SHIRE OF LAKE GRACE
LOCAL PLANNING SCHEME NO.4

NOTICE OF PUBLIC ADVERTISEMENT OF PLANNING PROPOSAL

Planning and Development Act 2005
Shire of Lake Grace

The local government has received an application to use and/or develop land for the following purpose and public comments are invited.

Property Details: Lot 300 on Deposited Plan 425173 Newdegate-Ravensthorpe Road, Newdegate (Note: No street address number assigned).

Proposal: Construction and use of a proposed new grain handling and storage facility on the abovementioned property comprising a total storage capacity of 191,915 tonnes including various associated improvements.

Details of the proposal including supporting documentation and plans are attached.

Comments on the proposal are now invited and can be emailed to shire@lakegrace.wa.gov.au or posted to the Shire's Chief Executive Officer at PO Box 50 LAKE GRACE WA 6353 by no later than **Friday 17 January 2025**. All submissions must include the following information:

- Your name, address and contact telephone number;
- How your interests are affected; whether as a private citizen, on behalf of a company or other organisation, or as an owner or occupier of property;
- Address of property affected (if applicable); and
- Whether your submission is in support of, or objecting to the proposal and provide any arguments supporting your comments.

All submissions received may be made public at a Council meeting and included in a Council Agenda, which will be available on the Shire's website, unless a submission specifically requests otherwise.

Alan George
Chief Executive Officer
Shire of Lake Grace

18 December 2024

Co-operative Bulk Handling Ltd
ABN 29 256 604 947
Level 6, 240 St Georges Terrace
Perth WA 6000 Australia
GPO Box L886
Perth WA 6842 Australia
Telephone
+61 8 9237 9600
Grower Service Centre
1800 199 083
cbh.com.au

03 December 2024

Alan George
Chief Executive Officer
Shire of Lake Grace
Via email: ceo@lakegrace.wa.gov.au

Dear Alan,

PROPOSED GRAIN HANDLING & STORAGE FACILITY AT LOT 300 ON DEPOSITED PLAN 425173, NEWDEGATE.

CBH is seeking development approval from the Shire of Lake Grace for a proposed grain handling and storage facility located at Lot 300 on Deposited Plan 425173. The subject application is prepared in accordance with Schedule 2 (Deemed Provisions) of the Planning and Development (Local Planning Schemes) Regulations 2015 and the Shire of Lake Grace Local Planning Scheme No. 4 (LPS4).

Proposal

The proposed development incorporates the following elements:

- 4 x 300m long x 35m wide x 1.8m high x 39,300 tonnes capacity open storage bulkhead.
- 1 x 265m long x 35m wide x 1.8m high x 34,715 tonnes capacity open storage bulkhead.
- 2 x 500tph auger pit and conveyor loading system each with two stackers and trippers.
- 2 x drive-over-grid (D.O.G.) stackers to service proposed OBH15.
- 1 x twin spear Type-11 sample hut with 3 x pull forward lanes.
- 1 x 36m entry weighbridge with hut (manned).
- 1 x 48m exit weighbridge (unmanned).
- 1 x RAV7 36.5m truck marshalling area.
- 1 x laydown and storage area.
- 1 x staff amenities area.
- 1 x refueling area.
- 1 x ablutions block.
- 1 x SMSB pad.
- 1 x genset & compressor room pad.
- Sealed internal roads inc. bypass lanes, car parking and laydown, storage & refueling areas.
- New site entry/exit with proposed BAL and BAR treatment within adjacent road reserve.
- General drainage (open drains, culverts, drainage basins) to support impervious works.

Site Details

The subject land is located less than 2km northeast of the Newdegate townsite along Newdegate-Ravensthorpe Road. The proposed development is primarily located on Lot 300 on Deposited Plan 425173. The site is zoned 'general agriculture' under the Shire of Lake Grace LPS4. The subject site is surrounded by 'general agriculture' zoned land to the north and west and 'conservation' zoned land to the east. Land immediately south of the subject site across Newdegate-Ravensthorpe Road is also a mix of 'conservation' and 'general agriculture' zoned land. Newdegate-Ravensthorpe Road is a state road under the control of the Main Roads Great Southern region.

Background

Newdegate is the largest receival site in CBH Area 14 with an average annual receival task of 300,000 tonnes. The townsite facility, with a storage capacity of 199,395 tonnes, currently operates with an effective permanent capacity of 160,000 tonnes after 'loss by division' resulting in an average storage deficit of 140kt each year. Site demand is largely driven by increased local production with 77% of Newdegate deliveries originating from within the lowest cost catchment.

Oversubscription is currently managed using temporary OBH storage (92,000 tonnes) at the Newdegate Field Day site ~2.5km west of town on Lake Grace – Newdegate Road. With land availability at the field day site exhausted, recent above average seasons required additional, emergency storage (100,000 tonnes) at a third receival point ~1.8km north-east of town on Newdegate North Road. As such, growers are currently delivering across three different receival points.

This current operating model is not sustainable nor supported by the Shire of Lake Grace and its community members. A permanent solution is required that consolidates storage and upgrades to permanent specification enabling efficient and cost-effective operations into the future as well as relieving community concern by reducing duplication of heavy vehicle traffic through the townsite. It is expected that following delivery of this greenfields expansion that Area 14 will have sufficient storage capacity to accommodate local demand and the Newdegate Field Day site and emergency storage site will be decommissioned and the site the subject of this development application will run in tandem with the town site facility. The emergency site has approval until 28 August 2025 and the lease for the Field Day site expires on 08 March 2027.

The vacant crown land to the northeast of the CBH townsite facility identified within the Shire of Lake Grace Local Planning Strategy as additional land for grain receival and storage purposes is covered by native vegetation and expansion on this land was not considered viable noting the significant environmental approvals pathway and considerable costs and time delays associated with any clearing of native vegetation which would have made the project unviable. Further this landholding is not of a sufficient size to support the storage shortfall within CBH Area 14.

With no available land to expand at the town site, a site classification study was completed in 2018 to identify a suitable location that would support the expansion of permanent storage capacity for the Newdegate catchment. This development application responds to the recommendations within the site classification study as well as addressing the future needs and strategic direction of CBH within the Newdegate locality and across the wider network.

Town Planning Considerations

The proposed development is consistent with Clause 68 of Schedule 2 (Deemed Provisions) of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of the Shire of Lake Grace Local Planning Scheme No. 4. The following key matters are further discussed in this report:

- Local Planning Scheme No. 4
- Stormwater Management
- Traffic Impact Assessment
- State Planning Policy 3.7 – Planning in Bushfire Prone Areas
- Noise and Dust Management

Shire of Lake Grace Local Planning Scheme No. 4

The subject land is zoned 'general agriculture' under the Shire's LPS4. It is understood, through past development applications for its facilities, that the Shire of Lake Grace deem the best fit use class for CBH operations to be the land use of 'Warehouse/Storage' which is defined in LPS4 as:

'Warehouse/Storage means premises including indoor or outdoor facilities used for the storage of goods, equipment, plant or materials; or the display or sale by wholesale of goods.'

A 'warehouse/storage' land use within the 'general agriculture' zone means that the use is permissible when the local government has exercised its discretion after advertising the application in accordance with clause 64 of the deemed provisions.

A 'warehouse/storage' land use is subject to the site and development requirements prescribed by Table 2 of LPS4 which sets out the zone/use development requirements for various land uses to ensure the scale, nature, design, general appearance, and impact of such uses is compatible with the objectives of the zone in which the development is located as well as the general purposes and aims of the Scheme.

LPS4 stipulates that development requirements for the development of uses not referred to in Table 2 shall be determined by the local government. Noting the scale of the subject site and the land use is designed to support agricultural activities within the immediate and wider locality it is considered that the setbacks, height, plot ratio and number of car parking spaces proposed by this application are appropriate to the zone in which it is located.

Stormwater Management

The stormwater drainage system has been designed in accordance with the requirements of CBH Design Specification TS10A – Civil Earthworks, Roads and Drainage and followed guidelines set out in the Australian Rainfall & Runoff. Open drains and culverts have been designed to convey the 20-year ARI rainfall event.

The stormwater management strategy is to cater for surface runoff within the site, to minimise flooding and damage to critical infrastructure. Surface water runoff up to the 20-year ARI event is to be conveyed via an open drainage system. Surface water incident to the site from up to the 20-year ARI critical storm event is to be detained onsite within two proposed detention basins to the northeast and to the southwest with a controlled outflow limited to the predevelopment flow rates.

It is likely that these basins will fill quickly and leave insufficient capacity for future events unless the water is pumped out. If this occurs, then provision has been made for a high-level overflow from the basin, through a culvert under Newdegate-Ravensthorpe Road and ultimately into Lake Gregory. The basin is unlikely to empty through evaporation over the warmer months. Through its annual stormwater maintenance and monitoring routine, CBH will pump the stored water out of the basin, as required, to free up capacity for future events through a solar powered pump.

Further detail is provided as part of Shawmac's Stormwater Management Plan attached in support of this application for development approval that documents the drainage and associated design constraints for the proposed CBH Newdegate East facility.

Traffic Management

If local production exceeds the capacity of the Newdegate receival site, they must out-turn grain simultaneously (Harvest Essential Moves/HEM's) to continue to offer a service to growers, and by doing so, increase the traffic on surrounding roads during the peak harvest period. The peak season receivals from local growers is approximately 408,503 tonnes which will far exceed Newdegate's 199,395 tonnes storage capacity once the temporary storage sites are decommissioned. As such, a large number of HEM's would be required.

The proposed storage expansion therefore enables CBH to eliminate the need for HEM's with the intention of reducing trucks on road during the harvest, and instead holding the grain on site to out-turn over the remaining 9 months of the year when the road network is less busy.

The proposal is to construct 191,915 tonnes of permanent storage to replace the lost temporary storage. The new site will operate in tandem with the existing 'town' site which provides 199,395t of capacity, to provide a total storage capacity of 391,310 tonnes. This will exceed the peak season receivals, thereby eliminating the need for HEM's. If the construction does not occur, then an additional 3,198 truck movements (70 trucks per day) would be required during the harvest period.

When the new grain receival site has been constructed as part of this development, the distribution of in loading CBH traffic remains unchanged as the receival task is driven by local production regardless of the outcome of the development.

Notwithstanding the proposed decrease in traffic movements during the busy harvest period, the site is subject to the MRWA intersection warrants to determine the appropriate intersection treatment for site access. CBH has proposed a location for the new site access towards the western extent of the subject site at SLK 329.37. The Traffic Impact Statement lodged in support of the application was reviewed and endorsed by MRWA prior to lodgment of this development application. As detailed within the TIA, a Basic Right (BAR) and a Simple Left (SL) Turn are the warranted treatments. Notwithstanding MRWA requested CBH install a Basic Left (BAL) whilst contractors are mobilised which CBH has accepted and proposed as part of this development application.

It is CBH's intention to have the site constructed and operational before the start of harvest 2025. Construction of the BAR treatment does require the removal of native vegetation. CBH commissioned environmental surveys to understand our environmental approvals pathway however this will not be confirmed until early 2025 when the reports are finalised. Preliminary advice suggests that a State native vegetation clearing permit will be required for the extent of the BAR treatment meaning construction of the BAR cannot occur until the clearing permit has been obtained. Preliminary advice has informed that no clearing is required within the extent of the BAL treatment meaning the BAL can be constructed prior to use and operation of the facility. Construction of the BAR is not possible until 2026 whilst the clearing permit process is navigated.

Full construction of the development including the associated intersection treatment is generally required prior to use or occupation of a facility. As the environmental approvals pathway does not align with our intention to use the facility for harvest 2025, CBH is proposing a staged intersection construction. Main Roads have provided in principle endorsement for staged construction of the intersection being the Basic Left treatment constructed at the same time as construction of the new facility and the Basic Right treatment being constructed following approval of the native vegetation clearing permit which is expected around mid-2026. This in principle support from MRWA is included as an attachment in support of this application.

State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP 3.7)

A portion of the lot falls within a Bushfire Prone Area. Clause 78D of Part 10A of the Deemed Provisions 'Bushfire Risk Management' requires a BAL assessment if habitable structures are located within the extend of the bushfire prone area. The habitable structures proposed are part of this application and located within the bushfire prone area are the staff amenities building and entry weighbridge hut. A Bushfire Management Plan has been included in support of this development application which identifies a Bushfire Attack Level (BAL) of FZ.

Clause 6.6.1 of State Planning Policy 3.7 requires development applications with a BAL rating above 12.5 to be supported by a Bushfire Management Plan. Table 4 of the Bushfire Management plan outlines the recommended bushfire management strategies in response to the bushfire protection criteria listed under Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas. These recommended strategies reduce the BAL rating to BAL12.5 meaning the application can be supported.

This development application does not warrant referral to DFES as per Clause 6.5 of the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines) as a Method 1 assessment was undertaken. Further the application meets all the acceptable solutions and does not propose a performance principle-based to the bushfire protection criteria contained in Appendix 4 of the guidelines.

Noise & Dust Management

CBH shall ensure that noise from the specification and installation of any mechanical equipment as well as traffic and construction noise does not exceed assigned levels prescribed in the *Environmental Protection (Noise) Regulations 1997*, when it is received at a neighbouring property.

Dust Management will comply with *Environmental Protection Act 1986* and the relevant *National Environmental Protection Measures.* Due to the nature of grain handling and storage, some dust can be produced from a range of activities. A Dust Management Plan has been provided in support of the application that defines the requirements associated with the process of minimising the impact of dust emission during operations at the Newdegate facility.

CBH is committed to improving the overall environmental impacts of its business and in achieving the environmental objectives outlined in the CBH Group Health, Safety and Environmental Policy. CBH undertakes frequent noise and dust monitoring across its sites to ensure that dust and noise levels are measured and are mitigated whenever there is an exceedance.

Conclusion

The proposed additions are aligned with the planning framework for the area specifically the 'general agriculture' zone in which it is located, and it is not considered to result in any new amenity impacts to the surrounding area. CBH respectfully requests the Application for Development Approval is considered by the Shire of Lake Grace expeditiously given the straightforward nature of the application and its general compliance with the Shire's planning framework.

Should you have any question in relation to the details provided in this submission, please contact Timothy Roberts on 9216 6061 or timothy.roberts@cbh.com.au

Yours Sincerely,

Timothy Roberts
Lead – Planning & Approvals

SHIRE OF LAKE GRACE LOCAL PLANNING SCHEME NO.4

FORM 1 - APPLICATION FOR DEVELOPMENT APPROVAL

Owner Details

Name/s:

Co-operative Bulk Handling Ltd

ABN (if applicable):

Postal Address: Level 6 No. 240 St Georges Terrace Postcode: 6000

Work Phone: 08 9216 6061 Home Phone: Mobile Phone:	Fax:	E-mail: timothy.roberts@cbh.com.au

Contact Person for Correspondence: Timothy Roberts

Signature:	Date: 03/12/224
Signature:	Date:

NOTES:

i) Use and attach a separate copy of this page where there are more than two (2) landowners.

ii) The signature/s of all registered owner(s) as listed on the land's Certificate of Title is required. This application cannot proceed without the required signature/s. For the purposes of signing this application an owner includes the persons referred to in the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 clause 62(2). Land owned by an incorporated body (i.e. a company) must be signed by:

- *1 director of the company, accompanied by the company seal; or*
- *2 directors of the company; or*
- *1 director and 1 secretary of the company; or*
- *1 director if a sole proprietorship company.*

Print the full names and positions of company signatories underneath the signatures.

iii) A copy of the Certificate of Title for all land the subject of this application must be provided and can be purchased through Landgate directly if required.

iv) Development Applications relating to Unallocated Crown Land, Unmanaged Crown Reserves, land under management order to the Shire of Lake Grace where the development is not consistent with the reserve's purpose, or is used for commercial purposes, or land which is subject to a lease issued under the Land Administration Act 1997 need to be referred to the Lands Division of the Department of Planning, Lands and Heritage for consideration and signing.

Applicant Details (if different from owner)

Name/s:

As above.

Address:

Postcode:

Work Phone: Home Phone: Mobile Phone:	Fax:	E-mail:
Contact Person for Correspondence:		
Signature:		Date:

NOTES:

i) Failure to provide a suitably completed development application form, a copy of the relevant Certificate/s of Title, sufficient plans and other supporting information and/or the correct application fee may result in the application being returned or placed on hold.

ii) The application fee payable will be confirmed by the local government following receipt of the application. Processing of the application will not commence until the fee is paid in full.

iii) As per Schedule 2 clause 64 of the Planning and Development (Local Planning Schemes) Regulations 2015, the information and plans provided with this application may be made available by the local government for public viewing in connection with the application.

iv) If public advertising of the application is required by the local government an additional fee in accordance with the local government's adopted schedule of fees and charges will be payable by the applicant. Further processing of the application following completion of public advertising will not proceed until the additional fee is paid in full.

v) The original of this application and supporting information and plans will be retained by the local government for its records and will not be returned to the applicant/landowner following final determination.

Property Details

NOTE: The details provided must match those shown on the relevant Certificate/s of Title.

Lot No: 300	House/Street No:	Location No:
Survey Diagram or Plan No: 425173	Certificate of Title Volume No: 4039	Certificate of Title Folio No: 685

Title encumbrances (*e.g. easements, restrictive covenants etc. as listed on the Second Schedule of the relevant Certificate/s of Title*):

Nil

Street name: Newdegate-Ravensthorpe Road	Suburb: Newdegate East

Nearest street intersection:

Newdegate North Road

Proposed Development:

Nature of development: ☐ Works (New construction works with no change of land use)
☐ Use (Change of use of land with no construction works)
✓ Works and Use

NOTE: If the proposal involves advertising signage the Additional Information for Development Approval for Advertisements form (i.e. a Form 2) must be completed and submitted with this application.

Is an exemption from development claimed for part of the development? Yes ☐ No ✓

If yes, is the exemption for: ☐ Works
☐ Use

Description of proposed works and/or land use: Refer below.
Description of exemption claimed (if relevant): NA
Nature of any existing buildings and/or land use: Agriculture - Extensive
Approximate cost of proposed development (excluding GST): $20,000,000
OFFICE USE ONLY Date application received: Received by: Application reference number: Application fee payable: $ Date of receipt of application fee from applicant: Receipt number for application fee:

Description of proposed works and/or land use:

Proposed warehouse/storage land use.

The proposed land use incorporates the following works elements:

- 4 x 300m long x 35m wide x 1.8m high x 39,300 tonnes capacity open storage bulkhead.
- 1 x 265m long x 35m wide x 1.8m high x 34,715 tonnes capacity open storage bulkhead.
- 2 x 500tph auger pit and conveyor loading system each with two stackers and trippers.
- 2 x drive-over-grid (D.O.G.) stackers to service proposed OBH15.
- 1 x twin spear Type-11 sample hut with 3 x pull forward lanes.
- 1 x 36m entry weighbridge with hut (manned).
- 1 x 48m exit weighbridge (unmanned).
- 1 x RAV7 36.5m truck marshalling area.
- 1 x laydown and storage area.
- 1 x staff amenities area.
- 1 x refueling area.
- 1 x ablutions block.
- 1 x SMSB pad.
- 1 x genset & compressor room pad.
- Sealed internal roads inc. bypass lanes, car parking and laydown, storage & refueling areas.
- New site entry/exit with proposed BAL and BAR treatment within adjacent road reserve.
- General drainage (open drains, culverts, drainage basins) to support impervious works.

Co-operative Bulk Handling Ltd
ABN 29 256 604 947

Level 6, 240 St Georges Terrace
Perth WA 6000 Australia

GPO Box L886
Perth WA 6842 Australia

Telephone
+61 8 9237 9600

Grower Service Centre
1800 199 083

cbh.com.au

CONSENT TO SIGN APPLICATIONS FOR DEVELOPMENT APPROVAL AND BUILDING PERMITS FOR LAND OWNED, LEASED OR LICENSED BY CO-OPERATIVE BULK HANDING LIMITED

This is to confirm that Co-operative Bulk Handling Limited (**CBH**) authorises each of the following CBH personnel to sign and lodge on behalf of CBH all applications for development approval and building permits (and all documents associated with those applications) in connection with land owned, leased or licensed by CBH:

1. Brianna Peake, Chief Stakeholder Relations, Sustainability and Strategy Officer
2. Rob Dickie, Head of Government & Industry Relations
3. Kellie Todman, Manager – Government & Industry Relations
4. Aaron Lohman, Principal – Planning & Approvals
5. Timothy Roberts, Lead - Planning and Approvals

Should you require further information regarding any present or future applications for development approval or building permits, please do not hesitate to contact CBH Planning Approvals at PlanningApprovals@cbh.com.au.

This consent takes effect on the last date written below and from that date supersedes any and all previous consents to sign and lodge on behalf of CBH applications for development approval and / or building permits (and documents associated with those applications) in connection with land owned, leased or licensed by CBH.

Yours faithfully

Signed for and on behalf of Co-operative Bulk Handling Limited by or in the presence of:

Signature of Director

Signature of ~~Director or~~ Company Secretary

SIMON STOAD

Name of Director

RICHARD CODLING

Name of ~~Director or~~ Company Secretary

30/1/2024

Date of signing

30/1/2024.

Date of signing

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
4039	**685**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 300 ON DEPOSITED PLAN 425173

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

CO-OPERATIVE BULK HANDLING LIMITED OF LEVEL 6, 240 ST GEORGES TCE PERTH WA 6000
(T P649750) REGISTERED 4/8/2023

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	DP425173
PREVIOUS TITLE:	2830-387
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF LAKE GRACE

PLAN
1:2000

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. ALL EXISTING FENCING TO BE REMOVED. INSTALL PREFABRICATED WIRE FENCE (7No. STRAND PLUS 1No. PLAIN WIRE ON TOP) ALONG CBH SITE BOUNDARY. REFER TO DRG. S000-ENG-CI-STD-0010 FOR SINGLE AND DOUBLE FENCE.

HOLDS:

1. INTERSECTION DESIGN TBC

1:2000 @ A1
1:4000 @ A3
0 20 40 60 80 100 120 140 160 180 200 m

APPROVED FOR CONSTRUCTION

CBHGROUP
ABN 29 256 604 947
SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

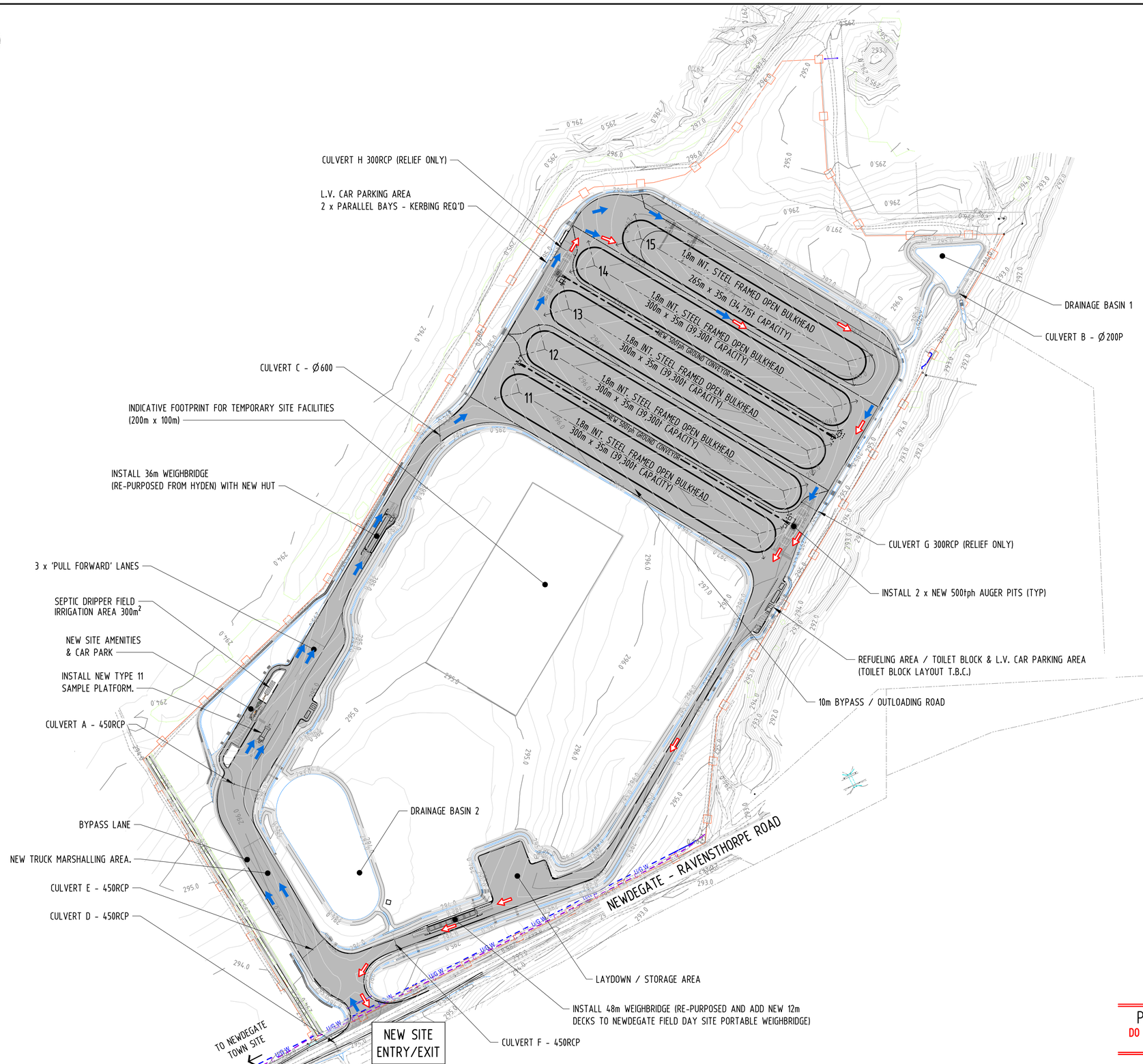
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
		1	28.11.24	GENERAL AMENDMENTS PER CLIENT COMMENTS	JG	RN	RN
-	-	0	30.10.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE 1:2000
SHEET A1
PROJECT -
CONTRACT No -

DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
GENERAL ARRANGEMENT

DRG No 940-ENG-CI-DGA-0002
SHEET 1 OF 1
REV. 1



DRAWING LEGEND

- TRAFFIC MOVEMENTS - TRUCKS FULL
- TRAFFIC MOVEMENTS - TRUCKS EMPTY
- LOT BOUNDARIES
- CBH SITE BOUNDARY
- CBH RAIL LEASE BOUNDARY
- PROPOSED CBH BOUNDARY
- O/H P — OVERHEAD POWER LINES
- U/G P — UNDERGROUND POWER LINES
- U/G W — UNDERGROUND WATER PIPES
- C — UNDERGROUND COMMS LINE
- EPA INDUSTRIAL/SENSITIVE LAND USE SEPARATION DISTANCE - 500m RADIUS

STORAGE CAPACITIES

EXISTING STORAGE - TOWN SITE		
'G' TYPE STORAGE	HOR 01	27,200 t
'A' TYPE STORAGE	HOR 02	26,800 t
'S' TYPE STORAGE	(3 CELLS)	60,000 t
RRLF	(4 CELLS)	2,000 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(01)	16,875 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(02)	20,760 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(03)	19,019 t
1.6m INT. STEEL FRAMED OPEN BULKHEAD	(04)	26,741 t
TOTAL EXISTING STORAGE - TOWN SITE		199,395 t
EXISTING STORAGE - NORTH SITE		
1.2m LOW STEEL FRAMED OPEN BULKHEAD	(TBH 94)	40,000 t
1.2m LOW STEEL FRAMED OPEN BULKHEAD	(TBH 95)	45,000 t
TOTAL EXISTING STORAGE - NORTH SITE		85,000 t
EXISTING STORAGE - FIELD DAY SITE		
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(TBH 96)	21,500 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(TBH 97)	18,750 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(TBH 98)	27,875 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(TBH 99)	24,173 t
TOTAL EXISTING STORAGE - FIELD DAY SITE		92,298 t
PROPOSED STORAGE		
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(11)	39,300 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(12)	39,300 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(13)	39,300 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(14)	39,300 t
1.8m INT. STEEL FRAMED OPEN BULKHEAD	(15)	34,715 t
TOTAL PROPOSED STORAGE		191,915 t

TOTAL NEWDEGATE STORAGE	568,608
LAND ACQUISITION	34.24 ha

HATCHING LEGEND

AREA OF EXPANSION WORKS 115,000m²

PRELIMINARY ISSUE
DO NOT USE FOR CONSTRUCTION
DATE 29.11.24

1:2000 @ A1
1:4000 @ A3
0 20 40 60 80 100 120 140 160 180 200 m

CBHGROUP
ABN 29 256 604 947

CBH GROUP
LEVEL 6
240 ST GEORGE'S TERRACE
PERTH W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	A	01.11.24	ISSUED AS CHECK PRINT AND FOR REVIEW	JD		
		B	19.11.24	RE-ISSUED FOR REVIEW - LAYDOWN AREA REMOVED	JD		
		C	26.11.24	REVISED & RE-ISSUED FOR REVIEW	JD		
		D	29.11.24	REVISED & RE-ISSUED FOR REVIEW	JD		

SCALE 1:2000
SHEET A1
PROJECT
CONTRACT No

DRAWN	J. Durante	01.11.24
CHECKED		
DESIGNED		
DESIGN APPR		
PROJECT APPR		

TITLE
NEWDEGATE - EAST SITE (GREENFIELD)
DA APPROVAL
STAGE 1 SITE DEVELOPMENT
SITE ARRANGEMENT PLAN

DRG No 940-ENG-CI-DLP-0002
SHEET 1 OF 1
REV. D

DESIGN CRITERIA IN ACCORDANCE WITH AS1170.2:
IMPORTANCE 2
Vu=V 500=45 m/s
Ms=1.0
Mt=1.0
Mzcat=0.91
REGION A CAT 2.0
V serviceability=37 m/s

DESIGN CRITERIA IN ACCORDANCE WITH AS1170.4:
PROBABILITY P = 1/500 (TABLE 3.1)
KP = 1.0 (TABLE 3.1)
SITE HAZARD FACTOR Z ALLOWED = 0.09 (FIGURE 3.2(C))
EARTHQUAKE DESIGN CATEGORY = DOMESTIC AS PER APPENDIX A

REGION A WINDOWS DESIGN CRITERIA TO AS2047
FOR HOUSING (CLAUSE 2.3.1):
1. SERVICEABILITY PRESSURE
   GENERAL – 400 Pa, CORNER WINDOWS - 600 Pa
2. ULTIMATE STRENGTH PRESSURE
   GENERAL – 900 Pa, CORNER WINDOWS - 1300 Pa
3. WATER PENETRATION RESISTANCE TEST PRESSURE
   NON-EXPOSED – 150 Pa, EXPOSED – 200 Pa
   CORNER WINDOWS ARE LOCATED WITHIN 1200mm
   OF BUILDING CORNERS

ALL REFERENCED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF CONSTRUCTION.

THE ENTIRE ROOF AND WALL ASSEMBLY, THEIR CONNECTIONS & IMMEDIATE SUPPORTING MEMBERS HAVE BEEN DESIGNED SO AS TO BE CAPABLE IN REMAINING IN POSITION NOTWITHSTANDING ANY PERMANENT DISTORTION, FRACTURE OR DAMAGE THAT MIGHT OCCUR IN ACCORDANCE WITH NCC VOLUME 1, SPECIFICATION B1.2 OR VOLUME 2 PART 2.1.1(B) AND 3.10.1 HIGH WIND AREAS (IF APPLICABLE)

1.1 GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
G2. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
G3 THE APPROVAL OF ANY SUBSTITUTION BY THE ENGINEER IS NOT AN AUTHORIZATION FOR A VARIATION. ANY ASSOCIATED COST INCREASE IS TO BE APPROVED BY THE CLIENT AND/OR PROJECT MANAGER BEFORE THE SUBSTITUTION IS ADOPTED.
G4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
G5. ALL DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED ON SITE BY THE BUILDER PRIOR TO CONSTRUCTION OR FABRICATION. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
G6. U.N.O. DENOTES UNLESS NOTED OTHERWISE.
G7. THE STRUCTURE SPECIFIED ON THE FOLLOWING DRAWINGS IS FOR THE FINAL/PERMANENT CONDITION ONLY. DURING CONSTRUCTION THE BUILDER IS RESPONSIBLE FOR ENSURING THE STRUCTURE IS MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
G8. ALL WORKMANSHIP AND MATERIAL SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA AS AMENDED AND THE APPROPRIATE AND CURRENT AUSTRALIAN STANDARDS.
G9. THE WORD "ENGINEER" USED IN THESE NOTES REFERS TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF INTRAX CONSULTING ENGINEERS.
G10 IT IS THE RESPONSIBILITY OF THE BUILDER TO LOCATE AND PROTECT ALL EXISTING SERVICES ON SITE PRIOR TO CONSTRUCTION.
G11 REFER ARCHITECTURAL DRAWINGS FOR INSULATION DETAILS.

1.2 STRUCTURAL STEEL

SS1. ALL STEEL WORKS TO BE IN ACCORDANCE WITH AS4100 AND AS4600.
SS2. ALL STRUCTURAL STEEL SHALL BE GRADE 250 FOR HOT ROLLED PLATES. GRADE 300PLUS FOR UB, UC PFC, ANGLES. GRADE 350 FOR SHS, CHS. TO AS 1163, AS 1594, AS 3678 AND AS 3679 UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL STRUCTURAL STEEL IS TO BE PROVIDED WITH ACRS CERTIFICATION PRIOR TO FABRICATION TO ENSURE COMPLIANCE WITH AUSTRALIAN STANDARDS AND REGULATIONS.
SS3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF CONFORMING WITH DESIGN INTENT BEFORE FABRICATION COMMENCES, IF APPLICABLE.
SS4. ALL STEELWORK (INCLUDING FASTENERS) TO BE TREATED IN ACCORDANCE WITH AS3700 OR CLAUSE 3.4.4.4 OF THE NCC, AS APPLICABLE.
SS5. ALL STEELWORK WITH A GALVANISED OR HIGHER TREATMENT THAT IS SITE WELDED OR SUSTAINS ANY OTHER KIND OF SURFACE DAMAGE IS TO BE PREPARED TO AS 1627:2 CLASS 3 AND PRIMED WITH 2 COATS OF GALVANISE (MANUFACTURED BY JOTUN) TO MANUFACTURERS SPECIFICATIONS.
SS6. FOR GALVANISED STEELWORK, MATING SURFACES OR FRICTION TYPE BOLTED CONNECTIONS SHALL BE POST TREATED BY DISC ABRASION (OR EQUIVALENT) TO IMPROVE THE SURFACES SLIP FACTOR. THE TREATMENT SHALL PROVIDE THE SURFACES WITH A MINIMUM SLIP FACTOR OF 0.35 IN ACCORDANCE WITH AS 4100.
SS7. ALL GALVANISED STEELWORK IS TO BE FIXED USING GALVANISED FASTNERS.
SS8. THE ENDS OF ALL TUBULAR MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN.
SS13. ALL STEELWORK IS TO BE FABRICATED & ERECTED TO WITHIN THE REQUIRED TOLERANCES SET-OUT IN SECTIONS 14 & 15 OF AS4100.
SS14. ALL GROUTING UNDER BASEPLATES IS TO BE INSTALLED AFTER STEELWORK IS PROPERLY ALIGNED AND LEVELLED. RAMSET "PREMIER GROUT" OR EQUIVALENT 40MPa STRENGTH NON-SHRINK GROUT TO BE INSTALLED TO MANUFACTURERS SPECIFICATION UNDER PRESSURE OR RAMMING.

1.3 FOUNDATIONS

F1. THE BUILDER IS TO FAMILIARISE THEMSELVES WITH THE GEOTECHNICAL REPORTAND IS TO TAKE NOTE OF ALL ADVICE AND RECOMMENDATIONS CONTAINED THEREIN.
F2. ANY OVER EXCAVATION SHALL BE BACK FILLED WITH BLINDING CONCRETE GRADE 15 MPa.
F3. EXCAVATIONS NEAR EXISTING FOOTINGS SHALL NOT BE EXTENDED BELOW FOUNDATION LEVEL OF THE EXISTING FOOTING WITHOUT THE ENGINEERS APPROVAL.
F4. ALL FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS U.N.O.
F5. THE BUILDER IS SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATION IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROUNDING PROPERTY OR GROUND SERVICES. THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING SYSTEMS AND THEIR EXPECTED DURATION ON SITE. STABILITY OF EXCAVATION TO BE RE-ASSESSED IF DELAYS GREATER THAN THREE DAYS OCCUR.

1.4 OCCUPATIONAL, HEALTH AND SAFETY

O1. FOR ALL WORKS CONDUCTED ON THIS PROJECT, THE BUILDER SHALL HAVE ALL APPROPRIATE AND SUFFICIENT SAFETY MEASURES AND PROCEDURES IN PLACE.
O2. DEEP TRENCHES MAY EXIST ON THIS SITE. BUILDER TO ENSURE NECESSARY SAFETY MEASURES ARE TAKEN TO PREVENT FALL AND TRIPPING HAZARDS ARE ELIMINATED.
O3. FOR LARGE SPAN BEAMS (≥ 6000mm), BUILDER TO ENSURE SEAT PLATES/ANGLES TO STEEL COLUMNS FOR MAJOR BEAMS AND LINTELS ARE INSTALLED FOR SAFER CONNECTION, BOLTING AND SITE WELDING.
O4. ADEQUATE PROPPING MAY BE REQUIRED FOR ANY RETAINING/LOAD BEARING WALLS ON BOUNDARIES. TEMPORARY SHORING MAY BE REQUIRED.
O5. PROVISIONS SHALL BE MADE FOR APPROPRIATE DISTANCE FOR ROOF BATTENS/RAFTERS TO PROVIDE A SAFE WORKING PLATFORM DURING ROOF INSTALLATION AND WORKING AT HEIGHTS.
O6. BUILDER MAY NEED TO BE AWARE OF APPROPRIATE MEASURES TO DEAL WITH HAZARDOUS MATERIALS SUCH AS ASBESTOS WHICH STILL CAN BE FOUND IN SERVICE PITS.
O7. IF A CRANE IS REQUIRED, THE BUILDER IS TO PROVIDE ADEQUATE SAFETY MEASURES FOR CRANE USAGE AROUND POWER LINES.
O8. IF ANY DIGGING IS REQUIRED OUTSIDE OF SITE BOUNDARIES, INFORMATION REGARDING EXISTING COUNCIL ASSETS NEED TO BE SOUGHT FROM "DIAL BEFORE YOU DIG".
O9. THE SAFETY CONCERNS AND HAZARDS IDENTIFIED ABOVE REPRESENT COMMONLY OCCURRING RISKS. THE LIST DOES NOT COVER THE FULL RANGE OF RISK AVOIDANCE MEASURES REQUIRED.

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : SP210760
SIGNATURE:
DATE: 10.01.2024

AMENITIES BUILDING

PROJECT NO.:
J004276

PROJECT CLIENT
CBH

PROJECT STATUS
ISSUED FOR REVIEW

PROJECT ADDRESS:
CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

GENERAL NOTES
1. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORKS.
2. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE DRAWINGS.
3. READ IN CONJUNCTION WITH OTHER DRAWINGS, SPECIFICATIONS & CONSULTANTS DOCUMENTATION.
4. REFER ANY DISCREPANCIES IMMEDIATELY TO THE DESIGNER & AWAIT WRITTEN INSTRUCTION.

SHEET
COVER PAGE

DRAWN	CHECKED	SCALE	SIZE
FZ	KP		A3

DRAWING NO. **A00-CS01**
REVISION **0**
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

GENERAL NOTES:

BUILDING CLASSIFICATION:	**NCC CLASS 6**
BAL LEVEL:	**N/A**
CLIMATE ZONE:	**4**
CYCLONIC REGION CLASSFICIATION:	**"A" REGION, TERRAIN CATEGORY = 2.0**
WINDOWS DESIGN CRITERIA:	**AS2047**
SERVICEABILITY PRESSURE:	GENERAL: 740Pa - TABLE 2.1 AS2047-2014 1100Pa FOR WINDOWS 660mm FROM CORNERS
ULTIMATE STRENGTH PRESSURE:	GENERAL: 1095Pa - TABLE 2.5 AS2047-2014 1640Pa FOR WINDOWS 660mm FROM CORNERS
WATER PENETRATION RESISTANCE PRESSURE:	NON EXPOSED - 150Pa, EXPOSED - 200Pa
WIND LOAD IN ACCORDANCE WITH:	**AS.1170.2-2011**
DESIGN CRITERIA IN ACCORDANCE WITH:	**AS1170.1-2002: IMPOSED FLOOR ACTIONS (TABLE 3.1).**
ALLOWABLE FLOOR LOADS:	**B-3.0kPa UNIFORMLY DISTRIBUTED. 2.7kN CONCENTRATED LOAD.**
DESIGN CRITERIA IN ACCORDANCE WITH:	**AS1170.4-2007:**
PROBABILITY:	**P=1/500 (TABLE 3.1)**
KP:	**1.0 (TABLE 3.1)**
SITE HAZARD FACTORZ Z ALLOWED:	**0.15 (FIGURE 3.2(C)).**
EARTHQUAKE DESIGN CATEGORY:	**EDC II AS PER TABLE 2.1**

THE ENTIRE ROOF AND WALL ASSEMBLIES, THER CONNECTIONS & IMMEDIATE SUPPORTING MEMBERS HAVE BEEN DESIGNED SO AS TO BE CAPABLE OF REMAINING IN POSITION NOTWITHSTANDING ANY PERMANENT DISTORTION, FRACTURE OR DAMAGE THAT MIGHT OCCUR WITH NCC VOLUME 1, SPECIFICATIONS B1.2 OR VOLUME 2, PART 2.1.1 (b) AND 3.10.1 HIGH WIND AREAS (IF APPLICABLE).

ALL REFERENCED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF CONSTRUCTION.

GENERAL SPECIFICATIONS:

CHASSIS:	STRUCTURAL STEEL
CHASSIS PAINT SPEC.:	425 ZINC PHOSPHATE PRIMER, 2 COATS ALKYD PRIMER ON WET - BLACK - FOR CORROSION INHIBITION.
ROOF & CEILING FRAME:	GALVANISED STEEL FRAMEWORK.

NOTES:

- STEPS AND LANDINGS TO BE DEPENDANT ON SITE. TO BE BUILT IN ACCORDANCE WITH ALL RELEVANT AUSTRALIAN STANDARD INCLUDING AS1428.1

FLOORING LEGEND

FVI-01 **VINYL**
TYPE: 2.0mm COMMERCIAL GRADE VINYL
COLOUR: GRANIT SAFE T. DARK GREY 0698
TO ALL AREAS INCLUDING WET AREAS
TO INCLUDE WSK-01

WSK-01 **SKIRTING**
100MM COVED VINYL SKIRTING
TYPE: TO MATCH FVI-01
COLOUR: TO MATCH FVI-01

EXTERNAL CLADDING & FINISHES LEGEND

WMC-01 **MAXIRIB METAL CLAD STEEL STUD FRAME**
EXTERNAL WALL
COLOUR: PAPERBARK

WTB-01 **OSB BOARD BRACING**
6mm OSB BOARD UNDERNEATH MAXIRIB

RMS-01 **ROOF SHEETING**
BMT: 0.42MM TRIMCLAD ROOF SHEETING
COLOUR: SURFMIST

RFL-01 **COLORBOND HIGH SIDE BARGE FLASHING WITH APRON**
COLOUR: DEEP OCEAN

RFL-02 **COLORBOND LOW SIDE BARGE FLASHING**
COLOUR: DEEP OCEAN

RFL-03 **COLORBOND HIGH SIDE BARGE FLASHING**
COLOUR: DEEP OCEAN

WFL-01 **COLORBOND CORNER FLASHING**
COLOUR: DEEP OCEAN

WFL-02 **COLORBOND STARTER FLASHING**
COLOUR: DEEP OCEAN

WALL & CEILING FINISHES LEGEND

CPP-01 **CEILING LINING**
MATERIAL: 3.6mm PRE-FINISHED POLY PLY
COLOUR: MIRAGE PEARL

WSP-01 **EXTERNAL WALLS:** 90mm STEEL STUD
COLOUR: PAPERBARK EXTERNAL / SURFMIST INTERNAL

WSP-02 **INTERNAL WALLS:** 90mm STEEL STUD
LINING MATERIAL: 3.6mm POLYPLY SHEETING
COLOUR: WHITE EMBOSSED

WTI-01 **WALL TILES**
TYPE: 400x200 TILES
COLOUR: WHITE
TO KITCHEN SPLASHBACK

INSULATION

CIN-01 **CEILING:**
R4.0 EARTHWOOL BATTS BETWEEN CEILING JOISTS

RIN-01 **ROOF:**
R1.3 60MM ANTI-CONDENSATION BLANKET UNDER ROOF SHEETS

FIRE EXTINGUISHERS

BFE-01 **ABE EXTINGUISHER - 1A:20B:E**
4.5kg DRY CHEMICAL
FIRE EXTINGUISHER

NOTE: FIRE EXTINGUISHERS & SIGNAGE TO DFES GUIDELINES

FIXTURES & FITTINGS

TSK-01 **SINK**
S/S SINGLE BOWL SINK WITH DRAINER & MIXER

XBN-01 **ACCESSIBLE BASIN**
CERAMIC BASIN WITH MIXER

XWC-01 **ACCESSIBLE TOILET**
CERAMIC c/w BACKREST

XGR-01 **GRAB RAIL**
300 S/S GRAB RAIL

XGR-02 **GRAB RAIL**
600 x 950 S/S GRAB RAIL

XMI-01 **MIRROR**
850H x 500W

XSD-01 **SOAP DISPENSER**

XPA-01 **PAPER TOWEL DISPENSER**

XCH-01 **COAT HOOK**

XTR-01 **TOILET ROLL HOLDER**

JOINERY LEGEND

JBE-01 **POLYTEC BENCH TOP**
VARYING LENGTH x 600D x 33THK
COLOUR : FRENCH STONE MATT

JDU-01 **MELAMINE DRAWERS**
3 DRAWERS (CUTLERY TRAY TO TOP DRAWER)
DIMENSIONS: 450MM W X 600MM D
COLOUR : EGGERBOARD ALPINE WHITE

JCU-01 **BELOW BENCH CUPBOARDS**
DOUBLE PENCIL ROUND NOSING EDGE BENCH TOP
EQ. SPACED DOORS
BRUSHED CHROME OR NICKLE FINISH SQUARE
D-HANDLE TO C'BRD DOORS
FIXED MID-SHELF
DIMENSIONS: 1140MM L X 600MM D X 865MM H
COLOUR : EGGERBOARD ALPINE WHITE

JCU-02 **BELOW BENCH CUPBOARDS**
DOUBLE PENCIL ROUND NOSING EDGE BENCH TOP
EQ. SPACED DOORS
BRUSHED CHROME OR NICKLE FINISH SQUARE
D-HANDLE TO C'BRD DOORS
FIXED MID-SHELF
DIMENSIONS: 1200MM L X 600MM D X 865MM H
COLOUR : EGGERBOARD ALPINE WHITE

JCU-03 **BELOW BENCH CUPBOARDS**
DOUBLE PENCIL ROUND NOSING EDGE BENCH TOP
EQ. SPACED DOORS
BRUSHED CHROME OR NICKLE FINISH SQUARE
D-HANDLE TO C'BRD DOORS
FIXED MID-SHELF
DIMENSIONS: 1910MM L X 600MM D X 865MM H
COLOUR : EGGERBOARD ALPINE WHITE

JCO-01 **OVERHEAD CUPBOARDS**
EQ. SPACED DOORS
BRUSHED CHROME OR NICKLE FINISH SQUARE
D-HANDLE TO C'BRD DOORS
ADJUSTABLE SHELVING
DIMENSIONS: 2310MM W X 300MM D X 600MM H
COLOUR : EGGERBOARD ALPINE WHITE

JBS-01 **UNDERBENCH OPEN SHELVING WITH MICROWAVE RECESS**
ADJUSTABLE SHELVING
DIMENSIONS: 600MM W X 600MM D X 865MM H
COLOUR : EGGERBOARD ALPINE WHITE

JCF-01 **FULL HEIGHT DOUBLE DOOR PANTRY SHELF**
ADJUSTABLE SHELVING
DIMENSIONS: 1200MM W X 600MM D X 2100MM H
COLOUR : EGGERBOARD ALPINE WHITE

NOTE: ABS EDGING TO ALL DOORS, SHELVES, SHELVING & FIXED PANELS TO BE PVC.

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : SP210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	26.06.23	FZ	FS

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

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4. REFER ANY DISCREPANCIES IMMEDIATELY TO THE DESIGNER & AWAIT WRITTEN INSTRUCTION.

PROJECT NO.: **J004276**
PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

SHEET
CODE LEGEND

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	1 : 100	A3

DRAWING NO. **A00-CS02**
REVISION 0
DC SIGN OFF:

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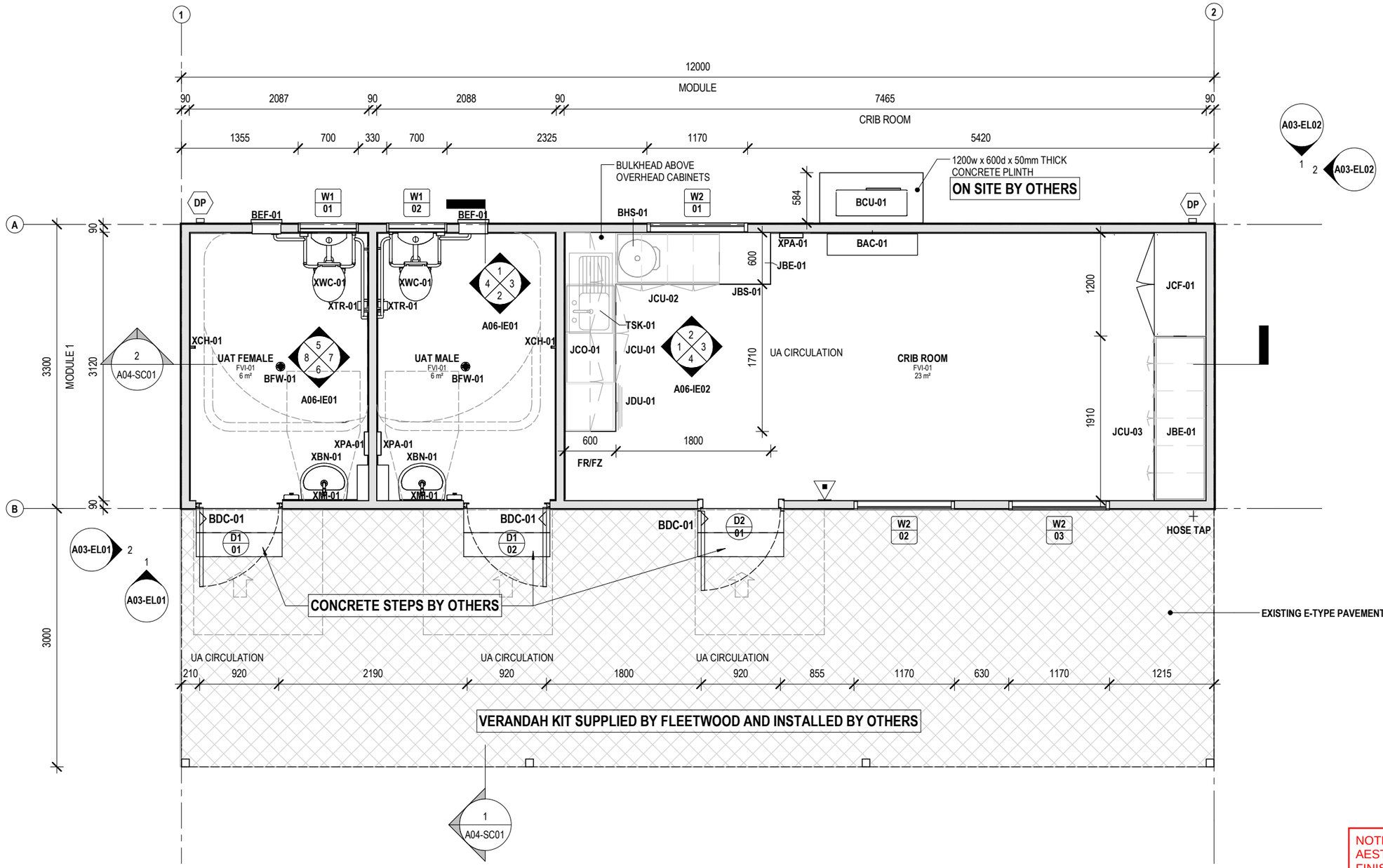
ROOM NAME	AREA
CRIB ROOM	23 m²
UAT FEMALE	6 m²
UAT MALE	6 m²
TOTAL	35 m²

NO.	MARK	DESCRIPTION	COUNT
1.	XGR-01	300 SS GRABRAIL INSTALLED TO AS 1428.1-2009	2
2.	XGR-02	600 x 950 SS GRABRAIL INSTALLED TO AS 1428.1-2009	2
3.	XWC-01	ACCESSIBLE TOILET PAN c/w DUAL FLUSH CISTERN & SAFE ASSIST WALL MOUNTED BACKREST INSTALLED TO AS 1428.1-2009	2
4.	XBN-01	DISABLED PERSONS HAND BASIN INSTALLED TO AS 1428.1-2009	2
5.	XTR-01	TOILET PAPER DISPENSER	2
6.	XCH-01	COAT HOOK	2
7.	XPA-01	PAPER TOWEL DISPENSER	3
8.	XMI-01	MIRROR	2
9.	BFW-01	FLOOR WASTE	2
10.	BHS-01	FILTERED BOILING WATER UNIT 2SL	1
11.	TSK-01	SS SINK	1
12.	JBE-01	VARYING LENGTH x 600D x 33THK BENCH UNIT	1
13.	JCO-01	OVERHEAD CUPBOARDS (600 X 350 X 350)	1
14.	JCU-01	UNDERBENCH CUPBOARDS (1140 X 900 X 600)	1
15.	JCU-02	UNDERBENCH CUPBOARDS (1200 X 900 X 600)	1
16.	JCU-03	UNDERBENCH CUPBOARDS (1500 X 900 X 600)	1
17.	JDU-01	3 DRAWER UNIT (570 X 900 X 600)	1
18.	JBS-01	OPEN SHELF WITH NICHE FOR MICROWAVE	1
19.	JCF-01	FULL HEIGHT DOUBLE DOOR PANTRY CABINET (1500 X 2100 X 600)	1
20.	FR/FZ	NOM 500L FRIDGE	1
21.	BEF-01	EXHAUST FAN	2
22.	BAC-01	WALL MOUNTED AC	1
23.	BCU-01	AC CONDENSER UNIT PROVIDE TUNDISH	1
24.	BSB-01	BUILDING SWITCH BOARD	1
25.	PE	PHOTOELECTRIC CELL	1
26.	BDC-01	DOOR CLOSER	3
27.	XSI-01	TOILET SIGN IN ACCORDANCE TO AS 1428.1	2
	WTI-01	WALL TILE SPLASHBACK	-
	WSK-01	100 M.M. SKIRTING	-



NOTE:
AESTHETICS AND
FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : SHZ10760
SIGNATURE: DATE: 10.01.2024

A
A02-FP01
FLOOR PLAN
1 : 50

**BUILDING TO COMPLY WITH AS1428.1 FOR FUTURE USE.
ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.**

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

GENERAL NOTES
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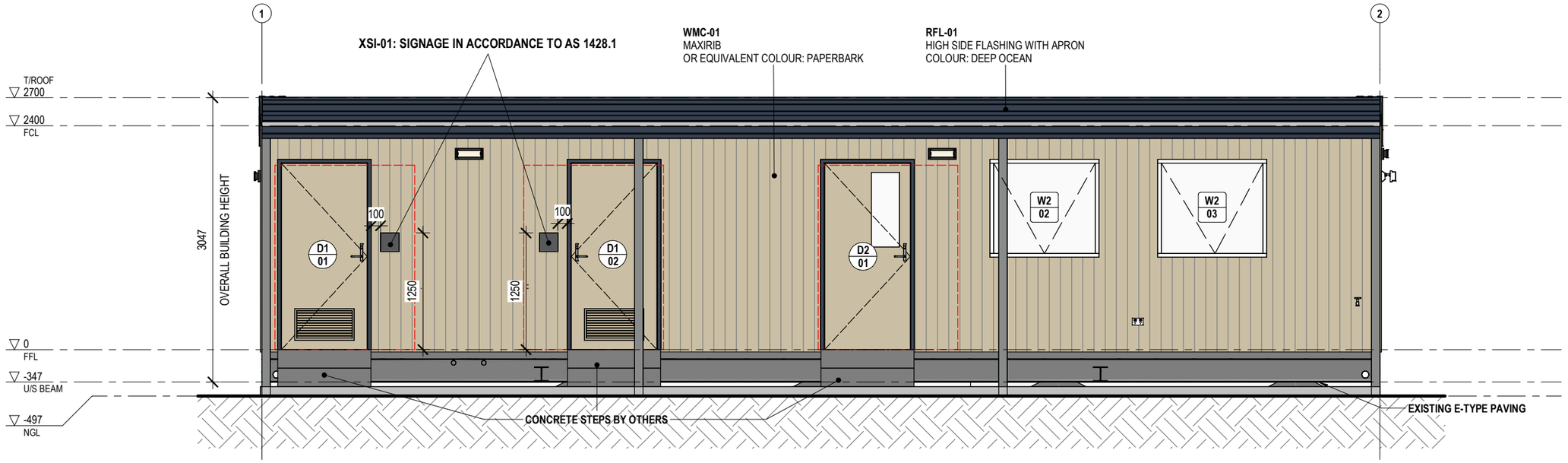
4. REFER ANY DISCREPANCIES IMMEDIATELY TO THE DESIGNER & AWAIT WRITTEN INSTRUCTION.

PROJECT NO.: J004276
PROJECT STATUS: ISSUED FOR REVIEW
PROJECT CLIENT: CBH
PROJECT: AMENITIES BUILDING
PROJECT ADDRESS: CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575
NORTH

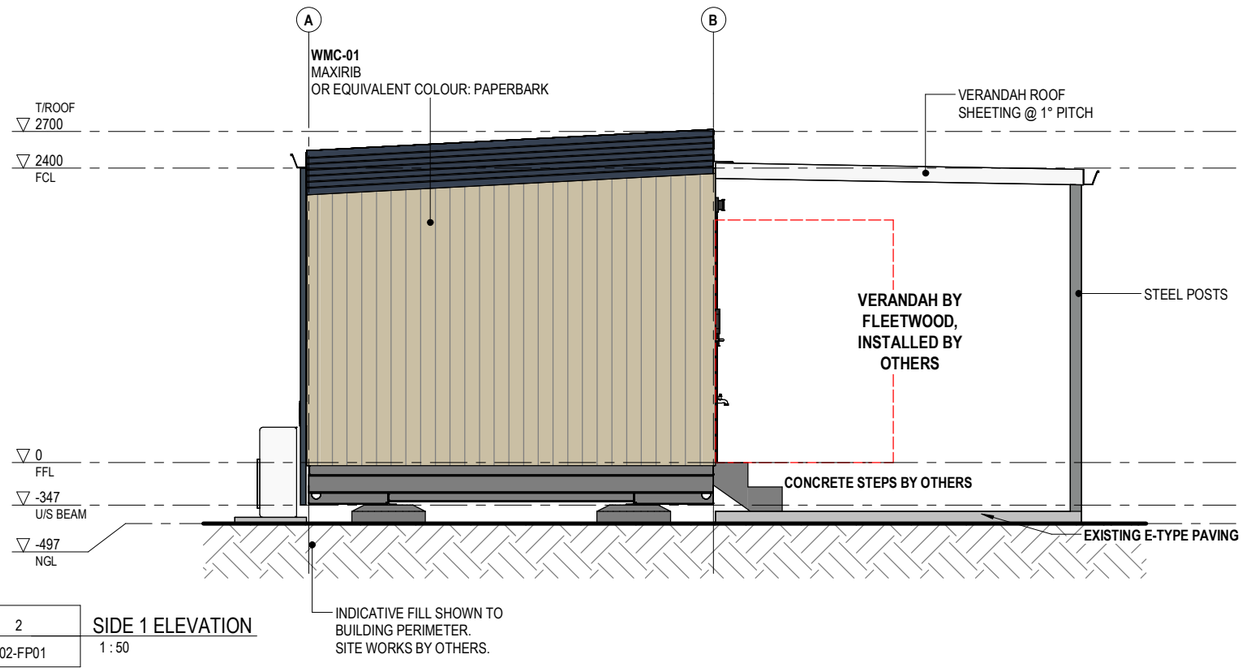
SHEET: FLOOR PLAN
DRAWN: FZ | CHECKED: FS | SCALE: As indicated | SIZE: A3
DRAWING NO.: A02-FP01 | REVISION: 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt



1
A02-FP01

FRONT ELEVATION
1 : 50



2
A02-FP01

SIDE 1 ELEVATION
1 : 50

NOTE:
AESTHETICS AND
FINISHES BY OTHERS

Intrax
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

**BUILDING TO COMPLY WITH AS1428.1 FOR FUTURE USE.
ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.**

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

GENERAL NOTES
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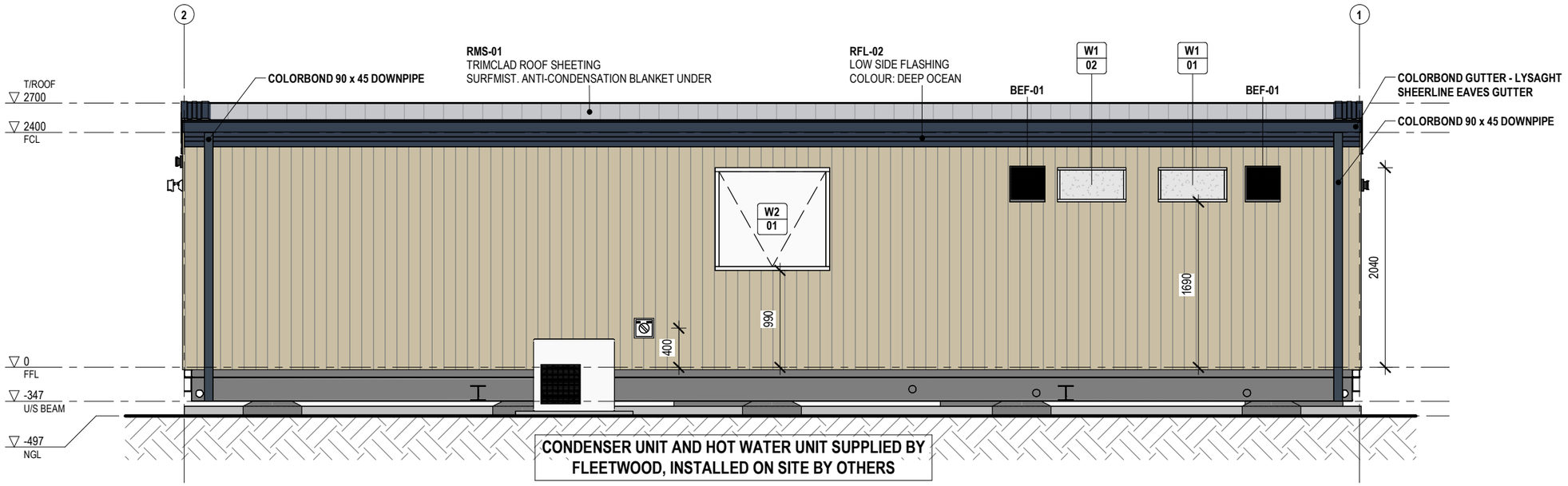
PROJECT NO.: J004276
PROJECT STATUS: ISSUED FOR REVIEW
PROJECT CLIENT: CBH

PROJECT: AMENITIES BUILDING
PROJECT ADDRESS: CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575

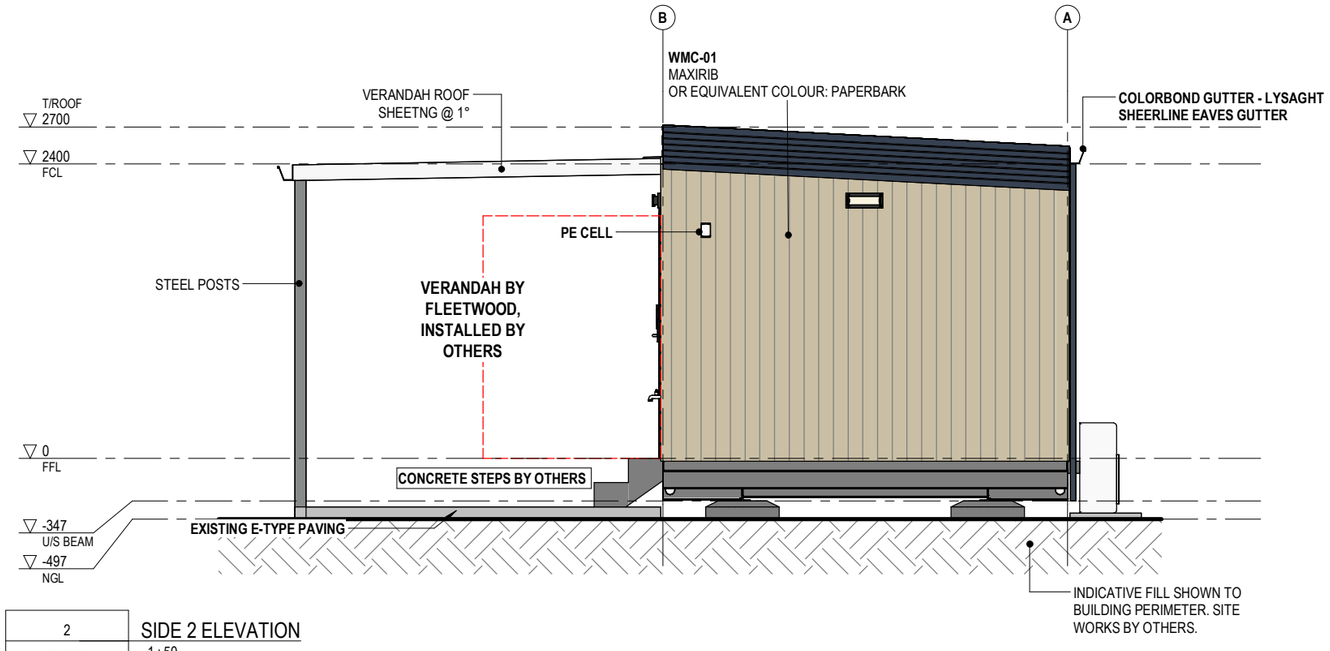
SHEET
ELEVATIONS

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	1 : 50	A3

DRAWING NO. A03-EL01
REVISION 0
DC SIGN OFF:



1
A02-FP01
REAR ELEVATION
1 : 50



2
A02-FP01
SIDE 2 ELEVATION
1 : 50

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax BUILDING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE:
DATE: 10.01.2024

BUILDING TO COMPLY WITH AS1428.1 FOR FUTURE USE. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

GENERAL NOTES
1. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORKS.
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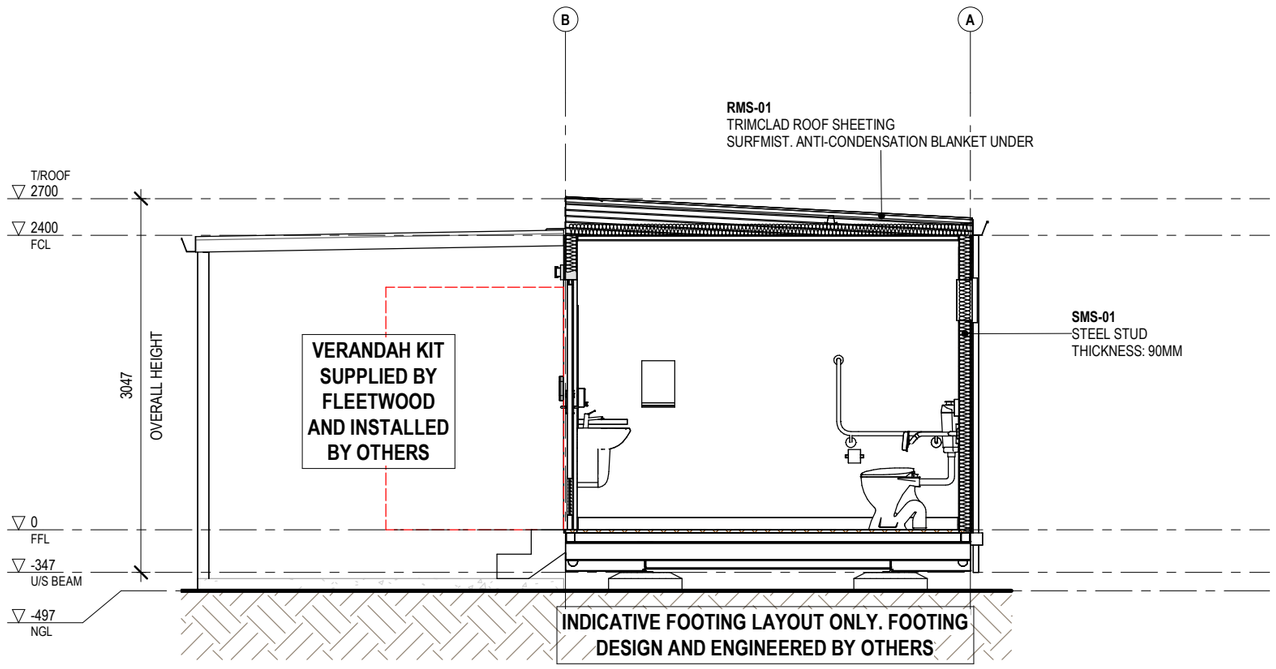
4. REFER ANY DISCREPANCIES IMMEDIATELY TO THE DESIGNER & AWAIT WRITTEN INSTRUCTION.

PROJECT NO.: **J004276**
PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

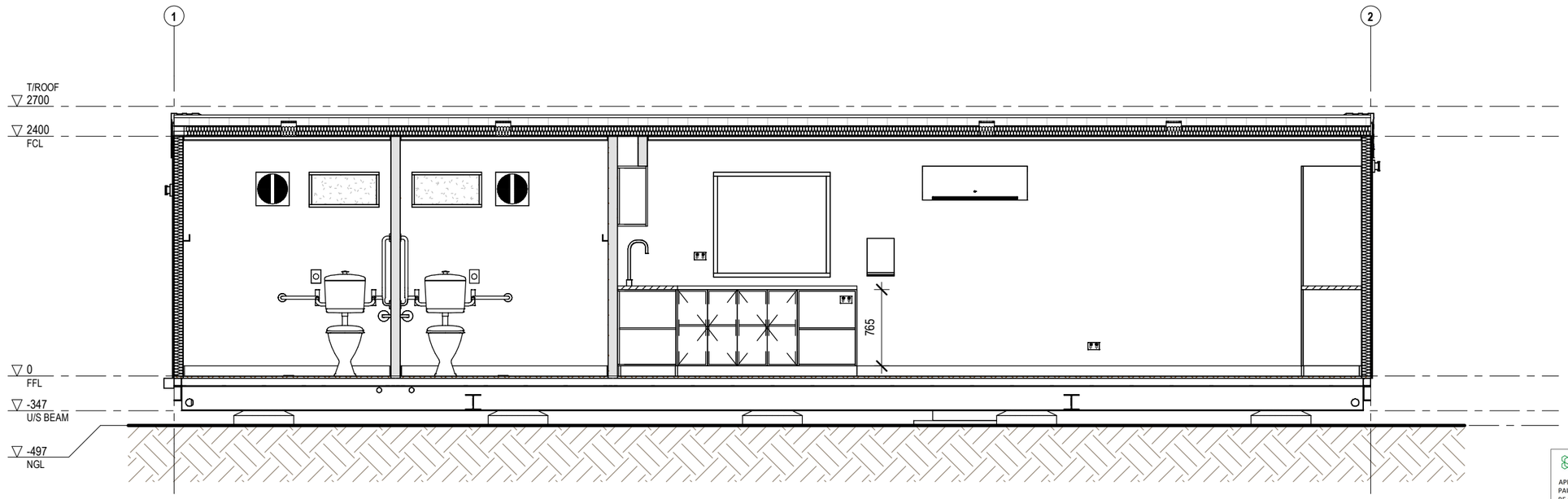
SHEET: **ELEVATIONS**
DRAWN: FZ | CHECKED: FS | SCALE: 1 : 50 | SIZE: A3
DRAWING NO.: **A03-EL02**
REVISION: 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt



1
A02-FP01

SECTION 1
1 : 50



2
A02-FP01

SECTION 2
1 : 50

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

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PROJECT NO.: J004276
PROJECT STATUS: ISSUED FOR REVIEW
PROJECT CLIENT: CBH

PROJECT: AMENITIES BUILDING
PROJECT ADDRESS: CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575

SHEET
SECTIONS

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	1 : 50	A3

DRAWING NO. A04-SC01
REVISION 0

DC SIGN OFF:

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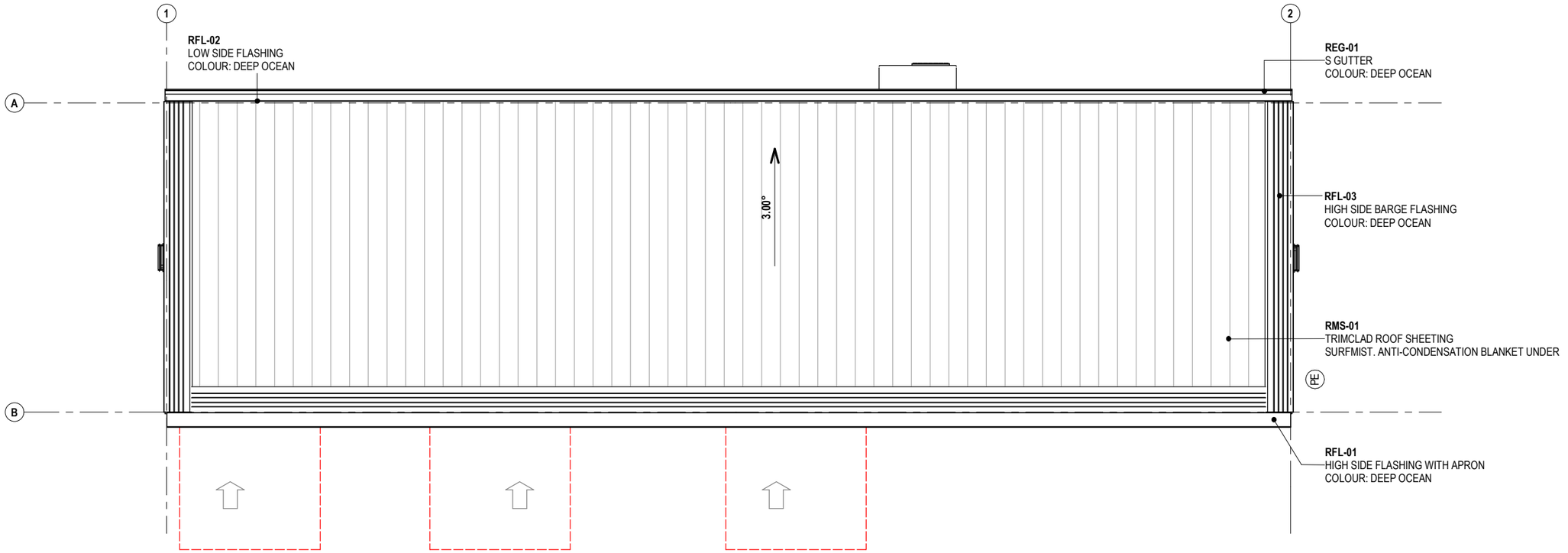
ROOF NOTES

METAL SHEET ROOFING TO BE IN ACCORDANCE WITH AS1562.1-1992.



1	ROOF PLAN
	1 : 50

NOTE:
AESTHETICS AND
FINISHES BY OTHERS

Intrax HOUSING

APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760

SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

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PROJECT NO.: **J004276**

PROJECT STATUS: **ISSUED FOR REVIEW**

PROJECT CLIENT: **CBH**

PROJECT: **AMENITIES BUILDING**

PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

NORTH

SHEET: **ROOF PLAN**

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	As indicated	A3

DRAWING NO. **A05-RP01**

REVISION 0

DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

SERVICES FIXTURES

REFER TO SERVICES CONSULTANTS DRAWINGS FOR ALL SERVICES FIXTURES SPECIFICATIONS, REQUIREMENTS AND SCHEDULES.

WIRING SHALL BE IN ACCORDANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY.

CONTRACTORS SHALL BEFORE COMMENCEMENT OF CONSTRUCTION OF SERVICES, CHECK ALL SETOUTS AND DIMENSIONS.

