

Aboriginal Objects Due Diligence Assessment Pedestrian/Cycleway Rail Overbridge, Station Street, Menangle NSW

Wollondilly Local Government Area
Prepared for Calibre Group

Prepared by Niche Environment and Heritage | 5 August 2022



A leading independent specialist environmental and heritage consultancy

5 August 2022

Mr Tom Foster
Calibre Group

Dear Mr Foster,

Re: Updated Pedestrian/Cycleway Rail Overbridge, Station Street, Menangle NSW – Aboriginal Objects Due Diligence Assessment (Niche ref: #6570)

On the basis of this revised assessment, it is unlikely that Aboriginal objects have survived within the Activity Area due to significant ground disturbances associated with vegetation removal, the construction of roads, bridges, railway corridor and associated infrastructure. These disturbances have modified the Activity Area to such an extent, that the potential for subsurface Aboriginal objects is low.

No Aboriginal heritage was identified within the Activity Area and no further investigation or impact assessment is required.

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* states that where a desktop and visual inspection has occurred and concluded that Aboriginal Objects are unlikely to occur, an Aboriginal Heritage Impact Permit (AHIP) application will not be necessary. The proposed activity may therefore proceed with caution without a further Aboriginal Cultural Heritage Assessment (ACHA) or AHIP. The following Find Procedure should be put in place as a minimum response in the unlikely event of the identification of artefacts within the Activity Area:

- All site workers and contractors should be inducted to the area and informed of their obligations under the *National Parks and Wildlife Act 1974*
- In the unlikely event that any Aboriginal objects are found, all activities with the potential to impact the objects must stop. A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge. An appropriately qualified archaeologist is to be engaged to assess the findings, and notification is provided to Heritage NSW. Works should not proceed without advice from Heritage NSW or an appropriately qualified archaeologist
- In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately and:
 - The location, including a 20m curtilage, should be secured using barrier fencing to avoid further harm
 - The NSW Police must be contacted immediately
 - No further action is to be undertaken until the NSW Police provide written notification to the Proponent
 - If the skeletal remains are identified as Aboriginal, the Proponent or their agent must contact: Heritage NSW's Enviroline on 131 555

- No works are to continue until Heritage NSW provides written notification to the Proponent or their Agent.

Please do not hesitate to contact me on **0488 224 300** or **kmorris@niche-eh.com** should you have any questions or would like to clarify details of this assessment.

Yours sincerely,



Kate Morris

Heritage Consultant - Niche Environment and Heritage

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1. Introduction

1.1 The proponent and the Activity Area

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Calibre Group (the Proponent) to undertake updates to the Aboriginal Objects Due Diligence assessment (DD) (Niche 2021) for the proposed construction of improvements to the existing rail overbridge on Station Street, between Moreton Park Road and Stevens Road at Menangle, NSW (hereafter referred to as the 'Activity Area') (Figure 1 and Figure 2).

1.2 The proposed activity

The overbridge design has been finalised and the proposed works will involve the following activities:

- Vegetation removal of trees (western portion of Activity Area)
- Installation of subsoil drains (except where drainage is already provided) and three drainage pits on the western portion of the Activity Area
- Removing and replacing existing kerbs
- Installation of new kerbs and gutters in selected areas (up to 35 cm below surface)
- Installation of ramps with siderails and stairs
- Addition of elevated pedestrian footpath and handrail parallel to existing bridge.

The final plan is provided in Attachment 1.

1.3 Statutory controls

1.3.1 Aboriginal objects due diligence assessment

The *National Parks and Wildlife Act 1974* (NPW Act) administered by the former Office of Environment and Heritage (OEH), now called Heritage NSW in the Department of Premier and Cabinet, is the primary legislation for the protection of some aspects of Aboriginal cultural heritage in New South Wales¹. Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm.

The *National Parks and Wildlife Act 1974* (NPW Act) provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution if they later unknowingly harm an object without an AHIP.

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* sets out a process for individuals and organisations to follow to determine whether any Aboriginal objects will be harmed by an activity, whether further investigation is needed, and whether that harm requires an AHIP (Figure 3).

¹ For further information visit: <https://www.environment.nsw.gov.au/licences/achregulation.htm>

1.4 Objectives

The aim of a DD is to assess whether Aboriginal objects and/or places are present or are likely to occur within or in close proximity to the Activity Area and, and if present whether they may be harmed by the proposed works. This assessment will establish if further investigation is required.

1.5 Assessment methodology

This DD follows the process outlined in Figure 3.



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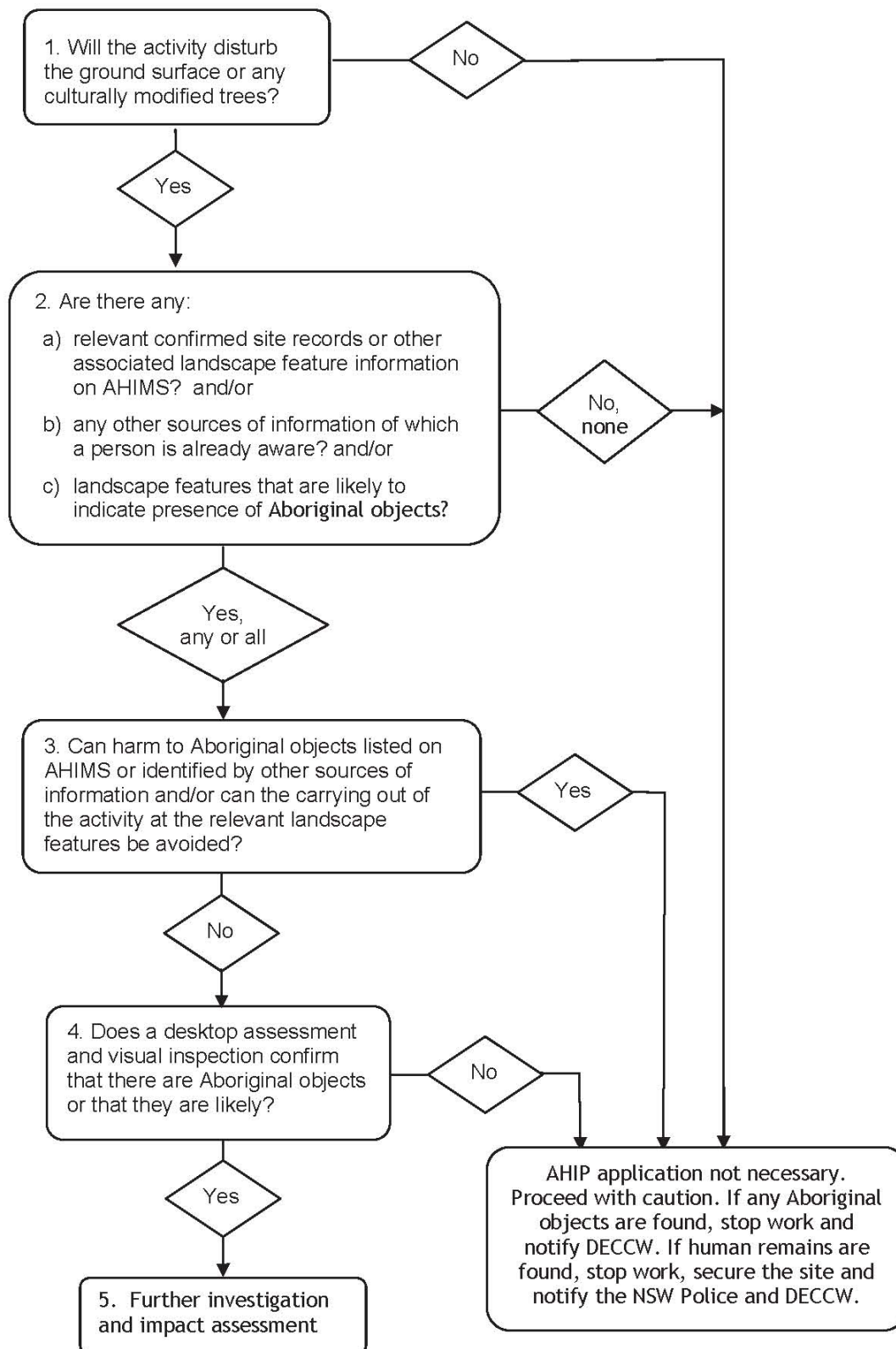


Figure 3: The *Due Diligence Code of Practice for the Protection of Aboriginal objects in NSW*.

2. Environmental context

2.1 Topography, landforms, and hydrology

The Activity Area is located on the southern margins of the Cumberland Plain, which is characterised by low lying, gently undulating plains and hills (OEH n.d.). The Activity Area is also located on the peripheries of the Woronora Plateau, as defined by the gorges and sandstone plateaus found to the east and the incised Nepean Gorge.

2.2 Geology and soils

The Activity Area is located within the Theresa Park soil landscapes, see Figure 4. This soil landscape is formed from fluvial processes associated with the Foot Onslow Creek and the Nepean River (Figure 4). It is characterised by its undulating slopes, floodplains and terraces with local relief up to 60m and slope gradients <5%, except on edges of terraces where gradients exceed 10%.

The soil profile is relatively deep (>250cm) consisting of sandy loams overlying sandy clay, within landforms associated with floodplains and terrace edges. This profile is moderately deep (>150cm) towards drainage lines and consisting predominately of sandy clay deposits. The Theresa Park soils are often subject to post depositional movement as a result to the seasonal waterlogging/ flooding as well as soil erosion as such, Aboriginal objects may not be preserved in their original archaeological context.

Due to twentieth century constructions, it is likely that the soil profile within the Activity Areas has been extensively disturbed.

2.3 Vegetation

Historically, the Activity Area was within an open wet-sclerophyll forest, which would have contained cabbage gum and broad-leaved apple. In the present day, the Activity Area has been previously cleared of native vegetation however, there are still some trees present. The remaining trees surrounding the Activity Area consist of native and introduced species. The native species include: *Eucalyptus crebra* (Narrow Leaf Ironbark), *Eucalyptus melliodora* (Yellow Box), *Flindersia australis* (Australia teak) and *Grevillea robusta* (Silky Oak). Examples of introduced species include: *Celtis sp.* (Hackberry), *Tamarix aphylla* (Athel Pine) and *Cupressus Macrocarpa* 'Brunniana' (Monterey Cypress) (Sturt Noble Aboriculture 2018:31).

2.4 Past land use and disturbance

The Menangle area is the traditional country of the Tharawal people. Tindale (1974) identified the Tharawal boundaries as being from the south side of Botany Bay to north of the Shoalhaven River, and running inland to the Campbelltown and Camden area (Attenbrow 2010: 34). Attenbrow (2010:35) points out that such boundary mapping, undertaken as it was in the nineteenth century is indicative at best, however there appears to be reasonably strong agreement between those who have mapped language boundaries that the Douglas Park area is indeed a transitional boundary between the Tharawal and Gundangara.

The records and histories of the Tharawal and their country at the time of contact with Europeans are subject to bias and are generally fragmented, providing nothing like a complete picture of the way Aboriginal people were living prior to European interference. Nevertheless, we know the Tharawal regularly communicated, moved, traded and participated in ceremonies between their country and neighbouring areas. It is most likely family groups or clans would 'intermingle and interact along both physical and social boundaries' rather than be strictly confined to the 'tribal' borders that were to be artificially imposed by European anthropologists (Organ 1990: xliii).

The arrival of the First Fleet in Sydney Cove in 1788 was followed the next year by a smallpox epidemic, which spread to the neighbouring regions and, although the exact effects are not known, killed over half the Aboriginal population of the areas effected (Organ 1990:5).

