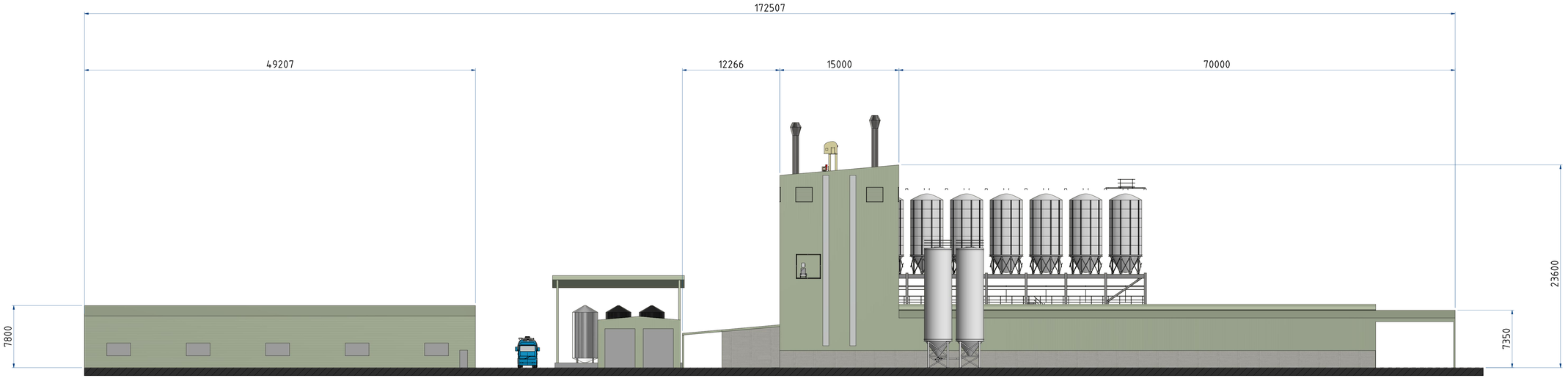

SIDE OF PROCESS BUILDING

SECTION B-B

1 : 200

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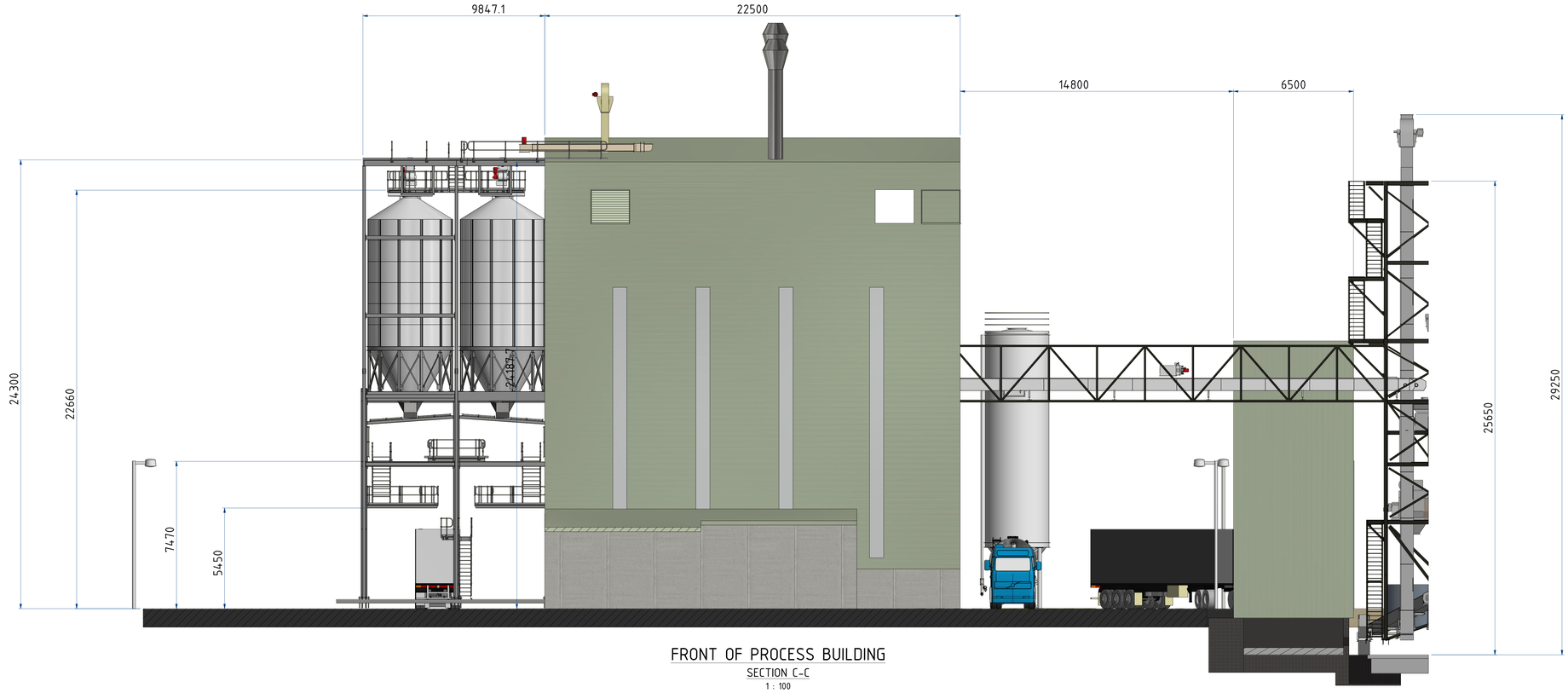
CHK			FEED MILL
APP			GENERAL ASSEMBLY
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN mm	SCALE 1 : 100		ELEVATIONS
THIRD ANGLE PROJECTION	A0	P&ID ITEM No.	DRG No. 9751-00003 REV. 0 SHT 3 OF 8