THE ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/NZS 3000 & 3008.1

ALL CEILINGS TO BE 2400MM HIGH UNLESS NOTED OTHERWISE

CEILING FIXTURES GENERALLY TO BE CENTRED WITHIN ROOMS UNLESS NOTED OTHERWISE

NOTE SET OUT IS MIRRORED WHERE NO ADDITIONAL DIMENSIONS ARE PROVIDED

CEILING FINISHES

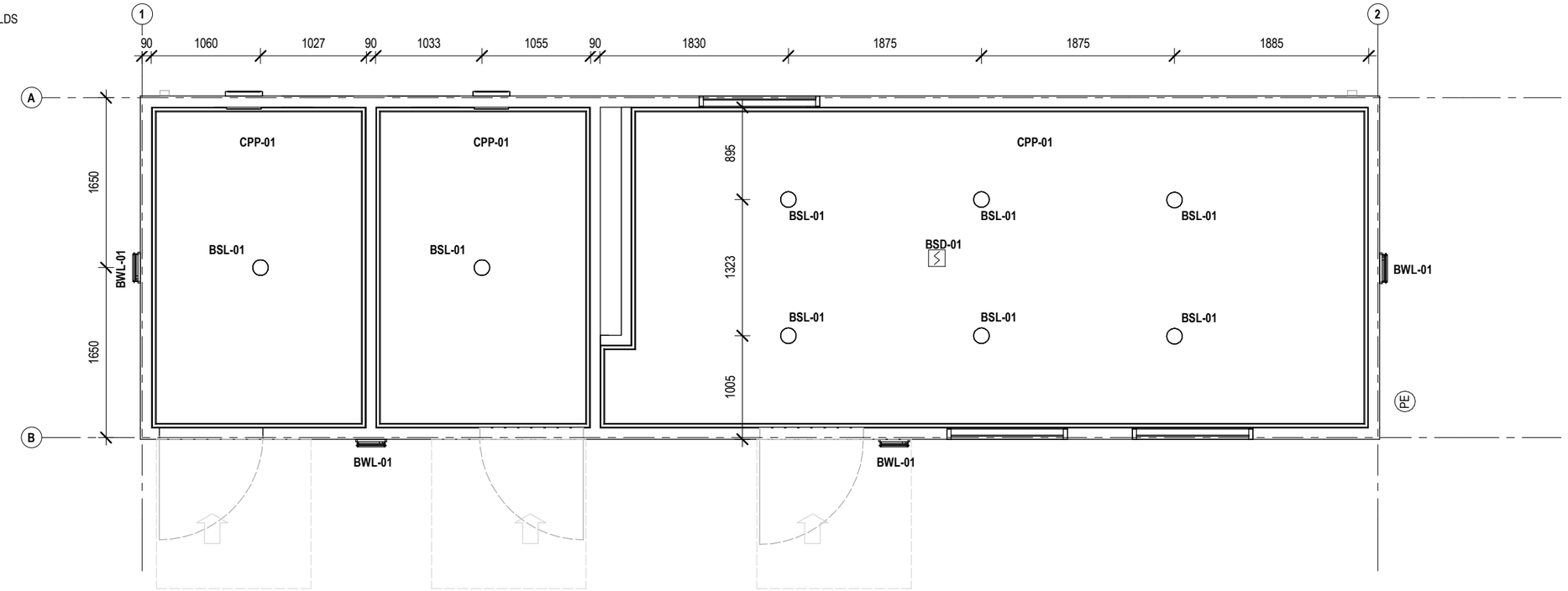
▭	**CPP-01**	POLYPLY CEILING WITH PVC H & J MOULDS TO JOINTS AND CORNICE

LIGHTING FIXTURES

○	**BSL-01**	SURFACE CEILING MOUNTED LED OYSTER LIGHT FITTING (3000K)
▬	**BWL-01**	WEATHERPROOF OUTSIDE WALL MOUNTED LIGHT FITTING

FIRE DETECTION FIXTURES

⧘	**BSD-01**	SMOKE DETECTOR



1	REFLECTED CEILING PLAN
A05-RP10	1 : 50

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

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PROJECT NO.: **J004276**

PROJECT STATUS: **ISSUED FOR REVIEW**

PROJECT CLIENT: **CBH**

PROJECT: **AMENITIES BUILDING**

PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

NORTH

SHEET: **REFLECTED CEILING PLAN**

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	As indicated	A3

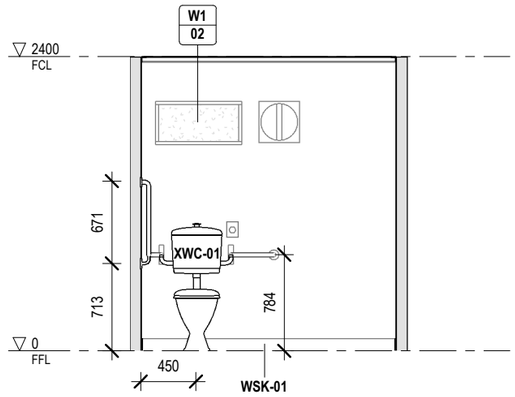
DRAWING NO.: **A05-RP10**

REVISION: 0

DC SIGN OFF:

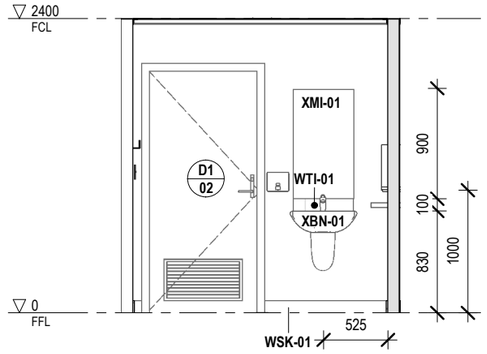
Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

UAT TO COMPLY WITH AS 1428.1



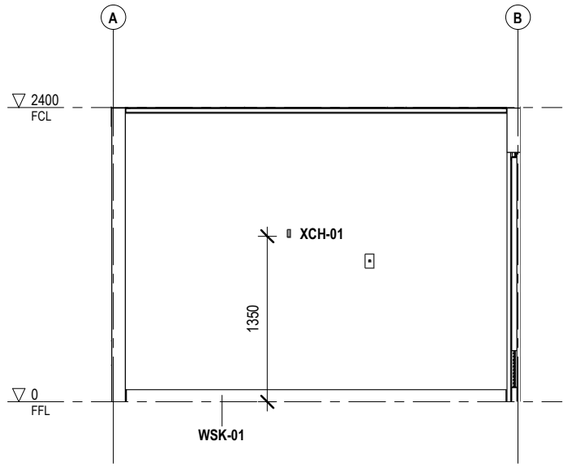
1
A02-FP01

MALE UAT ELEVATION 1
1 : 50



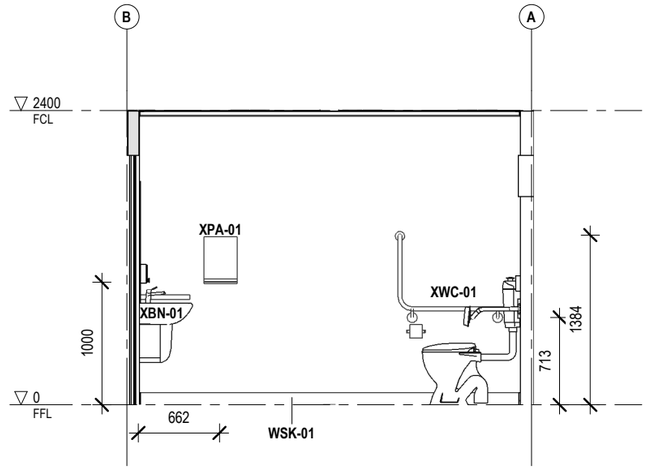
2
A02-FP01

MALE UAT ELEVATION 2
1 : 50



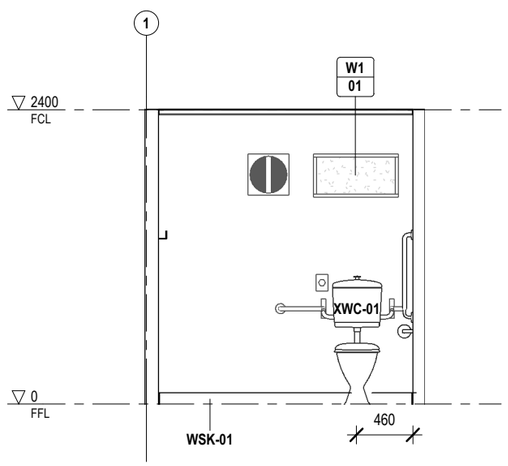
3
A02-FP01

MALE UAT ELEVATION 3
1 : 50



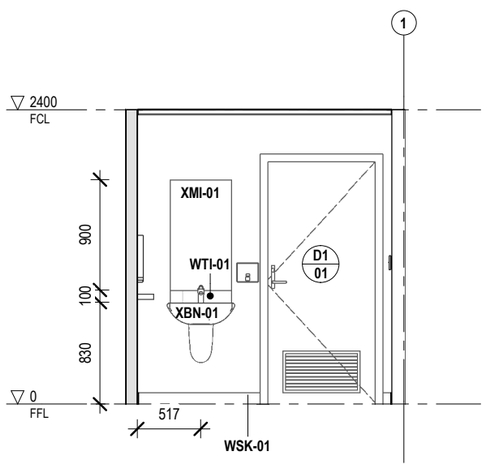
4
A02-FP01

MALE UAT ELEVATION 4
1 : 50



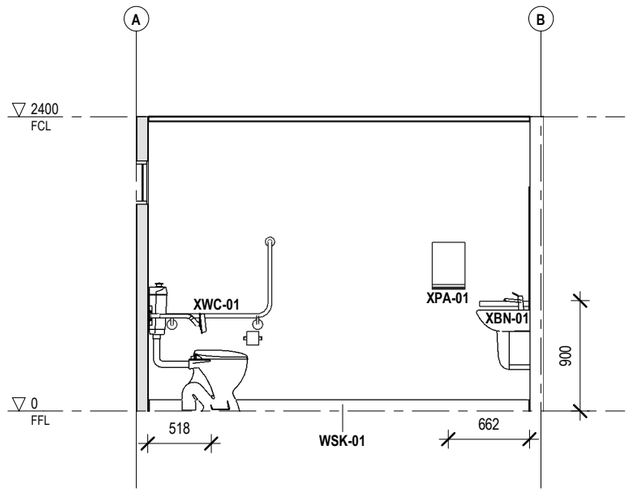
5
A02-FP01

FEMALE UAT ELEVATION 1
1 : 50



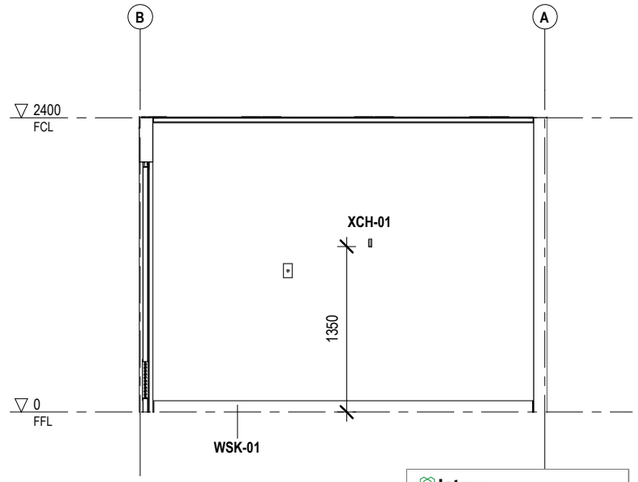
6
A02-FP01

FEMALE UAT ELEVATION 2
1 : 50



7
A02-FP01

FEMALE UAT ELEVATION 3
1 : 50



8
A02-FP01

FEMALE UAT ELEVATION 4
1 : 50

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING

APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760

SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA

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PROJECT NO.: **J004276**

PROJECT STATUS: **ISSUED FOR REVIEW**

PROJECT CLIENT: **CBH**

PROJECT: **AMENITIES BUILDING**

PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

SHEET
INTERNAL ELEVATIONS

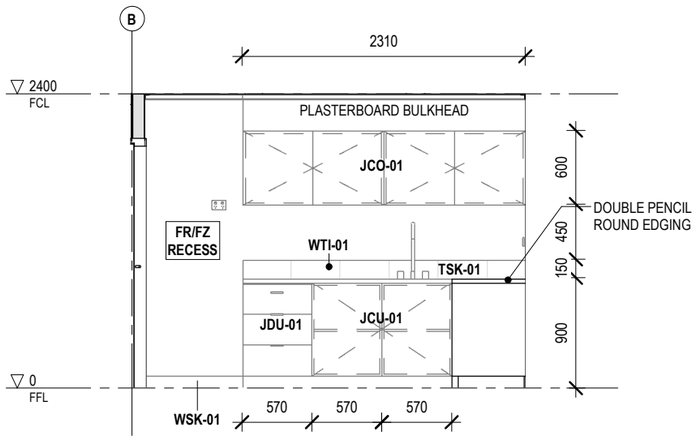
DRAWN	CHECKED	SCALE	SIZE
FZ	FS	1 : 50	A3

DRAWING NO. **A06-IE01**

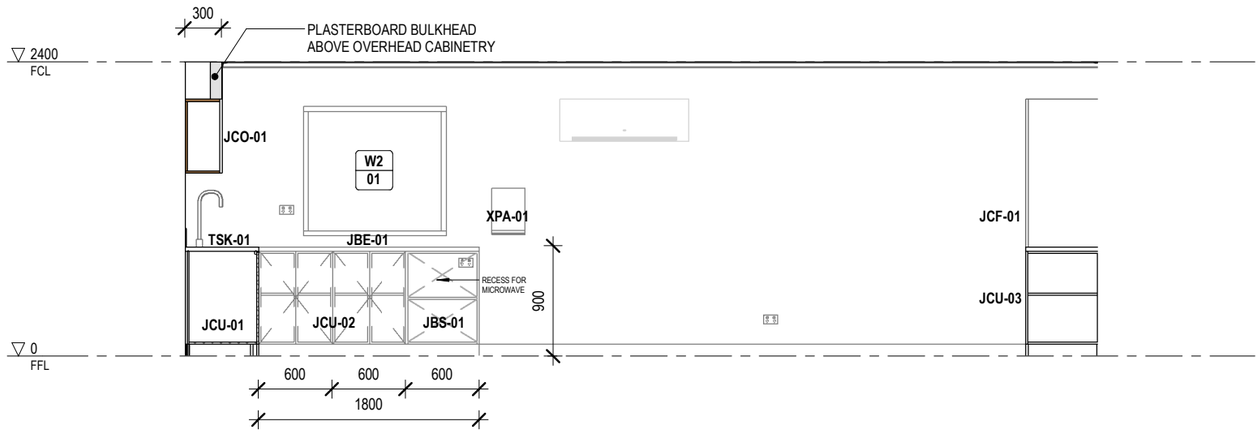
REVISION 0

DC SIGN OFF:

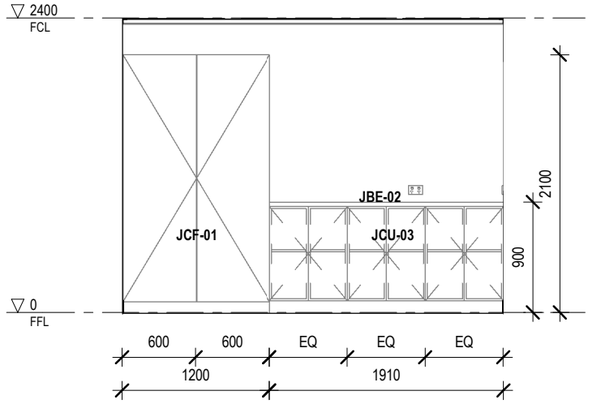
Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt



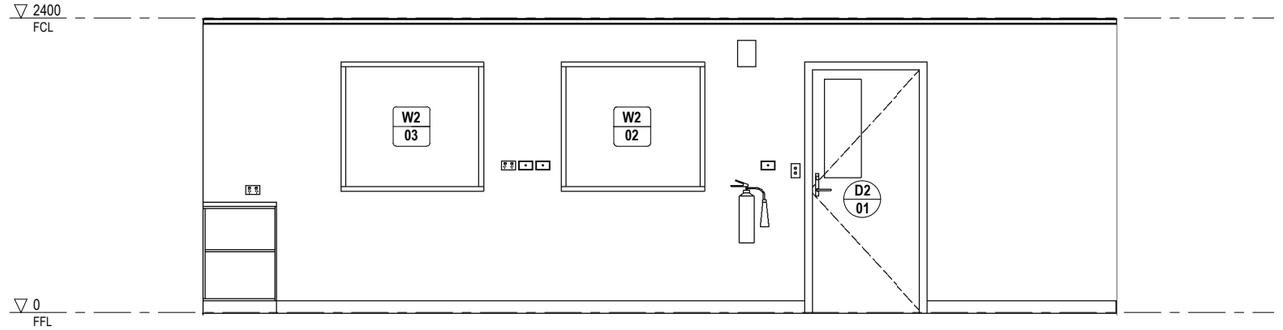
1	KITCHENETTE ELEVATION 1
A02-FP01	1 : 50



2	KITCHENETTE ELEVATION 2 / INTERNAL ELEVATION 2
A02-FP01	1 : 50



3	INTERNAL ELEVATION 3
A02-FP01	1 : 50



4	INTERNAL ELEVATION 4
A02-FP01	1 : 50

NOTE:
AESTHETICS AND
FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1139905
JOB NUMBER : SI#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

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PROJECT STATUS: **ISSUED FOR REVIEW**

PROJECT CLIENT: **CBH**

PROJECT: **AMENITIES BUILDING**

PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

SHEET
INTERNAL ELEVATIONS 2

DRAWN	CHECKED	SCALE	SIZE
FZ	KP	1 : 50	A3

DRAWING NO. **A06-IE02**

REVISION 0

DC SIGN OFF:

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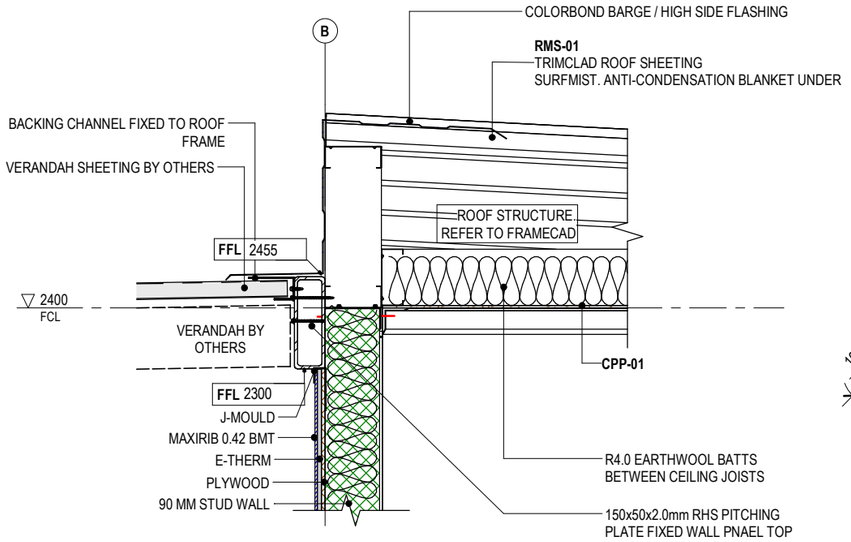
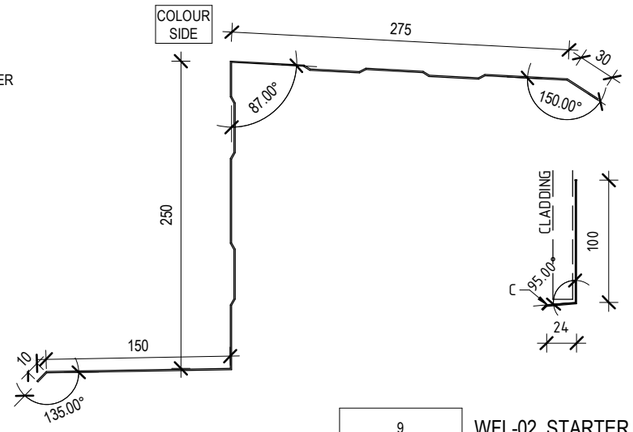
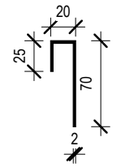


1 | A07-SD01 — HIGH BARGE DETAIL
1 : 10

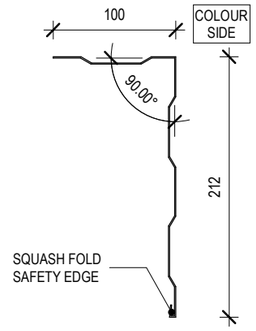


FLASHING TO BE PROFILED

9 | A07-SD01 — WFL-02. STARTER FLASHING
1 : 5



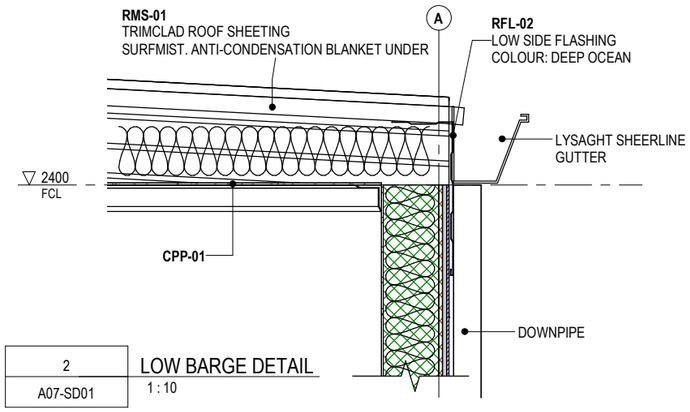
10 | A07-SD01 — WFL-04. J MOULD
1 : 5



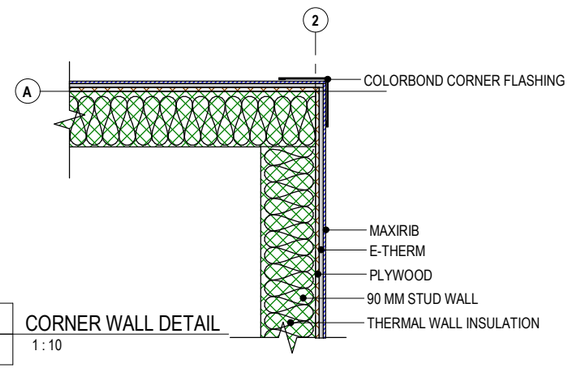
FLASHING TO BE PROFILED

7 | A07-SD01 — RFL-01. HIGH SIDE BARGE WITH APRON FLASHING
1 : 5

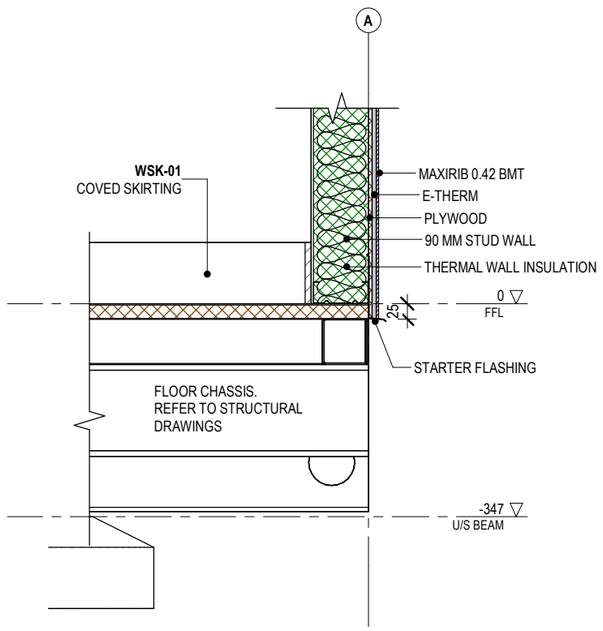
8 | A07-SD01 — RFL-02. LOW SIDE FLASHING
1 : 5



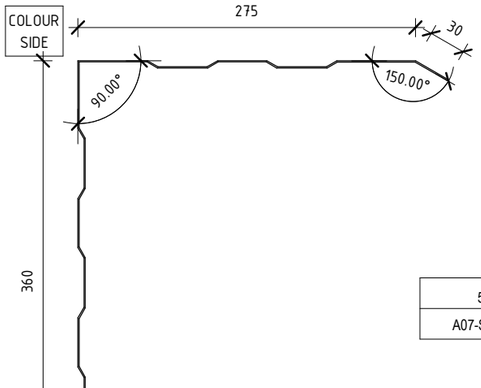
2 | A07-SD01 — LOW BARGE DETAIL
1 : 10



3 | A07-SD01 — CORNER WALL DETAIL
1 : 10

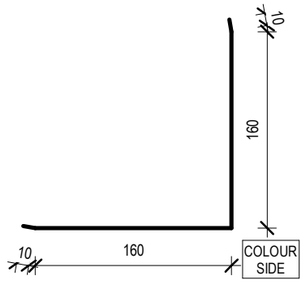


4 | A07-SD01 — CHASSIS DETAIL
1 : 10

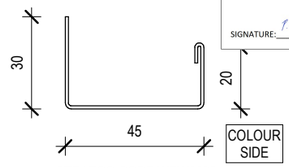


FLASHING TO BE PROFILED

11 | A07-SD01 — RFL-03. HIGH SIDE BARGE FLASHING
1 : 5



5 | A07-SD01 — WFL-01. CORNER FLASHING
1 : 5



STRATCO CODE WPW0038

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NOTE:
AESTHETICS AND FINISHES BY OTHERS

6 | A07-SD01 — WFL-03. DOOR HEADER
1 : 2

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
A	ISSUED FOR REVIEW	26.06.23	FZ	FS

FLEETWOOD AUSTRALIA
1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

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4. REFER ANY DISCREPANCIES IMMEDIATELY TO THE DESIGNER & AWAIT WRITTEN INSTRUCTION.

PROJECT NO.: **J004276**
PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

SHEET
CONSTRUCTION & FLASHING DETAILS

DRAWN: FZ | CHECKED: KP | SCALE: As indicated | SIZE: A3
DRAWING NO.: **A07-SD01** | REVISION: 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

DOOR NOTES

D / 1 — DOOR TYPE / DOOR NUMBER

DOORS TO BE NOMINAL HEIGHT OF 2040MM UNLESS SPECIFIED.

DOORS GLAZING TO CONFORM TO A.S 1288.

DOOR HARDWARE AS REFERRED TO IN SPECIFICATION.

DOORS TO BE KEYED AS PER ADDENDA.

ALL DOORS TO BE FITTED WITH APPROVED AIR SEALS AS PER SECTION 'J' OF THE BCA. **DOOR SEALS AND THRESHOLDS PLATES TO EXTERNAL DOORS.**

ALL EXIT DOORS AND DOORS LEADING TO EXITS TO BE PROVIDED WITH COMPLIANT HARDWARE BETWEEN 900MM AND 1.1M FROM THE FFL.

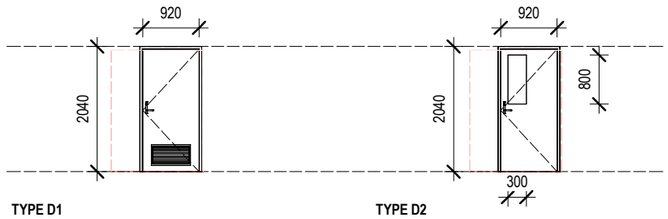
ALL DOORS WILL BE CONTRASTING TO FRAMES IN ACCORDANCE WITH AS1428.1 - 2009

REFER TO FLOOR PLAN FOR HANDING.

NOTE:

LOCK TYPE FROM BullAnt SECURITY - CBH TO AUTHORISE USE OF AREA LOCK AT TIME OF PROCUREMENT / FABRICATION.

ALLOW FOR MANDATORY SIGNAGE IN ACCORDANCE WITH AS 1428.1



TYPE D1

FRAME:	METAL FRAME FINISH : DEEP OCEAN
LEAF:	METAL CLAD DOOR FINISH : EXT - PAPERBARK, INT- SURFMIST
TYPE:	HINGED DOOR. (ARCHITECTURAL BUTT HINGES)
HARDWARE:	STANDARD ENTRO LEVER TYPE ENTRANCE SET WITH INDICATOR BOLT

TYPE D2

FRAME:	METAL FRAME FINISH : DEEP OCEAN
LEAF:	METAL CLAD DOOR FINISH : EXT- PAPERBARK, INT- SURFMIST
TYPE:	HINGED DOOR. (ARCHITECTURAL BUTT HINGES)
HARDWARE:	STANDARD ENTRO LEVER TYPE ENTRANCE SET

DOOR SCHEDULE

MARK	LOCATION	TYPE	HEIGHT	WIDTH	HANDLE	COMMENTS	CLOSER
D1 01	UAT FEMALE	SWING	2040	920	LEVER TYPE PRIVACY INDICATOR INTEGRATED	300H x 600W DOOR GRILL	YES
D1 02	UAT MALE	SWING	2040	920	LEVER TYPE PRIVACY INDICATOR INTEGRATED	300H x 600W DOOR GRILL	YES
D2 01	CRIB ROOM	SWING	2040	920	LEVER TYPE ENTRANCE SET	800H X 300W VISION PANEL	YES

WINDOW NOTES

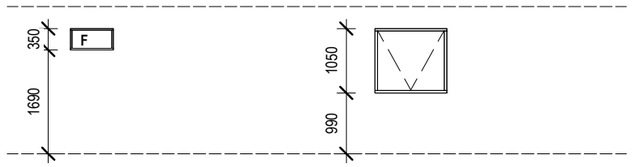
W / # — WINDOW TYPE / WINDOW NUMBER

WINDOWS SHALL BE POWDERCOAT ALUMINIUM FINISHED. OVERALL WINDOW Uw AND SGHC TO BE COMPLIAN WITH SECTION J AND WITH RELEVANT AS 2047 & AS 1288 GLAZING CODES.

WINDOWS REQUIRE TO BE KEY LOCKABLE AS PER SPECIFICATIONS.

REFERENCE	GLAZING U- VALUE (AFRC)	SHGC (AFRC)
W1	6.50	0.75

Glazing to be equal or less to both U-Value and SHGC numerical value.



TYPE W1

FRAME:	POWDERCOAT ALUMINIUM DEEP OCEAN
OPERATION:	FIXED
GLAZING:	4MM OBSCURED

TYPE W2

FRAME:	POWDERCOAT ALUMINIUM DEEP OCEAN
OPERATION:	AWNING
GLAZING:	4MM CLEAR

WINDOW SCHEDULE

MARK	LOCATION	TYPE	HEIGHT	WIDTH	GLAZING
W1 01	UAT FEMALE	FIXED	350	700	OBSCURED
W1 02	UAT MALE	FIXED	350	700	OBSCURED
W2 01	CRIB ROOM	AWNING	1050	1170	CLEAR
W2 02	CRIB ROOM	AWNING	1050	1170	CLEAR
W2 03	CRIB ROOM	AWNING	1050	1170	CLEAR

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA
1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

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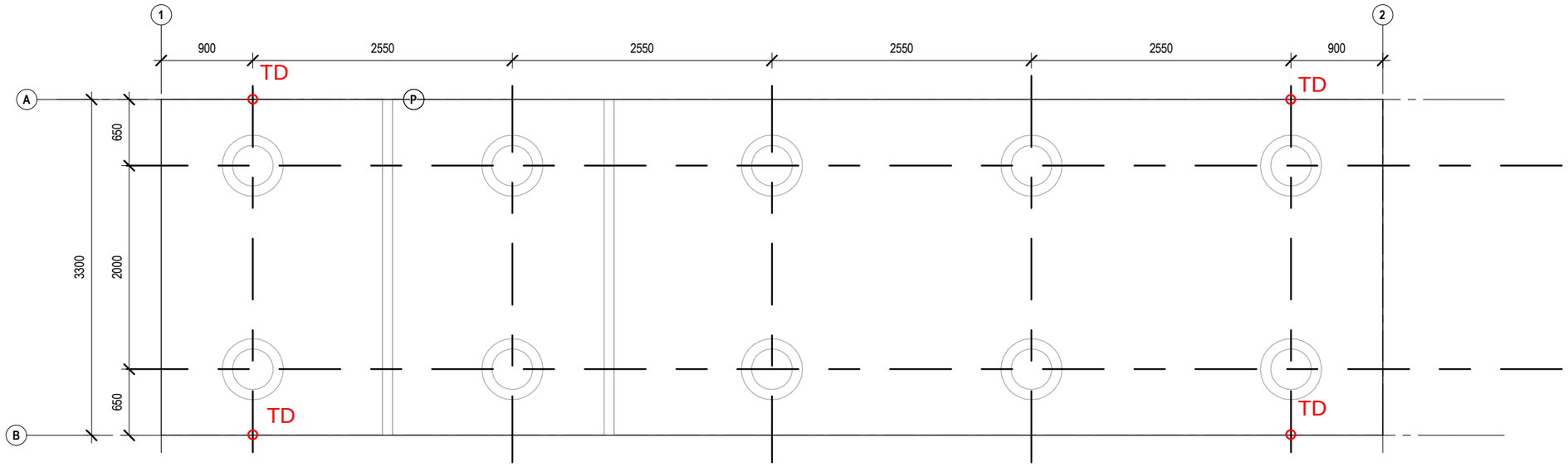
PROJECT NO.: **J004276**
PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**

SHEET
DOOR & WINDOW SCHEDULE

DRAWN	CHECKED	SCALE	SIZE
FZ	FS	As indicated	A3

DRAWING NO. **A08-SH01**
REVISION 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

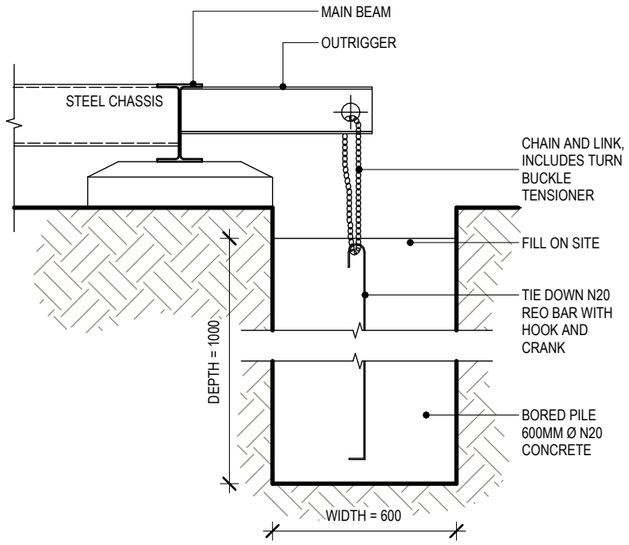


1 INDICATIVE FOOTING LAYOUT
A10-ST20 1 : 50

MODULE WEIGHT APPROX 7M TONNE

INDICATIVE FOOTING LAYOUT ONLY. FOOTING DESIGN AND ENGINEERING BY OTHERS.

CONCRETE PAD FOOTING UNDER CONCRETE DONUT	
SITE CLASSIFICATION	**CONCRETE FOOTING SIZE**
A OR S	NO EXTRA PAD FOOTING REQUIRED
M	600 DIA x 450 DEEP BULK CONCRETE PAD FOOTING
M-D	600 DIA x 800 DEEP BULK CONCRETE PAD FOOTING
H1-D	600 DIA x 1600 DEEP BULK CONCRETE PAD FOOTING



○ TD
600 DIA x 1000 DEEP BULK CONCRETE PAD FOOTING

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR REVIEW	28.06.23	FZ	FS
A	ISSUED FOR REVIEW	26.06.23	FZ	FS

FLEETWOOD AUSTRALIA

1202 Abernethy Rd, Perth Airport WA 6105 | (08) 9281 7500

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PROJECT NO.: **J004276**
PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**
NORTH

SHEET
FOOTING LAYOUT

DRAWN FZ | CHECKED KP | SCALE 1 : 50 | SIZE A3
DRAWING NO. **A10-ST20** | REVISION 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

ELECTRICAL, LIGHTING & DATA FIXTURES

	BGP-01	SINGLE 10A GENERAL PURPOSE OUTLET WALL MOUNTED 1500MM AFFL UNLESS NOTED OTHERWISE
300	**BGP-02**	DOUBLE 10A GENERAL PURPOSE OUTLET WITH DOUBLE USB WALL MOUNTED 300MM AFFL UNLESS NOTED OTHERWISE
300	**BDO-01**	DOUBLE COMMUNICATIONS OUTLET RJ45 4 PAIR CAT. 6 UTP WALL MOUNTED 300MM AFFL UNLESS NOTED OTHERWISE
TV	**BDO-03**	TELEVISION POINT WALL MOUNTED 1200MM AFFL UNLESS NOTED OTHERWISE
	BDO-04	SINGLE COMMUNICATIONS OUTLET RJ45 4 PAIR CAT. 6 UTP WALL MOUNTED 1200MM AFFL UNLESS NOTED OTHERWISE
AC	**BDO-05**	AC CONTROL WALL MOUNTED 1200MM AFFL UNLESS NOTED OTHERWISE
	BPI-01	SINGLE PHASE ISOLATOR WALL MOUNTED 800MM AFFL UNLESS NOTED OTHERWISE
	BSB-01	DISTRIBUTION BOARD (**P.O.E** - POINT OF ENTRY) WALL MOUNTED 1800MM AFFL UNLESS NOTED OTHERWISE
	BSL-01	SURFACE CEILING MOUNTED LED OYSTER LIGHT FITTING (3000 KELVIN)
	BWL-01	LED BUNKER LIGHT, SCREW FIXED LUMINARY. WALL MOUNTED.
	BSW-01	SINGLE LIGHT SWITCH WALL MOUNTED 1100 AFFL
	BSW-02	DOUBLE LIGHT SWITCH WALL MOUNTED 1100 AFFL
		TELEPHONE POINT
PE	**BPE-01**	PHOTO ELECTRIC SENSOR
	1500	DENOTES MOUNTING HEIGHT
	WP	DENOTES WEATHER PROOF

FIRE DETECTION FIXTURES

	BSD-01	SMOKE DETECTOR
	BFE-01	FIRE EXTINGUISHER

MECHANICAL FIXTURES

	BEF-01	EXHAUST FAN
	BCU-01	AIR CONDITIONER UNIT 5.0KW
	BAC-01	SPLIT AIR CONDITIONER UNIT 5.0KW

PLUMBING FIXTURES

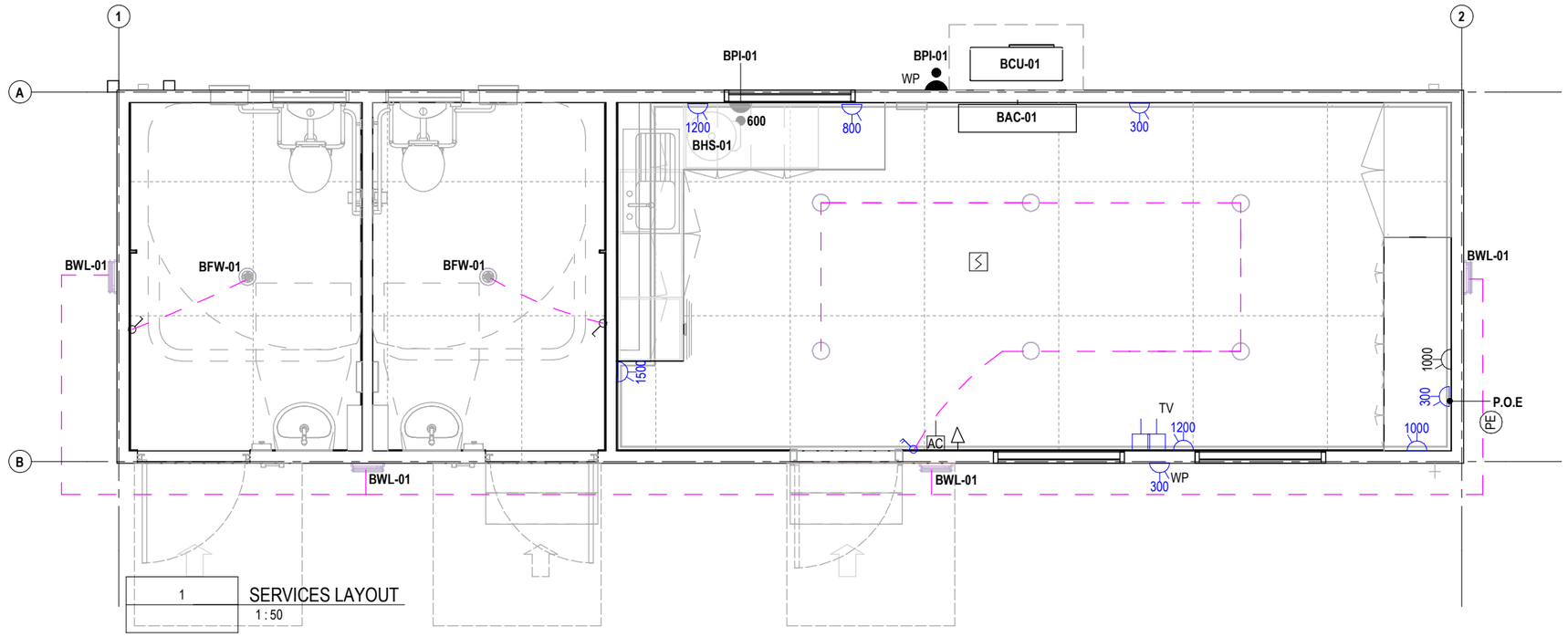
	BHS-01	HOT WATER SYSTEM
	BFW-01	FLOOR WASTE

DRAWING TO BE READ IN CONJUNCTION WITH REFLECTED CEILING PLAN

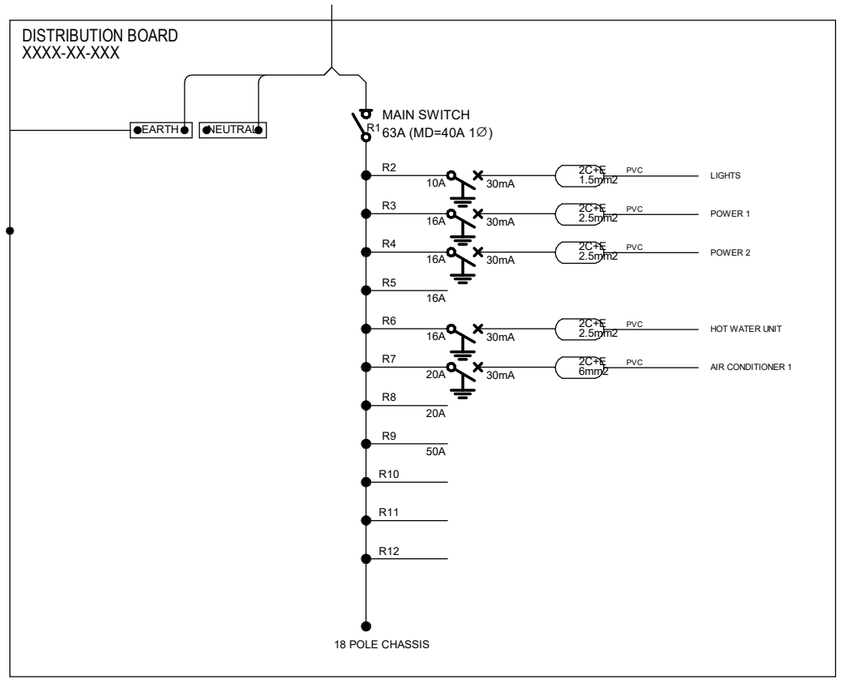
WIRING SHALL BE IN ACCORDANCE WITH A.S 3000, A.S 3008 &
THE RELEVANT LOCAL ELECTRICAL AUTHORITY.

CONTRACTORS SHALL BEFORE COMMENCEMENT OF CONSTRUCTION OF SERVICES, CHECK ALL SETOUTS AND DIMENSIONS.

THE ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/NZS 3000 & 3008.1



1 SERVICES LAYOUT
1 : 50



NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND THE ARCHITECTURAL DRAWINGS.
2. FINAL LOCATIONS OF ALL EQUIPMENT TO BE DETERMINED ON SITE PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL FITOUT DRAWINGS. LIAISE WITH ALL OTHER SERVICES.
3. RATINGS AND TERMINATIONS OF ALL EQUIPMENT TO BE CONFIRMED WITH MANUFACTURER / SUPPLIER PRIOR TO INSTALLATION.
4. INSTALLATION TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3000:2001, THE AUSTRALIAN ELECTRICAL REQUIREMENTS.

NOTE:
AESTHETICS AND FINISHES BY OTHERS

Intrax HOUSING
APPROVED BY:
PAUL ROMAGNOLO
BE (Hons)
MIEAUST No. 4637105
PROJECT NUMBER : PRJ1133905
JOB NUMBER : S#210760
SIGNATURE: DATE: 10.01.2024

NO.	DESCRIPTION	DATE	BY	CHK'D
0	ISSUED FOR CONSTRUCTION	07.09.23	FZ	KP
B	ISSUED FOR APPROVAL	02.08.23	FZ	FS
A	ISSUED FOR REVIEW	28.06.23	FZ	FS

FLEETWOOD AUSTRALIA
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PROJECT STATUS: **ISSUED FOR REVIEW**
PROJECT CLIENT: **CBH**
PROJECT: **AMENITIES BUILDING**
PROJECT ADDRESS: **CRN RICHARDSON RD & MILING WEST ROAD, MILING, WA 6575**
NORTH

SHEET
SERVICES LAYOUT

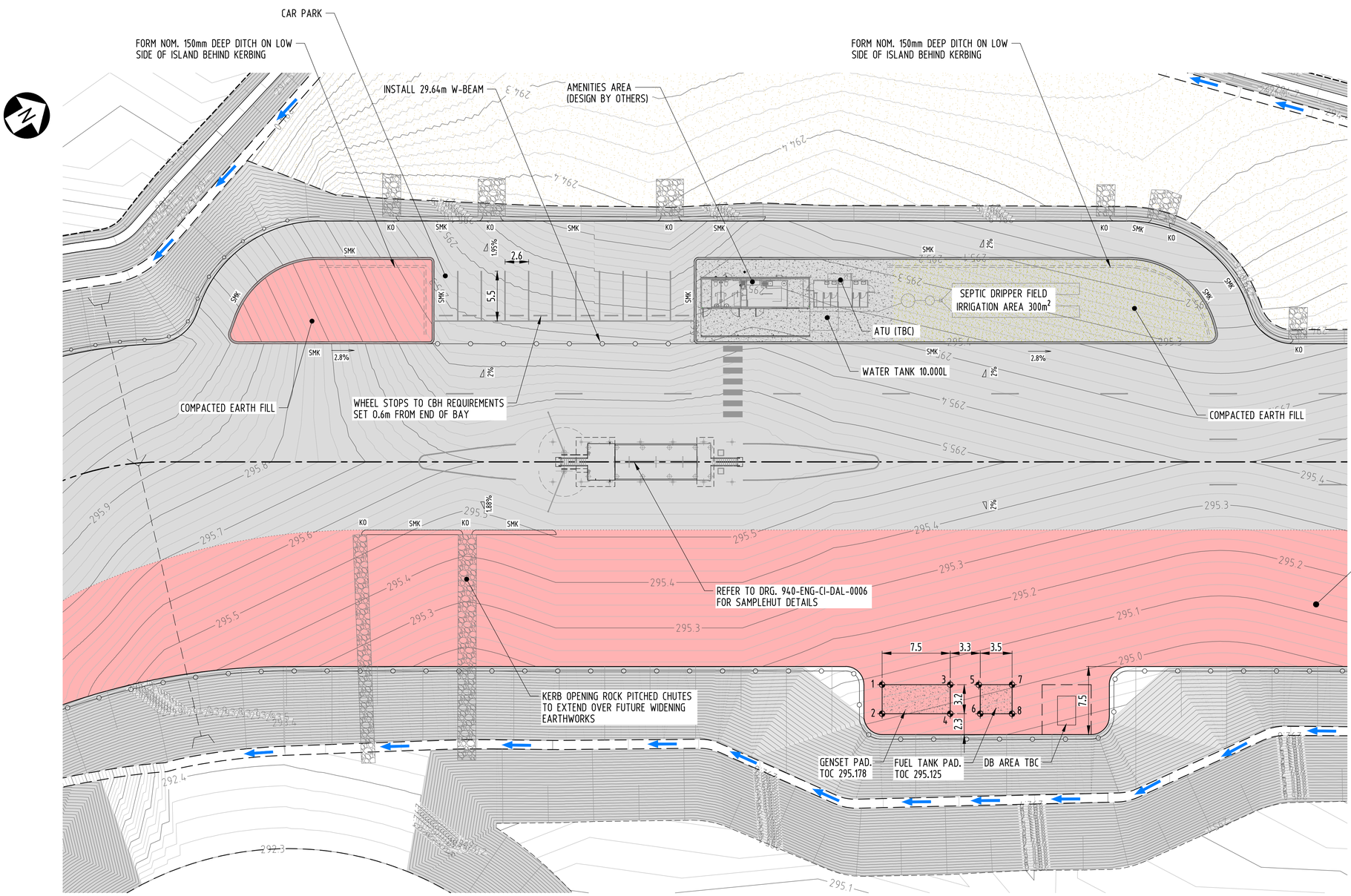
DRAWN FZ | CHECKED FS | SCALE As indicated | SIZE A3
DRAWING NO. **A11-SR01** | REVISION 0
DC SIGN OFF:

Autodesk Docs://J004276 CBH MILING AMENITIES BUILDING/J004276-CBH-MILING AMENITIES BUILDING.rvt

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001

SETOUT POINTS				
POINT	EASTING(m)	NORTHING(m)	TOP	TOC
1	49210.112	237766.560	295.078	295.178
2	49212.863	237764.926	295.014	295.178
3	49213.943	237773.008	295.041	295.178
4	49216.694	237771.373	294.977	295.178
5	49215.557	237775.706	295.025	295.125
6	49218.380	237774.210	294.960	295.125
7	49217.416	237778.854	295.007	295.125
8	49220.167	237777.219	294.943	295.125



PLAN
1:250

APPROVED FOR CONSTRUCTION

1:250 @ A1
1:500 @ A3
0 4 8 12 16 20 24 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

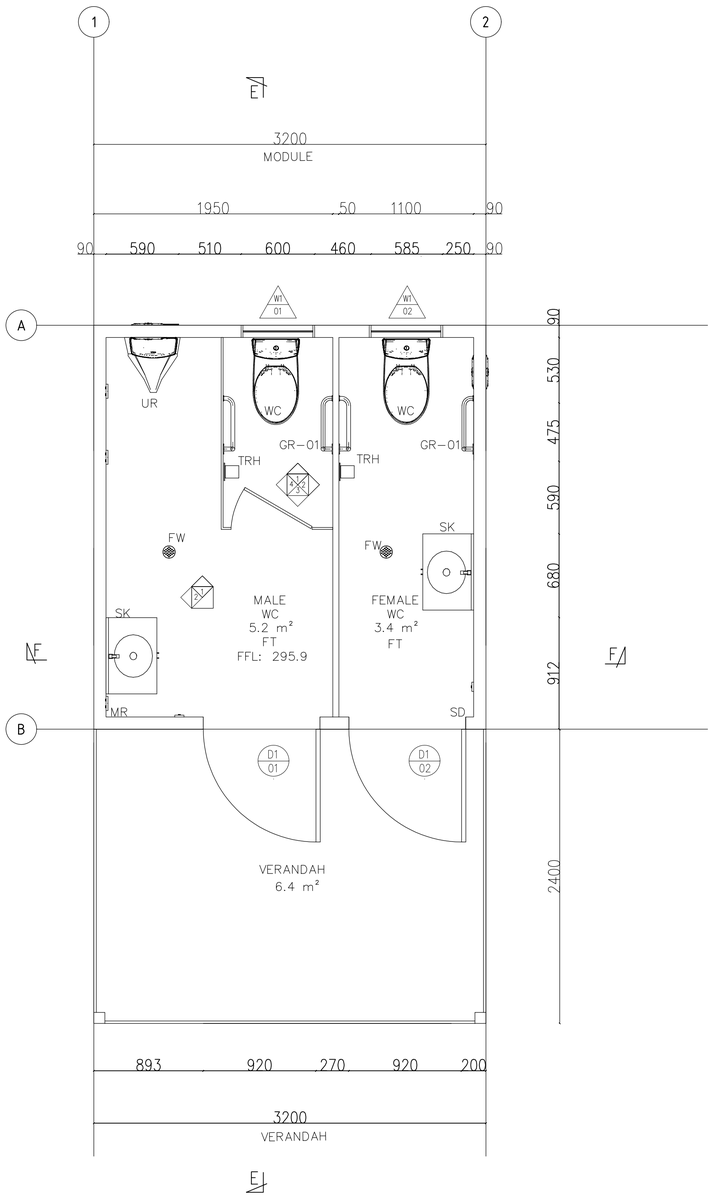
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE 1:250
SHEET A1
PROJECT -
CONTRACT No -

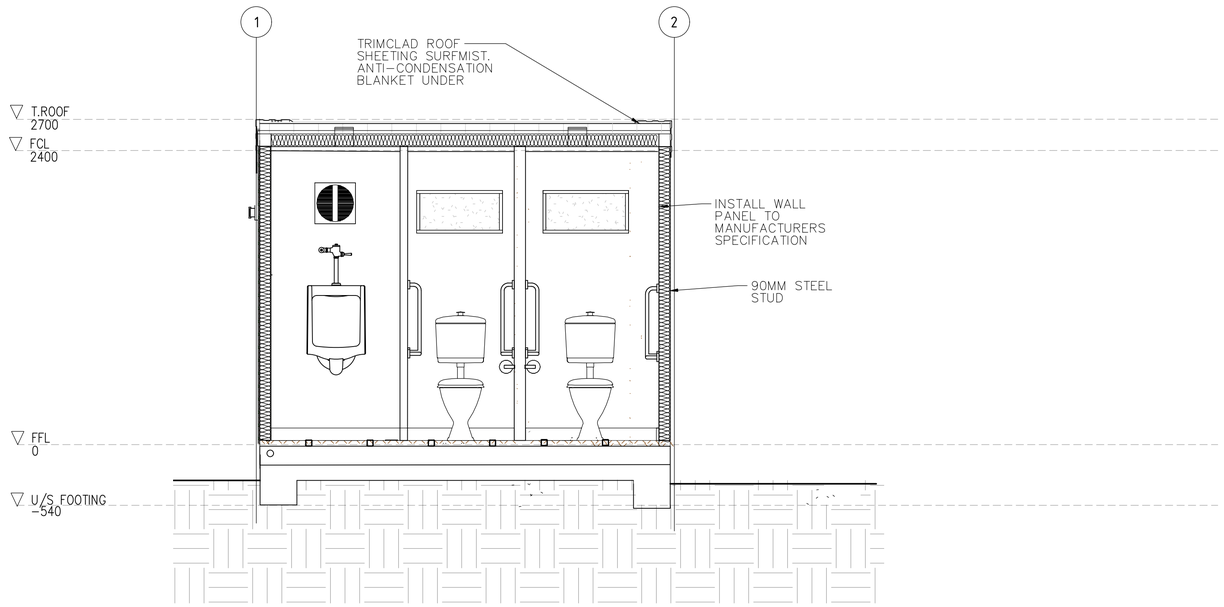
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
AMENITIES AREA PLAN
SHEET 1 OF 1

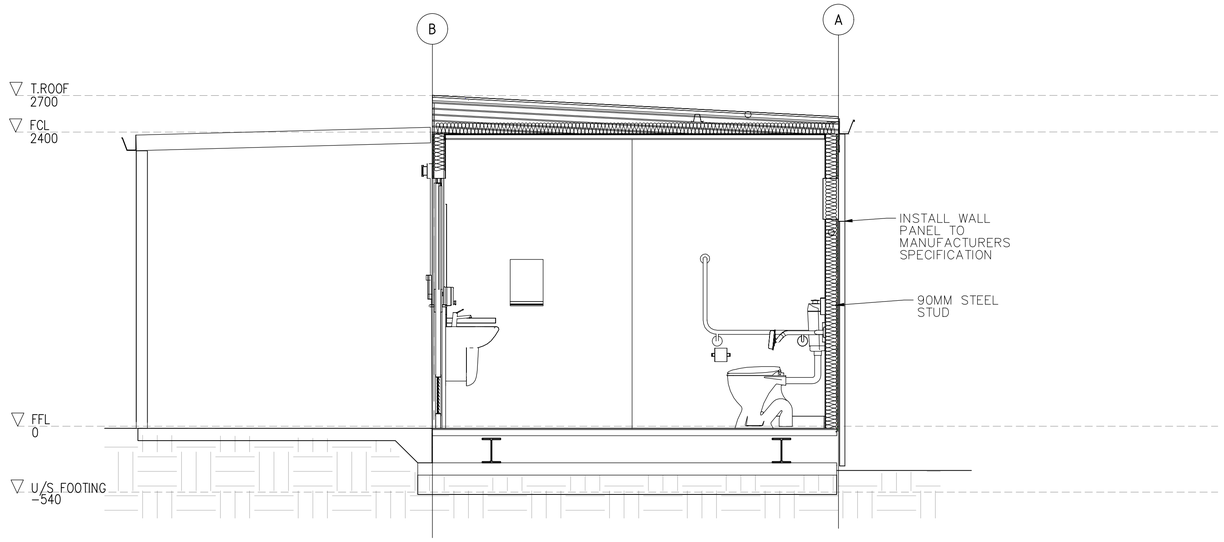
DRG No 940-ENG-CI-DAL-0007 | SHEET 1 OF 1 | REV. 0



FLOOR PLAN
1:25



E - TOILET BLOCK SECTION
SCALE 1:25



F - TOILET BLOCK SECTION
SCALE 1:25

NOTES:

1. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.
2. METAL SHEET ROOFING TO COMPLY WITH AS1562-1992
3. FOOTING LAYOUT TO COMPLY WITH
4. CONCRETE FOOTINGS TO COMPLY WITH AS3600 - CONCRETE STRUCTURES
5. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A CODES AS1554 CAT SP
6. ALL EMERGENCY LIGHTS TO BE INSTALLED TO MANUFACTURER SPECIFICATION AND ASS229
7. GRAB RAIL INSTALLED TO AS 1428.1-2009
8. TOILET PLAN INSTALLED TO AS 1428.1 - 2009
9. SIGNAGE TO AS 1428.1
10. WIRING SHALL BE IN ACCORANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY
11. ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/ANZ 3000 & 3008.1

FIXTURE LEGEND

PART NO	DESCRIPTION	NO REQ'D
WC	TOILET	TBC
UR	URINAL	TBC
TRH	TOILET ROLL HOLDER	TBC
GR	GRAB RAIL	TBC
GR-01	GRAB RAIL TYP 1	TBC
SD	SOAP DISPENSER	TBC
TD	PAPER TOWEL DISPNESER	TBC
SK	SINK	TBC
MR	MIRROR	TBC
FW	FLOOR WASTE	TBC
HWU	HOT WATER UNIT	TBC
SK	SS SINK	TBC
MX	MIXER	TBC
OCB	OVERHEAD CUPBOARDS	TBC
BCB	UNDERBENCH CUPBOARDS	TBC
BCB-01	UNDERBENCH CUPBOARDS TYP 1	TBC
BCB-02	UNDERBENCH CUPBOARDS TYP 2	TBC
BCB-R	UNDERBENCH CUPBOARDS WITH RECESS	TBC
CH	COAT HANGER	TBC
LS	LIGHT SWTICH	TBC
DR	DRAWER	TBC
BL	BUNKER LIGHT	TBC
AC	AIR CONDITIONING	TBC
AC-UN	AIR CONDITIONING UNIT	TBC
FE	FIRE EXTINGUISHER	TBC

FINISH LEGEND

PART NO	DESCRIPTION	AREA
WT	WALL TILE	ALL
SKR	SKIRTING	ALL
FT	FLOORTILE	ALL

ELECTRICAL LEGEND

PART NO	DESCRIPTION	NO
LBK	BUNKER LIGHT	TBC
ISO	SINGLE PHASE ISOLATER	TBC
BHS	HOT WATER UNIT	TBC
BF	EXHAUST FAN	TBC
LS	LIGHT SWITCH	TBC
ACC	AC CONTROL	TBC
GPO	2x GENERAL POWER OUTLET	TBC
TV	TELEVISION POINT	TBC

AREA

ROOM NAME	AREA
MALE TOILET	5.2m²
FEMALE TOILET	3.4m²
TOTAL	8.6m²

FOOTING SCHEDULE	
F1	TBC
F2	TBC

MEMBER SCHEDULE	
C1	TBC
C2	TBC

× LOCATION OF FLOOR WASTES TO WET AREAS TO BE DETERMINED ON SITE TO PLUMBER'S DESCRETION

PRELIMINARY
CONCEPT ONLY

1:25 @ A1
1:50 @ A3
0 400 800 1200 1600 2000 2400 mm

CBH GROUP
ABN 29 256 604 947

ELLETT CONTRACTING

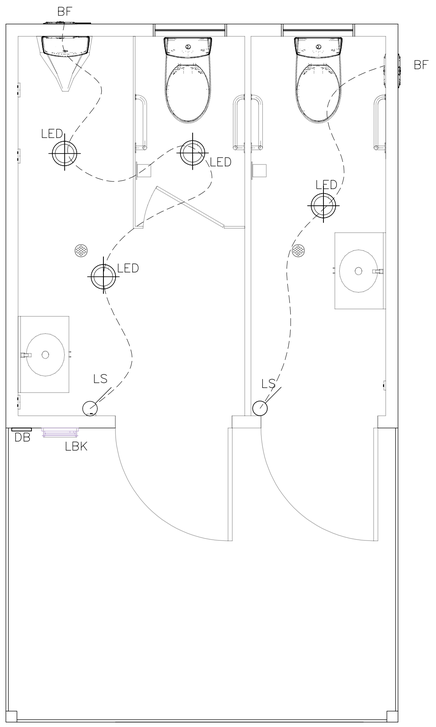
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	01.10.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

SCALE: AS SHOWN
SHEET: A1
PROJECT: –
CONTRACT No: –

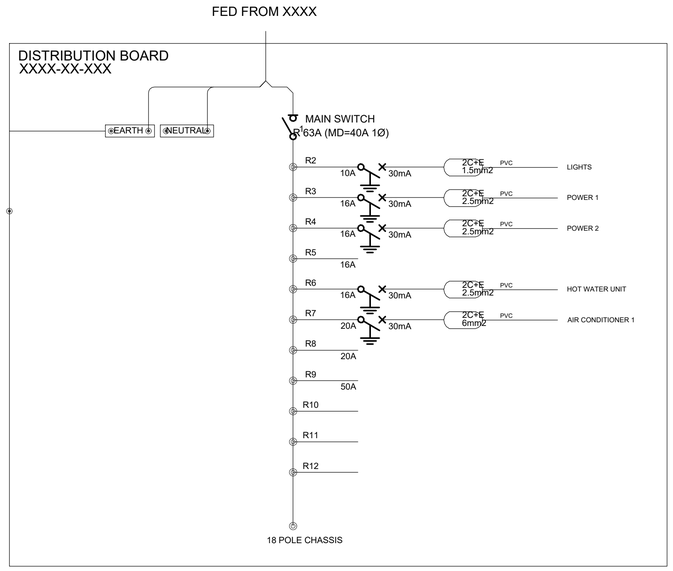
DRAWN	AE	23.09.24	
CHECKED	SE	01.10.24	
DESIGNED	--	--	
DESIGN APPR	--	--	
PROJECT APPR	--	--	

TITLE: NEWDEGATE SITE EXPANSION TOILET BLOCK GENERAL ARRANGEMENT

DRG No: 940-ENG-ST-DGA-0002 | SHEET: 1 OF 6 | REV: A



ELECTRICAL SERVICES LAYOUT
1:50



NOTES:

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GR	GRAB RAIL	TBC
GR-01	GRAB RAIL TYP 1	TBC
SD	SOAP DISPENSER	TBC
TD	PAPER TOWEL DISPNESER	TBC
SK	SINK	TBC
MR	MIRROR	TBC
FW	FLOOR WASTE	TBC
HWU	HOT WATER UNIT	TBC
SK	SS SINK	TBC
MX	MIXER	TBC
OCB	OVERHEAD CUPBOARDS	TBC
BCB	UNDERBENCH CUPBOARDS	TBC
BCB-01	UNDERBENCH CUPBOARDS TYP 1	TBC
BCB-02	UNDERBENCH CUPBOARDS TYP 2	TBC
BCB-R	UNDERBENCH CUPBOARDS WITH RECESS	TBC
CH	COAT HANGER	TBC
LS	LIGHT SWTICH	TBC
DR	DRAWER	TBC
BL	BUNKER LIGHT	TBC
AC	AIR CONDITIONING	TBC
AC-UN	AIR CONDITIONING UNIT	TBC
FE	FIRE EXTINGUISHER	TBC

FINISH LEGEND

PART NO	DESCRIPTION	AREA
WT	WALL TILE	ALL
SKR	SKIRTING	ALL
FT	FLOORTILE	ALL

ELECTRICAL LEGEND

PART NO	DESCRIPTION	NO
LBK	BUNKER LIGHT	TBC
ISO	SINGLE PHASE ISOLATER	TBC
BHS	HOT WATER UNIT	TBC
BF	EXHAUST FAN	TBC
LS	LIGHT SWITCH	TBC
ACC	AC CONTROL	TBC
GPO	2x GENERAL POWER OUTLET	TBC
TV	TELEVISION POINT	TBC
LED	SURFACE MOUNTED LIMINAIRE LED (CIRCULAR)	TBC
DS	DISTRIBUTION BOARD	TBC

PRELIMINARY
CONCEPT ONLY

1:25 @ A1
1:50 @ A3
0 400 800 1200 1600 2000 2400 mm

CBH GROUP
ABN 29 256 604 947

ELLETT CONTRACTING

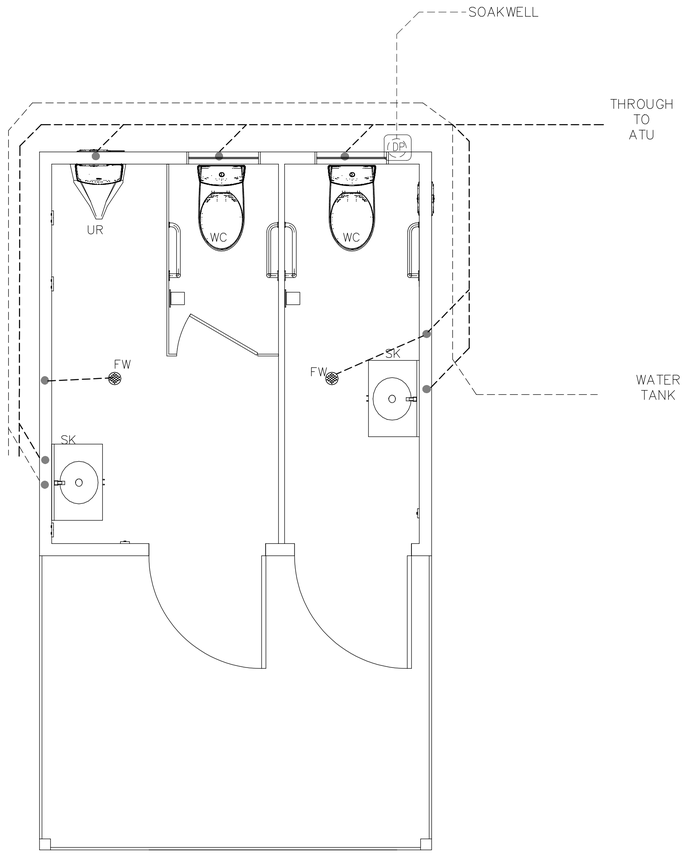
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	01.10.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

SCALE: AS SHOWN
SHEET: A1
PROJECT: –
CONTRACT No: –

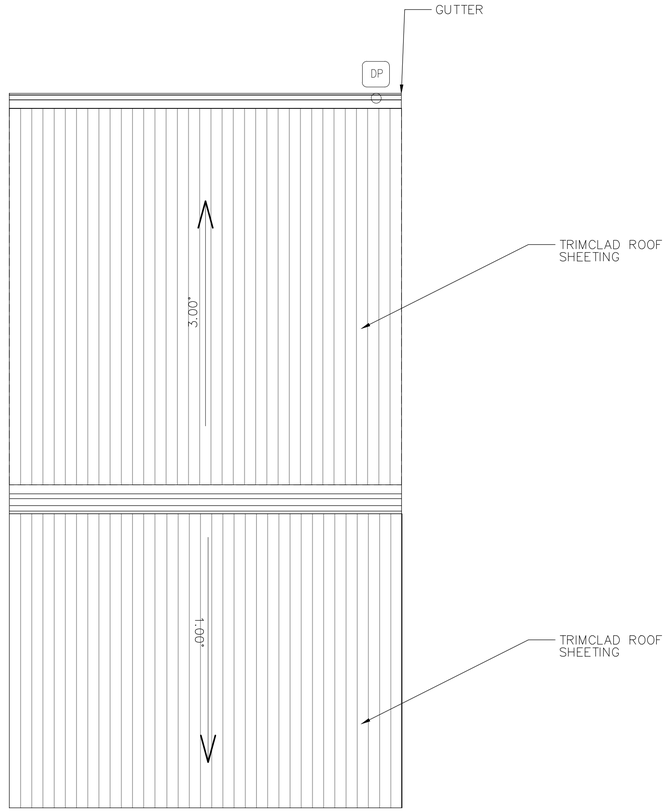
DRAWN	AE	23.09.24
CHECKED	SE	01.10.24
DESIGNED	--	--
DESIGN APPR	--	--
PROJECT APPR	--	--

TITLE: NEWDEGATE SITE EXPANSION TOILET BLOCK PLUMBING DETAILS

DRG No: 940-ENG-EL-DLS-0002 | SHEET: 5 OF 6 | REV.: A



PLUMBING SERVICES LAYOUT
1:25



ROOF PLAN
1:25

NOTES:

1. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.
2. METAL SHEET ROOFING TO COMPLY WITH AS1562–1992
3. FOOTING LAYOUT TO COMPLY WITH
4. CONCRETE FOOTINGS TO COMPLY WITH AS3600 – CONCRETE STRUCTURES
5. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A CODES AS1554 CAT SP
6. ALL EMERGENCY LIGHTS TO BE INSTALLED TO MANUFACTURER SPECIFICATION AND ASS229
7. GRAB RAIL INSTALLED TO AS 1428.1–2009
8. TOILET PLAN INSTALLED TO AS 1428.1 – 2009
9. SIGNAGE TO AS 1428.1
10. WIRING SHALL BE IN ACCORANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY
11. ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/ANZ 3000 & 3008.1

FIXTURE LEGEND

PART NO	DESCRIPTION	NO REQ'D
WC	TOILET	TBC
UR	URINAL	TBC
TRH	TOILET ROLL HOLDER	TBC
GR	GRAB RAIL	TBC
GR-01	GRAB RAIL TYP 1	TBC
SD	SOAP DISPENSER	TBC
TD	PAPER TOWEL DISPNESER	TBC
SK	SINK	TBC
MR	MIRROR	TBC
FW	FLOOR WASTE	TBC
HWU	HOT WATER UNIT	TBC
SK	SS SINK	TBC
MX	MIXER	TBC
OCB	OVERHEAD CUPBOARDS	TBC
BCB	UNDERBENCH CUPBOARDS	TBC
BCB-01	UNDERBENCH CUPBOARDS TYP 1	TBC
BCB-02	UNDERBENCH CUPBOARDS TYP 2	TBC
BCB-R	UNDERBENCH CUPBOARDS WITH RECESS	TBC
CH	COAT HANGER	TBC
LS	LIGHT SWTICH	TBC
DR	DRAWER	TBC
BL	BUNKER LIGHT	TBC
AC	AIR CONDITIONING	TBC
AC-UN	AIR CONDITIONING UNIT	TBC
FE	FIRE EXTINGUISHER	TBC

FINISH LEGEND

PART NO	DESCRIPTION	AREA
WT	WALL TILE	ALL
SKR	SKIRTING	ALL
FT	FLOORTILE	ALL

ELECTRICAL LEGEND

PART NO	DESCRIPTION	NO
LBK	BUNKER LIGHT	TBC
ISO	SINGLE PHASE ISOLATER	TBC
BHS	HOT WATER UNIT	TBC
BF	EXHAUST FAN	TBC
LS	LIGHT SWITCH	TBC
ACC	AC CONTROL	TBC
GPO	2x GENERAL POWER OUTLET	TBC
TV	TELEVISION POINT	TBC
LED	SURFACE MOUNTED LIMINAIRE LED (CIRCULAR)	TBC

PRELIMINARY
CONCEPT ONLY

1:25 @ A1
1:50 @ A3
0 400 800 1200 1600 2000 2400 mm

CBH GROUP
ABN 29 256 604 947

ELLETT CONTRACTING

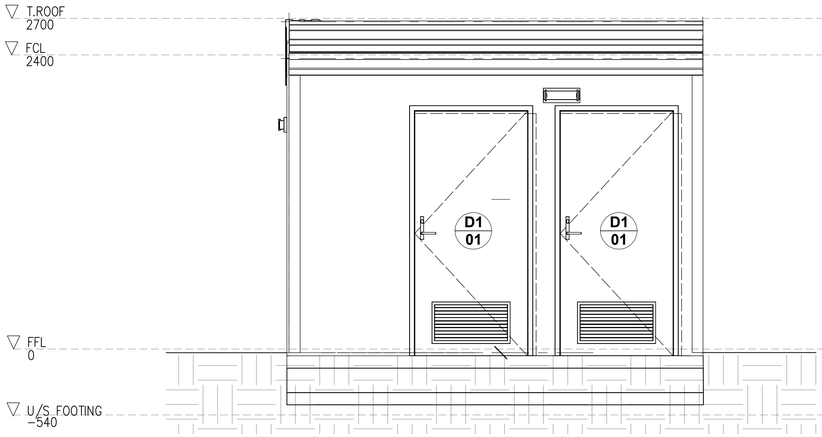
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	01.10.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

SCALE: AS SHOWN
SHEET: A1
PROJECT: –
CONTRACT No: –

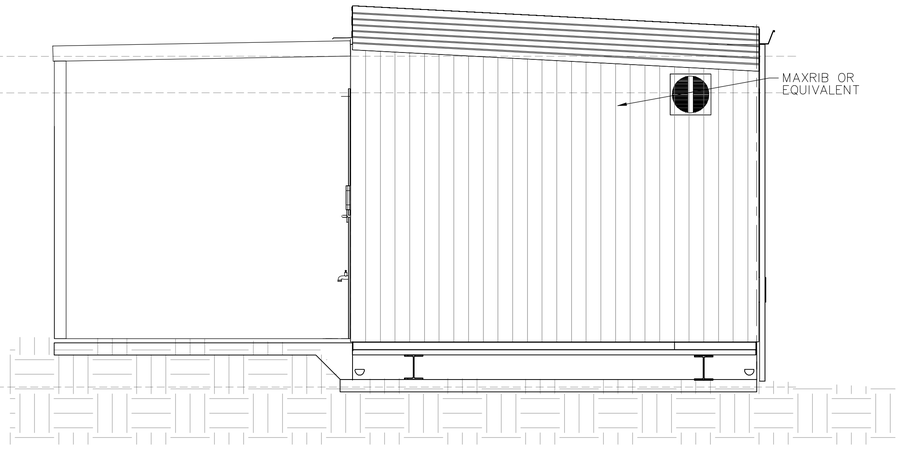
DRAWN	AE	23.09.24
CHECKED	SE	01.10.24
DESIGNED	--	--
DESIGN APPR	--	--
PROJECT APPR	--	--

TITLE: NEWDEGATE SITE EXPANSION TOILET BLOCK PLUMBING DETAILS

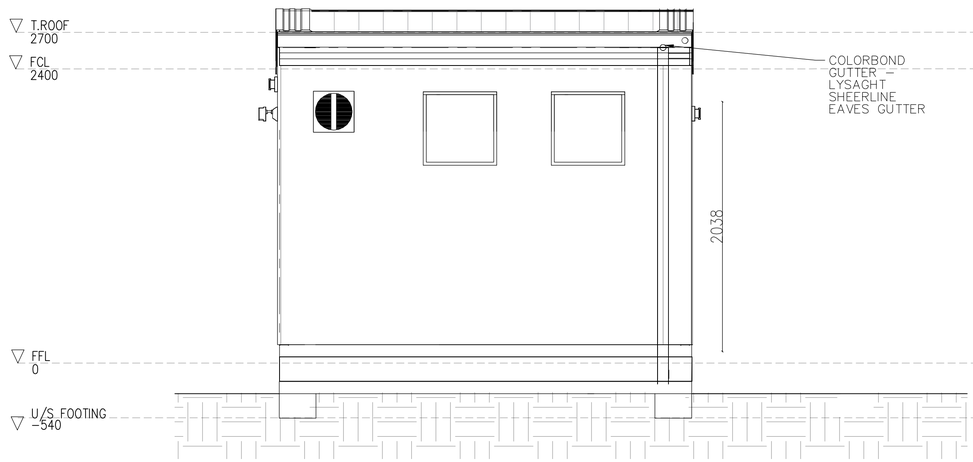
DRG No: 940-ENG-HY-DTD-0002
SHEET: 6 OF 6
REV.: A



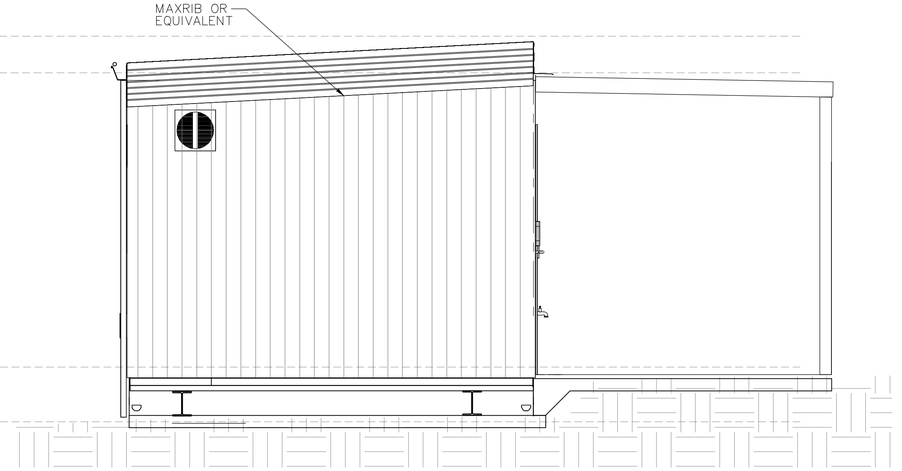
ELEVATION 1
1:25



ELEVATION 2
1:25



ELEVATION 3
1:25



ELEVATION 4
1:25

NOTES:

1. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.
2. METAL SHEET ROOFING TO COMPLY WITH AS1562–1992
3. FOOTING LAYOUT TO COMPLY WITH
4. CONCRETE FOOTINGS TO COMPLY WITH AS3600 – CONCRETE STRUCTURES
5. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A CODES AS1554 CAT SP
6. ALL EMERGENCY LIGHTS TO BE INSTALLED TO MANUFACTURER SPECIFICATION AND ASS229
7. GRAB RAIL INSTALLED TO AS 1428.1–2009
8. TOILET PLAN INSTALLED TO AS 1428.1 – 2009
9. SIGNAGE TO AS 1428.1
10. WIRING SHALL BE IN ACCORANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY
11. ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/ANZ 3000 & 3008.1

FIXTURE LEGEND

PART NO	DESCRIPTION	NO REQ'D
WC	TOILET	TBC
UR	URINAL	TBC
TRH	TOILET ROLL HOLDER	TBC
GR	GRAB RAIL	TBC
GR-01	GRAB RAIL TYP 1	TBC
SD	SOAP DISPENSER	TBC
TD	PAPER TOWEL DISPNESER	TBC
SK	SINK	TBC
MR	MIRROR	TBC
FW	FLOOR WASTE	TBC
HWU	HOT WATER UNIT	TBC
SK	SS SINK	TBC
MX	MIXER	TBC
OCB	OVERHEAD CUPBOARDS	TBC
BCB	UNDERBENCH CUPBOARDS	TBC
BCB-01	UNDERBENCH CUPBOARDS TYP 1	TBC
BCB-02	UNDERBENCH CUPBOARDS TYP 2	TBC
BCB-R	UNDERBENCH CUPBOARDS WITH RECESS	TBC
CH	COAT HANGER	TBC
LS	LIGHT SWTICH	TBC
DR	DRAWER	TBC
BL	BUNKER LIGHT	TBC
AC	AIR CONDITIONING	TBC
AC-UN	AIR CONDITIONING UNIT	TBC
FE	FIRE EXTINGUISHER	TBC

FINISH LEGEND

PART NO	DESCRIPTION	AREA
WT	WALL TILE	ALL
SKR	SKIRTING	ALL
FT	FLOORTILE	ALL

ELECTRICAL LEGEND

PART NO	DESCRIPTION	NO
LBK	BUNKER LIGHT	TBC
ISO	SINGLE PHASE ISOLATER	TBC
BHS	HOT WATER UNIT	TBC
BF	EXHAUST FAN	TBC
LS	LIGHT SWITCH	TBC
ACC	AC CONTROL	TBC
GPO	2x GENERAL POWER OUTLET	TBC
TV	TELEVISION POINT	TBC

FOOTING SCHEDULE	
F1	TBC
F2	TBC

MEMBER SCHEDULE	
C1	TBC
C2	TBC

PRELIMINARY
CONCEPT ONLY

1:25 @ A1
1:50 @ A3
0 400 800 1200 1600 2000 2400 mm

CBH GROUP
ABN 29 256 604 947

ELLETT CONTRACTING

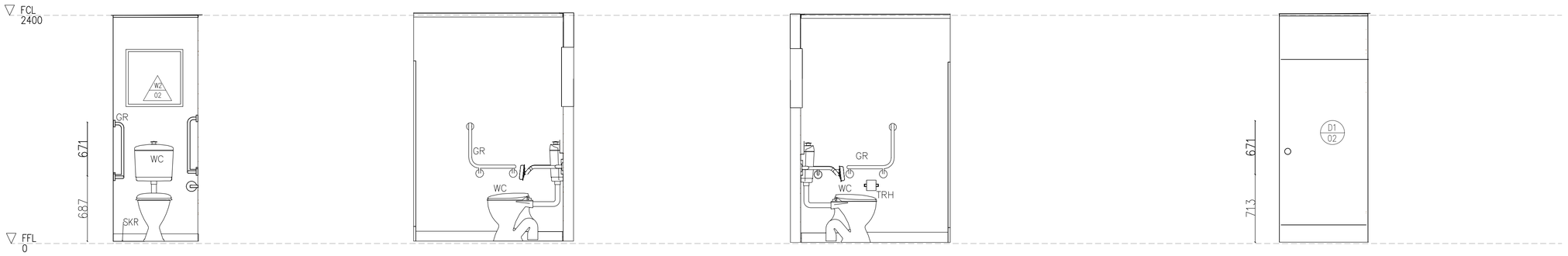
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	02.08.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

SCALE: AS SHOWN
SHEET: A1
PROJECT: –
CONTRACT No: –

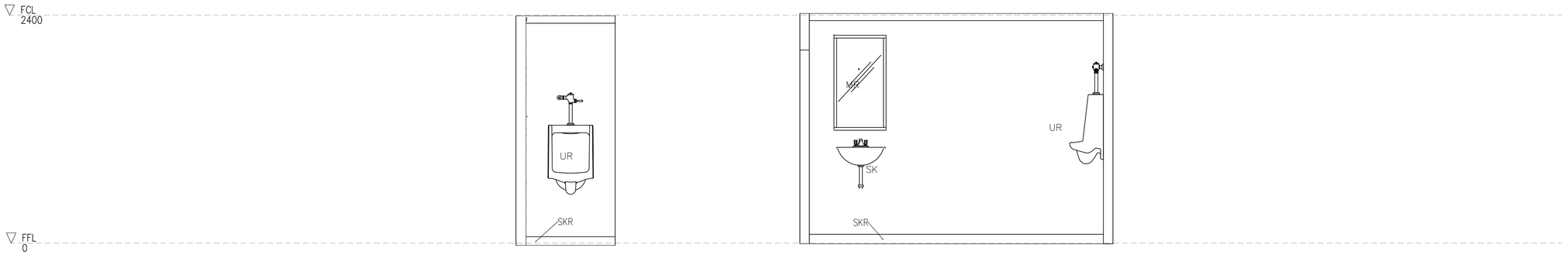
DRAWN	AE	23.09.24
CHECKED	SE	01.10.24
DESIGNED	–	--
DESIGN APPR	–	--
PROJECT APPR	–	--

TITLE: NEWDEGATE SITE EXPANSION TOILET BLOCK ELEVATIONS

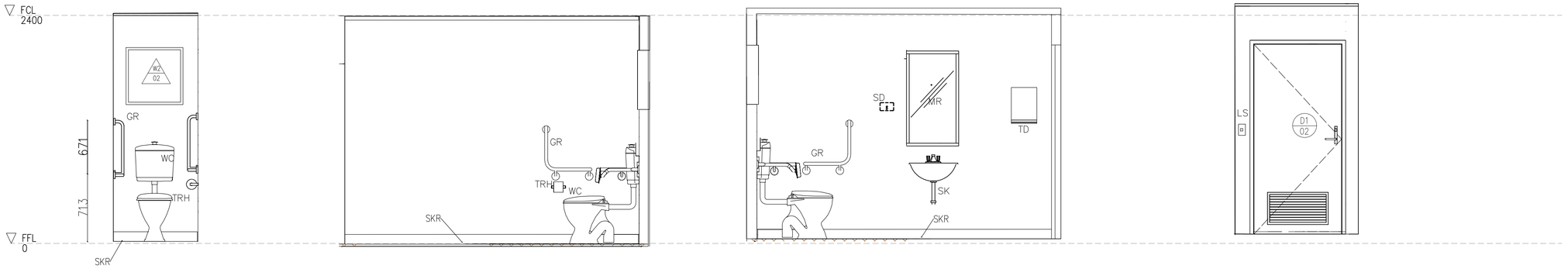
DRG No: 940–ENG–ST–DEL–0005
SHEET: 2 OF 6
REV.: A



MALE CUBICLE – E1 | MALE CUBICLE – E2 | MALE CUBICLE – E3 | MALE CUBICLE – E4



MALE TOILET – E1 | MALE TOILET – E2



FEMALE TOILET – E1 | FEMALE TOILET – E2 | FEMALE TOILET – E3 | FEMALE TOILET – E4

NOTES:

1. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.
2. METAL SHEET ROOFING TO COMPLY WITH AS1562–1992
3. FOOTING LAYOUT TO COMPLY WITH
4. CONCRETE FOOTINGS TO COMPLY WITH AS3600 – CONCRETE STRUCTURES
5. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A CODES AS1554 CAT SP
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9. SIGNAGE TO AS 1428.1
10. WIRING SHALL BE IN ACCORANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY
11. ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/ANZ 3000 & 3008.1

FIXTURE LEGEND

PART NO	DESCRIPTION	NO REQ'D
WC	TOILET	TBC
UR	URINAL	TBC
TRH	TOILET ROLL HOLDER	TBC
GR	GRAB RAIL	TBC
GR-01	GRAB RAIL TYP 1	TBC
SD	SOAP DISPENSER	TBC
TD	PAPER TOWEL DISPNESER	TBC
SK	SINK	TBC
MR	MIRROR	TBC
FW	FLOOR WASTE	TBC
HWU	HOT WATER UNIT	TBC
SK	SS SINK	TBC
MX	MIXER	TBC
OCB	OVERHEAD CUPBOARDS	TBC
BCB	UNDERBENCH CUPBOARDS	TBC
BCB-01	UNDERBENCH CUPBOARDS TYP 1	TBC
BCB-02	UNDERBENCH CUPBOARDS TYP 2	TBC
BCB-R	UNDERBENCH CUPBOARDS WITH RECESS	TBC
CH	COAT HANGER	TBC
LS	LIGHT SWTICH	TBC
DR	DRAWER	TBC
BL	BUNKER LIGHT	TBC
AC	AIR CONDITIONING	TBC
AC-UN	AIR CONDITIONING UNIT	TBC
FE	FIRE EXTINGUISHER	TBC

FINISH LEGEND

PART NO	DESCRIPTION	AREA
WT	WALL TILE	ALL
SKR	SKIRTING	ALL
FT	FLOORTILE	ALL

ELECTRICAL LEGEND

PART NO	DESCRIPTION	NO
LBK	BUNKER LIGHT	TBC
ISO	SINGLE PHASE ISOLATER	TBC
BHS	HOT WATER UNIT	TBC
BF	EXHAUST FAN	TBC
LS	LIGHT SWITCH	TBC
ACC	AC CONTROL	TBC
GPO	2x GENERAL POWER OUTLET	TBC
TV	TELEVISION POINT	TBC

FOOTING SCHEDULE	
F1	TBC
F2	TBC

MEMBER SCHEDULE	
C1	TBC
C2	TBC

PRELIMINARY
CONCEPT ONLY

1:25 @ A1
1:50 @ A3
0 400 800 1200 1600 2000 2400 mm

CBH GROUP
ABN 29 256 604 947

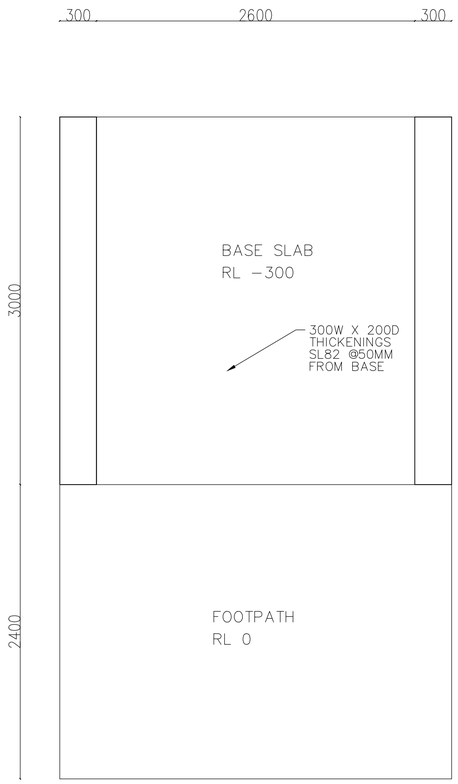
ELLETT CONTRACTING

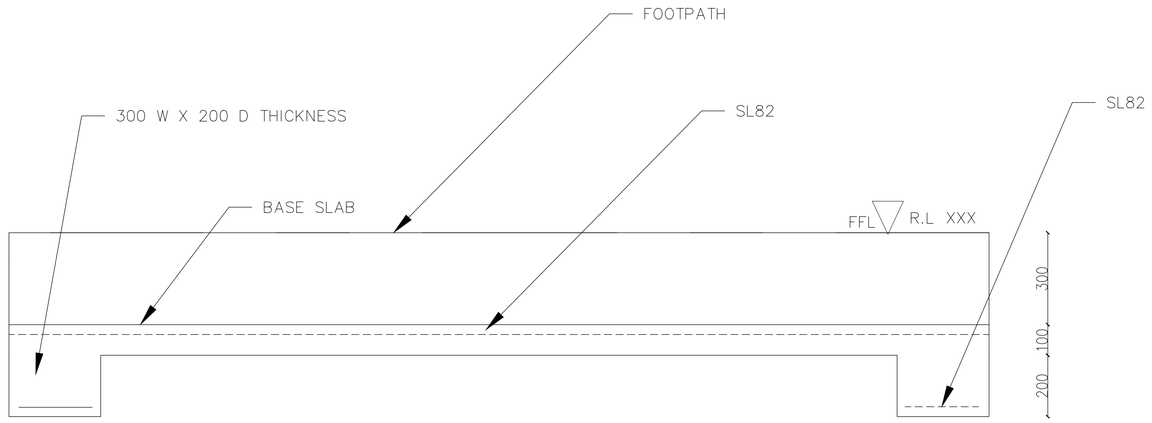
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	01.10.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

SCALE	1:25		
SHEET	A1		
PROJECT	–		
CONTRACT No	–		
DRAWN	AE	23.09.24	
CHECKED	SE	01.10.24	
DESIGNED	–	--	
DESIGN APPR	–	--	
PROJECT APPR	–	--	

TITLE: NEWDEGATE SITE EXPANSION TOILET BLOCK ELEVATIONS

DRG No. 940-ENG-ST-DEL-0006 | SHEET 3 OF 6 | REV. A





H SLAB SECTION
SCALE 1:10

NOTES:

1. ACCESS COMPLIANCE NOT REQUIRED FOR CURRENT USE.
2. METAL SHEET ROOFING TO COMPLY WITH AS1562−1992
3. FOOTING LAYOUT TO COMPLY WITH
4. CONCRETE FOOTINGS TO COMPLY WITH AS3600 − CONCRETE STRUCTURES
5. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A CODES AS1554 CAT SP
6. ALL EMERGENCY LIGHTS TO BE INSTALLED TO MANUFACTURER SPECIFICATION AND ASS229
7. GRAB RAIL INSTALLED TO AS 1428.1−2009
8. TOILET PLAN INSTALLED TO AS 1428.1 − 2009
9. SIGNAGE TO AS 1428.1
10. WIRING SHALL BE IN ACCORANCE WITH A.S 3000, A.S 3008 & THE RELEVANT LOCAL ELECTRICAL AUTHORITY
11. ELECTRICAL INSTALLATION MUST COMPLY WITH REQUIREMENTS OF AS/ANZ 3000 & 3008.1

FOOTING SCHEDULE	
F1	TBC
F2	TBC

MEMBER SCHEDULE	
C1	TBC
C2	TBC

FOUNDATION LAYOUT
1:25

G SLAB STEP DOWN SECTION
SCALE 1:10

PRELIMINARY
CONCEPT ONLY

1:50 @ A1
1:100@ A3
0 1 2 3 4 5 m

CBH GROUP
ABN 29 256 604 947

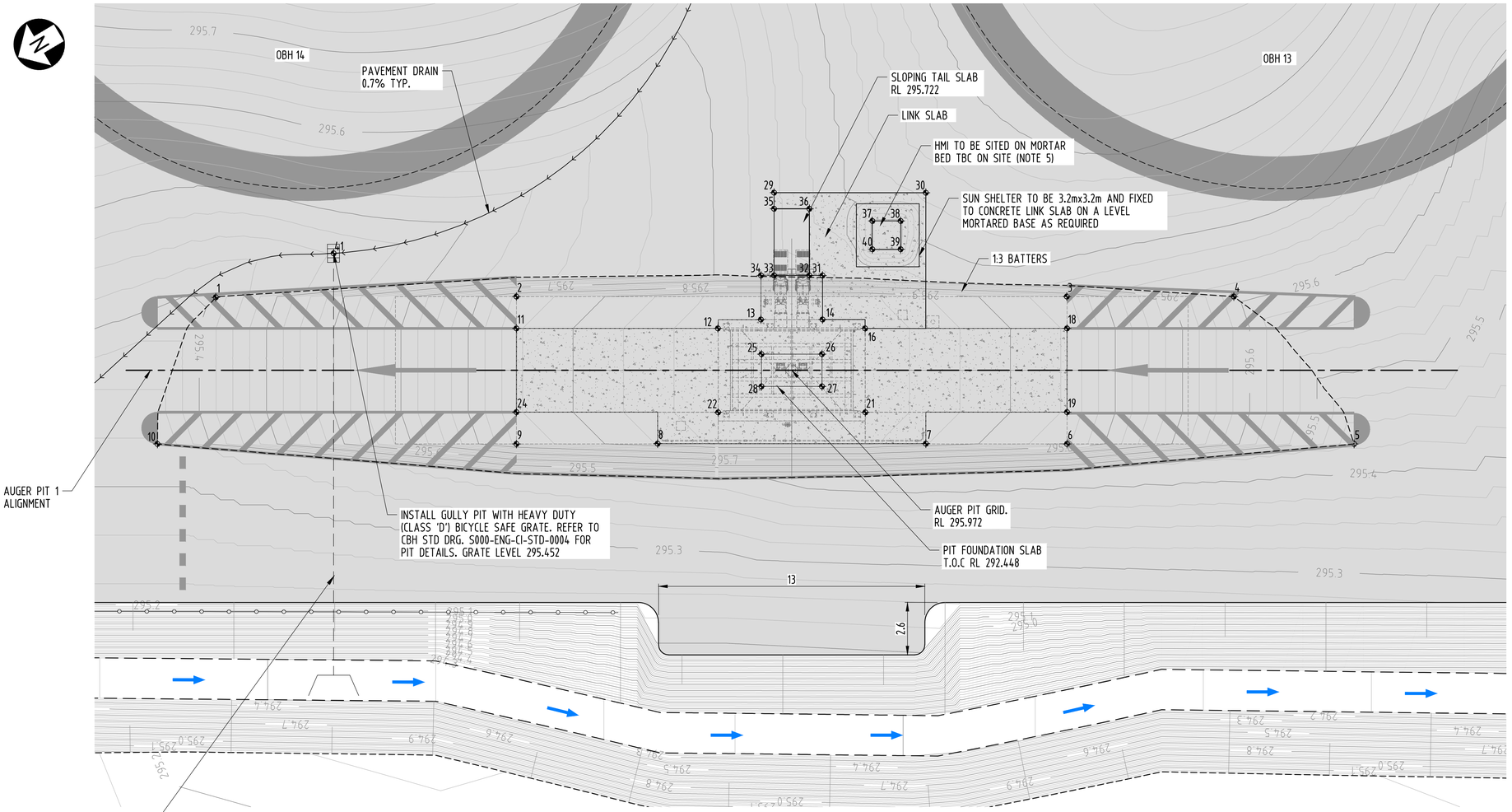
ELLETT CONTRACTING

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
–	–	A	01.10.24	80% DESIGN FOR CLIENT REVIEW	AE	SE	–

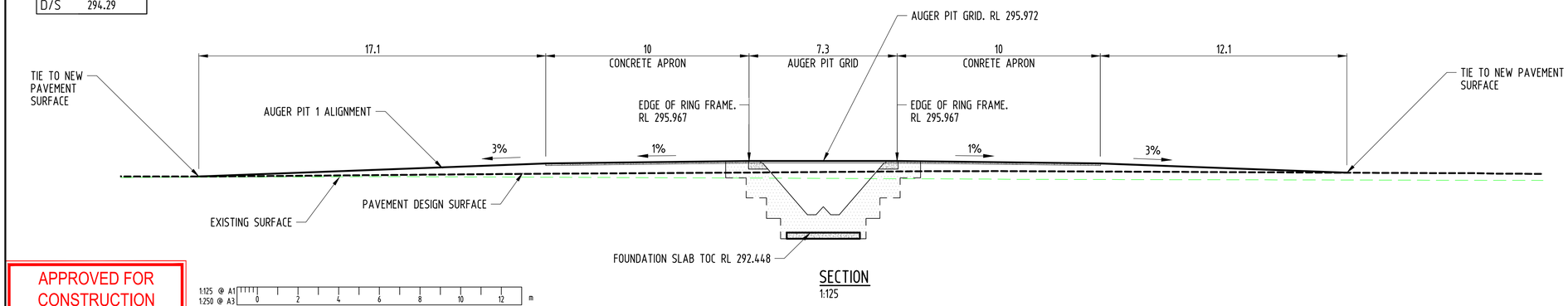
SCALE	AS SHOWN		
SHEET	A1		
PROJECT	–		
CONTRACT No	–		
DRAWN	AE	23.09.24	
CHECKED	SE	01.10.24	
DESIGNED	--	--	
DESIGN APPR	--	--	
PROJECT APPR	--	--	

TITLE
NEWDEGATE
SITE EXPANSION
TOILET BLOCK
SLAB & FOOTING DETAILS

DRG No. 940−ENG−ST−DFN−0002 | SHEET 4 OF 6 | REV. A



PLAN
1:125



SECTION
1:125

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. POINTS 25, 26, 27, 28 REFERS TO BASE CONCRETE SLAB LEVELS
4. WHERE TOP OF PAVEMENT TO TOP CONCRETE CLEARANCE EXCEEDS 100mm, CONCRETE SLAB THICKNESS TO BE INCREASED TO ENSURE A MINIMUM 100mm KEY BELOW PAVEMENT
5. SETOUT AND CONTOURS FOR HMI PAD IS INDICATIVE ONLY AND REFLECTS CBH STANDARD DETAIL. ACTUAL DETAIL WITH MORTAR BED TO BE DETERMINED ON SITE

AUGER PIT 1 SETOUT POINTS

POINT	EASTING (m)	NORTHING (m)	TOP	TOC
1	49474.465	238219.994	296.494	-
2	49466.982	238207.399	295.856	-
3	49453.042	238183.937	295.856	-
4	49449.240	238177.539	296.710	-
5	49440.122	238176.485	296.543	-
6	49446.761	238187.658	295.856	-
7	49450.349	238193.668	295.926	295.926
8	49457.143	238205.102	295.926	295.926
9	49460.706	238211.127	295.856	-
10	49469.525	238225.970	296.415	-
11	49465.628	238208.203	295.872	295.872
12	49460.525	238199.615	295.972	295.967
13	49459.812	238197.555	295.972	295.967
14	49458.254	238194.932	-	295.967
16	49456.796	238193.344	-	295.967
18	49451.683	238184.733	295.872	295.872
19	49448.115	238186.853	295.872	295.872
21	49453.214	238195.455	-	295.967
22	49456.943	238201.731	-	295.967
24	49462.060	238210.323	295.872	295.872
25	49458.325	238198.409	-	292.448
26	49456.793	238195.830	-	292.448
27	49455.417	238196.647	-	292.448
28	49456.950	238199.226	-	292.448
29	49464.884	238193.784	295.645	295.645
30	49461.036	238187.318	295.730	295.730
31	49460.127	238193.820	-	295.647
32	49460.465	238194.375	-	295.722
33	49461.359	238195.880	295.632	295.722
34	49461.691	238196.438	295.628	295.653
35	49464.197	238194.193	295.644	295.722
36	49463.302	238192.690	-	295.722
37	49461.187	238190.311	-	295.805
38	49460.472	238189.108	-	295.805
39	49459.268	238189.823	-	295.805
40	49459.983	238191.027	-	295.805
41	49473.453	238214.095	295.452	-

APPROVED FOR CONSTRUCTION

1:125 @ A1
1:250 @ A3
0 2 4 6 8 10 12 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

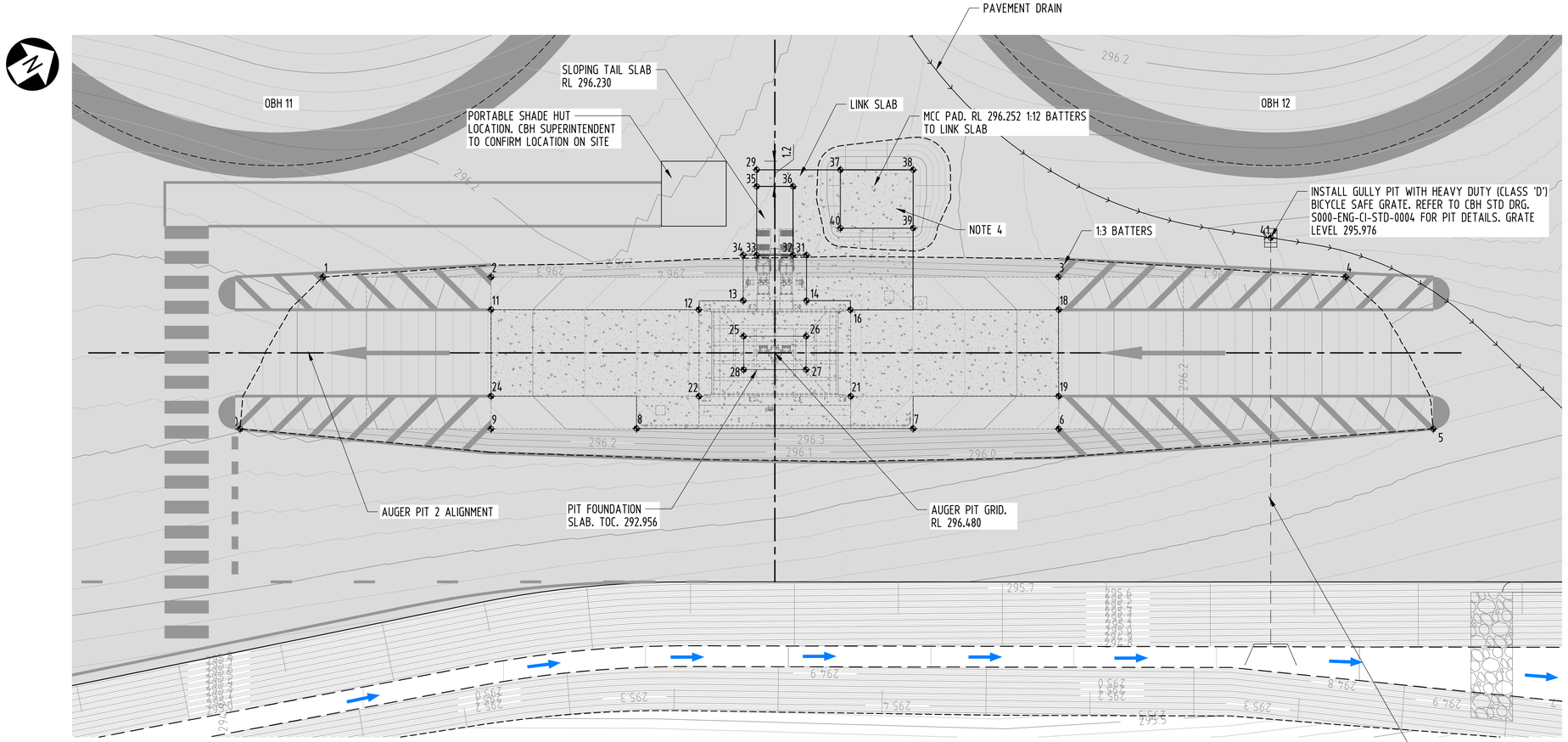
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE H 1:125
SHEET A1
PROJECT -
CONTRACT No -

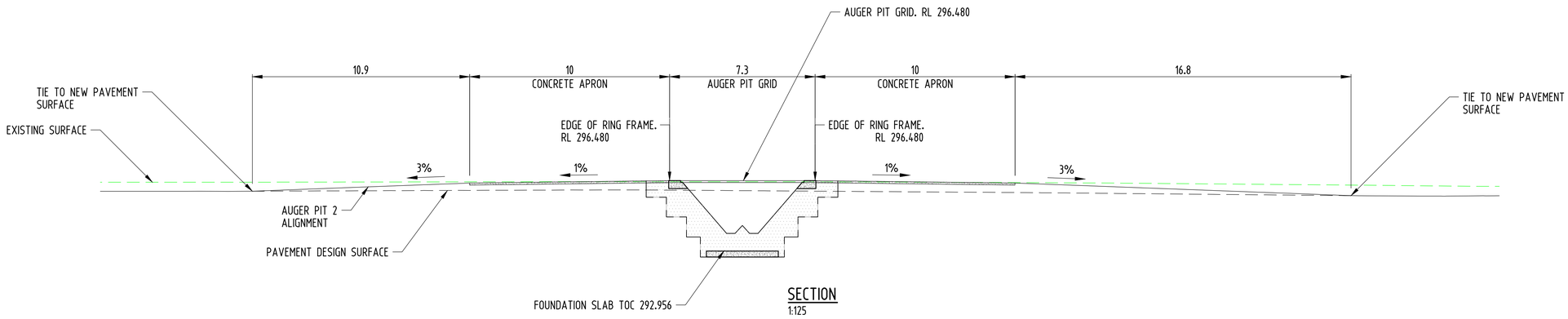
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	KL	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
AUGER PIT 1 (GRID No.8) PLAN, SECTION AND SETOUT
SHEET 1 OF 1

DRG No 940-ENG-CI-DAL-0001 | SHEET 1 OF 1 | REV. 0



PLAN
1:125



SECTION
1:125

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. POINTS 25, 26, 27, 28 REFERS TO BASE CONCRETE SLAB LEVELS
4. WHERE TOP OF PAVEMENT TO TOP CONCRETE CLEARANCE EXCEEDS 100mm, CONCRETE SLAB THICKNESS TO BE INCREASED TO ENSURE A MINIMUM 100mm KEY BELOW PAVEMENT

AUGER PIT 2 SETOUT POINTS

POINT	EASTING (m)	NORTHING (m)	TOP	TOC
1	49668.364	237938.074	296.494	-
2	49672.641	237945.272	295.856	-
3	49686.580	237968.732	295.856	-
4	496693.637	237980.608	296.710	-
5	49702.062	237980.497	296.543	-
6	49692.861	237965.012	295.856	-
7	49689.273	237959.002	295.926	296.434
8	49682.479	237947.568	295.926	296.434
9	49678.917	237941.543	295.856	-
10	49672.625	237930.953	296.415	-
11	49673.995	237944.467	295.872	296.380
12	49679.098	237953.055	295.972	296.475
13	49679.810	237955.115	295.972	296.475
14	49681.368	237957.737	-	296.475
16	49682.826	237959.326	-	296.475
18	49687.940	237967.936	295.872	296.380
19	49691.507	237965.817	295.872	296.380
21	49686.408	237957.215	-	296.475
22	49682.679	237950.939	-	296.475
24	49677.563	237942.347	295.872	296.380
25	49681.297	237954.261	-	292.956
26	49682.829	237956.840	-	292.956
27	49684.205	237956.023	-	292.956
28	49682.673	237953.444	-	292.956
29	49674.738	237958.886	295.645	296.183
30	-	-	-	-
31	49679.495	237958.850	-	296.152
32	49679.157	237958.295	-	296.230
33	49678.264	237956.790	295.632	296.230
34	49677.932	237956.231	295.628	296.194
35	49675.426	237958.477	295.644	296.230
36	49676.321	237959.980	-	296.230
37	49676.799	237962.343	296.152	296.252
38	49678.587	237965.352	296.119	296.252
39	49680.994	237963.921	296.117	296.252
40	49679.206	237960.912	-	296.252
41	49690.179	237978.470	295.452	-

APPROVED FOR CONSTRUCTION

1:125 @ A1
1:250 @ A3
0 2 4 6 8 10 12 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

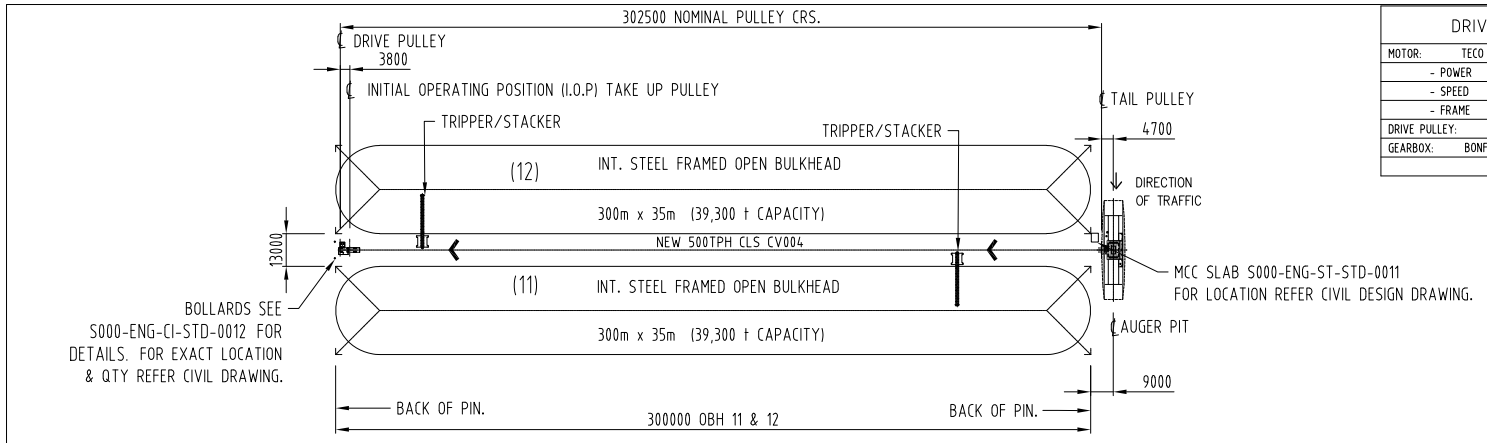
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE H 1:125
SHEET A1
PROJECT -
CONTRACT No -

DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	KL	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
AUGER PIT 2 (GRID No.10) PLAN, SECTION AND SETOUT
SHEET 1 OF 1

DRG No 940-ENG-CI-DAL-0002 | SHEET 1 OF 1 | REV. 0



KEY PLAN CV004 NEWDEGATE - EAST SITE

FOR TENDER PURPOSES ONLY

DATE 19.09.2024

DRIVE CONFIGURATION	
MOTOR:	TECO MAXe3. 015/H0055DD4R-Extd
- POWER	55 kW
- SPEED	1485 rpm
- FRAME	250SC-V
DRIVE PULLEY:	Ø530 mm
GEARBOX:	BONFIG-A903 UH90 P250-70 10.5 B3 TA

HOLDS:
1. PENDING GEOTECH.