Early in the nineteenth century European graziers began taking land in the south of the Cumberland Plain and the coastal plains around Wollongong, with cedar getting being conducted in the narrower northern coastal plain and rainforest areas of the escarpment (DEC 2005b). Access to traditional and everyday resources (such as water) and clearing the land of trees would have had a major impact on the ways in which Aboriginal people would have been living, and also caused significant social disruption between Aboriginal groups, and pressure between Aboriginal people and the ever increasing European population. This period was a time of drought, and the competition for resources between the Europeans and the Tharawal, who were adapting to the massive changes that were so quickly upon them, led to several years of conflict. Organ (1990) documents the various skirmishes, killings and reprisals between Europeans and the Tharawal during the 1814 – 1815 period in the Cowpastures, Camden and Appin districts. Eventually this sporadic bloodshed would lead to larger scale conflict, with Governor Macquarie implementing a sustained punitive action against the Aboriginal population in the district. This resulted in the Appin Massacre of 17 April 1816, in which Aboriginal people were shot and driven over the steep cliffs (probably near Broughtons Pass) to their death during a surprise attack by a detachment of the 46th Regiment, in the middle of the night.

Despite the massive changes that were so quickly brought to the Aboriginal people of the region, they maintained a sense of community, traditional customs and practices, cultural knowledge and continued to care for significant sites and the land in general. The Tharawal continue as custodians of the land, and many continue to live in the Gundungara and Tharawal tribal country today.



3. Aboriginal objects due diligence assessment

Is the proposed activity a low impact activity as defined by the Regulation?

No.

The activity is not a low impact activity as defined under section 80B of the *National Parks and Wildlife Regulation 2009* ('the Regulation') because it involves:

- Earthworks.

Step 1 - Will the activity disturb the ground surface or any culturally modified trees?

Yes.

The proposed activity involves earthworks however, the proposed construction works will take place within a previously disturbed footprint.

The proposed activity also includes vegetation removal of a selection of trees. The activity will not disturb any culturally modified trees as none have been identified from the site inspection. Since colonisation, the native vegetation within the Activity Area has been cleared and replaced with a mixture of native and non-native species.

Step 2a - Are there any relevant confirmed site records or other associated landscape feature information on AHIMS (or other heritage registers)?

Yes.

AHIMS

An extensive search of the Aboriginal Heritage Information Management System (AHIMS) was conducted on the 26 July 2022 (AHIMS Client Service ID # 703031) over the Activity Area, covering approximately a 2km radius.

There are no recorded sites located within the Activity Area (Figure 5). There is one recorded Aboriginal cultural heritage sites located within 200m of the Activity Area, namely Aboriginal cultural heritage site SSM-GG-001 (AHIMS ID#52-2-4562).

SSM-GG-001 (AHIMS ID#52-2-4562) is located approximately 190m from the Activity Area and comprises an Axe Grinding Groove.

Within the wider local area, Isolated Artefacts and Modified Trees (carved or scarred) were the most common Aboriginal site features within the AHIMS register. Table 1 outlines AHIMS sites that are within 700m of the Activity Areas.

Table 1: Summary of AHIMS site features within 700 m of the Activity Area

AHIMS ID	Site Name	Site Features	Distance from Activity Area	Potential to be harmed
52-2-4562	SSM-GG-001	Grinding Groove	190m	None
52-2-4563	SSM1	Isolated Artefact	306m	None
52-2-4565	SSM-ST-002	Modified Tree (carved or scarred)	300m	None
52-2-4563	SSM-ST-003	Modified Tree (carved or scarred)	306m	None
52-2-4202	SSM4	Habitation Structure and Potential archaeological Deposit (PAD)	352m	None
52-2-4564	SSM-ST-001	Modified Tree (carved or scarred)	360m	None
52-2-4561	SSM-AS-001	Isolated Artefact	382m	None
52-2-4206	SSM PAD2	Potential archaeological Deposit (PAD)	400m	None
52-2-4203	SSM3	Isolated Artefact	471m	None

It must be noted that care should be taken when using the AHIMS database to reach conclusions about site prevalence or distribution. The distribution of registered sites does not reflect patterns of occupation, but rather is often indicative of survey and excavation coverage and conditions.

Other heritage registers

Searches of the World Heritage Database, the Commonwealth Heritage List, National Heritage List, State Heritage Register, State Heritage Inventory, the Wollondilly Local Environmental Plan (LEP) (2011) and the Wollondilly Development Control Plan (DCP) (2016) were conducted on the 26 July 2022.

The searches concluded that there are no Aboriginal heritage items within the Activity Area.

Table 2: Listed heritage items within 400m of the Activity Area

Heritage Register	Items within the Activity Area	Items nearby to the Activity Area
World Heritage Database	No items	No items
Commonwealth Heritage List	No items	No items
National Heritage List	No items	No items
State Heritage Register	No items	- Menangle Railway Station Group, Station Street, Menangle (ID# 5012101 - 120m from Activity Area) - Elizabeth Macarthur Agricultural Institute (formerly Camden Park Estate) [part] Woodbridge Road, Elizabeth Macarthur Avenue, Menangle (ID# 5051536) - 320m from Activity Area
State Heritage Inventory	No items	No items

Heritage Register	Items within the Activity Area	Items nearby to the Activity Area
Schedule 5 of the LEP	Conservation Area - General (ID# C1).	- Menangle Public School (former) (ID# I291) - 20m from Activity Area - Conservation Area - Landscape (ID# C6) - 40m from Activity Area - Dairy Cottage (ID# I97) – 107m from Activity Area - Menangle Railway Station Group (ID# I81) - 224m from Activity Area - Camden Park Estate Central Creamery (ID# I100) - 268m from Activity Area - Camden Park Rotolactor (ID# I83) - 300m from Activity Area - St James' Anglican Church (ID# I94) - 293m from Activity Area - Menangle School of Arts Community Hall (ID# I292) - 422m from Activity Area
Development Control Plan	No items	No items

Previous heritage assessments within or relevant to the Activity Areas

Table 3 provides an outline of Aboriginal heritage assessments that are relevant to the Activity Area.

Table 3: Heritage assessments of the Activity Area

Author and Year	Title and Description
BIOSIS 2018	Station Street, Menangle: Aboriginal Cultural Heritage Due Diligence Assessment This assessment was prepared for the proposed subdivision of approximately 100 residential lots across 9 acres of land at Station Street, Menangle. The study site is primarily located to the land west of the Activity Area however, the western portion of the Activity Area along Stevens Road was also included as part of the Biosis assessment. The surface showed evidence of moderate to high disturbance from historical impacts, such as land clearing, and the construction of rural infrastructure. There were no Aboriginal objects identified on the surface and there is little to no potential predicted for subsurface archaeological material. Subsurface archaeological potential is low due to the study site being located in a flood prone area. Further investigation was therefore not required, and the proposed works could proceed with caution.
AHMS 2015	Greater Macarthur Investigation Area: Aboriginal and Historic Heritage- Gap Analysis and Future Direction AHMS undertook an investigation for the wider Macarthur region to assess the potential for development in the growth areas, encompassing the Activity Area. The assessment identified a high likelihood of extensive and/or significant Aboriginal sites occurring along the large river systems and their riparian corridors. In particular, the tributaries of the Nepean River were identified as key area of high potential, with Aboriginal sites likely to be clustered around the upper reaches of tributaries where sandstone shelters begin to form. This investigation is of relevance as it contributes to the archaeological record of the region and assists in establishing a predictive model for the nature and distribute of Aboriginal sites for the region.

Author and Year	Title and Description
	The Activity Area is located in a flood prone zone in proximity to an ephemeral first order drainage line, which would indicate a potential for low density artefact scatters. However, the Activity Area is disturbed from historical impacts which have reduced the potential of Aboriginal objects to low.
Biosis 2009	Bulli Seam Operations (BSO) Aboriginal Cultural Heritage Assessment Biosis were commissioned to conduct an Aboriginal Cultural Heritage Assessment of the Bulli Seam Operations including Appin Mine and the Activity Area. A total of 632 known sites were recorded within the study area including an additional 44 as a result of the assessment. The majority of these sites were found to consist of sandstone shelters and platforms followed by stone artefacts and Potential Archaeological Deposits (PADs), which were found to predominately occur on the Blacktown soil landscape, within paddock grasses and open woodland vegetation across the Cumberland lowlands. These finds are associated with upper hill slopes, ridgelines and in close proximity to water sources including swamps and water lines. This report is of relevance as it contributes to the archaeological record of the region and assists in establishing a predictive model for the nature and distribute of Aboriginal sites for the region.

Previous assessments indicate that while Aboriginal sites and objects are recorded in the area, the Activity Area has been disturbed and no Aboriginal sites and objects have been identified in previous surveys.



Step 2b - Are there any other sources of information of which a person is already aware?

Yes.

The local archaeological studies detailed above contribute to archaeological context of the wider Cumberland Plain area, which encompasses the Activity Area. The antiquity of Aboriginal occupation in the region is demonstrated through a number of archaeological excavations that have been undertaken across the Cumberland Plain.

It is now proposed that Aboriginal occupation of Australia dates back at least 65,000 years based on results from Madjedbebe, a rockshelter located in northern Australia (Clarkson et al. 2017). The greater Sydney region has been inhabited by Aboriginal people for at least 35,000 years. The earliest known occupational site of the Cumberland Plain and generally in the Sydney Basin is located north of Pitt Town, south of the Hawkesbury and the cultural deposits have been dated by optically stimulated luminescence (OSL) to 36,000+/-3000 BP (Williams et al. 2012). While there is early evidence that the Sydney region has been occupied for over 35,000 years (Williams et al. 2012), archaeological research indicates the earliest evidence for occupation in the eastern Blue Mountains to the west of the Sydney Basin is 12,000 years Before Present (BP) from Walls cave, Lyre Bird dell and Kings Table. The earliest date recorded at King Table of 22,000 years BP (Stockton and Holland 1974) has been rejected due to a lack of clarity on associated taphonomic processes (Johnson 1979). The late Holocene (5,000-0 years BP) sees extensive increased occupation of the Cumberland Plain with the vast majority of the 12,000 or so sites recorded from this period. The result of this extensive and continued occupation has left a vast amount of accumulated depositional evidence.

Step 2c - Are there landscape features that are likely to indicate the presence of Aboriginal objects?

Yes.

The Activity Area is located approximately 120 m away from an ephemeral first order drainage line, which is an associated tributary of the Nepean River.

In accordance with the Due Diligence Code of Practice, there is a higher probability of Aboriginal Objects occurring within land that is within 200 m of water.

Although this landscape feature is likely to indicate the presence of Aboriginal objects, the archaeological model however indicates limited potential for subsurface deposit within the Activity Area. This is due to significant ground disturbances associated with vegetation removal, the construction of roads, bridges, railway corridor and associated infrastructure. These disturbances have impacted the subsurface deposits within the Activity Area to such an extent that the likelihood of Aboriginal objects is low.

Step 3 - Can the harm or the activity be avoided?

No.

However, the assessment indicates that Aboriginal objects are unlikely to occur within the impact footprint. As such, there is no compelling reason to move or avoid the activity.

Step 4 - Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

No.

The desktop assessment and visual inspection concluded that there are no known Aboriginal cultural heritage sites within or near the Activity Area and that the Activity Area has undergone significant ground disturbances from vegetation removal, the construction of roads, bridges, railway corridor and associated infrastructure. The Activity Area therefore has a low probability of containing Aboriginal objects.