FRONT OF PROCESS BUILDING

SECTION C-C

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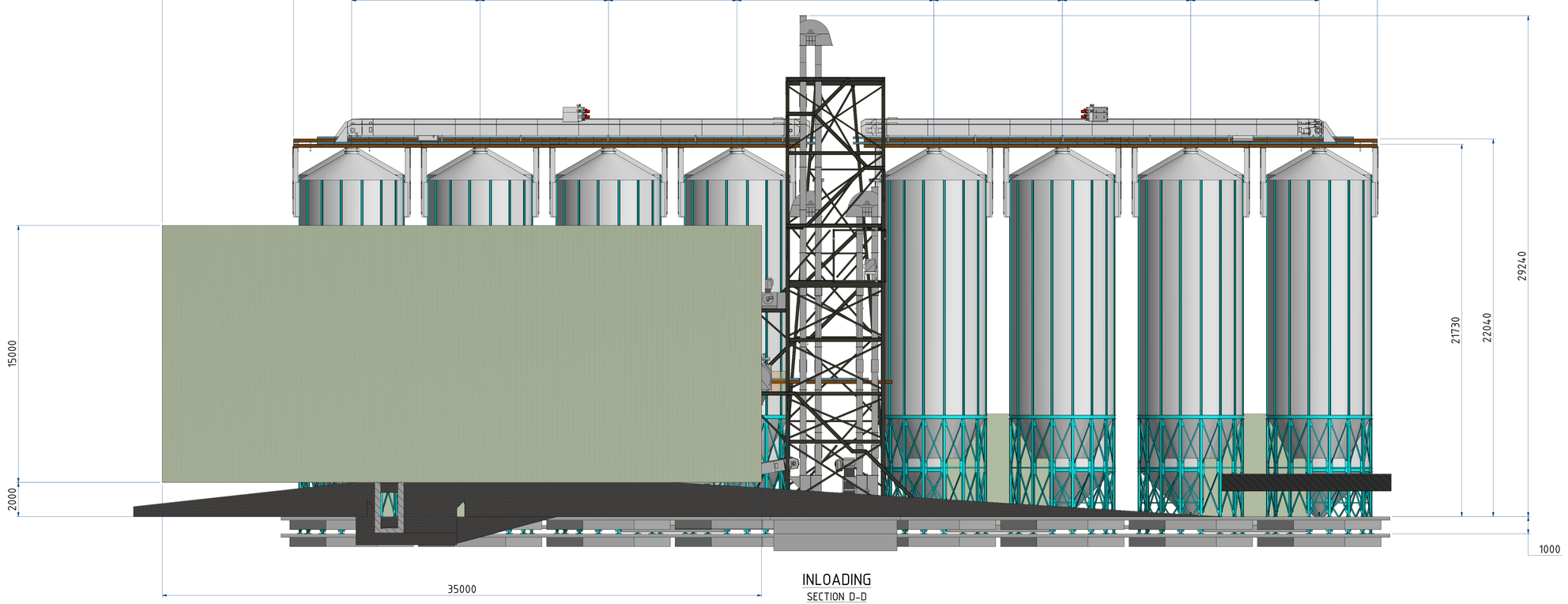