GENERAL NOTES (UNLESS NOTED OTHERWISE):
1. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH AS1554 CAT SP.
2. REMOVE ALL BURRS & SHARP EDGES.
3. ASSEMBLY TO BE CONTINUOUS FULLY WELDED WITH MINIMUM 3mm FILLET FOR 3mm PLATE
   6mm FILLET FOR 4mm TO <12mm PLATE
   8mm FILLET FOR 12mm TO <20mm PLATE
   10mm FILLET FOR 20mm TO <32mm PLATE
4. ALL FASTENERS TO BE GR.8.8 GALV.
5. ALL STEEL PLATE & SHEET TO BE MIN. GR.250
6. ALL STRUCTURAL STEEL TO BE MIN. GR.300
7. ALL GALVANISED STEEL SHEET TO AS1397 AND OF GRADE G2Z275 OR EQUIV.
8. ALL FERROUS ARTICLES TO BE H.D GALVANISED TO AS/NZS4680

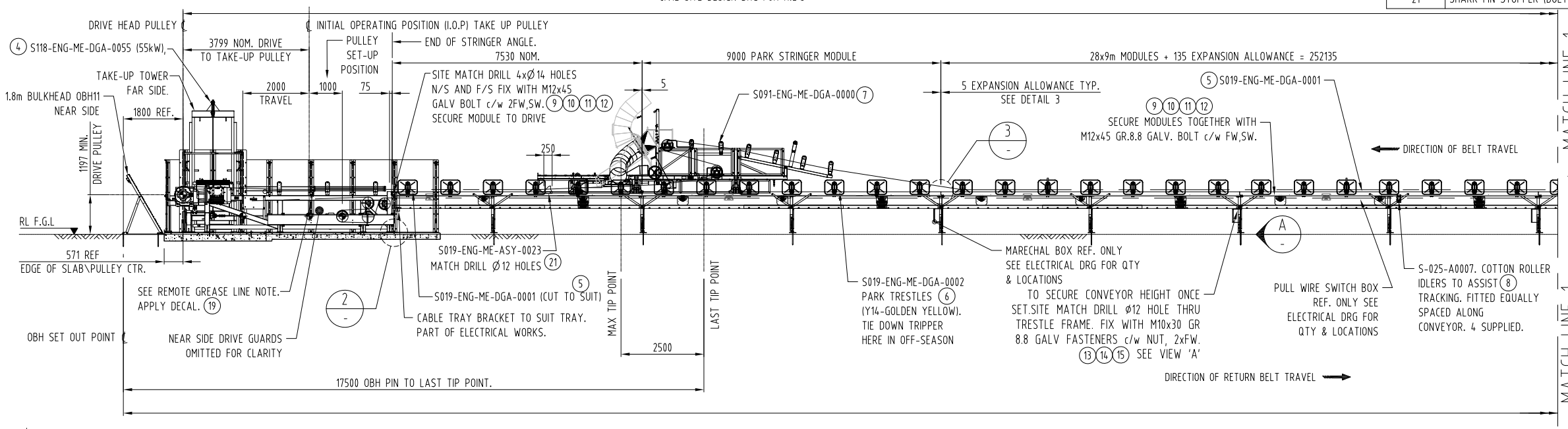
CONVEYOR BELT		CONVEYOR DATA	
SPEED	3.9 m/s	CAPACITY	500 tph
WIDTH	900 mm	CAPACITY MAX. FUTURE	- tph
DESIGNATION 900mm AS1332:2000 PN630/3 E MOR OZ 3mm/1.5mm		LIFT (EFFECTIVE)	- m
RATING RUN/START	- kN	WEIGHT REQ'D FOR G.T.U.	765 kg
TAPE LENGTH	618m + 3m SPLICE =621 m	MATERIAL	WHEAT
THICKNESS	8.1mm±0.2 mm	BULK DENSITY	770 kg/m³
TOP COVER/BOTTOM COVER	3/1.5 mm	SURCHARGE ANGLE	10 °
COVER GRADE AS1332:2000 E+AS1683.23 MOR MAX 50% +OZ MOULD EDGE		POWER DEMAND	41.1 kW
MASS	9.75 kg/m	POWER INSTALLED	55 kW

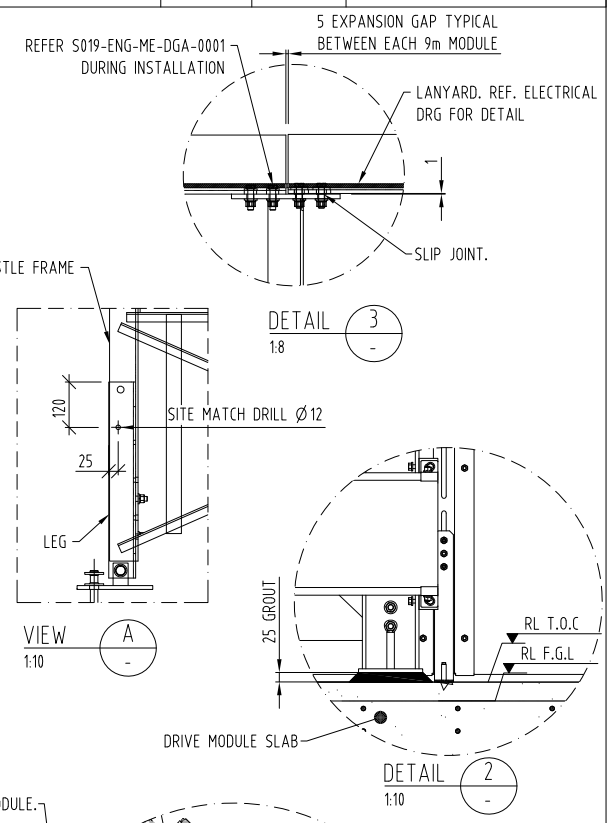
HOLD 1

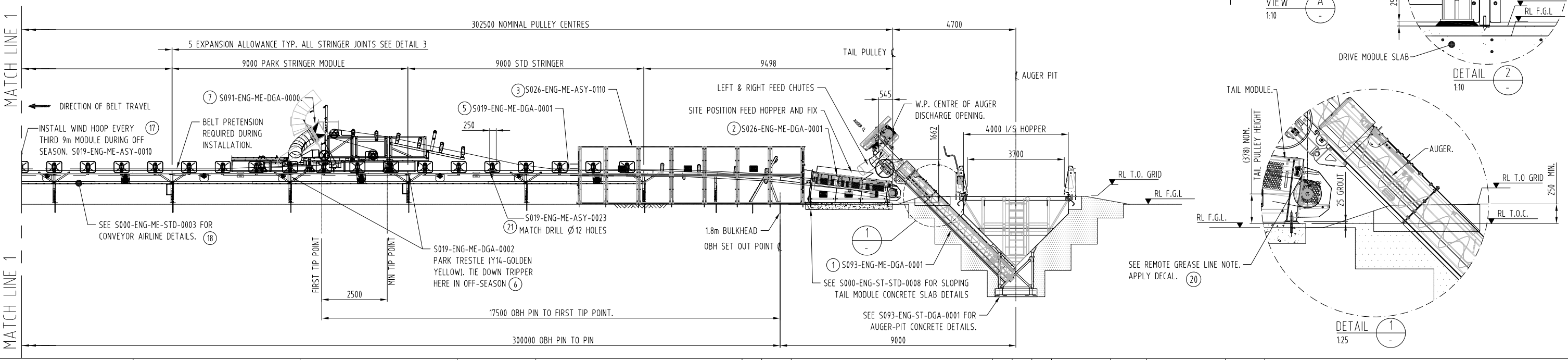
PART No.	DESCRIPTION	NO REQD.	MASS (kg)	SUPPLIER OR C.B.H. PART No.
1	AUGER PIT GENERAL ARRANGEMENT	1	11735	S093-ENG-ME-DGA-0001
2	SLOPING TAIL (FEED ON OPTION 2)	1	1423	S026-ENG-ME-DGA-0001
3	SLOPING TAIL GUARDING	1	540	S026-ENG-ME-ASY-0110
4	55Kw HEAD DRIVE TAKE UP MODULE	1	7863	S118-ENG-ME-DGA-0055
5	9m STANDARD STRINGER MODULE	30	18712	S019-ENG-ME-DGA-0001
6	9m STANDARD PARK MODULE	2	1320	S019-ENG-ME-DGA-0002
7	3 WAY TRUNK TRIPPER	2	3991	S091-ENG-ME-DGA-0000
8	TRACKING IDLER	4	79	S-025-A0007
9	M12 GALV. SW	130		GRADE 8.8
10	M12 GALV NUT	130		GRADE 8.8
11	M12 GALV BOLT, 45LG	130		GRADE 8.8
12	M12 GALV FW	260		GRADE 8.8
13	M10 GALV BOLT, 30LG	130		GRADE 8.8
14	M10 GALV FW	260		GRADE 8.8
15	M10 GALV NUT	130		GRADE 8.8
16	UVE500-1100, 500LT AIR RECEIVER	1	161	ULTRAMAX (OR SIMILAR), REFER TO SITE SPECIFIC CIVIL, ELECTRICAL LAYOUT
17	WIND HOOP KIT	10	5	S019-ENG-ME-ASY-0010
18	CONVEYOR AIRLINE	1		S000-ENG-ME-STD-0003
19	DRIVE REMOTE GREASE LINE ANCHOR. C/W DECAL	2		S147-ENG-ME-ASY-0001
20	TAIL REMOTE GREASE LINE. C/W DECAL	2		S147-ENG-ME-ASY-0003
21	SHARK FIN STOPPER (BOLT ON)	4		S019-ENG-ME-ASY-0023

REMOTE GREASE LINE NOTE:
ALL GREASE LINES REQUIRED TO THE CENTRE OF THE BEARING HOUSINGS. ACCESS IS VIA REMOTE POINTS. APPLY DECALS WHERE NOTED STATING:
'WARNING' SEALED BEARINGS INSTALLED RE-GREASE AS PER MANUFACTURERS RECOMMENDATIONS

NOTES:
REFER TO:
- CIVIL SITE DESIGN DRG & ELECTRICAL SITE DESIGN DRG FOR LOCATION AND ORIENTATION OF 8FT SQUARE STORAGE CUBE (C/W COMPRESSOR & RECEIVER).
- CIVIL SITE DESIGN DRG FOR SLAB SET OUT.
- CIVIL SITE DESIGN DRG FOR R.L'S







CBHGROUP
ABN 29 256 604 947

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH
W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942

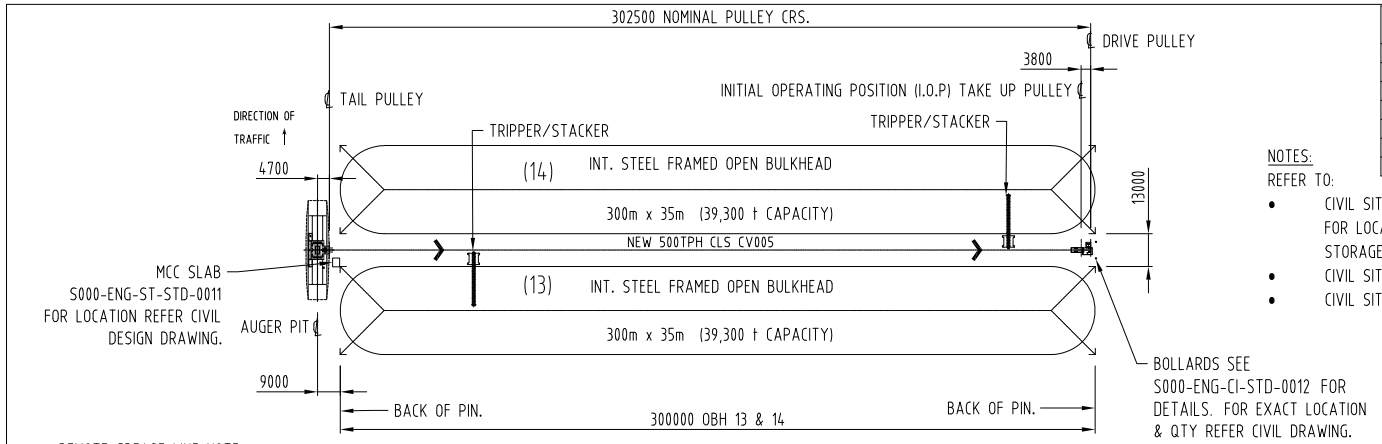
DO NOT SCALE FROM THIS DRAWING

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
S000-ENG-ME-STD-0017	TRIPPER BUMPER STOPPER (SHARK FIN) INSTALLATION DETAILS	-	-	-	-	-	-
S000-ENG-ST-STD-0019	HEAD DRIVE SLAB	-	-	-	-	-	-
-	-	-	-	-	-	-	-
S093-ENG-ST-DGA-0001	AUGER PIT CONCRETE DESIGN	-	-	-	-	-	-
S000-ENG-ST-STD-0008	SLOPING TAIL SLAB	B	17.09.2024	ISSUED FOR TENDER	AME	DD	DD
940-ENG-CI-DCO-0001	CONCEPTUAL LAYOUT - No 6	A	10.09.2024	ISSUED FOR REVIEW	AME	-	-

SCALE	NTS	DRAWN	AME 10.09.2024
SHEET	A1	CHECKED	DD 19.09.2024
PROJECT	M-3236	DESIGNED	- -
CONTRACT No		DESIGN APPR	- -
		PROJECT APPR	- -

TITLE: NEWDEGATE - EAST SITE (GREENFIELD)
STAGE 1 SITE DEVELOPMENT
ADDITIONAL STORAGE, OBH11 & 12
CLS CONVEYOR CV004, MECHANICAL G.A.

DRG No 940-ENG-ME-DGA-0001 | SHEET 1 OF 1 | REV. B



DRIVE CONFIGURATION	
MOTOR:	TECO MAXe3. 075/H0055DD4R-Extd
- POWER	55 kW
- SPEED	1485 rpm
- FRAME	250SC-V
DRIVE PULLEY:	Ø530 mm
GEARBOX:	BONFIG-A903 UH90 P250-70 10.5 B3 TA

NOTES:
REFER TO:
- CIVIL SITE DESIGN DRG & ELECTRICAL SITE DESIGN DRG FOR LOCATION AND ORIENTATION OF 8FT SQUARE STORAGE CUBE (C/W COMPRESSOR).
- CIVIL SITE DESIGN DRG FOR SLAB SET OUT.
- CIVIL SITE DESIGN DRG FOR R.L'S

HOLDS:
1. PENDING GEOTECH.

GENERAL NOTES (UNLESS NOTED OTHERWISE):
1. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH AS1554 CAT SP.
2. REMOVE ALL BURRS & SHARP EDGES.
3. ASSEMBLY TO BE CONTINUOUS FULLY WELDED
   WITH MINIMUM 3mm FILLET FOR 3mm PLATE
   6mm FILLET FOR 4mm TO <12mm PLATE
   8mm FILLET FOR 12mm TO <20mm PLATE
   10mm FILLET FOR 20mm TO <32mm PLATE
4. ALL FASTENERS TO BE GR.8.8 GALV.
5. ALL STEEL PLATE & SHEET TO BE MIN. GR.250
6. ALL STRUCTURAL STEEL TO BE MIN. GR.300
7. ALL GALVANISED STEEL SHEET TO AS1397 AND OF GRADE G2Z275 OR EQUIV.
8. ALL FERROUS ARTICLES TO BE H.D GALVANISED TO AS/NZS4680

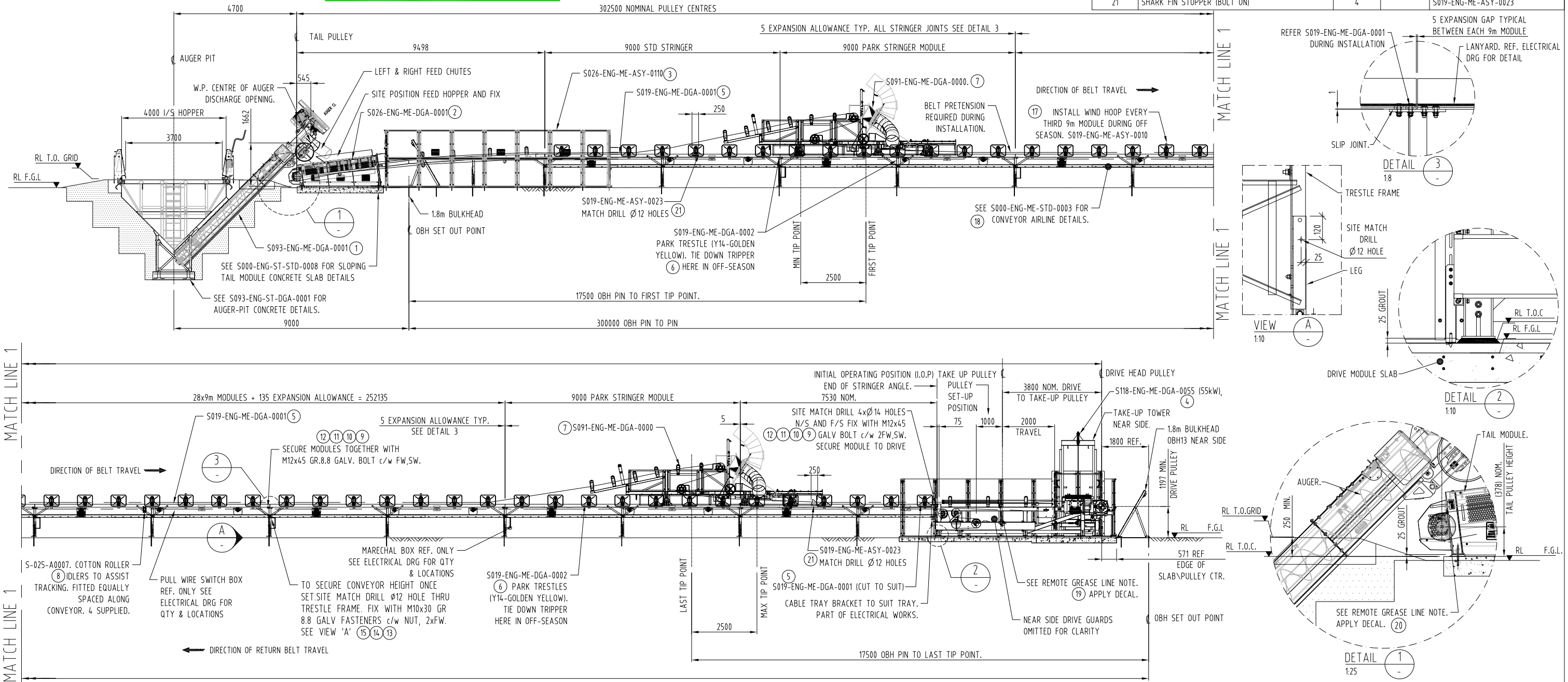
CONVEYOR BELT		CONVEYOR DATA	
SPEED	3.9 m/s	CAPACITY	500 tph
WIDTH	900 mm	CAPACITY MAX. FUTURE	- tph
DESIGNATION 900mm AS1332:2000 PN630/3 E MOR OZ 3mm/1.5mm		LIFT (EFFECTIVE)	- m
RATING RUN/START	- kN	WEIGHT REQ'D FOR G.T.U.	765 kg
TAPE LENGTH	618m + 3m SPLICE =621 m m	MATERIAL	WHEAT
THICKNESS	8.1mm±0.2 mm	BULK DENSITY	770 kg/m³
TOP COVER/BOTTOM COVER	3/1.5 mm	SURCHARGE ANGLE	10 °
COVER GRADEAS1332:2000 E+AS1683.23 MOR MAX 50% +OZ MOULD EDGE		POWER DEMAND HOLD 1	38.6 kW
MASS	9.75 kg/m	POWER INSTALLED	55 kW

PART No.	DESCRIPTION	NO REQD.	MASS (kg)	SUPPLIER OR C.B.H. PART No.
1	AUGER PIT GENERAL ARRANGEMENT	1	11735	S093-ENG-ME-DGA-0001
2	SLOPING TAIL (FEED ON OPTION 2)	1	1423	S026-ENG-ME-DGA-0001
3	SLOPING TAIL GUARDING	1	540	S026-ENG-ME-ASY-0110
4	55Kw HEAD DRIVE TAKE UP MODULE	1	7863	S118-ENG-ME-DGA-0055
5	9m STANDARD STRINGER MODULE	30	18712	S019-ENG-ME-DGA-0001
6	9m STANDARD PARK MODULE	2	1320	S019-ENG-ME-DGA-0002
7	3 WAY TRUNK TRIPPER	2	3991	S091-ENG-ME-DGA-0000
8	TRACKING IDLER	4	79	S-025-A0007
9	M12 GALV. SW	130		GRADE 8.8
10	M12 GALV NUT	130		GRADE 8.8
11	M12 GALV BOLT, 45LG	130		GRADE 8.8
12	M12 GALV FW	260		GRADE 8.8
13	M10 GALV BOLT, 30LG	130		GRADE 8.8
14	M10 GALV FW	260		GRADE 8.8
15	M10 GALV NUT	130		GRADE 8.8
16	COMPRESSOR, INGERSOL-RAND TYPE 30 COMPRESSOR 2475C10-8, 7.5kW, 34.2 CFM C/W 230L AIR RECEIVER, CAPS TO SUPPLY 8FT STORAGE CUBE WITH VENTS	1	1260	REFER TO SITE SPECIFIC CIVIL, ELECTRICAL LAYOUT
17	WIND HOOP KIT	10	5	S019-ENG-ME-ASY-0010
18	CONVEYOR AIRLINE	1		S000-ENG-ME-STD-0003
19	DRIVE REMOTE GREASE LINE ANCHOR. C/W DECAL	2		S147-ENG-ME-ASY-0001
20	TAIL REMOTE GREASE LINE. C/W DECAL	2		S147-ENG-ME-ASY-0003
21	SHARK FIN STOPPER (BOLT ON)	4		S019-ENG-ME-ASY-0023

REMOTE GREASE LINE NOTE:
ALL GREASE LINES REQUIRED TO THE CENTRE OF THE BEARING HOUSINGS. ACCESS IS VIA REMOTE POINTS. APPLY DECALS WHERE NOTED STATING:
'WARNING' SEALED BEARINGS INSTALLED RE-GREASE AS PER MANUFACTURERS RECOMMENDATIONS

KEY PLAN CV005 NEWDEGATE - EAST SITE

FOR TENDER PURPOSES ONLY
DATE 19.09.2024



CBHGROUP
ABN 29 256 604 947
CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH
W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942
DO NOT SCALE FROM THIS DRAWING

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
S000-ENG-ME-STD-0017	TRIPPER BUMPER STOPPER (SHARK FIN) INSTALLATION DETAILS	-	-	-	-	-	-
S000-ENG-ST-STD-0019	HEAD DRIVE SLAB	-	-	-	-	-	-
-	-	-	-	-	-	-	-
S093-ENG-ST-DGA-0001	AUGER PIT CONCRETE DESIGN	-	-	-	-	-	-
S000-ENG-ST-STD-0008	SLOPING TAIL SLAB	B	17.09.2024	ISSUED FOR TENDER	AME	DD	DD
940-ENG-CI-DCO-0001	CONCEPTUAL LAYOUT - No 6	A	10.09.2024	ISSUED FOR REVIEW	AME	-	-

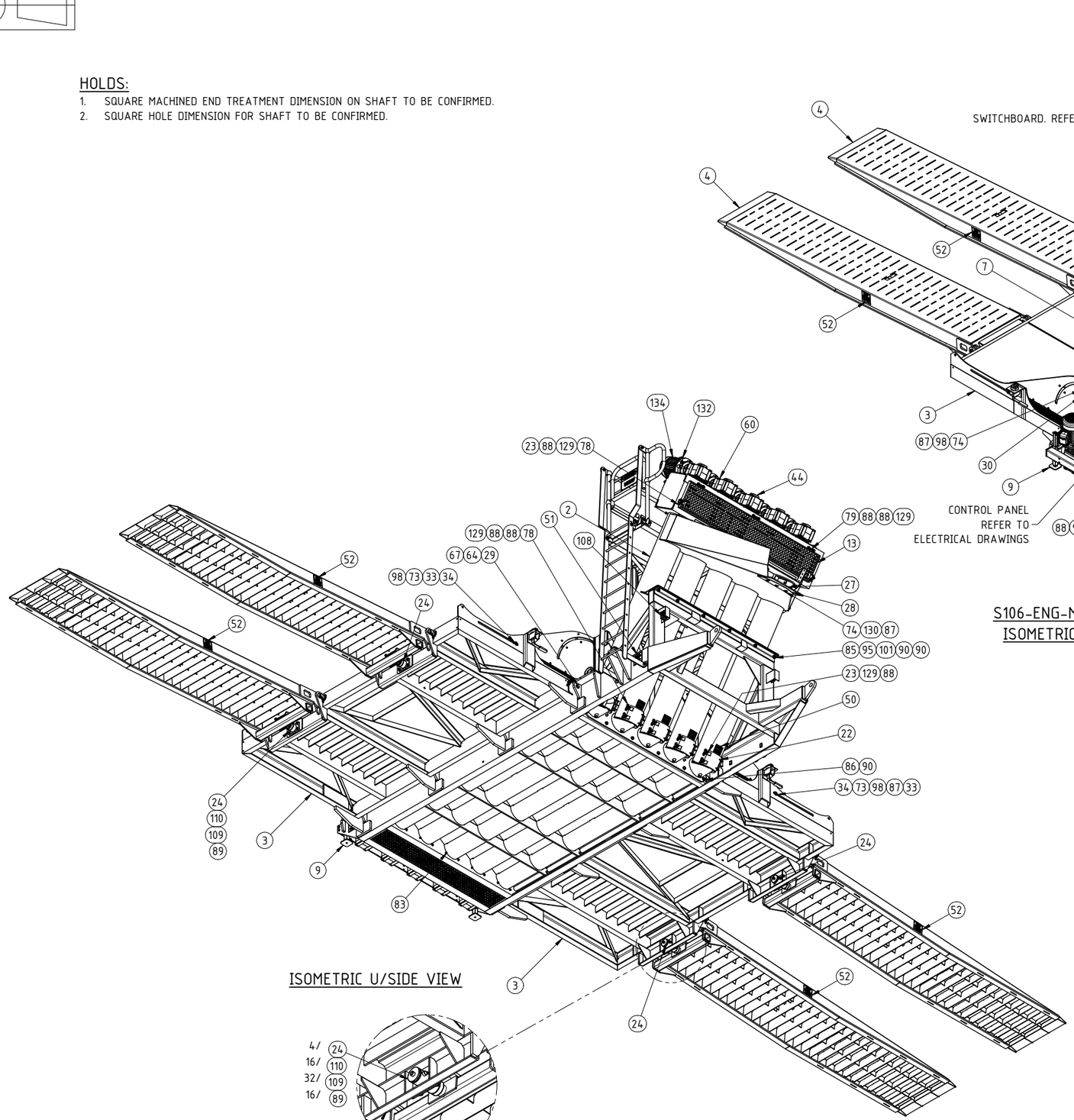
SCALE	NTS		
SHEET	A1		
PROJECT	M-3236		
CONTRACT No			
DRAWN	AME	10.09.2024	
CHECKED	DD	19.09.2024	
DESIGNED	-	-	
DESIGN APPR	-	-	
PROJECT APPR	-	-	

TITLE
NEWDEGATE - EAST SITE (GREENFIELD)
STAGE 1 SITE DEVELOPMENT
ADDITIONAL STORAGE, OBH13 & 14
CLS CONVEYOR CV005, MECHANICAL G.A.

DRG No	SHEET	REV.
940-ENG-ME-DGA-0002	1 OF 1	B

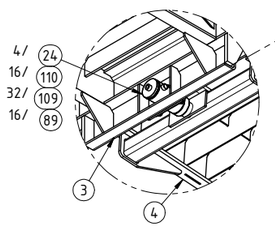
HOLDS:

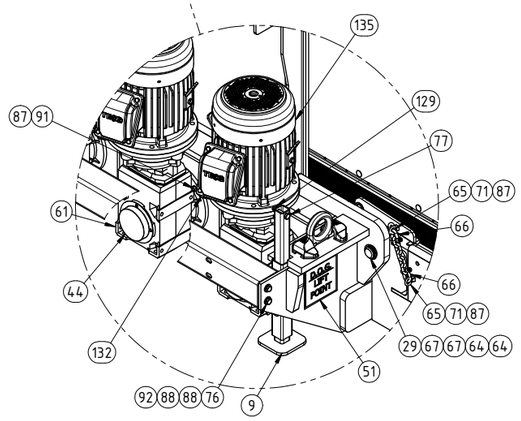
1. SQUARE MACHINED END TREATMENT DIMENSION ON SHAFT TO BE CONFIRMED.
2. SQUARE HOLE DIMENSION FOR SHAFT TO BE CONFIRMED.



S106-ENG-ME-DGA-0000
ISOMETRIC TOP VIEW

ISOMETRIC U/SIDE VIEW





WITH BREAK OUT VIEW FOR CLARITY

ALL ITEMS TO BE SUPPLIED WITH CORRECT SURFACE COATING AS PER TECHNICAL SPECIFICATION - CBH-ENG-GN-SST-0002.
WHERE THE SCOPE OF WORKS SPECIFIES THE COATING SPEC ALWAYS FOLLOW THE SCOPE OF WORKS.

GENERAL NOTES (UNLESS NOTED OTHERWISE):

1. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT AS1554 CAT SP.
2. REMOVE ALL BURRS & SHARP EDGES.
3. ASSEMBLY TO BE CONTINUOUS FULLY WELDED WITH MINIMUM 3mm FILLET FOR 3mm PLATE
   6mm FILLET FOR 4mm TO <12mm PLATE
   8mm FILLET FOR 12mm TO <20mm PLATE
   10mm FILLET FOR 20mm TO <32mm PLATE
4. ALL FASTENERS TO BE GALV GR.8.8/TB
5. ALL STEEL PLATE & SHEET TO BE MIN. GR.250
6. ALL STRUCTURAL STEEL TO BE MIN. GR.300
7. ALL GALVANISED STEEL SHEET TO AS1397 AND OF GRADE G2Z275 OR EQUIV. ALL H.D GALVANISED FERROUS ARTICLES TO AS/NZS4680

SURFACE COATING:	**N/A**
COATING SPEC:	**N/A**
TOTAL MASS:	**11823.4**

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

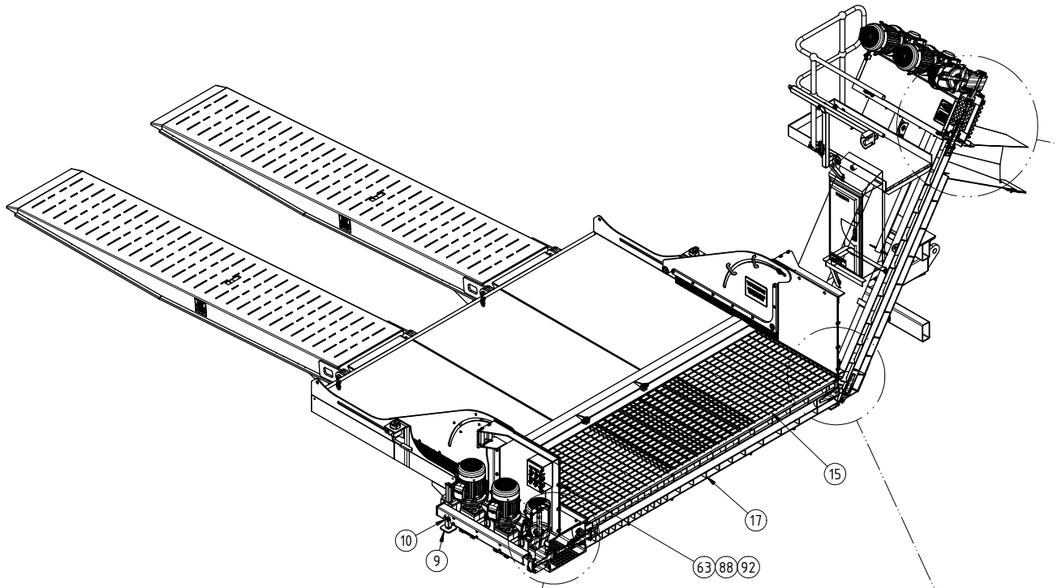
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
2	6/06/2023	MANTAIN HOLD, HORIZ SHAFT REDESIGNED	AP	AME	DD
1A	14.11.2022	HOLD PLACED ON STUB SHAFT	AME		
1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

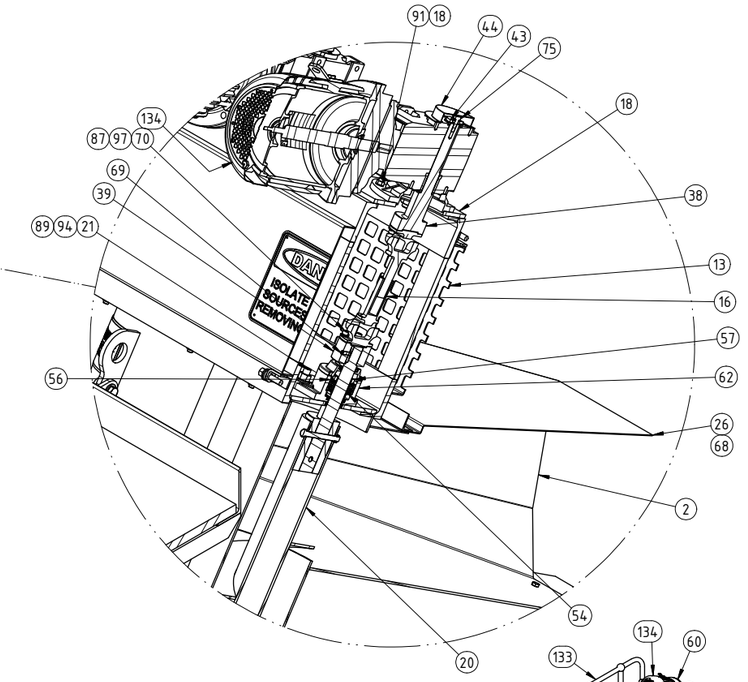
DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

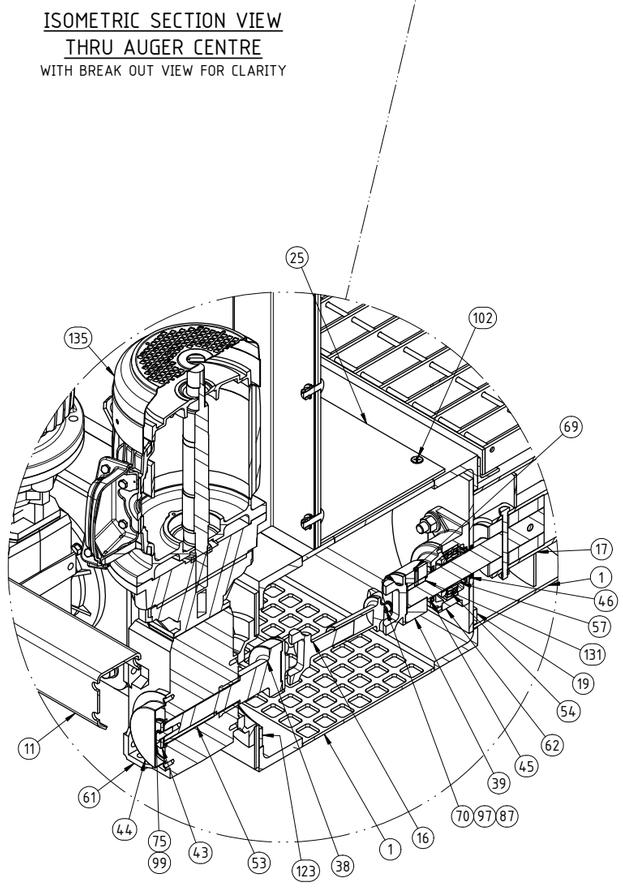
DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
ISOMETRIC VIEWS

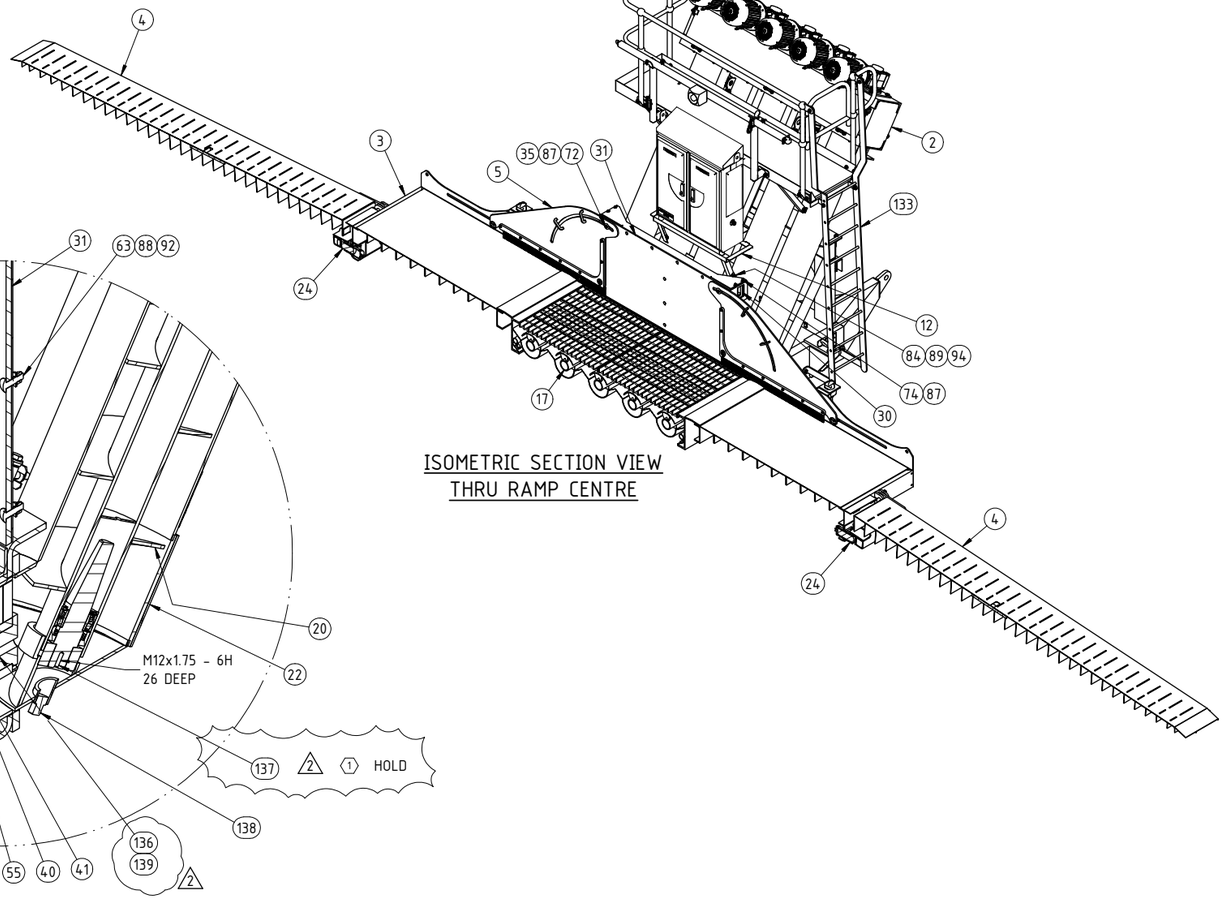
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 1 OF 13
REV: 2



ISOMETRIC SECTION VIEW
THRU AUGER CENTRE
WITH BREAK OUT VIEW FOR CLARITY







ISOMETRIC SECTION VIEW
THRU RAMP CENTRE

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE	REV	DATE	REVISIONS	BY	CHK	APP

REV	DATE	REVISIONS	BY	CHK	APP
2	6/06/2023	MANTAIN HOLD, HORIZ SHAFT REDESIGNED	AP	AME	DD
1A	14.11.2022	HOLD PLACED ON STUB SHAFT	AME		
1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
ISOMETRIC SECTIONAL & DETAIL VIEWS

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 2 OF 13
REV.: 2

PARTS LIST (PER UNIT)

ITEM No	DESCRIPTION	WIDTH	LENGTH	QTY	CBH OR SUPPLIER PART No	PROCESS	SAP Code	MASS Kg	TO DETAIL	SURFACE TREATMENT	C/SPEC.
1	CHASSIS MAIN FRAME			1	S106-ENG-ME-ASY-0001	FITTING	N/A	2784.1	Yes	Y14 - GOLDEN YELLOW	PC6
2	Ø300 INCLINE AUGER TROUGH FRAME			1	S106-ENG-ME-ASY-0025	FITTING	N/A	1193.5	Yes	Y14 - GOLDEN YELLOW	PC6
3	PIVOTING DECK PLATFORM			2	S106-ENG-ME-ASY-0040	FITTING	N/A	1234.6	Yes	GALVANIZE	N/A
4	REMOVABLE RAMPS			4	S106-ENG-ME-ASY-0043	FITTING	N/A	567.6	Yes	GALVANIZE	N/A
5	RH HUNGRY BOARD			2	S106-ENG-ME-ASY-0047	FITTING	N/A	17.3	Yes	N/A	N/A
6	LH HUNGRY BOARD			2	S106-ENG-ME-ASY-0048	FITTING	N/A	17.3	Yes	N/A	N/A
7	FLIP UP DECK COVER			2	S106-ENG-ME-ASY-0051	FITTING	N/A	79.6	Yes	GALVANIZE	N/A
8	8MM CHAIN S/S - 7 LINKS (175 LNG)			4		FITTING	DREQ	0.2	No	N/A	N/A
9	DROP DOWN LEG			2	S106-ENG-ME-ASY-0053	FITTING	N/A	3.3	Yes	ZINC PLATE	N/A
10	DROP DOWN LEG PIN			2	S106-ENG-ME-ASY-0054	FITTING	N/A	0.2	Yes	ZINC PLATE	N/A
11	REAR STEP - CABLE TRAY			1	S106-ENG-ME-ASY-0056	FITTING	N/A	22.6	Yes	GALVANIZE	N/A
12	CONTROL BOX FRAME			1	S106-ENG-ME-ASY-0058	FITTING	N/A	11.5	Yes	Y14 - GOLDEN YELLOW	PC6
13	LOWER INCLINE DRIVE INSPECTION HATCH			1	S106-ENG-ME-ASY-0060	FITTING	N/A	17.7	Yes	Y14 - GOLDEN YELLOW	PC6
14	UPPER INCLINE DRIVE INSPECTION HATCH			1	S106-ENG-ME-ASY-0061	FITTING	N/A	26.7	Yes	Y14 - GOLDEN YELLOW	PC6
15	GRIDMESH PANEL			2	S106-ENG-ME-ASY-0062	FITTING	DREQ	174.5	Yes	N/A	N/A
16	DRIVE SHAFT C/W SLIP JOINT & SUB ASSY			10	S106-ENG-ME-ASY-0068	FITTING	129713	3.4	Yes	BLACK PRIMER	N/A
17	Ø245 AUGER			5	S106-ENG-ME-ASY-0080	FITTING	N/A	120.7	Yes	N/A	N/A
18	DRIVE MOUNT PLATE			5	S106-ENG-ME-ASY-0082	FITTING	N/A	8.2	Yes	Y14 - GOLDEN YELLOW	PC6
19	SEAL PLATE			5	S106-ENG-ME-ASY-0083	FITTING	N/A	7.6	Yes	Y14 - GOLDEN YELLOW	PC6
20	Ø295 AUGER			5	S106-ENG-ME-ASY-0084	FITTING	N/A	94.6	Yes	N/A	N/A
21	SEAL PLATE			5	S106-ENG-ME-ASY-0086	FITTING	N/A	10.5	Yes	Y14 - GOLDEN YELLOW	PC6
22	INCLINE BASE INSPECTION HATCH			5	S106-ENG-ME-ASY-0088	FITTING	N/A	3.0	Yes	Y14 - GOLDEN YELLOW	PC6
23	LOCK BOLT WELDED ASSY			14	S-007-A0016	FITTING	N/A	0.1	Yes	ZINC PLATE	N/A
24	3.5" BORE X 1.75" ROD X 3" STROKE			4	S106-ENG-ME-ASY-0021	FITTING	DREQ	27.0	No	SEE NOTES	PC6
25	6PL FLOOR PLATE	288	1120	2	S106-ENG-ME-PRT-0582	FAB PROFILE	DREQ	15.2	Yes	GALVANIZE	N/A
26	2PL - DISCHARGE CHUTE LID	972	1962	1	S106-ENG-ME-PRT-1952	FAB PROFILE	108006	21.1	Yes	Y14 - GOLDEN YELLOW	PC6
27	12THK RUBBER - DISCHARGE CHUTE	300	570	1	S106-ENG-ME-PRT-0587	FAB CUT	DREQ	1.9	Yes	N/A	N/A
28	3PL	220	570	1	S106-ENG-ME-PRT-0588	FAB PROFILE	108008	2.4	Yes	Y14 - GOLDEN YELLOW	PC6
29	Ø40 ROUND 4140		128	8	S106-ENG-ME-PRT-0600	FAB MACHINE	DREQ	1.2	Yes	ZINC PLATE	PC6
30	25PL	169	155	4	S106-ENG-ME-PRT-0611	FAB PROFILE	107908	3.3	Yes	ZINC PLATE	N/A
31	12.7 RALLOY SIGNBOARD - CENTRE HB	930	1810	2	S106-ENG-ME-PRT-0612	FITTING	DREQ	20.4	Yes	N/A	N/A
32	5PL WASHER	60	60	4	S106-ENG-ME-PRT-0614	FAB PROFILE	107901	0.1	Yes	ZINC PLATE	N/A
33	Ø50 RND NYLON WHEEL		19	4	S106-ENG-ME-PRT-0615	FAB MACHINE	DREQ	0.0	Yes	N/A	N/A
34	Ø50 RND NYLON WHEEL		22	4	S106-ENG-ME-PRT-0618	FAB MACHINE	DREQ	0.0	Yes	N/A	N/A
35	Ø60 RND NYLON WHEEL		17	4	S106-ENG-ME-PRT-0619	FAB MACHINE	107987	0.0	Yes	N/A	N/A
36	Ø60 RND NYLON WHEEL		15	4	S106-ENG-ME-PRT-0620	FAB MACHINE	107987	0.0	Yes	N/A	N/A
37	Ø60 RND NYLON WHEEL		8	4	S106-ENG-ME-PRT-0621	FAB MACHINE	107987	0.0	Yes	N/A	N/A
38	EX Ø100 RND 4140		273	10	S106-ENG-ME-PRT-0671	FAB MACHINE	DREQ	4.5	Yes	ZINC PLATE	N/A
39	Ø100 RND 4140	97	50	10	S106-ENG-ME-PRT-0672	FAB MACHINE	118754	2.3	Yes	ZINC PLATE	N/A
40	LIP SEAL Ø65xØ85x10			10		FITTING	DREQ	0.0	No	N/A	N/A
41	NYLON LIP SEAL RETAINER	102	25	10	S106-ENG-ME-PRT-0674	FAB MACHINE	DREQ	0.1	Yes	N/A	N/A
42	BEARING SPACER Ø100 1030	105	105	10	S106-ENG-ME-PRT-0675	FAB MACHINE	DREQ	0.1	Yes	ZINC PLATE	N/A
43	6PL	50	50	10	S106-ENG-ME-PRT-0676	FAB PROFILE	107902	0.1	Yes	ZINC PLATE	N/A
44	1.2PL	199	199	10	S106-ENG-ME-PRT-0677	FAB PROFILE	108002	0.2	Yes	ZINC PLATE	N/A
45	BEARING OIL SEAL NITRILE 80x50x8			20		FITTING	DREQ	0.0	No	N/A	N/A
46	OIL SEAL - DOUBLE LIP 50x65x8			10		FITTING	DREQ	0.0	No	N/A	N/A
47	COTTER (SPLIT) PIN STEEL 4X63MM			4		FITTING	DREQ	0.0	No	N/A	N/A
48	DOG ID COLOURBOND LABEL	115	1040	1	S106-ENG-ME-PRT-0713	FITTING	DREQ	0.2	Yes	N/A	N/A
49	NOT DOG LIFT STICKER	120	174	2	S106-ENG-ME-PRT-0714	FITTING	DREQ	0.0	Yes	N/A	N/A
50	ISOLATE POWER STICKER	100	120	5	S106-ENG-ME-PRT-0715	FITTING	DREQ	0.0	Yes	N/A	N/A
51	DOG LIFT COLOURBOND LABEL	150	150	4	S106-ENG-ME-PRT-0716	FITTING	DREQ	0.0	Yes	N/A	N/A
52	RAMP WEIGHT COLOURBOND LABEL	150	150	8	S106-ENG-ME-PRT-0718	FITTING	DREQ	0.0	Yes	N/A	N/A
53	12x8x300 KEY STEEL	12	115	10		FITTING	120260	0.1	No	N/A	N/A
54	SPHERICAL TAPER BORE BEARING			10	SKF - 22211 EK	FITTING	100559	0.8	No	N/A	N/A
55	Ø55 SEALED SPHERICAL ROLLER BEARING - CYLINDRICAL BORE			10	SKF - BS2-2211-2CS_VT143	FITTING	DREQ	0.1	No	N/A	N/A
56	BEARING LOCATING RING 8/100			10	SKF - FRB 8/100	FITTING	100487	0.1	No	N/A	N/A
57	50MM BEARING ADAPTOR SLEAVE			10	SKF - H 311	FITTING	DREQ	0.4	No	N/A	N/A
60	GEARBOX FLANGE MOUNT			5	BONFIG - A35 2 UH40 6.4 P132 V1 FA	FITTING	DREQ	40.0	No	N/A	N/A
61	GEARBOX FLANGE MOUNT			5	BONFIG - A35 2 UH40 7.0 P132 V1 FA	FITTING	DREQ	40.0	No	N/A	N/A
62	FCM511 BEARING HOUSING			10	SKF- FCM511	FITTING	119768	5.8	No	N/A	N/A
63	BOLT CUP HD ZP M12x40mm	12	40	26	BLACKWOODS - 0003 3065	FITTING	DREQ	0.1	No	N/A	N/A
64	RING FOR SHAFTS DIN 471			16	SEEGER - A 40 CIRCLIP	FITTING	DREQ	0.0	No	N/A	N/A
65	M8 EYE NUT S/S			8	EYENUT M8 SS	FITTING	DREQ	0.0	No	N/A	N/A
66	D SHACKLE Ø8 S/S			8	DSHACKLE Ø8 SS	FITTING	DREQ	0.1	No	N/A	N/A
67	SS SUPPORT WASHERS DIN 988			16	SEEGER - SS 42x52x25	FITTING	DREQ	0.0	No	N/A	N/A
68	HI TEK SCREW 14 - 20 x 22mm NO SEAL			8		FITTING	501922	0.0	No	N/A	N/A
69	KNURLED CUP POINT SOCKET SET SCREW M8 x 35			20		FITTING	DREQ	0.0		N/A	N/A
70	SOCKET HD CAP SCREW - M8 x 25			80		FITTING	DREQ	0.0		N/A	N/A

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE	REV	DATE	REVISIONS	BY	CHK	APP
		2	6/06/2023	MANTAIN HOLD, HORIZ SHAFT REDESIGNED	AP	AME	DD
		1A	14.11.2022	HOLD PLACED ON STUB SHAFT	AME		
		1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
			14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
		0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PARTS LIST

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 3 OF 13
REV: 2

PARTS LIST (PER UNIT)

ITEM No	DESCRIPTION	WIDTH	LENGTH	QTY	CBH OR SUPPLIER PART No	PROCESS	SAP Code	MASS Kg	TO DETAIL	SURFACE TREATMENT	C/SPEC.
71	M8 x 25 GALV BOLT			8		FITTING	120956	0.0		N/A	N/A
72	M10 x 25 GALV BOLT			4		FITTING	120959	0.0	No	N/A	N/A
73	M10 x 30 GALV BOLT			4		FITTING	120960	0.0	No	N/A	N/A
74	M10 x 35 GALV BOLT			11		FITTING	DREQ	0.0	No	N/A	N/A
75	M12 x 30 GALV BOLT			13		FITTING	120968	0.0		N/A	N/A
76	M12 x 40 GALV BOLT			4		FITTING	120970	0.1	No	N/A	N/A
77	M12 x 60 GALV BOLT			2		FITTING	DREQ	0.1	No	N/A	N/A
78	M12 x 75 GALV BOLT			14		FITTING	DREQ	0.1	No	N/A	N/A
79	M12 x 110 GALV BOLT			6		FITTING	120974	0.1		N/A	N/A
81	M20 x 50 GALV BOLT			44		FITTING	DREQ	0.2	No	N/A	N/A
82	M20 x 70 GALV BOLT			4		FITTING	DREQ	0.2	No	N/A	N/A
83	M12 x 40 GALV BOLT GR8.8			40		FITTING	DREQ	0.1	No	N/A	N/A
84	M16 x 40 GALV BOLT GR8.8			2		FITTING	DREQ	0.1	No	N/A	N/A
85	M20 x 55 GALV BOLT GR8.8			6		FITTING	DREQ	0.2		N/A	N/A
86	M20 x 60 GALV BOLT GR8.8			12		FITTING	DREQ	0.2	No	N/A	N/A
87	M8 GALV FW			155		FITTING	110172	0.0	No	N/A	N/A
88	M12 GALV FW			134		FITTING	110165	0.0	No	N/A	N/A
89	M16 GALV FW			76		FITTING	110168	0.0	No	N/A	N/A
90	M20 GALV FW			80		FITTING	118457	0.0	No	N/A	N/A
91	M10 GALV. NUT			40		FITTING	DREQ	0.0	No	N/A	N/A
92	M12 GALV. NUT			33		FITTING	DREQ	0.0	No	N/A	N/A
94	M16 GALV. NUT			42		FITTING	DREQ	0.0	No	N/A	N/A
95	M20 GALV. NUT			6		FITTING	DREQ	0.1	No	N/A	N/A
96	M20 NYLOC NUT			8		FITTING	110131	0.1	No	N/A	N/A
97	M8 GALV SW			80		FITTING	128164	0.0	No	N/A	N/A
98	M10 GALV SW			20		FITTING	128135	0.0	No	N/A	N/A
99	M12 GALV SW			12		FITTING	DREQ	0.0	No	N/A	N/A
100	M16 GALV SW			2		FITTING	DREQ	0.0	No	N/A	N/A
101	M20 GALV SW			6		FITTING	128137	0.0	No	N/A	N/A
102	M10 x 35 CSK POZI HD BOLT			10		FITTING	DREQ	0.0	No	N/A	N/A
103	Ø50 x 45 RUBBER MOUNT			4	RS COMPONENTS - 237-2127	FITTING	DREQ	0.1	No	N/A	N/A
104	M10 x 20 BOLT			4		FITTING	121060	0.0	No	N/A	N/A
105	M10 x 16 BOLT			4		FITTING	DREQ	0.0	No	N/A	N/A
108	CONTROL STATION			2	SCHNEIDER- XALD215	FITTING	N/A	2.0	No	N/A	N/A
109	M16 NYLOC NUT			16		FITTING	DREQ	0.0		N/A	N/A
110	M16 x 70 BOLT GR8.8			16		FITTING	DREQ	0.1	No	N/A	N/A
123	HORIZ DRIVE MOUNT PLATE			5	S106-ENG-ME-ASY-0111	FITTING	N/A	8.1	Yes	Y14 - GOLDEN YELLOW	PC6
124	SPLIT PIN - 8 x 100			8		FITTING	DREQ	0.0	No	N/A	N/A
125	RAMP PIVOT PIN			8	S106-ENG-ME-ASY-0042	FITTING	N/A	1.3	Yes	ZINC PLATE	PC1
126	M10 FW ZP			32		FITTING	110159	0.0	No	N/A	N/A
127	M10 NYLOC NUT			8		FITTING	110128	0.0	No	N/A	N/A
128	M10 x 35 BOLT			8		FITTING	110032	0.0		N/A	N/A
129	M12 NYLOC NUT			36		FITTING	128120	0.0	No	N/A	N/A
130	M10 NYLOC NUT			3		FITTING	128161	0.0		N/A	N/A
131	12x8 KEY STEEL	12	41	10		FITTING	120260	0.0	No	N/A	N/A
132	BREATHER EXTENSION			10	S106-ENG-ME-PRT-1827	FITTING	DREQ	0.6	Yes	N/A	N/A
133	ACCESS PLATFORM			1	S106-ENG-ME-ASY-0002	FITTING	N/A	225.6	Yes	N/A	N/A
134	5.5kW ELECTRIC MOTOR, 2P, 3PH, B5 EXTD + RAINHOOD			5	TECO MAXe3 - 013/0005DD2S-ExtD-RC	FITTING	131280	4.9			N/A
135	7.5kW ELECTRIC MOTOR, 2P, 3PH, B5 EXTD + RAINHOOD			5	TECO MAXe3 - 013/0007DD2S-ExtD-RC	FITTING	131281	4.9			N/A
136	Ø110 BRIGHT STEEL 4140		262	5	S106-ENG-ME-PRT-2020	FAB MACHINE	DREQ	5.8	Yes	N/A	N/A
137	Ø65 BRIGHT STEEL 4140		225	5	S106-ENG-ME-PRT-2029	FAB MACHINE	DREQ	3.5	No	N/A	N/A
138	GALV. STEEL SQU HD PLUG 1" INCH BSP			5		FITTING	DREQ	0.1	No	N/A	N/A
139	SOCKET HD CAP SCREW - M8 x 20			30		FITTING	DREQ	0.0	No	N/A	N/A

△2 ⓘ1 HOLD

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
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DO NOT SCALE FROM THIS DRAWING

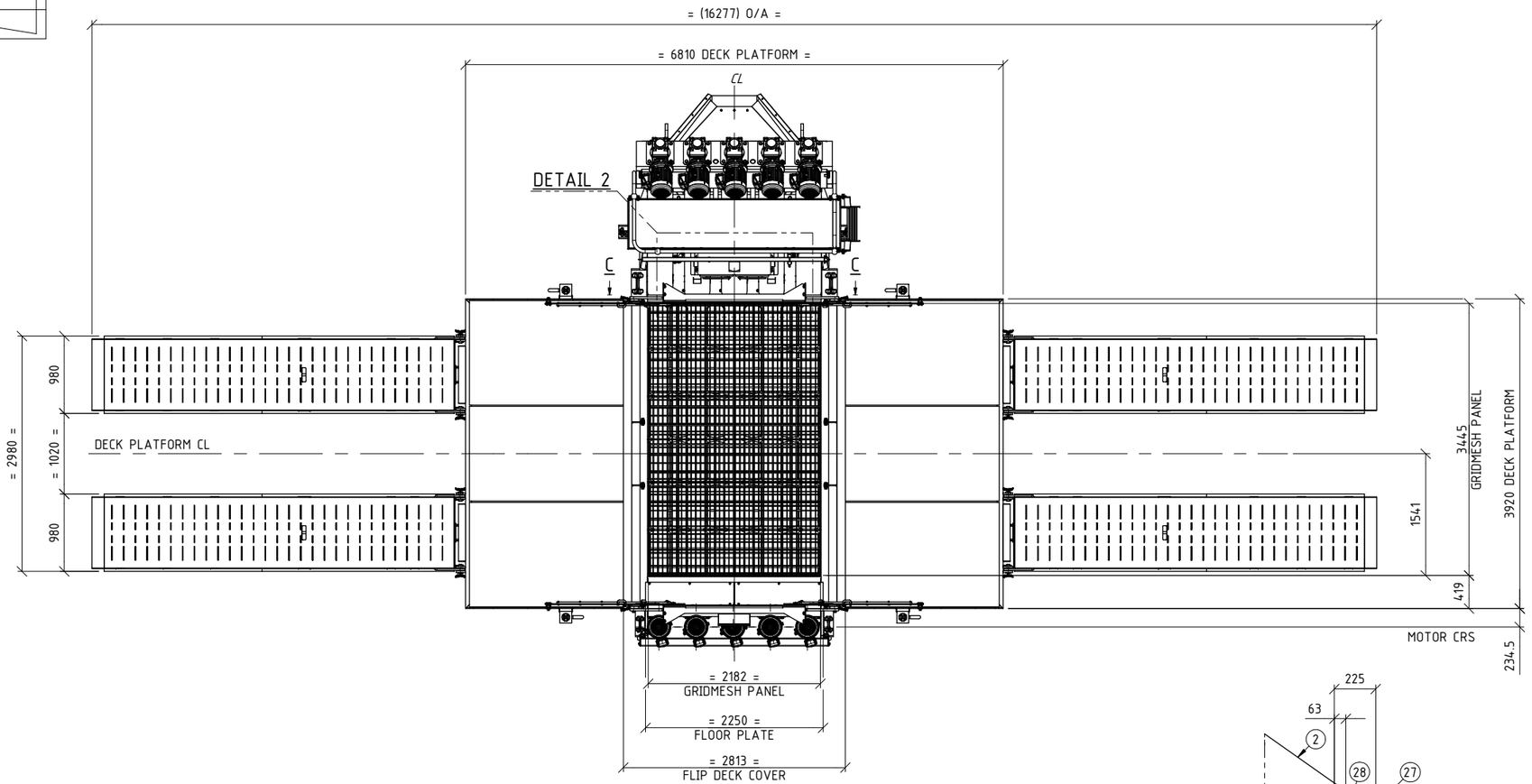
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
2	6/06/2023	MANTAIN HOLD, HORIZ SHAFT REDESIGNED	AP	AME	DD
1A	14.11.2022	HOLD PLACED ON STUB SHAFT	AME		
1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

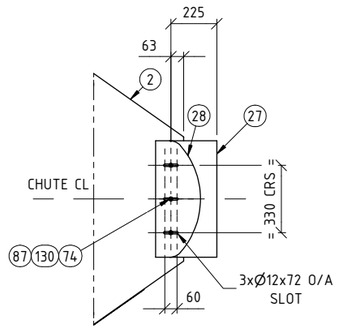
DRAWN	AME 11/05/2021
CHECKED	PJC 11/05/2021
ENGINEER	PJC 11/05/2021
APPROVED	NH 11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PARTS LIST

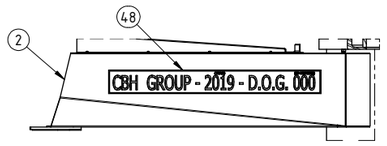
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 4 OF 13
REV.: 2



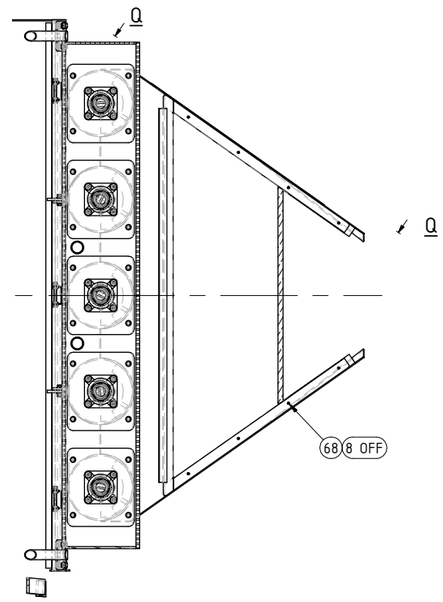
PLAN



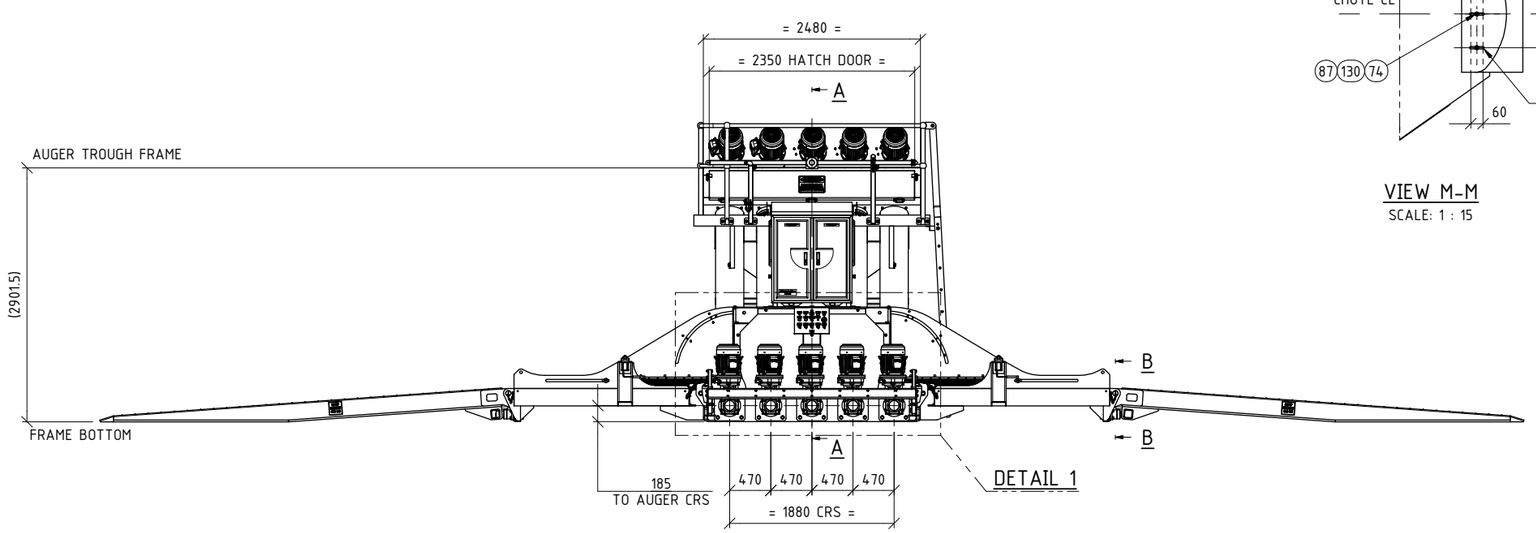
VIEW M-M
SCALE: 1 : 15



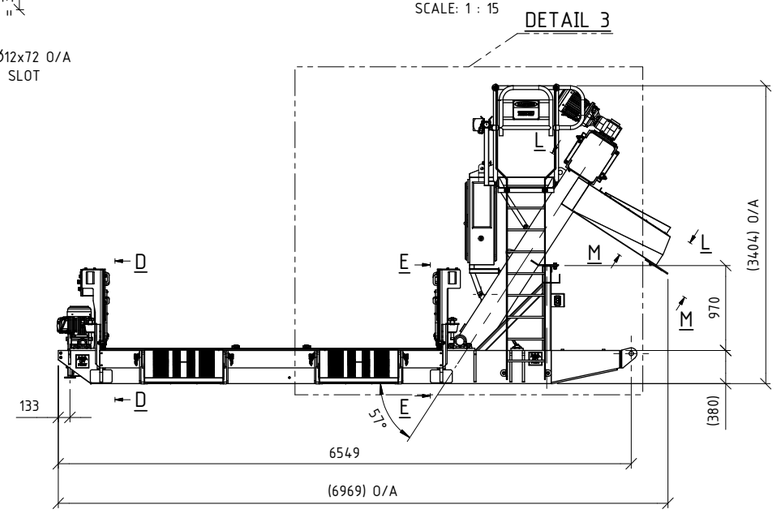
SECTION Q-Q
SCALE: 1 : 15



SECTION L-L
SCALE: 1 : 15



S106-ENG-ME-DGA-0000
ELEVATION
GENERAL ARRANGEMENT
SCALE: 1 : 35



END VIEW

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
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1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
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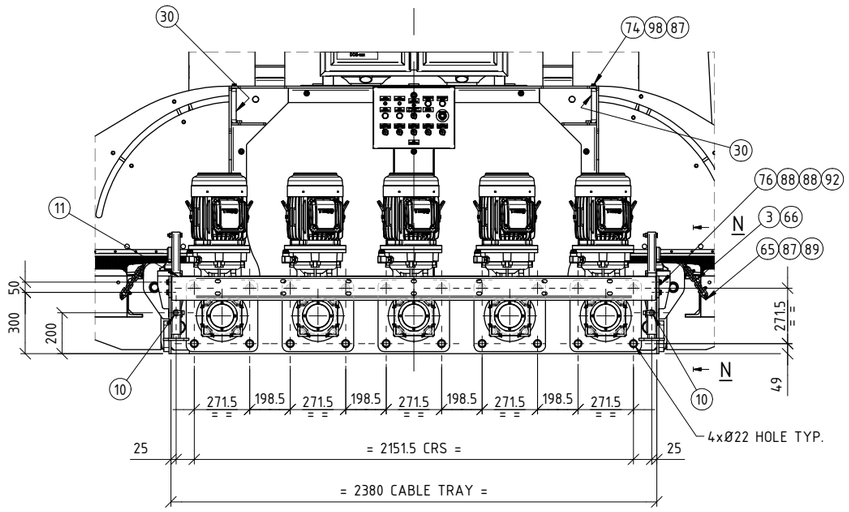
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

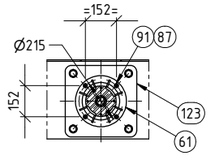
DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PLAN, ELEVATION, VIEW
& SECTIONS

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 5 OF 13
REV.: 2

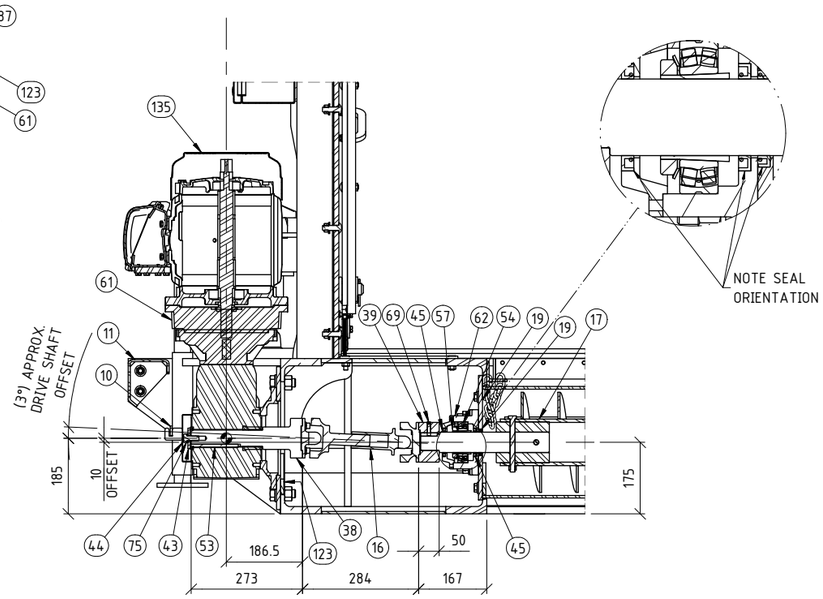


DETAIL 1
SCALE: 1 : 15

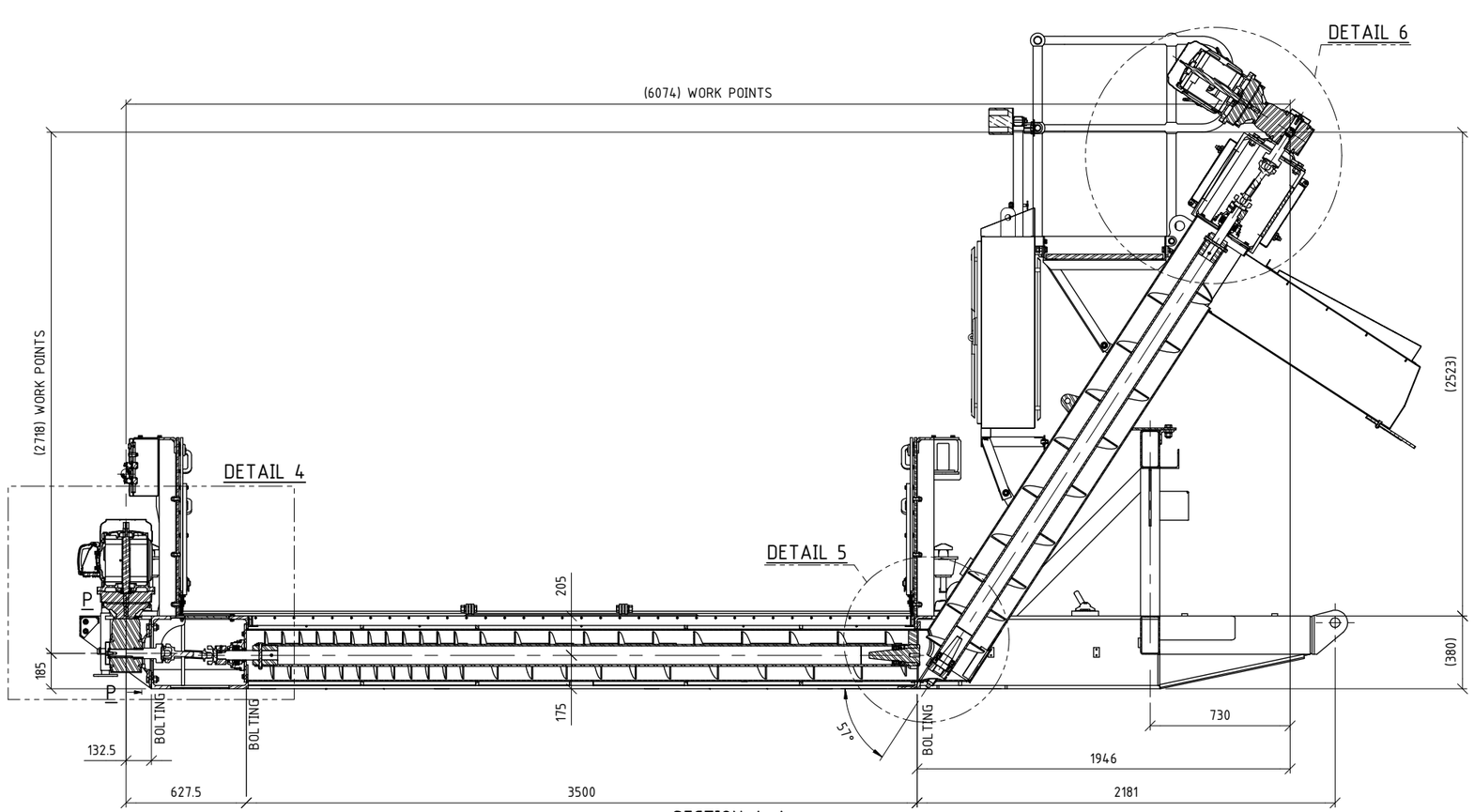
SECTION N-N
SCALE: 1 : 15
SIM. 2 PLACES



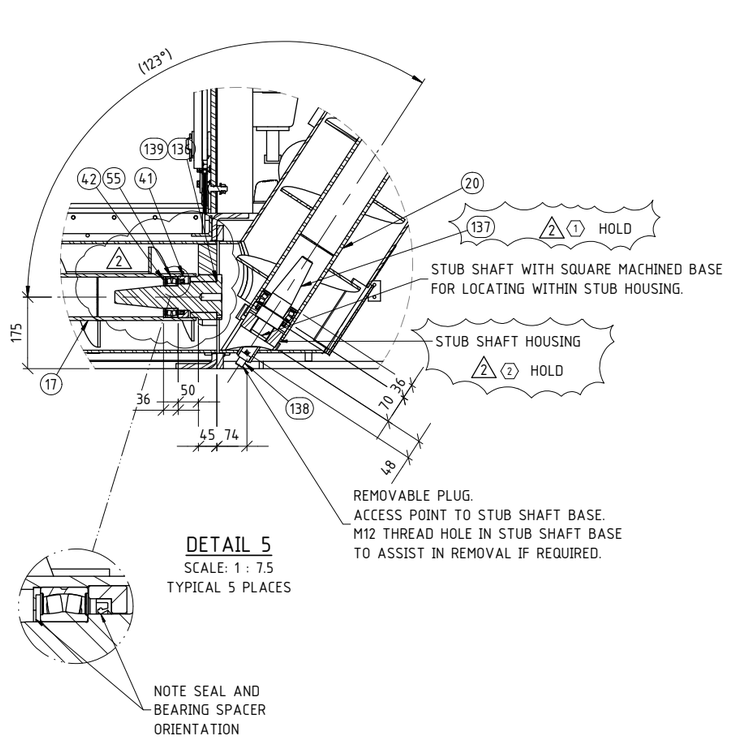
SECTION P-P
SCALE: 1 : 15
TYPICAL 5 PLACES



DETAIL 4
SCALE: 1 : 7.5
TYPICAL 5 PLACES



SECTION A-A
SCALE: 1 : 15



DETAIL 5
SCALE: 1 : 7.5
TYPICAL 5 PLACES

CBH GROUP HEAD OFFICE
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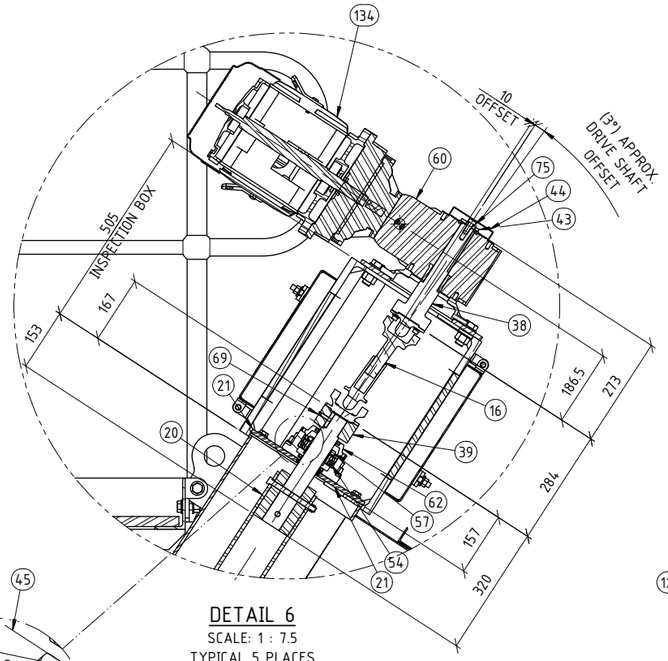
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