Site inspection details

The site inspection was completed on 26 May 2021 by Wade Goldwyer (Heritage Consultant, Niche). The site was inspected on foot and targeted the Activity Area (Plate 1-Plate 6). Visibility within the Activity Area varied depending on setting. The constructed areas had a good visibility of 80% due to exposures and cleared ground cover, such as on cleared access tracks and roads (Plate 1, Plate 4 and Plate 6).

The remaining areas had a poor visibility of 30-40% due to vegetation coverage (Plate 1-Plate 4). The entire Activity Area was found to be extensively disturbed from vegetation removal, the construction of roads, bridges, railway corridor and associated infrastructure (i.e. subsurface utilities).

During the site inspection there were no Aboriginal objects identified within the Activity Area.



Plate 1: General view of the Activity Area, looking north west.



Plate 2: General view of the Activity Area, looking south.



Plate 3: General view the Activity Area, looking south east.



Plate 4: General view of the Activity Area, looking east.



Plate 5: General view of the Activity Area, looking west.

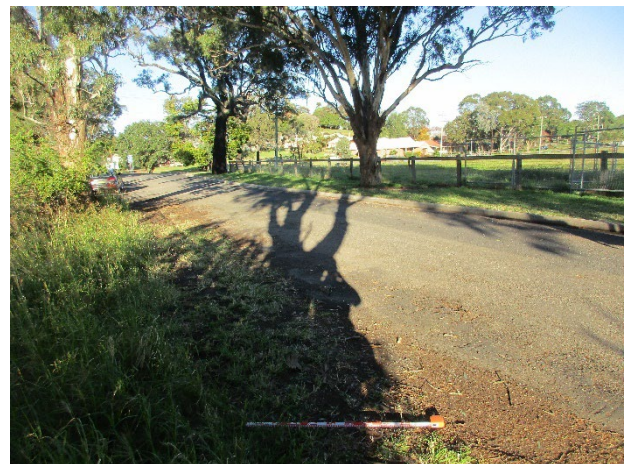


Plate 6: General view of the Activity Area, looking south west.

Step 5 - Further investigations and impact assessment

No.

The assessment concludes that Aboriginal objects are unlikely due to significant ground disturbances and no Aboriginal site or objects were identified during the site inspection. The closest AHIMS site is 190m from the Activity Area and will not be harmed during the works.

No further investigation or impact assessment is required.

4. Conclusions and recommendations

On the basis of this assessment, it is unlikely that Aboriginal objects have survived within the Activity Area due to significant ground disturbances associated with vegetation removal, the construction of roads, bridges, railway corridor and associated infrastructure. These disturbances have modified the Activity Area to such an extent, that the potential for subsurface Aboriginal objects is low.

No Aboriginal heritage was identified within the Activity Area and no further investigation or impact assessment is required.

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* states that where a desktop and visual inspection has occurred and concluded that Aboriginal Objects are unlikely to occur, an Aboriginal Heritage Impact Permit (AHIP) application will not be necessary. The proposed activity may therefore proceed with caution without a further Aboriginal Cultural Heritage Assessment (ACHA) or AHIP. The following Find Procedure should be put in place as a minimum response in the unlikely event of the identification of artefacts within the Activity Area:

- All site workers and contractors should be inducted to the area and informed of their obligations under the *National Parks and Wildlife Act 1974*
- In the unlikely event that any Aboriginal objects are found, all activities with the potential to impact the objects must stop. A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge. An appropriately qualified archaeologist is to be engaged to assess the findings, and notification is provided to the Heritage NSW. Works should not proceed without advice from Heritage NSW or an appropriately qualified archaeologist
- In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately and:
 - The location, including a 20m curtilage, should be secured using barrier fencing to avoid further harm
 - The NSW Police must be contacted immediately
 - No further action is to be undertaken until the NSW Police provide written notification to the Proponent
 - If the skeletal remains are identified as Aboriginal, the Proponent or their agent must contact: Heritage NSW's Enviroline on 131 555
 - No works are to continue until Heritage NSW provides written notification to the Proponent or their Agent.

5. References

- AHMS 2015 Greater Macarthur Investigation Area: Aboriginal and Historic Heritage- Gap Analysis and Future Direction.
- Attenbrow, V. 2010 Sydney's Aboriginal Past: Investigating the archaeological and historical records (2nd ED.). Sydney: UNSW Press.
- Biosis Research 2009 Bulli Seam Operations: Aboriginal Cultural Heritage Assessment. Report to BHP Billiton Illawarra Coal
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- Clarkson, C., Jacobs, Z., Marwick, B., Fullagar, R., Wallis, L., Smith, M., Oberts, R.G., Hayes, E., Lowe, K., Florin, S.A., McNeil, J., Cox, D., Arnold, L.J., Hua, Q., Huntley, J., Brand, H.E.A., Manne, T., Fairbairn, A., Shulmeister, J., Lyle, L., Salinas, M., Page, M., Connell, K., Park, G., Norman, K., Murphy, T., and C. Pardoe 2017 Human occupation of northern Australia by 65,000 years ago. *Nature* (547), 306–310.
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- Wollondilly Shire Council (2011) Wollondilly Development Control Plan (DCP) 2011, Menangle, NSW.
- Wollondilly Shire Council (2016) Wollondilly Local Environment Plan (LEP) 2016, Menangle, NSW.
- Sturt Noble Aboriculture 2018 Arboricultural Impact Assessment Report, Stage 1 Station Street, Menangle. Prepared for Mirvac.

Attachment 1 – Construction plans



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Wyoming, NSW 2250
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ABN 63 145 429 063

Calibre
Attention:

Document Register/Issue: B1849-DI-03

Date: 21 July 2022

Footbridge over Main Southern Railway

Document number	Title	Rev	Issued to Calibre		Issued to Mirvac	
			Format	No	Format	No
B1849-D-101	Cover Sheet	P1	A3	pdf	A3	pdf
B1849-D-102	General Arrangement	P1	A3	pdf	A3	pdf
B1849-D-103	Substructure And Piling - Setout And Details	P1	A3	pdf	A3	pdf
B1849-D-104	Abutments - Reinforced Concrete Details	P1	A3	pdf	A3	pdf
B1849-D-105	Prestressed Beam - Concrete Details - Sheet A	P1	A3	pdf	A3	pdf
B1849-D-106	Prestressed Beam - Concrete Details - Sheet B	P1	A3	pdf	A3	pdf
B1849-D-107	Prestressed Beam - Reinforcement Details - Sheet A	P1	A3	pdf	A3	pdf
B1849-D-108	Prestressed Beam - Reinforcement Details - Sheet B	P1	A3	pdf	A3	pdf
B1849-D-109	Prestressed Beam - Reinforcement Details - Sheet C	P1	A3	pdf	A3	pdf
B1849-D-110	Deck - Reinforced Concrete Details	P1	A3	pdf	A3	pdf
B1849-D-111	Protection Screen - Steelwork Details	P1	A3	pdf	A3	pdf
B1849-D-112	Bearings And Miscellaneous Steelwork Details	P1	A3	pdf	A3	pdf

			Issued to Calibre		Issued to Mirvac	
Document number	Title	Rev	Format	No	Format	No
B1849-D-113	Reinforcement - Bar Shapes	P1	A3	pdf	A3	pdf

Notes

- Highlighted drawings are included in this issue
- Darker Highlight drawings are new in this issue

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21/07/2022 9:45:42 AM Jim

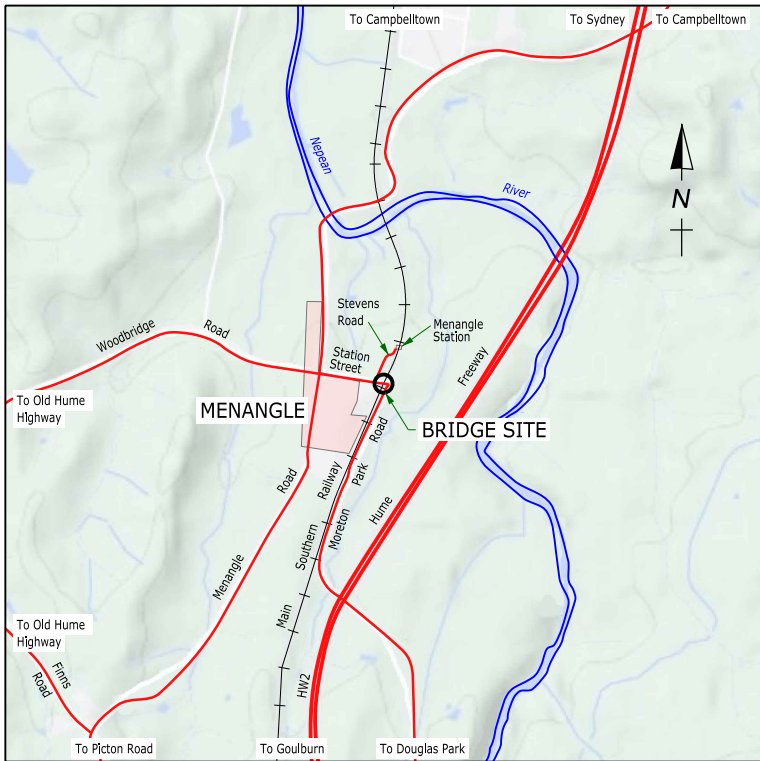
...Drafting\B1849 D01 Cover.dgn

FOOTBRIDGE OVER RAILWAY LINE

ON STATION STREET

AT 0.45km EAST OF MENANGLE ROAD

AUTHORITY - WOLLONDILLY SHIRE COUNCIL



LOCATION
1:50 000
Latitude - 34.1277° S
Longitude - 150.7431° E

DRAWING LIST

- D101 COVER SHEET
- D102 GENERAL ARRANGEMENT
- D103 SUBSTRUCTURE AND PILING - SETOUT AND DETAILS
- D104 ABUTMENTS - REINFORCED CONCRETE DETAILS
- D105 PRESTRESSED BEAM - CONCRETE DETAILS - SHEET A
- D106 PRESTRESSED BEAM - CONCRETE DETAILS - SHEET B
- D107 PRESTRESSED BEAM - REINFORCEMENT DETAILS - SHEET A
- D108 PRESTRESSED BEAM - REINFORCEMENT DETAILS - SHEET B
- D109 PRESTRESSED BEAM - REINFORCEMENT DETAILS - SHEET C
- D110 DECK - REINFORCED CONCRETE DETAILS
- D111 PROTECTION SCREEN - STEELWORK DETAILS
- D112 BEARINGS AND MISCELLANEOUS STEELWORK DETAILS
- D113 REINFORCEMENT - BAR SHAPES

New bridge - 2022.
Bridge design to AS 5100-2017.
Pedestrian live loading: 5 kPa.
Ultimate design wind speed 43m/s.
Minimum lateral restraint load 100kN on walkway

SAFETY IN DESIGN

The design of the works shown on these drawings does not present hazards that are not usually encountered in this type of construction.

Note that any work in the rail corridor requires compliance with all the requirements of the ARTC.