INLOADING

SECTION D-D

1 : 100

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THIRD ANGLE PROJECTION

SCALE 1 : 100

A0

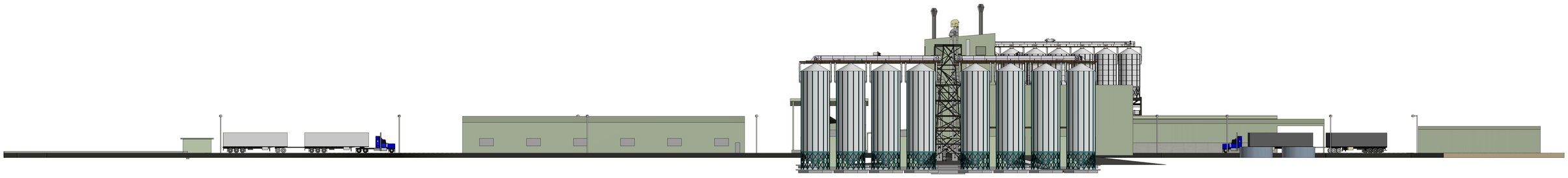
CLIENT & PROJECT LOCATION
PATMORE FEEDS – CUBALLING, W.A.

FEED MILL
GENERAL ASSEMBLY
ELEVATIONS

P&ID ITEM No.	ORG No.	REV.	SHT
	9751-00003	0	4 OF 8

OVERALL SOUTHERN SECTION

1 :200



OVERALL WESTERN SECTION

1 :300

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SCALE 1:300

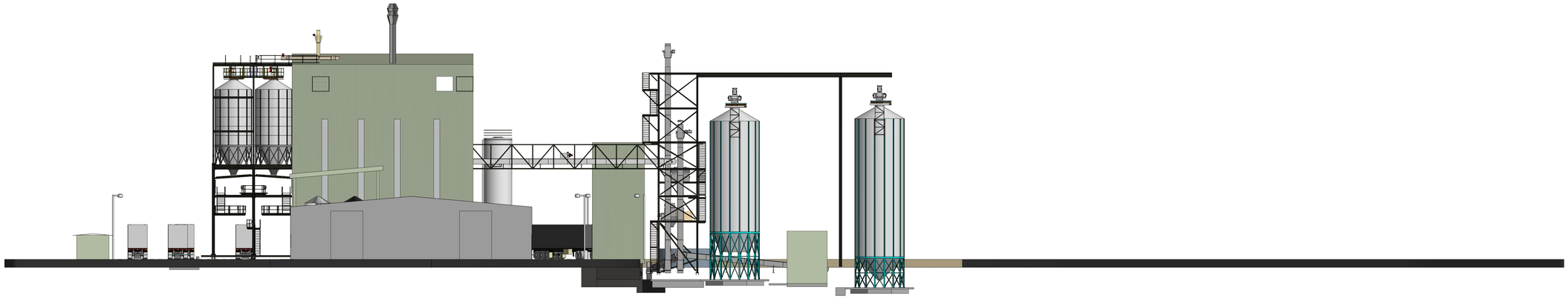
THIRD ANGLE PROJECTION

A0

CLIENT & PROJECT LOCATION
PATMORE FEEDS - CUBALLING, W.A.