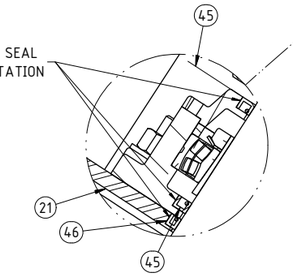
DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

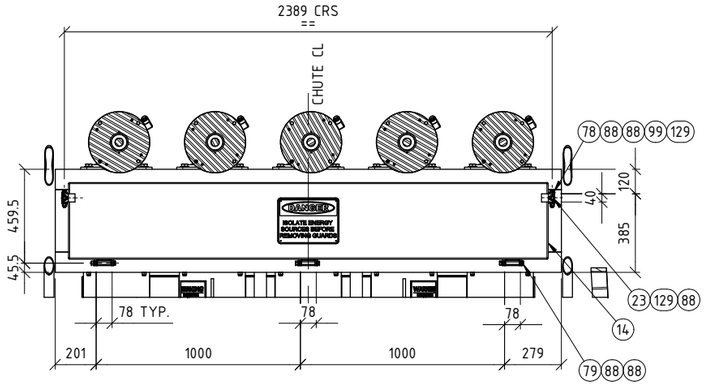
DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
VIEWS, SECTIONS & DETAILS

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 6 OF 13
REV.: 2

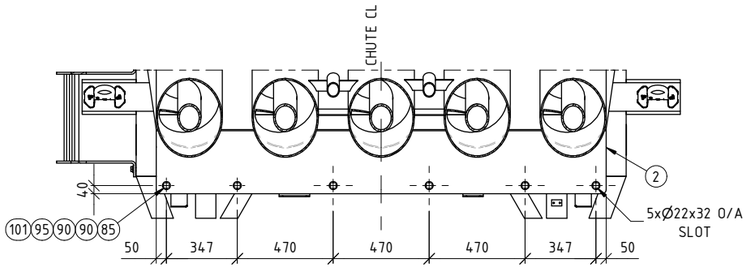


DETAIL 6
SCALE: 1 : 7.5
TYPICAL 5 PLACES

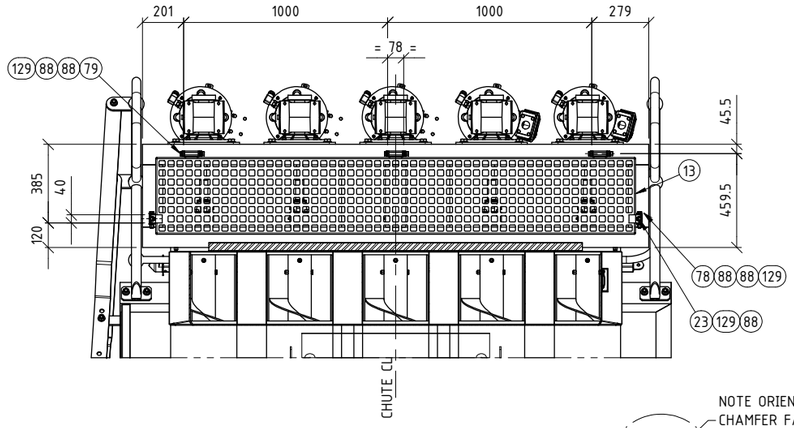




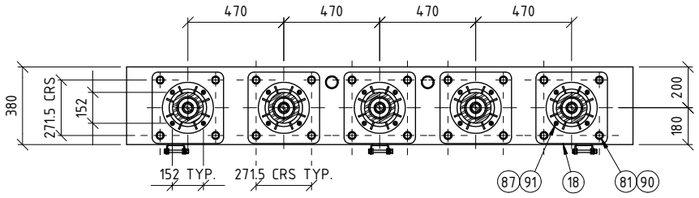
SECTION H-H
SCALE: 1 : 15



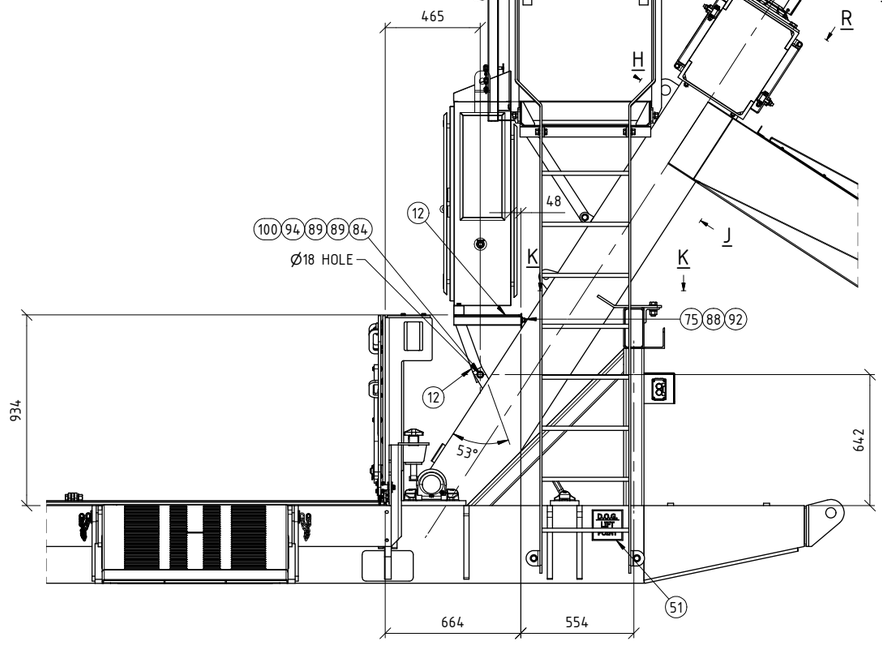
SECTION K-K
SCALE: 1 : 15



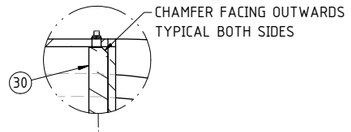
SECTION J-J
SCALE: 1 : 15

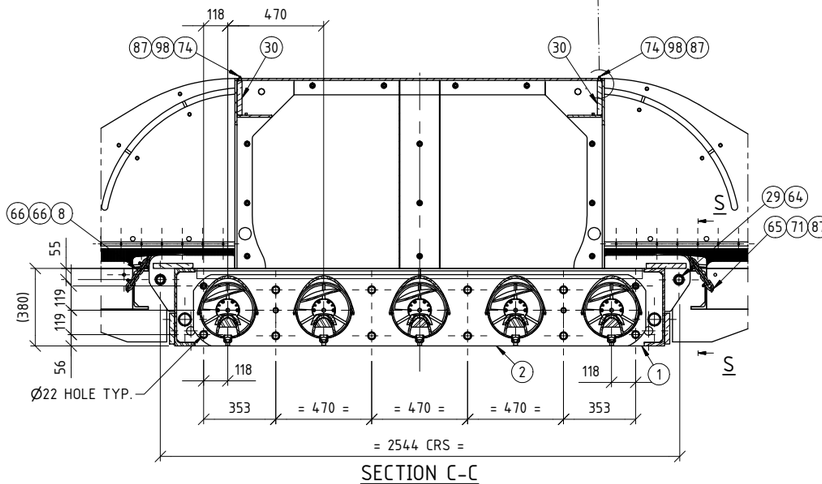


SECTION R-R
SCALE: 1 : 15

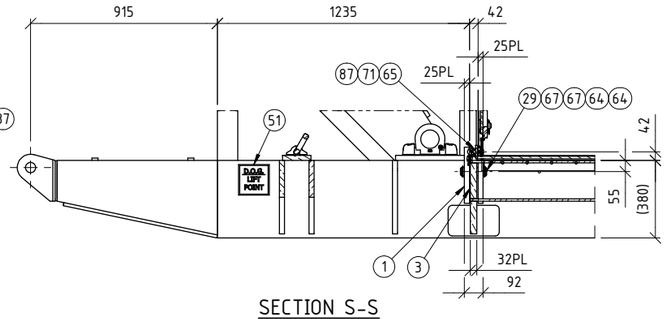


DETAIL 3
SCALE: 1 : 15





SECTION C-C
SCALE: 1 : 15



SECTION S-S
SCALE: 1 : 15
SIM. 2 PLACES

SECTION R-R
SCALE: 1 : 15

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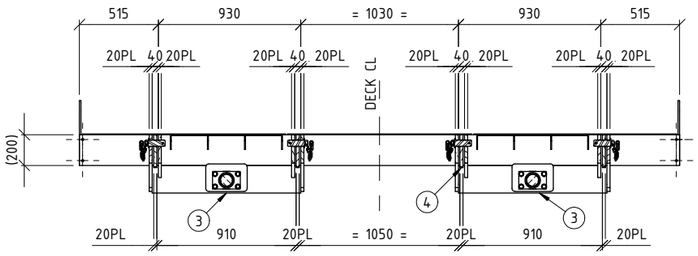
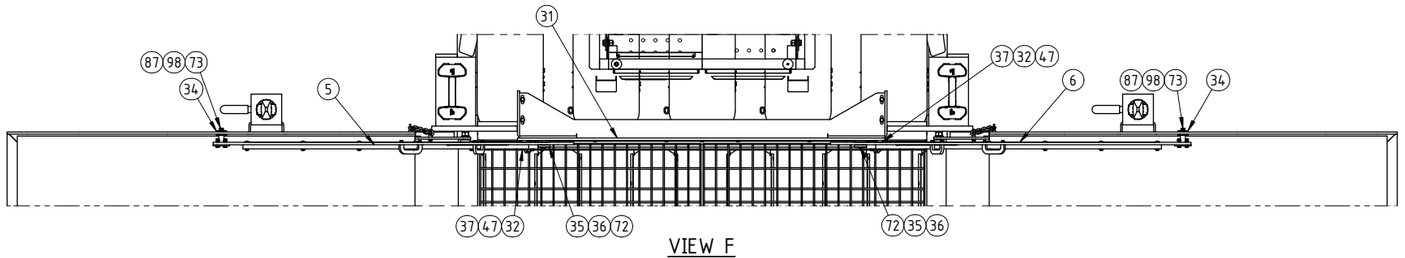
DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
SECTIONS & DETAILS

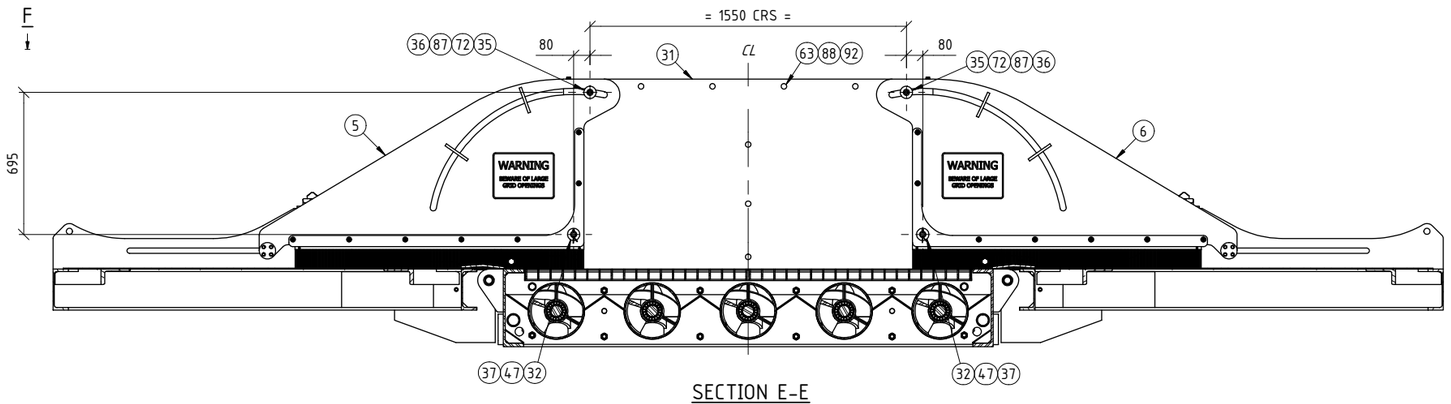
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 7 OF 13
REV.: 2



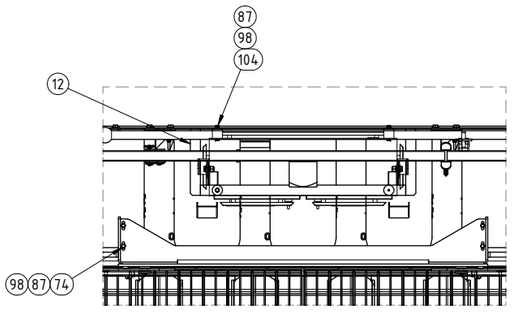
SECTION B-B
SCALE: 1 : 20
TYPICAL 2 PLACES



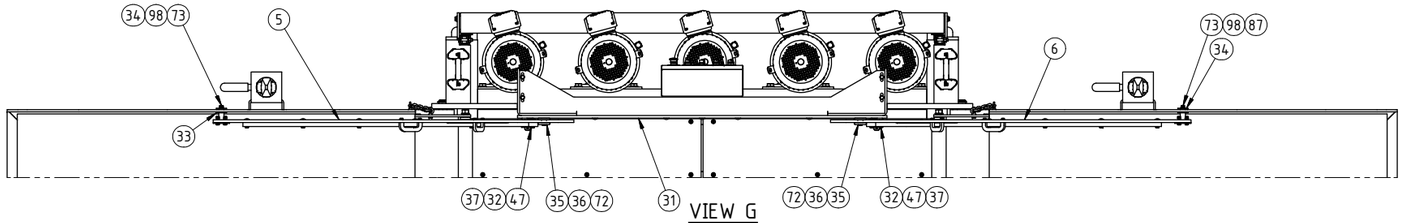
VIEW F
SCALE: 1 : 15



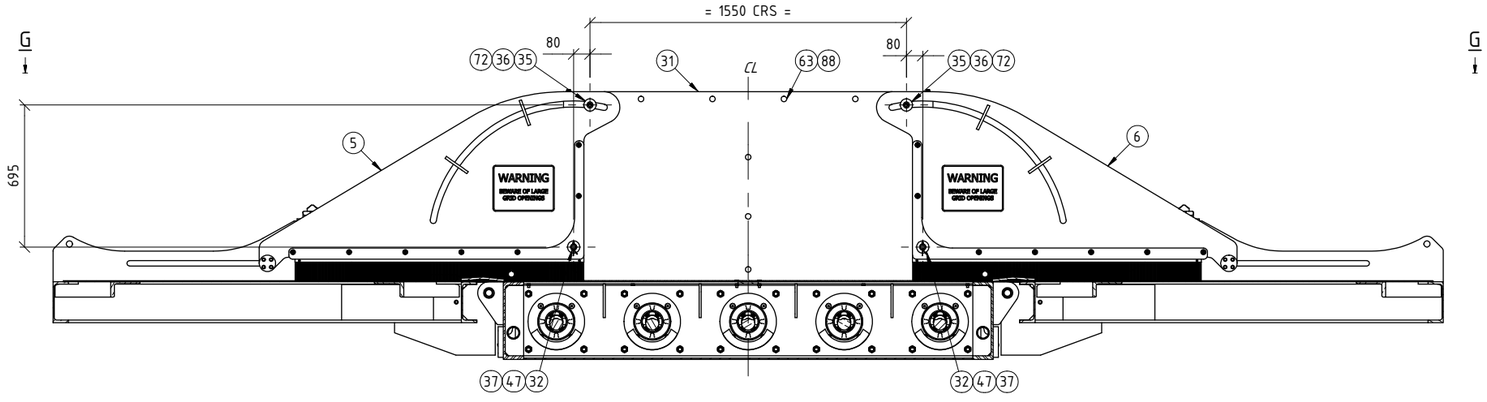
SECTION E-E
SCALE: 1 : 15



DETAIL 2
SCALE: 1 : 15



VIEW G
SCALE: 1 : 15



SECTION D-D
SCALE: 1 : 15

CBH GROUP HEAD OFFICE
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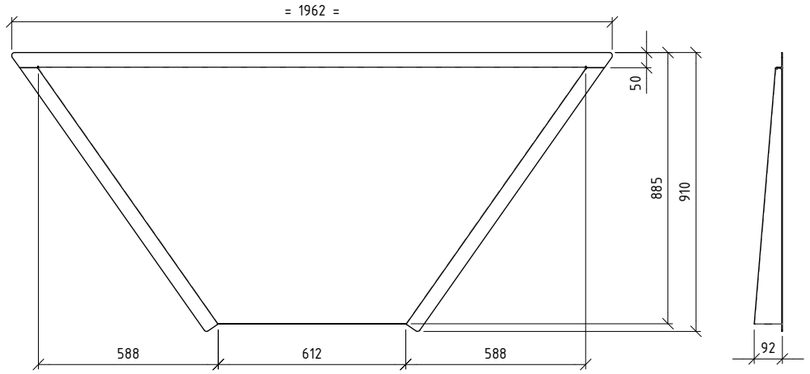
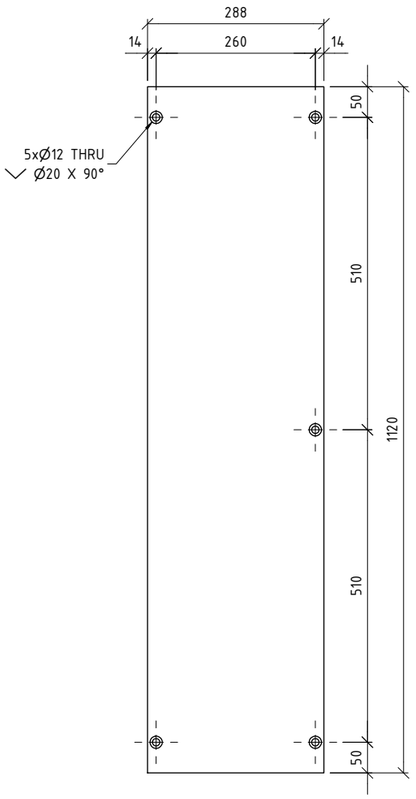
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
SECTIONS, VIEWS & DETAILS

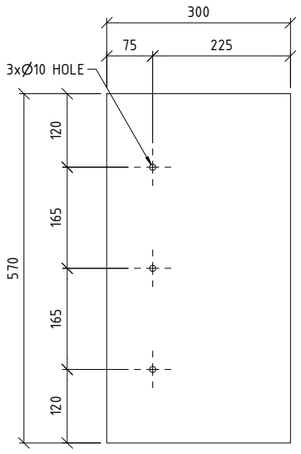
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 8 OF 13
REV: 2



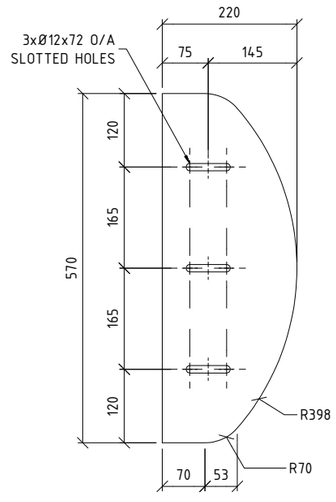
S106-ENG-ME-PRT-1952
2PL - DISCHARGE CHUTE LID



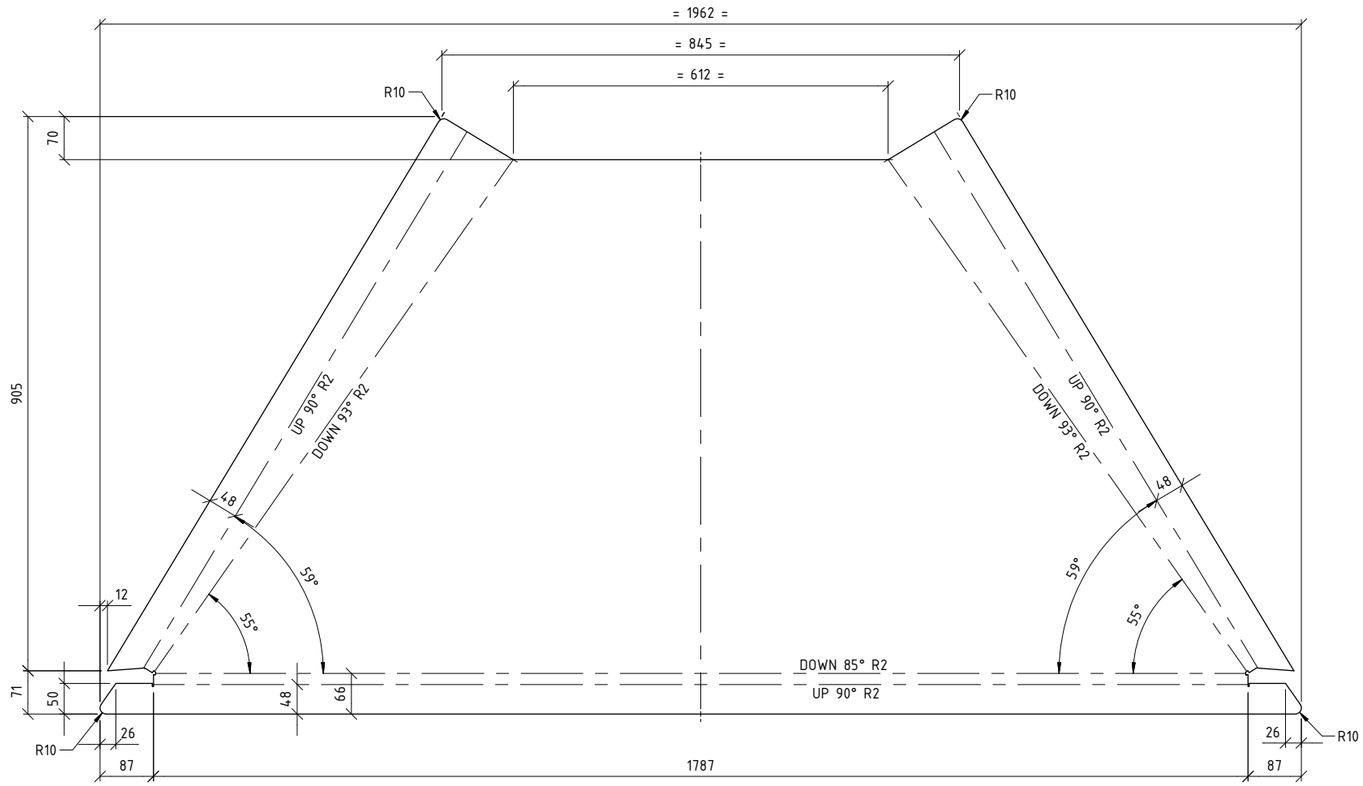
S106-ENG-ME-PRT-0582
6PL FLOOR PLATE
SCALE: 1 : 5



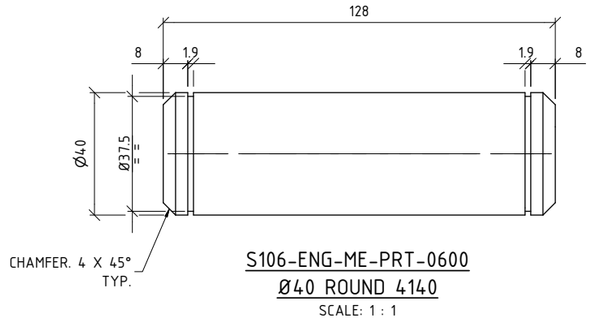
S106-ENG-ME-PRT-0587
12THK RUBBER - DISCHARGE CHUTE
SCALE: 1 : 5



S106-ENG-ME-PRT-0588
3PL
SCALE: 1 : 5



DEVELOPMENT OF S106-ENG-ME-PRT-1952
2PL - DISCHARGE CHUTE LID



S106-ENG-ME-PRT-0600
Ø40 ROUND 4140
SCALE: 1 : 1

MACHINING NOTES:

BREAK ALL SHARP CORNERS
ALL MACHINING 3.2 UNO
ALL DIAMETERS ⌀ 0.05 UNO

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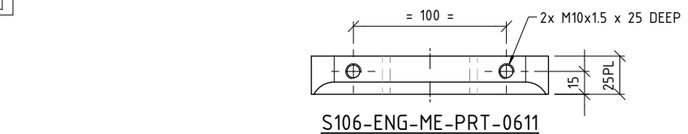
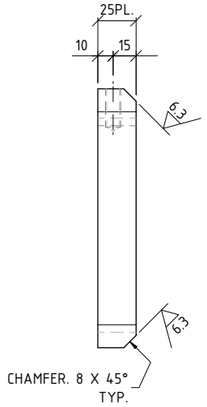
APPROVED	NH 11/05/2021	

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PART DETAILS

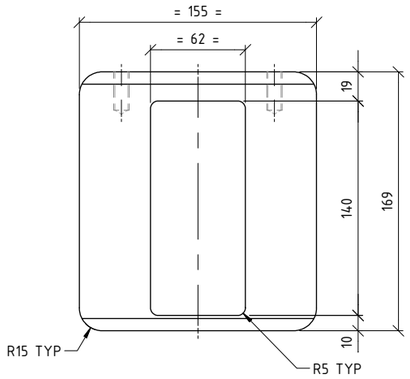
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 9 OF 13
REV.: 2



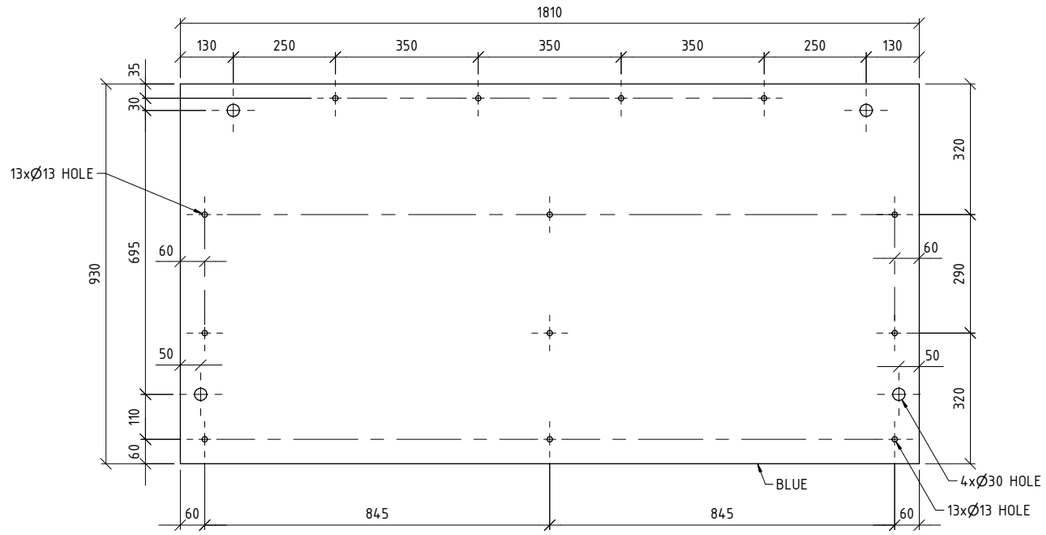
S106-ENG-ME-PRT-0611
PLAN



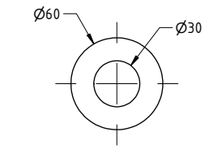
S106-ENG-ME-PRT-0611
END VIEW



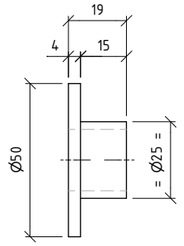
S106-ENG-ME-PRT-0611
ELEVATION
25PL
SCALE: 1 : 2



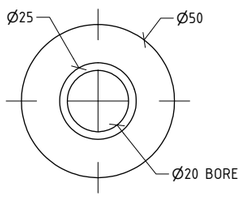
S106-ENG-ME-PRT-0612
12.7 RALLOY SIGNBOARD - CENTRE HB
SCALE: 1 : 7.5



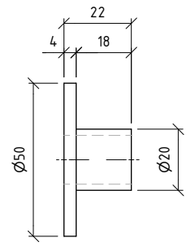
S106-ENG-ME-PRT-0614
5PL WASHER
SCALE: 1 : 2



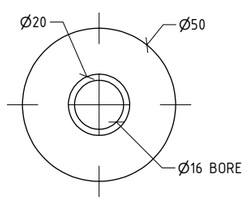
S106-ENG-ME-PRT-0615
END VIEW



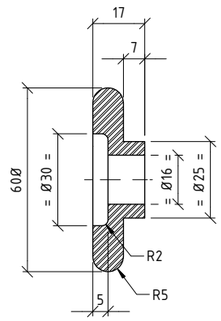
S106-ENG-ME-PRT-0615
ELEVATION
Ø50 RND NYLON WHEEL
SCALE: 1 : 1



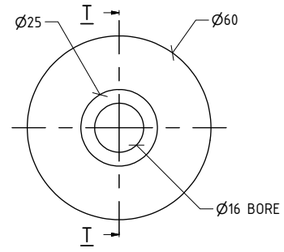
S106-ENG-ME-PRT-0618
END VIEW



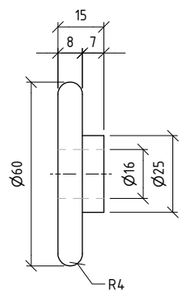
S106-ENG-ME-PRT-0618
ELEVATION
Ø50 RND NYLON WHEEL
SCALE: 1 : 1



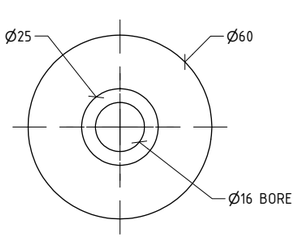
SECTION T-T
SCALE: 1 : 1



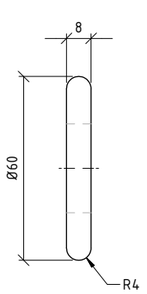
S106-ENG-ME-PRT-0619
Ø60 RND NYLON WHEEL
SCALE: 1 : 1



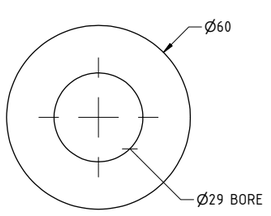
S106-ENG-ME-PRT-0620
END VIEW



S106-ENG-ME-PRT-0620
ELEVATION
Ø60 RND NYLON WHEEL
SCALE: 1 : 1



S106-ENG-ME-PRT-0621
END VIEW



S106-ENG-ME-PRT-0621
ELEVATION
Ø60 RND NYLON WHEEL
SCALE: 1 : 1

MACHINING NOTES:

BREAK ALL SHARP CORNERS
ALL MACHINING 3.2 UNO
ALL DIAMETERS ⌀ 0.05 UNO

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DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PART DETAILS

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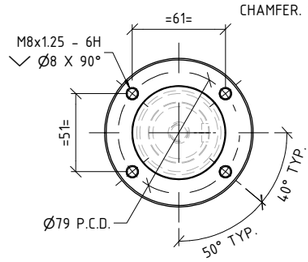
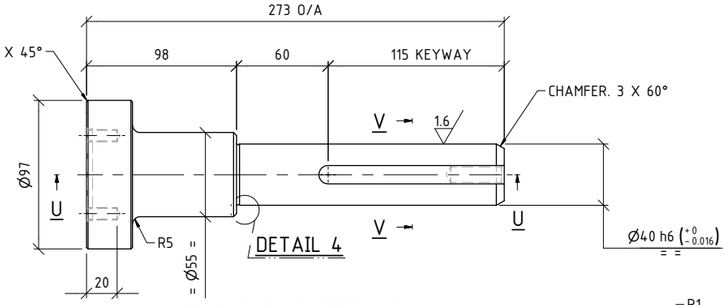
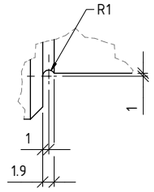
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 10 OF 13
REV.: 2



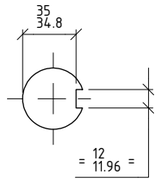
S106-ENG-ME-PRT-0671
END VIEW



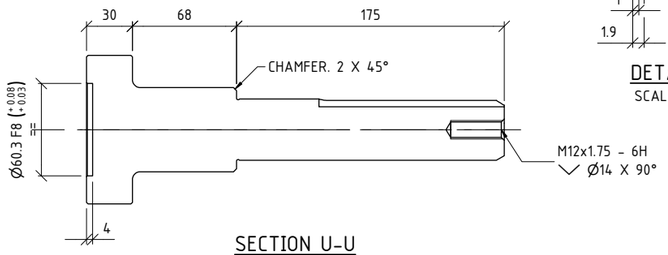
S106-ENG-ME-PRT-0671
ELEVATION
EX Ø100 RND 4140
SCALE: 1 : 2



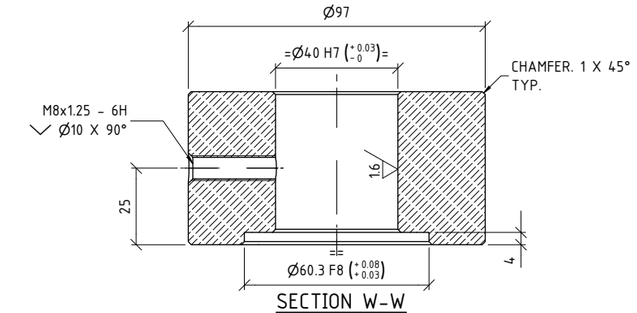
DETAIL 4
SCALE: 2 : 1



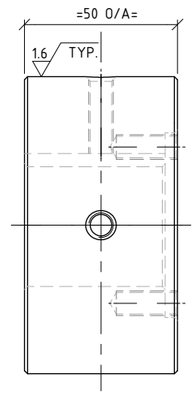
SECTION V-V
SCALE: 1 : 2



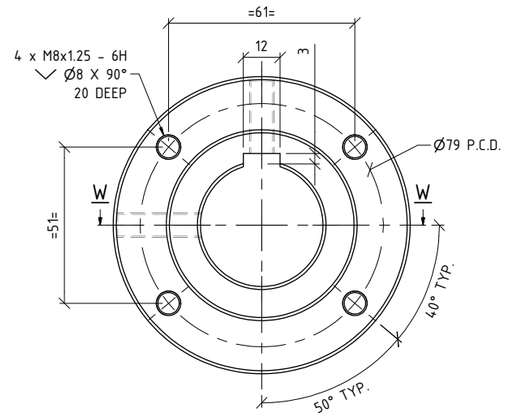
SECTION U-U
SCALE: 1 : 2



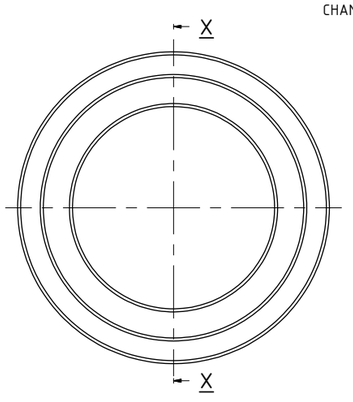
SECTION W-W
SCALE: 1 : 1



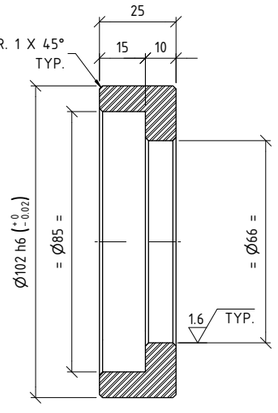
S106-ENG-ME-PRT-0672
END VIEW



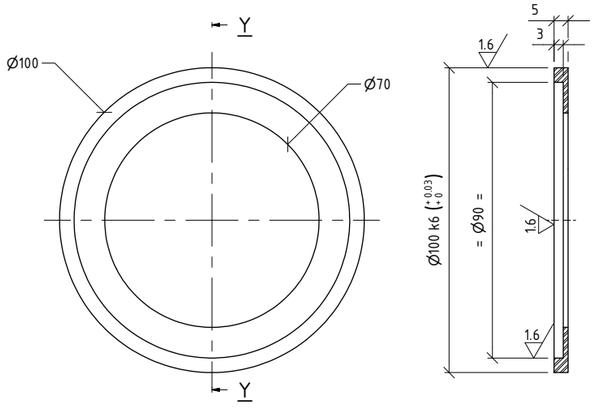
S106-ENG-ME-PRT-0672
ELEVATION
Ø100 RND 4140
SCALE: 1 : 1



S106-ENG-ME-PRT-0674
NYLON LIP SEAL RETAINER
SCALE: 1 : 1

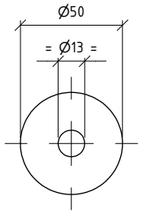


SECTION X-X
SCALE: 1 : 1

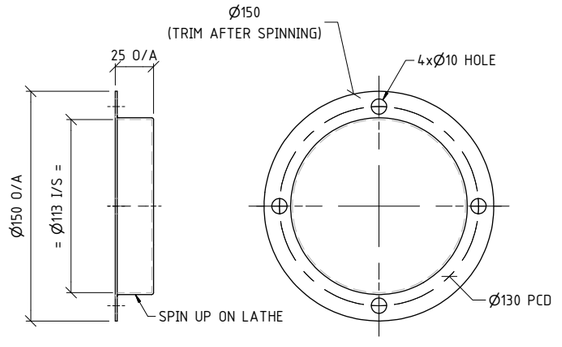


S106-ENG-ME-PRT-0675
BEARING SPACER Ø100 1030
SCALE: 1 : 1

SECTION Y-Y
SCALE: 1 : 1



S106-ENG-ME-PRT-0676
6PL
SCALE: 1 : 1.5



S106-ENG-ME-PRT-0677
ELEVATION
1.2PL
SCALE: 1 : 2

S106-ENG-ME-PRT-0677
END VIEW

MACHINING NOTES:
BREAK ALL SHARP CORNERS
ALL MACHINING 3.2 UNO
ALL DIAMETERS ◎ 0.05 UNO

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

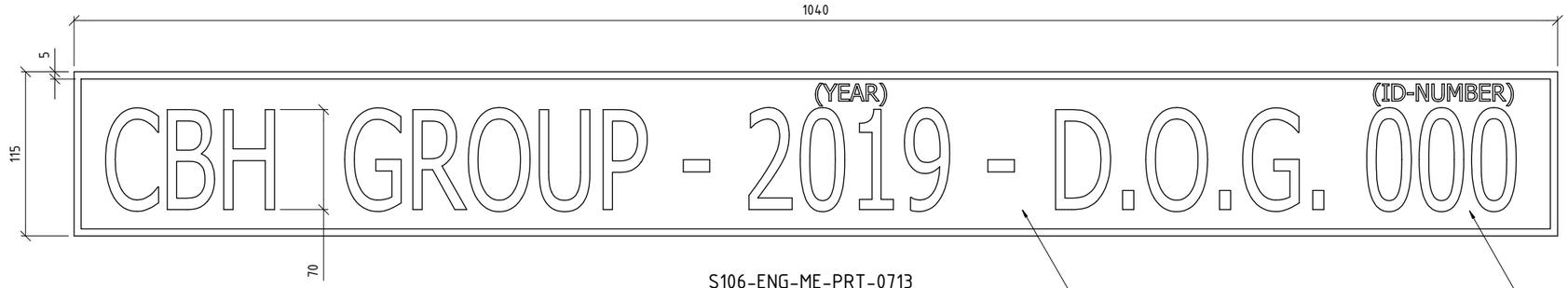
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
2	6/06/2023	MANTAIN HOLD, HORIZ SHAFT REDESIGNED	AP	AME	DD
1A	14.11.2022	HOLD PLACED ON STUB SHAFT	AME		
1	25.07.2022	STUB SHAFTS REDESIGNED.SHEET ADDED	AME	DD	DD
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PART DETAILS

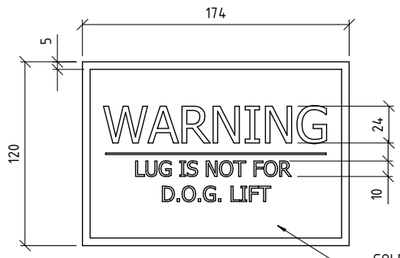
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 11 OF 13
REV.: 2



S106-ENG-ME-PRT-0713
DOG ID COLOURBOND LABEL
SCALE: 1 : 2

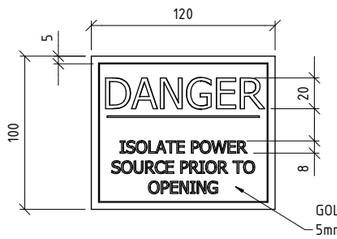
GOLDEN YELOOW BACKGROUND
5mm BORDER
BOLD BLACK LETTERING (TYP.)

ZEROS REPRESENTATIVE ONLY,
REPLACE WITH RELEVANT D.O.G.
I.D. NUMBER



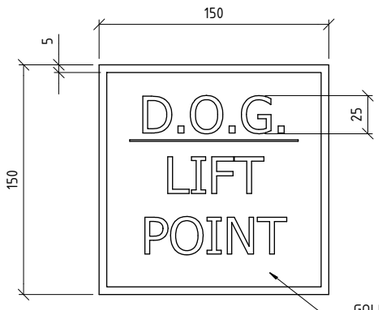
GOLDEN YELOOW BACKGROUND
5mm BORDER
BOLD BLACK LETTERING (TYP.)

S106-ENG-ME-PRT-0714
NOT DOG LIFT STICKER
SCALE: 1 : 2



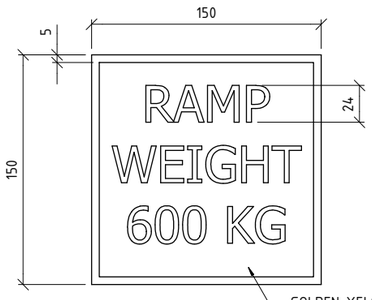
GOLDEN YELOOW BACKGROUND
5mm BORDER
BOLD BLACK LETTERING (TYP.)

S106-ENG-ME-PRT-0715
ISOLATE POWER STICKER
SCALE: 1 : 2



GOLDEN YELOOW BACKGROUND
5mm BORDER
BOLD BLACK LETTERING (TYP.)

S106-ENG-ME-PRT-0716
DOG LIFT COLOURBOND LABEL
SCALE: 1 : 2



GOLDEN YELOOW BACKGROUND
5mm BORDER
BOLD BLACK LETTERING (TYP.)

S106-ENG-ME-PRT-0718
RAMP WEIGHT COLOURBOND LABEL
SCALE: 1 : 2

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

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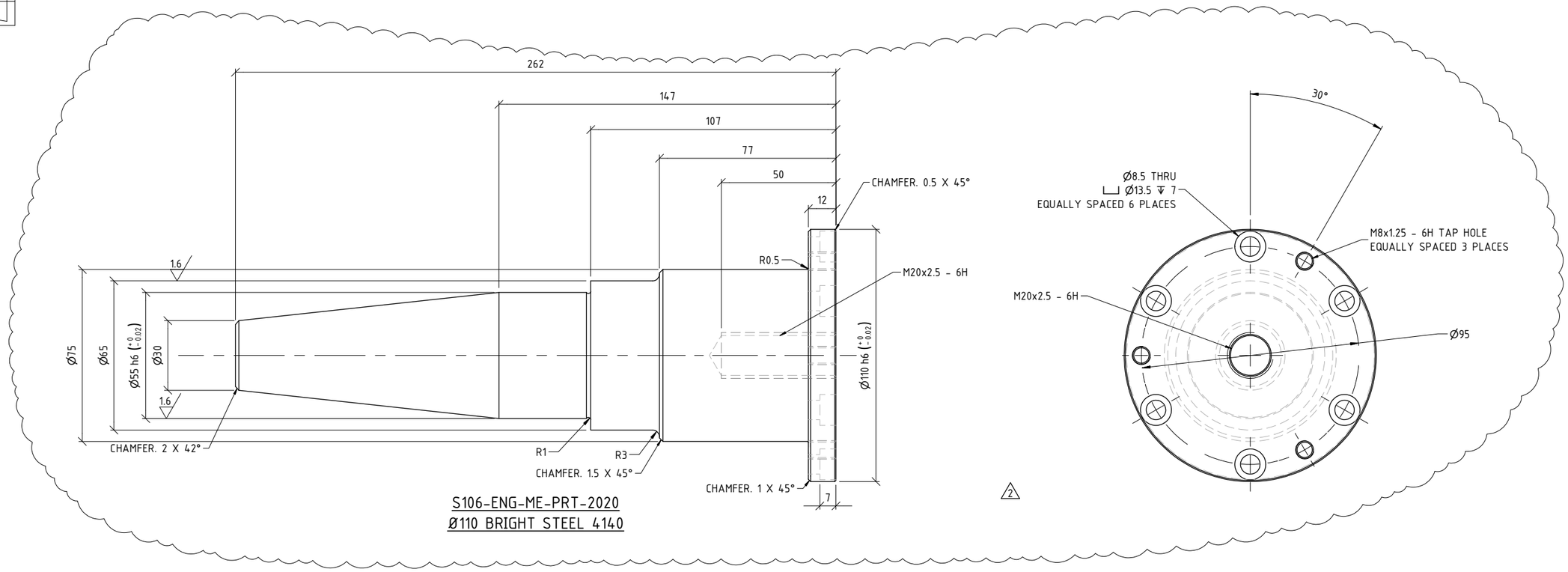
	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

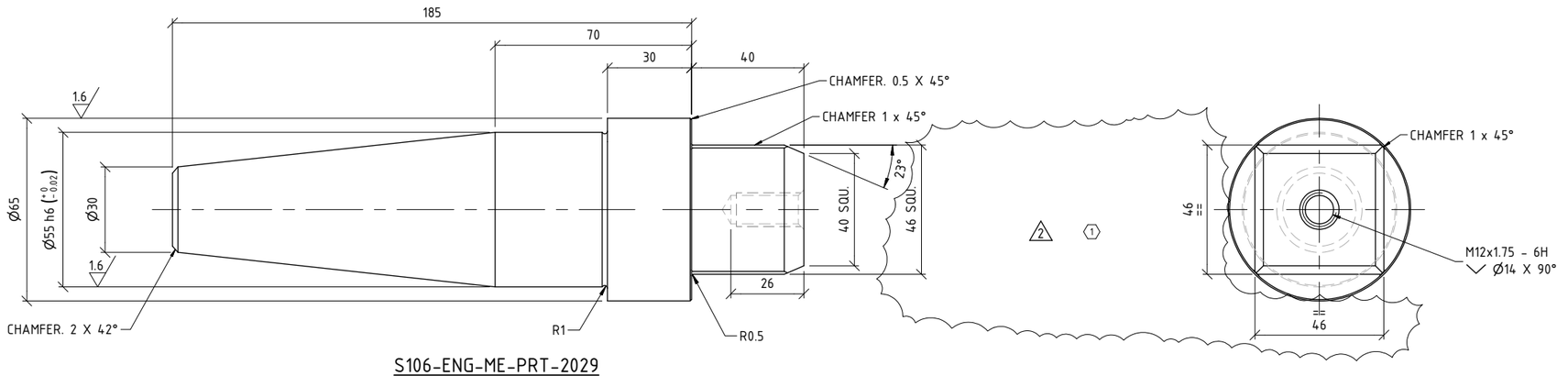
DRAWN	AME 11/05/2021	
CHECKED	PJC 11/05/2021	
ENGINEER	PJC 11/05/2021	
APPROVED	NH 11/05/2021	

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
ENGRAVED LABEL DETAILS

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 12 OF 13
REV.: 2



S106-ENG-ME-PRT-2020
Ø110 BRIGHT STEEL 4140



S106-ENG-ME-PRT-2029
Ø65 BRIGHT STEEL 4140

MACHINING NOTES:

BREAK ALL SHARP CORNERS

ALL MACHINING $\frac{3.2}{\nabla}$ UNO

ALL DIAMETERS ⌀ 0.05 UNO

ALL WELDING ON SHAFTS TO BE COMPLETED PRIOR TO MACHINING

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
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	14.01.2019	ACCESS PLATFORM ADDED & MOTORS WAS CMG	SCR	AME	PJC
0	11/05/2021	ISSUED FOR CONSTRUCTION	AME	PJC	NH

DRAWN	AME	11/05/2021
CHECKED	PJC	11/05/2021
ENGINEER	PJC	11/05/2021
APPROVED	NH	11/05/2021

DRAWING TITLE
DRIVE OVER GRID
GENERAL ARRANGEMENT
PART DETAILS

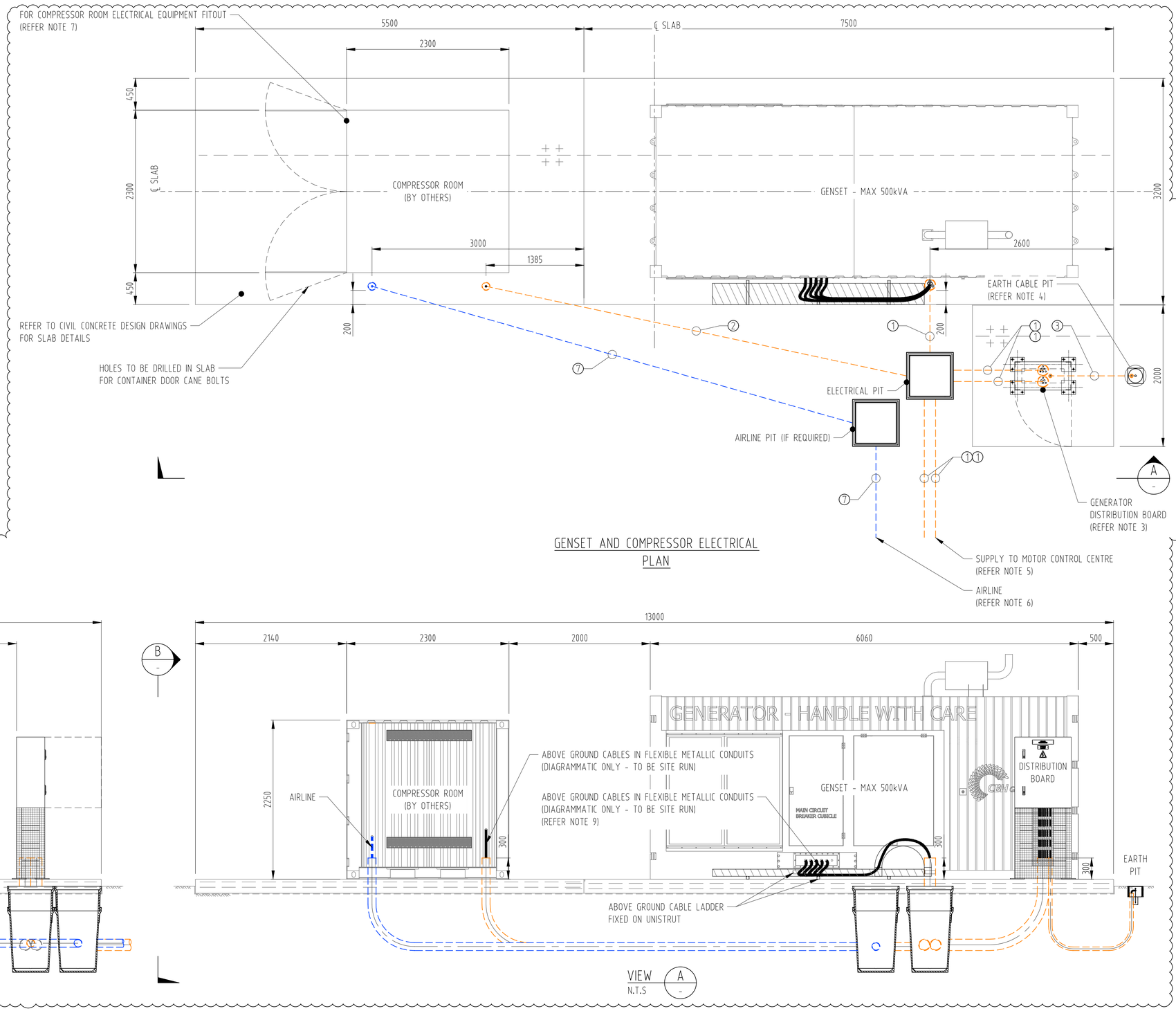
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S106-ENG-ME-DGA-0000
SHEET: 13 OF 13
REV.: 2

DRAWING LEGEND

- ELECTRICAL CONDUITS - POWER
- ELECTRICAL CONDUITS - COMMS
- ELECTRICAL CONDUITS - AIRLINE

CONDUIT DETAILS

ITEM NO.	DESCRIPTION
1	150mmØ HD PVC ORANGE CONDUIT (POWER/CONTROL)
2	100mmØ HD PVC ORANGE CONDUIT (POWER/CONTROL)
3	50mmØ HD PVC ORANGE CONDUIT (POWER/CONTROL)
4	32mmØ HD PVC ORANGE CONDUIT (POWER/CONTROL)
5	50mmØ HD PVC WHITE CONDUIT (COMMUNICATION)
6	50mmØ TELSTRA CONDUIT
7	100mmØ HD PVC BLACK DN90 CONDUIT (AIRLINE)



GENSET AND COMPRESSOR ELECTRICAL PLAN

NOTES:

1. ALL WORKS SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL SPECIFICATION DOCUMENTS:
   - TS6 ELECTRICAL SERVICES CBH-ENG-EL-SST-0001.
   - TS7 ELECTRICAL ENCLOSURES CBH-ENG-EL-SST-0003.
2. ALL EQUIPMENT AS PER:
   - TS16 EQUIPMENT LIST CBH-ENG-EL-SST-0002.
3. DISTRIBUTION BOARD DETAILS AS PER:
   - TYPICAL GENERATOR DB GA S000-ENG-EL-DGA-0024
   - TYPICAL GENERATOR DB SINGLE LINE S000-ENG-EL-SLD-0002
4. EARTH CABLE PIT DETAILS AS PER:
   - TYPICAL EARTHING DRAWING S000-ENG-EL-DTD-0001
5. FOR CONDUIT DIRECTION REFER TO SITE SPECIFIC ELECTRICAL LAYOUT.
6. FOR AIRLINE DETAILS REFER TO MECHANICAL DRAWINGS:
   - TYPICAL ELEVATOR AIRLINE DETAILS S000-ENG-ME-STD-0004
   - TYPICAL CONVEYOR AIRLINE DETAILS S000-ENG-ME-STD-0003
7. COMPRESSOR ROOM DETAILS REFER TO::
   - TYPICAL 8FT CONTAINER ELEC. EQUIPMENT S000-ENG-EL-DGA-0026
8. FOR ORIENTATION REFER TO SITE SPECIFIC CIVIL AND ELECTRICAL LAYOUT.
9. SUFFICIENT EXTRA LENGTH TO BE ALLOWED FOR ON GENERATOR CABLES, FOR VARYING GENERATOR CONNECTION.

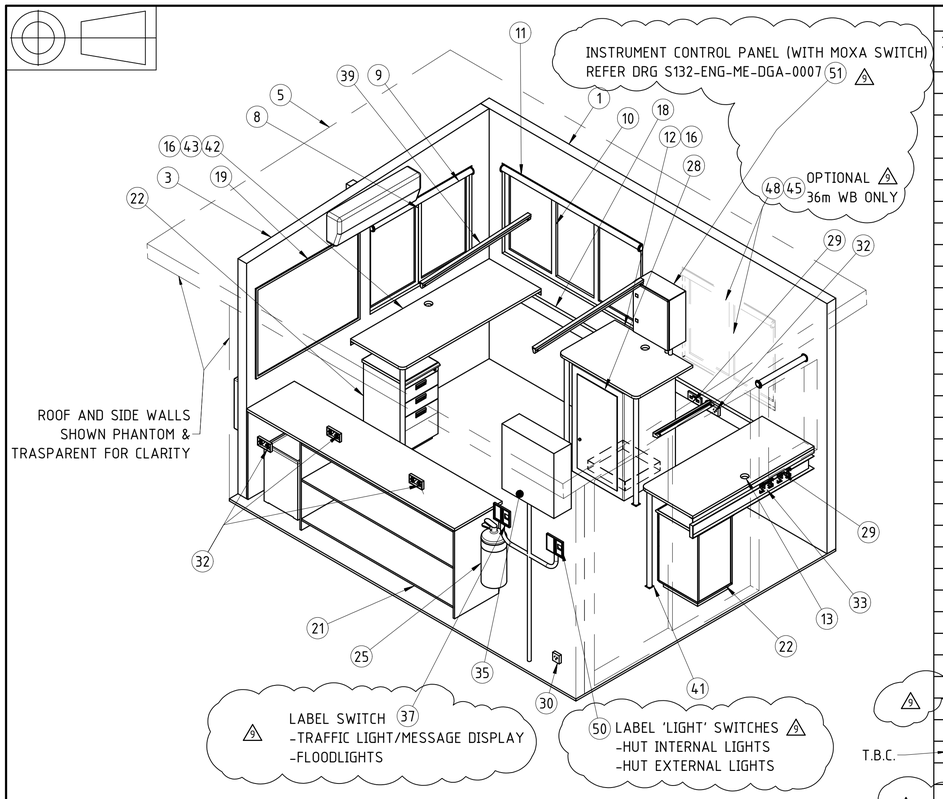
CBH GROUP
LEVEL 6
240 SAINT GEORGE'S TERRACE
PERTH W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942
ABN 29 256 604 947

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
S000-ENG-ST-STD-0003	CONCRETE DESIGN ELECTRICAL GENSET & COMPRESSOR ROOM SLAB						
S000-ENG-EL-SLD-0002	415V GENERATOR DISTRIBUTION BOARD SINGLE LINE DIAGRAM	2	12.12.19	RE-ISSUED FOR USE	BR	DDF	NH
S000-ENG-EL-DTD-0006	UNDERGROUND SERVICES ELECTRICAL INSTALLATION STANDARD DETAILS SHEET 2	1A	11.09.19	RE-ISSUED FOR REVIEW - CABLE PIT ADDED AND CONDUITS MODIFIED	BR	DDF	-
S000-ENG-EL-DTD-0005	UNDERGROUND SERVICES ELECTRICAL INSTALLATION STANDARD DETAILS SHEET 1	1	25.02.19	DISTRIBUTION BOARD DETAILS AND REFERENCE UPDATES	BR	DDF	NH
S000-ENG-EL-DTD-0001	EARTHING ELECTRICAL INSTALLATION STANDARD DETAILS	0	23.09.19	ISSUED FOR USE	SRM	DDF	NH
S000-ENG-EL-DGA-0024	GENERATOR DISTRIBUTION BOARD AND STAND GENERAL ARRANGEMENT	A	31.12.18	ISSUED AS CHECK PRINT AND FOR REVIEW	BR	DDF	-

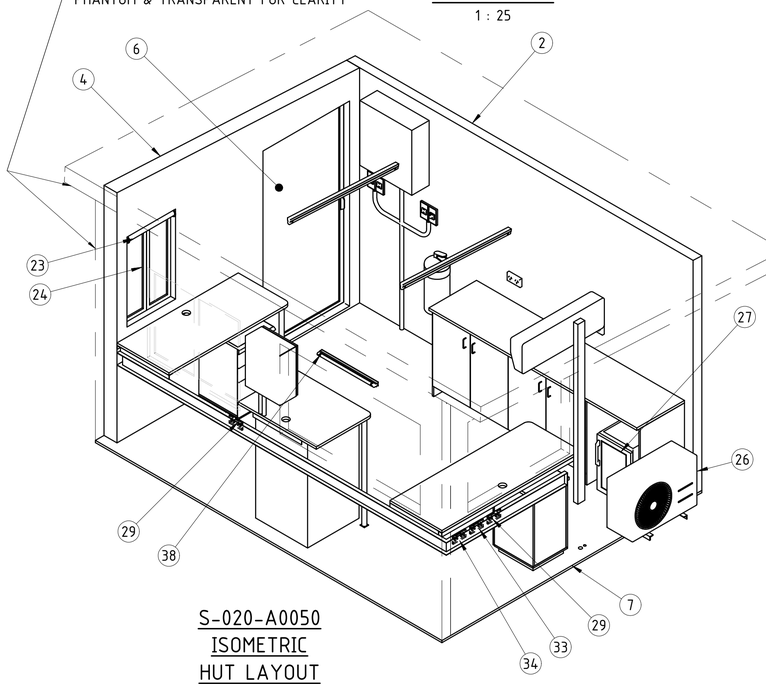
SCALE	N.T.S	
SHEET	A1	
PROJECT	STANDARD	
CONTRACT No		
DRAWN	SRM	06.02.19
CHECKED	DDF	06.02.19
DESIGNED	SRM	06.02.19
DESIGN APPR	DDF	06.02.19
PROJECT APPR	NH	06.02.19

TITLE: TYPICAL DRAWING
GENSET AND COMPRESSOR ROOM
ELECTRICAL EQUIPMENT
GENERAL ARRANGEMENT

DRG No	SHEET	REV.
S000-ENG-EL-DGA-0001	1 OF 1	2



S-020-A0050
ISOMETRIC
HUT LAYOUT
1 : 25



S-020-A0050
ISOMETRIC
HUT LAYOUT
1 : 25

PARTS LIST (PER UNIT)

ITEM No	DESCRIPTION	MATERIAL	WIDTH	LENGTH	QTY	CBH OR SUPPLIER PART No	PROCESS	SAP Code	TO DETAIL	SURFACE TREATMENT	C/SPEC.
1	100THK COLOUR BOND Hi R INSULATED WALL MIN R3.30		2500	4000	1		FITTING	DREQ	No	N/A	N/A
2	100THK COLOUR BOND Hi R INSULATED WALL MIN R3.30		2350	4000	1		FITTING	DREQ	No	N/A	N/A
3	100THK COLOUR BOND Hi R INSULATED WALL MIN R3.30		2500	2800	1		FITTING	DREQ	No	N/A	N/A
4	150THK COLOUR BOND Hi R INSULATED WALL MIN R4.0		2500	2800	1		FITTING	DREQ	No	N/A	N/A
5	150THK COLOUR BOND Hi R INSULATED ROOF MIN R4.0		3505	4800	1		FITTING	DREQ	No	N/A	N/A
6	SECURITY SLIDING DOOR				1	FRONTLINEWINDOWS +J1 2090-1900 1S1F	FITTING	N/A	No	N/A	N/A
7	22THK AQUATITE FLOOR		3000	4000	1		FITTING	DREQ	No	N/A	N/A
8	1175x900 SLIDING WINDOW				1		FITTING	DREQ	No	N/A	N/A
9	2 STAGE GLARE BLIND				1	OPTIONAL	FITTING	DREQ	Yes	N/A	N/A
10	1620x900 WINDOW				1		FITTING	DREQ	No	N/A	N/A
11	2 STAGE GLARE BLIND				1	OPTIONAL	FITTING	DREQ	Yes	N/A	N/A
12	25THK LAMINATE	LAMINATE	655	900	1		FITTING	DREQ	No	N/A	N/A
13	25THK LAMINATE	LAMINATE	600	1400	1		FITTING	DREQ	No	N/A	N/A
15	3PL SIGNAGE	AS3678-250	110	300	1		FAB SHEET	108008	No	N/A	N/A
16	40x40x3 EA SUPPORT	AS3679-300		560	3		FAB CUT	107685	No	N/A	N/A
17	40x40x3 EA SUPPORT	AS3679-300		1400	1		FAB CUT	107685	No	N/A	N/A
18	CABLE DUCT SKIRTING				1	AK150-35	FITTING	DREQ	No	N/A	N/A
19	MAGNETIC WHITE BOARD		900	1200	1		FITTING	DREQ	No	N/A	N/A
20	STAINLESS STEEL LEG				2		FITTING	DREQ	No	N/A	N/A
21	STORAGE DESK				1		FITTING	DREQ	No	N/A	N/A
22	UNDERDESK PENCIL & FILE DRAW				2		FITTING	DREQ	No	N/A	N/A
23	2 STAGE GLARE BLIND				1	OPTIONAL	FITTING	DREQ	Yes	N/A	N/A
24	560x900 SLIDING WINDOW				1		FITTING	DREQ	No	N/A	N/A
25	4.5KG ABE DCP FIRE EXTINGUISHER				1	QUELL - 136178	FITTING	DREQ	No	N/A	N/A
26	AIR CONDITIONER (2.5kw REVERSE CYCLE)				1		FITTING	DREQ	No	N/A	N/A
27	BAR FRIDGE				1		FITTING	DREQ	No	N/A	N/A
28	WIDEBAND COMM CUBICLE				1	CB22WM66BK	FITTING	DREQ	No	N/A	N/A
29	DATA DOUBLE OUTLET	PLASTIC			3	CLIPSAL RJ45 - DATA	FITTING	DREQ	No	N/A	N/A
30	SINGLE 15A IP56 GPO	PLASTIC			1	CLIPSAL 56C315GY	FITTING	DREQ	No	N/A	N/A
32	TWIN GPO	PLASTIC			8	CLIPSAL 2025	FITTING	DREQ	No	N/A	N/A
33	TELEPHONE DOUBLE OUTLET	PLASTIC			2	CLIPSAL RJ45 - TELEPHONE	FITTING	DREQ	No	N/A	N/A
T.B.C. 34	INTERCOM DOUBLE OUTLET	PLASTIC			1	CLIPSAL RJ45 - INTERCOM	FITTING	DREQ	No	N/A	N/A
35	NHP CONCEPT PLUS DISTRIBUTION BOARD IN GREY				1	CPL-24-G	FITTING	DREQ	No	N/A	N/A
⚠9 37	TRAFFIC LIGHT/MESSAGE DISPLAY - INTERNAL 2 WAY & FLOODLIGHT SWITCH - EXTERNAL 3 WAY C/W 2 GANG & MOUNT CLIP	PLASTIC			1	CLIPSAL 2000 SERIES:2000/2Rx1, 30FNM 2 WAY SWITCHx1, 39MAOM 3 WAY SWITCHx1, MOUNT CLIP 2154/2x1	FITTING	DREQ	No	N/A	N/A
38	20W LED LIGHT VANDAL PROOF				2	SUNSL9721/20WDL	FITTING	DREQ	No	N/A	N/A
39	LED LIGHT BATTEN FITTING				2	DAVIS 36W DAVACW435	FITTING	DREQ	No	N/A	N/A
40	APC SMART-UPS 750va LCD				1	RM 2U 230V	FITTING	TBA	No	N/A	
41	STAINLESS STEEL LEG				2		FITTING	DREQ	No	N/A	N/A
42	25THK LAMINATE	LAMINATE	600	1600	1		FITTING	DREQ	No	N/A	N/A
43	40x40x3 EA SUPPORT	AS3679-300		1600	1		FAB CUT	107685	No	N/A	N/A
45	1070x900 WINDOW C/W ULTRA-VISION ES 0.38 FILM: MAX SHGC 0.38		900	1070	1	OPTIONAL FOR 36m WEIGHBRIDGE	FITTING	DREQ	No	N/A	N/A
48	2 STAGE GLARE BLIND				1	OPTIONAL FOR 36m WEIGHBRIDGE	FITTING	DREQ	Yes	N/A	N/A
49	LIGHTING PHOTOELECTRIC CELL				1	CLIPSAL 56SSR/3	FITTING	TBA	Yes	N/A	N/A
⚠9 50	HUT INTERNAL & EXTERNAL LIGHT SWITCHES - 2 x INTERNAL 2 WAY C/W 2 GANG & MOUNT CLIP	PLASTIC	1	1	1	CLIPSAL 2000 SERIES: 30FNM 2 WAY SWITCH x 2, 2000/2R x1, MOUNT CLIP 2154/2 x 1	FITTING	DREQ	No	N/A	N/A
51	ENCLOSURE W/MOUNT M/STEEL IP66 H500 x W400 x D210mm S/DOOR, INSTRUMENTATION CONTROL PANEL	Steel, Mild	400	210	1	NHP MAS0504021R5	FITTING	DREQ	No	LIGHT GREY	N/A

GLASS & BLINDS NOTE:
GLASS IN ALL NON DOOR WALLS TO BE:
INTRUDER LAM GREY: MAX U-VALUE 5.6 AND MAX SHGC 0.61. OR EQUIVALENT

DOOR AND WINDOW IN DOOR WALL TO BE:
INTRUDER LAM GREY: MAX U-VALUE 5.6 AND MAX SHGC 0.61. WITH ULTRA-VISION ES 0.38 FILM: MAX SHGC 0.38 OR EQUIVALENT

OPTION FOR ALL WINDOWS TO BE FITTED WITH AN INTERNAL DOUBLE BLIND;
NON-WINDOW SIDE BLIND: REFLECTIVE BLINDS - GREY/GREY OR EQUIVALENT.
WINDOW-SIDE BLIND: REFLECTIVE BLINDS - SUPER GREY/SILVER OR EQUIVALENT.

GENERAL NOTES (UNLESS NOTED OTHERWISE):
1. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT AS1554 CAT SP.
2. REMOVE ALL BURRS & SHARP EDGES.
3. ASSEMBLY TO BE CONTINUOUS FULLY WELDED
   WITH MINIMUM 3mm FILLET FOR 3mm PLATE
   6mm FILLET FOR 4mm TO <12mm PLATE
   8mm FILLET FOR 12mm TO <20mm PLATE
   10mm FILLET FOR 20mm TO <32mm PLATE
4. ALL FASTENERS TO BE GALV GR.8.8/TB
5. ALL STEEL PLATE & SHEET TO BE MIN. GR.250
6. ALL STRUCTURAL STEEL TO BE MIN. GR.300
7. ALL GALVANISED STEEL SHEET TO AS1397 AND OF GRADE G2Z275 OR EQUIV. ALL H.D GALVANISED FERROUS ARTICLES TO AS/NZS4680

SURFACE COATING:	N/A
COATING SPEC:	N/A
TOTAL MASS:	0.0 kg

HUT NOTES:
1. 1200 x 900 MAGNETIC WHITE BOARD.
2. NO COMMERCIAL SIGNS TO BE PLACED ON BUILDING.
3. ALL CONCRETE WORKS TO BE PERFORMED AS PER DETAILS OUTLINED ON GENERAL ARRANGEMENT AND CONCRETE DRAWINGS.
4. P.V.C. SEGREGATED SKIRTING DUCT (2 CABLE CHANNEL) TO BE SUPPLIED AND FITTED TO ALL INSIDE WALLS WITHIN OFFICE FOR COMPUTER AND COMMUNICATIONS WIRING. CABLE DUCT SYSTEMS AK150-35 OR SIMILAR.
5. REFER TO DRAWING S132-ENG-EL-SLD-0001 FOR ELECTRICAL DISTRIBUTION BOARD DETAILS
6. ALL GPO'S TO BE MARKED FOR RESPECTIVE CIRCUIT BREAKER CIRCUIT IDENTIFICATION WITH ENGRAVED LABELS.
7. REFER TO S132-ENG-EL-SCH-0001 FOR UPS WIRING
8. ALL ELECTRICAL EQUIPMENT TO BE INSTALLED BY OFFICE MANUFACTURER.
9. COMMS OUTLET CABLE SHALL BE TERMINATED AT OUTLET.
10. FIXINGS NOT TO BE REMOVABLE FROM OUTSIDE OF BUILDING.
11. ALL FURNISHINGS AND FIXTURES TO BE SUPPLIED BY HUT MANUFACTURER, EXCLUDING I.T. EQUIPMENT, SEE PART LIST FOR DETAIL.
12. SUPPLIER TO INSTALL ON SITE INCLUDING COMPLEXING MATERIALS.
13. ALL COMMUNICATION CABLES TO BE TERMINATED AT A PATCH PANEL OR F.O.B.O.T
14. AIRCONDITIONING REFRIGERATION GAS BE HYDROFLUOROCARBON (HFC) R410a

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE, PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

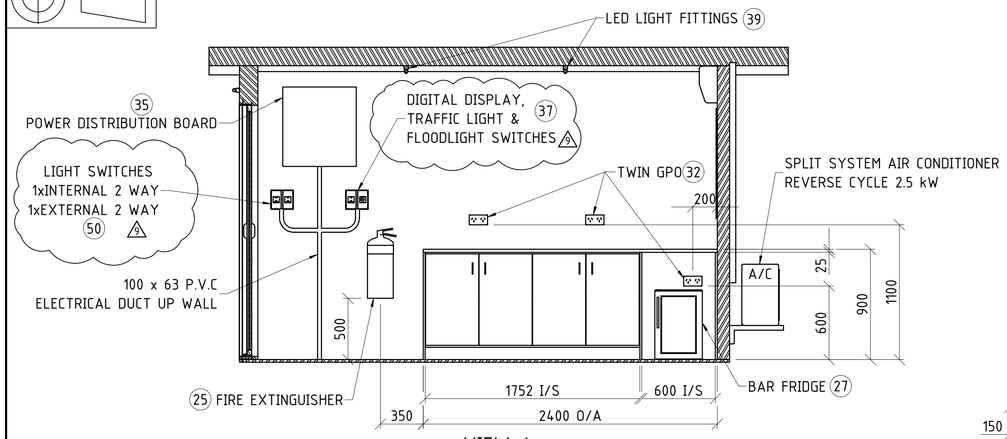
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
9	06-05-2020	UPS REMOVED, CABINET,REF. & LABEL NOTE ADDED	AME	CL	CL
8	17.03.2020	FULL UPDATE -ELECTRICAL, WINDOWS, BLINDS	AME	CL,GH	PJC
7	15.09.2017	ITEM 39, GPO-UPS ADDED	VP	SM	DF
6	06.09.2017	COMMS CABINET PART NUM ADDED	TTW	JH	CBH
5	11.04.2017	FIRE EXTINGUISHER ADDED	TTW	DD	DD
4	18.01.2017	HOLE IN FLOOR ADDED FOR LOAD CELL CABLE	AME	JW	CBH
3	18.03.2016	NEW SLIDE DOOR ADDED	TTW	VP	MD
2	30.07.2015	REFERENCE DRAWINGS REMOVED	TTW	JB	CBH
1	18.11.2014	NOTES ADDED, WINDOW CHANGED	TTW	VP	CBH
0	2/12/2014	ISSUED FOR CONSTRUCTION	TU	JR	CBH

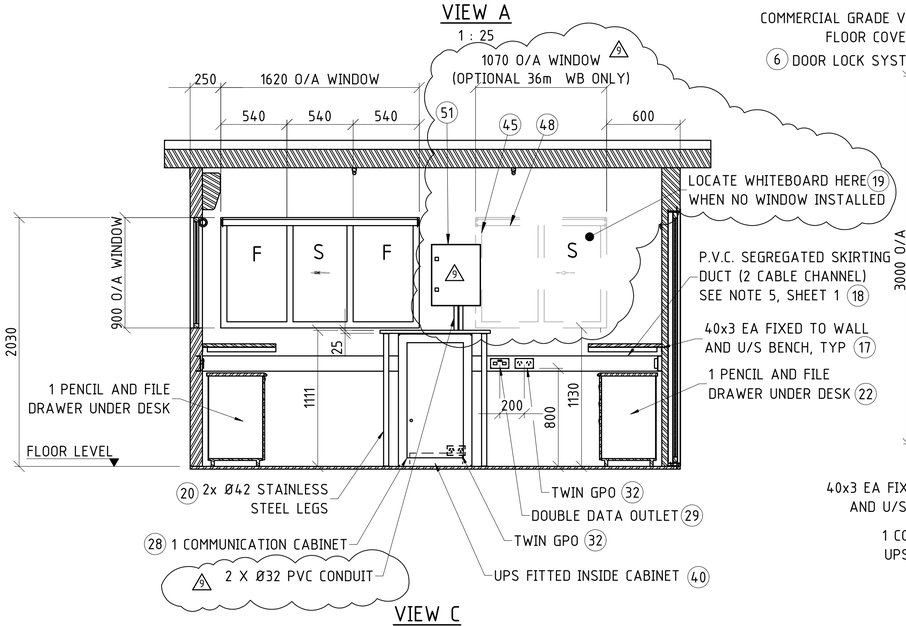
DRAWN	TU	2/12/2014
CHECKED	JR	13/02/2014
ENGINEER	CBH	14/02/2014
APPROVED	CBH	14/02/2014

DRAWING TITLE
WEIGHBRIDGE
AUSTRALIAN STEEL
HUT LAYOUT
ISOMETRICS AND PARTS LIST

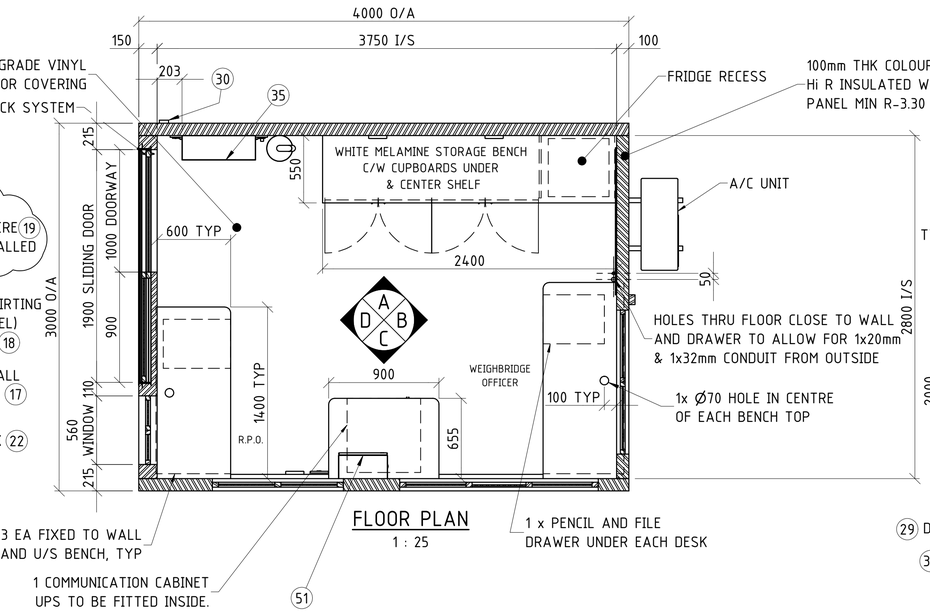
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD DRAWING
DRAWING No: S-020-A0050
SHEET: 1 OF 2
REV.: 9



VIEW A
1 : 25

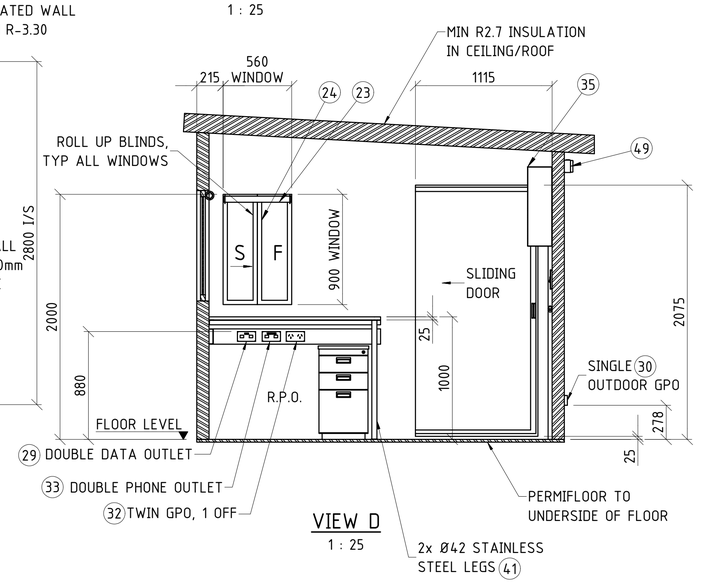


VIEW C
1 : 25

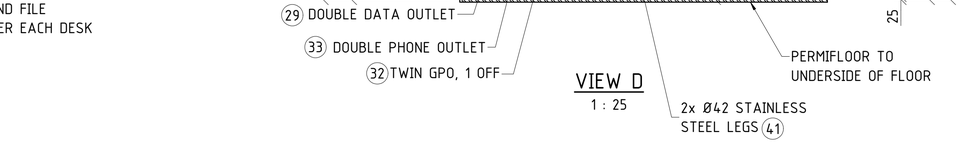


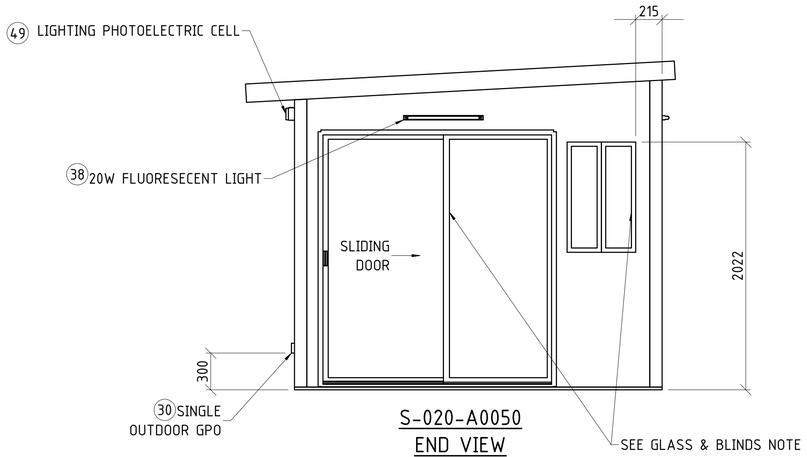
FLOOR PLAN
1 : 25

VIEW B
1 : 25

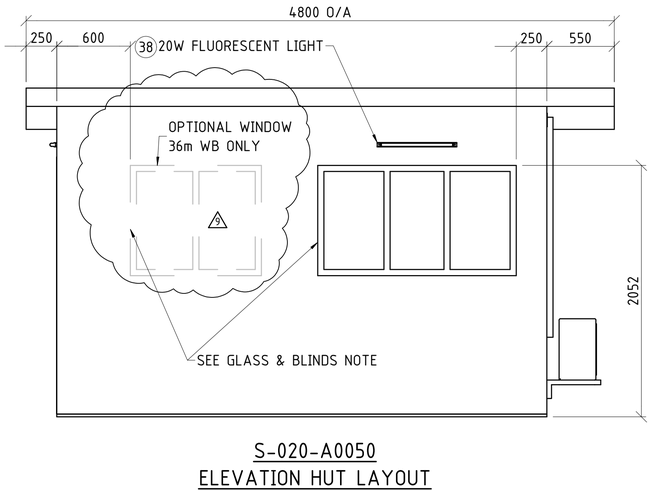


VIEW D
1 : 25

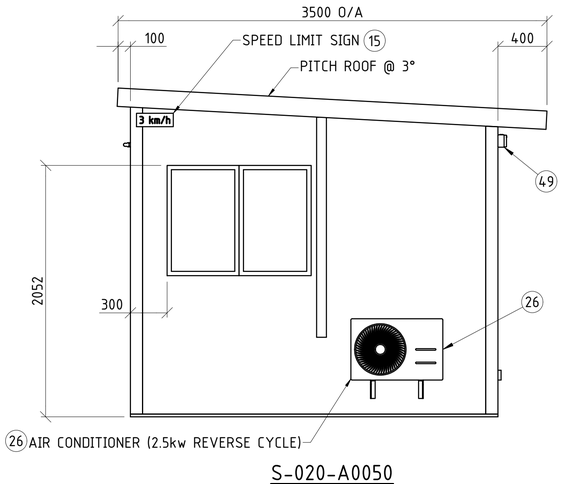




S-020-A0050
END VIEW



S-020-A0050
ELEVATION HUT LAYOUT
1 : 25



S-020-A0050
END VIEW

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
9	06-05-2020	UPS REMOVED, CABINET,REF. & LABEL NOTE ADDED	AME	CL	CL
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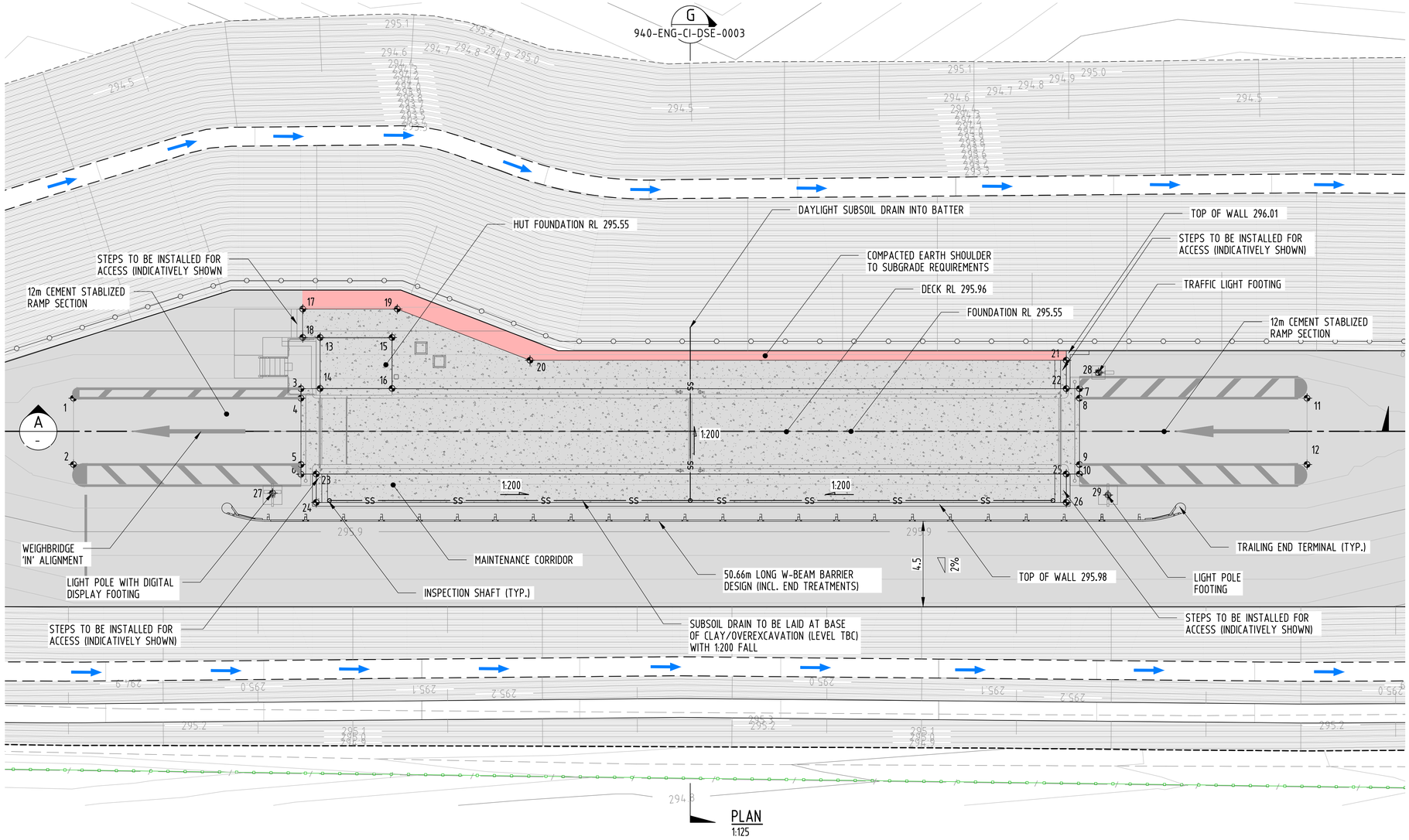
2	30.07.2015	REFERENCE DRAWINGS REMOVED	TTW	JB	CBH
1	18.11.2014	NOTES ADDED, WINDOW CHANGED	TTW	VP	CBH
0	2/12/2014	ISSUED FOR CONSTRUCTION	TU	JR	CBH

DRAWN	TU	2/12/2014
CHECKED	JR	13/02/2014
ENGINEER	CBH	14/02/2014
APPROVED	CBH	14/02/2014

DRAWING TITLE
WEIGHBRIDGE
AUSTRALIAN STEEL
HUT LAYOUT
GENERAL ARRANGEMENT

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD DRAWING
DRAWING No: S-020-A0050
SHEET: 2 OF 2
REV.: 9