PRELIMINARY DRAWING
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 Bridge Design Pty Ltd ABN 63 145 429 063	 ISO 9001:2008 REGISTERED COMPANY  CONSULT AUSTRALIA Member firm	DESIGN: JRA	MANAGER, BRIDGE DESIGN PTY LTD THIS DRAWING IS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED DIGITALLY ON THIS SHEET OR THE FIRST SHEET IN THIS SET OF DRAWINGS.	Station Street	Wollondilly Shire Council		JOB NUMBER	B1849			
		VERIFIED:		FOOTBRIDGE OVER RAILWAY LINE		DOCUMENT NUMBER	D101				
		DRAWING: WJS		at 0.45km east of Menangle Road				SHEET OF	1 13	REVISION	P1
		CHECKED:		COVER SHEET							

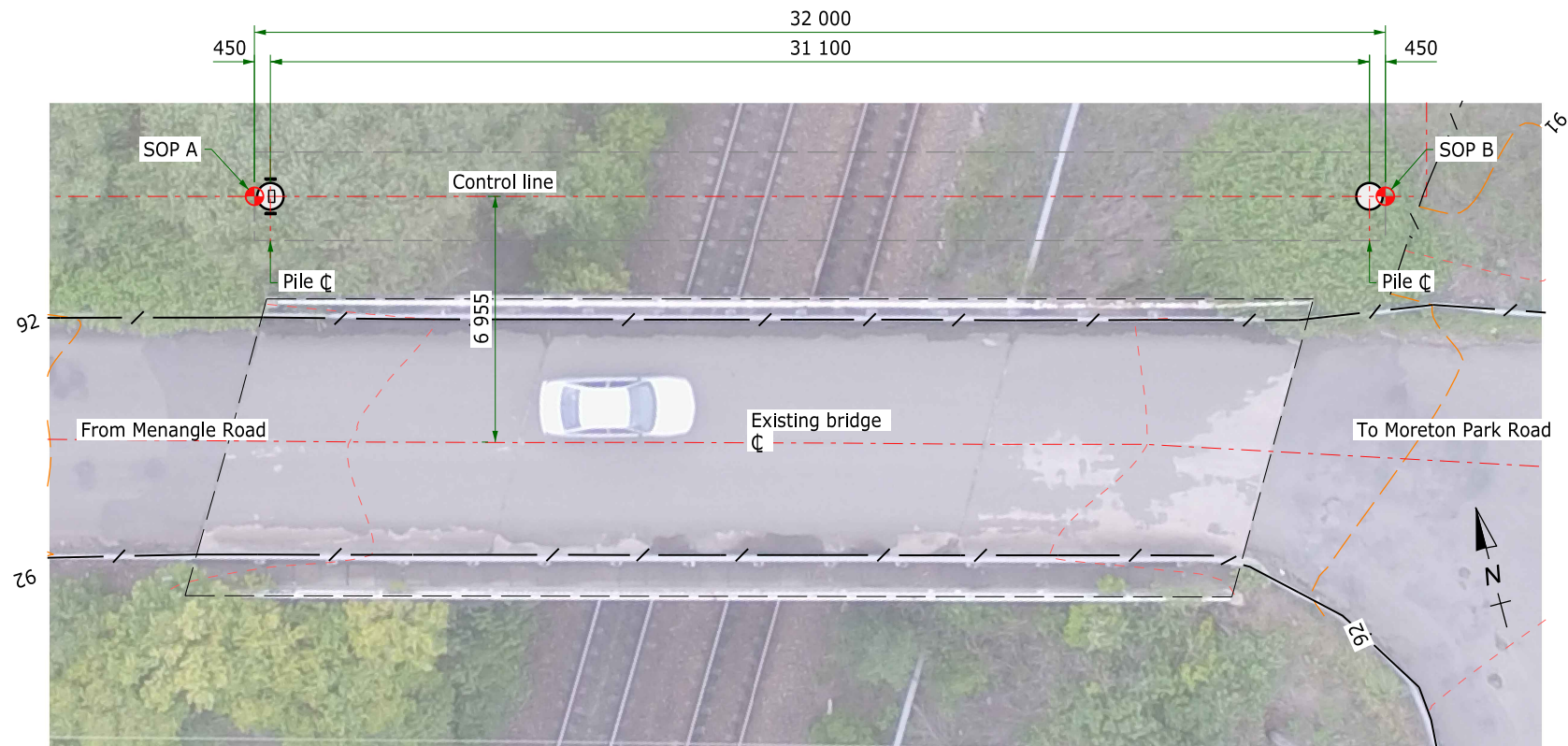
100mm on original

200mm on original

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21/07/2022 2:04:49 PM jim

...181849 D103 Setout and Details.dgn



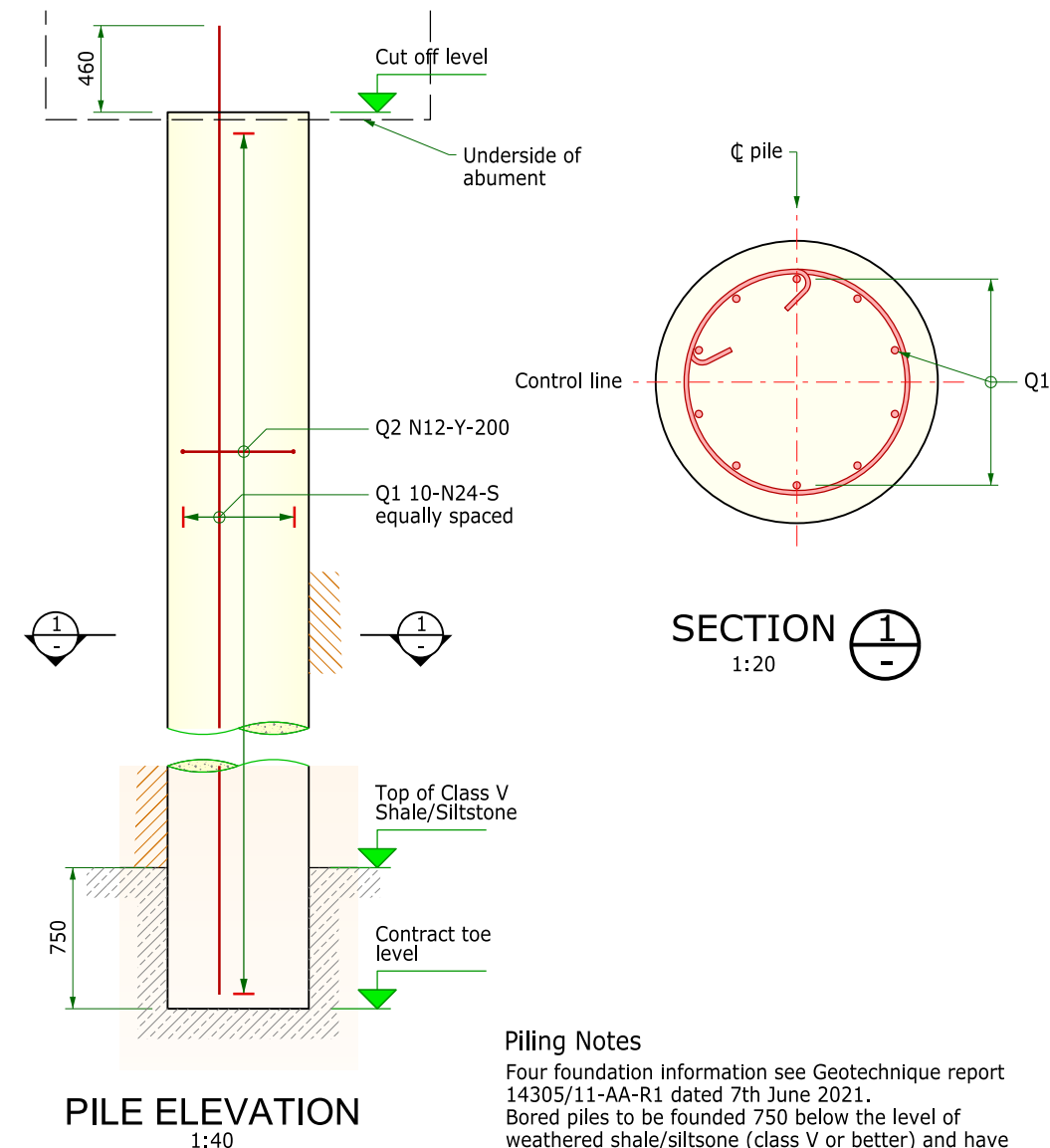
PLAN
1:200

	Easting	Northing
SOP A	291 860.680	6 221 391.767
SOP B	291 892.351	6 221 387.186

TABLE 1 - SETOUT

Pile No.	Easting	Northing	Ultimate Design Loads			Contract Toe Level	Cut off Level
			Vertical (kN)	Lateral (kN)	Bending (kNm)		
PA-1	291 861.126	6 221 391.702	1000	500	140	84.2	92.930
PB-1	291 891.905	6 221 387.250	1000	500	140	85.2	92.930

TABLE 2 - PILE DETAILS



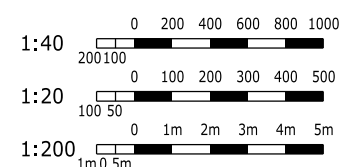
Piling Notes

Four foundation information see Geotechnique report 14305/11-AA-R1 dated 7th June 2021.
Bored piles to be founded 750 below the level of weathered shale/siltstone (class V or better) and have a minimum ultimate bearing capacity, $\phi g R_u$ of 2,200kPa.
Cover to pile reinforcement: 75mm cast against the ground, 45mm otherwise.

General Notes

Dimensions in millimetres.
Coordinates to GDA94.
Reduced levels are in metres and to AHD.
SOP denotes set out point.
Concrete exposure classification B1.
Minimum 28 day compressive strength of concrete 40MPa.
Chamfer edges 20x20 and fillet re-entrant angles 20x20 USO.
NCF denotes no chamfer or fillet.
Lap lengths to be as follows USO:

Bar size	N12	N16	N20	N24	N28	N32
Horizontal bars with >300mm of concrete cast below the bar	450	600	...	...	...	...
Other bars	350	470	...	770	...	...



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Bridge Design
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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
SUBSTRUCTURE SETOUT AND DETAILS

Wollondilly Shire Council
JOB NUMBER **B1849**
DOCUMENT NUMBER **D103**
SHEET 3 OF 13
REVISION **P1**