FEED MILL
GENERAL ASSEMBLY
SECTIONS

P&ID ITEM No. | DRG No. 9751-00003 | REV. 0 | SHT 5 OF 8



OVERALL NORTHERN SECTION

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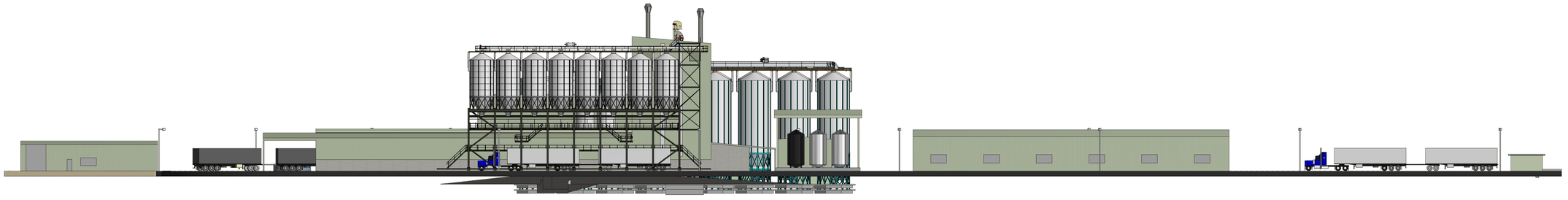

OVERALL EASTERN SECTION

1 :300

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SCALE 1:300

THIRD ANGLE PROJECTION

A0

CLIENT & PROJECT LOCATION
PATMORE FEEDS - CUBALLING, W.A.