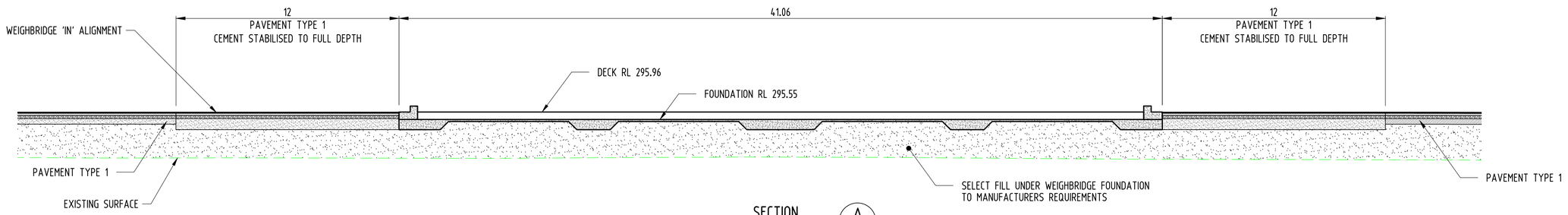
PLAN
1:125

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001

WEIGHBRIDGE IN SETOUT POINTS

POINT	EASTING (m)	NORTHING (m)	TOP	TOC
1	49303.568	237975.729	295.960	-
2	49300.559	237977.517	295.960	-
3	49297.868	237965.157	295.960	295.550
4	49297.438	237965.413	295.960	295.550
5	49294.429	237967.201	295.960	295.550
6	49293.991	237967.461	295.960	295.550
7	49276.894	237929.858	295.960	295.550
8	49276.464	237930.114	295.960	295.550
9	49273.455	237931.901	295.960	295.550
10	49273.026	237932.157	295.960	295.550
11	49270.335	237919.797	295.960	-
12	49267.326	237921.585	295.960	-
13	49299.673	237962.910	295.907	295.550
14	49297.360	237964.284	295.960	295.550
15	49297.737	237959.652	-	295.550
16	49295.425	237961.026	-	295.550
17	49301.430	237962.931	295.877	295.520
18	49300.141	237963.697	295.907	295.550
19	49298.884	237958.645	295.877	295.520
20	49292.987	237954.007	295.931	295.520
21	49278.541	237929.694	295.931	295.520
22	49277.252	237930.460	295.960	295.550
23	49293.590	237966.768	295.960	295.550
24	49292.301	237967.534	295.931	295.570
25	49273.383	237932.759	295.960	295.550
26	49272.094	237933.525	295.931	295.570
27	49293.901	237969.259	295.941	295.991
28	49277.114	237928.564	295.944	295.994
29	49271.305	237931.434	295.939	295.989



SECTION A
1:125

APPROVED FOR CONSTRUCTION

1:125 @ A1
1:250 @ A3
0 2 4 6 8 10 12 m

CBH GROUP
ABN 29 256 604 947

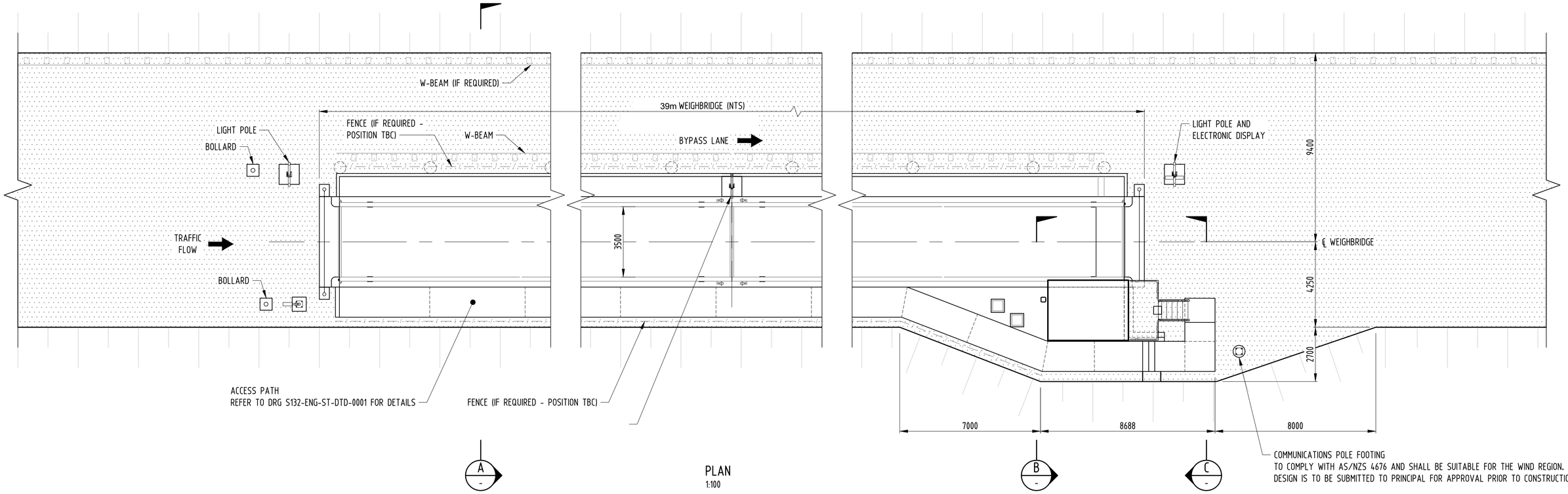
SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

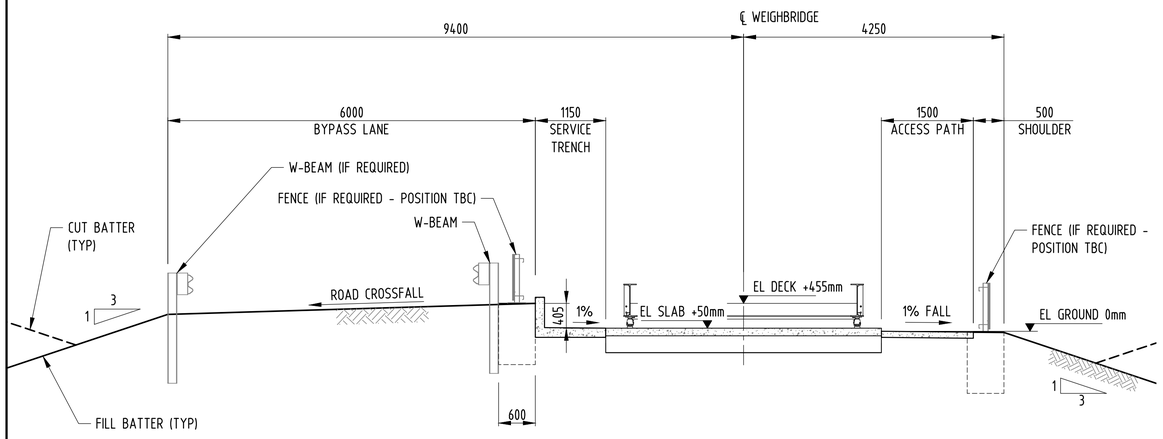
SCALE	H 1:125	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
WEIGHBRIDGE IN 39m PLAN, SECTION & SETOUT DETAILS
SHEET 1 OF 1

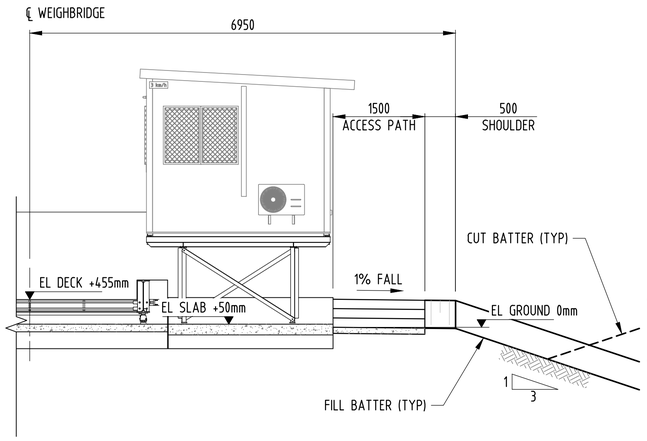
ORG No	SHEET	REV.
940-ENG-CI-DAL-0004	1 OF 1	0



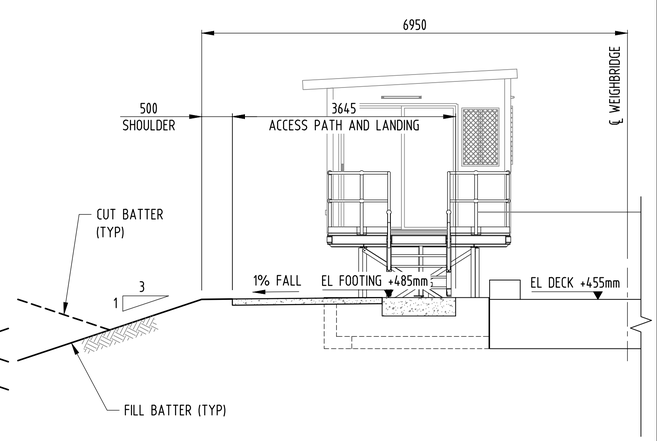
PLAN
1:100



SECTION A
1:50



SECTION B
1:50



SECTION C
1:50

ISSUED FOR CONSTRUCTION
DATE 14.12.21

1:50 @ A1
1:100 @ A3
0 1000 2000 3000 4000 5000 mm

1:100 @ A1
1:200 @ A3
0 2000 4000 6000 8000 10000 mm

CBHGROUP
ABN 29 256 604 947
CBH GROUP
LEVEL 6
240 ST GEORGE'S TERRACE
PERTH W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
S132-ENG-MD-DGA-0001	METTLER TOLEDO WEIGHBRIDGE TYPE 1 - GENERAL ARRANGEMENT	0	14.12.21	ISSUED FOR CONSTRUCTION	PF	YKY	BC

SCALE: AS SHOWN
SHEET: A1
PROJECT: STANDARD
CONTRACT No

DRAWN	P. Forrest	14.12.21
CHECKED	Y.K. Yip	14.12.21
PROJECT APPR	B. Crane	21.01.22

TITLE: TYPICAL DRAWING
WEIGHBRIDGE TYPE 1 - SINGLE WAY & MANNED
EARTHWORKS FORMATION - SERVICE TRENCH OPTION
PLAN AND SECTIONS

ORG No: S132-ENG-CI-DAL-0001
SHEET: 1 OF 1
REV.: 0

INSTALLATION NOTES:

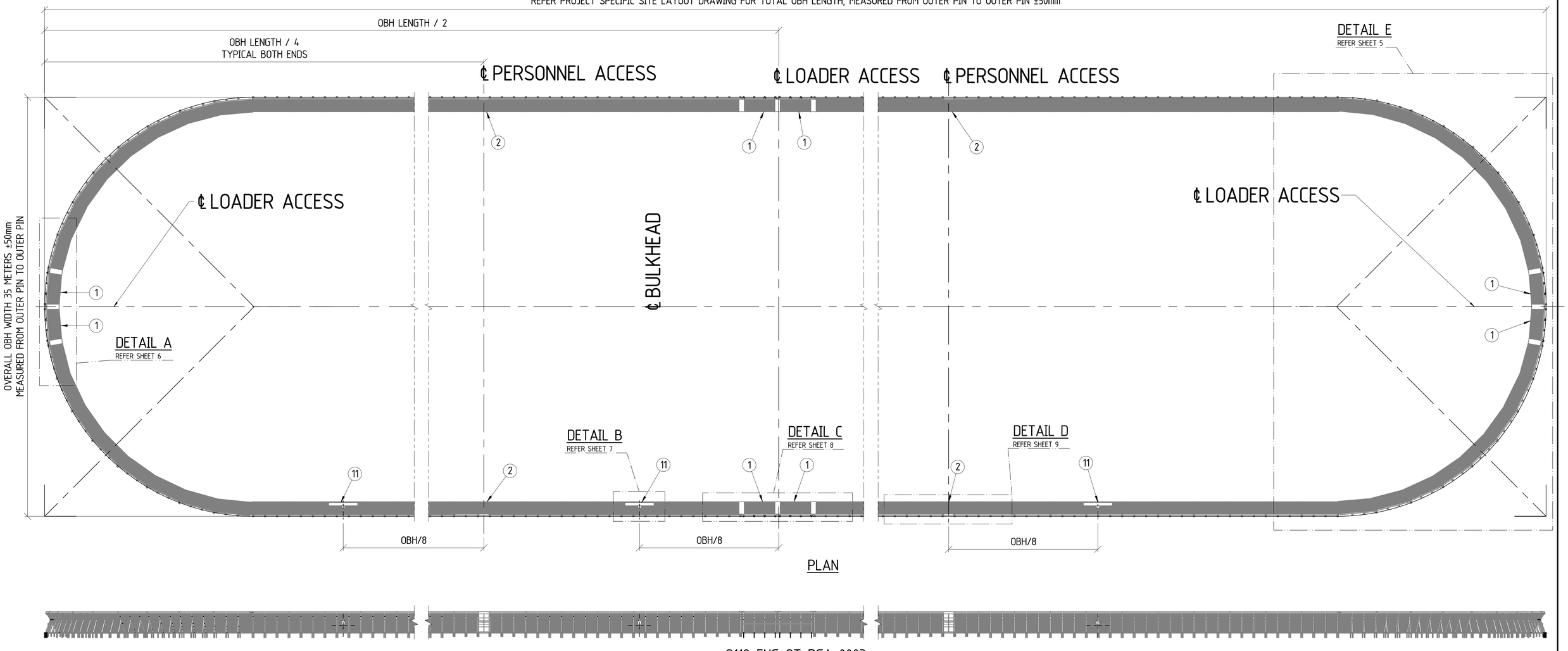
1. OBH LENGTH AND WIDTH DIMENSIONS ARE SPECIFIED FROM REAR PIN TO THE OPPOSITE REAR PIN. REFER PROJECT SPECIFIC SITE LAYOUT DRAWING FOR DIMENSIONS.
2. TOLERANCE FOR OVERALL OBH WIDTH AND LENGTH ARE +/- 50MM. TOLERANCE FOR FRAME SPACING +/- 10mm.
3. NOTE DIFFERENT ANCHORING DETAILS FOR DOOR/GATES AND FRAMES EITHER SIDE OF BULKHEAD OPENINGS. REFER ANCHORING DETAILS ON SHEETS 2 AND 3.
4. NOTE ADDITIONAL Z-CAPPING, WOOD AND CLADDING TRIMMING REQUIRED AT GATE JOINS. REFER SHEETS 6 AND 8 FOR DETAILS.
5. TYPICAL CLADDING OVERLAP IS 200mm, CENTERERED OVER THE CENTERLINE OF THE STRUT, FOR ALL JOINS EXCEPT AT GATE AND DOOR JOINS. REFER SHEETS 6 - 9.
6. ALL Z-CAPPING MUST BE ALIGNED AS ACCURATELY AS POSSIBLE. ANY MISALIGNMENT IN Z-CAPPING WILL TEAR THE OBH TARP. REFER NOTES ON SHEETS 6, 8 AND 9 FOR TOLERANCES.
7. FOUR PERSONNEL ACCESS DOORS TO BE INSTALLED AS SHOWN. TWO INSTALLED EACH SIDE AT MIDPOINTS BETWEEN END OF OBH AND CENTRE BULKHEAD OPENING.
8. THREE FUMIGATION T-PIECES TO BE INSTALLED ON SAME SIDE AS ELECTRICAL CONNECTION. REFER SHEETS 1 AND 7 FOR INSTALLATION DETAILS. REFER CBH DRAWING S119-ENG-ME-DER-0001 FOR VENDOR DRAWING OF T-PIECE.
9. DRAWING DEPICTS TYPICAL OBH SIZE OF 35M WIDE BY 300M LONG AND ASSOCIATED STANDARDISED REQUIRED QUANTITIES OF FUMIGATION TEES, PERSONAL ACCESS DOORS AND FRONT END LOADER ACCESS GATES. SITE SPECIFIC OBH REQUIREMENTS SHALL BE CONFIRMED WITH THE NOMINATED CBH REPRESENTATIVE PRIOR TO CONSTRUCTION.
10. BULKHEAD CONTENTS ARE INTENDED TO BE FUMIGATED IN A SEALED ENVIRONMENT BY USE OF WALL CANVICON AND OVER STACK TARPS - THE CONTRACTOR SHALL MINIMISE ANY MEANS WHICH COULD DETRIMENTALLY AFFECT THE SEALING CAPABILITY, SUCH AS SHARP EDGES THAT COULD CUT TARP.

PARTS LIST (PER UNIT)

ITEM No	DESCRIPTION	WIDTH	LENGTH	QTY	CBH OR SUPPLIER PART No	PROCESS	SAP Code	MASS Kg	TO DETAIL
1	FRONT END LOADER ACCESS GATE			REFER NOTE	S119-ENG-ST-ASY-0034	FIELD FIT	N/A	184.4	Yes
2	PERSONNEL ACCESS DOOR			REFER NOTE	S119-ENG-ST-ASY-0017	FITTING	N/A	17.1	Yes
3	STRAIGHT PIN STRUT ASSEMBLY			REFER NOTE	S119-ENG-ST-ASY-0004	FITTING	N/A	36.4	Yes
4	SPIRAL PIN STRUT ASSEMBLY			REFER NOTE	S119-ENG-ST-ASY-0005	FITTING	N/A	36.2	Yes
5	CUSTOM ORB ZINC ALUME 0.42mm BMT 550 MPa MIN. (YIELD)	762	3200	REFER NOTE	S119-ENG-ST-PRT-0010	FITTING	DREQ	1.3	No
6	DIA 20 STRAIGHT PIN ANCHOR		420	REFER NOTE	S-014-A0000	FIELD KIT	DREQ	1.1	Yes
7	SPIRAL PIN ANCHOR		300	REFER NOTE	S119-ENG-ST-DER-0052	FITTING	DREQ	0.8	Yes
8	Z CAPPING 1.6PL PGI	300	3000	REFER NOTE	S119-ENG-ST-PRT-0011	FAB SHEET	108015	11.4	Yes
9	TIMBER SAWN KARRI STRUC3 75mmx50mmx3m	75	3000	REFER NOTE	S119-ENG-ST-PRT-0014	FITTING	108594	6.2	No
10	TARP CLAMP 6PL	130	257	REFER NOTE	S119-ENG-ST-PRT-0012	FAB PROFILE	107901	1.6	Yes
11	FUMIGATION TEE PIECE			REFER NOTE	S119-ENG-ME-DER-0001	FITTING	N/A		Yes
12	RUBBER STRIP 450mm WIDE, 8mm THICK	450	2050	REFER NOTE	S119-ENG-ST-PRT-0048	FIELD KIT	DREQ	6.9	No
13	M10 x 120 GALV BOLT GR8.8 (50mm THREAD Min.)			REFER NOTE		FIELD KIT	DREQ	0.1	No
14	M10 GALV. NUT			REFER NOTE		FIELD KIT	DREQ	0.0	No
15	M10 GALV FW			REFER NOTE		FIELD KIT	DREQ	0.0	No
16	METAL TEK SCREW, HEX HEAD, 14g-20x22mm, CLASS 4, WITH SEAL			REFER NOTE		FIELD KIT	DREQ	0.0	No
17	METAL TEK SCREW, HEX HEAD, 14g-20x45mm, CLASS 4, WITH SEAL			REFER NOTE		FIELD KIT	DREQ		No
18	NOVALAST LTM 151			REFER NOTE		FIELD KIT	DREQ		No
19	BOSTIK SEAL AND FLEX 1			REFER NOTE		FIELD KIT	DREQ		No

** QTY NOTE: TO CALCULATE EXACT ORDER QUANTITYS, REFER TO THE 'CBH OBH PROCUREMENT CALCULATOR'-S119-ENG-ST-CAL-0001

REFER PROJECT SPECIFIC SITE LAYOUT DRAWING FOR TOTAL OBH LENGTH, MEASURED FROM OUTER PIN TO OUTER PIN ±50mm



PLAN

S119-ENG-ST-DGA-0003

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

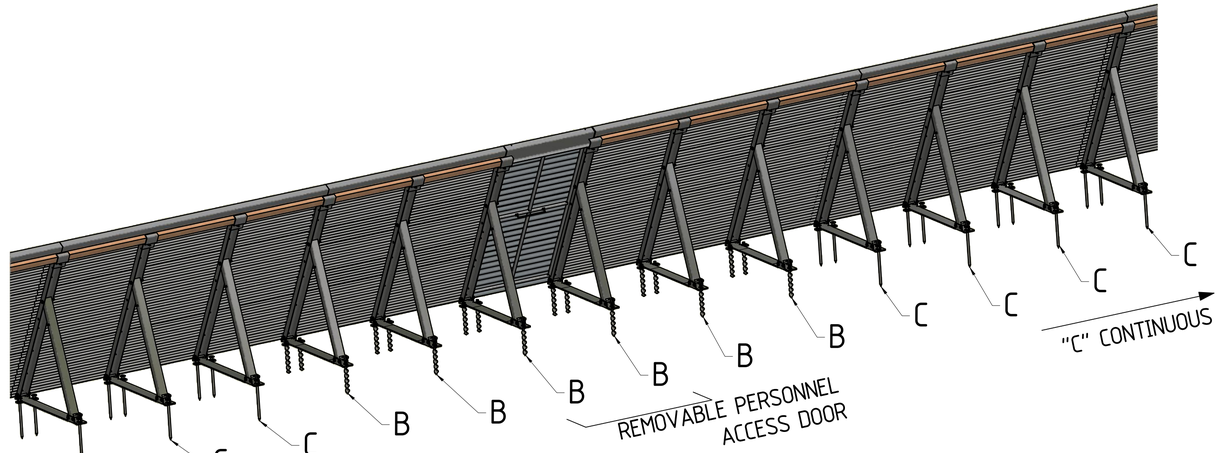
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
0	10/06/2020	COPIED FROM S-119, ISSUED FOR CONSTRUCTION	SCR	LS	NH

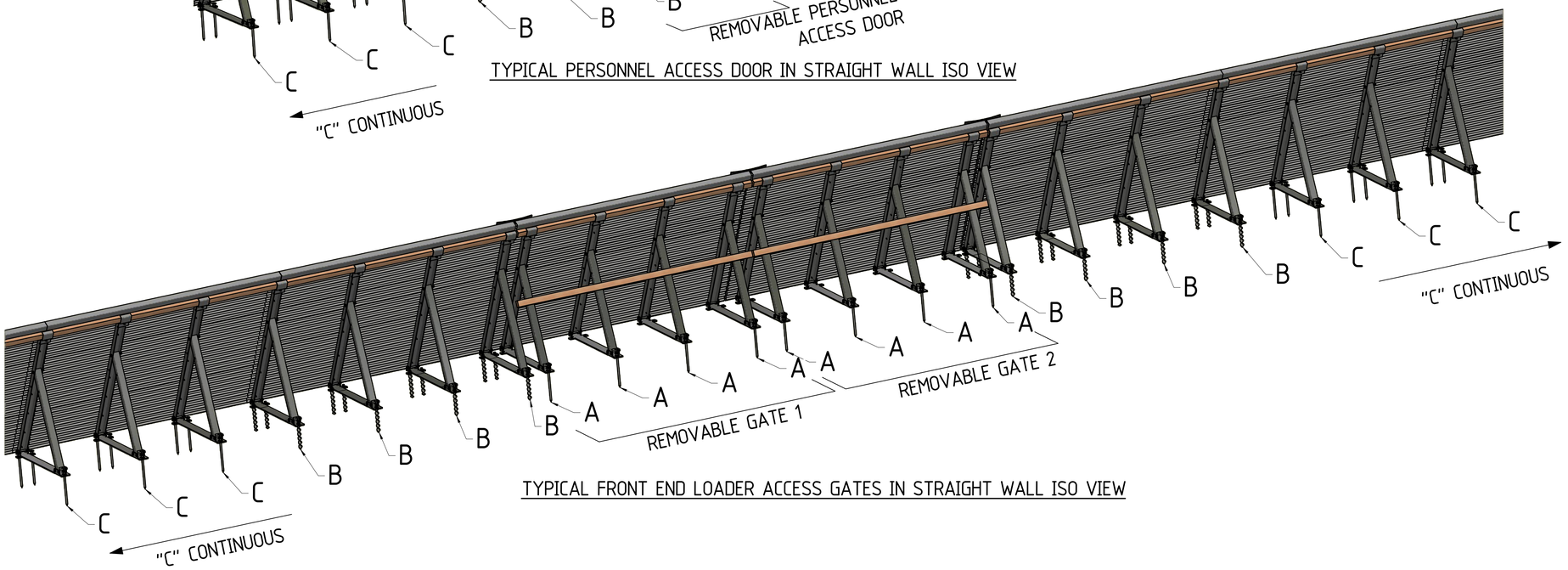
DRAWN	SCR	10/06/2020
CHECKED	LS	10/06/2020
ENGINEER	BC	11/06/2020
APPROVED	NH	11/06/2020

DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
OVERALL LAYOUT

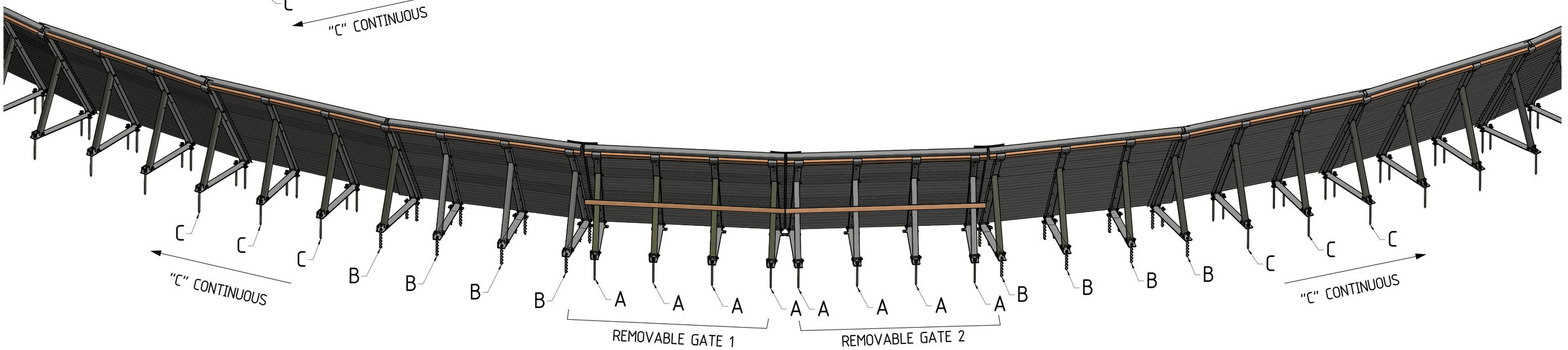
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 1 OF 9
REV: 0



TYPICAL PERSONNEL ACCESS DOOR IN STRAIGHT WALL ISO VIEW



TYPICAL FRONT END LOADER ACCESS GATES IN STRAIGHT WALL ISO VIEW



TYPICAL FRONT END LOADER ACCESS GATES IN CURVED WALL ISO VIEW

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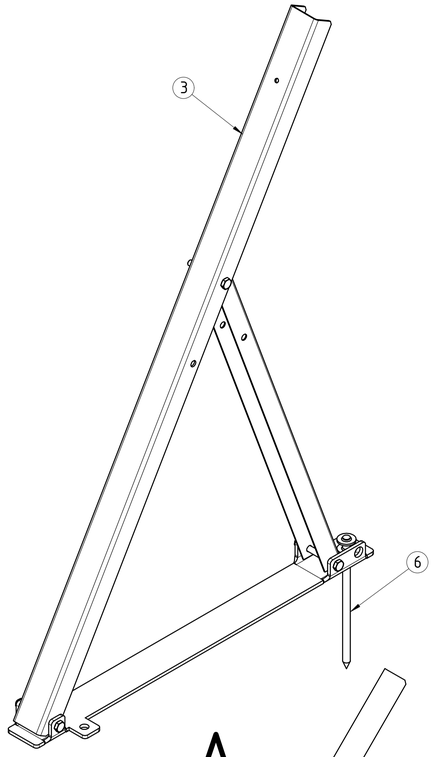
APPROVED	NH	11/06/2020

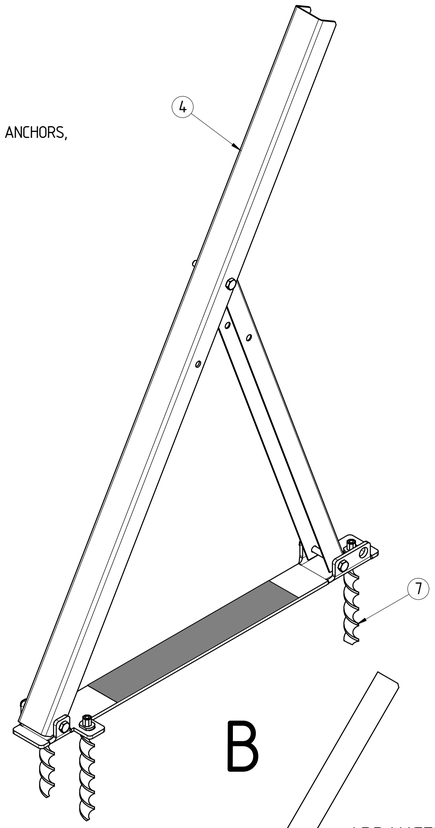
DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
ANCHORINGS LAYOUT

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 2 OF 9
REV: 0



A

NOTES:
REMOVAL TOOL REQUIRED FOR SPIRAFIX ANCHORS,
M22 SPANNER/SOCKET,
HANDLE LENGTH TO SUIT CONDITIONS.



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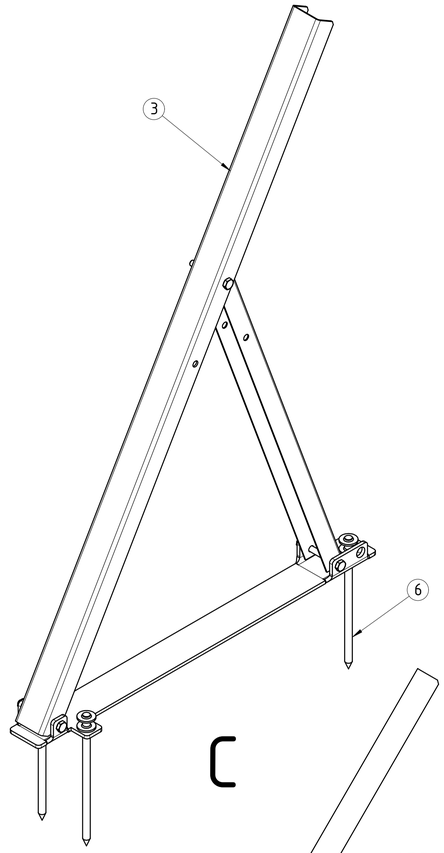


C

ARRANGEMENT 'A' NOTES:

- PURPOSE: ARRANGEMENT 'A' IS USED IN THE FRONT END LOADER ACCESS GATE ASSEMBLY (S119-ENG-ST-ASY-0034). ONLY 1 STRAIGHT PIN ANCHOR IS TO BE INSTALLED AS THE DOOR IS TO BE REMOVABLE.
- STRUT TYPE: STRAIGHT PIN STRUT
- PIN TYPE: STRAIGHT PIN ANCHOR
- PIN QUANTITY: 1

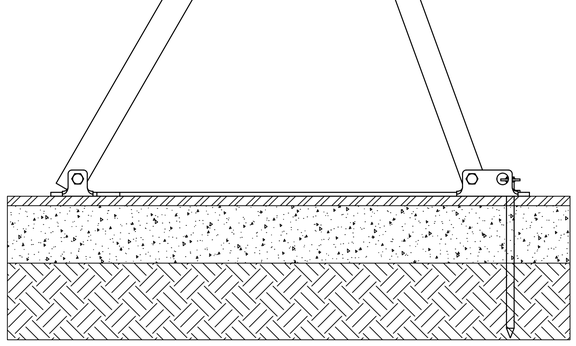
ARRANGEMENT 'B' NOTES:

- PURPOSE: ARRANGEMENT 'B' IS USED 4 STRUTS EITHER SIDE OF THE FRONT END LOADER ACCESS GATES AND 3 STRUTS EITHER SIDE OF PERSONNEL ACCESS DOORS, AS WHEN THE GATES/DOORS ARE REMOVED THE SURROUNDING STRUTS EXPERIENCE HIGHER WIND LOADS.
- STRUT TYPE: SPIRAL PIN STRUT
- PIN TYPE: SPIRAL PIN ANCHOR
- PIN QUANTITY: 3

ARRANGEMENT 'C' NOTES:

PURPOSE: ARRANGEMENT 'C' IS USED IN ALL LOCATIONS, OTHER THAN WHERE ARRANGEMENT 'A' AND 'B' ARE USED

- STRUT TYPE: STRAIGHT PIN STRUT
- PIN TYPE: STRAIGHT PIN ANCHOR
- PIN QUANTITY: 3



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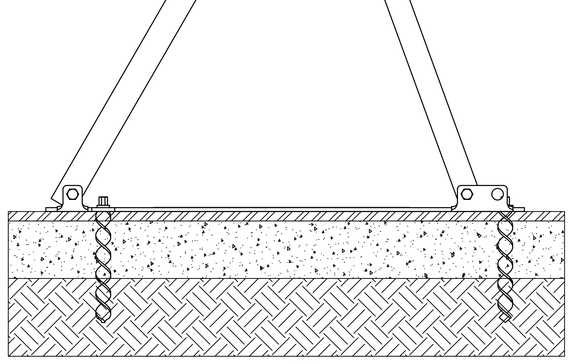

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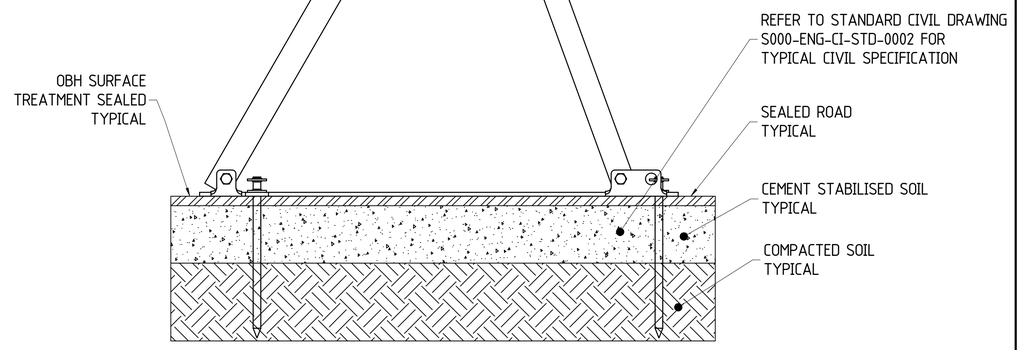

C

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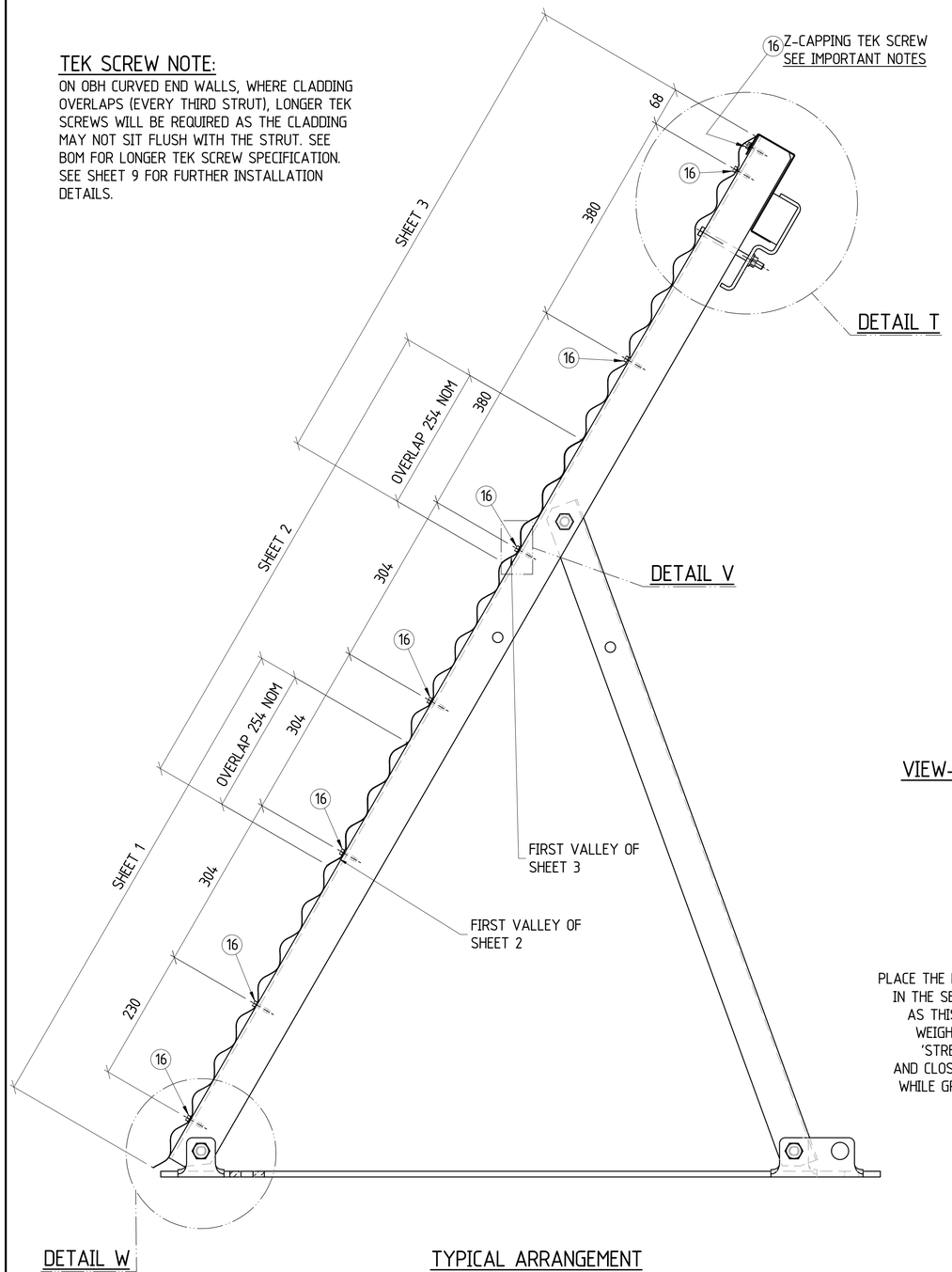
APPROVED	NH	11/06/2020

DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
TYPICAL ANCHORINGS

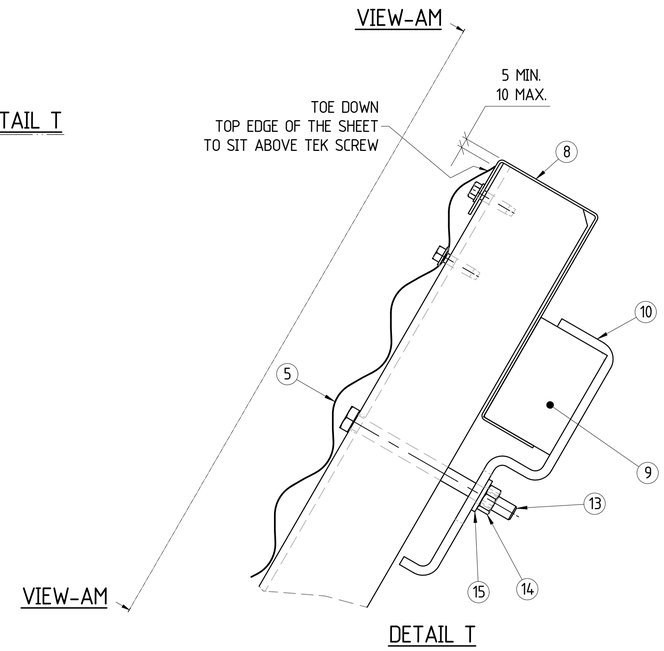
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 3 OF 9
REV.: 0

TEK SCREW NOTE:

ON OBH CURVED END WALLS, WHERE CLADDING OVERLAPS (EVERY THIRD STRUT), LONGER TEK SCREWS WILL BE REQUIRED AS THE CLADDING MAY NOT SIT FLUSH WITH THE STRUT. SEE BOM FOR LONGER TEK SCREW SPECIFICATION. SEE SHEET 9 FOR FURTHER INSTALLATION DETAILS.



TYPICAL ARRANGEMENT

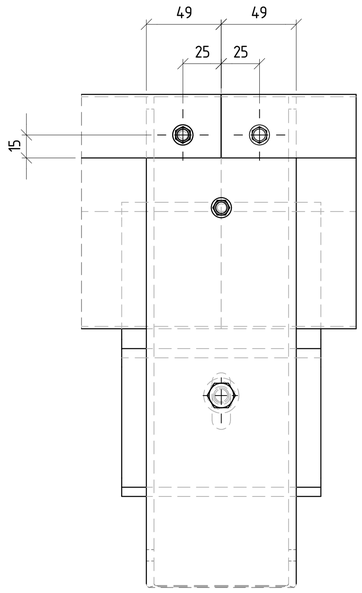


DETAIL T

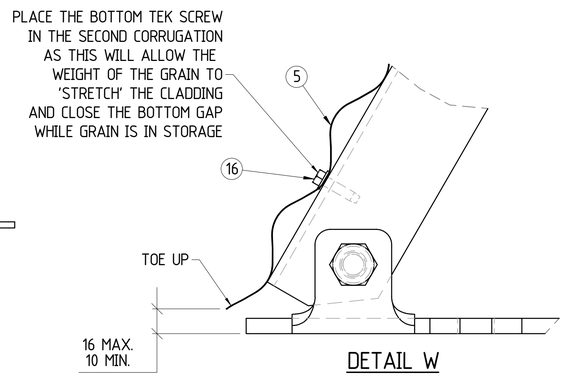
IMPORTANT NOTE:

TYPICAL ALL JOINTS, EXCEPT DOOR/GATE JOINS:

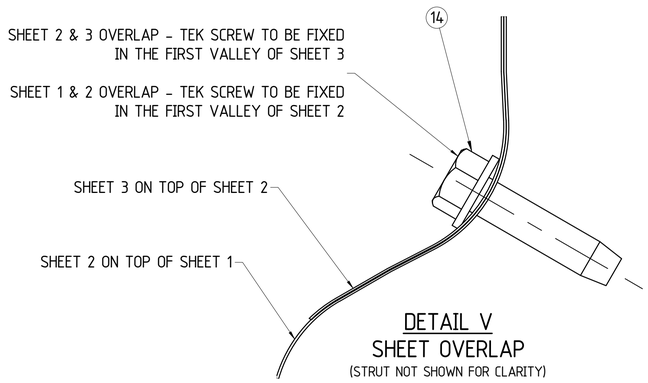
- 'Z' CAPPING SHALL BUTT JOIN TO THE CENTRE LINE OF THE STRUT.
- ALL Z CAPPING MUST BE ALIGNED AS ACCURATELY AS POSSIBLE. ANY MIS-ALIGNMENT IN THE 'Z' CAPPING WILL CREATE SHARP EDGES, WHICH MAY DAMAGE THE OBH TARP. MAXIMUM 'Z' CAPPING MISALIGNMENT TO BE 2mm IN ALL DIRECTIONS.
- WHERE 'Z' CAPPING BUTT JOINS OVER A STRUT, FIX 'Z' CAP WITH 2 x TEK SCREWS, ONE IN EACH 'Z' CAP (SHOWN BELOW)
- WHERE 'Z' CAPPING PASSES OVER A STRUT, FIX 'Z' CAP WITH 1 x TEK SCREW, INLINE WITH THE CENTRE OF THE STRUT.



VIEW-AM
(CLADDING NOT SHOWN FOR CLARITY)



DETAIL W



DETAIL V
SHEET OVERLAP
(STRUT NOT SHOWN FOR CLARITY)

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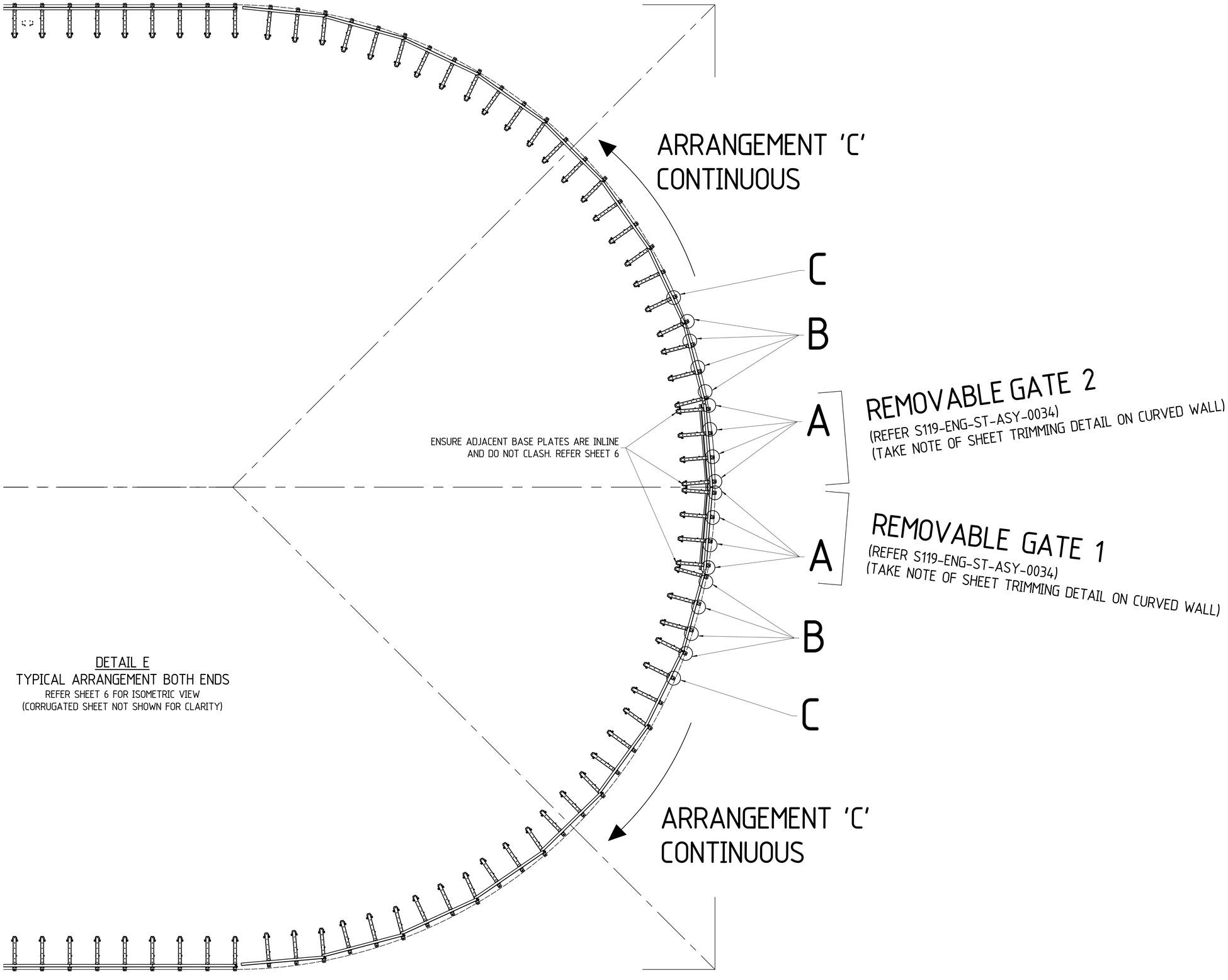
DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
TYPICAL WALL ASSEMBLY

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 4 OF 9
REV.: 0



DETAIL E
TYPICAL ARRANGEMENT BOTH ENDS
REFER SHEET 6 FOR ISOMETRIC VIEW
(CORRUGATED SHEET NOT SHOWN FOR CLARITY)

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APPROVED	NH	11/06/2020

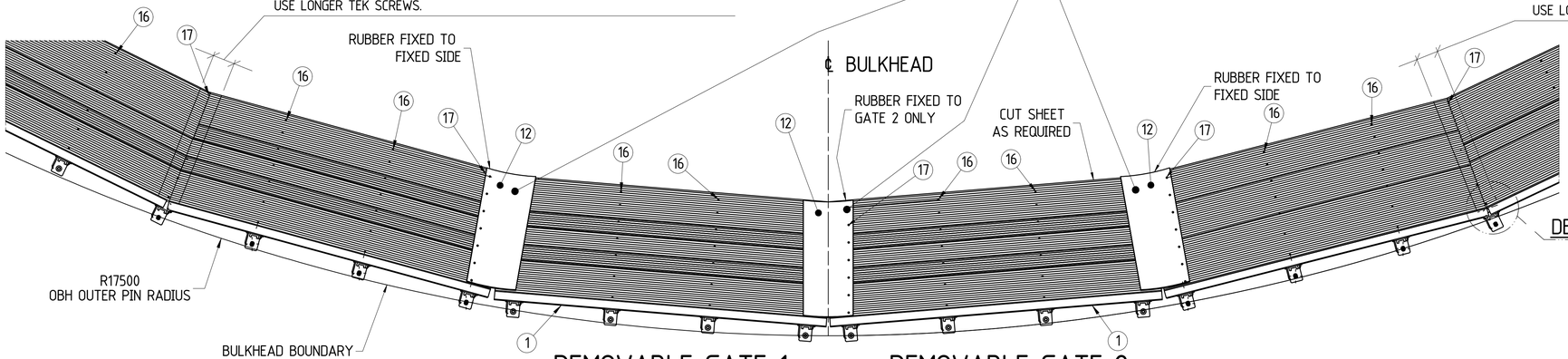
DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
TYPICAL CURVED END WALL LAYOUT

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 5 OF 9
REV.: 0

TYPICAL RUBBER FIXINGS, BOTH ENDS

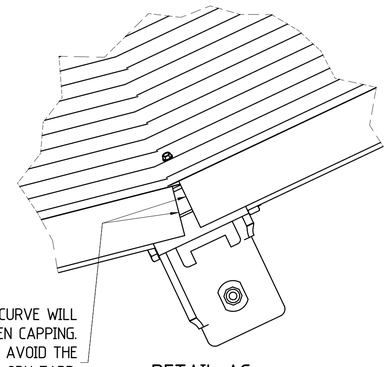
- ATTACH CONVEYOR BELT OVER JOINTS (SEE BOM FOR BELT DETAILS)
- FIX RUBBER USING 45MM LONG TEK SCREWS, USING 7 TEK SCREWS PER RUBBER STRIP

■ 200 CLADDING OVERLAP, CENTERED OVER THE CENTRELINE OF THE STRUT TYPICAL ALL CLADDING, EXCEPT OBH GATE/DOOR JOINS
■ ON CURVED ENDS, WHERE CLADDING OVERLAPS, USE LONGER TEK SCREWS.



■ 200 CLADDING OVERLAP, CENTERED OVER THE CENTRELINE OF THE STRUT TYPICAL ALL CLADDING, EXCEPT OBH GATE/DOOR JOINS
■ ON CURVED ENDS, WHERE CLADDING OVERLAPS, USE LONGER TEK SCREWS.

DETAIL AC



FITTING THE Z-CAPPING TO A CURVE WILL CREATE A GAP BETWEEN CAPPING. MINIMISE GAP AS MUCH AS POSSIBLE TO AVOID THE SHARP EDGES RIPPING THE OBH TARP. VERTICAL AND HORIZONRAL MISALIGNMENT SHOULD BE A MAXIMUM OF 2MM.

DETAIL AC

DETAIL A

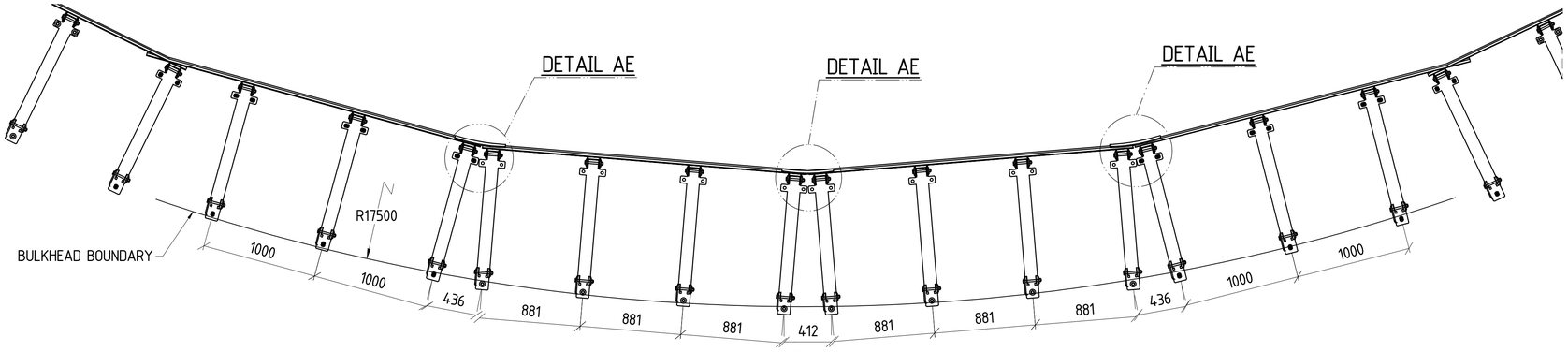
FRONT END LOADER ACCESS GATES IN CURVED WALL
TYPICAL BOTH ENDS

CLADDING, Z-CAPPING AND WOOD, ALL TRIMMED TO SUIT ON BOTH SIDES TO CREATE A BUTT JOIN BETWEEN THE FIXED WALL AND THE REMOVABLE GATE. REFER S119-ENG-ST-ASY-0003 FOR CLADDING TRIMMING DETAIL. MAX ALLOWABLE GAP BETWEEN BUTT JOINTS IS 20mm - TYPICAL ALL GATES

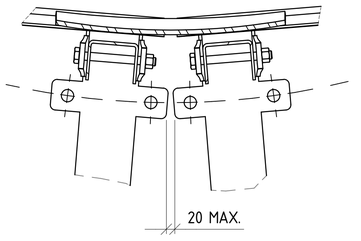
20 MAX. GAP TYPICAL ALL ACCESS WAYS

CLADDING, Z-CAPPING AND WOOD, ALL TRIMMED TO SUIT ON BOTH SIDES TO CREATE A BUTT JOIN BETWEEN THE FIXED WALL AND THE REMOVABLE GATE. REFER S119-ENG-ST-ASY-0003 FOR CLADDING TRIMMING DETAIL. MAX ALLOWABLE GAP BETWEEN BUTT JOINTS IS 20mm - TYPICAL ALL GATES

ELEVATION



SECTION B
FRAMES FOOT PRINT



DETAIL AE

TYPICAL STRUT FOOT ALIGNMENT AT GATE JOINS
(PINS NOT SHOWN FOR CLARITY)

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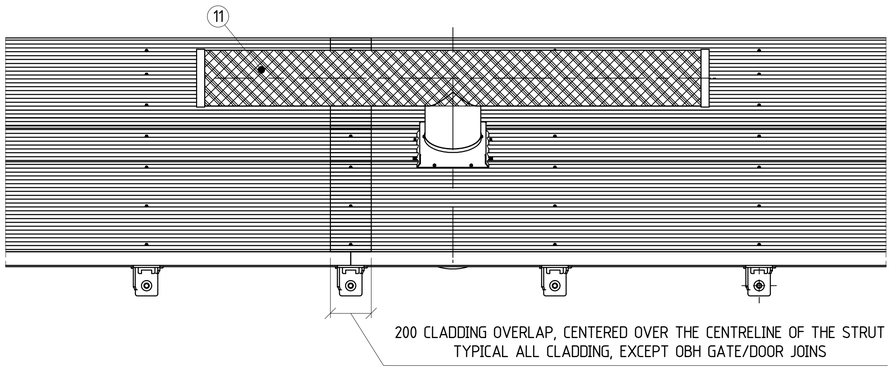
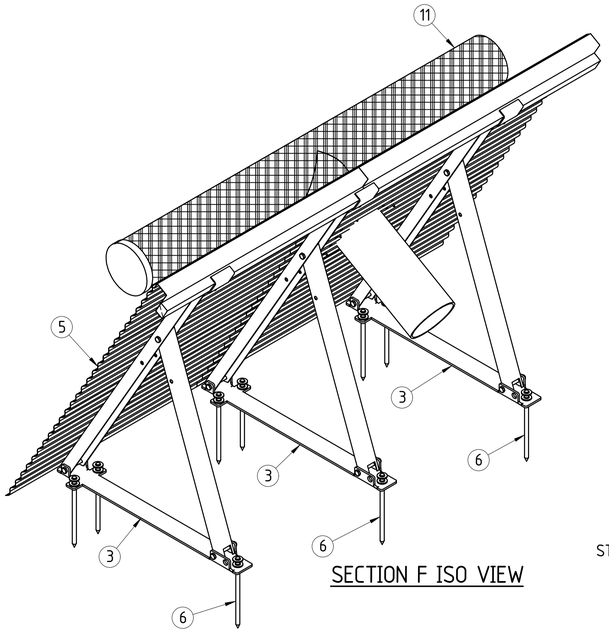
DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
CURVED OBH OPENING DETAIL

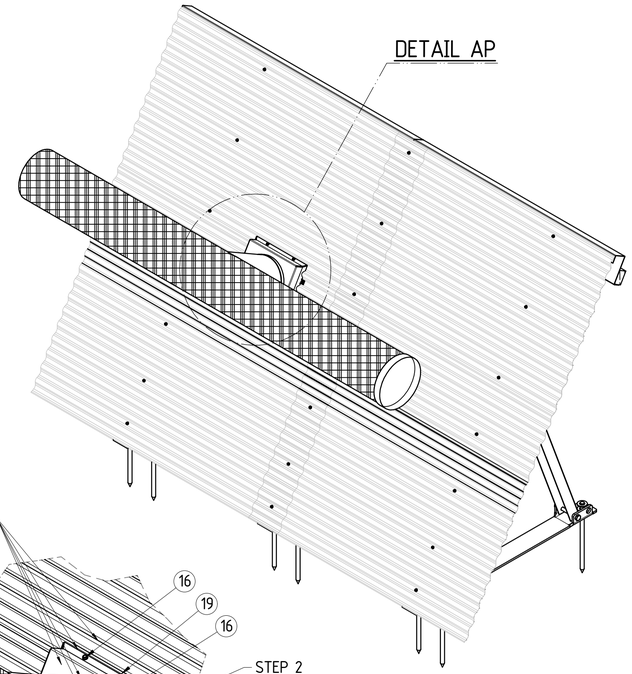
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 6 OF 9
REV.: 0

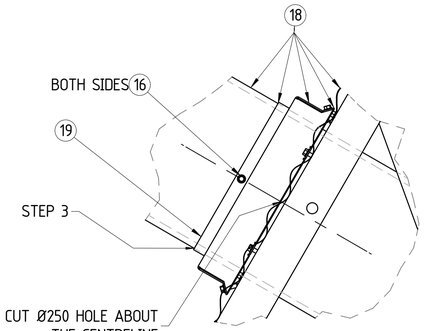


DETAIL B
'T' PIECE INSTALLATION DETAIL

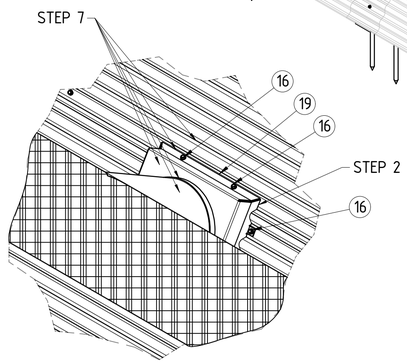


SECTION F ISO VIEW

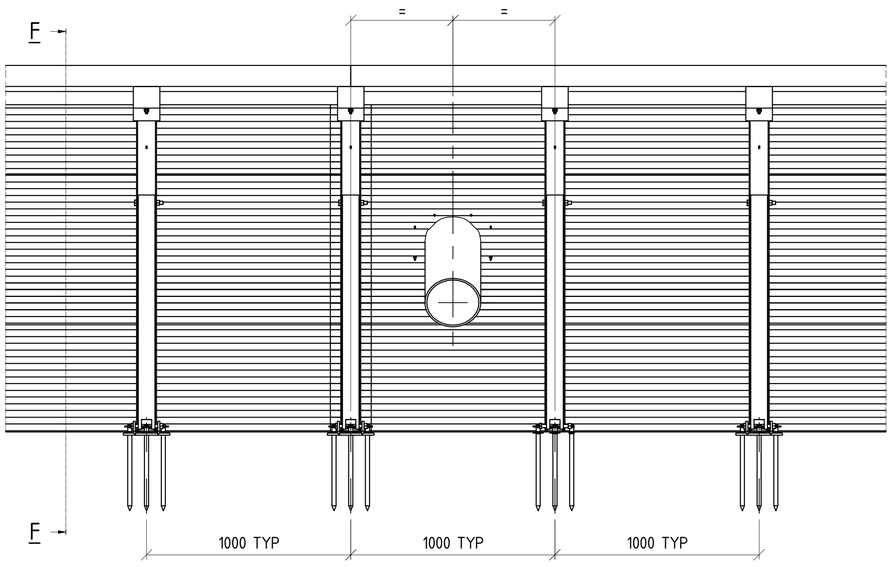




DETAIL AR

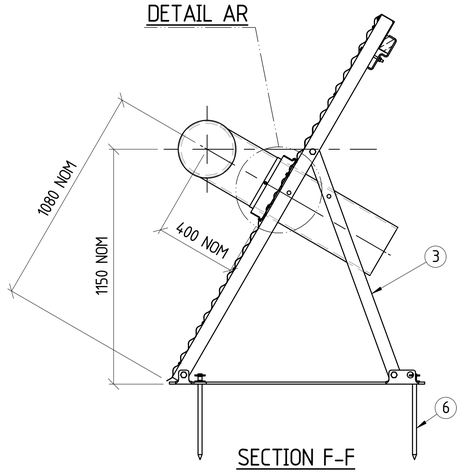


DETAIL AP



ELEVAION

DETAIL AR



SECTION F-F

BACKGROUND:

- THE 'T' PIECE IS USED TO PUMP HAZARDOUS FUMIGANT INTO THE STORAGE AFTER IT IS FULLY SEALED. CARE MUST BE TAKEN WHEN INSTALLING THE 'T' PIECE AND APPLYING THE SEALANTS TO ENSURE THE SEAL IS APPLIED TO A HIGH QUALITY.

USE THE FOLLOWING QUANTITY'S PER 1 'T'PIECE

- 1 X 600ML SAUSAGE OF BOSTIK SEAL AND FLEX 1
- 1L OF NOVALAST LTM 151

PROCEDURE:

- STEP 1: PREPARE AND CLEAN SURFACES WHERE SEALANTS ARE TO BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS.
- STEP 2: INITIAL COLLAR INSTALL; APPLY A THICK (5-10MM) BEAD OF 'BOSTIK SEAL N FLEX 1' TO ALL EDGES OF THE T-PIECE MOUNTING COLLAR WHICH WILL CONTACT THE CORRUGATED CLADDING. TEK SCREW T-PIECE MOUNT (WITH BOSTIC SEALANT APPLIED) TO THE CLADDING USING 8 TEK SCREWS, EVENLY SPACED AROUND THE T-PIECE MOUNTING COLLAR.
- STEP 3: INSERT T-PIECE INTO THE T-PIECE MOUNTING COLLAR. SECURE THE T-PIECE AT THE LOCATION SHOWN, USING 2 X TEK SCREWS, THROUGH THE MOUNTING COLLAR RING. APPLY A THICK (5-10MM) BEAD OF 'BOSTIK SEAL N FLEX 1' AROUND THE JOIN AND AROUND ANY GAPS, INCLUDING AROUND THE TEK SCREWS. ALSO APPLY A THICK BEAD TO FILL THE GAP BETWEEN THE CLADDING AND THE T-PIECE, ON THE OUTSIDE OF THE BULKHEAD.
- STEP 4: LET SEALANT DRY AS PER MANUFACTURER'S DIRECTIONS.
- STEP 5: APPLY A SECOND THICK (5-10MM) BEAD OF 'BOSTIC SEAL N FLEX 1' AROUND ALL JOINS BETWEEN THE T-PIECE MOUNTING COLLAR, THE T-PIECE AND THE CLADDING.
- STEP 6: LET SEALANT DRY AS PER MANUFACTURER'S DIRECTIONS.
- STEP 7: PAINT THE ENTIRE T-PIECE MOUNTING COLLAR AND 150MM OF CLADDING AROUND THE COLLAR. ALSO PAINT 150MM OF THE T-PIECE, PAST THE COLLAR RING JOIN. PAINT WITH 'NOVALAST 151 LTM'
- STEP 8: LET SEALANT DRY AS PER MANUFACTURER'S DIRECTIONS.

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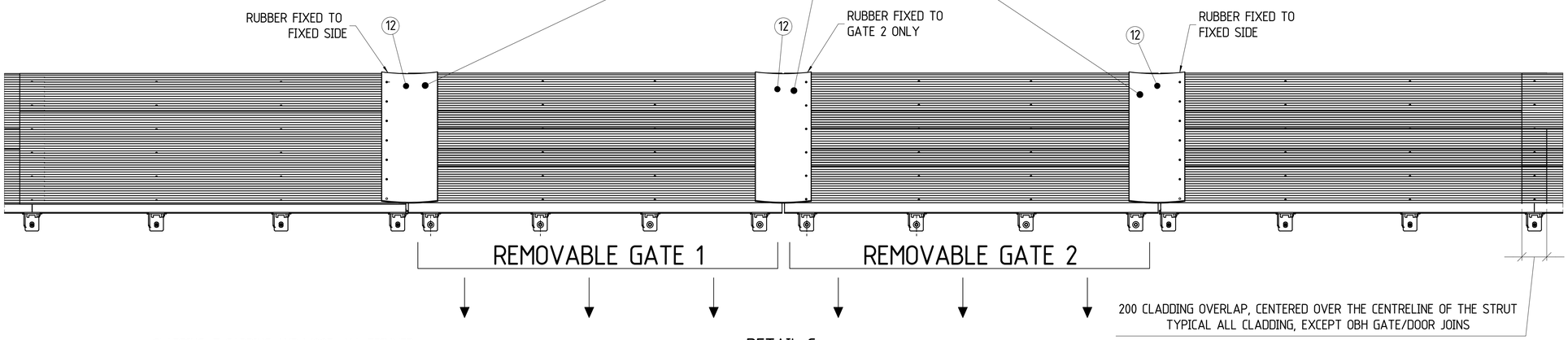
ENGINEER	BC	11/06/2020
APPROVED	NH	11/06/2020

DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
'T' PIECE DETAIL

SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 7 OF 9
REV: 0

TYPICAL RUBBER FIXINGS, BOTH ENDS

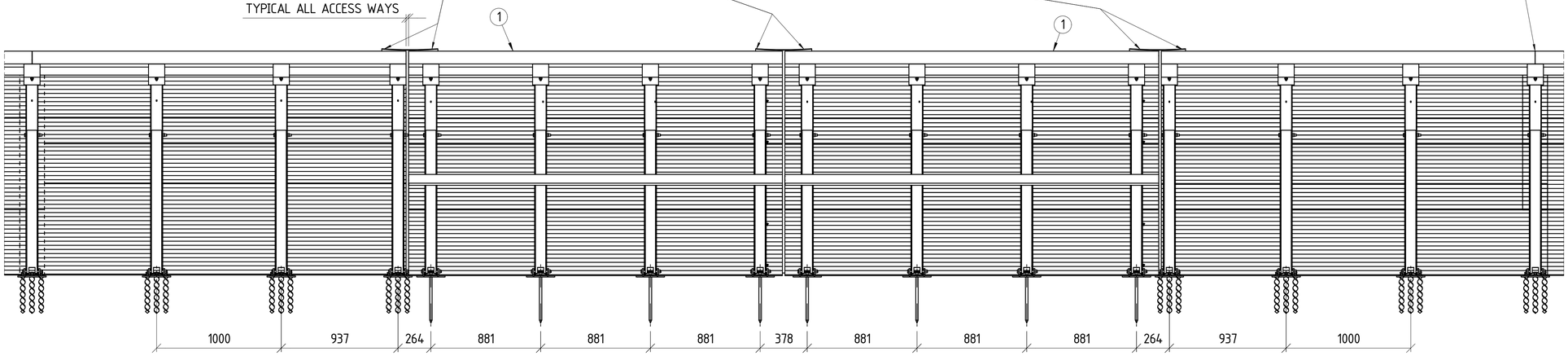
- ATTACH CONVEYOR BELT OVER JOINTS (SEE BOM FOR BELT DETAILS)
- FIX RUBBER USING 45MM LONG TEK SCREWS, USING 7 TEK SCREWS PER RUBBER STRIP



DETAIL C
FRONT END LOADER ACCESS GATES IN STRAIGHT WALL
TYPICAL BOTH SIDES

CLADDING, Z-CAPPING AND WOOD, ALL TRIMMED TO SUIT ON BOTH SIDES TO CREATE A BUTT JOIN BETWEEN THE FIXED WALL AND THE REMOVABLE GATE. REFER S119-END-ST-ASY-0003 FOR CLADDING TRIMMING DETAIL. MAX ALLOWABLE GAP BETWEEN BUTT JOINTS IS 20MM - TYPICAL ALL GATES

Z-CAPPING MUST BE NEATLY BUTT JOINED AND ALIGNED IN ALL DIRECTIONS TO ENSURE THAT THERE ARE NO SHARP EDGES WHICH COULD PUNCTURE THE OBH TARP. MAX MISALIGNMENT OF 2MM IN ALL DIRECTIONS. TYPICAL ALL JOINTS EXCEPT AT OBH DOOR/GATE JOINS.



ELEVATION

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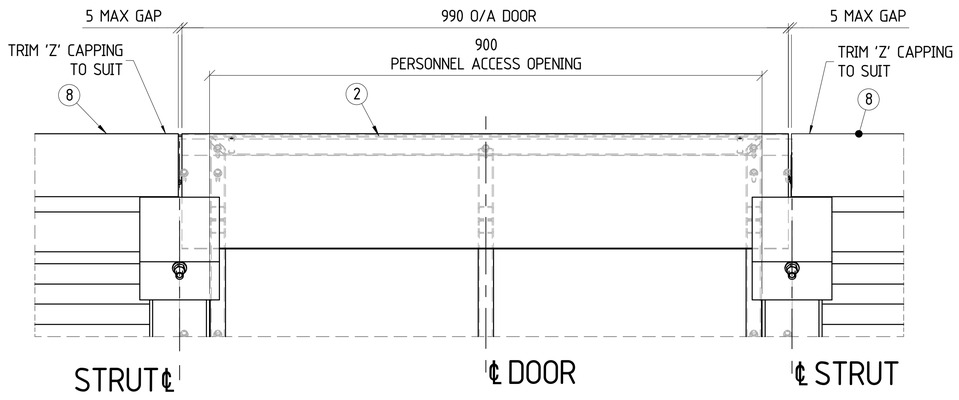
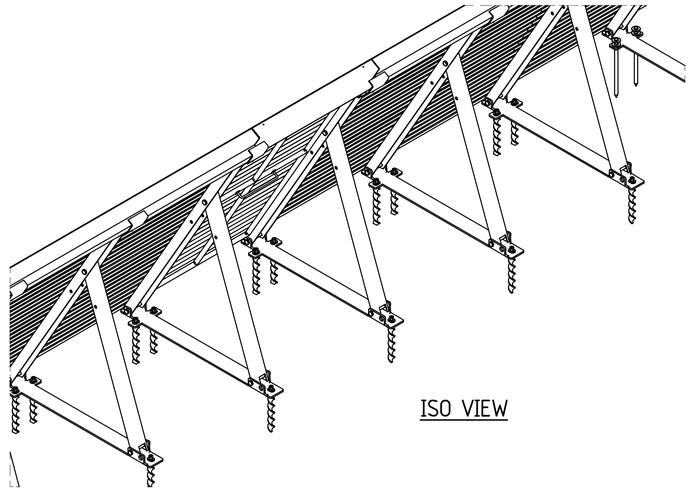
APPROVED	NH	11/06/2020

DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
STRAIGHT OBH OPENING DETAIL

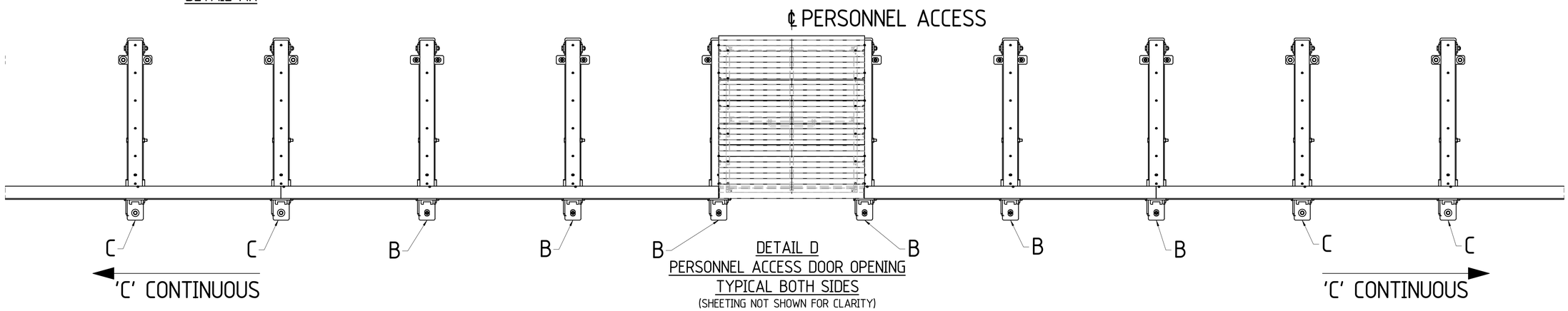
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 8 OF 9
REV: 0



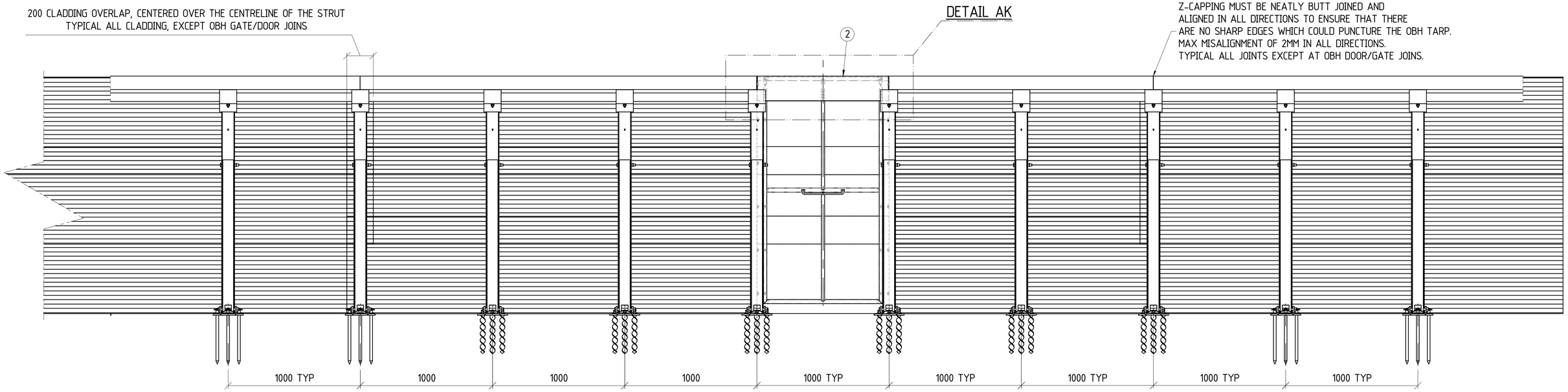
DETAIL AK



ISO VIEW



DETAIL D
PERSONNEL ACCESS DOOR OPENING
TYPICAL BOTH SIDES
(SHEETING NOT SHOWN FOR CLARITY)



ELEVATION

CBH GROUP HEAD OFFICE
LEVEL 6, 240 ST GEORGES TERRACE,
PERTH W.A 6000
PH (08) 9237 9600 FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

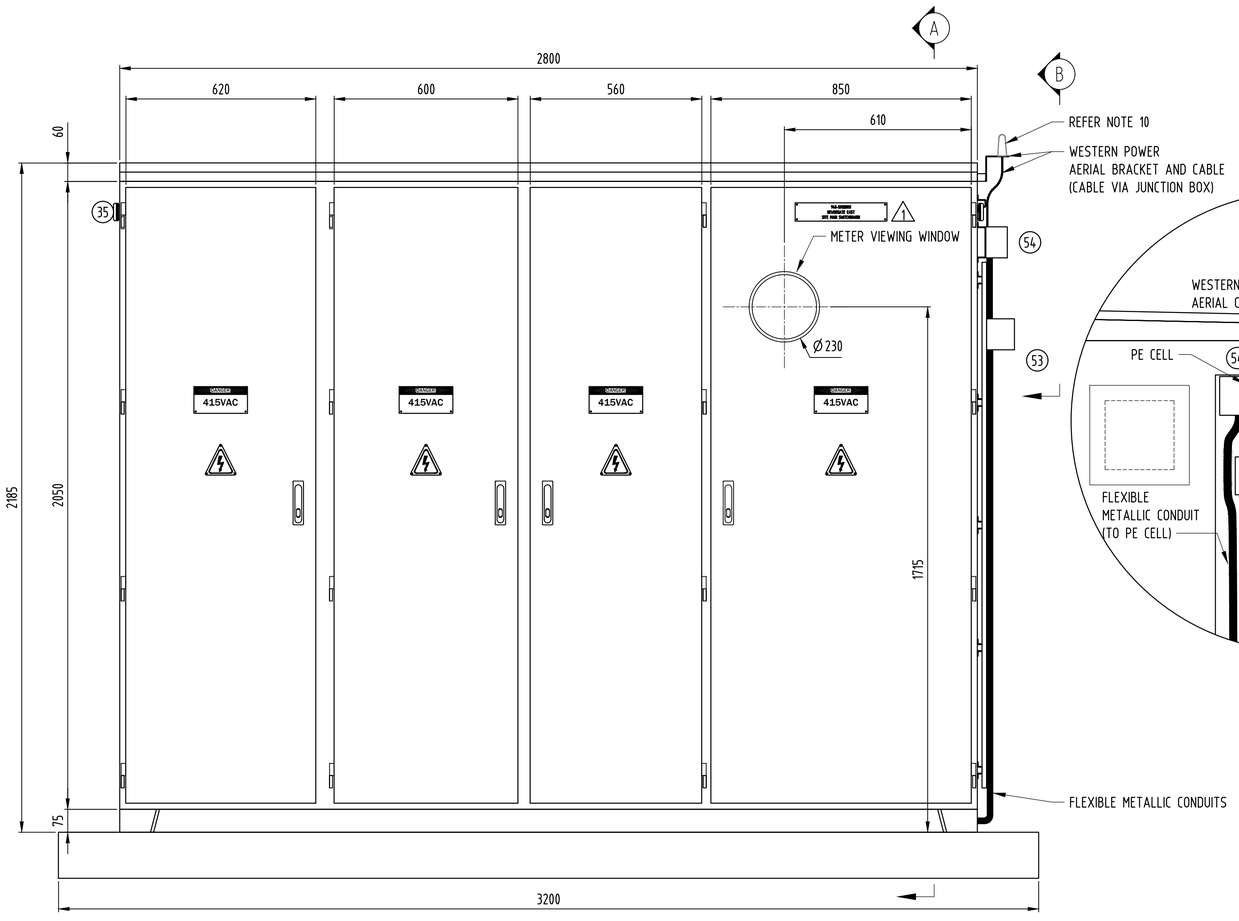
REF DRG No.	REFERENCE DRAWING TITLE

REV	DATE	REVISIONS	BY	CHK	APP
0	10/06/2020	COPIED FROM S-119, ISSUED FOR CONSTRUCTION	SCR	LS	NH

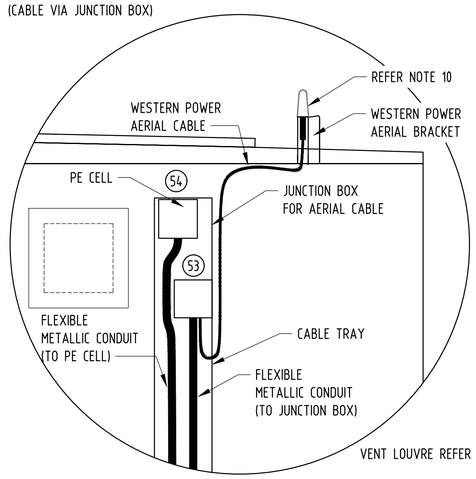
DRAWN	SCR	10/06/2020
CHECKED	LS	10/06/2020
ENGINEER	BC	11/06/2020
APPROVED	NH	11/06/2020

DRAWING TITLE
1.8m OPEN BULK HEAD
GENERAL ARRANGEMENT
PERSONELL ACCESS DOOR DETAIL

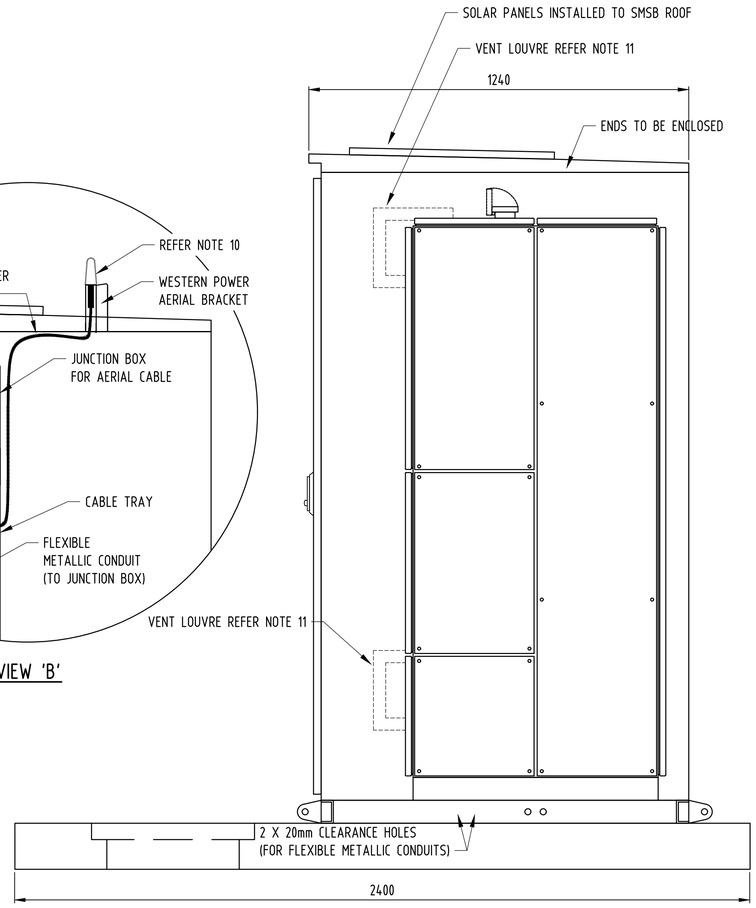
SITE: VARIOUS
SIZE: A1
PROJECT: STANDARD
DRAWING No: S119-ENG-ST-DGA-0003
SHEET: 9 OF 9
REV.: 0



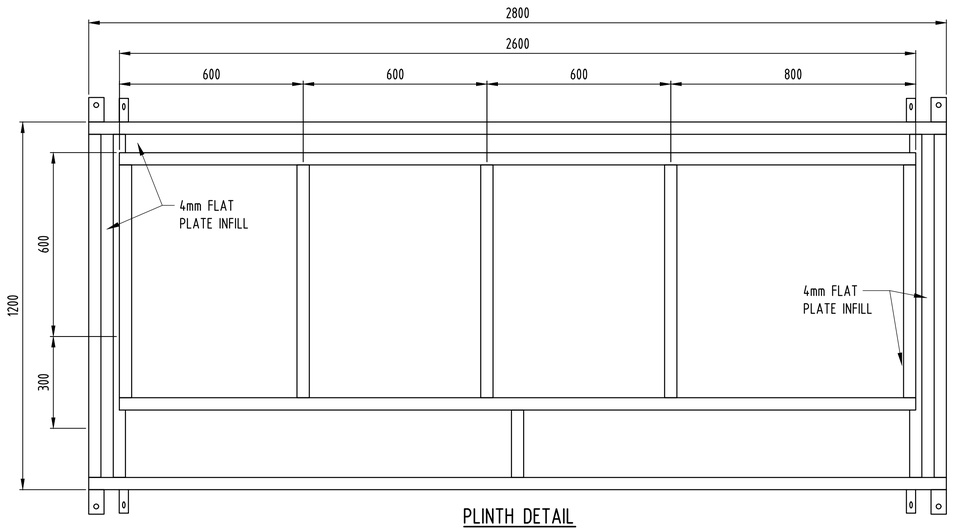
FRONT ELEVATION



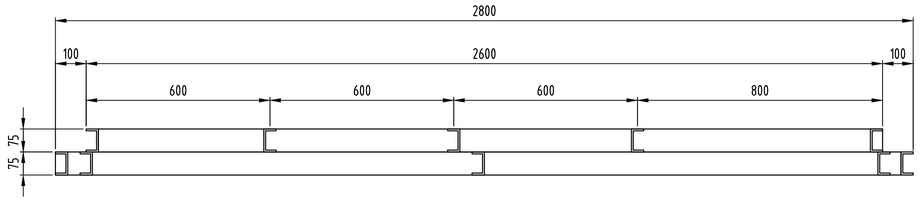
VIEW 'B'



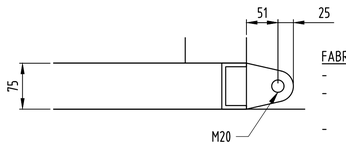
SECTION VIEW 'A' (A)



PLINTH DETAIL
TOP VIEW



PLINTH DETAIL
FRONT VIEW



FABRICATION NOTES
- FABRICATED FROM 10mm MILD STEEL PLATE
- WELDED TO PLINTH, INSTALLED WITHIN WEB AT 75 DEGREE ANGLE TO BASE
- GENERAL PURPOSE CONTINUOUS WELD TO AS1554

COMPLETE ASSEMBLY
LIFTING LUG (x4)
SCALE 1:5

CONSTRUCTION:

CABINET	-	2.5MM ALUMINIUM SHEET FOLDED AND WELDED
DOOR	-	2.5MM ALUMINIUM SHEET FOLDED AND WELDED HUNG ON 316SS LIFT OFF PINTLE HINGES WITH 3 POINT LOCKING SYSTEM SECURED BY 316SS LOCKABLE SWING HANDLE DOOR STIFFENERS PROVIDED WITH DRAWING HOLDER GAS STRUTS DOOR STAY TO ALLOW 110 DEGREE OPENING GAS STRUT TO BE MOUNTED AT TOP OF DOOR, HEAVY DUTY DOOR STAY TO BE MOUNTED AT BASE RUBBER GASKET TO PROVIDE IP56 DEGREE OF PROTECTION VIEWING WINDOW TO BE MANUFACTURED FROM TOUGHENED GLASS.
SUNSHADE	-	2.5MM ALUMINIUM SHEET FOLDED AND WELDED, SUNSHADE SHALL BE REMOVABLE, PROVIDED WITH M8 HOLES FOR MOUNTING TO CABINET
LIFTING POINTS	-	PROVIDED ON BASE OF PLINTH
WEIGHT	-	1000KG

FINISH:

ALL METALWORK TO BE CLEANED FREE OF RUST AND GREASE.

CABINET	-	ORBITALLY SANDED FINISHED
DOORS	-	ORBITALLY SANDED FINISHED
SUNSHADE	-	ORBITALLY SANDED FINISHED

PLINTH:

TO BE CONSTRUCTED OF 75MM X 40MM 6MM HDG CHANNEL IRON FULLY WELDED, WITH 4 OFF M16 HOLES FOR FIXING TO CONCRETE BASE

NOTES:

1. CONCRETE PLINTH ON BURDEN EZY STACK PIT.
2. STRUCTURAL LIFTING LUGS RATED TO LIFT 1000KG.
3. 316SS BOLTS WELDED TO OUTER ENCLOSURE TO CONNECT TO PLINTH.
4. FOAM GASKET TO BE INSTALLED BETWEEN OUTER ENCLOSURE AND PLINTH.
5. ALL WORKS SHALL BE COMPLETE IN ACCORDANCE WITH TECHNICAL SPECIFICATION DOCUMENTS:
   TS6 ELECTRICAL SERVICES
   CBH-ENG-EL-SST-0001.
   TS7 ELECTRICAL ENCLOSURES
   CBH-ENG-EL-SST-0003.
6. ALL EQUIPMENT AS PER:
   TS16 EQUIPMENT LIST CBH-ENG-EL-SST-002.
7. ENCLOSURE DESIGN INCLUDING STIFFENING REQUIREMENTS AND HOLD DOWN TAB SIZING TO BE SUITABLE FOR REGION B WIND LOADING.
8. HINGE CONNECTION POINTS TO BE STRENGTHENED WITH WELDED 2.5MM ALUMINIUM STRIP.
9. CONNECTION BETWEEN PLINTH AND CONCRETE TO BE SEALED BY CONTRACTOR.
10. AERIAL AND BRACKET TO BE INSTALLED TO EXTEND BEYOND THE TOP OF THE ENCLOSURE ROOF.
11. VENT LOUVRE TO BE INSTALLED TO THE RHS AND THE LHS OF THE OUTER ENCLOSURE TO THE SMSB. FOUR (4) IN TOTAL.