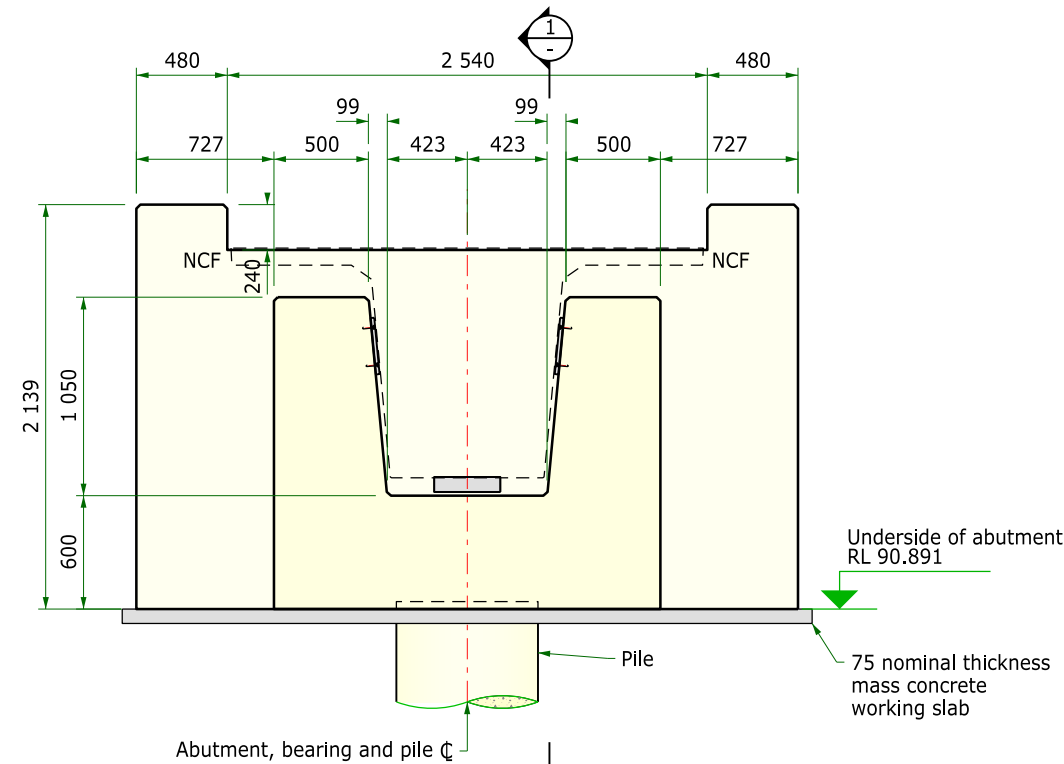
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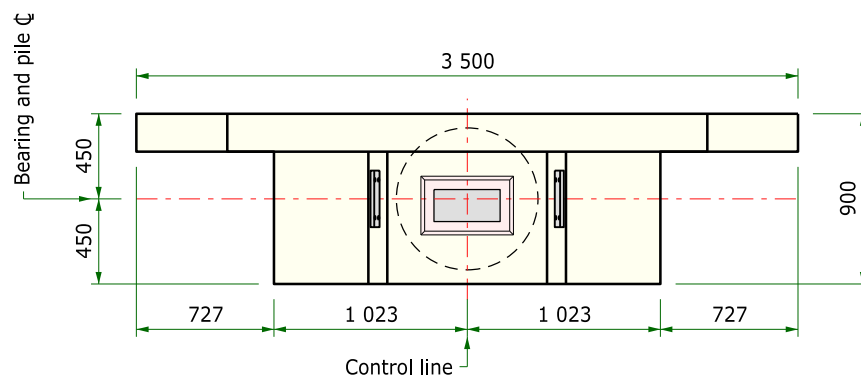
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21/07/2022 2:53:33 PM jlm

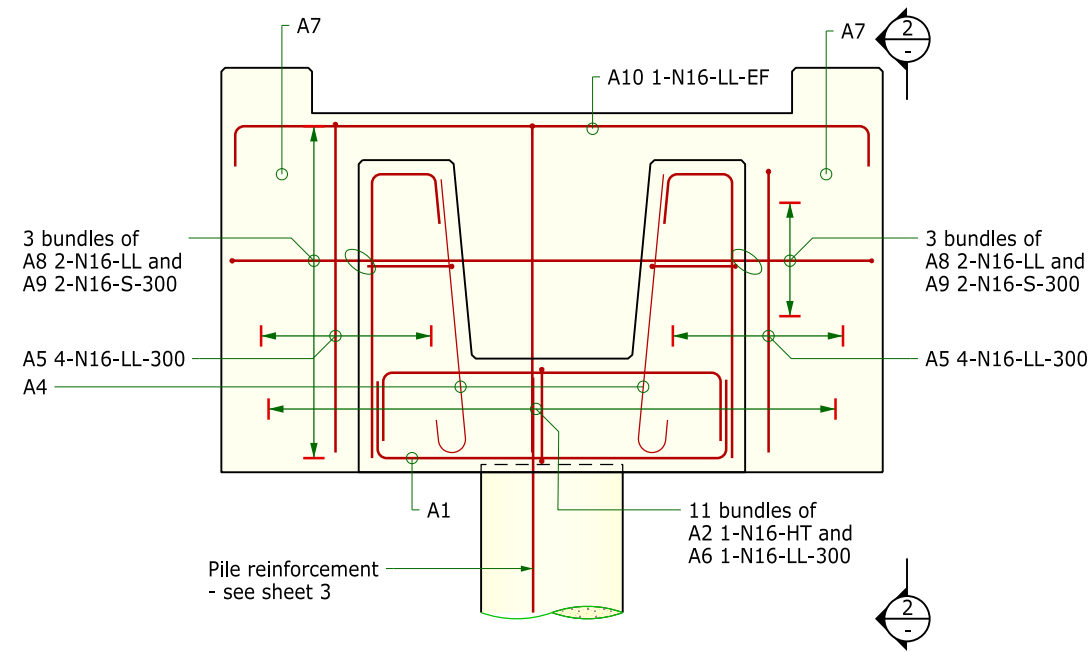
...B1849 d104 Abutment RC.dgn



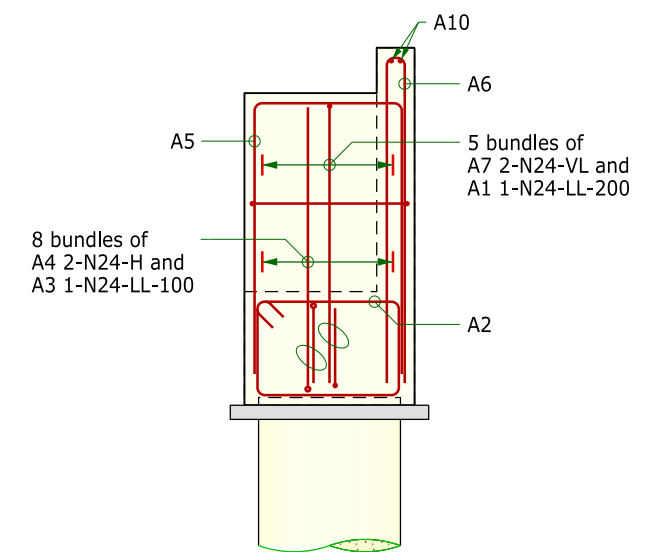
ELEVATION - CONCRETE
1:40



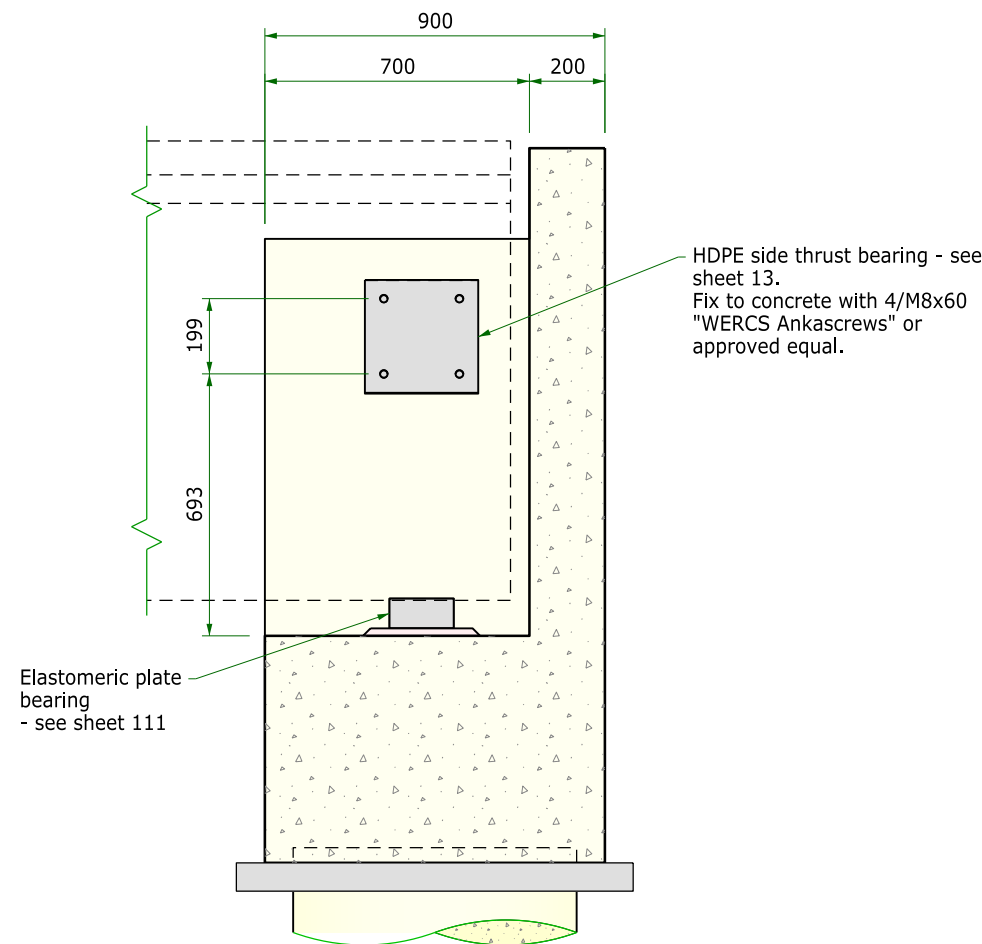
PLAN - CONCRETE
1:40



ELEVATION - REINFORCEMENT
1:40



VIEW 2
1:40



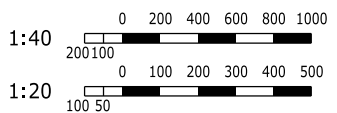
SECTION 1
1:20

General Notes

Dimensions in millimetres.
SOP denotes set out point
Concrete exposure classification B1.
Minimum 28 day compressive strength of concrete 40MPa.
Chamfer edges 20x20 and fillet re-entrant angles 20x20 USO.
Clear cover to reinforcement nearest to the concrete surface 45mm USO.
FF far face NF near face
EF each face LV length varies.
USO unless specified otherwise.
Lap lengths to be as follows USO:

Bar size	N12	N16	N20	N24	N28	N32
Horizontal bars with >300mm of concrete cast below the bar	450	600	810	...	...	...
Other bars	350	470	620	...	...	...

Hot dip galvanise all steel fixings to AS1214.
HS denotes bolting category 8.8/S to AS5100.6



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DRAWING: WJS
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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
ABUTMENTS
REINFORCED CONCRETE DETAILS

Wollondilly Shire Council
JOB NUMBER B1849
DOCUMENT NUMBER D104
SHEET 4 OF 13
REVISION P1