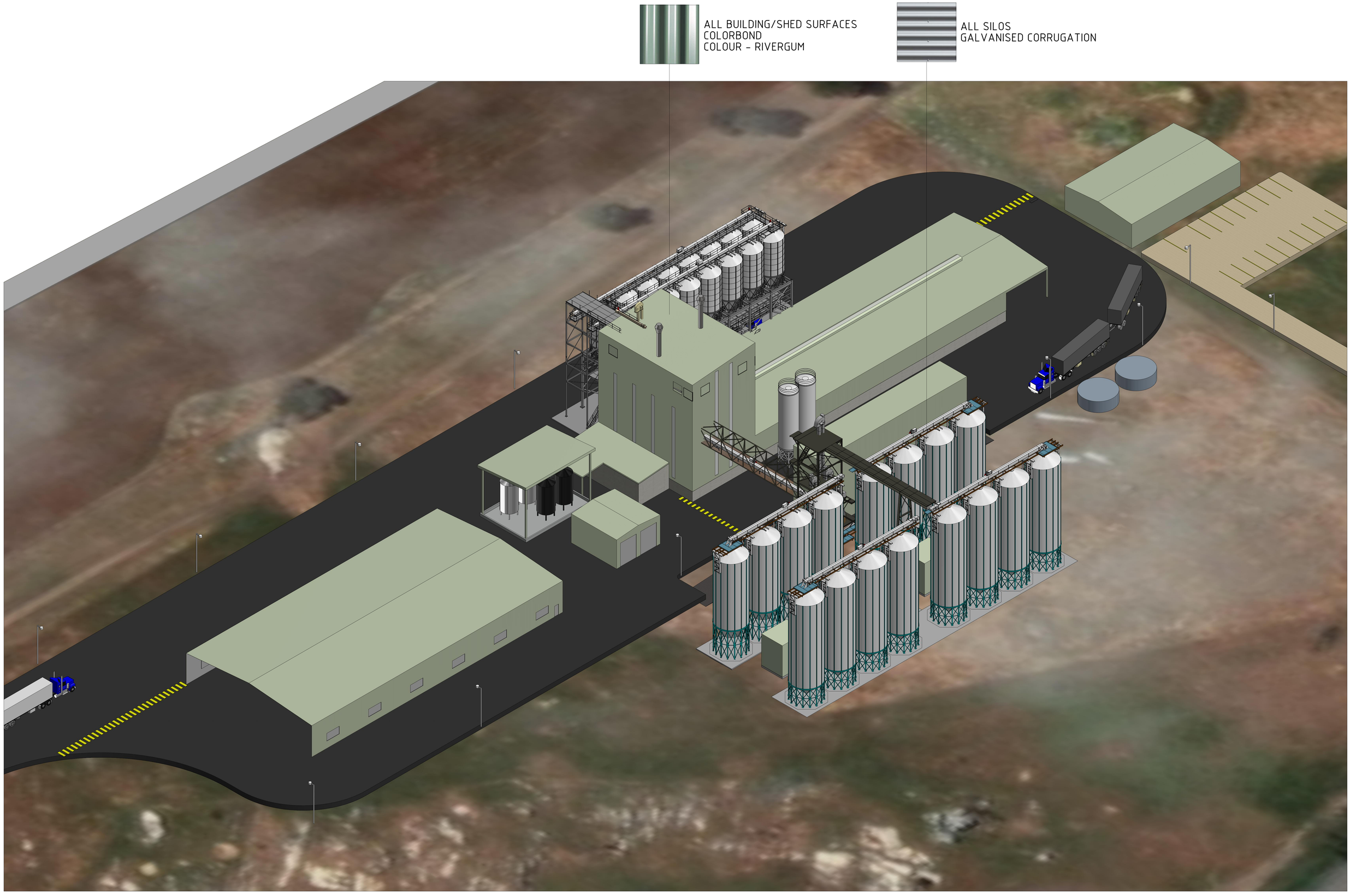
FEED MILL
GENERAL ASSEMBLY
SECTIONS

P&ID ITEM No.

DRG No. 9751-00003

REV. 0

SHT 6 OF 8



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THIRD ANGLE PROJECTION

A0

CLIENT & PROJECT LOCATION
PATMORE FEEDS – CUBALLING, W.A.

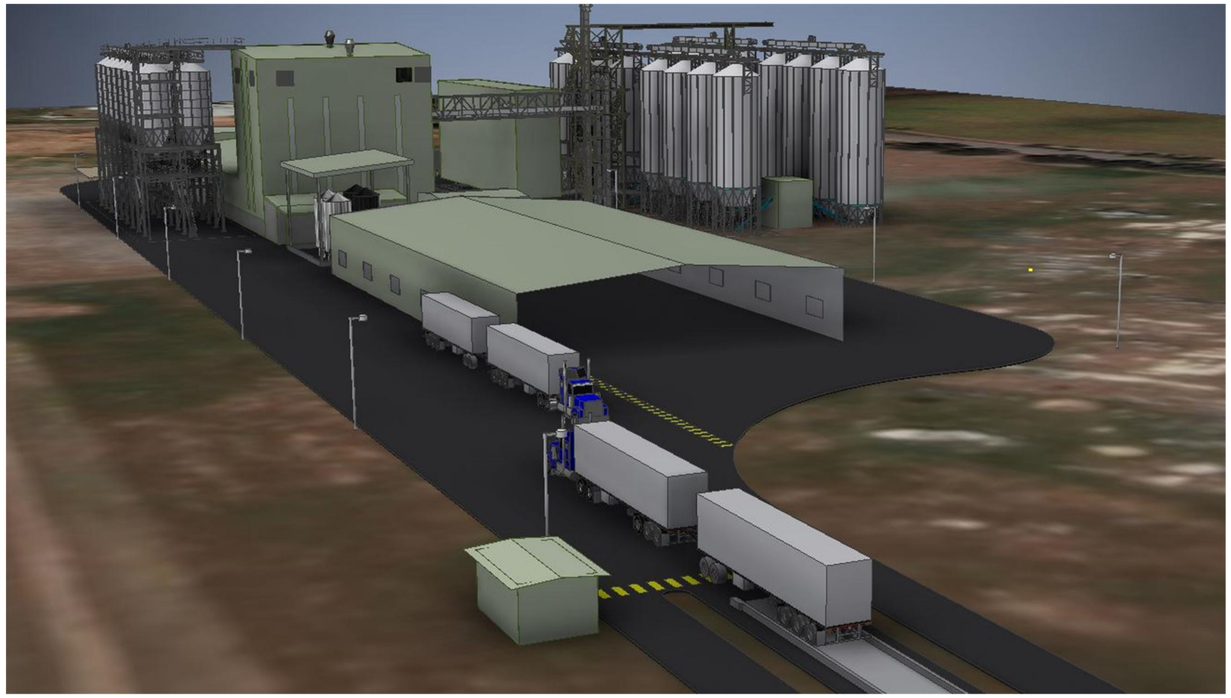
FEED MILL
GENERAL ASSEMBLY
SURFACE INFORMATION