CBH GROUP
ABN 29 256 604 947

mason electrical engineering contractors EC 000768

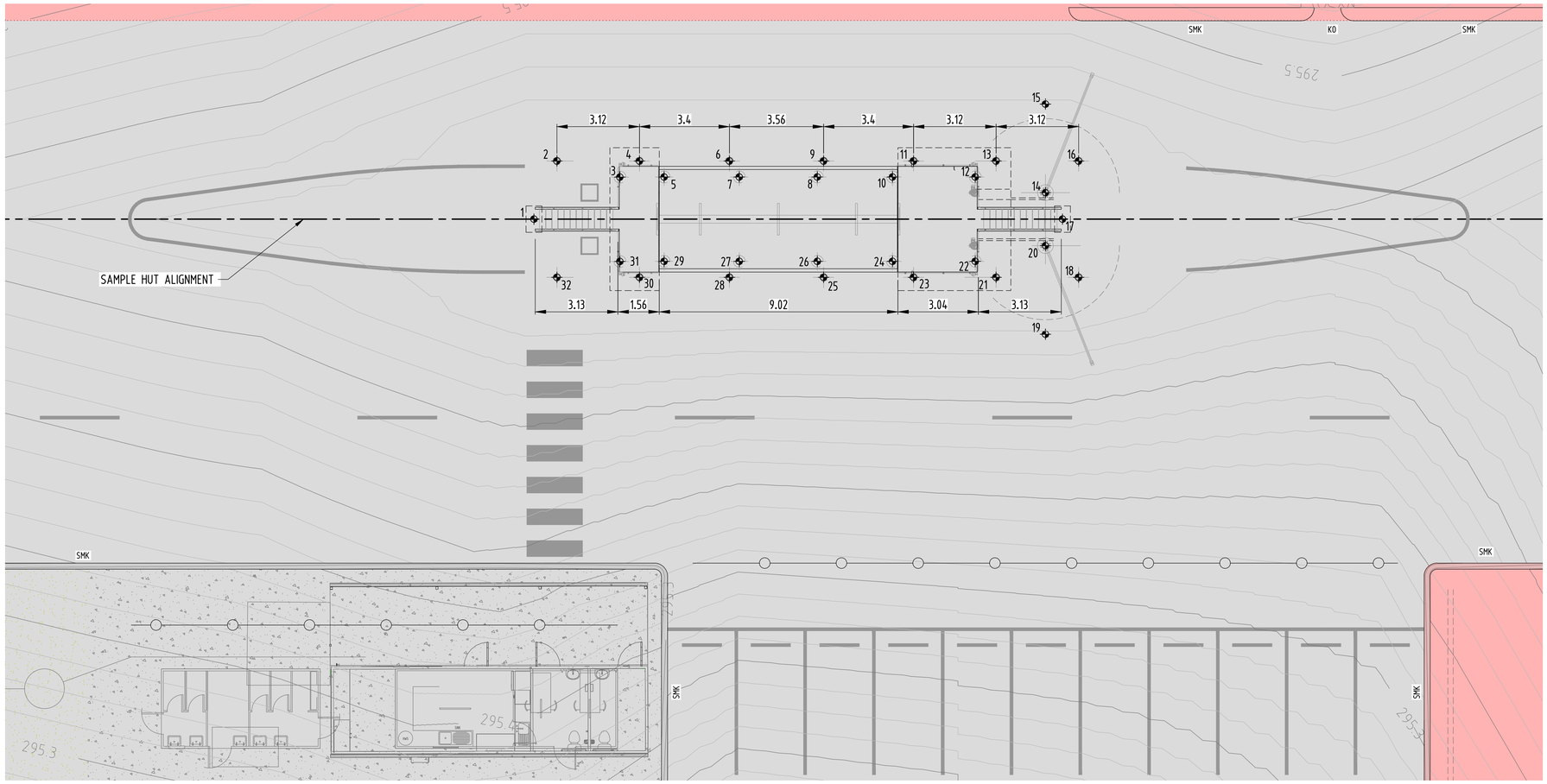
REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
940-ENG-EL-DGA-0004	NEWDEGATE - EAST SITE - 940-SMSB001 - SMSB CABLE PIT						
940-ENG-EL-DGA-0003	NEWDEGATE - EAST SITE - 940-SMSB001 - SMSB INTERNAL MODULE LAYOUT						
940-ENG-EL-DGA-0002	NEWDEGATE - EAST SITE - 940-SMSB001 - SMSB - LABEL SCHEDULE	A	12.07.24	85% DESIGN REVIEW	BM	JW	TM

SCALE N.T.S
SHEET A1
PROJECT M-3236
CONTRACT No

DRAWN	BM	12.07.24
CHECKED	J. WEBB	12.07.24
DESIGNED	B. MATTHEWS	12.07.24
DESIGN APPR	T. MASON	12.07.24
PROJECT APPR	V. WEDGWOOD	12.07.24

TITLE
NEWDEGATE - EAST SITE
940-SMSB01
SITE MAIN SWITCHBOARD - EXTERNAL SKIN
GENERAL ARRANGEMENT

DRG No 940-ENG-EL-DGA-0001
SHEET 1 OF 4
REV. A



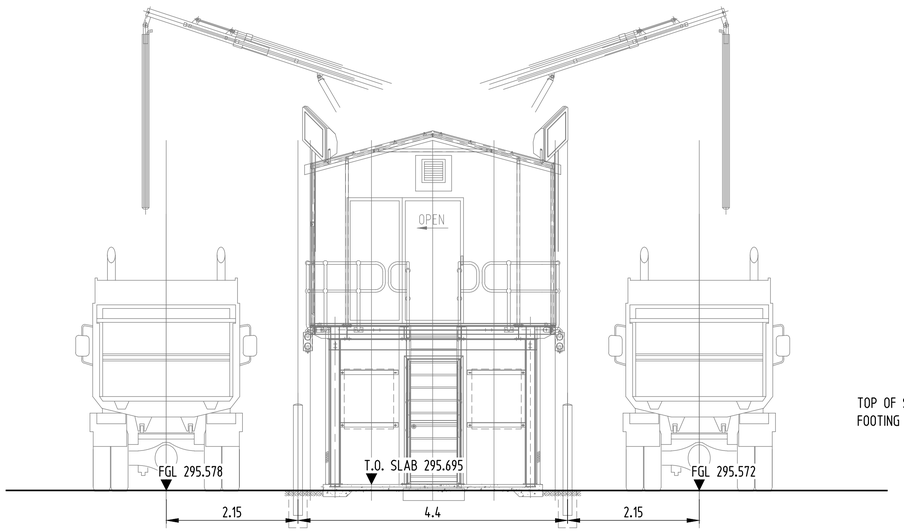
PLAN
1:100

NOTES:

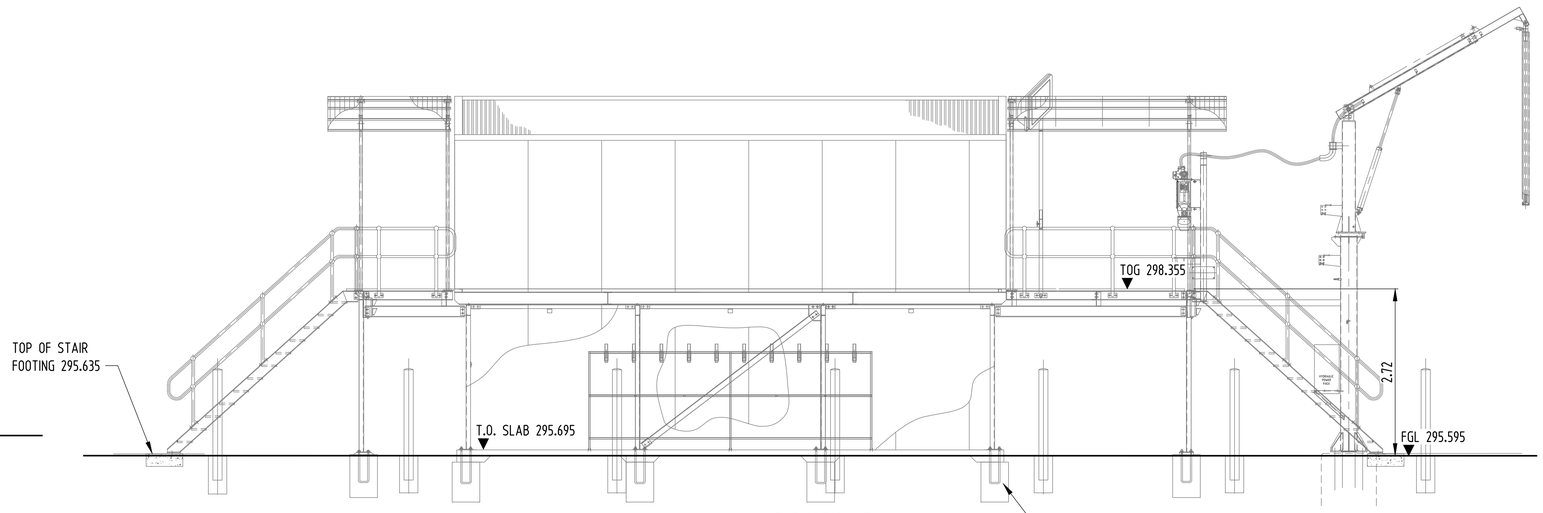
1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. F1 FOOTINGS ARE LOCATED BELOW SURFACE LEVEL. FOR TOP OF FOOTINGS REFER TO TABLE
3. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001

SAMPLEHUT SETOUT POINTS

POINT	EASTING (m)	NORTHING (m)	FOOTING TYPE	TOP	TOC
1	49181.061	237765.630	F3	295.595	295.635
2	49182.510	237763.762	F4	295.595	295.595
3	49180.769	237762.026	F5	295.595	295.625
4	49180.916	237761.079	F4	295.595	295.595
5	49179.920	237760.587	F1	295.595	295.495
6	49179.179	237758.156	F4	295.595	295.595
7	49178.468	237758.143	F1	295.595	295.495
8	49176.963	237755.610	F1	295.595	295.495
9	49177.361	237755.096	F4	295.595	295.595
10	49175.512	237753.168	F1	295.595	295.495
11	49175.624	237752.173	F4	295.595	295.595
12	49173.913	237750.477	F5	295.595	295.625
13	49174.030	237749.490	F4	295.595	295.595
14	49172.046	237748.500	F2	295.595	295.628
15	49174.926	237746.789	N/A	295.578	-
16	49172.437	237746.808	F4	295.593	295.593
17	49170.856	237748.456	F3	295.595	295.635
18	49168.654	237749.056	F4	295.595	295.595
19	49167.447	237751.233	N/A	295.572	-
20	49170.327	237749.522	F2	295.595	295.622
21	49170.248	237751.738	F4	295.595	295.595
22	49171.171	237752.107	F5	295.595	295.625
23	49171.841	237754.420	F4	295.595	295.595
24	49172.769	237754.797	F1	295.595	295.495
25	49173.578	237757.343	F4	295.595	295.595
26	49174.220	237757.239	F1	295.595	295.495
27	49175.727	237759.775	F1	295.595	295.495
28	49175.397	237760.404	F4	295.595	295.595
29	49177.178	237762.217	F1	295.595	295.495
30	49177.133	237763.327	F4	295.595	295.595
31	49178.040	237763.678	F5	295.595	295.625
32	49178.727	237766.010	F4	295.595	295.595



ELEVATION A
1:50



ELEVATION B
1:50

APPROVED FOR CONSTRUCTION

1:100 @ A1
1:200 @ A3
0 1 2 3 4 5 6 7 8 9 10 m

1:50 @ A1
1:100 @ A3
0 1 2 3 4 5 m

CBH GROUP
ABN 29 256 604 947

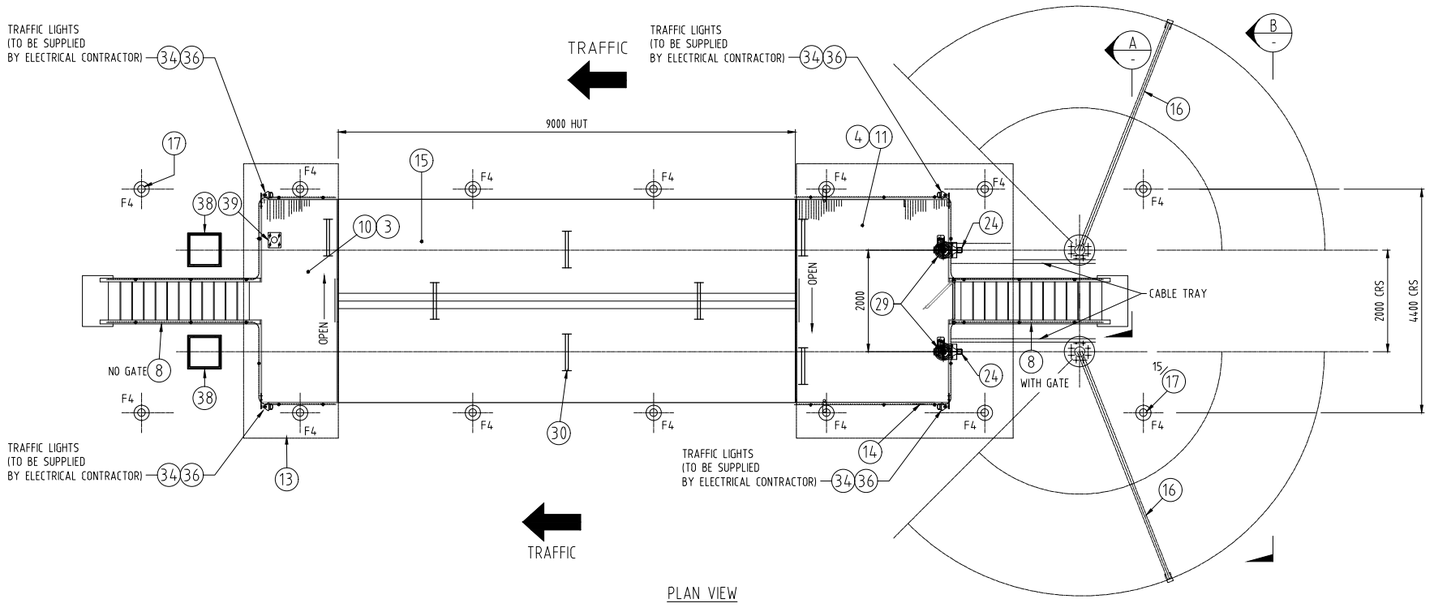
SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

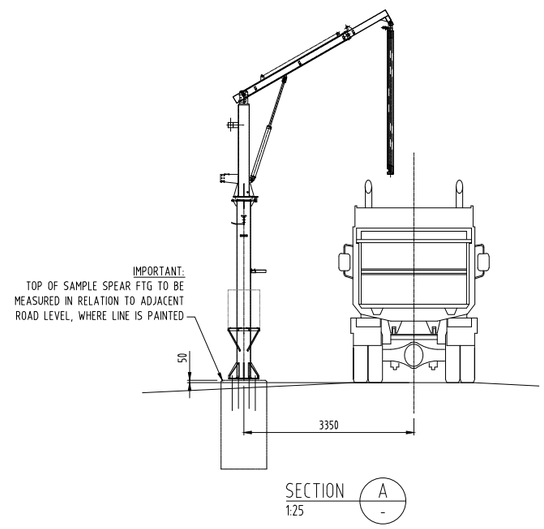
SCALE	AS SHOWN	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
SAMPLE HUT PLAN, ELEVATION, AND SETOUT DETAILS
SHEET 1 OF 1

DRG No	SHEET	REV.
940-ENG-CI-DAL-0006	1 OF 1	0



PLAN VIEW

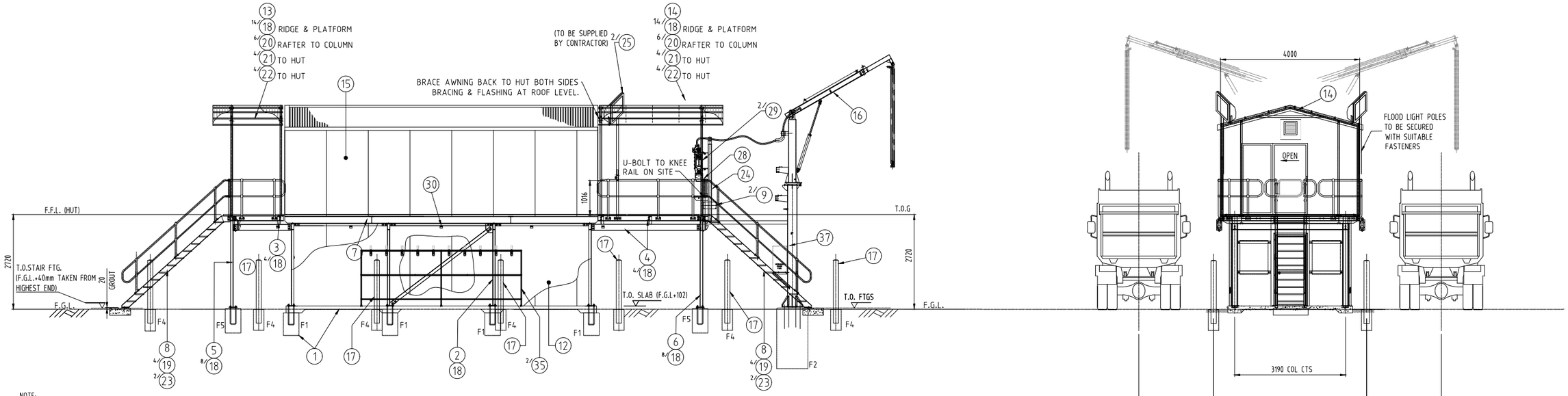


SECTION A
1:25

PART NO	DESCRIPTION	NO REQD	MASS (kg)	SUPPLIER OR C.B.H. PART NO
1	FOOTING LAYOUT AND DETAILS	1		STD-101-0001
2	SAMPLE HUT SUPPORT STRUCTURE	1		STD-101-0002-01
3	ACCESS PLATFORM	1		STD-101-0003-01
4	SAMPLING PLATFORM	1		STD-101-0003-02
5	ACCESS PLATFORM SUPPORT	1		STD-101-0004-01
6	SAMPLING PLATFORM SUPPORT	1		STD-101-0004-02
7	SAMPLE HUT FLOOR FRAME	1		STD-101-0011-01
8	ACCESS STAIR (1 WITH GATE, 1 WITHOUT)	1/1		STD-101-0005-01
9	VACUUM BOX	2		S-028-A0017
10	ACCESS PLATFORM GRATING	1		STD-101-0005-02
11	SAMPLING PLATFORM GRATING	1		STD-101-0005-03
12	UNDER SAMPLE HUT STORE			STD-101-0007
13	ACCESS PLATFORM AWNING	1		STD-101-0009-01
14	SAMPLING PLATFORM AWNING	1		STD-101-0008-01
15	SAMPLE SHED 9m x 4m (BY OTHERS)	1		STD-101-0006
16	HYDRAULIC SAMPLER	2		S-028-A0000
17	BOLLARD	14		STD-101-0001
18	M16 x 45 BOLT C/W NUT & WASHER	60		GRADE 8.8
19	M16 x 40 BOLT C/W NUT & WASHER	8		GRADE 8.8
20	M16 x 90 BOLT C/W NUT & WASHER	12		GRADE 8.8
21	M12 x 110 BOLT C/W NUT & WASHER	8		GRADE 8.8
22	M12 x 40 BOLT C/W NUT & WASHER	8		GRADE 8.8
23	M16 EPOXY SET CHEMICAL ANCHORS	4		100 MIN. EMBEDMENT
24	SAMPLING BLENDER SUPPORT POST	2		STD-101-0010-01
25	FLOODLIGHT & POST DETAILS	2		STD-101-0012
26	NOT USED			
27	NOT USED			
28	PENDENT HOLDER	2		S-028-A0015
29	SAMPLE BLENDER	2		S-004-A0000
30	LIGHTING & SMALL POWER G.A.			S144-ENG-EL-DGA-0012
31	*** NOT USED *** - -	-		-
32	32 NB MED. ANGLE CLOSURE BEND (ACB)	2 B/S		STD-101-0005-04
33	*** NOT USED *** - -	-		-
34	TRAFFIC LIGHT BRACKET	4		STD-101-0017-01
35	GSS BENCH	2		S-081-0060
36	100mm R&G LED TRAFFIC LIGHTS	4		REFER TO TS6
37	SAMPLE SPEAR JUNCTION BOX	2		STD-101-0022
38	ELECTRICAL/ COMMS PIT	2		CBH-ENG-EL-SST-0002
39	DAVIT ARM	1		STD-101-0030

GENERAL NOTES

1. ALL STEELWORKS, WELDING & FABRICATION TO CONFORM WITH CURRENT S.A.A. CODES AS1554 CAT SP
2. ALL WELDS TO BE 6 FILLET UNLESS NOTED AND 3 FILLET ON 3 PL.
3. REMOVE ALL BURRS & SHARP EDGES.
4. SURFACE TREATMENT: AS PER BULKWEST SPEC. NO TREATMENT TO INSIDE RED.O.
5. ALL HOLES Ø18 TO SUIT M16 HEX. HEAD BOLT GR. 8.8 U.N.O.
6. CONDUIT QUANTITIES ARE TYPICAL ONLY. REFER TO SITE SPECIFIC DRAWING FOR CONDUIT DETAILS.
7. REFER TO CBH-ENG-EL-SST-0001 TS6 ELECTRICAL SPEC FOR INSTALLATION DETAILS.
8. 2 x 100mm CONDUIT TYPICALLY INSTALLED FROM INCOMING ELECTRICAL PIT TO ELECTRICAL DISTRIBUTION BOARD. REFER TO SITE SPECIFIC DRAWING FOR CONDUIT DETAILS.
9. 2 x 50mm CONDUIT TYPICALLY INSTALLED FROM INCOMING COMMUNICATIONS PIT TO COMMUNICATIONS DISTRIBUTION BOARD. REFER TO SITE SPECIFIC DRAWING FOR CONDUIT DETAILS.



NOTE:
SETOUT HEIGHT TO BE TAKEN FROM THE HIGHEST F.G.L. AT THE TWO STAIR LANDING LOCATIONS

TYPE 11 SAMPLE HUT-ELEVATION

VIEW B

(HYDRAULIC SAMPLER NOT SHOWN FOR CLARITY)

CBH GROUP HEAD OFFICE
240 ST GEORGES TCE
PERTH
W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942

DO NOT SCALE FROM THIS DRAWING

REF DRG No.	REFERENCE DRAWING TITLE
S144-ENG-EL-DGA-0012	LIGHTING & SMALL POWER
S144-ENG-EL-DGA-0011	CABLE LADDER
S144-ENG-EL-DGA-0010	CONDUIT

REV	DATE	REVISIONS	BY	CHK'D	APP'D
17	23.08.24	CL LINEMARKING REMOVED.	JD	YKY	BC
16	12.08.22	DAVIT ARM ADDED (WGA). ELECTRICAL UPDATE.	AME	MR	MR
15	24.11.21	SWING GATE ADDED TO SAMPLING PLATFORM STAIR ASSEMBLY ONLY	AME	SCR	DW
14	13.01.20	SAMPLE SPEAR JUNCTION BOX REFERENCE & ELECTRICAL PITS ADDED	JF	DDF	NH
13	24.06.19	AS PER PINGRUP RLM	AME	SCR	YK
0	30.08.09	ISSUED FOR CONSTRUCTION	J.D.	P.B.	E.M.

SCALE NTS

NORTH POINT

DESIGNED	BULKWEST	2009
DES. CHECK	J.D'cruze	02.08.09
DRAWN	E.Martin	27.08.09
CHECKED	B.W.E.	2009
APPROVED		

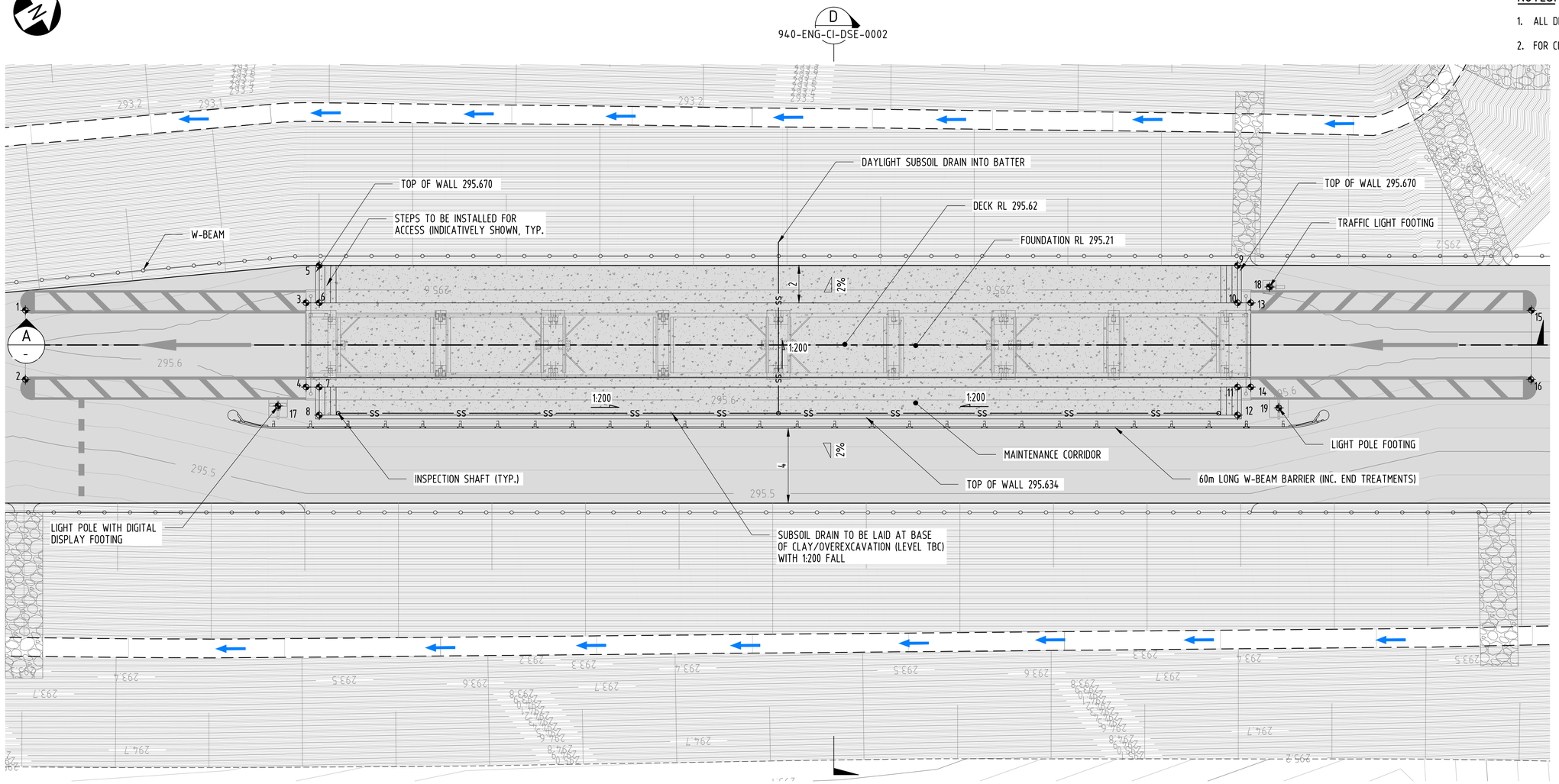
DRAWING TITLE

HYDRAULIC SAMPLE PLATFORM
TYPE 11 - SAMPLE HUT
GENERAL ARRANGEMENT

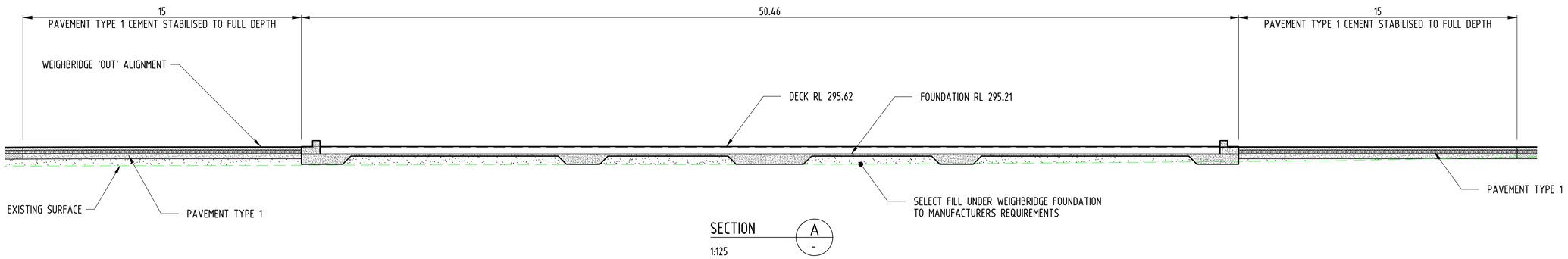
SITE: VARIOUS	SHEET SIZE: A1
PROJECT: TYPE 11 SAMPLE HUT	
DRAWING NO: STD-101-0000	REV.: 17

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001



PLAN
1:125



SECTION A-A
1:125

WEIGHBRIDGE OUT SETOUT POINTS				
POINT	EASTING (m)	NORTHING (m)	TOP	TOC
1	49317.338	237566.003	295.562	-
2	49318.608	237562.528	295.562	-
3	49331.290	237571.527	295.614	295.210
4	49332.834	237567.301	295.614	295.210
5	49331.261	237573.646	295.574	295.170
6	49331.947	237571.768	295.614	295.210
7	49333.492	237567.541	295.614	295.210
8	49334.006	237566.132	295.584	295.240
9	49377.344	237590.486	295.574	295.170
10	49378.031	237588.608	295.614	295.210
11	49379.575	237584.381	295.614	295.240
12	49380.090	237582.972	295.584	295.210
13	49378.688	237588.848	295.614	295.210
14	49380.233	237584.621	295.614	295.210
15	49392.914	237593.621	295.577	-
16	49394.161	237590.137	295.577	-
17	49331.770	237565.842	295.587	295.637
18	49379.336	237589.989	295.592	295.642
19	49382.023	237584.093	295.585	295.635

APPROVED FOR CONSTRUCTION

1:125 @ A1
1:250 @ A3
0 2 4 6 8 10 12 m

CBH GROUP
ABN 29 256 604 947

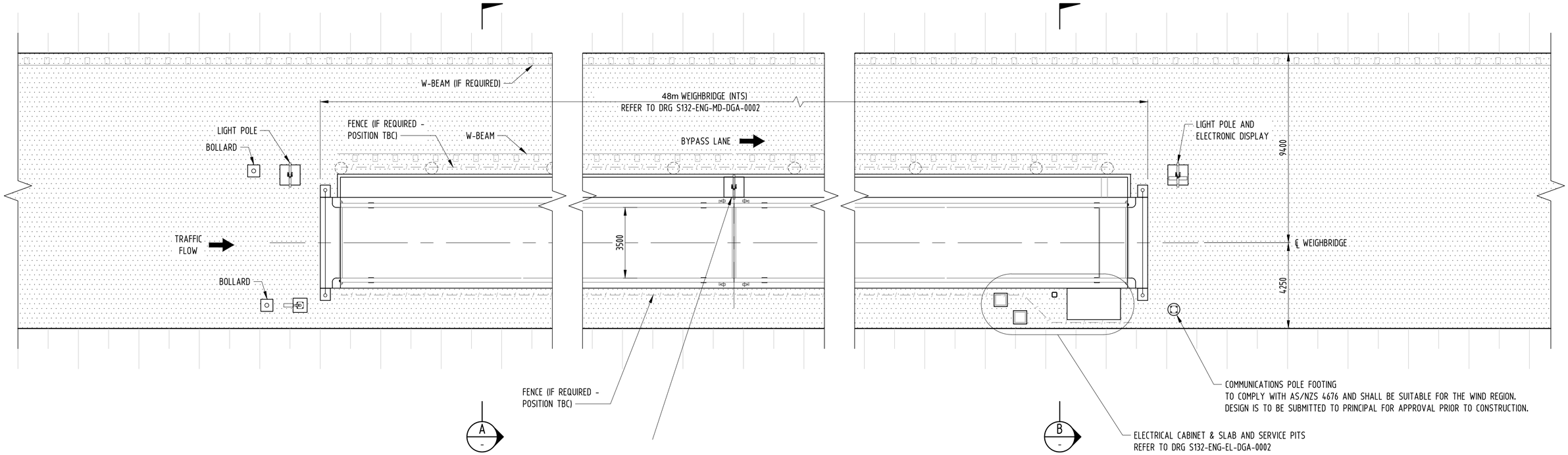
SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

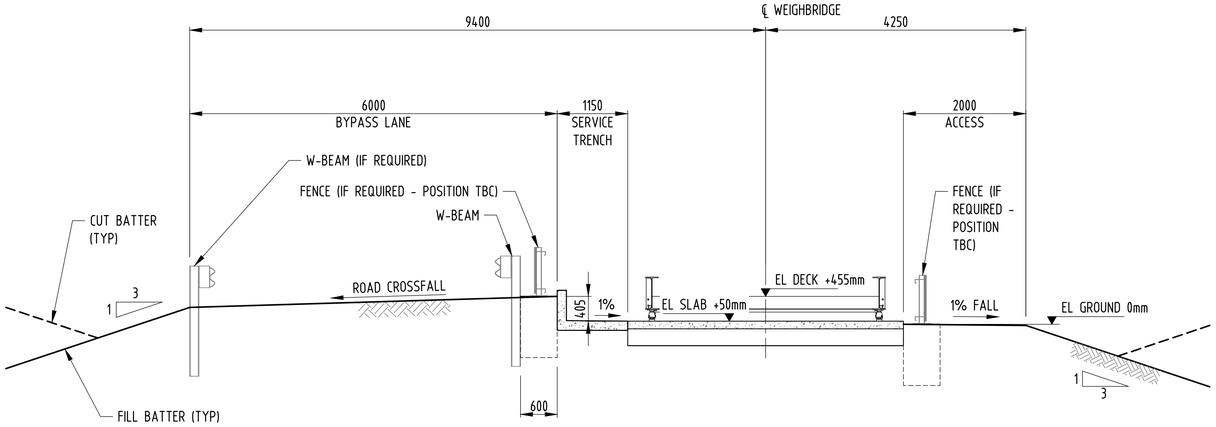
SCALE	H 1:125	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
WEIGHBRIDGE OUT 48m PLAN,SECTION & SETOUT DETAILS
SHEET 1 OF 1

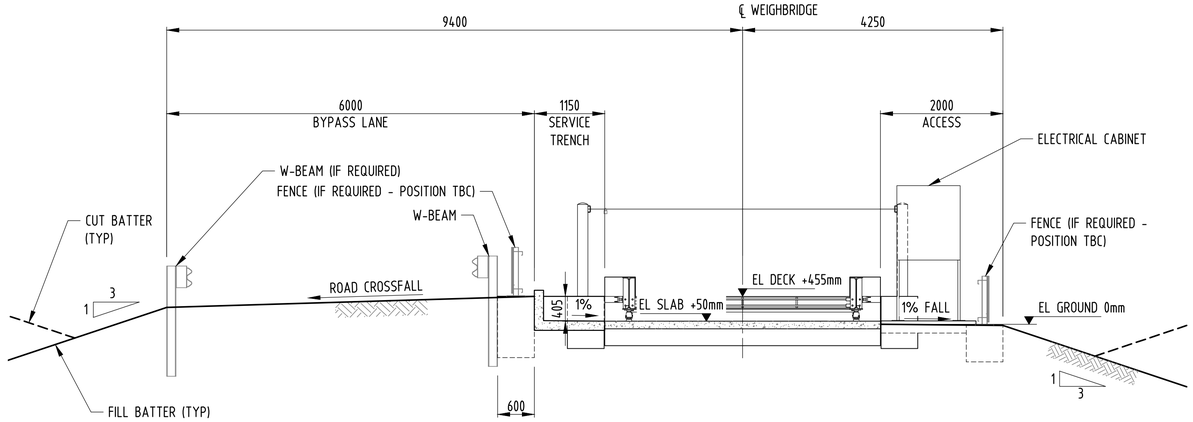
DRG No	SHEET	REV.
940-ENG-CI-DAL-0005	1 OF 1	0



PLAN
1:100



SECTION A
1:50



SECTION B
1:50

ISSUED FOR CONSTRUCTION
DATE 14.12.21

1:50 @ A1
1:100 @ A3
0 1000 2000 3000 4000 5000 mm

1:100 @ A1
1:200 @ A3
0 2000 4000 6000 8000 10000 mm

CBHGROUP
ABN 29 256 604 947
CBH GROUP
LEVEL 6
240 ST GEORGE'S TERRACE
PERTH W.A. 6000
PH (08) 9237 9600
FAX (08) 9322 3942

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
S132-ENG-MD-DGA-0003	METTLER TOLEDO WEIGHBRIDGE TYPE 3 - GENERAL ARRANGEMENT						
S132-ENG-MD-DGA-0002	METTLER TOLEDO WEIGHBRIDGE TYPE 2 - GENERAL ARRANGEMENT	0	14.12.21	ISSUED FOR CONSTRUCTION	PF	YKY	BC

SCALE: AS SHOWN
SHEET: A1
PROJECT: STANDARD
CONTRACT No

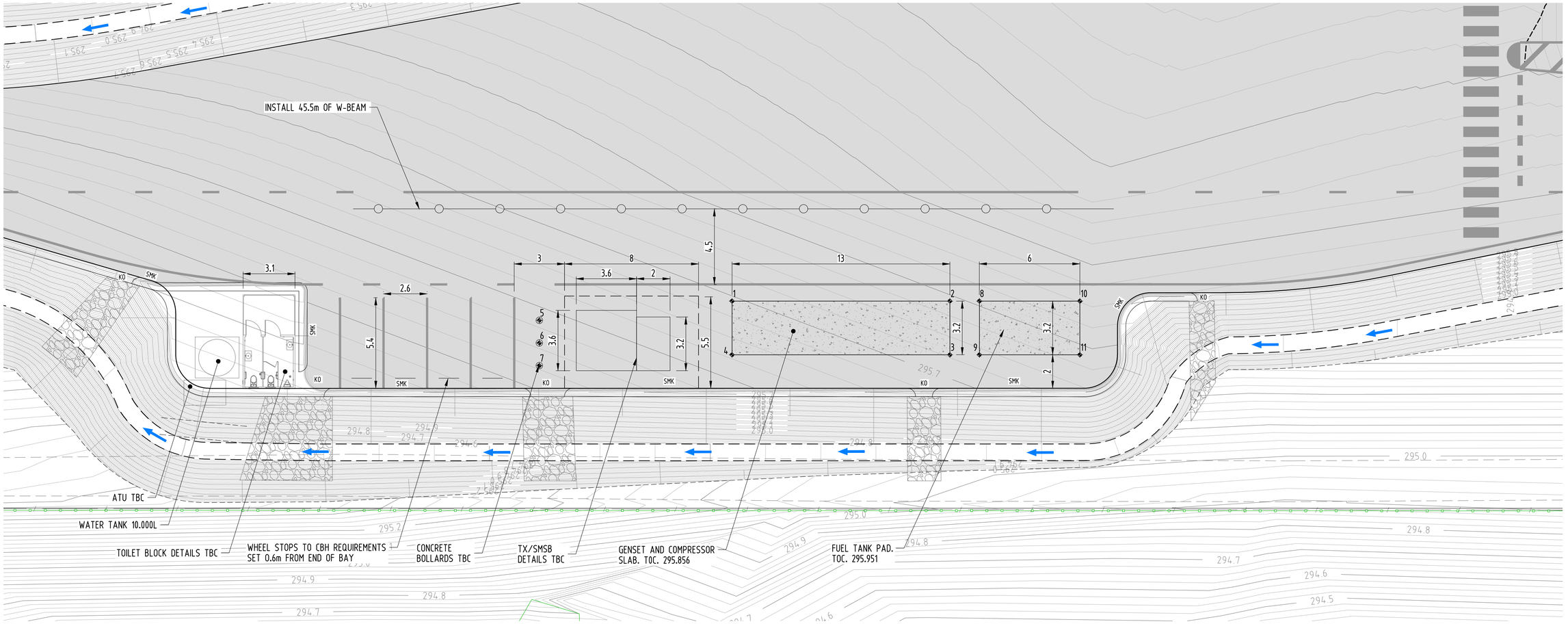
DRAWN	P. Forrest	14.12.21
CHECKED	Y.K. Yip	14.12.21
PROJECT APPR	B. Crane	21.01.22

TITLE: TYPICAL DRAWING
WEIGHBRIDGE TYPE 2 - SINGLE WAY & UNMANNED
EARTHWORKS FORMATION - SERVICE TRENCH OPTION
PLAN AND SECTIONS

ORG No: S132-ENG-CI-DAL-0003
SHEET: 1 OF 1
REV.: 0

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. WHERE TOP OF PAVEMENT TO TOP CONCRETE CLEARANCE EXCEEDS 100mm, CONCRETE SLAB THICKNESS TO BE INCREASED TO ENSURE A MINIMUM 100mm KEY BELOW PAVEMENT



PLAN
1:125

REFUELLING AREA SETOUT POINTS				
POINT	EASTING (m)	NORTHING (m)	TOP	TOC
1	49660.511	237883.450	295.665	295.856
2	49667.151	237894.626	295.756	295.856
3	49669.902	237892.991	295.693	295.856
4	49663.262	237881.815	295.601	295.856
5	49655.625	237872.976	295.561	295.581
6	49656.786	237872.286	295.534	295.554
7	49657.947	237871.597	295.508	295.528
8	49668.050	237896.139	295.806	295.951
9	49670.801	237894.504	295.742	295.951
10	49671.115	237901.297	295.851	295.951
11	49673.866	237899.663	295.787	295.951

APPROVED FOR CONSTRUCTION

1:125 @ A1
1:250 @ A3
0 2 4 6 8 10 12 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
-	-	0	06.11.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE 1:125
SHEET A1
PROJECT -
CONTRACT No -

DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
REFUELLING AREA PLAN
SHEET 1 OF 1

DRG No 940-ENG-CI-DAL-0008
SHEET 1 OF 1
REV. 0

Bushfire management plan /statement addressing the bushfire protection criteria coversheet

Site address: Lot 300 Newdegate-Ravensthorpe Rd, Newdegate

Site visit: Yes ✓ No

Date of site visit (if applicable): Day 6 Month December Year 2023

Report author or reviewer: James Terenciuk

WA BPAD accreditation level (please circle):

Not accredited | Level 1 BAL assessor | Level 2 practitioner ✓ | Level 3 practitioner

If accredited please provide the following.

BPAD accreditation number: 36529 Accreditation expiry: Month February Year 2025

Bushfire management plan version number: 1

Bushfire management plan date: Day 27 Month November Year 2024

If one or more of the following are selected, then these should be automatically referred to DFES	YES	NO
Strategic planning is required to address SPP 3.7 and the Guidelines		
The application is a vulnerable land use		

None of the Above ✓

If one or more of the following are selected, and the decision-maker requires input form DFES, then the application can be referred.	YES	NO
The BAL rating has been calculated by a method other than Method 1 as prescribed by AS 3959		
An outcomes-based approach has been submitted to demonstrate compliance with the bushfire protection criteria		

None of the Above ✓

Note: If a subdivision or development application meets all the acceptable solutions and does not otherwise trigger a referral as listed above, seeking advice from DFES on SPP 3.7 or other matters is at the discretion of the decision-maker.

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer  Date 27.11.2024

Bushfire Management Plan

Report Details

Report / Job number

21610

Report version

2

Date submitted:

28 November 2024

Project:	Proposed bulkhead, machinery shed, weighbridges, sample platform, toilet block and site amenities
Project Address:	Lot 300 Newdegate-Ravensthorpe Rd, Newdegate
Prepared by:	James Terenciuk, Bushfire Planning Practitioner.

Address: Suite 26, 443 Albany Highway, Victoria Park, WA 6100, **Phone:** (08) 6114 9356
Email: admin@greenstartconsulting.com.au, **Web:** www.greenstartconsulting.com.au

1. Background Information

This Bushfire Management Plan was prepared to provide guidance for the planning and management of potential bushfire threat. The standards and recommendations within this plan are based on the performance criteria as set out in Guidelines for Planning in Bushfire Prone Areas (November 2024).

This Bushfire Management Plan meets the requirements of SPP 3.7 and the Guidelines for Planning in Bushfire Prone Areas.

James Terenciuk
Bushfire Planning Practitioner

1.1 Purpose of Plan

The purpose of this Plan is minimise the occurrence and impact of bushfires and their devastating effects to life, property and the environment, and to document fire prevention requirements at the Site. By providing acceptable solutions the BAL level can be managed to an acceptable level.

1.2 Objectives

The objectives of this Plan are to:

- Define areas where values are located
- Define and rank hazard areas
- Identify individuals and organizations responsible for fire management and associated works within the area of the plan
- Develop fire management strategies for all land with regard to life, property and the environment
- Nominate an assessment procedure that evaluates the effectiveness and impact of proposed and existing fire prevention work and strategies
- Identify performance criteria and acceptable solutions for all fire management works, including acceptable solutions for firebreaks, low fuel areas and building construction standards.

This Plan will achieve the objectives by:

- Assessing the bushfire attack level
- Determining bushfire management requirements
- Determining ongoing management responsibilities

1.3 Statement against Other Relevant Documents

This Bushfire Management Plan meets the intent of:

1. State Planning Policy 3.7,
2. Guidelines for Planning in Bushfire Prone Areas,
3. Local planning strategy references to bushfire risk management,
4. Local planning scheme provisions relating to bushfire risk management,
5. Applicable structure plans, special control area provisions, previous planning approvals or similar referencing bushfire risk management applicable to the subject site,
6. Standard fire break orders of the area; and
7. AS3959 Construction of Buildings in Bushfire-Prone Areas.

1.4 Proposal details

The Site is located approximately 449 km North of the Perth CBD. The lot area is about 34.2 ha. The proposal at CBH Newdegate, Lot 300 Newdegate-Ravensthorpe Rd, Newdegate seeks approval for a proposed bulkhead, machinery shed, weighbridges, toilet block, site amenities, sample platform (refer to Figure 1: Site layout plan).

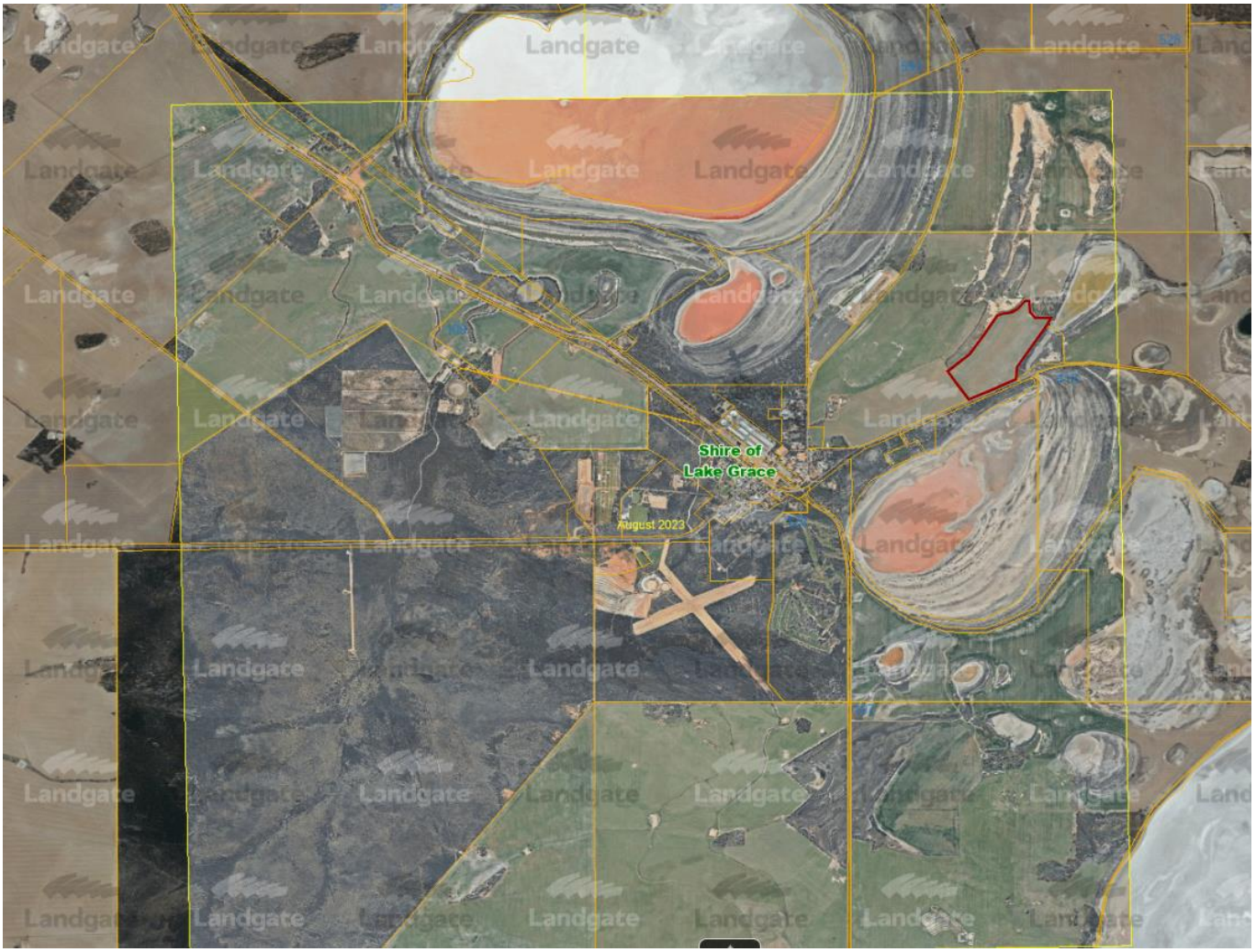
It has been identified as being located within a bushfire prone area according to the most recent map published by the Department of Fire and Emergency Services (refer to Figure 2).

There are no relevant environmental considerations, including local reserves, State Forest, National park, wetlands, Bush Forever sites, etc. within the site or being affected by the development.

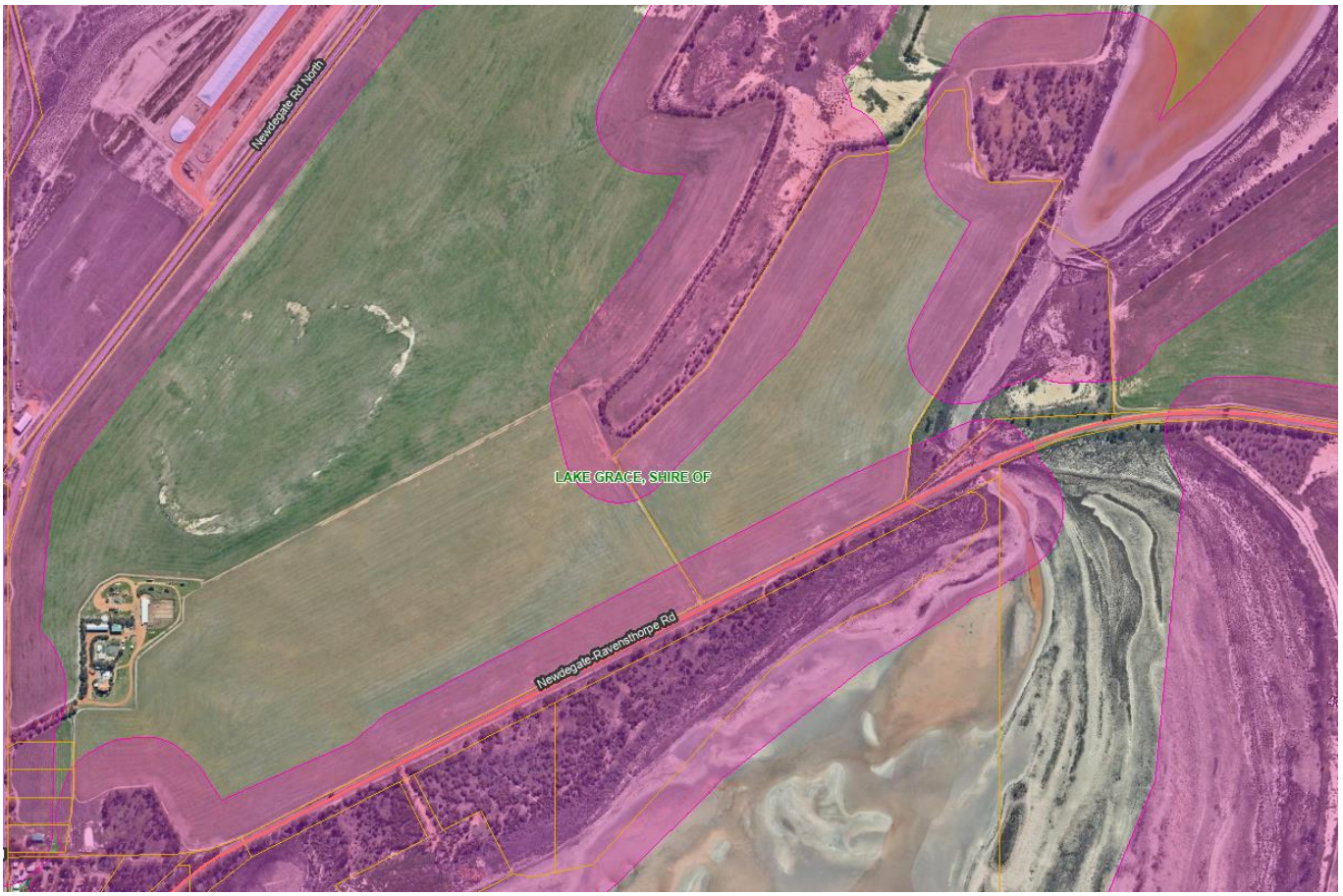
There are no known previous bushfire assessments that have been undertaken for the site.

1.4.1 Figure 1: Site plan

1.4.2 Figure 2: Location Plan



1.4.3 Figure 3: Map of Bushfire Prone Areas for the subject site



2. Environmental considerations

We rely on our client to provide us with detailed environmental information specific to their site including reports from other consultants. To the best of our knowledge there are no environmental, biodiversity or conservation values on the subject site (or adjoining).

2.1 Native vegetation – modification and clearing

The subject site does not contain those values mentioned above and is not identified in a local planning strategy or local biodiversity strategy therefore clearing requirements will be in accordance with the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004.*

2.2 Revegetation/Landscape Plan

No Revegetation/Landscape Plan has been provided for this site.

3. Bushfire Assessment Results

3.1 Assessment Inputs

The location and extent of the classifiable vegetation in relation to the proposed developments have been assessed and recorded in the attached BAL Assessment Report extract. The BAL Assessment Report is produced based on a methodology 1 assessment, with the vegetation being assessed "as is" in accordance with AS3959. The initial BAL rating is given in the table below.

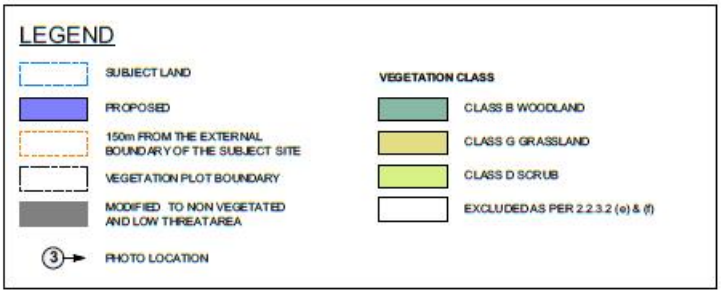
Table 2A: Worst case BAL that applies to the site

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class B Woodland	Flat land	58m	BAL – 12.5
2	Excludable – Clause 2.2.3.2(e)	-	-	BAL – LOW
3	Excludable – Clause 2.2.3.2(e)	-	-	BAL – LOW
4	Class D Scrub	Flat land	17.9m	BAL – 29
5	Class G Grassland	Flat land	0m	BAL – FZ
6	Class B Woodland	Flatland	27.8m	BAL – 19
7	Class G Grassland	Flatland	32m	BAL – 12.5

Table 2B: Determined Bushfire Attack Level (BAL)
The Determined Bushfire Attack Level for the proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis.

Determined Bushfire Attack Level				BAL – FZ
Photo ID:	7	**Plot:**	5	
Vegetation Classification or Exclusion Clause				
Class G Grassland – Tussock grassland G-22				
Description / Justification for Classification				
Grassland including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Grassland over 100mm.				

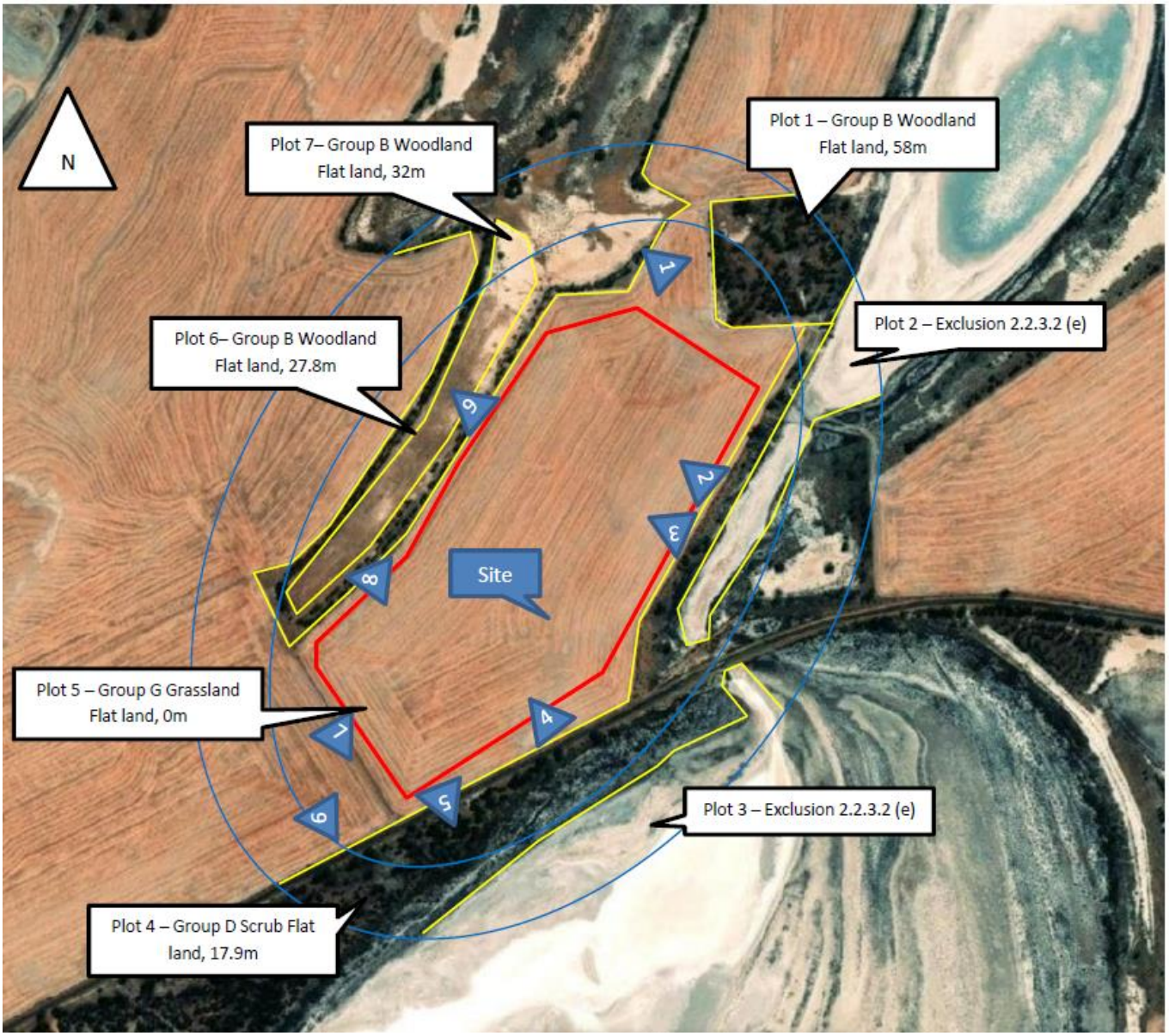
3.1.1 Figure 4: Post-Development Vegetation Classification Map



3.2 Preliminary BAL Assessment

3.2.1 Site Assessment & Site Plans

The assessment of this site was undertaken by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2018 Simplified Procedure (Method 1).



Legend

1 = Photo location

= 100m and 150m wide buffers

= Vegetation plots

= Site

3.2.2 Vegetation Classification

All vegetation within 100m of the site development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

Photo ID:	1	**Plot:**	1
Vegetation Classification or Exclusion Clause			
Class B Woodland - Low woodland B-07			
Description / Justification for Classification			
Trees 10-30m high, 10-30% foliage cover, dominated by callistris with a prominent grassy understorey. May contain isolated shrubs.			

Photo ID:	2	**Plot:**	4
Vegetation Classification or Exclusion Clause			
Class D Scrub - Open scrub D-14			
Description / Justification for Classification			
Shrubs 1-2m high, 10-30% foliage cover. Prominent grassy understorey. Mixed species composition.			

Photo ID:	3	Plot:	4
Vegetation Classification or Exclusion Clause			
Class D Scrub - Open scrub D-14			
Description / Justification for Classification			
Shrubs 1-2m high, 10-30% foliage cover. Prominent grassy understorey. Mixed species composition.			

Photo ID:	4	Plot:	5
Vegetation Classification or Exclusion Clause			
Class G Grassland – Tussock grassland G-22			
Description / Justification for Classification			
Grassland including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Grassland over 100mm.			

Photo ID:	5	Plot:	4
Vegetation Classification or Exclusion Clause			
Class D Scrub - Open scrub D-14			
Description / Justification for Classification			
Shrubs 1-2m high, 10-30% foliage cover. Prominent grassy understorey. Mixed species composition.			

Photo ID:	6	Plot:	5
Vegetation Classification or Exclusion Clause			
Class G Grassland – Tussock grassland G-22			
Description / Justification for Classification			
Grassland including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Grassland over 100mm.			

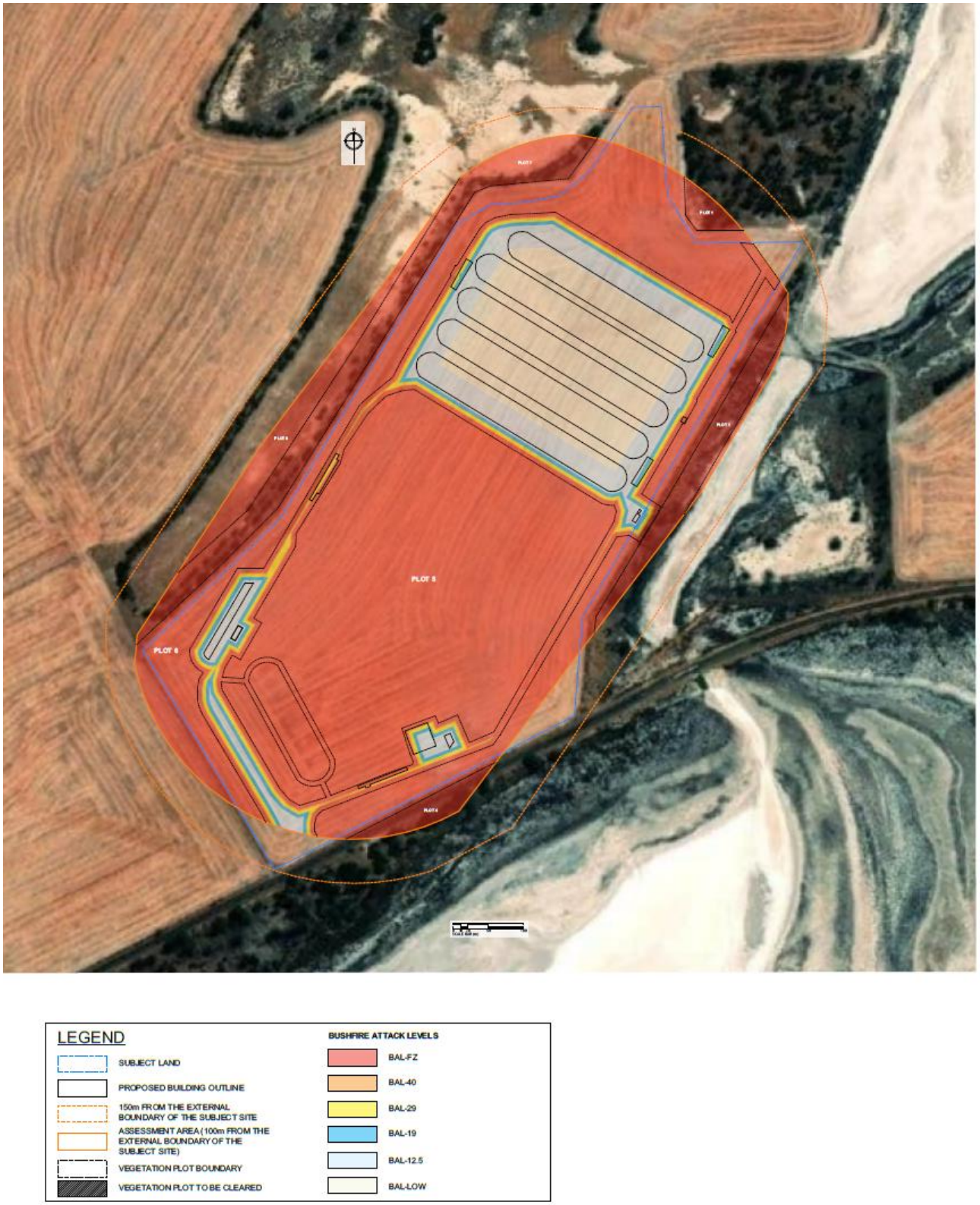
Photo ID:	7	Plot:	5
Vegetation Classification or Exclusion Clause			
Class G Grassland – Tussock grassland G-22			
Description / Justification for Classification			
Grassland including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Grassland over 100mm.			

Photo ID:	8	Plot:	6
Vegetation Classification or Exclusion Clause			
Class B Woodland - Low woodland B-07			
Description / Justification for Classification			
Trees 10-30m high, 10-30% foliage cover, dominated by callistris with a prominent grassy understorey. May contain isolated shrubs.			

Photo ID:	9	Plot:	6
Vegetation Classification or Exclusion Clause			
Class B Woodland - Low woodland B-07			
Description / Justification for Classification			
Trees 10-30m high, 10-30% foliage cover, dominated by callistris with a prominent grassy understorey. May contain isolated shrubs.			

3.3 Assessment outputs (Contour Map)

3.3.1 Figure 5: BAL Contour Map (to infrastructure following implementation of APZ)



3.3.2 Table A: Method 1 Table (to infrastructure following implementation of APZ)

The BAL contours are based on:

- The vegetation classifications and effective slope observed at the time of inspection
- The anticipated post-development vegetation based on proposed on-site clearing extent, and resultant vegetation exclusions and separation distances, achieved to implement the proposed development and Asset
- The extent of clearing assumes the rail loading facility has been progressed and that clearing for this project has been completed.

The results of the BAL contour assessment for the current scenario are detailed in Table A and illustrated in Figure 4.

BAL Determination				
	Applied Vegetation Classification	**Effective Slope Under the Classified Vegetation (degrees)**	**Asset Protection Zone around future construction (metres)**	**Highest BAL Rating**
Sample Platform	Class G Grassland	Flat land	20m	BAL – 12.5
Site Amenities	Class G Grassland	Flat land	20m	BAL – 12.5
39m Weightbridge c/w Hut & Bypass	Class G Grassland	Flat land	20m	BAL – 12.5
Bulkhead	Class G Grassland	Flat land	20m	BAL – 12.5
Toilet Block	Class D Scrub	Flat land	20m	BAL – 19
Machinery Shed	Class G Grassland	Flat land	20m	BAL – 12.5

4. Identification of bushfire hazard issues

The site is a commercial operation surrounded by grassland and woodland. Access is above average due to the commercial heavy vehicle access required. Refer to Figure 4.

5. Assessment against the Bushfire Protection Criteria

5.1 Compliance

Each of the elements listed within Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas has been addressed in this bushfire management plan as per the following table.

Bushfire protection criteria	Method of Compliance/Acceptable Solutions	Proposed bushfire management strategies
Element 1: Location	Area 1	N/A
	Area 2	N/A
Element 2: Siting and design of development	A2.1a Siting and design	N/A
	A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m2 (BAL-40 or BAL-FZ)	The proposed development is located in an area subject to BAL-29 or lower in order to comply with the *Guidelines for Planning in Bushfire Prone Areas.* If the provision of an APZ in accordance with acceptable solution A2.2 cannot be achieved, then the vegetation immediately surrounding the building is to be managed as defendable space in accordance with Appendix 1, Table 9 – APZ technical requirements.
	A2.2 Asset Protection Zone	The Asset Protection Zone will be maintained within the boundary of the lot. All future construction is to be surrounded by an APZ of 20m as per the council firebreak notice which will ensure the potential radiant heat impact of a bushfire does not exceed BAL-29 as per the Planning for bushfire guidelines acceptable solutions. Refer to Table A which indicates the minimum width of the APZ to not exceed BAL-29. The standards for an APZ from the Guidelines are attached in Appendix 1.
	A2.3 Clearing of native vegetation	The development avoids, or where unavoidable, minimises the clearing of native vegetation.
	A2.4 Storage of hazardous, flammable and/or combustible materials	The proposed development will be in an area not exceeding BAL-29 once the APZ is stablished.
Element 3: Vehicular access	A3.6 Private driveway longer than 70m. A private driveway is to meet detailed requirements contained within the Guidelines.	The site's driveway is used by heavy vehicles and complies with the requirements of Table 6, Column 5.
Element 4: Water	A4.1 Identification of future water supply	The site is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services. An existing hydrant is located on Newdegate North Rd – refer to Figure 5 for the location.

5.1.1 Figure 6: Spatial representation of the bushfire management strategies

1) The APZ of 20m is to be contained solely within the lots. An APZ is required around the future structures to ensure the BAL rating is not higher than BAL-29. Refer to Appendix 1.
2) The proposed network needs to meet the requirements of Table 6 Column 3. (i.e. hard gravel and bitumen surface).
3) The site is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services. Existing hydrant is located on Newdegate North Rd – refer to map for the location.
4) Firebreak as per Shire of Moora Fire-Break Notice.

Location Details: Lot 300 Newdegate-Ravensthorpe Rd, Newdegate
Local Government Area: Shire of Lake Grace
Assessment Date: 6.12.2024
Date of aerial photo: Unknown
Prepared by: James Tereciuk, Bushfire Planning Practitioner

LEGEND

- BUILDING OUTLINE
- EXISTING ACCESS
- ASSET PROTECTION ZONE
- FIRE BREAK
- CLASSIFIED VEGATATION
- 100m & 150m WIDE VEGATATION RADIUS
- SUBJECT LAND
- H — EXISTING HYDRANT

6. Responsibilities for Implementation and Management of the Bushfire Measures

DEVELOPER/LANDOWNER – PRIOR TO SALE OR OCCUPANCY	
No.	**Implementation Action**
1	Install the private driveway to the standards stated in the BMP.
2	Establish the Asset Protection Zones to the dimensions and standards stated in the BMP.
3	Comply with the relevant local government annual firebreak notice issued under s33 of the Bush Fires Act 1954.
LANDOWNER/OCCUPIER – ONGOING MANAGEMENT	
No.	**Management Action**
1	Maintain the Asset Protection Zones to the dimensions and standard stated in the BMP.
2	Landowners/occupiers to thoroughly read this BMP. If there are any items which require clarification it is recommended that they contact the author of this report.
3	Maintain vehicular access routes within the lot to the required surface condition and clearances.
4	Comply with the relevant local government annual firebreak notice issued under s33 of the Bush Fires Act 1954.

To ensure that the above individuals/organisations are able to comply with the Bushfire Management Plan they are to be notified of their responsibilities by the developer and be given a copy of the endorsed Bushfire Management Plan.

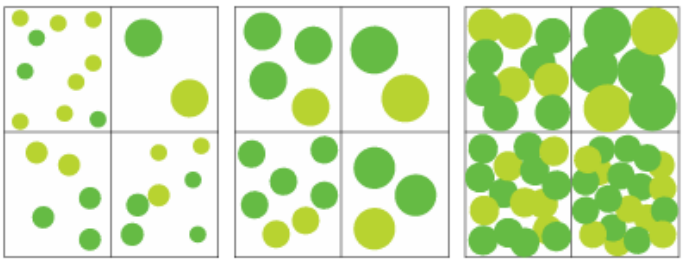
This Bushfire Management Plan relates to a specific planning approval and should be referred to periodically as part of the owner's fire mitigation strategy. As time passes, any items found to require review due to changing circumstances are to be brought to the attention of the local government and the Bushfire Management Plan author.

Certification by bushfire consultant

I James Terenciuk, certify that at the time of inspection, the BAL ratings contained within this BMP are correct; Clearance by local government is recommended.

James Terenciuk
Bushfire Planning Practitioner
Date: 28 November 2024

7. Appendix 1: Schedule 1: Standard for Asset Protection Zones (Appendix B, Table 9 of the Guidelines)

OBJECT	REQUIREMENT
Fences within the APZ	Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (combustible, dead vegetation matter less than 6 mm in thickness)	• Should be managed and removed on a regular basis to be maintained as low threat vegetation • Should be maintained at less than two tonnes per hectare (on average) • Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 m in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building • Branches at maturity should not touch or overhang a building or powerline • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be less than 15 per cent of the total APZ area • Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ. Tree canopy cover – ranging from 15 to 70 per cent at maturity  15% 30% 70%

OBJECT	REQUIREMENT
Shrub* and scrub* (0.5 m to 6 m in height). Shrub and scrub more than 6 m in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings • Should not be planted in clumps more than five square metres in area • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground cover*(less than 0.5 m in height. Ground cover more than 0.5 m in height is to be treated as shrub)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above • Can be located within two metres of a structure but three metres from windows or doors if more than 100 mm in height.
Grass	• Grass should be maintained at a height of 100 mm or less, at all times • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	Within three metres of each wall or supporting post of a habitable building; the area is kept free from vegetation but can include ground cover, grass and non- combustible mulches as prescribed above.
Liquid petroleum gas cylinders	• Should be located on the side of a building farthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building • The pressure relief valve should point away from the house • No flammable material within six metres from the front of the valve • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

Notes:
** Plant flammability, landscaping design and maintenance should be considered – refer to following explanatory notes*

Fine fuel load is the combustible, dead or dry vegetation matter on the ground, near ground, or elevated. Fine fuel includes grass, leaves, bark and twigs less than six millimetres in diameter that ignite readily and are burnt rapidly when dry.

Fine fuel should be maintained at less than 2t/ha. 100gm/m² equates to 1t/ha. To estimate a fuel load (in t/ha), collect the dry fine fuel from a representative one square meter and weigh (in grams using kitchen scales) and multiply the weight by 0.01.

8. Appendix 2: Vehicular access technical requirements

Table 10: Vehicular access technical requirements

	1		2		3		4		5	
TECHNICAL REQUIREMENTS	**PERIMETER ROADS**		**PUBLIC ROADS**		**EMERGENCY ACCESS WAY[3]**		**FIRE SERVICE ACCESS ROUTE[3]**		**BATTLE-AXE & PRIVATE DRIVEWAYS[1]**	
MAP OF BUSH FIRE PRONE AREAS DESIGNATION	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**
Minimum horizontal clearance (metres)	12	8	See note 5		10	6	10	6	6	
Minimum vertical clearance (metres)	4.5									
Minimum weight capacity (tonnes)	15									
Maximum grade unsealed road[2]	See note 5		See note 5		1:10 (10% or 6°)					
Maximum grade sealed road[2,4]					1:7 (14.3% or 8°)					
Maximum average grade sealed road					1:10 (10% or 6°)					
Minimum inner radius of road curves (metres)					8.5					

Notes:

[1] Driveways and battle-axe legs to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision where not required to comply with the widths in this Appendix or the Guidelines.

[2] Dips must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.

[3] To have crossfalls between 3 per cent and 6 per cent.

[4] For sealed roads only the maximum grade of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50 metres is permissible, except for short constrictions to 3.5 metres for no more than 30 metres in length where an obstruction cannot be reasonably avoided or removed.

[5] As outlined in the Institute of **Public Works Engineering Australasia (IPWEA) subdivision guidelines**, **Liveable Neighbourhoods**, **Austroads Standards** Main Roads standard, supplement, policy or guideline and/or any applicable or relevant local government standard or policy.

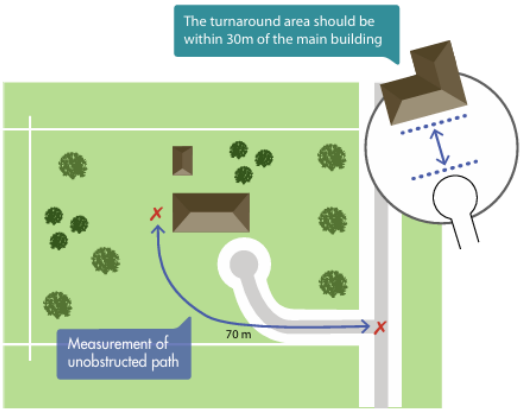
B.3.8 Private Driveway

Emergency services vehicles typically operate from the street frontage in areas serviced by reticulated water and where the distance from the public road to the farthest part of the habitable building is no greater than 70 metres.

In the event the habitable building cannot be reached by hose reel from the public road, emergency services vehicles will need to gain access via the driveway to the property. Emergency services vehicles will also need to gain access to the property where access to water is provided by onsite water tanks. In these situations, the driveway and battle-axe access leg (if applicable) will need to be wide enough for access by an emergency services vehicle and a vehicle to evacuate.

It is acceptable for a private driveway to have a carriageway width of four metres with a traversable verge of one metre on either side of the carriageway.

Figure 38: Design requirements for a private driveway where required

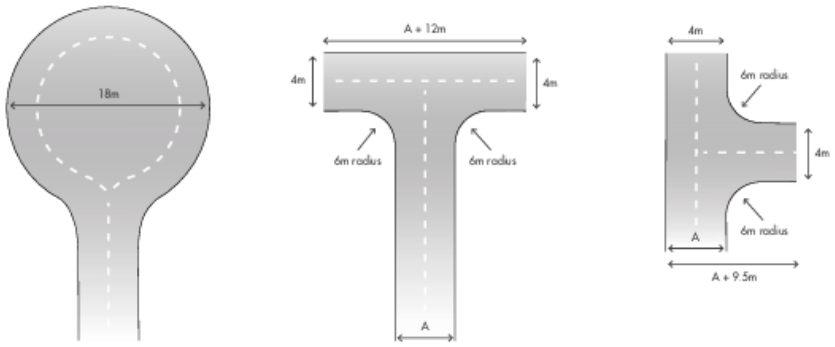


Turn-around areas (Figure 38) should be available for conventional two-wheel drive vehicles and type 3.4 fire appliances and should be located within 30 metres of habitable buildings. Circular and loop driveway design may also be considered.

A private driveway greater than 70m is to meet all of the following requirements:

a) Requirements in Table 10, Column 5; and
b) passing bays every 200 metres with a minimum length of 20 metres and a minimum additional carriageway width of 2 metres (i.e. the combined carriageway width of the passing bay and constructed private driveway to be a minimum 6 metres); and
c) turn-around area (Figure 30) and within 30 metres of the habitable building (Figure 38).

Figure 30: Design requirements for a turn-around area



9. Appendix 3: LG's Firebreak Notice

Shire of Lake Grace

Fire Hazard Reduction Notice

FIRST AND FINAL NOTICE

COMPLIANCE DUE BY:
1 November

ASSESSMENTS COMMENCE:
1 November

Important: The works outlined below must be completed by 1 November and maintained in this state up to and including 30 April.

Notice to all land owners and occupiers in the Shire of Lake Grace

Pursuant to Section 33 of the Bush Fires Act 1954, the Shire of Lake Grace (Shire) gives written notice to act as specified in this notice to land that you own and/or occupy, and with respect to any matter which is upon the land that you own and/or occupy within the Shire. Failure or neglect to comply with this notice is an offence and can result in a penalty of up to $5,000. The Shire advises that its officers, servants, staff, contractors, vehicles, machinery, and appliances (as the officers deem fit) may carry out the requisitions of this notice that are not complied with by the date specified above, and any costs and expenses incurred may be recovered from you as the owner and/or occupier of the land.

All land with an area greater than 4,000m² (0.4 ha)

☐ **Fire Breaks**

- Install or upgrade a **3-metre-wide** by **4-metre-high clearance**, **bare mineral earth**, **continuous** (no dead ends) trafficable fire break as close as possible inside the entire perimeter of the land.
- Install or upgrade a **3-metre-wide** by **4-metre-high clearance**, **bare mineral earth**, **continuous** (no dead ends) trafficable fire break within 50 metres of and surrounding all buildings and haystacks.

☐ **Dead Flammable Material (DFM)**

Reduce and/or maintain all dead flammable material below 8 tonnes per hectare (see definition *Fuel Load*).

☐ **Asset Protection Zone**

Maintain a fuel-reduced zone around all buildings and assets which extends 20 metres from the outermost point of all buildings and assets.

- Gutters, roofs, and walls of all buildings to be free of flammable matter and maintained.
- Fuel load within the 20-metre zone is reduced and maintained to no more than 2 tonnes per hectare.
- Maintain all grass around buildings to a height no greater than 50mm.
- Trees over 5 metres in height within the 20-metre zone to be under-pruned up to 2 metres.
- Trees or shrubs within 2 metres of a building / asset shall be pruned to a height no greater than 2 metres and/or pruned away from the building / asset to a distance greater than 2 metres.

All land with a total area of less than 4,000m² (0.4ha)

☐ **Dead Flammable Material (DFM)**

Reduce and/or maintain all dead flammable material below 8 tonne per hectare (see definition *Fuel Load*).

☐ **Slashing**

Slash, mow, or trim dead grasses, dead shrubs, and dead plants to a height no greater than 50mm and remove cuttings/swath across the entire property.

☐ **Asset Protection Zone**

Maintain a fuel-reduced zone around all buildings and assets which extends 20 metres from the outermost point of all buildings and assets.

- Gutters, roofs, and walls of all buildings to be free of flammable matter and maintained.
- Fuel load within the 20-metre zone is reduced and maintained to no more than 2 tonnes per hectare.
- Trees over 5 metres in height within the 20-metre zone to be under-pruned up to 2 metres.
- Trees or shrubs within 2 metres of a building / asset shall be pruned to a height no greater than 2 metres and/or pruned away from the building / asset to a distance greater than 2 metres.

By Order of the CEO Shire of Lake Grace

GREEN START CONSULTING
fast building approvals

Additional Works

Where a property is affected by an approved bushfire management plan, property owner and/or occupier must still comply with all requirements in this notice and with ALL additional requirements outlined within that plan.

You may be required to carry out further bushfire property preparedness works on your land to reduce any fire hazards considered necessary by a Fire Control Officer. If required, these will be outlined in a 'work order' and sent to the address of the owner.

Emergency Management Plans and Shire Approved Treatment Plans

All properties and/or land subject to a Bushfire Management Plan or an approved Bushfire Attack Level assessment (BAL), as a result of subdivision, development application or a Shire approved treatment plan, must comply with the listed requirements in their entirety. Compliance with any additional plans does not constitute compliance with this Notice.

Airstrips

Pursuant to Regulation 39B of the Bush Fires Regulations 1954, the Shire gives written notice to act as specified in this notice to land that you own and/or occupy

- Install or upgrade a **6-metre-wide**, **bare mineral earth**, **continuous** trafficable fire break immediately surrounding airstrips.
- Engine start-up, refuelling and maintenance areas shall be cleared of flammable material to a radius of 18m.

Variation to the Fire Hazard Reduction Notice

If you consider it impractical to meet a requirement/s of this Notice, you may apply to the Shire for a variation no later than 2 October.

Note: A variation is not an exemption but an application to employ other methods of property preparedness to land that you own and/or occupy.

If your application is not granted you must comply with all requirements outlined in the Fire Hazard Reduction Notice. Variation request application forms are available before 1 October on the Shire's website.

Fire Suppression Equipment

Pursuant to Regulation 38A & 38B of the Bush Fires Regulations 1954, the Shire gives written notice that undertaking the below-listed agricultural activities shall have the following conditions;

- Provide an operational mobile firefighting unit with no less than 450 litres of water (recommended 1200 litres),
- Minimum 6 metres of hose (recommended 30 metres) with a controlled nozzle,
- Self-propelled fire units are preferred with trailer units being accepted only if connected to a tow vehicle at all times.
- Mobile firefighting unit GVM and/or GTM shall not be exceeded pursuant to WHS legislation to maintain a safe work environment.

Specified activities;

- Grain harvesting
- Rock raking/ windrowing/ track chaining
- Spreading
- Other activities as broadcast by the CBFCO, CESM or CEO.
- Hay baling
- Reefinating
- Stubble crunching

Fire units are to be ready and available from 1 November - 31 March annually, outside above activities.

Definitions

Fire Break:
A strip of land free of all flammable material with the intention of minimising the spread or extension of a bushfire and provide safe access on the property for emergency vehicles and other firefighting operations.
» Clearance must be no less than 3-metres wide and 4-metres in height inside and along all boundaries (including boundaries adjacent to roads, rail and drain reserves and reserves).
» Must not be more than 5-metres wide (further width extensions may be considered upon written application for approval to the Shire).
» Maintained, reticulated living lawns are lawns considered to be kept completely green. Driveways may be acceptable in conjunction with, or in lieu of, mineral earth fire breaks.
» Must have a corner turning radius of up to 12 metres.

Fuel Load
Can be live and dead vegetation that accumulates over time. This Notice refers only to dead vegetation.

Fine fuels include:	Heavy (Course) fuels include:
Leaf litter, grasses, twigs (up to 6mm diameter), bark etc.	Branches, logs, stumps etc.

- A fuel load depth of 15mm (fine fuels) to the mineral earth is indicative of approximately 8 tonne per hectare. The more fuel load, the higher the flame height and increased fire intensity.
- Mulch piles, stored firewood and burn piles can contribute to fuel loading on land and must be stored safely away from assets, removed from the property, or actioned as directed by a Fire Control Officer.

10. Appendix 4: Water Supply Dedicated for Bushfire Firefighting Purposes

Table 11: Water supply dedicated for bushfire firefighting purposes

SECTIONS FROM THE PLANNING FOR BUSHFIRE GUIDELINES					
SECTION 5[2] STRUCTURE PLANS AND SUBDIVISION APPLICATIONS		**SECTION 6[2] DEVELOPMENT – RESIDENTIAL**	**SECTION 7[2] DEVELOPMENT – COMMERCIAL & INDUSTRIAL**	**SECTION 8[2] – DEVELOPMENT – VULNERABLE LAND USES**	
One additional lot	10,000 litre water tank per lot	10,000 litre water tank per habitable building	For each habitable building - 10,000 litre per 1,500 m² of floor space up to 50,000 litre. Provided in a water tank	Camping ground	At the discretion of the local government
Three to 24 lots	10,000 litre water tank per lot[1] **or** 50,000 litre strategic water tank				
25 lots or more	50,000 litre per 25 lots or part thereof, provided as a strategic water tank(s) **and/or** 10,000 litre water tank per lot			Other vulnerable land uses	For each habitable building - 10,000 litre per 500 m² of floor space up to 50,000 litre. Provided in a water tank

Notes:
[1] Evidence that the identified water supply amounts in either column denoted is to be provided at the relevant planning stage.
[2] where more than one habitable building is proposed, strategic water tanks are to be provided in accordance with Section 5 requirements and at the discretion of the Local Government.

B.4.1 CONSTRUCTION AND DESIGN

An above-ground tank and associated stand should be constructed of non-combustible material.

Below-ground tanks should have a 200 millimetres diameter access hole to allow tankers or emergency services vehicles to refill direct from the tank, with the outlet location clearly marked on the surface.

Above and below ground tanks may need to comply with AS/NZS 3500.1:2018.

An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018.

Where an outlet for an emergency services vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

B.4.1.1 Pipes and fittings

All above-ground, exposed water supply pipes and fittings should be metal. Fittings should be located away from the source of bushfire hazard and be in accordance with the applicable section below, unless otherwise specified by the local government.

B.4.1.2 Fittings for above-ground water tanks:

- Commercial land uses: 125 millimetres Storz fitting; or
- Strategic water tanks: 50 millimetres or 100 millimetres (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50 millimetres male camlock coupling with full flow valve; or
- Combined water tanks: 50 millimetres male camlock coupling with full flow valve or a domestic fitting, being a standard household tap that enables an occupant to access the water supply with domestic hoses.

B.4.1.3 Remote outlets

In certain circumstances, it may be beneficial to have the outlet located away from the water supply. In instances in which a remote outlet is to be used, the applicant should consult the local government and DFES on their proposal.

INTRODUCTION

Purpose and Scope

This management plan defines the requirements associated with the process of minimising the impact of dust emissions that could potentially be generated from activities at the Newdegate East Grain Storage facilities.

CBH is committed to improving the overall environmental impacts of its business, and in achieving the environmental objectives outlined in the CBH Group Health, Safety and Environmental Policy.

All activities undertaken at the Newdegate East Grain Storage facilities must comply with this Dust Management Plan.

The plan will be subject to ongoing review and therefore will be subject to change to ensure that it remains relevant and effective considering site performance, past results, and technological advances throughout the life of the site.