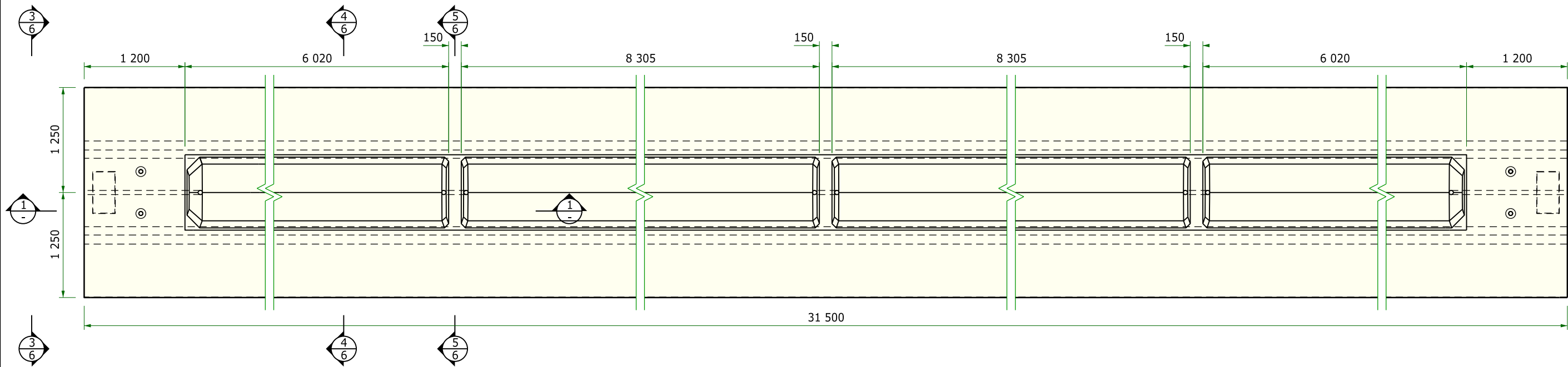
100mm on original

200mm on original

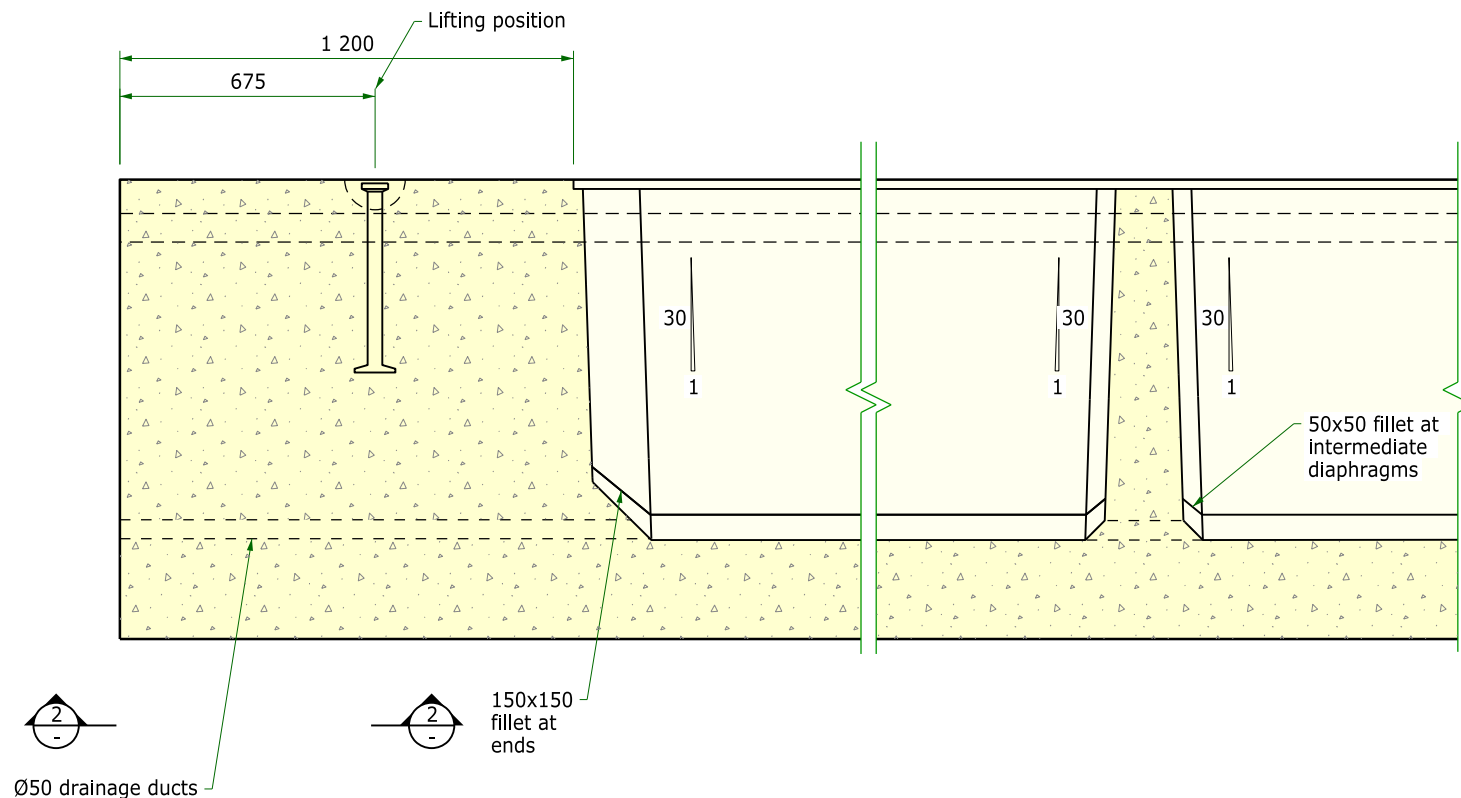
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21/07/2022 3:02:22 PM jim

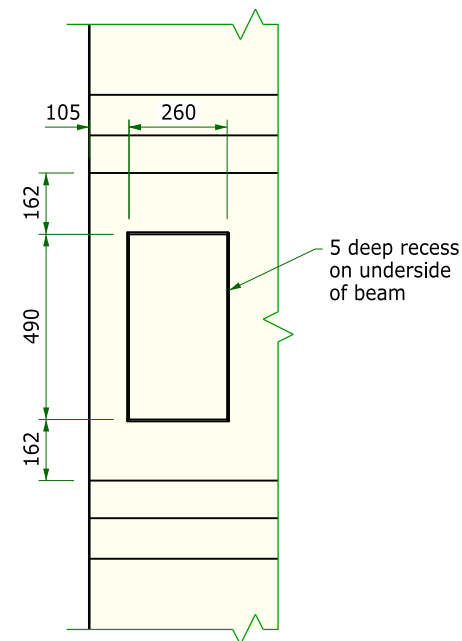
...1B1849 of 05 Girder Concrete Adgn



PLAN
1:50



SECTION 1
1:20



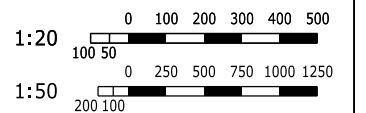
VIEW 2
1:20

General Notes

Scales as shown.
Concrete exposure classification:
- External faces B1
- Internal faces A.
Minimum 28 day compressive strength of concrete 50MPa.
Minimum compressive strength of concrete at transfer 35MPa.
Maximum aggregate size 14mm.
Edges of soffits and end edges only chamfered 20x20 USO.
Mass of beam is 51.2 tonnes (based on an average density of 2.55T/m³).
During storage, transport and handling, keep beams upright and supported at not more than 2500mm from the nearest end.

Prestressing Notes

Strands shall be AS/NZS 4672.1- 7 wire ordinary - 15.2 - 1830 - relax 2.
Stress to produce a force in each strand immediately after release of 170 kN.
Release strands symmetrically about the girder centreline.
Cut or trim strands flush with the end of the beam and seal exposed strands against corrosion with 3 thick epoxy resin - MEGAPOXY H THIXOTROPIC or equivalent.
The calculated hog of the beams at release is 37mm, increasing to 44mm at 28 days, assuming:-
- Density = 2.55t/m³
- Elastic modulus at transfer = 25,000MPa.
- Steam curing in accordance with TfNSW B80.
- Storage in open air, after steam curing, at 20°C.
- Average temperature and relative humidity in the range of 50%-75%.
- No loads except beam self weight.
The anticipated slope at the bearing points at 28 days is +0.7% towards beam centre.



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Station Street at 0.45km east of Menangle Road PRESTRESSED BEAMS CONCRETE DETAILS - SHEET A		Wollondilly Shire Council	JOB NUMBER B1849
		DOCUMENT NUMBER D105	REVISION P1
		SHEET OF 5 13	

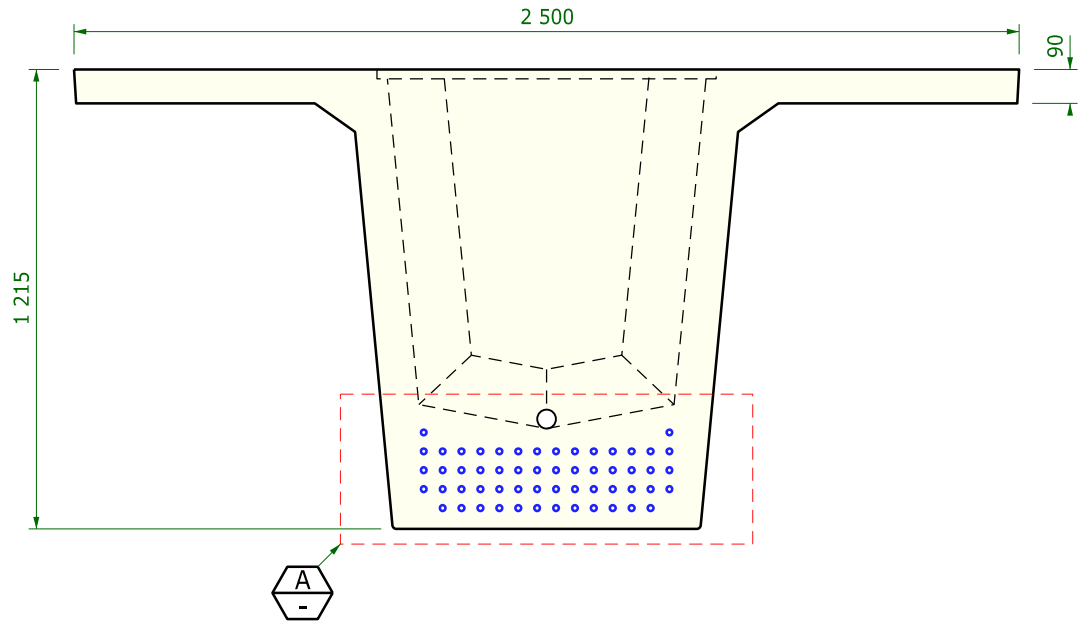
100mm on original

200mm on original

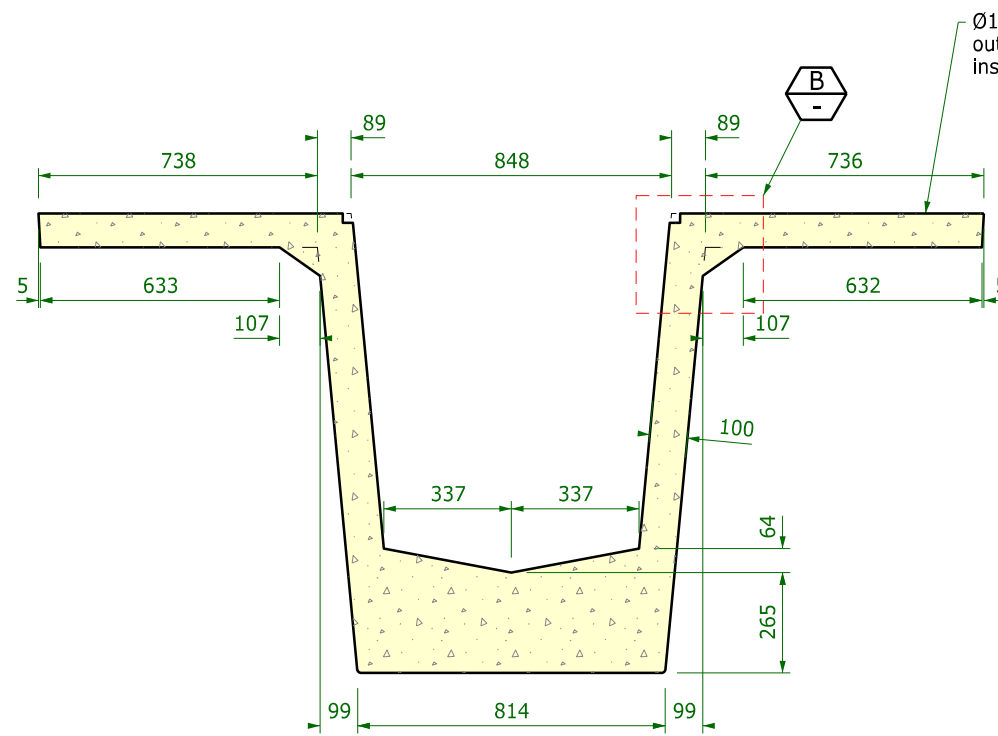
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15/07/2022 5:12:47 PM ben