P&ID ITEM No.

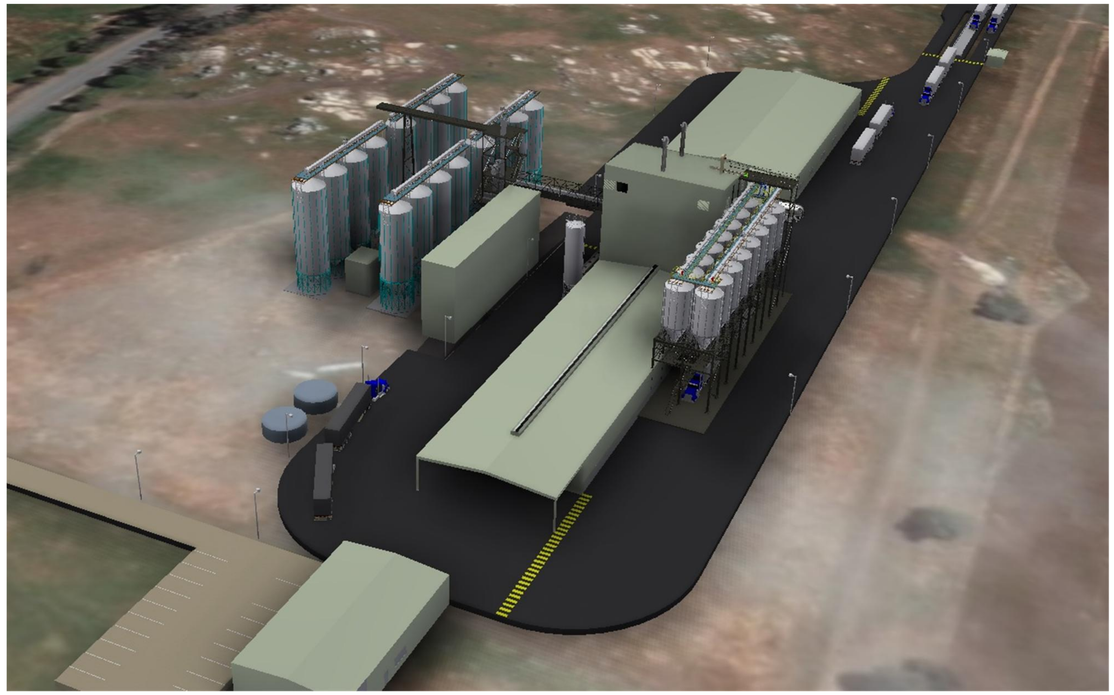
ORG No. 9751-00003

REV 0

SHT 7 OF 8



PERSPECTIVE FROM NORTH EAST



PERSPECTIVE FROM SOUTH EAST

PERSPECTIVE FROM CLOSE UP NORTH WEST

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DRN	ALN	21/7/20	CLIENT & PROJECT LOCATION: PATMORE FEEDS – CUBALLING, W.A.
CHK			
APP			FEED MILL
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN mm	SCALE		GENERAL ASSEMBLY
THIRD ANGLE PROJECTION	A0		PERSPECTIVES

P&ID ITEM No.	DRG No.	REV.	SHT
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