Definitions

Term	Definition
Dust	Dust is considered to be any particle suspended within the atmosphere. Particles can range in size from as small as a few nanometers to 100 microns (um) and can become airborne through the action of wind turbulence, by mechanic disturbance of fine materials or through the release of particulate rich gaseous emissions. Dust is measured using a variety of methods, the most common being Total Suspended Particulates (TSP), which normally measure up to 50um, and PM_{10} or $PM_{2.5}$ (particulate matter less than 10um or 2.5um in size, respectively). Deposited matter measures the mass of any particulate falling out of suspension expressed in mass per area per time and is the least commonly used in determining dust concentrations (Environment Australia, 1998).
Fugitive Dust	Refers to dust derived from a mixture of sources, or a source not easily defined and includes dust generated from vehicular traffic on unpaved roads, materials transport, and handling and unvegetated soils and surfaces.
Nuisance Dust	Describes dust particles ranging in size from 1mm to 50um, which reduce environmental amenity without necessarily resulting in material environmental harm.
PM_{10}	A criteria air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 10 microns. Their small size allows them to make their way to the air sacs deep within the lungs where they may be deposited and result in adverse health effects.
TWA	Time Weighted Average
$PM_{2.5}$	Includes tiny particles with an aerodynamic diameter less than or equal to a nominal 2.5 microns. This fraction of particulate matter penetrates most deeply into the lungs.
NEPM	*National Environmental Protection (Ambient Air Quality) Measure*
CBH	Co-operative Bulk Handling Limited
NEGS	CBH Newdegate East Grain Storage facilities
SHARE	CBH incident and hazard reporting system

BACKGROUND

The original Newdegate “town/primary’ site” is located within the main town of Newdegate and includes a number of horizontal and circular storages as well as permanent open bulkhead storages. Additional temporary and emergency storage capacity has been established both west and north-east of the town to accommodate increased grain production in the region.

The CBH Newdegate East Grain Storage facilities (NEGS) will be constructed to significantly increase the permanent grain storage capacity. This will reduce the reliance on temporary and emergency open bulkheads storages. The NEGS will include 5 permanent open bulk heads, grain sampling facilities, 2 weighbridges and staff amenities.

In addition to increasing storage capacity the NEGS aims to reduce the volume and frequency of heavy traffic movements within the Newdegate town centre.

Location

The NEGS will form part of CBH’s grain storage network across the Wheatbelt Region of Western Australia. The NEGS will be located within the Shire of Lake Grace on the Newdegate-Ravensthorpe Rd. The site will be situated approximately 2 kilometres east from the Newdegate town centre.

Figure 1: Newdegate East Grain Storage Location

Extract From MNG

Operations Description

The NEGS will receive grain from the surrounding district via road transport. Received grain will be sampled, segregated, and stored on site until it is trucked to the Primary site in town and sent via train to Albany Grain Terminal for export.

Other activities conducted at the premises to enable the continued safe and efficient handling of grain will include but are not limited to ongoing maintenance on infrastructure, civil and ground improvement works, pavement works, track repair and maintenance and other associated improvement, refurbishment and construction works as required from time to time.

The Area Manager is responsible for dust control on site. Contact details are as follows:

Chris Poot
Area Manager – Area 14
chris.poot@cbh.com.au
M: 0427 190 827

The concept layout plan for the site is illustrated in Figure 2.

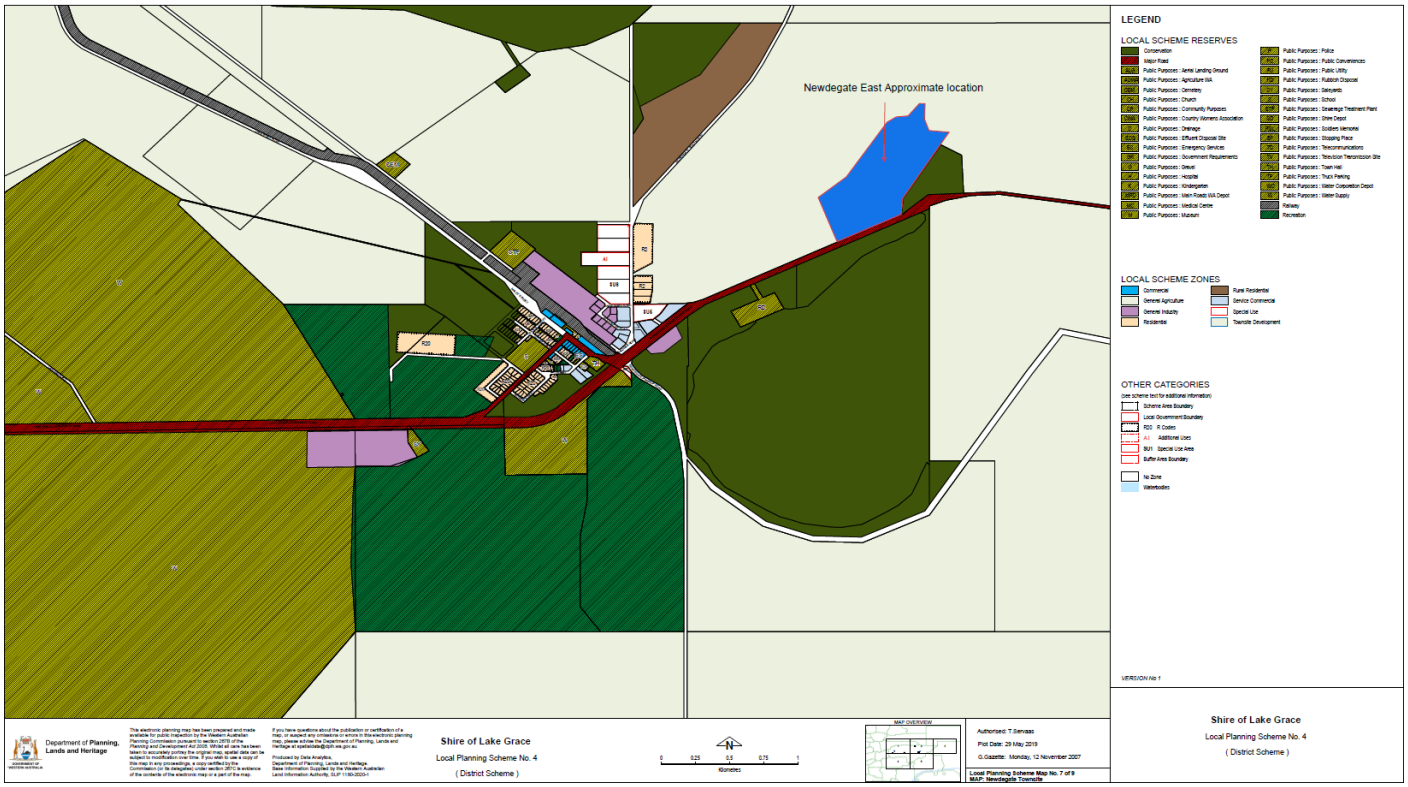
Figure 2: CBH Newdegate East Grain Storage Concept Design

Sensitive Receptors

The NEGS is primarily surrounded by land zoned for general agriculture with land to the south and east zoned for conservation. Sensitive receptors include the environmental conservation reserves, rural residential, public purpose - rubbish disposal site and the major road. All areas may be impacted by dust emissions from CBH activities.

Locations of sensitive receptors and their proximity to CBH operations are outline in Figure 3.

Figure 3: Sensitive Receptor Locations in Proximity to CBH Newdegate East Grain Storage



Extract From Shire of Lake Grace displaying the Sensitive Receptors in proximity to NEGS. The most notable receptors are environmental conservation reserves, general agriculture, rural residential, public purpose - rubbish disposal and major road.

COMPLIANCE OBLIGATIONS

Environmental Protection Act 1986

The principal statute relevant to environmental protection in WA. It provides for the establishment of the EPA, preparation, and implementation of EPPs, environmental impact assessment and approvals for new developments, licensing and permitting, and waste management.

Environmental Protection (Unauthorised Discharges) Regulations 2004

Under the Environmental Protection (Unauthorised Discharges) Regulations 2004, it is an offense to cause or allow certain materials to enter the environment in connection with a commercial or business activity.

Under regulation 3(1) a person who, in the course of or in connection with a business or a commercial activity, causes or allows dust (or other schedule 1 material) to be discharged into the environment commits an offence.

Regulatory Criteria for Dust

The National Environmental Protection Council Act 1994 (Cth) has established national objectives in the form of the National Environment Protection Measures (NEPMs) designed to manage ambient air quality concentrations. Fugitive dust emissions as PM10 should not exceed NEPM (Ambient Air Quality) criteria of 50 µm/m^3 (24-hour average) beyond the site boundary.

Table 2: Regulatory Criteria for Dust

Parameter	Monitoring Point	Criteria Target	Averaging Period	Source
Particulates as PM_{10}	Between source and sensitive receptor	50 µg/m^3	24-hour average	NEPC 2016

POTENTIAL IMPACTS

Product Characteristic Summary

Product Type	Product	Description (particle size – diameter)	Moisture Content	Transport Mode	Storage
Unprocessed Grain	Wheat, Barley, Canola, Lupins	<2.8mm	<13%	Truck	Enclosed fixed storage and open bulkheads

Table 3: Product Characteristics

Sources of Dust

Particulate emissions from a wide range of sources can impact upon air quality in proximity to CBH operations including:

- Unloading of bulk grain products at truck unloaders
- Loading of bulk products via conveyors and elevators
- Operation of conveyor and grain storage facilities
- Localised maintenance, construction, and excavation activities
- Heavy vehicle movements
- Offsite agricultural, road maintenance and construction activities
- Dust from unsealed surfaces and disturbed ground.

Elevated ambient background dust levels (regional and local scale) can also contribute to particulate levels in proximity to the site along with offsite sources, such as suspended aerosol components in windblown dust from hot and dry environments.

Characteristics of Grain Dust

Grain dust is a type of inhalable dust with its own designated Time Weighted Average (TWA) exposure standard of 1.5 mg/m^3 (Safework Australia). The recommended TWA is for exposure to the total dust produced during harvesting and handling activities of whole grain of oat, wheat and barley prior to the milling operation to minimise the potential for acute irritation of the upper respiratory tract, eyes and skin, bronchitis and decreased pulmonary function (Safework Australia). It is a respiratory sensitiser and can induce allergic reactions in the respiratory system, with symptoms being immediate or delayed and can occur some hours after exposure when symptoms are not often associated with the trigger. Grain dust is

not classified as a carcinogen according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Grain dust consists of 60 to 75 percent organic material and 25 to 40 percent inorganic material and can be contaminated by other materials during its growth, transport, and processing. These can include (but are not limited to).

- Bacteria
- Fungal spores
- Insect and insect body parts
- Storage mites and excreta
- Animal hair
- Pollen
- Fungicides, pesticides & fertiliser residues.

Risk Assessment

A risk assessment has been completed to identify potential pathways and receptors that may be impacted from various sources of dust emissions at NEGS. Risk ratings have been established based on the CBH Hazard, Risk and Change Management Procedure.

Management actions to mitigate risks identified are outlined in the following sections.

Potential Emissions	Activity / Sources	Potential Receptors	Potential Pathways	Potential Adverse Impacts	Consequence	Likelihood	Risk Rating
Dust emissions	Truck in-loading or out-loading. Stockpiling of bulk materials (including within storages). Transfer points within the Facility, and other supporting equipment. Exposed areas / unsealed roadways	Residential Public open spaces Commercial premises	Air / wind dispersion. Dust settling on infrastructure Resuspension of particulates in high wind conditions and severe weather.	Impacts to human health through inhalation of particulates.	Minor	Unlikely	Low
				Impacts to amenity at nearby sensitive receptors resulting in nuisance dust (visual dust emissions). Dust deposition on private property. Impacts to public road users. Complaints. Adverse media attention.	Minor	Possible	Moderate

Table 4: Pathways and receptors analysis risk rating

OBJECTIVES AND TARGETS

As outlined in CBH's Environmental Management Standard the key objective for protection of air quality is to ensure "adverse impacts on local or regional air quality from CBH generated air emissions (such as dust, odour, or combustion emissions) are minimised". The following objectives, targets and performance indicators have been established to enable the protection of air quality to be achieved.

Objective	Target	Performance Indicator
Dust emissions do not adversely impact public health beyond the CBH operational boundary.	Dust emissions related to CBH operations remain below target levels for PM_{10} as defined in NEPM.	Visual monitoring or Continuous PM_{10} monitoring (where deemed necessary).
Dust emissions do not adversely impact public amenity beyond the CBH operational boundary.	No public complaints attributed to dust emissions from CBH operations.	Public Complaints.
Dust emissions do not adversely impact environmental values beyond the CBH operational boundary.	No reportable incidents relating to dust emissions which cause pollution to natural or built environment.	Reportable Incidents in SHARE.

Table 5: Objectives, Targets and Performance Indicators

IMPLEMENTATION STRATEGY

A range of management actions are implemented at CBH to ensure that objectives and targets for protecting air quality can be met. The management actions in the table below shall be implemented by CBH, Contractors, and customers to enable dust management objectives to be achieved.

Aspect	Dust Management Action	Frequency/Timing	Responsibility
Training	Environmental issues including dust management are and will continue to be included as part of CBH induction programs for all CBH employees and contractors	Prior to new employees starting	Area / Project Manager
Grain dust suppression systems	Product moisture management is not currently in place or possible at grain handling facilities due to quality impacts to the grain. Investigations are ongoing as to where misting may be beneficial but not pose any product quality risk.	n/a	n/a
Conveyors	Wherever practicable dust covers and wind shields shall be maintained on all conveyors to contain dust and spillage. Measures shall be in place to prevent overloading of conveyors and prevent spillages.	Whenever product movement is occurring.	Maintenance Superintendent / Area Manager
Roadways and open areas	Sweeping and housekeeping duties will be completed as required on sealed roadways, and around infrastructure to remove product spillage that has the potential to generate dust. Unsealed open areas and roadways are either sheeted with gravel or appropriate dust suppression or chemical soil stabilisers are applied.	Frequency of sweeping commensurate with build-up. Frequency of dust suppression in line with situational requirements.	Operations Supervisor
Truck Discharge Grids	Regular hygiene activities shall be conducted around truck discharge grids to remove residual product spillage and prevent it becoming windblown. Where product is migrating due to vehicle movement hygiene activities are to be employed. Hygiene of truck wheels and wheel guards shall be undertaken where required to prevent tracking of product outside of discharge grids or storage sheds.	At all times during truck loading and unloading activities.	Area Manager / Maintenance Superintendent
Truck Movement	All grain haulage trucks shall be tarped when transporting product within the facility to ensure dust generation is minimised.	All grain haulage trucks shall be tarped when transporting product within the	Operations Supervisors/ Transporters /Project Manager

Aspect	Dust Management Action	Frequency/Timing	Responsibility
	All site traffic is required to adhere to the site speed limit to minimise dust lift generated by vehicle movement, and this will be communicated at any Growers and Contractor Meetings.	facility to ensure dust generation is minimised.	
Hygiene Program	Hygiene activities will occur daily to maintain a high standard of housekeeping. This reduces the amount of grain and dust build up when more thorough cleaning is required or when maintenance is undertaken. During harvest receivals, efforts are made to sweep dust from the floors of storages on in loading to reduce the amount of dust on outturn. Safety critical grain spills are cleaned up immediately.	At all times during operations.	Operations Supervisor
Inspections	Inspections of facilities shall be undertaken at regular intervals to ensure dust control measures are in place and effective. These include: Environmental Control Verification Inspections Hygiene Inspections Workplace Inspections	As required.	Quality Coordinator / Area Manager / Operations Supervisor
Changes to Operations	Changes to infrastructure, handling methods and throughput volumes shall be thoroughly assessed to ensure environmental, human health and amenity impacts are managed. Project activities outside of operations to have Risk Assessment and environmental management to be reviewed to include additional controls and monitoring if required.	Prior to change in throughput volume, infrastructure or handling method, or site activities.	Area Manager / Maintenance Superintendent / Project Manager

Aspect	Dust Management Action	Frequency/Timing	Responsibility
Boundary dust control	Where deemed necessary shade cloth is to be installed along boundary fence lines at key locations to reduce emissions of fugitive dust from facilities. Preference for screening trees to be retained and/or planted where landscaping design, Local Government Authority and road safety requirements permit to assist in mitigating nuisance dust.	As required.	Area Manager/ Maintenance Superintendent / Project Manager
Monitoring	Regular visual monitoring of site activities for the generation of excessive dust emissions in order to implement early intervention measures. Daily assessment of weather conditions and potential effect on dust generation from CBH activities. Where required continuous dust monitoring equipment to be installed to assess dust concentrations at CBH boundaries.	As required.	Area Manager / Project Manager / Local Government Authority
Product handling procedures in place to mitigate dust emissions during bulk material handling	Receive Grain SOP Store Grain SOP Outload Grain SOP Outturn Grain SOP Hygiene SOP	At all times during operations.	Area Manager

MONITORING

Dust monitoring data is obtained by from CBH site specific monitoring equipment that is installed where CBH risk assessments identify the measure is necessary or an incident or complaint response requires this as an action.

Monitoring, measurements, equipment siting and reporting will be conducted in accordance with:

- Section 4 of AS 2436-2010 Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites
- AS 3580.1.1-2007 - Methods for sampling and analysis of ambient air Part 1.1;
- National Environmental Protection Council (1998) National Environmental Protection Measure for Ambient Air Quality, June 1998 and variation dated 2015; and
- A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities, Department of Environment and Conservation March 2011.

Real time dust monitoring data, including wind direction information can be collected and access provided to key CBH personnel following approval by the CBH Environmental and Sustainability Manager.

Where real time dust monitoring equipment is deemed necessary, early warning levels and alerts shall be established with the aim to provide early notification to CBH in order to implement effective preventative measures.

TRIGGERS AND CORRECTIVE ACTIONS

In the event of excessive dust emissions being generated from NEGS, activities will be reviewed and adjusted until emissions are reduced or controlled.

For trigger events, the process in Figure 4: CBH Guideline for Dust Management shall be followed.

Trigger	Corrective Action	Responsibility
Visual monitoring by CBH staff identifies excessive dust emissions at site boundary.	1. Assess source of dust, wind, weather conditions. 2. Cease dust generating activity until weather conditions change or additional dust control measures are in place.	CBH Operations Supervisors CBH Area Manager CBH Project Manager
Monitoring equipment advise of PM_{10} exceedance of early warning levels.	1. Assess source of dust, wind, weather conditions. 2. Cease dust generating activity until weather conditions change or additional dust control measures are in place.	CBH Operations Supervisors CBH Area Manager
Public complaint received relating to excessive dust emissions.	1. Assess source of dust, wind, weather conditions. 2. Cease dust generating activity until weather conditions change or additional dust control measures are in place.	CBH Operations Supervisors CBH Area Manager
Repeat complaints indicate excessive dust emissions are impacting neighbouring businesses or public.	1. Assess source of dust. 2. Investigate adequacy of control measures. 3. Implement interim dust control measures as necessary until further controls can be put in place.	CBH Operations Supervisors CBH Area Manager CBH General Manager

Table 6: Triggers and Corrective Actions

Figure 4: CBH Guideline for Dust Management

Assess activities and identify source of dust generation	
Confirm dust is from CBH activities and not from external sources.	Identify the specific activities generating the dust.
Are dust control measures in place and working correctly	
Ensure all required dust covers, wind shields, shade cloth and tarps are in place.	Check unsealed areas and earthworks have dust suppression measures as required.
Are hygiene works required to remove excess spilled grain/grain dust.	
Confirm hygiene works being completed frequent enough.	Check if there is an equipment issue resulting in hygiene issues.
Can additional dust control methods be implemented.	
Implement additional dust control measures (additional dust suppression on unsealed areas etc.).	Install additional equipment (shade cloth or covers to create wind breaks etc.).
Do the weather conditions require works to be modified.	
Reschedule activities with high dust generation potential.	Change the location of specific works so dust can be contained to site.
Do activities need to cease until further controls can be implemented or weather conditions become more favourable.	
Cease works generating excessisve dust.	Contain any material that is generating excessive dust.

STAKEHOLDER CONSULTATION

CBH stakeholder consultation and liaison in relation to dust includes the following:

- Regular consultation with growers, local government authority and other stakeholders.

CBH will work closely with all relevant stakeholders in relation to dust generation concerns associated with CBH activities.

REPORTING

This section outlines the reporting responsibilities for all concerned, not only the individual with specified tasks but all employees, contractors, and visitors to CBH sites and receival points.

All CBH employees and contractors will be required to report generation of significant dust plumes, and /or any increase in dust levels to their Supervisor or Area/Project Manager as per the Incident Management Group Procedure. All incidents relating to excessive dust emissions or complaints shall be recorded in SHARE.

In addition, ***any complaints received*** regarding dust is immediately referred to the Area/Project Manager, who would then notify the General Manager of the following information.

- Date of complaint
- Time of complaint
- Location of complaint
- Nature of complaint
- Name and contact details of complainant (if given)
- A summary of any action taken.

All feedback and complaints shall be investigated thoroughly, and an assessment completed to determine appropriate course of action. A response is to be provided to the complainant within three (3) business days, or as otherwise agreed between CBH and the complainant. This response may include investigation findings and remedial action taken.

MONITORING, EVALUATION AND REVIEW

This Dust Management Plan will be reviewed regularly in response to the following:

- Significant changes to infrastructure, operations and/or dust control equipment
- In response to issues raised by regulatory agencies or the community or relevant stakeholders
- In response to additional studies, significant incidents, or monitoring information (such as dust/wind modelling).

The Document Custodian is responsible for conducting the review in accordance with the Document Control and Records Management Group Procedure (STORE-1473931053-253).

ASSOCIATED DOCUMENTS

Reference	STORE ID
Health, Safety and Environment Policy	STORE-1473931053-383
Environmental Management Standard	STORE-1473931053-261
Hazard, Risk and Change Management Procedure	STORE-1473931053-382
Incident Management Group Procedure	STORE-1473931053-24370

REFERENCES

Document	Title
Act or Regulation	Environmental Protection Act 1986 Environmental Protection (Unauthorised Discharges) Regulations 2004 The National Environmental Protection Council Act 1994 (Cth)
Report	Safe Work Australia Evaluation Report - Grain Dust (Oats, Wheat, Barley)

DOCUMENT CONTROL

Authorities

Approved By	Area Manager	**Approval Date**	
Review Frequency	Annual	**Next Review Date**	
Owner	Principal – Environment & Sustainability	**Custodian**	Specialist – Environment & Sustainability
Division	Operations	**Department**	Health, Safety and Environment

Review History

Version	Date	Author	Description of Revision
1	7/11/2024	Specialist – Environment & Sustainability	Document created in new template

CBH RISK CRITERIA AND RISK RATING MATRIX

Impact Area	1- Insignificant	2 - Minor	3 – Moderate	4 – Major	5- Catastrophic
Health and Safety – Injury or Illness	No medical treatment required. Negligible or no injury	Minor injuries / occupational illness / psychological injury requiring First Aid or Medical treatment	Serious injury / occupational illness / psychological injury requiring possible hospitalisation or permanent loss / significant effects	Life-threatening or multiple serious injuries or illnesses requiring hospitalisation and permanent effects	Death or multiple life-threatening injuries or illnesses
Environment	No effect on local environment No impact outside of site boundary No environmental breach	Minor environmental effect Minor release contained on site No environmental breach	Moderate environmental effects to localised area Moderate release contained within site boundary Environmental breach that would require reporting to an external body	Major environmental effects to localised area with offsite impacts Major release contained within site boundary Environmental breach that would require reporting to environmental or external body with likely investigation	Serious long-term effects to wide area and/or irreversible damage to environment Major release not contained within site boundary Breach likely to result in loss or impact on site operations and activities
Reputation	Minor local community / shire attention	Adverse attention from local media	Significant adverse local public or media attention	Significant adverse national public or media attention	Significant loss of international public or media attention or loss of grower/customer support.
Legal	Minor internal non-compliance	Minor legal issues and non-compliances	Internally detected breaches, reported to regulators	Serious breach of legislation with remediation notice	Suspension of licenses, prosecution and litigation
Financial	Under $1m	$1m - $10m	$10m-$50m	$50m-$150m	Over $150m
Continuity	1 hour	1 day	2-5 days	1-4 weeks	>4 weeks

Table 7: Risk Impact / Consequence Rating

Rating	Frequency	Description	Frequency example
1	Rare	The event may occur in exceptional circumstances	Occur in more than 100 years
2	Unlikely	The event could occur sometimes	Occur between 10 and 100 years
3	Possible	The event should occur sometimes	Occur between 1 and 10 years
4	Likely	The event will probably occur in most circumstances	Occur once or twice per year
5	Almost certain	The event is expected to occur in most circumstances	Occur more than twice per year

Table 8: Likelihood Rating

		Consequence				
		1- Insignificant (No Injuries or health issues)	**2 – Minor** (First Aid treatment)	**3 – Moderate** (Medical treatment, potential LTI)	**4 – Major** (Permanent injury or illness)	**5- Catastrophic** (Fatality)
Likelihood	**1 – Rare** (Occur in more than 100 years)	Low 1	Low 2	Low 3	Low 4	Moderate 5
	2 – Unlikely (Occur between 10 and 100 years)	Low 2	Low 4	Moderate 6	Moderate 8	High 10
	3 – Possible (Occur between 1 and 10 years)	Low 3	Moderate 6	High 9	High 12	Critical 15
	4 – Likely (Occur 1 or 2 times per year)	Low 4	Moderate 8	High 12	Critical 16	Catastrophic 20
	5 – Almost Certain (Occur more than 2 times per year)	Moderate 5	High 10	Critical 15	Catastrophic 20	Catastrophic 25

Table 9: CBH Risk Rating Matrix

Traffic Impact Statement

Project:	Newdegate Grain Receival Site
Client:	CBH
Author:	R. Needham/N. Baby
Date:	28th November 2024
Shawmac Document #:	2212002-TIS-001

CONSULTING CIVIL AND TRAFFIC ENGINEERS
1 ST. FLOOR, 908 ALBANY HIGHWAY, EAST VICTORIA PARK WA 6101.
PHONE|+61 8 9355 1300
EMAIL| admin@ shawmac.com.au

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1. Introduction

1.1. The Project

CBH are currently in the process of assessing the feasibility of the potential construction of a new grain receival site in Newdegate which will function as a satellite site for the existing main Newdegate Site.

CBH have selected a preferred location for the new site which is approximately 2km north-east of the Newdegate town site, along Newdegate-Ravensthorpe Road. **Figure 1** shows the proposed site location.

Figure 1: Proposed Site Location

CBH plan to construct approximately 191,915t of new Open Bulkhead (OBH) storage at the new site. Refer to **Appendix A –** for details of the proposed development. The new site is proposed to operate in tandem with the existing 'town' receival site which has a capacity of 199,395t and is located just north of the Newdegate town site. The existing 'field day' and 'north' temporary storage sites are planned to be closed.

1.2. Purpose

CBH have commissioned Shawmac to prepare a Traffic Impact Statement (TIS) supporting the development. The TIS has been generally prepared in accordance with WAPC's Transport Impact Assessment Guidelines, and includes the following:

- Documenting the details of the proposed site.
- Documenting the existing situation including the road network, traffic volumes (CBH and background), crash history, RAV network etc.
- Estimating the future traffic generation and trip distribution.
- Assess the suitability of the proposed access, any alternative access locations (along the immediate boundary of the proposed CBH site) and road network to cater for the future traffic demand in terms of:
    - Conformance to RAV network requirements
    - Intersection configuration/warrants (i.e., whether there is a need for turn pockets)
    - Sight Distance

2. Existing Situation

2.1. Road Network

The layout and hierarchy of the existing road network according to the Main Roads WA Road Information Mapping System is shown in **Figure 2**.

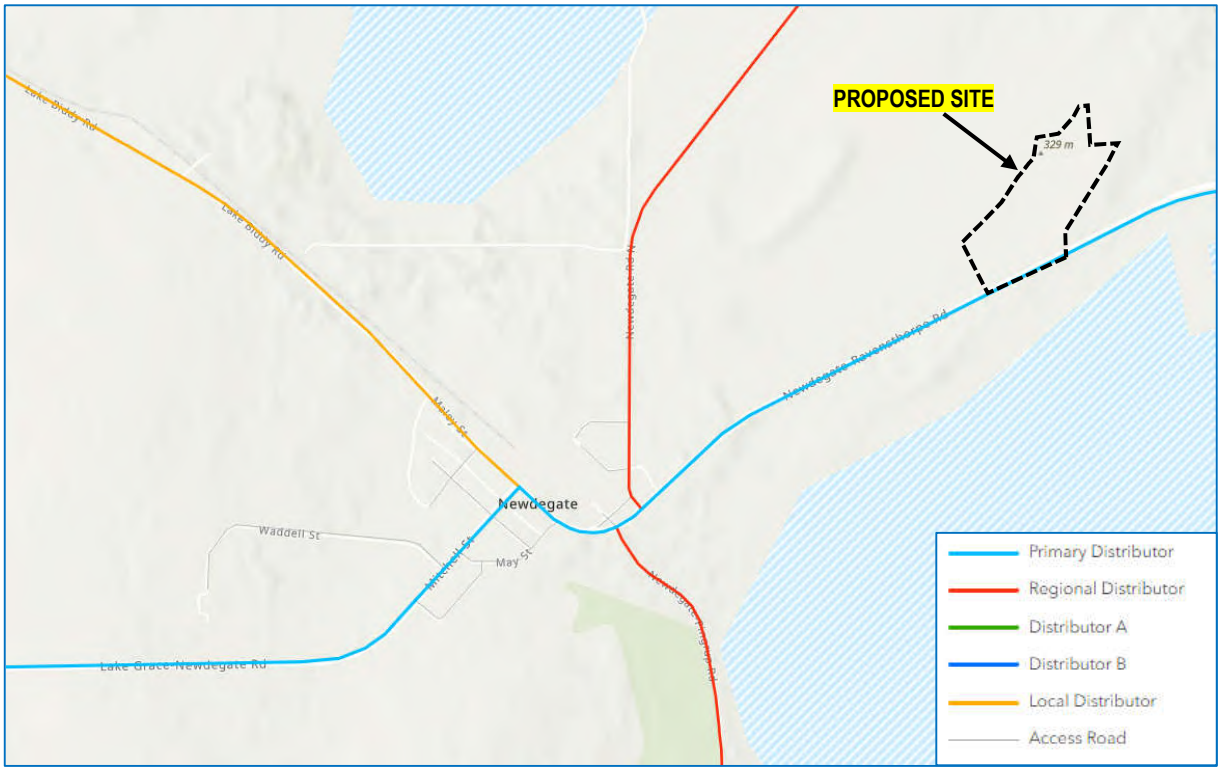


Figure 2: Road Hierarchy

2.2. Carriageway Width and Cross Section

The carriageway width and cross section of the relevant adjacent roads are summarised in **Table 1**.

Table 1: Road Configuration

Road and Location	Road Type	Cross Section	Carriageway Width (Approx.)	Sealed Pavement Width (Approx.)
Newdegate-Ravensthorpe Road	Primary Distributor	Two-lane single carriageway	9m	7.4m
Newdegate North Road	Regional Distributor	Two-lane single carriageway	9m	7.4m
Newdegate-Pingrup Road	Regional Distributor	Two-lane single carriageway	10m	7.4m
Maley Street	Primary Distributor	Two-lane single carriageway	10m	7.4m – 8.0m
Mitchell Street	Primary Distributor	Two-lane single carriageway	9m	9m

2.3. Traffic Volumes

The MRWA traffic count site available on Newdegate-Ravensthorpe Road is Site 6122 (East of Hewson Road) at SLK 377.11 which is approximately 47km east of the proposed site. There are no other traffic count sites of direct significance to the project.

The latest figures recorded at Site 50469 were from 2019/2020 and show an average weekly daily traffic volume of 252 and 27% heavy vehicles. Nearby network monitoring sites show 3.4% (site 6095) and 14.3% (site 6122) increases in traffic from 2019/2020 to 2023/2024. Both sites show 44% heavy vehicles. To bring the recorded traffic volumes to 2023/2024 figures a conservative 20% escalation has been applied. 44% heavy vehicles have been assumed which is consistent with the two referenced network monitoring sites. Refer to **Appendix B – Traffic Counts** for the MRWA data.

Traffic volumes for other relevant roads have been estimated by judgement and with reference to other traffic count sites within the region.

Table 2 provides a summary of the estimated traffic volumes.

Table 2: Daily Traffic Volumes (2023/2024)

Road	Location	Daily Volume	%HVs	Data Source
Newdegate-Ravensthorpe Road	East of Hewson Road (site 50469)	302	44	MRWA 2019/2020 (escalated to 2023/2024
Newdegate North Road	North of Newdegate-Ravensthorpe Road	150	30	Assumed
Newdegate-Pingrup Road	South of Newdegate-Ravensthorpe Road	150	30	Assumed

Road	Location	Daily Volume	%HVs	Data Source
Maley Street	West of Newdegate-Pingrup Road	250	20	Assumed
Mitchell Street	South of Maley Street	200	20	Assumed

Peak hour volumes have been estimated in a similar manner, and where traffic count data is not available, are assumed to be 10% of the daily traffic volumes which is consistent with the available traffic counts in the area.

Table 3: Peak Hour Traffic Volumes

Road / Direction	Location	AM Peak	PM Peak	Data Source
Newdegate-Ravensthorpe Road	East of Hewson Road (site 50469)	35	28	MRWA 2019/2020 (escalated to 2023/2024)
Newdegate North Road	North of Newdegate-Ravensthorpe Road	15	15	Assumed
Newdegate-Pingrup Road	South of Newdegate-Ravensthorpe Road	15	15	Assumed
Maley Street	West of Newdegate-Pingrup Road	25	25	Assumed
Mitchell Street	South of Maley Street	20	20	Assumed

In all cases, it is conservatively assumed that none of CBH's existing traffic is captured in the background traffic volumes.

2.4. RAV Status

As per MRWA's HVS Network Mapping Tool:

- Newdegate-Ravensthorpe Road is categorised on the Tandem Drive 7.3 and Tri Drive 4.1 networks without condition.
- Newdegate North Road is categorised on the Tandem Drive 7.2 network and Tri Drive 4.1 networks with the following condition:
    - No operation on unsealed road segment when visibly wet, without road owner's approval.
    - Operation is not permitted while the school bus is operating on the road. Operators must contact the relevant schools and obtain school bus timetables; or where direct contact can be made with the school bus driver, operation is permitted once the school bus driver confirms all school drop-offs/pick-ups have been completed on the road.
- Newdegate-Pingrup Road is categorised on the Tandem Drive 7.3 and Tri Drive 4.3 networks with the following condition:
    - All operators must carry written support from the road manager acknowledging the operator's use of the road.

- Maley Street is categorised on the Tandem Drive 7.1 and Tri Drive 4.1 networks without condition.

Figure 3 shows the Tandem Drive 7.1 and Tri Drive 4.1 networks in the vicinity of the site.

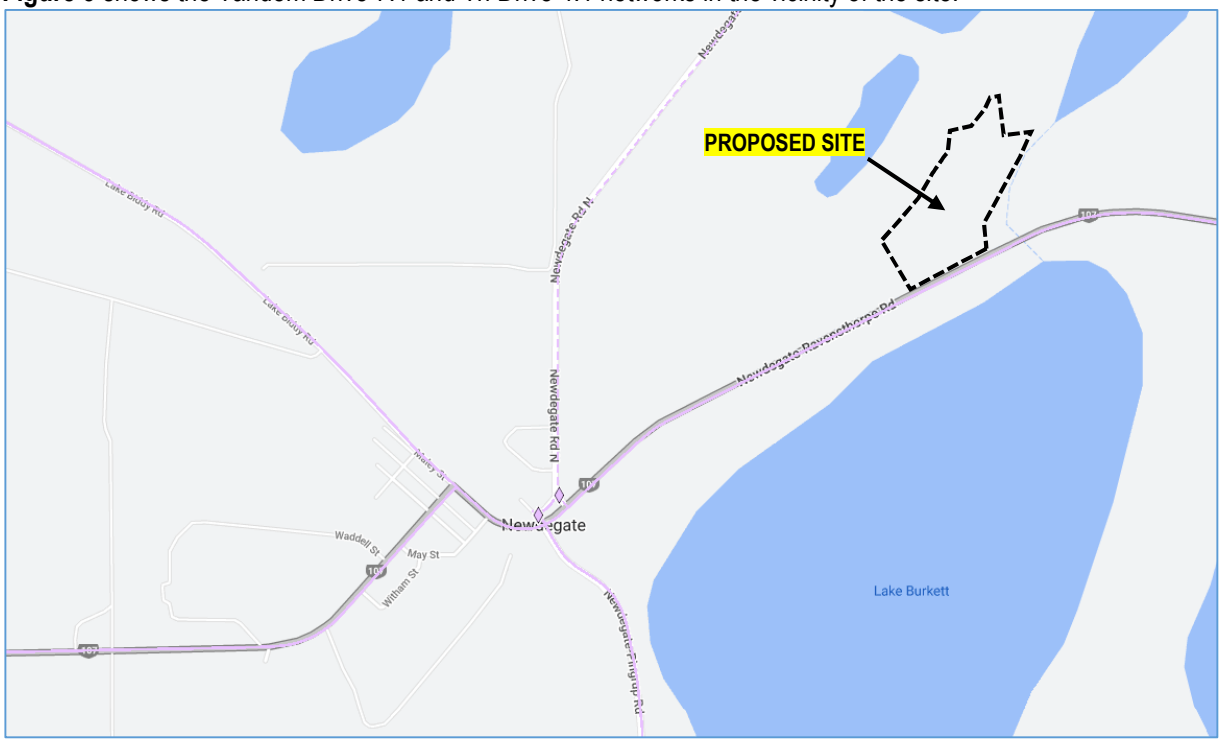


Figure 3: Tandem Drive 7/Tri Drive 4 Network

2.5. Speed Limit

The speed limits of the surrounding road networks according to the Main Roads WA Road Information Mapping System is shown in **Figure 4**.

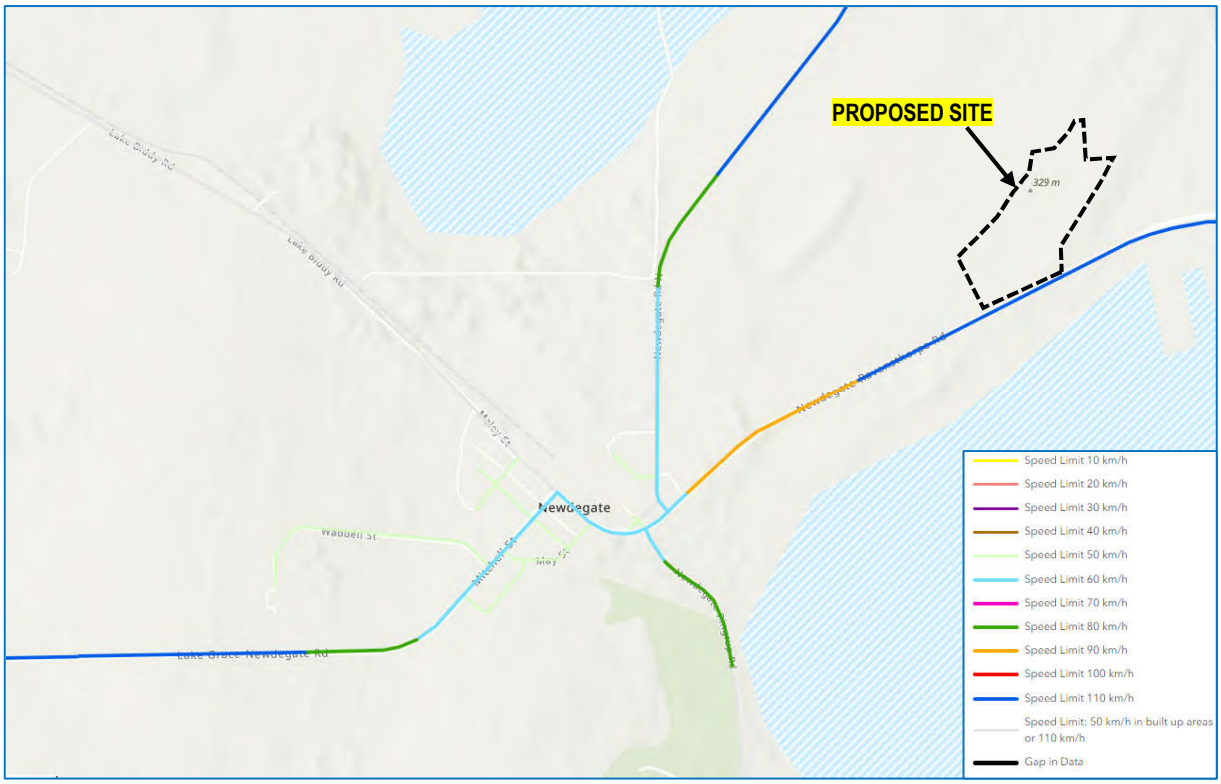


Figure 4: Speed Limits

2.6. Crash History

Crash data for the relevant roads in the vicinity of the site was sourced from MRWA Crash Analysis Reporting System (CARS) for the 5-year period ending 31/12/2022. The report is summarised in **Table 4**.

Table 4: Crash History

Location	Number of Crashes	MR Nature and Location	Severity
Newdegate-Ravensthorpe Road /Maley Street	1	Other/Unknown	PDO Major
Newdegate-Pingrup Road	0	-	-
Newdegate North Road	0	-	-

The crash history does not indicate any particular issue associated with CBH's operation.

3. Transport Logistics

3.1. Current CBH Traffic Data

CBH have provided the following traffic data associated with the current state of the Newdegate Receival site:

- Peak season receivals (from local growers) – 408,503t
- Average carryover (grain remaining on site from previous harvest) – 28,603t
- CBH road moves in (from other storage sites) – 2,144t
- Total site task (peak receivals, plus carryover, plus road moves in)– 439,250t
- Available capacity after storage upgrade – 391,310t (existing 'town' site plus expansion)
- Available capacity without expansion – 199,395t (existing 'town' site only)
- Capacity of temporary sites – 177,298t ('field day' and 'north sites)
- Average in-loading truck payload - 57t
- Average out-loading truck payload – 60t

3.2. Proposed Development

CBH currently utilise the existing temporary 'field day' and 'north' sites to bolster Newdegate storage capacity. These sites are being leased, have temporary approvals only and are due to be decommissioned which will result in a reduction of 177,298t storage capacity.

CBH advise that, if local production exceeds the capacity of the Newdegate receival site(s), they must out-turn grain simultaneously (Harvest Essential Moves/HEM's) to continue to offer a service to growers, and by doing so, increase the traffic on surrounding roads during the peak harvest period. The peak season receivals from local growers is approximately 408,503t which will far exceed Newdegate's 199,395t storage capacity once the temporary storage sites are decommissioned. As such, a large number of HEM's would be required.

The proposed storage expansion will enable CBH to significantly reduce the volume of HEM's, from 71 trucks per day to just 1 truck per day, with the intention of reducing trucks on road during the harvest, and instead holding the grain on site to out-turn over the remaining 9 months of the year when the road network is less busy.

The proposal is to construct 191,915 tonnes of permanent storage to replace the lost temporary storage. The new site will operate in tandem with the existing 'town' site which provides 199,395t of capacity, to provide a total storage capacity of 391,310t. This accounts for 96% of the peak season receivals volume, thereby significantly reducing the need for HEM's.

When the new grain receival site has been constructed as part of this development, the distribution of in loading CBH traffic remains unchanged as the receival task is driven by local production regardless of the outcome of the development.

Table 5 demonstrates the reduction in HEM's that would occur (based on the peak harvest receivals and CBH supplied data) due to the construction of the new site. As shown, if the construction does not occur, then an additional 3,208 truck movements (71 trucks per day) would be required during the harvest period.

Table 5: HEM Comparison with/without Expansion

	Unit of Measurement	Without Expansion [2]	With Expansion [2]
Record Site Task[1]	Tonnes	439,250	439,250
Available Site Capacity	Tonnes	199,395	391,310
Harvest Essential Moves (HEMs)	Tonnes	239,855	47,940
Rail HEMs[3]	Tonnes	47,351	47,351
Road HEMs	Tonnes	192,504	589
HEMs Per Harvest	Trucks	3,208	10
HEMs Per Day	Trucks	71	1

[1] For the purposes of this assessment the record site task has been adopted and therefore should not be interpreted as the average.
[2] Figures may not sum due to rounding.
[3] All rail movements occur from the town site.

3.3. Changes to Surrounding Transport Networks

There are no known changes to the adjacent network that have the potential to affect the assessment.

3.4. Proposed Haulage Vehicle

It is proposed to continue the use RAV 7 trucks up to 36.5m long for the haulage task. Refer **Figure 5** for a typical configuration of the RAV 7 vehicle. In addition, CBH also noted that while this site is rated for RAV7, smaller RAV vehicles may also be used.

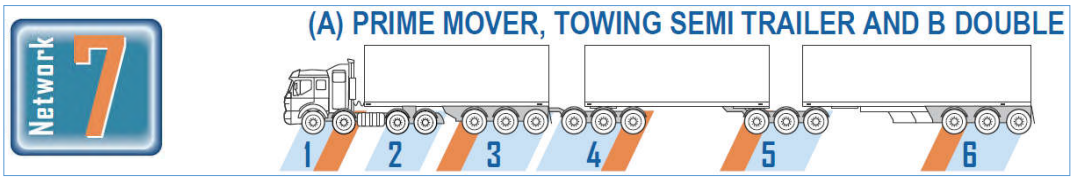


Figure 5: Typical Tandem Drive RAV 7 Trucks

3.5. Receival Period and Operating Hours

CBH have indicated that on average the harvest receival period will last approximately 90 days, generally October through to December. During this period, it is known that delivery patterns peak for around 45 days with 80% of the crop delivered in this time. Generally, receival sites will operate 7 days a week for 12 hours a day during the harvest period.

3.6. Harvest Period

3.6.1. Traffic Distribution

As per the current traffic data provided by CBH, directional movement for the harvest receivals (from local growers) without and with the proposed construction are shown in **Figure 6** and **Figure 7**. CBH advise that the directional splits are developed based on internal models which consider the proximity of grower locations to the site.

All out loading/HEM's traffic distribution via road will occur towards the west along Lake Grace-Newdegate Road to the Lake Grace receival site or to Albany Port.

Figure 6 : CBH Directional Split without Expansion

Figure 7:CBH Directional Split with Expansion

As shown in **Figure 7** the grower trucks entering the townsite from the east will be reduced by enabling these tonnes to stop short at the new site and not have to continue into the town site. After construction of the new site, CBH expect that, other than canola deliveries (2% of total), all eastern origin deliveries will utilise the new site, and other origins will normally only use the new site if storage at the town site is full. Slight differences are expected from season to season, and as different growers produce particular grain types. CBH is not in control of which CBH site a grower selects for its in-loading.

3.6.2. Traffic Generation

Based on the total site task of 439,250t, and the average truck payload of 57t:

- 7,706 truck deliveries would occur for the entire harvest.
- 6,165 truck deliveries would occur during the peak 45-day harvest period (80% of total).
- 137 truck deliveries would occur each day of the peak period.
- 14 deliveries would occur during a peak hour (assuming 10% of peak daily movements).

It should be noted that these figures represent the peak harvest, or the maximum known storage demand for the area. There is significant variability in harvest production year to year, and the average harvest is substantially smaller.

Table 6 shows the total / peak daily / peak hourly movements to each site, with and without the expansion. Note

that figures may not sum due to rounding. As shown, if the expansion is constructed, then there would be a net reduction in harvest period movements, because HEM's are eliminated.

Table 6: Harvest Period Truck Movements to each site (total / daily / hourly)

Direction	Without Expansion	With Expansion	
	Town Site	Town Site	New Site
North (9%)	694 / 12 / 1	450 / 9 / 1	214 / 4 / 1
Northwest (19%)	1464 / 26 / 3	1012 / 18 / 2	452 / 8 / 1
West (11%)	848 / 15 / 2	586 / 10 / 1	262 / 5 / 1
South (19%)	1464 / 26 / 3	1012 / 18 / 2	452 / 8 / 1
East (42%)	3237 / 58 / 6	154 / 3 / 1	3082 / 55 / 6
HEM's	3,208 / 71 / 7	10 / 1 / 1	-
Total	10914 / 208 / 21	3244 / 58 / 6	4462 / 79 / 8

Based on the directional split discussed previously, **Figure 8** and **Figure 9** show the distribution of the peak daily/hourly traffic movements. Note figures may not sum due to rounding.

Figure 8: Traffic Distribution without Expansion (Daily Volume/Peak Hour Volume)

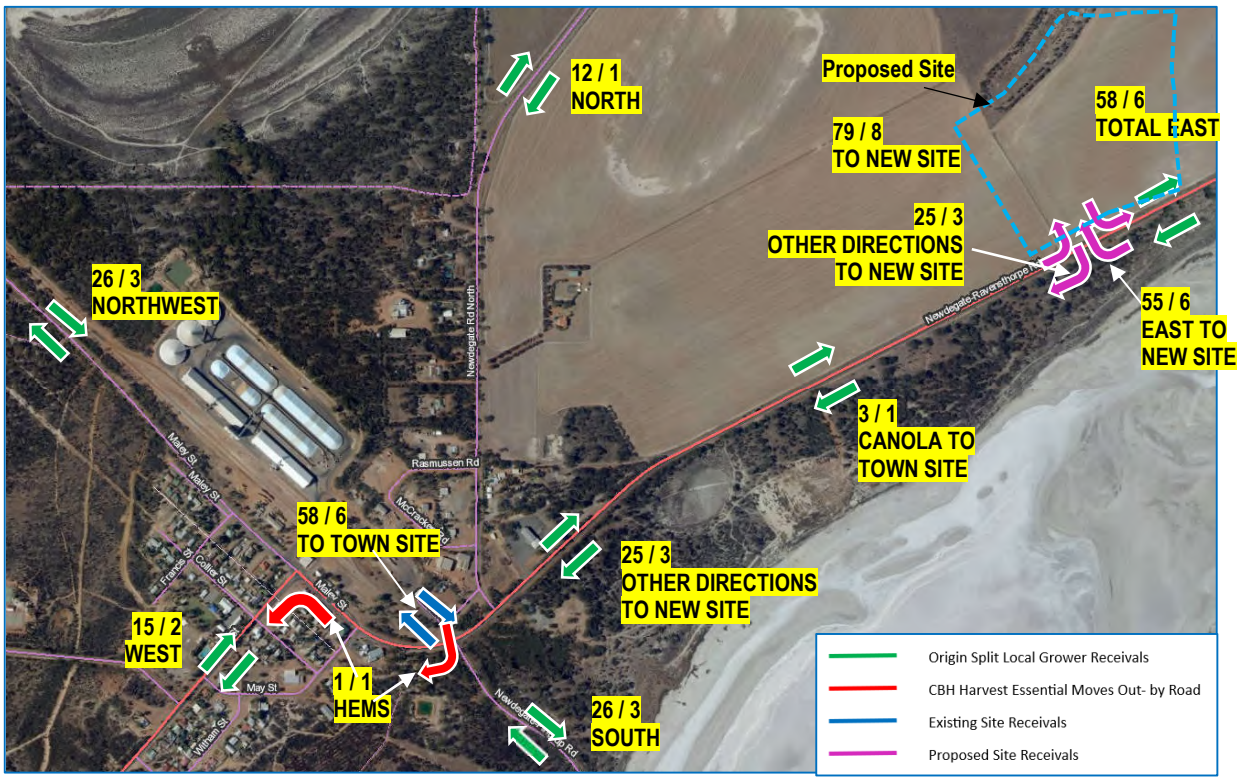


Figure 9: Traffic Distribution with Expansion (Daily Volume/Peak Hour Volume)

3.7. Out of Harvest Period

Outside of the harvest period, the town site will continue to outload as much grain as possible to port via rail, and the remaining will be out loaded via trucks. Similarly, the new site will outload to the town site for transfer to rail as a priority or will outload via trucks if rail capacity is exceeded.

Table 7 provides a comparison between the out of harvest truck movements, which would be required with and without the construction of the new site as proposed by CBH. Note that figures may not sum due to rounding.

Table 7: Out of Harvest Truck Movements

	Unit of Measurement	Without Expansion	With Expansion
Road Movements in	Tonnes	2,183	2,183
Grain on site post-Harvest	Tonnes	170,792	363,296
Total Out loading Task	Tonnes	172,975	365,479
Out loading via Rail	Tonnes	94,159	94,159
Out loading via Road	Tonnes	78,816	271,320
Days to out-load site on road	Days	39	136
Trucks Per Day	Trucks	33	33

The out-loading task will be performed over the 9 months of the year that are outside the harvest period. Whilst the out-loading task increases in proportion to the reduction in HEMs, with the proposed expansion, the same volume of grain is out-turned outside of the peak traffic period and at lower traffic intensity. It is noted that the additional capacity on site does not increase traffic intensity (trucks per day) as the daily out-loading capacity is constrained at approximately 2,000t/day. Instead, by holding grain during harvest, the same intensity of out-loading (33 trucks per day) is transferred to the less busy non harvest months for an additional 97 days than if the proposed site was not built.

The estimated out of harvest period out-loading movements are approximately 33 movements per day (with or without the expansion), which is considerably less than the peak harvest period traffic generation. As a result, the out of harvest period out-loading movements will have significantly less impact to the road network than the peak harvest period traffic generation.

Figure 10 shows the peak daily / hourly (assuming hourly is 10% of daily) out-loading movements. Note that whilst there are multiple scenarios that may occur depending on rail capacity, the total road movements from the combined sites will not exceed 33 per day.

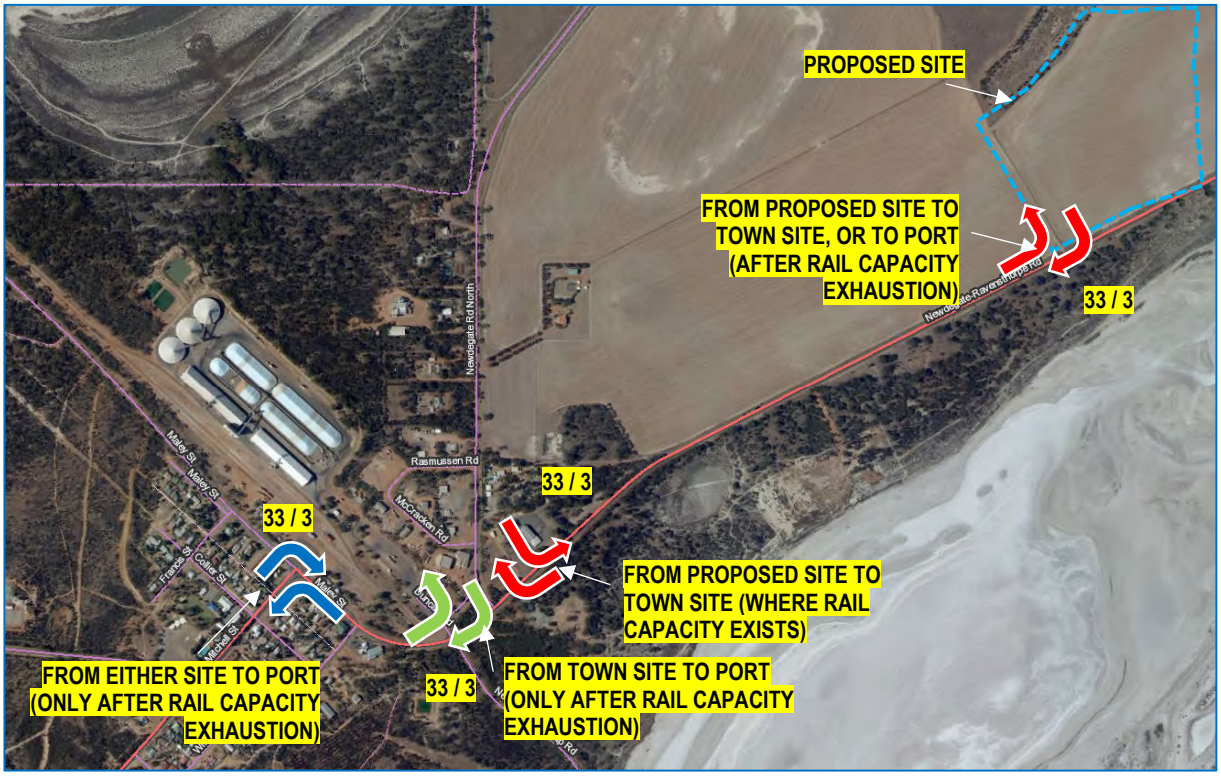


Figure 10: Out-Loading Traffic Distribution with Expansion (Daily Volume/Peak Hour Volume)

4. Traffic Impact Assessment

4.1. Assessment Years

The assessment is based on the 2023 network condition, within the harvest peak period, assuming the new site has been built and both sites are operating at capacity.

4.2. Impact on Roads

4.2.1. Traffic Volumes

According to the WAPC *Transport Impact Assessment Guidelines*, an increase below 10 peak hour vehicles is considered to have a low impact and is generally deemed acceptable without requiring detailed capacity analysis. As the proposed development will result in a net decrease in peak hour vehicle during harvest period (compared to the situation where the expansion is not constructed), the development has a positive impact on the surrounding road network during the peak traffic period. Noting the net reduction from the proposed expansion, this TIS is considered the appropriate level of analysis with reference to the guidelines.

It is also noted that during the remainder of the year (remaining 9 months), the site will generate a much lower volume of traffic compared to the harvest period and a scenario where the proposed development does not occur.

4.2.2. Road Minimum Widths

The sealed widths of the surrounding roads were checked against the rural road minimum widths in accordance with Appendix A of the MRWA RAV assessment guideline. The comparison is shown below in **Table 8**.

Table 8: Rural Road Minimum Width

Road	Location	Background / Proposed AADT	Speed (RAV) (km/hr)	RAV Status	Existing / Required Min Seal Width (m)	Existing / Required Min Carriageway Width (m)
Newdegate-Ravensthorpe Road	East of Newdegate Road N	302 / 348	110	7	7.4 / 6.0	9 / 8.0
Newdegate-Ravensthorpe Road	East of New site entry	301 / 418	110	7	7.4 / 6.0	9 / 8.0
Newdegate North Road	North of Shalders Road	150 / 174	60	7	7.4 / 5.7	9 / 7.7
Newdegate-Pingrup Road	South of Maley Street	150 / 202	80	7	7.4 / 6.0	10 / 8.0
Maley Street[1]	West of Newdegate Pingrup Road	250 / 333	60	7	8.0 / 7.2	10 / 7.2
Mitchell Street[1]	South of Maley Street	200 / 231	60	7	9 / 7.2	9 / 7.2

[1] town site requirements apply.

As shown, all seal and carriageway widths comply with the RAV guidelines.

As per Austroads Guide to Traffic Management Part 3, the operational capacity of an uninterrupted single lane without overtaking is about 1,800 passenger cars per hour. This is well above the predicted traffic on Newdegate-Ravensthorpe Road and so it can be concluded that the surrounding road network has adequate capacity to accommodate the predicted traffic, noting that the proposed site expansion results in a net reduction in peak AADT due to the elimination of HEM's.

4.3. Road Safety

The crash history of the adjacent road network (as previously outlined in **Section 2.6**) does not suggest any particular safety issues in the existing road network. The additional traffic movements generated by the operation in the long and short term is not considered to increase the likelihood of crashes to unacceptable levels.

4.4. Proposed Site Access

4.4.1. Location

CBH's has notionally proposed a location for the new site access towards the western extent of the new site, approximately as shown in **Figure 11**, at SLK 329.37.

Shawmac has reviewed this location and consider it to be acceptable for the following reasons:

- It is as far away as possible from the horizontal curve to the east which will maximise site distance.
- There is no existing significant vegetation in nearby verges which would impede sight distance.
- Although there is a slight crest approximately 100m to the east, this is relatively gentle and would not appear to restrict Safe Intersection Sight Distance to/from the access. Notwithstanding this, it is recommended that the actual sight distance be verified on site.
- Newdegate-Ravensthorpe Road is gently undulating and unlikely to cause significant difficulties for trucks accelerating empty out from the site.

It is understood that MRWA have also reviewed the proposed intersection location and consider it to be acceptable.

Figure 11: Proposed Site Access Location

4.4.2. Safe Intersection Sight Distance

The Safe Intersection Sight Distance (SISD) is the minimum distance which should be provided on the major road at any intersection. SISD provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation (e.g., in the worst case, stalling across the traffic

lanes) and to decelerate to a stop before reaching the collision point.

The SISD is assessed based on the following parameters:

- An observation time of 3 seconds as per Austroads Part 3.
- A reaction time of 2.5 seconds.
- Deceleration coefficients for the purpose of SISD calculations are 0.36 for light vehicles and 0.28 for heavy vehicles (Road Train Type 1 / RAV 7 equivalent).
- Driver eye height is 2.4m for trucks and 1.1m for cars.
- Object height of 1.25m.
- Measured 3m-5m from the edge of through lane.

Figure 12 and **Figure 13** show the available sight distance to/from the east and west, respectively. As mentioned previously, it is recommended that these sightlines be verified on site to confirm the crest just to the east does not impact SISD sight lines.

Figure 14 shows the SISD measurements, and **Table 9** provides a summary of the required and available sight distances. As shown, subject to confirmation on site, there is expected to be more than sufficient sight distance available at the proposed access location.

Figure 12: SISD Looking East

Figure 13: SISD Looking West

Figure 14: SISD Measurement

Table 9: SISD at Site Exit

Location	Vehicle Type	Design Speed (km/h) (EB / WB)	Coefficient of Deceleration	Decision Time (s)	Longitudinal Grade (EB / WB)*	Required SISD for EB / WB Traffic (m)	Available SISD (m)	
							EB	WB
Site Exit	Trucks	100 / 100	0.28	5.5	0.5% / -0.5%	291 / 296	+1000	640
	Cars	110 / 110	0.36	5.5	0.5% / -0.5%	299 / 302	+1000	640

*Positive for through traffic travelling uphill and negative for through traffic travelling downhill. Grades are conservative estimates based on google earth only.

4.4.3. Auxiliary Lanes

The requirements for turning treatments for the site access (worst case movements) was calculated using the Intersection Warrants calculator provided in Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8. **Figure 15** shows the peak hour volumes utilised and the results of the assessment are shown in **Figure 16**.

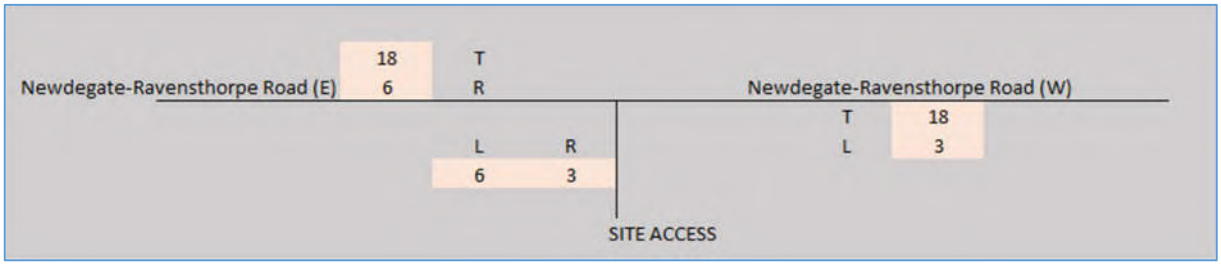


Figure 15: Peak Hour Volumes

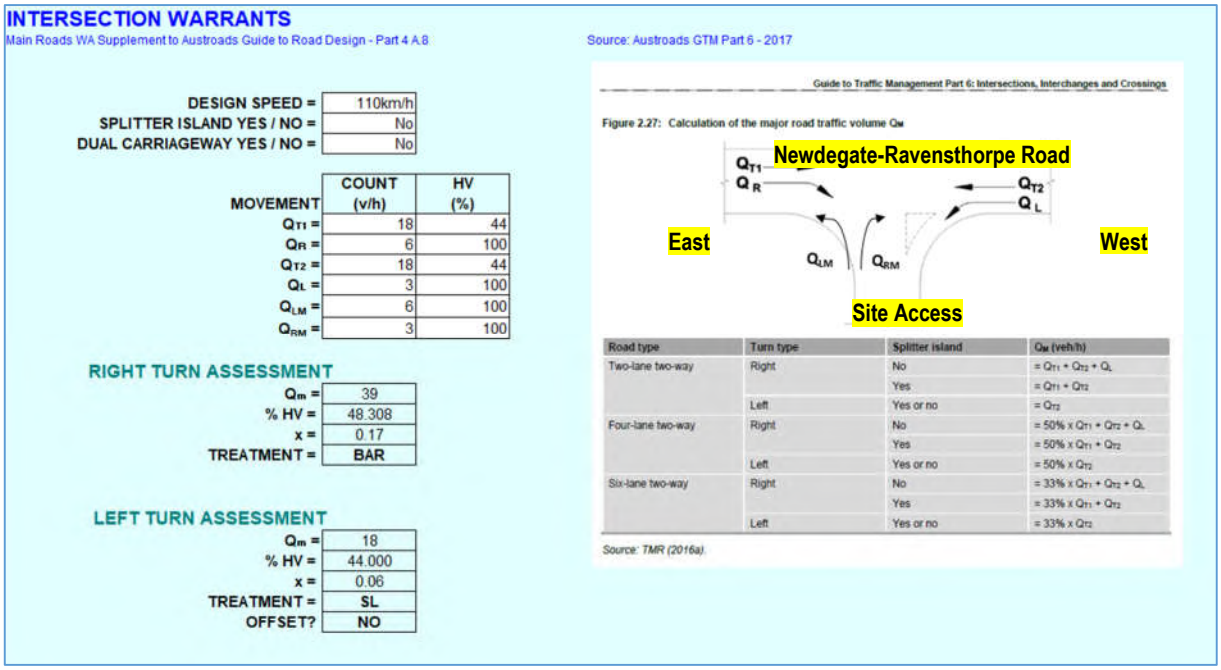


Figure 16: Intersection Configuration Warrants

As shown, a Basic Right and a Simple Left Turn are the warranted treatments. Excerpts of the relevant MRWA guideline drawings for these treatments (refer MRWA drawings 200131-0081 and 202231-0008) are provided in **Figure 17** and **Figure 18**.

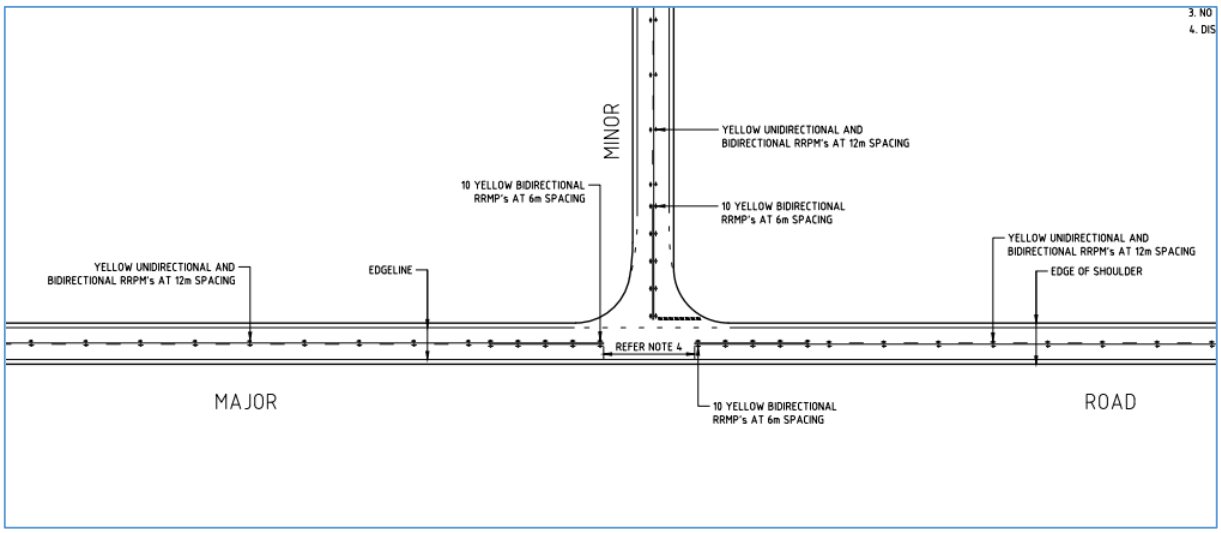


Figure 17: Simple Left/Simple Right (SL) Treatment

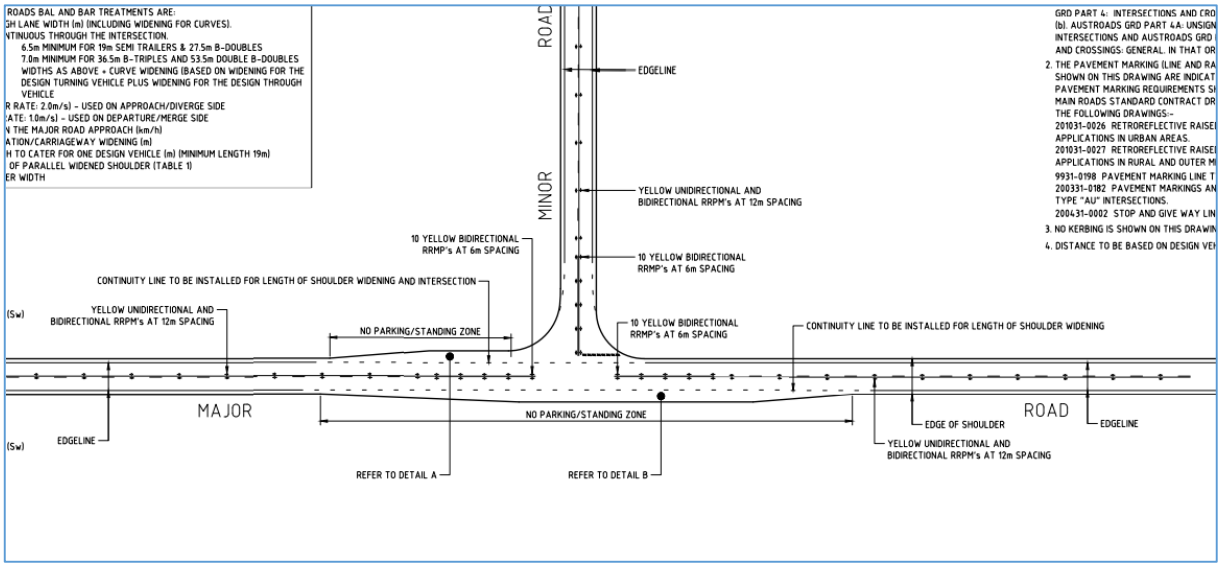


Figure 18: Basic Left/Basic Right (BA) Treatment

5. Conclusions

This TIS has been prepared to support CBH's proposal to construct a new grain receival site along Newdegate-Ravensthorpe Road north of the town site. The TIS concluded the following:

- The construction of the new site is considered to be beneficial to Newdegate in that it will reduce the number of truck movements through the town site and will significantly reduce the need for Harvest Essential Moves (HEMs) to occur for out loading during the already busy harvest period.
- The estimated traffic generation can be readily accommodated within the capacity of the existing surrounding road network and it is noted that the proposal results in a net reduction in peak daily/hourly movements due to the significant reduction of HEMs.
- There is no significant crash history on the surrounding roads and there is no indication that traffic generated by the new site would unduly change this.
- The surrounding road network has the appropriate RAV status for the proposed operation.
- The proposed location for the new CBH site access is considered acceptable, subject to verifying sight distances on site.
- Based on the estimated peak hour traffic volumes and MRWA's Intersection Warrants Calculator, the new access is required to have a Basic Right/Simple Left configuration.

Appendix A – General Arrangement Plan

PLAN
1:2000

1:2000 @ A1
1:4000 @ A3
0 20 40 60 80 100 120 140 160 180 200 m

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. ALL EXISTING FENCING TO BE REMOVED. INSTALL PREFABRICATED WIRE FENCE (7No. STRAND PLUS 1No. PLAIN WIRE ON TOP) ALONG CBH SITE BOUNDARY. REFER TO DRG. S000-ENG-CI-STD-0010 FOR SINGLE AND DOUBLE FENCE.

HOLDS:

1. INTERSECTION DESIGN TBC

APPROVED FOR CONSTRUCTION

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
		1	28.11.24	GENERAL AMENDMENTS PER CLIENT COMMENTS	JG	RN	RN
-	-	0	30.10.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE	1:2000	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE: NEWDEGATE SITE EXPANSION GENERAL ARRANGEMENT

DRG No: 940-ENG-CI-DGA-0002 | SHEET: 1 OF 1 | REV.: 1

Appendix B – Traffic Counts

SITE 6095

Hourly Volume

Dumbleyung Lake Grace Rd (M037)

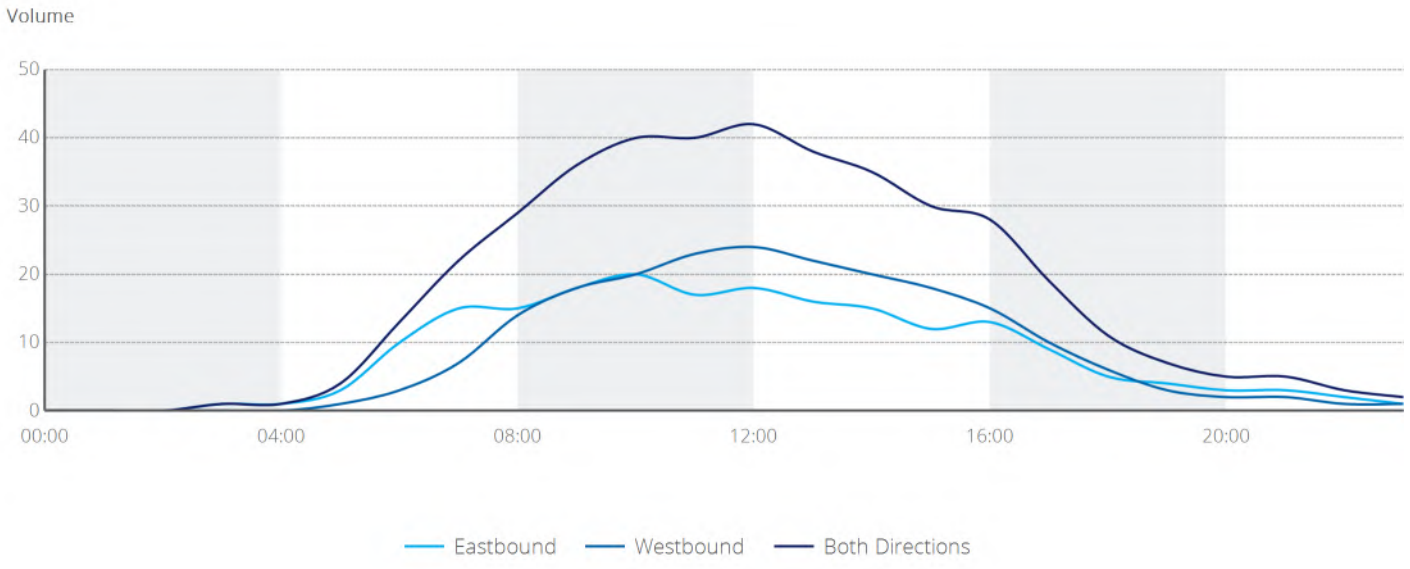
West of Wishbone Rd (SLK 210.49)

2023/24
Monday to Friday

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	0	0	0	0	0	0	0.0
01:00	0	0	0	0	0	0	0.0
02:00	0	0	0	0	0	0	0.0
03:00	1	0	1	1	0	1	100.0
04:00	1	0	1	1	0	1	100.0
05:00	3	1	4	2	1	3	75.0
06:00	10	3	13	5	1	6	46.2
07:00	15	7	22	9	2	11	50.0
08:00	15	14	29	7	5	12	41.4
09:00	18	18	36	8	10	18	50.0
10:00	20	20	40	9	10	19	47.5
11:00	17	23	40	6	12	18	45.0
12:00	18	24	42	7	13	20	47.6
13:00	16	22	38	7	12	19	50.0
14:00	15	20	35	6	10	16	45.7
15:00	12	18	30	5	9	14	46.7
16:00	13	15	28	5	7	12	42.9
17:00	9	10	19	3	5	8	42.1
18:00	5	6	11	3	3	6	54.5
19:00	4	3	7	3	2	5	71.4
20:00	3	2	5	2	1	3	60.0
21:00	3	2	5	2	1	3	60.0
22:00	2	1	3	2	1	3	100.0
23:00	1	1	2	1	1	2	100.0
TOTAL	201	210	411	94	106	200	48.7

Peak Statistics

AM	TIME	09:30	11:45	11:45	09:30	11:45	11:45
	VOL	23	25	46	11	14	23
PM	TIME	12:30	12:00	12:30	12:30	12:45	12:30
	VOL	20	24	42	11	13	23



SITE 6095

Hourly Volume

Dumbleyung Lake Grace Rd (M037)

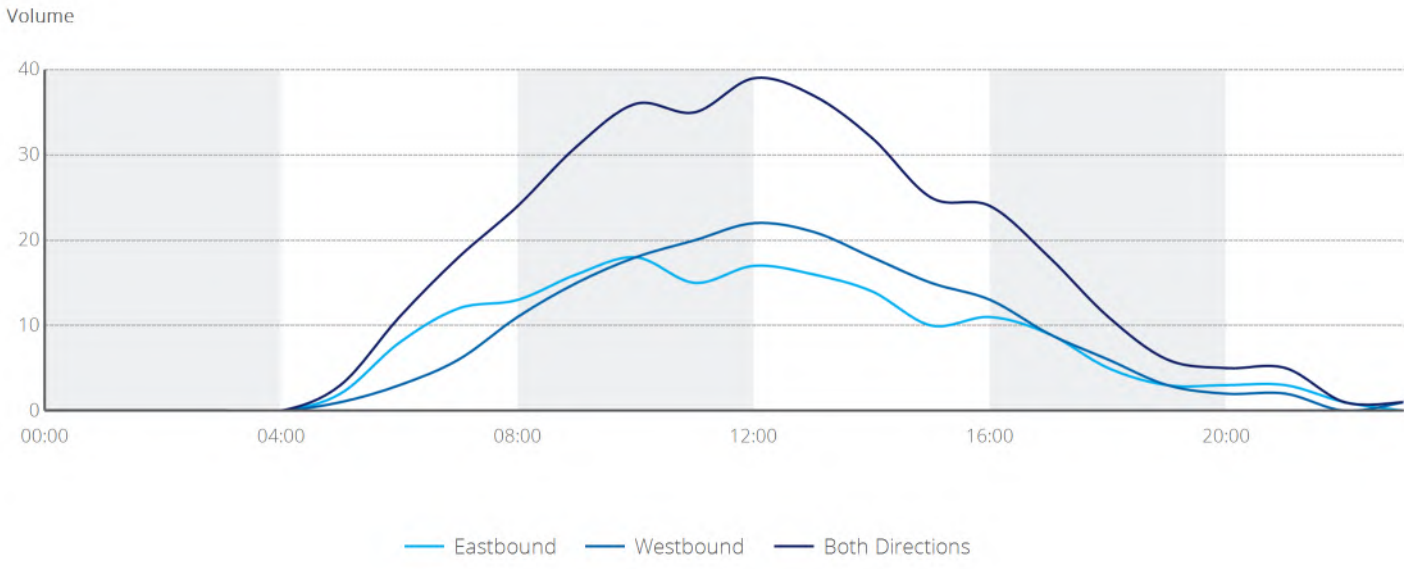
West of Wishbone Rd (SLK 210.49)

2023/24
Monday to Sunday

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	0	0	0	0	0	0	0.0
01:00	0	0	0	0	0	0	0.0
02:00	0	0	0	0	0	0	0.0
03:00	0	0	0	0	0	0	0.0
04:00	0	0	0	0	0	0	0.0
05:00	2	1	3	1	1	2	66.7
06:00	8	3	11	4	1	5	45.5
07:00	12	6	18	7	2	9	50.0
08:00	13	11	24	6	3	9	37.5
09:00	16	15	31	6	7	13	41.9
10:00	18	18	36	7	8	15	41.7
11:00	15	20	35	5	9	14	40.0
12:00	17	22	39	7	11	18	46.2
13:00	16	21	37	7	11	18	48.6
14:00	14	18	32	5	8	13	40.6
15:00	10	15	25	3	7	10	40.0
16:00	11	13	24	4	6	10	41.7
17:00	9	9	18	3	4	7	38.9
18:00	5	6	11	3	3	6	54.5
19:00	3	3	6	2	2	4	66.7
20:00	3	2	5	2	1	3	60.0
21:00	3	2	5	2	1	3	60.0
22:00	1	0	1	1	0	1	100.0
23:00	0	1	1	0	1	1	100.0
TOTAL	176	186	362	75	86	161	44.5

Peak Statistics

AM	TIME	10:00	11:45	11:45	07:30	11:45	11:45
	VOL	18	22	40	10	11	19
PM	TIME	12:30	13:15	12:00	12:30	13:15	12:30
	VOL	19	23	39	10	12	20



SITE 6095

Hourly Volume

Dumbleyung Lake Grace Rd (M037)

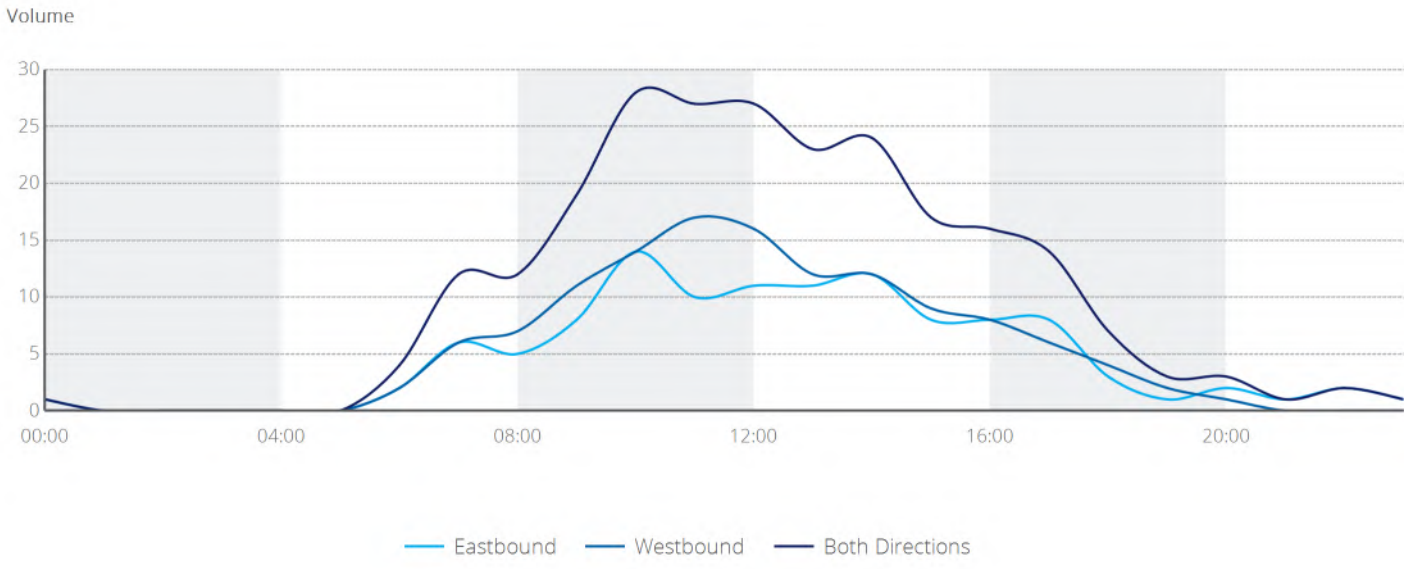
West of Wishbone Rd (SLK 210.49)

2023/24
Weekend

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	1	0	1	0	0	0	0.0
01:00	0	0	0	0	0	0	0.0
02:00	0	0	0	0	0	0	0.0
03:00	0	0	0	0	0	0	0.0
04:00	0	0	0	0	0	0	0.0
05:00	0	0	0	0	0	0	0.0
06:00	2	2	4	1	1	2	50.0
07:00	6	6	12	3	2	5	41.7
08:00	5	7	12	2	2	4	33.3
09:00	8	11	19	1	3	4	21.1
10:00	14	14	28	5	4	9	32.1
11:00	10	17	27	2	6	8	29.6
12:00	11	16	27	2	5	7	25.9
13:00	11	12	23	2	2	4	17.4
14:00	12	12	24	3	3	6	25.0
15:00	8	9	17	2	2	4	23.5
16:00	8	8	16	2	2	4	25.0
17:00	8	6	14	2	1	3	21.4
18:00	3	4	7	1	2	3	42.9
19:00	1	2	3	0	1	1	33.3
20:00	2	1	3	1	0	1	33.3
21:00	1	0	1	0	0	0	0.0
22:00	2	0	2	1	0	1	50.0
23:00	1	0	1	0	0	0	0.0
TOTAL	114	127	241	30	36	66	27.4

Peak Statistics

AM	TIME	10:00	11:00	11:45	10:15	10:45	10:45
	VOL	14	17	29	6	6	10
PM	TIME	13:45	12:15	12:15	14:30	12:15	14:30
	VOL	13	16	27	4	5	7



SITE 6122

Hourly Volume

2023/24
Monday to Friday

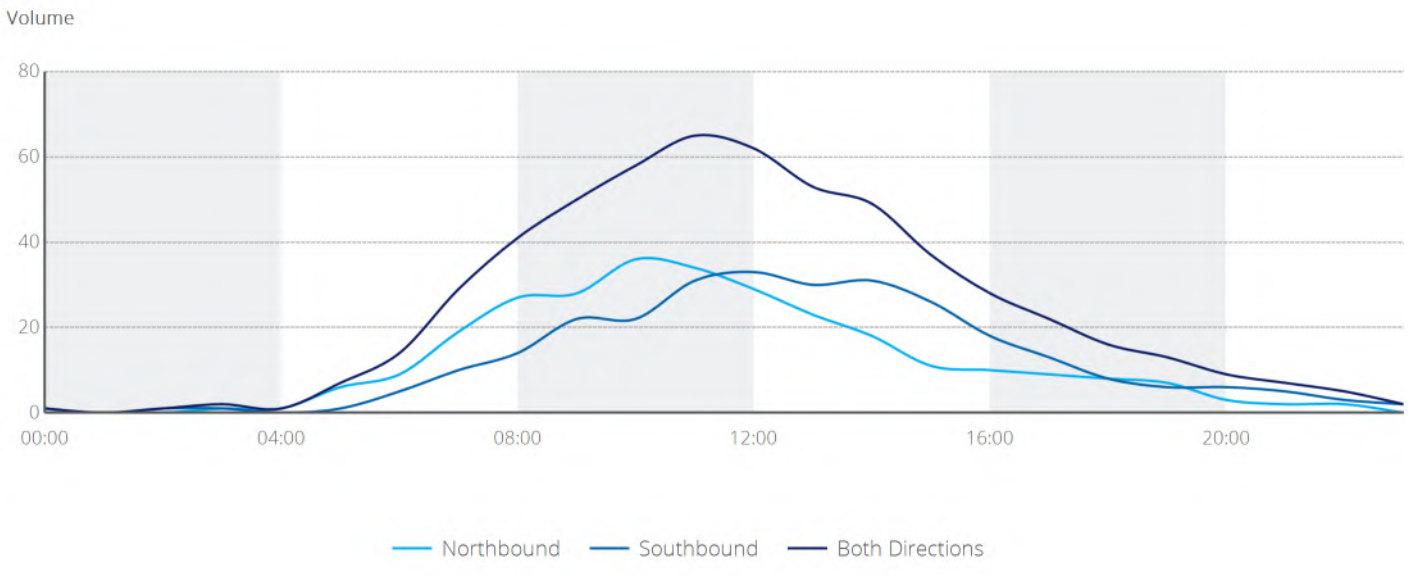
Newdegate Ravensthorpe Rd (H052)

South of Collie Lake King Rd (SLK 437.36)

	All Vehicles			Heavy Vehicles			
	NB	SB	Both	NB	SB	Both	%
00:00	0	1	1	0	1	1	100.0
01:00	0	0	0	0	0	0	0.0
02:00	0	1	1	0	1	1	100.0
03:00	1	1	2	0	1	1	50.0
04:00	1	0	1	0	0	0	0.0
05:00	6	1	7	3	0	3	42.9
06:00	9	5	14	4	3	7	50.0
07:00	19	10	29	10	8	18	62.1
08:00	27	14	41	12	9	21	51.2
09:00	28	22	50	8	15	23	46.0
10:00	36	22	58	13	11	24	41.4
11:00	34	31	65	14	16	30	46.2
12:00	29	33	62	12	15	27	43.5
13:00	23	30	53	11	12	23	43.4
14:00	18	31	49	8	15	23	46.9
15:00	11	26	37	4	14	18	48.6
16:00	10	18	28	4	9	13	46.4
17:00	9	13	22	3	7	10	45.5
18:00	8	8	16	3	5	8	50.0
19:00	7	6	13	5	3	8	61.5
20:00	3	6	9	2	3	5	55.6
21:00	2	5	7	1	3	4	57.1
22:00	2	3	5	1	2	3	60.0
23:00	0	2	2	0	2	2	100.0
TOTAL	283	289	572	118	155	273	47.7

Peak Statistics

AM	TIME	10:00	11:45	11:45	11:00	11:45	11:45
	VOL	36	35	66	14	18	31
PM	TIME	12:00	13:15	12:00	12:45	13:15	12:30
	VOL	29	35	62	13	16	27