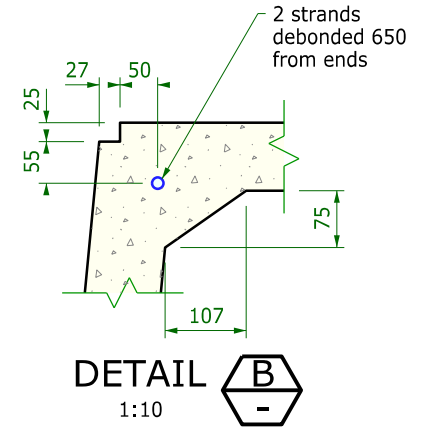
...B1849 of 08 Girder Concrete Bldg



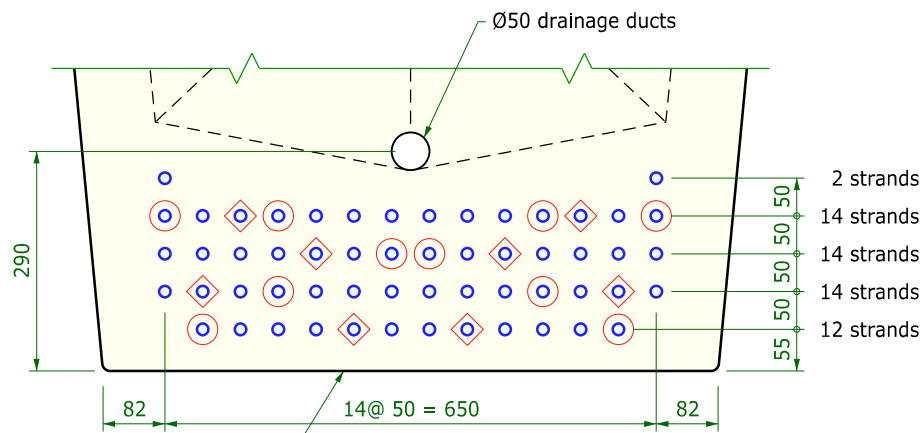
VIEW 3/5
1:20



SECTION 4/5
1:20



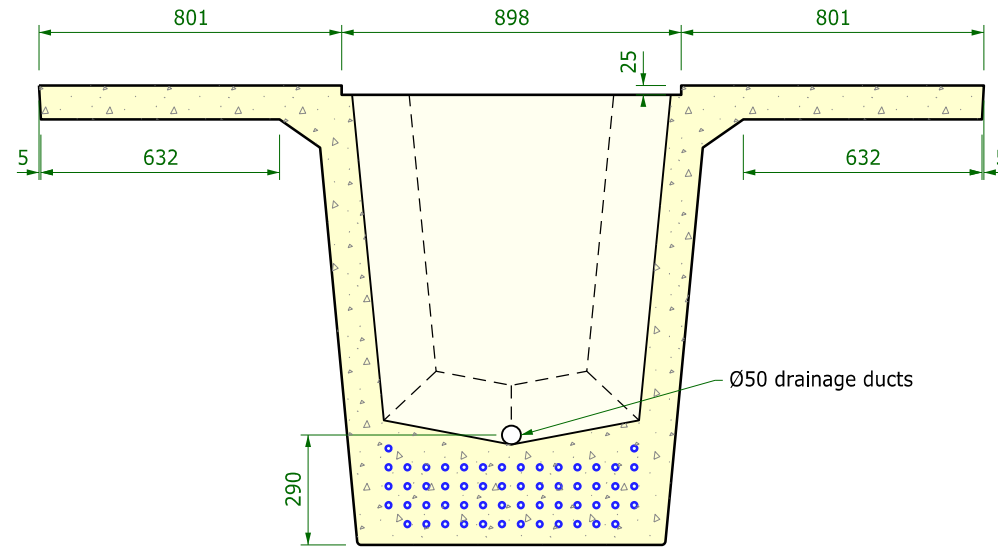
DETAIL B
1:10



Bearing recess;
see view 2, sheet 5.

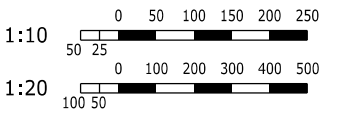
DETAIL A
1:10

○ Debonded 6 000
◊ Debonded 3 600
Total strands : 48 (including top strands)



SECTION 5/5
1:20

For general notes, see sheet 8



DRAWING SCALES TRUE AT A3

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Station Street at 0.45km east of Menangle Road		Wollondilly Shire Council	
JOB NUMBER		B1849	
DOCUMENT NUMBER		D106	
SHEET OF		6 8	REVISION P1

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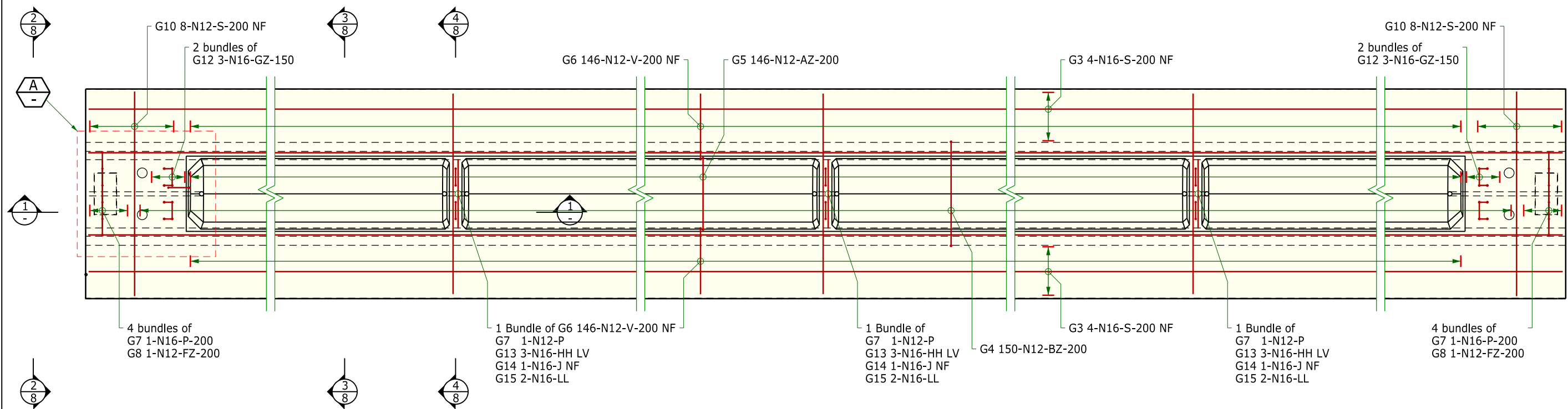
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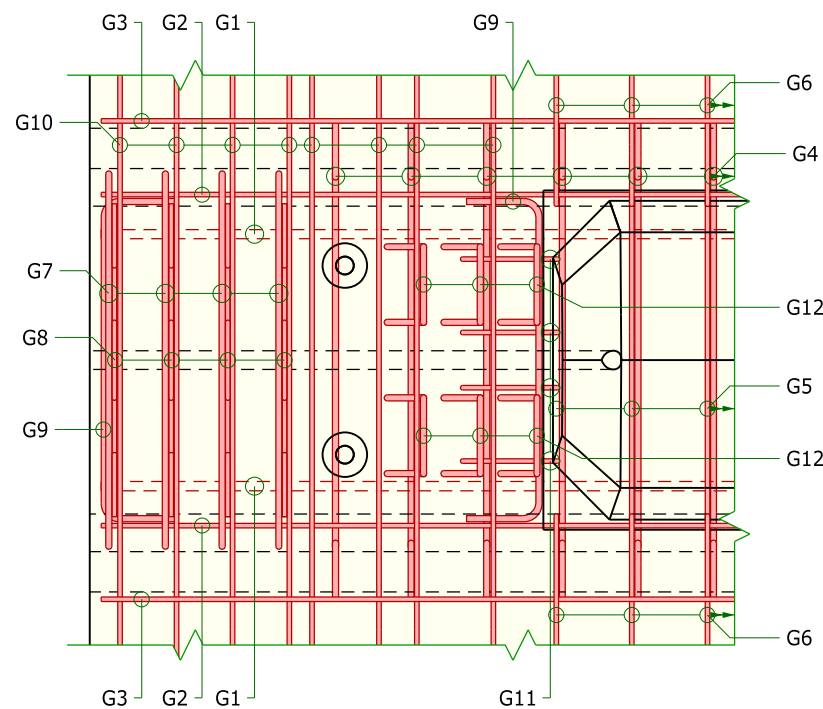
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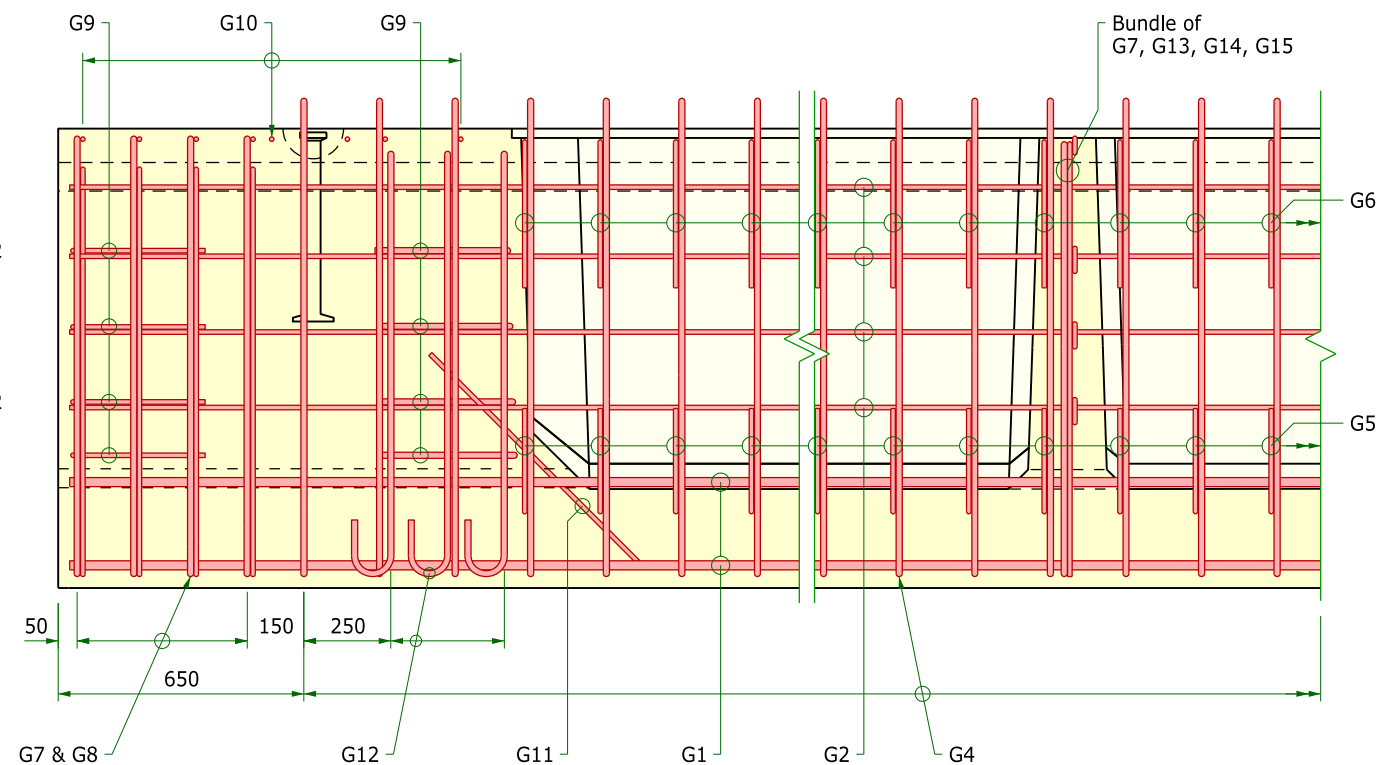
200mm on original



PLAN
1:50



DETAIL
1:20



SECTION 1
1:20

General Notes

Dimensions in millimetres.
Nominal cover to reinforcement nearest to:-
exterior (bottom and side) surfaces 30mm.
interior and top surfaces 25mm.
Use rigid forms and internse compaction.
FF far face NF near face
EF each face LV length varies.
USO unless specified otherwise.
Bar lap lengths to be as follows USO:

Bar size	N12	N16	N20	N24	N28	N32
Horizontal bars with >300mm of concrete cast below the bar	460	690	...	...	...	...
Other bars	350	530	...	...	1050	...