SITE 6122

Hourly Volume

2023/24
Monday to Sunday

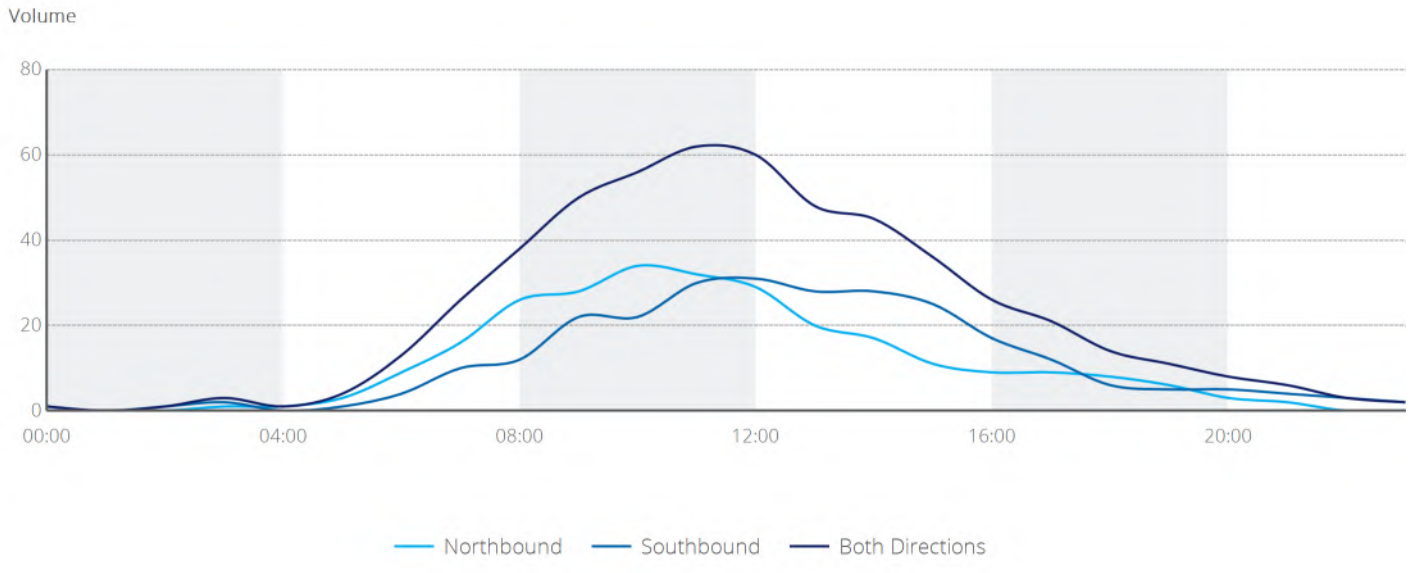
Newdegate Ravensthorpe Rd (H052)

South of Collie Lake King Rd (SLK 437.36)

	All Vehicles			Heavy Vehicles			
	NB	SB	Both	NB	SB	Both	%
00:00	0	1	1	0	1	1	100.0
01:00	0	0	0	0	0	0	0.0
02:00	0	1	1	0	1	1	100.0
03:00	1	2	3	0	2	2	66.7
04:00	1	0	1	0	0	0	0.0
05:00	3	1	4	1	1	2	50.0
06:00	9	4	13	4	3	7	53.8
07:00	16	10	26	7	8	15	57.7
08:00	26	12	38	12	8	20	52.6
09:00	28	22	50	8	14	22	44.0
10:00	34	22	56	11	10	21	37.5
11:00	32	30	62	11	15	26	41.9
12:00	29	31	60	12	13	25	41.7
13:00	20	28	48	8	10	18	37.5
14:00	17	28	45	7	12	19	42.2
15:00	11	25	36	4	12	16	44.4
16:00	9	17	26	3	8	11	42.3
17:00	9	12	21	3	5	8	38.1
18:00	8	6	14	3	3	6	42.9
19:00	6	5	11	4	2	6	54.5
20:00	3	5	8	2	2	4	50.0
21:00	2	4	6	1	2	3	50.0
22:00	0	3	3	0	2	2	66.7
23:00	0	2	2	0	1	1	50.0
TOTAL	264	271	535	101	135	236	44.1

Peak Statistics

AM	TIME	09:45	10:45	10:30	11:45	10:30	11:45
	VOL	35	31	64	13	15	27
PM	TIME	12:00	12:00	12:00	12:00	14:30	12:00
	VOL	29	31	60	12	13	25



SITE 6122

Hourly Volume

2023/24
Weekend

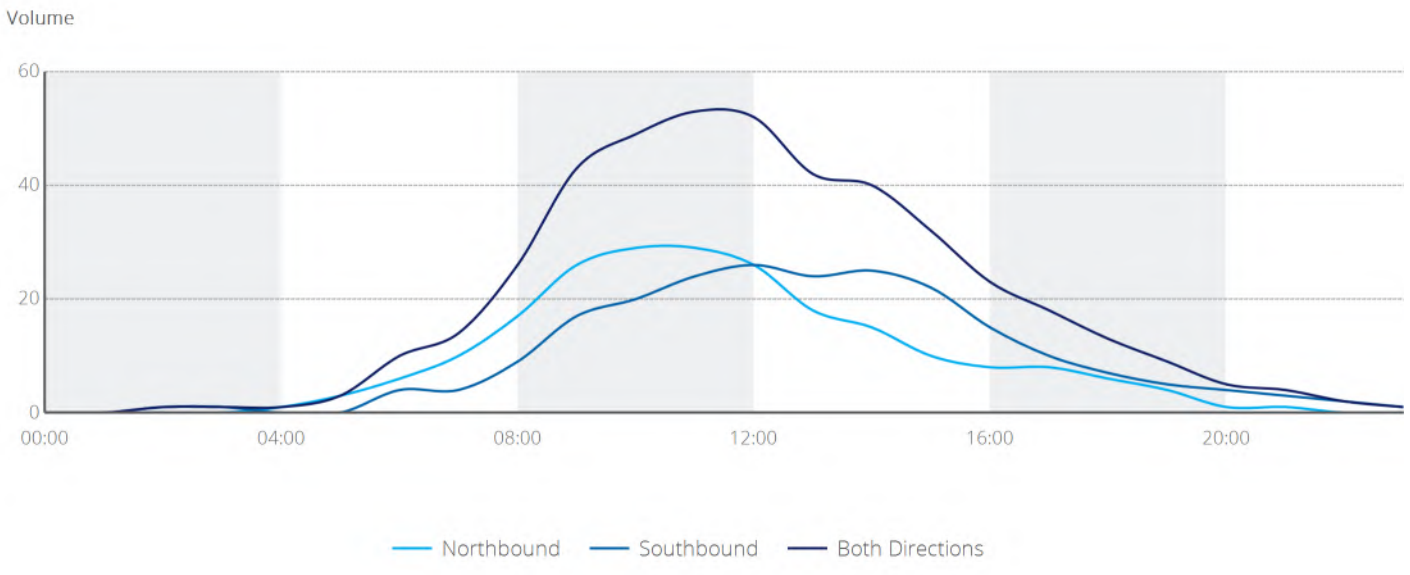
Newdegate Ravensthorpe Rd (H052)

South of Collie Lake King Rd (SLK 437.36)

	All Vehicles			Heavy Vehicles			
	NB	SB	Both	NB	SB	Both	%
00:00	0	0	0	0	0	0	0.0
01:00	0	0	0	0	0	0	0.0
02:00	0	1	1	0	1	1	100.0
03:00	0	1	1	0	1	1	100.0
04:00	1	0	1	0	0	0	0.0
05:00	3	0	3	1	0	1	33.3
06:00	6	4	10	3	3	6	60.0
07:00	10	4	14	3	3	6	42.9
08:00	17	9	26	4	5	9	34.6
09:00	26	17	43	6	9	15	34.9
10:00	29	20	49	6	9	15	30.6
11:00	29	24	53	6	10	16	30.2
12:00	26	26	52	7	7	14	26.9
13:00	18	24	42	6	7	13	31.0
14:00	15	25	40	4	8	12	30.0
15:00	10	22	32	3	7	10	31.3
16:00	8	15	23	2	4	6	26.1
17:00	8	10	18	3	3	6	33.3
18:00	6	7	13	2	3	5	38.5
19:00	4	5	9	2	2	4	44.4
20:00	1	4	5	0	1	1	20.0
21:00	1	3	4	0	1	1	25.0
22:00	0	2	2	0	1	1	50.0
23:00	0	1	1	0	0	0	0.0
TOTAL	218	224	442	58	85	143	32.4

Peak Statistics

AM	TIME	09:45	11:45	11:30	08:15	09:15	11:00
	VOL	29	28	54	6	10	16
PM	TIME	12:00	14:15	12:00	13:30	14:30	12:15
	VOL	26	27	52	7	9	15



SITE 50469

Hourly Volume

2019/20
Monday to Friday

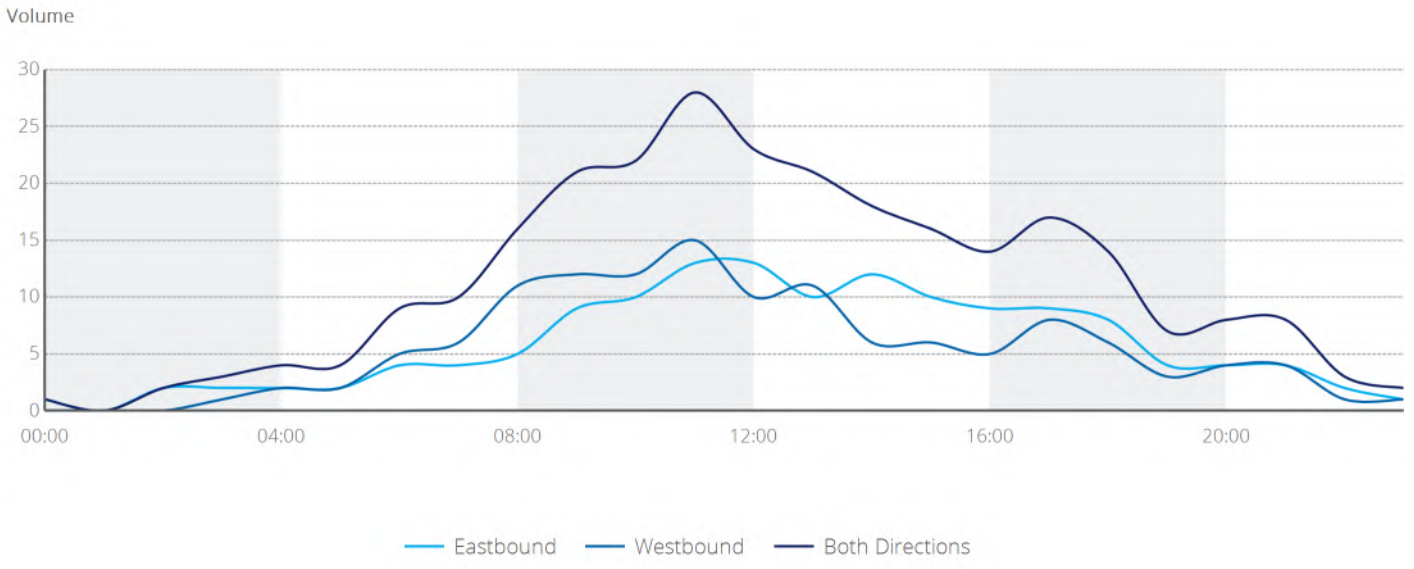
Newdegate Ravensthorpe Rd (M037)

East of Hewson Rd (SLK 377.11)

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	1	0	1	1	0	1	100.0
01:00	0	0	0	0	0	0	0.0
02:00	2	0	2	2	0	2	100.0
03:00	2	1	3	2	1	3	100.0
04:00	2	2	4	2	1	3	75.0
05:00	2	2	4	1	1	2	50.0
06:00	4	5	9	0	2	2	22.2
07:00	4	6	10	0	1	1	10.0
08:00	5	11	16	1	4	5	31.3
09:00	9	12	21	1	3	4	19.0
10:00	10	12	22	2	3	5	22.7
11:00	13	15	28	3	6	9	32.1
12:00	13	10	23	2	4	6	26.1
13:00	10	11	21	2	3	5	23.8
14:00	12	6	18	2	2	4	22.2
15:00	10	6	16	2	2	4	25.0
16:00	9	5	14	1	2	3	21.4
17:00	9	8	17	3	3	6	35.3
18:00	8	6	14	2	1	3	21.4
19:00	4	3	7	1	0	1	14.3
20:00	4	4	8	1	1	2	25.0
21:00	4	4	8	2	2	4	50.0
22:00	2	1	3	0	0	0	0.0
23:00	1	1	2	0	0	0	0.0
TOTAL	140	131	271	33	42	75	27.7

Peak Statistics

AM	TIME	10:45	10:30	10:30	03:15	10:30	10:30
	VOL	14	16	29	3	8	11
PM	TIME	12:00	13:15	12:00	14:30	13:15	14:30
	VOL	13	11	23	4	4	7



SITE 50469

Hourly Volume

2019/20
Monday to Sunday

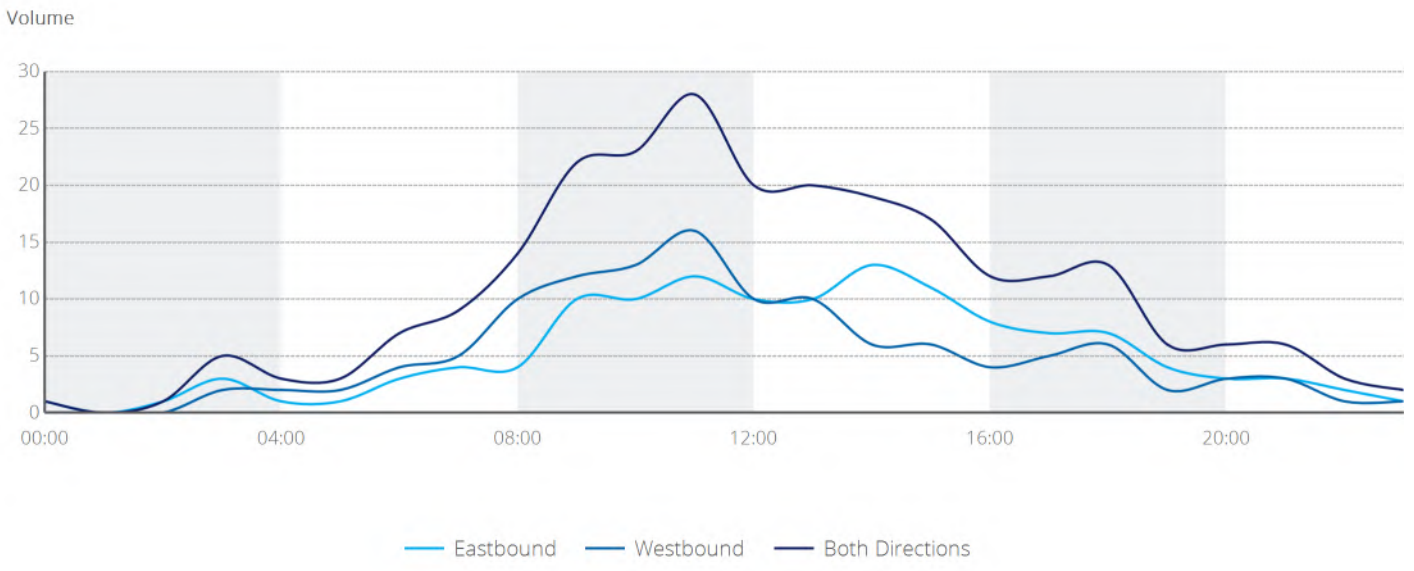
Newdegate Ravensthorpe Rd (M037)

East of Hewson Rd (SLK 377.11)

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	1	0	1	1	0	1	100.0
01:00	0	0	0	0	0	0	0.0
02:00	1	0	1	1	0	1	100.0
03:00	3	2	5	3	1	4	80.0
04:00	1	2	3	1	1	2	66.7
05:00	1	2	3	0	1	1	33.3
06:00	3	4	7	0	1	1	14.3
07:00	4	5	9	0	1	1	11.1
08:00	4	10	14	1	3	4	28.6
09:00	10	12	22	3	3	6	27.3
10:00	10	13	23	2	3	5	21.7
11:00	12	16	28	2	7	9	32.1
12:00	10	10	20	1	3	4	20.0
13:00	10	10	20	1	3	4	20.0
14:00	13	6	19	2	2	4	21.1
15:00	11	6	17	3	2	5	29.4
16:00	8	4	12	1	1	2	16.7
17:00	7	5	12	2	2	4	33.3
18:00	7	6	13	2	2	4	30.8
19:00	4	2	6	1	0	1	16.7
20:00	3	3	6	1	1	2	33.3
21:00	3	3	6	1	1	2	33.3
22:00	2	1	3	0	0	0	0.0
23:00	1	1	2	0	0	0	0.0
TOTAL	129	123	252	29	38	67	26.6

Peak Statistics

AM	TIME	10:45	10:30	10:30	03:00	10:30	10:30
	VOL	13	17	29	3	8	10
PM	TIME	14:00	12:45	12:45	16:15	14:30	14:15
	VOL	13	11	21	3	4	6



SITE 50469

Hourly Volume

2019/20
Weekend

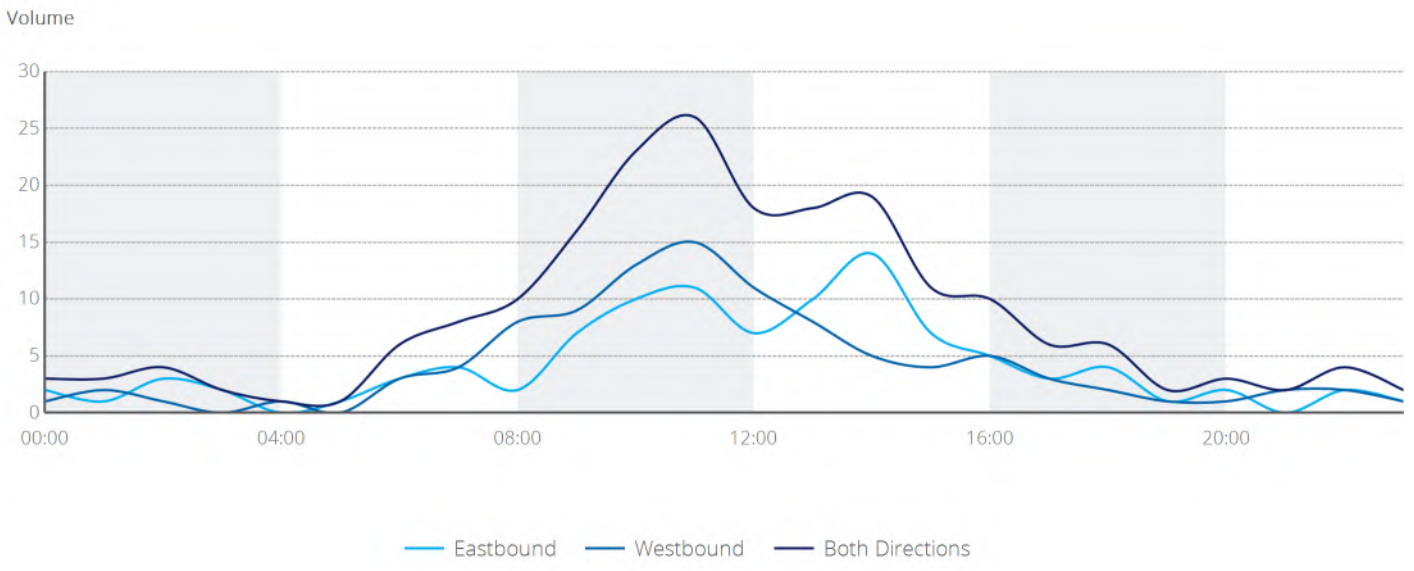
Newdegate Ravensthorpe Rd (M037)

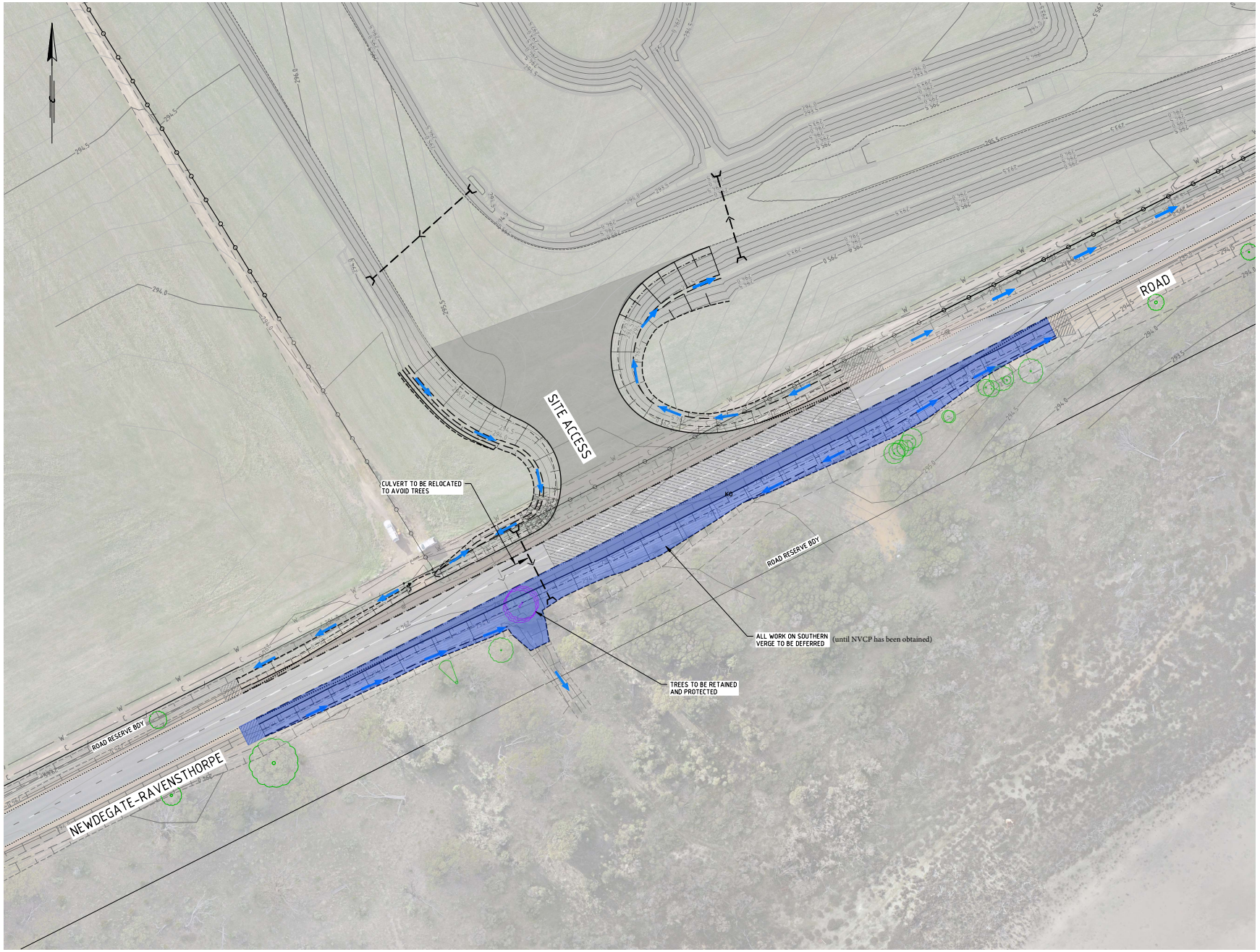
East of Hewson Rd (SLK 377.11)

	All Vehicles			Heavy Vehicles			
	EB	WB	Both	EB	WB	Both	%
00:00	2	1	3	2	1	3	100.0
01:00	1	2	3	0	1	1	33.3
02:00	3	1	4	2	0	2	50.0
03:00	2	0	2	2	0	2	100.0
04:00	0	1	1	0	0	0	0.0
05:00	1	0	1	0	0	0	0.0
06:00	3	3	6	1	0	1	16.7
07:00	4	4	8	1	1	2	25.0
08:00	2	8	10	0	3	3	30.0
09:00	7	9	16	2	1	3	18.8
10:00	10	13	23	2	3	5	21.7
11:00	11	15	26	1	7	8	30.8
12:00	7	11	18	0	2	2	11.1
13:00	10	8	18	1	2	3	16.7
14:00	14	5	19	2	1	3	15.8
15:00	7	4	11	0	1	1	9.1
16:00	5	5	10	1	2	3	30.0
17:00	3	3	6	0	1	1	16.7
18:00	4	2	6	0	1	1	16.7
19:00	1	1	2	0	0	0	0.0
20:00	2	1	3	0	0	0	0.0
21:00	0	2	2	0	1	1	50.0
22:00	2	2	4	1	1	2	50.0
23:00	1	1	2	0	1	1	50.0
TOTAL	102	102	204	18	30	48	23.5

Peak Statistics

AM	TIME	11:00	10:45	10:45	09:15	10:45	10:45
	VOL	11	17	27	3	8	9
PM	TIME	14:15	12:15	14:15	14:15	12:15	14:15
	VOL	14	11	21	2	3	4





PLAN
1:500

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION
3. CBH SITE CONCEPT LAYOUT IS INDICATIVE ONLY AND SUBJECT TO CHANGE
4. ALL VEGETATION TO BE RETAINED AND PROTECTED UNLESS STATED OTHERWISE

BEFORE YOU DIG www.byda.com.au
Zero Damage - Zero Harm

WARNING
SERVICES AND CADASTRAL BOUNDARY LOCATIONS SHOWN ARE INDICATIVE ONLY AND MUST NOT BE USED FOR EXCAVATION. THE "ONE CALL 1100" SYSTEM SHALL BE USED TO OBTAIN ACCURATE SERVICE LOCATIONS.

LEGEND

- EXISTING CADASTRAL BOUNDARY
- CBH SITE BOUNDARY
- EXISTING FENCE LINE
- EXISTING EDGE OF SEAL
- EXISTING SHOULDER
- EXISTING OPEN DRAIN
- EXISTING EARTHWORKS INTERFACE
- EXISTING COMMUNICATION SERVICES
- EXISTING UNDERGROUND POWER
- EXISTING CULVERT
- EXISTING GUIDE POST
- EXISTING SINGLE POST SIGN
- EXISTING DOUBLE POST SIGN
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- DESIGN ALIGNMENT
- CH 32940 DESIGN CHAINAGE
- CBH SITE CONCEPT LINEWORK
- DESIGN CUTLINE
- C1 DESIGN CULVERT
- DESIGN EDGE OF SEAL
- DESIGN ROAD SHOULDER
- DESIGN OPEN DRAIN
- DESIGN EARTHWORKS INTERFACE
- DESIGN PAVEMENT HINGE
- 21.0 COMBINED CONTOURS
- FLOW DIRECTION
- EXTENT OF DESIGN PAVEMENT
- ROCK PITCHING
- TREATMENT TO EXISTING PAVEMENTS WITHIN TURNING PATHS TBC
- FUTURE WORKS

(FOLLOWING APPROVAL OF NVCP)

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 1500
SCALES

A1

NOT FOR CONSTRUCTION

No.	DESCRIPTION	APPROVED & DATE
A	ISSUED FOR COMMENT	RN 11/09/2024

AMENDMENTS

METADATA	
GROUND SURVEY STANDARD:	67-08-43
DATE OF CAPTURE:	06.2023
MAPPING SURVEY STANDARD:	
DATE OF CAPTURE:	
MAIN ROADS PROJECT ZONE:	NEWGATE94
HEIGHT DATUM:	AHD

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

CONSULTANT DRAWING NUMBER

DRAWN	CRF
DESIGNED	KL
VERIFIED	RN
DIRECTOR	

mainroads WESTERN AUSTRALIA
METROPOLITAN AND SOUTHERN REGIONS DIRECTORATE
GREAT SOUTHERN REGION
2-6 KELLY STREET ALBANY, WA 6331
Telephone (08) 9892 0555 Fax (08) 9892 0577

CLIENT FILE No.	
RECOMMENDED	
APPROVED	

COLLIE LAKE KING (M037)
CBH ACCESS - NEWDEGATE-RAVENSTHORPE ROAD
SLK 329.401
GENERAL ARRANGEMENT
STAGING OPTION 2 - OMISSION OF BAR
LOCAL AUTHORITY SHIRE OF LAKE GRACE (311)
MRWA DRAWING NUMBER
2409001-SK-002 A

FILE REF: Y:\Jobs Active 2024\CE - Roads & Drainage\CBH_Newdegate Site Access_2409001\4. Drawings\4.5 Sketches\2409001-SK-002

From: Darren Wallace
To: Roberts, Timothy
Cc: Suvrat Patel
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status
Date: Thursday, 21 November 2024 9:14:12 AM
Attachments: image001.gif
image002.jpg
image003.jpg
image004.jpg
image005.jpg
image006.png
image007.png
image008.png
image009.png
image010.jpg
image011.jpg
image352110.png
image779538.png
image638173.png
image690344.png
image114072.jpg

OFFICIAL

OFFICIAL

Hi Tim

I am please to advise that Main Roads agrees, in principle, with your proposal to stage the Intersection works at your Newdegate site.

In particular the Shawmac Option 2) – BAL constructed prior to use of the facility (2025). Existing Simple Right. TMP during harvest/s. BAR constructed following NVCP approval.

Please note this is only in principle agreement at this stage. A full conditional approval will be developed in the near future.

Kind Regards

Darren Wallace (he/him/his)
Acting Asset Manager
Wheatbelt Region
Regional Operations
Tel: +61 8 9622 4720 Mob: 0417707478

From: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Sent: Wednesday, November 20, 2024 3:46 PM

To: Darren Wallace <darren.wallace@mainroads.wa.gov.au>
Cc: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

Thanks Darren, appreciate the update.

Tim

Timothy Roberts
Lead - Planning and Approvals

Timothy.Roberts@cbh.com.au
T (08) 9216 6061

Level 6, 240 St Georges Terrace
Perth WA 6000 Australia

From: Darren Wallace <darren.wallace@mainroads.wa.gov.au>
Sent: Wednesday, November 20, 2024 3:16 PM
To: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Cc: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

OFFICIAL

Hi Tim

Our review team had promised comments on the staging early this week. However, it has not been done yet and the Manager is not in today for me to be able to follow up. I will speak to him first thing tomorrow and hopefully get something to you.

The full review is due to be completed by the 28th of November.

Kind Regards

I will pass on what I get as soon as I get something.

Darren Wallace (he/him/his)
Acting Asset Manager
Wheatbelt Region
Regional Operations
Tel: +61 8 9622 4720 Mob: 0417707478

From: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Sent: Wednesday, November 20, 2024 1:01 PM
To: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Cc: Darren Wallace <darren.wallace@mainroads.wa.gov.au>
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

Hey Suvrat & Darren,

Just wondering whether there had been any comment from the HO team. We are meeting with the Shire tomorrow at 11:30 for DA lodgement next Monday and are hopeful we can provide comments prior to tomorrow's meeting with regard to the proposed intersection construction.

I do note that comments were expected to be due back from them mid-October so any sort of comments would be greatly appreciated.

Thanks,
Tim

Timothy Roberts
Lead - Planning and Approvals

Timothy.Roberts@cbh.com.au
T (08) 9216 6061

Level 6, 240 St Georges Terrace
Perth WA 6000 Australia

From: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Sent: Monday, November 18, 2024 9:37 AM
To: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Cc: Darren Wallace <darren.wallace@mainroads.wa.gov.au>
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

OFFICIAL

Hi Darren,

Could you please follow up with RTE and once again stress the urgency of assessment for the staged construction? The remaining 15% of comments can be addressed afterward.

Suvrat Patel
Network Manager
Wheatbelt Region
Regional Operations
Tel: +61 8 9881 0516 Mob: +61 417 910 661

From: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Sent: Friday, November 15, 2024 1:42 PM
To: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Cc: Darren Wallace <darren.wallace@mainroads.wa.gov.au>

Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

Hey Suvrat.

Was hopeful you would have something today for me?

Let me know if I need to chase someone up in HO as well

Thanks,
Tim

Timothy Roberts
Lead - Planning and Approvals

Timothy.Roberts@cbh.com.au
T (08) 9216 6061

Level 6, 240 St Georges Terrace
Perth WA 6000 Australia

From: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Sent: Wednesday, November 13, 2024 8:56 AM
To: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Cc: Darren Wallace <darren.wallace@mainroads.wa.gov.au>
Subject: RE: CBH Newdegate - Staged Intersection Construction - Status

OFFICIAL

OFFICIAL

Hi Tim,

Thank you for your email. We understand the urgency, and we are regularly following up with the head office design team to receive their comments as soon as possible. Hopefully, we'll be able to provide you with advice on staged construction shortly.

Suvrat Patel
Network Manager
Wheatbelt Region
Regional Operations
Tel: +61 8 9881 0516 Mob: +61 417 910 661

From: Roberts, Timothy <Timothy.Roberts@cbh.com.au>
Sent: Monday, November 11, 2024 3:23 PM
To: Suvrat Patel <suvrat.patel@mainroads.wa.gov.au>
Subject: CBH Newdegate - Staged Intersection Construction - Status

Hey Suvrat,

Just checking in to see whether you had received any comments from the design team on our proposed staged intersection construction.

At last weeks meeting we discussed having the design team expedite their comments on the staged construction request as we are looking to lodge the DA by the end of the next week and part of this DA lodgement requires negotiating with the Shire about constructing the BAR following NVCP approval (subject to MRWA approval).

If I can assist in any way, please let me know.

Thanks,
Tim

Timothy Roberts
Lead - Planning and Approvals

Timothy.Roberts@cbh.com.au
T (08) 9216 6061

Level 6, 240 St Georges Terrace
Perth WA 6000 Australia

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Stormwater Management Plan

Project:	Newdegate Site Enhancement Project Stormwater Management Plan
Client:	CBH
Author:	N. Baby/R.Needham/K.Li
Date:	28th November 2024
Shawmac Document #:	2406014-REP-001
CBH Document #:	940-3236-CI-RPT-0001

CONSULTING CIVIL AND TRAFFIC ENGINEERS
1 ST. FLOOR, 908 ALBANY HIGHWAY, EAST VICTORIA PARK WA 6101.
PHONE|+61 8 9355 1300
EMAIL| admin@ shawmac.com.au

Document Status: Issued for Construction

Version	Prepared By	Reviewed By	Approved By	Date
A	N. Baby	R. Needham	R. Needham	08.08.24
B	R. Needham	J. Bridge	R. Needham	11.09.24
0	K.Li	R. Needham	R. Needham	06.11.24
1	R. Needham		R. Needham	19.11.24
2	R. Needham		R. Needham	28.11.24

Disclaimer

File Reference: Y:\Jobs Active 2024\CE - Roads & Drainage\CBH_Newdegate Site Expansion_2406014\3. Documents\3.16 SWMP\940-3236-CI-RPT-0001_2.docx

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2.3. Geotechnical 0

2.3.1. PFS Investigation 0

2.3.2. Detailed Investigation 0

2.4. Environmental 0

2.5. Catchment and Surface Water Flows 1

3. Stormwater Management Strategy 0

3.1. Strategy Overview 0

3.2. Design Criteria and Modelling Assumptions 1

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Table 3: Post-Development Catchment Data 2

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Table 5: Culvert Modelling Outcomes 5

Table 6: Open Drain Modelling Outcomes 6

1. Introduction

1.1. The Project

CBH is currently undertaking a Feasibility Study for their planned new grain receival site at Newdegate. The new site will function as a satellite site to the existing Newdegate 'town' site and is a greenfield development, intended to replace the existing 'north' and 'field day' temporary storage sites. **Figure 1** shows the location of the proposed and existing sites.

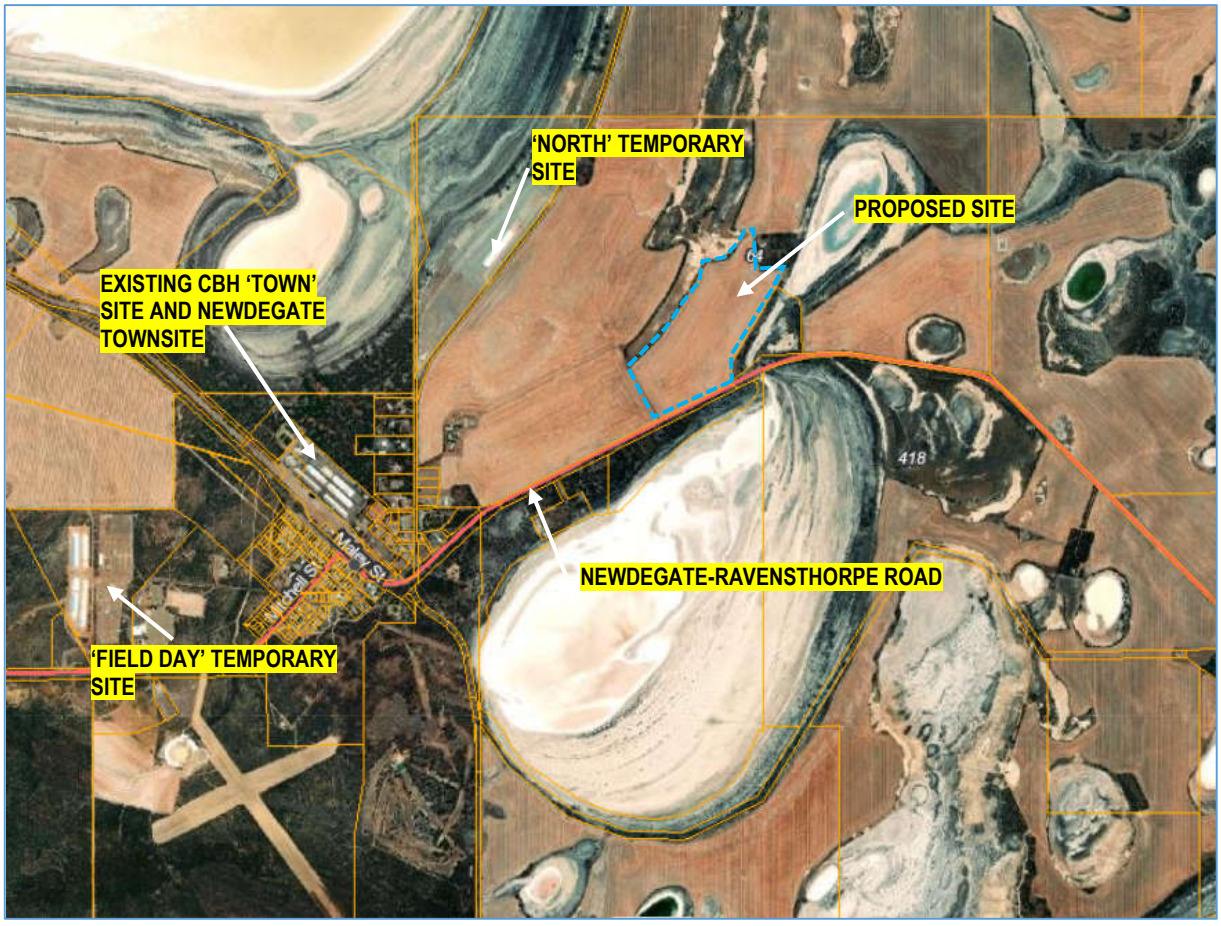

Figure 1: Proposed Site Location

CBH propose to construct approximately 190kt of OBH storage, as well as new fixed in-loading equipment, new MSW facilities, amenities and a new intersection with Newdegate-Ravensthorpe Road.

Refer to **Appendix A – General Arrangement Drawing** for an overview of the proposed site development.

1.2. Purpose

The purpose of this report is to outline and quantify the proposed stormwater management measures to be adopted in support of the proposed works. This report should be read in conjunction with the following drawings:

Table 1: Design Drawings

Title	Drawing No.	Revision
LOCALITY PLAN & DRAWING LIST	940-ENG-CI-DLP-0001	0
OVERALL GENERAL ARRANGEMENT, NOTES & LEGEND	940-ENG-CI-DGA-0001	0
GENERAL ARRANGEMENT	940-ENG-CI-DGA-0002	1
EARTHWORKS AND DRAINAGE SHEET 1 OF 3	940-ENG-CI-DDR-0001	0
EARTHWORKS AND DRAINAGE SHEET 2 OF 3	940-ENG-CI-DDR-0002	0
EARTHWORKS AND DRAINAGE SHEET 3 OF 3	940-ENG-CI-DDR-0003	0
EARTHWORKS HEAT MAP	940-ENG-CI-DGA-0003	0
PAVEMENT AND SURFACING SHEET 1 OF 2	940-ENG-CI-DGA-0004	0
PAVEMENT AND SURFACING SHEET 2 OF 2	940-ENG-CI-DGA-0005	0
PLAN AND PROFILE ACCESS ROAD CHA 0.00 TO CHA 500.00	940-ENG-CI-DPP-0001	0
PLAN AND PROFILE ACCESS ROAD CHA 500.00 TO CHA 1000.00	940-ENG-CI-DPP-0002	0
PLAN AND PROFILE ACCESS ROAD CHA 1000.00 TO CHA 1236.538	940-ENG-CI-DPP-0003	0
PLAN AND PROFILE CONVEYOR 1 CHA -37.500 TO CHA 303.00	940-ENG-CI-DPP-0004	0
PLAN AND PROFILE CONVEYOR 2 CHA -37.500 TO CHA 303.00	940-ENG-CI-DPP-0005	0
AUGER PIT 1 PLAN, SECTION AND CONCRETE SETOUT	940-ENG-CI-DAL-0001	0
AUGER PIT 2 PLAN, SECTION AND CONCRETE SETOUT	940-ENG-CI-DAL-0002	0
HEAD DRIVES 1 & 2 PLANS AND CONCRETE SETOUT	940-ENG-CI-DAL-0003	0
WEIGHBRIDGE IN PLAN, SECTION, AND SETOUT DETAILS	940-ENG-CI-DAL-0004	0
WEIGHBRIDGE OUT PLAN, SECTION, AND SETOUT DETAILS	940-ENG-CI-DAL-0005	0
SAMPLE HUT PLAN, ELEVATION, AND SETOUT DETAILS	940-ENG-CI-DAL-0006	0
AMENITIES AREA PLAN, AND SETOUT DETAILS	940-ENG-CI-DAL-0007	0
REFUELLING AREA PLAN AND SETOUT DETAILS	940-ENG-CI-DAL-0008	0
TYPICAL SECTIONS SHEET 1 OF 3	940-ENG-CI-DSE-0001	0
TYPICAL SECTIONS SHEET 2 OF 3	940-ENG-CI-DSE-0002	0
TYPICAL SECTIONS SHEET 3 OF 3	940-ENG-CI-DSE-0003	0
TYPICAL DETAILS	940-ENG-CI-DTD-0001	0
ACCESS ROAD CROSS SECTIONS CHA 20.00 TO CHA 120.00	940-ENG-CI-DSE-0004	0
ACCESS ROAD CROSS SECTIONS CHA 140.00 TO CHA 240.00	940-ENG-CI-DSE-0005	0
ACCESS ROAD CROSS SECTIONS CHA 260.00 TO CHA 320.00	940-ENG-CI-DSE-0006	0
ACCESS ROAD CROSS SECTIONS CHA 340.00 TO CHA 400.00	940-ENG-CI-DSE-0007	0
ACCESS ROAD CROSS SECTIONS CHA 420.00 TO CHA 460.00	940-ENG-CI-DSE-0008	0
ACCESS ROAD CROSS SECTIONS CHA 480.00 TO CHA 620.00	940-ENG-CI-DSE-0009	0

Title	Drawing No.	Revision
ACCESS ROAD CROSS SECTIONS CHA 640.00 TO CHA 740.00	940-ENG-CI-DSE-0010	0
ACCESS ROAD CROSS SECTIONS CHA 760.00 TO CHA 860.00	940-ENG-CI-DSE-0011	0
ACCESS ROAD CROSS SECTIONS CHA 880.00 TO CHA 980.00	940-ENG-CI-DSE-0012	0
ACCESS ROAD CROSS SECTIONS CHA 1000.00 TO CHA 1100.00	940-ENG-CI-DSE-0013	0
ACCESS ROAD CROSS SECTIONS CHA 1120.00 TO CHA 1220.00	940-ENG-CI-DSE-0014	0
PAVEMENT MARKING AND SIGNAGE SHEET 1 OF 2	940-ENG-CI-DSL-0001	0
PAVEMENT MARKING AND SIGNAGE SHEET 2 OF 2	940-ENG-CI-DSL-0002	0

2. Pre-developed Situation

2.1. Site Characteristics

The proposed site is currently undeveloped farmland as shown in **Figure 2**. Inland salt lakes about the site on the northwest and southeast boundaries. Newdegate-Ravensthorpe Road runs along the southern boundary.

Figure 3 shows an excerpt of the General Arrangement design plan for the site.

Figure 2: Site Characteristics

Figure 3: General Arrangement Plan

2.2. Topography

Figure 4 shows the existing surrounding topography (2m contours) of the site and **Figure 5** shows the feature survey of the proposed site. As shown, there is a ridge line of 296m height along the northwest part of the site and a ridge line of 297m along the southeast part of the site. Between the two ridge lines, the site falls from a height of 295.6m from the northeast to a local low point of 294m before the southwest boundary with an average gradient of 0.4%. Most of the site is relatively flat, the gradient adjacent to the northwest ridge line varies between 1-2% and the gradient adjacent to the southeast ridge line varies between 1-5%.

Figure 4: Existing Terrain

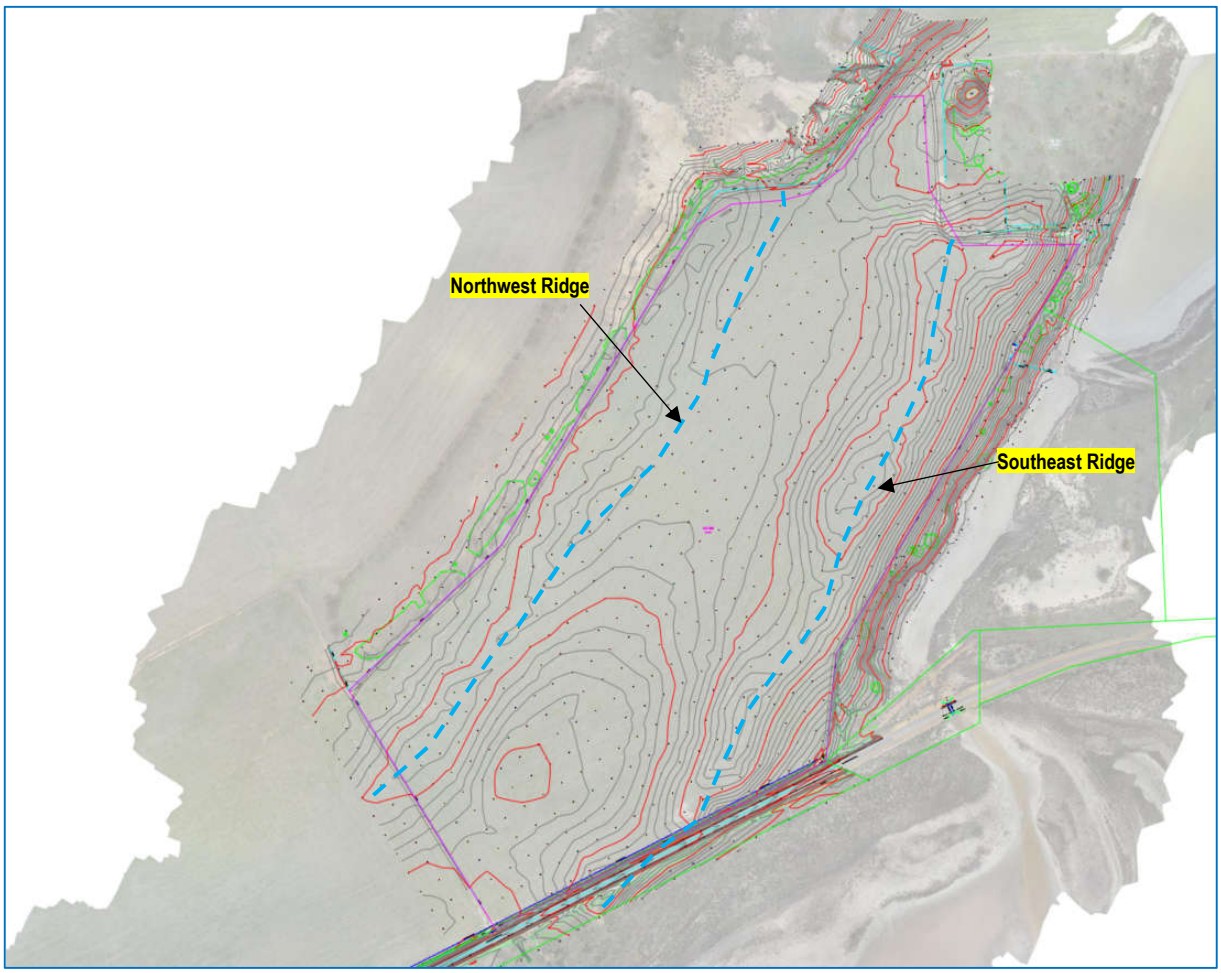

Figure 5: Feature Survey of Proposed Site

2.3. Geotechnical

2.3.1. PFS Investigation

CBH commissioned WSP to undertake a geotechnical investigation of the site to support the previous PFS design in December 2023.

WSP noted that as per the Newdegate sheet of the 1:250,000 scale geological series map the site is underlain by gypsiferous sand silt and silt in dunes adjacent to playa lakes; ancient drainage flats; commonly calcrete nodules.

From the site investigation WSP found that the subsurface conditions typically comprise stiff to very stiff, medium to high plasticity Sandy Clay for majority of the site. A layer (< 1m thick) of loose to medium dense silty sand overlying the clay was encountered towards the north-eastern part of the site.

Groundwater was not encountered during the field investigation; however, perched groundwater on impermeable clay materials should be anticipated during the wetter months.

2.3.2. Detailed Investigation

CBH commissioned Galt Geotechnics to undertake an additional geotechnical investigation in August 2024. Refer to document WAG240367-01 001 R Rev0. Galt advise that the tested in-situ sandy clay indicates an unusual >10% high plasticity without a particularly high moisture content. Galt advise that it the in-situ material may swell significantly more than that which occurred in the mould. Based on this and other relevant findings, Galt recommended, contrary to the previous investigation, that the purported sand layer overlying the clay does not exist, and the entire site should be considered as clayey below topsoil level.

Galt did not undertake any additional infiltration tests, however based on the earlier testing undertaken by WSP, they advised that the site should be considered relatively impermeable for the purposes of stormwater design.

2.4. Environmental

There are no environmentally sensitive features within or immediately surrounding the site. To the northwest of the site there is a salt lake which forms a trapped low point. To the southwest of the site there is another salt lake which has a flow path extending south through culverts under Newdegate-Ravensthorpe Road into Lake Burkett, another larger salt lake.

Figure 6 provides an excerpt of the 1:100,000 Geoscience Australia Topographic Map 'Newdegate' and shows the environmentally features surrounding the site. All the salt lakes are noted as being 'mainly dry'.

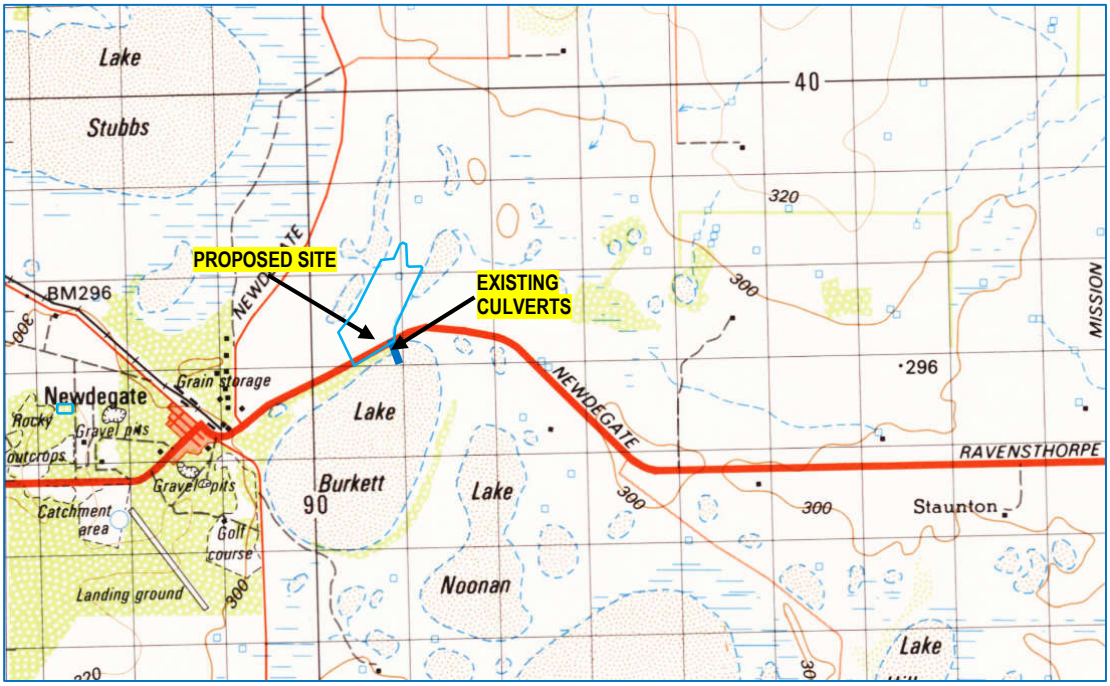

Figure 6: 1:100,000 Geoscience Australia Topographic Map Excerpt

2.5. Catchment and Surface Water Flows

As the site is undeveloped, surface water flows are maintained towards natural flow paths. **Figure 7** shows the existing major catchment boundaries and stormwater infrastructure.

As shown, the site can be divided into five major catchments described as follows:

- Catchment A is the small catchment in the northern part of site. All stormwater runoff within this vicinity flows towards the northern perimeters of the site to a low point in the north.
- Catchment B1 & B2 mostly consists of the north-western portion of site. All storm water runoff within this catchment flow towards the salt lake to the north-west.
- Catchment C contains the central portion of site, which flows south to a depression within the site.
- Catchment D1 & D2 contains the southeastern part of the site. Runoff from this catchment flow towards the salt lake to the southeast of the site and ultimately south into Lake Burkett via the existing culvert under Newdegate-Ravensthorpe Road.
- Catchment E consists of the southwestern corner of the site, where it drains off-site to the west along Newdegate-Ravensthrope Road, ultimately also reaching Lake Burkett.

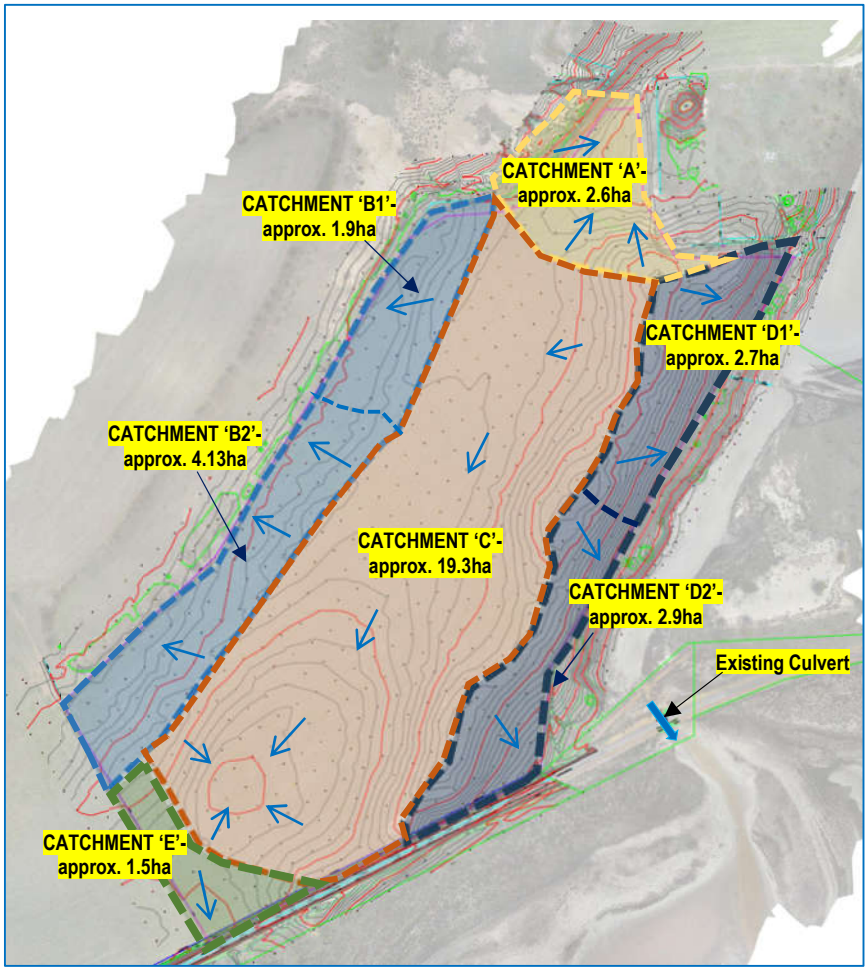

Figure 7: Catchment Characteristics

An XPSTORM model was built to reflect the predevelopment situation of the site and the resultant flow rates for selected catchments are shown in **Table 2.** Refer to **Section 3.2** for modelling assumptions. Pre-development flow rates for Catchments A, B2, C and D2 have not been assessed as there is no possibility of any post-development flow paths in these locations.

Table 2: Predevelopment Flow

Item	5% AEP (20 year ARI)
Catchment B1	0.086 m^3/s
Catchment D1	0.090 m^3/s
Catchment E	0.056 m^3/s

3. Stormwater Management Strategy

3.1. Strategy Overview

In general, the adopted strategy involves the construction of open drains and culverts to direct stormwater from the scope area into three proposed basins:

- Basin 1 – A free draining (i.e. with a low-level outfall pipe) basin in the northeastern corner of site to carry the majority of the impervious catchment from the eastern side of the bulkheads. This basin has an allowable discharge to the northeastern salt lake equal to the 5% AEP pre-developed flow rate from catchment D1, of 0.09m^3/s.
- Basin 2 – A large, trapped drainage basin in the southern centre of site to carry all the pervious and impervious catchments in the southern half of site, and the western side of the bulkheads. This basin is not free draining and will hold the entirety of the 5% AEP event (assuming the basin is empty at event commencement). An emergency overflow spillway/rock pitched weir is proposed for events greater than the 5% AEP event and up to the 100% AEP event which will direct stormwater under Newdegate-Ravensthorpe Road through a new culvert towards Lake Burkett. The emergency spillway is to be set 100mm below the basin top level, and 300mm freeboard is to be provided to the spillway in the 5% AEP event.

Refer to design drawings **940-ENG-CI-DDR-0001** through **940-ENG-CI-DDR-0003** for full details of the proposed drainage design.

CBH's design criteria is to accommodate the 1:20 event, and accordingly the basins have been designed to cater for the critical duration of this event. For Basin 2, the critical event is 24hrs as there is no low-level outfall. Basin 1 has a 6hr critical event as it will be provided with a low-level pipe outfall. The 1:20, 24hr event for Newdegate is 83.4mm of rainfall which roughly equates to 7.5 weeks of winter (Newdegate has an average of 144.5mm rainfall over the winter months). So, it is likely that the basin will fill quickly and leave insufficient capacity for future events unless the water is pumped out. If this occurs, then provision has been made for a high-level overflow from the basin, through a culvert under Newdegate-Ravensthorpe Road and ultimately into Lake Gregory. The culvert under Newdegate-Ravensthorpe Road has been designed to accommodate the 1:100-year critical event, assuming the basin is empty at the time the event commences. It is important to note that, should the basin be filled or partially filled when a significant event occurs, then flow rates will likely exceed the capacity of the drainage system and may result in damage.

It should also be noted that the basin is unlikely to empty through evaporation over the warmer months. The average pan evaporation for Newdegate between October and March is approximately 1.17m. The expected water depth in the basin from the 1:20, 24hr event is 1.92m, and the high-level outfall is proposed to be set at a

depth of 2.16m, so there may be around 1m of water remaining in the basin after summer, assuming no rainfall over that period.

It is recommended that CBH make contingency to pump the stored water out of the basin as required to free up capacity for future events. A solar powered pump could be a viable option to achieve this.

3.2. Design Criteria and Modelling Assumptions

Based on the adopted strategy and CBH's design specifications, the key stormwater management design criteria are summarised as follows:

- All drainage design is to be based on the critical 5% AEP event, except for the emergency overflow from Basin 2 which is to be based on the critical 1% AEP event.
- A 0.1m/day infiltration rate as per the geotechnical report (605-3236-CI-RPT-0001) has been applied to the basins to reflect some seepage and evaporation.
- A minimum freeboard level of 300mm to subgrade as per CBH TS10A Design Specification for long term ponding (i.e. to basin TWL).
- A minimum freeboard of 300mm to shoulder for short term ponding (i.e. culvert headwaters).
- Culverts may have a minimum cover of 400mm (RCP Class 4).
- Minimum open drain fall of 0.3% in accordance with CBH requirements.
- Scour protection required where >2m/s velocity is expected.

An XPSTORM model has been built for the proposed works. The following key assumptions were utilised:

- For the CBH site, infiltration losses were assumed as 15mm for pervious areas. Nil losses were assumed for impervious areas.
- Basin infiltration losses - 0.1m/day.
- Model outcomes reflect the median event from the hydraulic model.
- Rainfall intensities and temporal patterns are consistent with ARR 2019.
- Mannings 'n' value assumed as follows:
    - 0.018 for open drains
    - 0.014 for concrete culverts
- Culvert energy loss coefficients of 0.5 (entry) and 1.0 (exit).

3.3. Post-Development Catchments and Runoff

The site was divided into 2x overarching drainage catchments representing the 2x proposed drainage basins as shown in **Figure 8**. **Figure 9** shows the model setup, with labelling of key design elements.

Table 1 provides a summary of the catchment data, and runoff flow rates and volumes for all catchments and sub-catchments within the model.

Table 3: Post-Development Catchment Data

Node Name	Node Subcatchment	Basin Catchment	Catchment Area (ha)	Impervious %	Max Flow (m^3/s)[1]	Max Volume (m^3)[1]
Node1	1	1	1.458	100	0.038	1,151
Node2 / Basin 1	1	1	0.836	0	0.021	529
Node3	1	2	1.782	100	0.046	1,392
Node5	1	2	0.132	100	0.003	105
Node6	1	2	0.942	100	0.025	739
Node8	1	2	0.632	100	0.015	482
Node9	1	2	0.473	100	0.012	300
Node11[2] / Basin 2	1	2	14.81	0	0.346	9,466
	2		0.687	100		
Node22	1	1	0.352	100	0.009	281
Node27	1	1	0.587	100	0.015	460
Node30	1	Outlet	0.241	100	0.006	188
Node34	1	1	1.48	100	0.039	1,162
Node38	1	2	0.593	100	0.015	463
Node39	1	1	0.705	100	0.019	553
Node40	1	2	2.231	100	0.058	1,735
Node45	1	2	0.361	100	0.026	703
	2	2	0.668	0		

[1] Figures are based on the median ensemble 1:20, 24hr event which results in the maximum TWL in Basin 2

[2] This includes the large internal undeveloped catchment

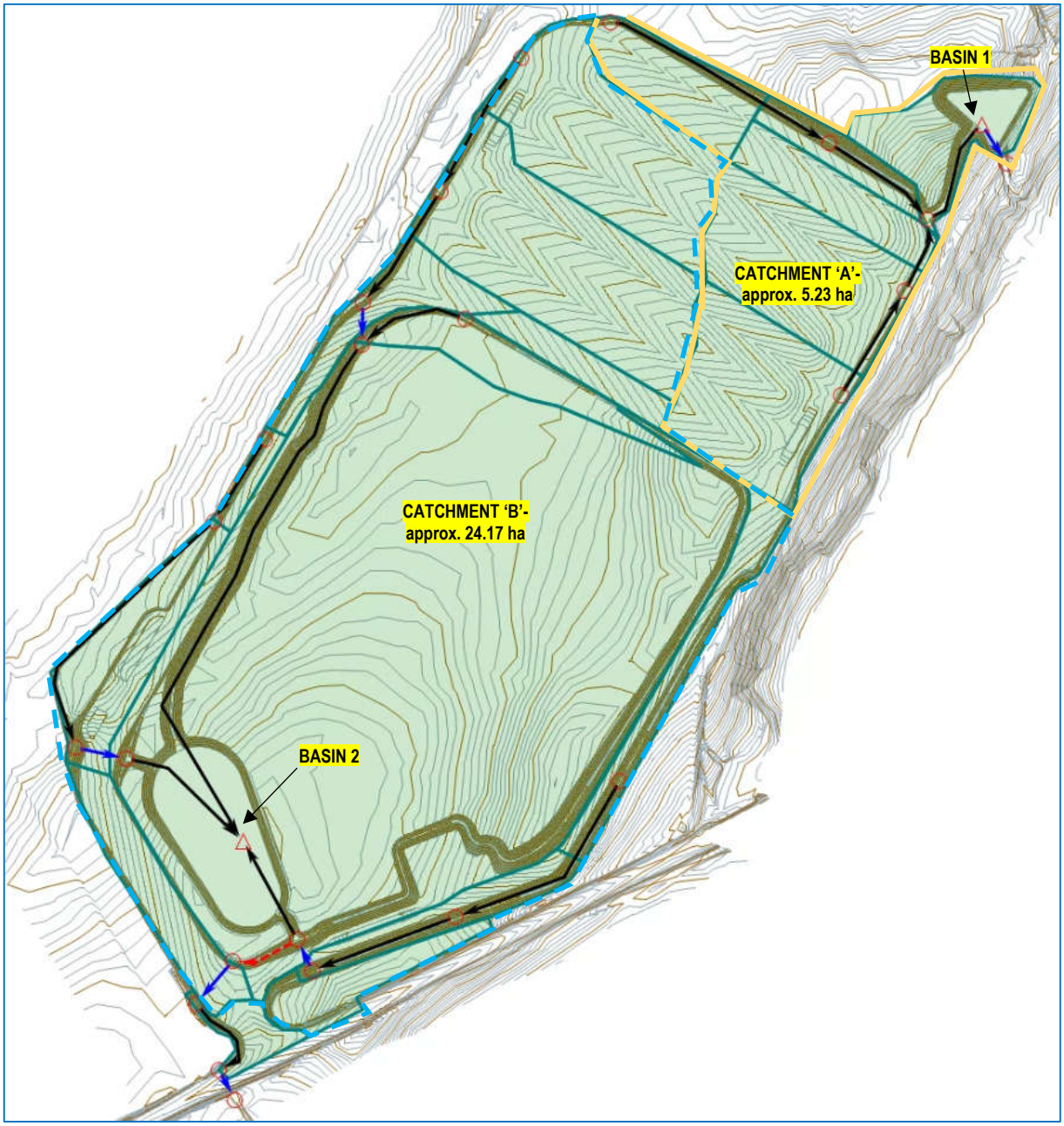

Figure 8: Post-Development Catchments

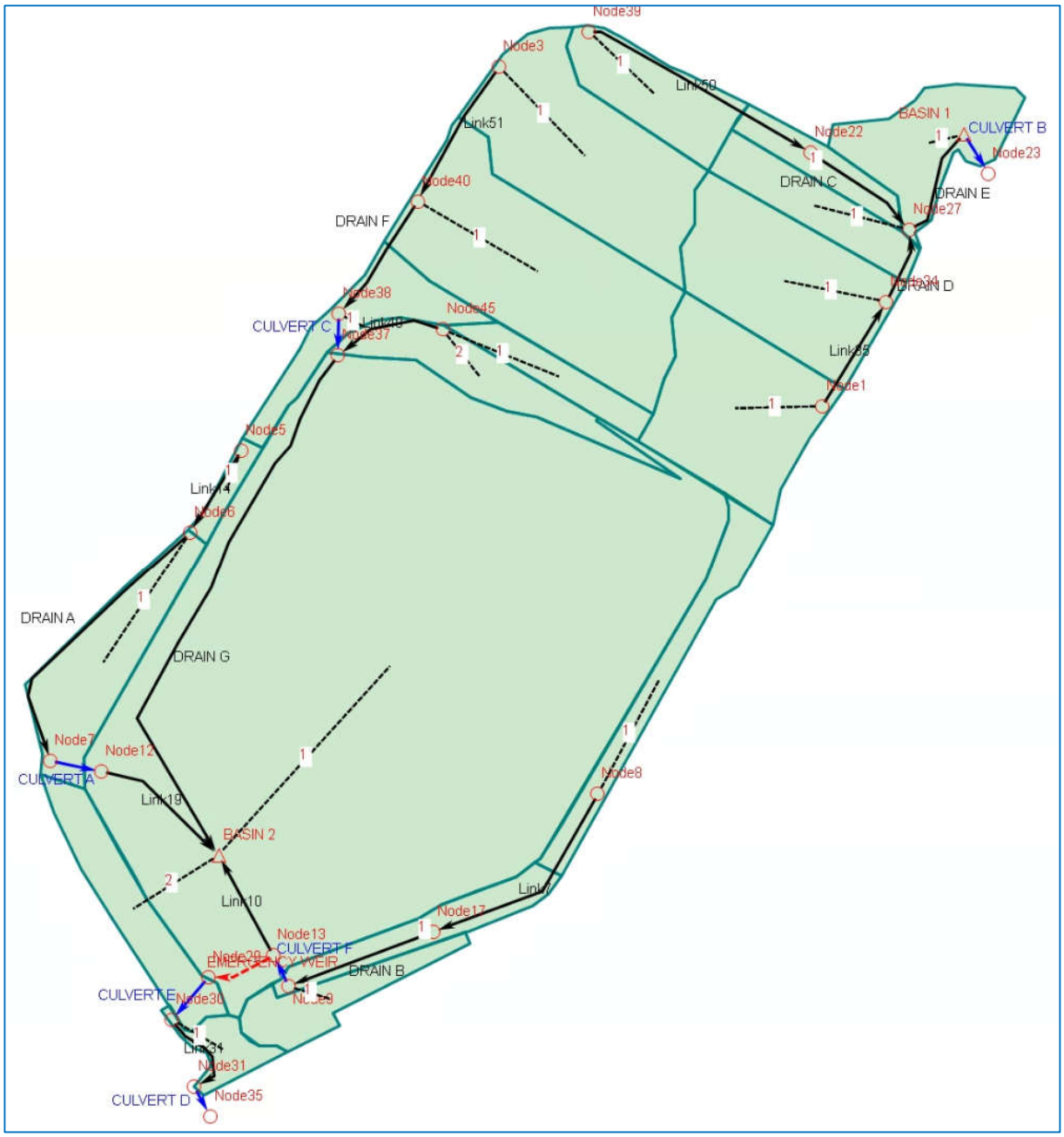

Figure 9: Model Setup

3.4. Stormwater Quantity and Model Outcomes

Table 4, **Table 5** and **Table 6** provide the key modelling outcomes for the basins, culverts and open drains.

Table 4: Basin Modelling Outcomes

Element	Basin 1	Basin 2
Basin Top Area (m^2)	2,670	10,519
Basin Base Area (m^2)	1,490	8,234
Basin Top Level (m AHD)	294.40	294.30
Basin Base Level (m AHD)	293.10	292.30
Total Basin Capacity (m^3)	2,405	18,753
Basin TWL (m AHD)	293.91	293.8
Freeboard to Subgrade (m)	0.68	0.8
Critical Event (hr)	6	24
Peak Outflow Rate (m^3/s)	0.088	-

Table 5: Culvert Modelling Outcomes

Culvert	Description	Type	U/S Shoulder (m AHD)	HW Level (m AHD)	Freeboard to shoulder (m)	Max Flow (m^3/s)	Max Velocity (m^3/s)
B	Basin 1 Outlet	1 x 225P	294.4 (GL[2])	293.91[3]	0.49[4]	0.088	2.18
E[1]	Emergency Flow Path from Basin 2 under Marshalling Area	1x450 RCP	295.08	294.28	0.8	0.135	1.15
F	After exit WB to Basin 2	1x450RCP	295.01	293.80	1.21	0.74	0.84
A	Under MSW Area to Basin 2	1x450 RCP	294.90	294.29	0.61	0.14	1.04
C	West of OBH11	1x600 RCP	295.10	294.38	0.72	0.41	1.56
D	New culvert under Newdegate-Ravensthorpe Road	1x450 RCP	294.35	293.67	0.68	0.034	0.93

[1] Culvert E results reflect 1% AEP event. Culvert is non-operational in the 5% AEP event.

[2] GL = Design Ground Level of Bund

[3] Governed by Basin Water Level

[4] Freeboard is to Bund Surface Level, Not Pavement.

Table 6: Open Drain Modelling Outcomes

Drain	Description	Max Flow (m^3/s)	Max Velocity (m/s)	Max Depth (m)
A	Along NW Boundary to Culvert A	0.18	0.53	0.40[1]
B	Along Exit WB to Culvert F	0.06	0.35	0.81[1]
C	Along north side of OBH 15	0.14	0.65	0.2
D	Along eastern side of OBH Area	0.55	0.95	0.2
E	Inlet to Basin 1	0.74	1.04	0.8[1]
F	US of Culvert C	0.39	0.58	0.77
G	DS of Culvert C, towards Basin 2	0.45	0.91	1.5[1]

[1] Governed by Culvert Headwater

3.5. Construction Stage Considerations:

The following items require attention during or ahead of construction:

- Outlet arrangements and scour protection from the free draining basin 1 require confirmation. At this stage it is proposed that the outlet is directed towards an existing scour line just south of the proposed basin location which flows into the salt lake.
- The emergency outfall from Basin 2 will require a new culvert under Newdegate-Ravensthorpe Road to direct stormwater south into Lake Burkett. This design and construction will be undertaken as part of the intersection package and would be subject to MRWA approval, but a 450RCP pipe is proposed at this stage. The 15% design for the intersection is currently being reviewed by MRWA.

Appendix A – General Arrangement Drawing

PLAN
1:2000

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001
3. ALL EXISTING FENCING TO BE REMOVED. INSTALL PREFABRICATED WIRE FENCE (7No. STRAND PLUS 1No. PLAIN WIRE ON TOP) ALONG CBH SITE BOUNDARY. REFER TO DRG. S000-ENG-CI-STD-0010 FOR SINGLE AND DOUBLE FENCE.

HOLDS:

1. INTERSECTION DESIGN TBC

1:2000 @ A1
1:4000 @ A3
0 20 40 60 80 100 120 140 160 180 200 m

APPROVED FOR CONSTRUCTION

CBHGROUP
ABN 29 256 604 947
SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
		1	28.11.24	GENERAL AMENDMENTS PER CLIENT COMMENTS	JG	RN	RN
-	-	0	30.10.24	ISSUED FOR CONSTRUCTION	JG	RN	RN

SCALE 1:2000
SHEET A1
PROJECT -
CONTRACT No -

DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
GENERAL ARRANGEMENT

DRG No 940-ENG-CI-DGA-0002
SHEET 1 OF 1
REV. 1

NOTES:

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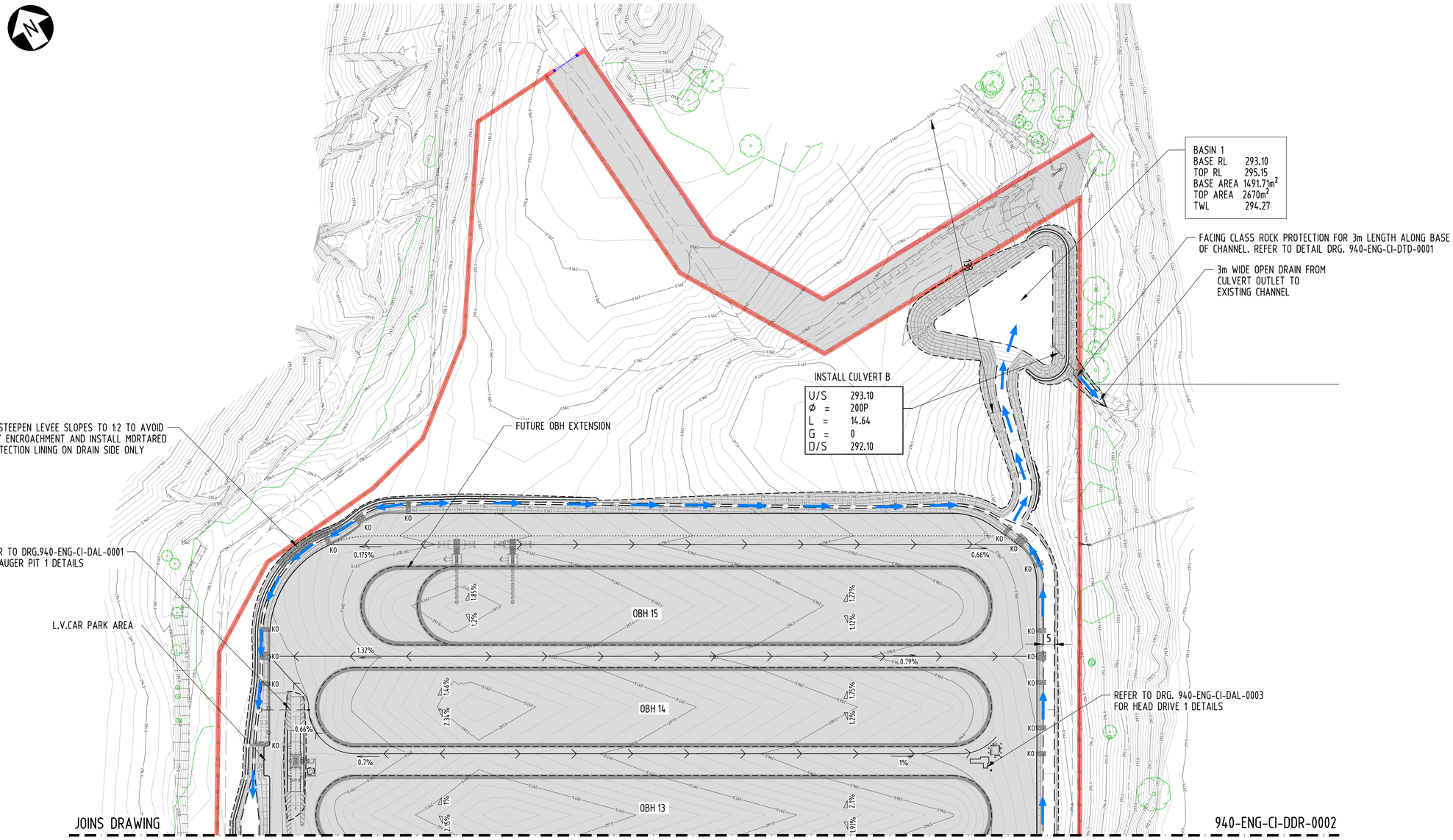
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001



PLAN
1:1000

ISSUED FOR TENDER

1:1000 @ A1
1:2000 @ A3
0 10 20 30 40 50 60 70 80 90 100 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
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-	-	A	02.08.24	85% DESIGN FOR CLIENT REVIEW	JG	RN	RN

SCALE	1:1000	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	--
DESIGNED	TM	18.07.24
DESIGN APPR	RN	--
PROJECT APPR	RN	--

TITLE
NEWDEGATE
SITE EXPANSION
EARTHWORKS AND DRAINAGE
SHEET 3 OF 3

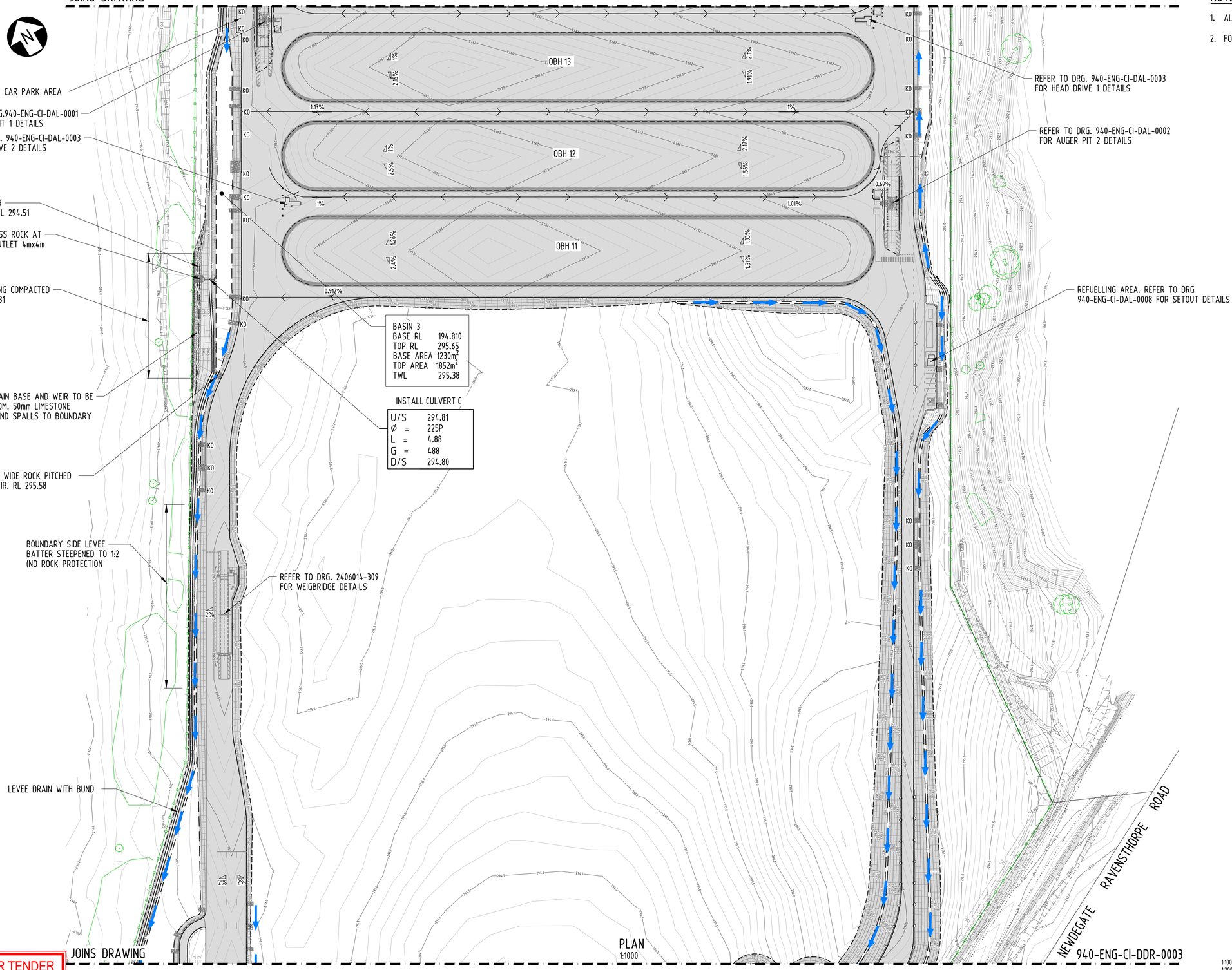
DRG No	SHEET	REV.
940-ENG-CI-DDR-0003	1 OF 1	C

JOINS DRAWING

940-ENG-CI-DDR-0001

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001



PLAN
1:1000

1:1000 @ A1
1:2000 @ A3
0 10 20 30 40 50 60 70 80 90 100 m

ISSUED FOR TENDER

JOINS DRAWING

940-ENG-CI-DDR-0003

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
WA 6101
P 9355 1300
E admin@shawmac.com.au

REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
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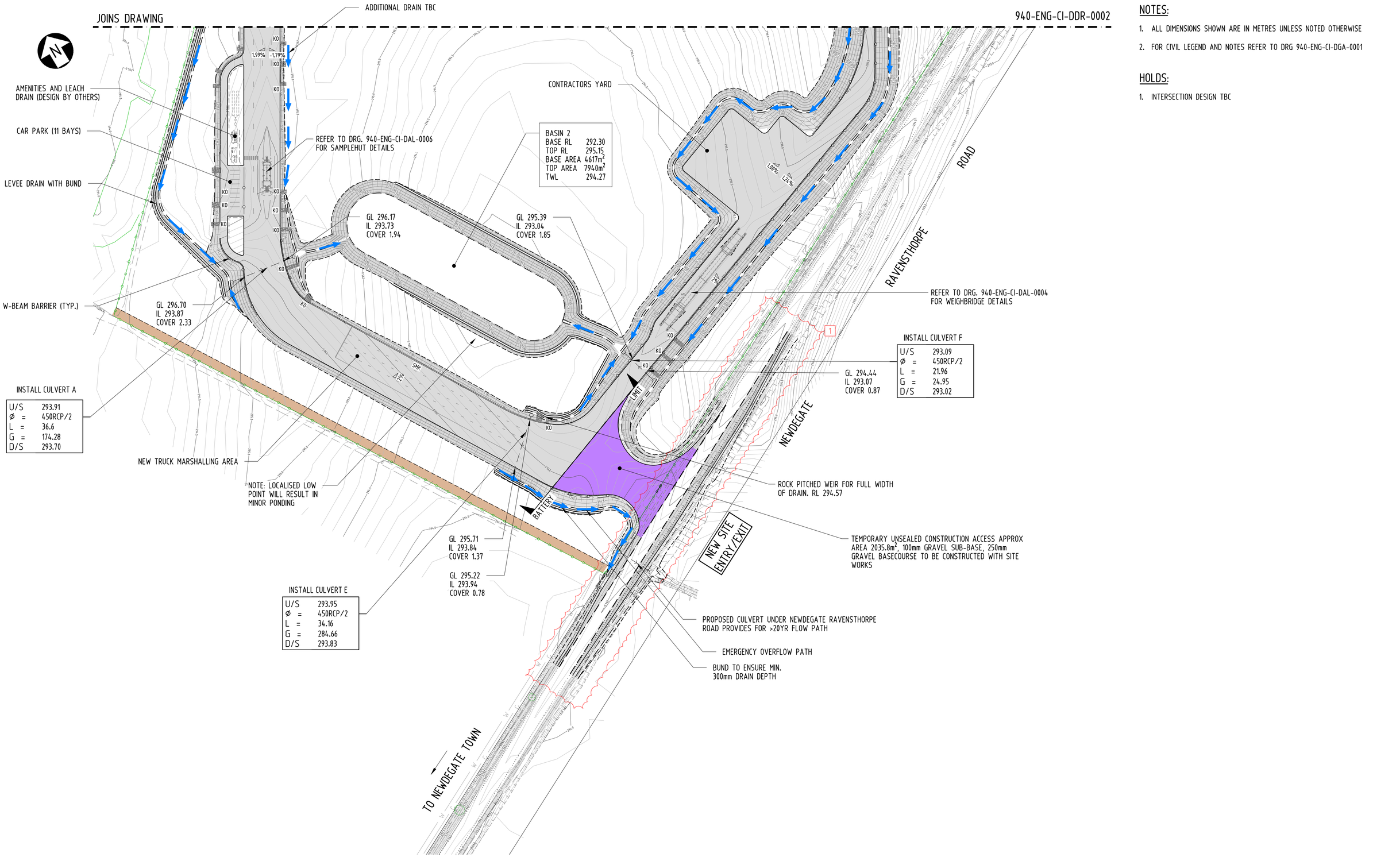
-	-	A	02.08.24	85% DESIGN FOR CLIENT REVIEW	JG	RN	RN

SCALE	1:1000	DRAWN	JG 23.07.24
SHEET	A1	CHECKED	RN --
PROJECT	-	DESIGNED	TM 18.07.24
CONTRACT No	-	DESIGN APPR	RN --
		PROJECT APPR	RN --

TITLE
NEWDEGATE
SITE EXPANSION
EARTHWORKS AND DRAINAGE
SHEET 2 OF 3

DRG No	SHEET	REV.
940-ENG-CI-DDR-0002	1 OF 1	B



PLAN
1:1000

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS NOTED OTHERWISE
2. FOR CIVIL LEGEND AND NOTES REFER TO DRG 940-ENG-CI-DGA-0001

HOLDS:

1. INTERSECTION DESIGN TBC

ISSUED FOR TENDER

1:1000 @ A1
1:2000 @ A3
0 10 20 30 40 50 60 70 80 90 100 m

CBH GROUP
ABN 29 256 604 947

SHAWMAC
1ST FLOOR
908 ALBANY HIGHWAY
EAST VICTORIA PARK
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REF DRAWING No.	REFERENCE DRAWING TITLE	REV	DATE	REVISION DESCRIPTION	BY	CHK'D	APP'D
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-	-	A	02.08.24	85% DESIGN FOR CLIENT REVIEW	JG	RN	RN

SCALE	1:1000	
SHEET	A1	
PROJECT	-	
CONTRACT No	-	
DRAWN	JG	23.07.24
CHECKED	RN	11.09.24
DESIGNED	TM	18.07.24
DESIGN APPR	RN	11.09.24
PROJECT APPR	RN	11.09.24

TITLE
NEWDEGATE
SITE EXPANSION
EARTHWORKS AND DRAINAGE
SHEET 1 OF 3

DRG No	SHEET	REV.
940-ENG-CI-DDR-0001	1 OF 1	C