Development length to be 100% of lap length USO.
Reinforcement may be displaced slightly to clear embedded objects, holes and recesses.



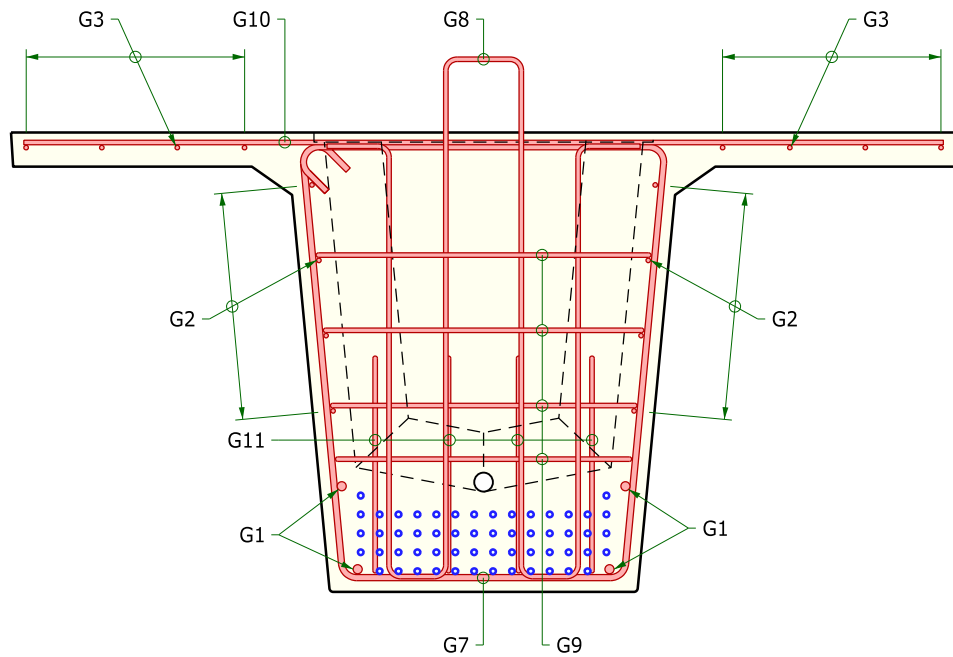
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DRAWING SCALES TRUE AT A3

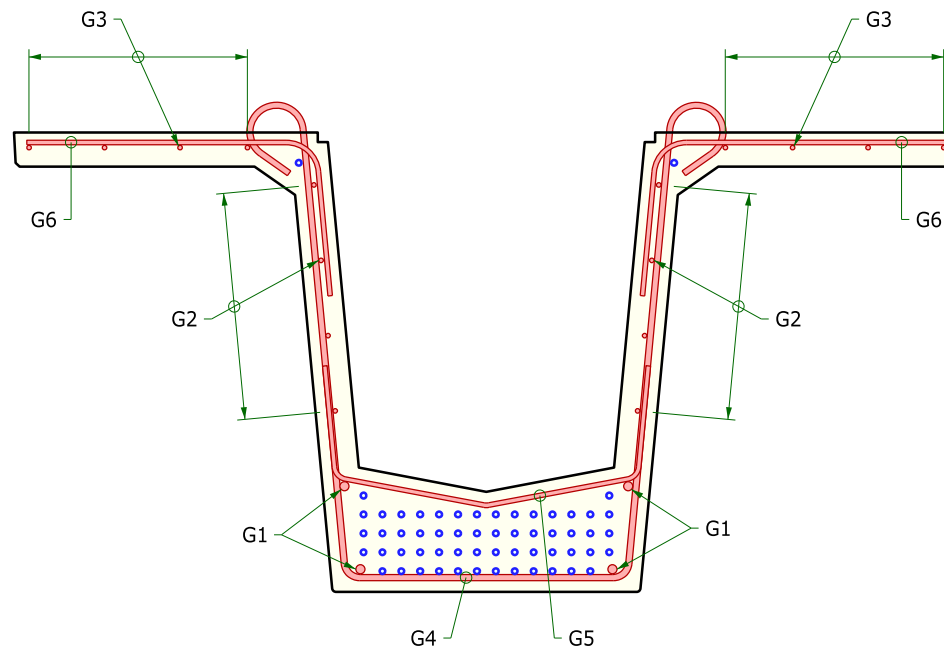
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21/07/2022 6:33:04 PM Jim

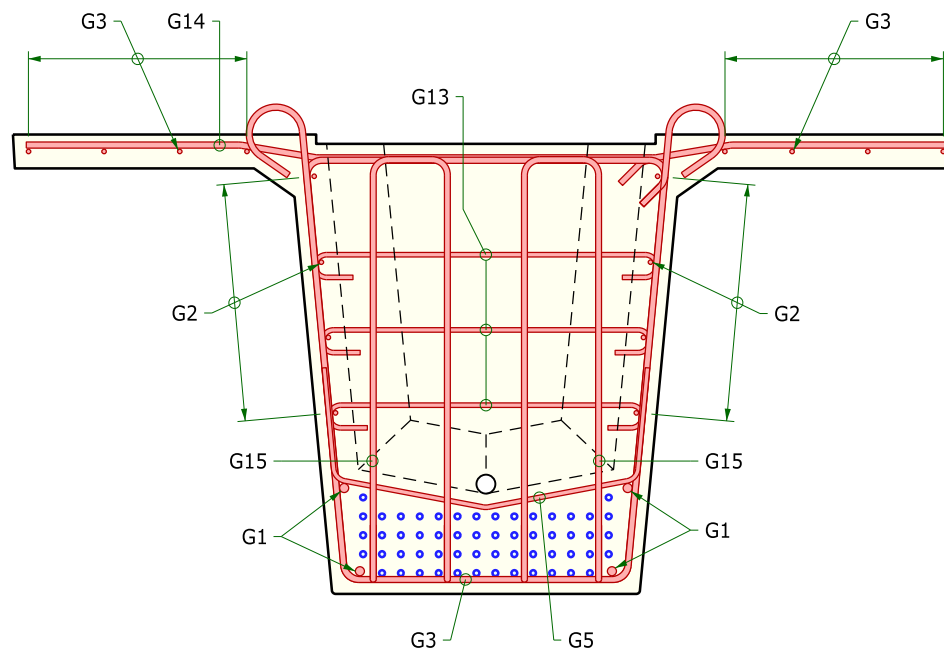
...181849 of 08 Girder Reo B.dgn



VIEW 1:20 (2/7)



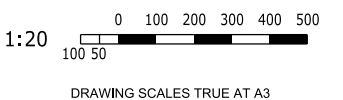
SECTION 1:20 (3/7)



SECTION 1:20 (4/7)

For general notes, see sheet 7

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Station Street Wollondilly Shire Council		JOB NUMBER	B1849
at 0.45km east of Menangle Road		DOCUMENT NUMBER	D108
PRESTRESSED BEAMS		SHEET OF	8 13
REINFORCEMENT DETAILS - SHEET B		REVISION	P1

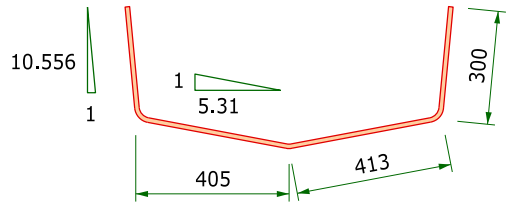
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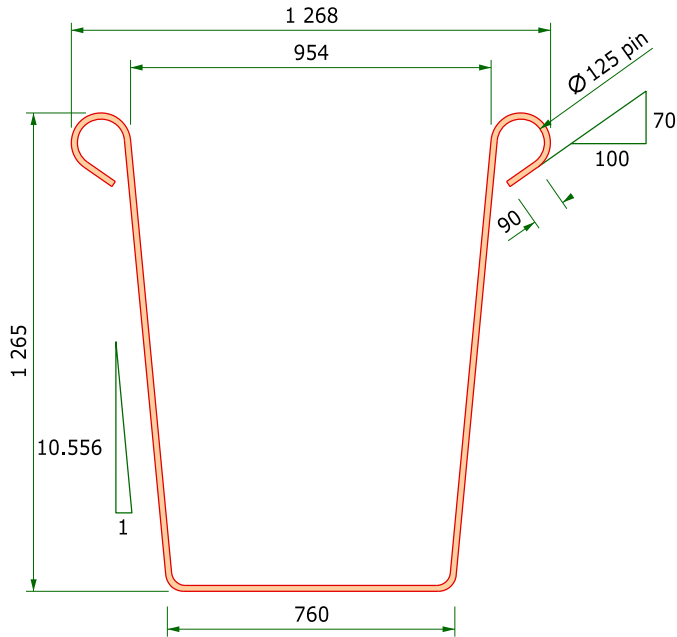
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21/07/2022 6:34:20 PM Jim

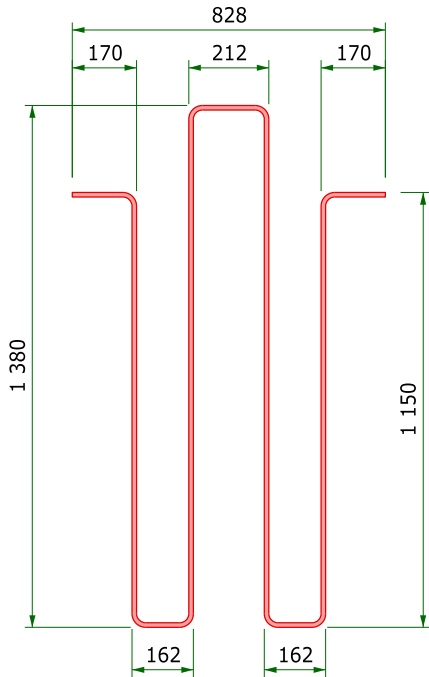
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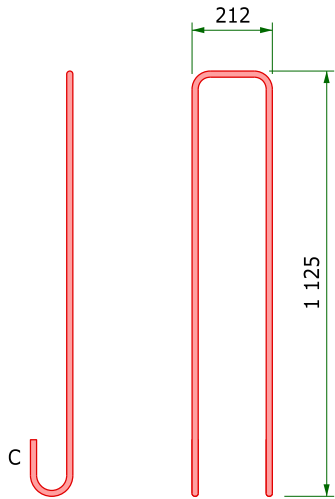
AZ Fitment bends



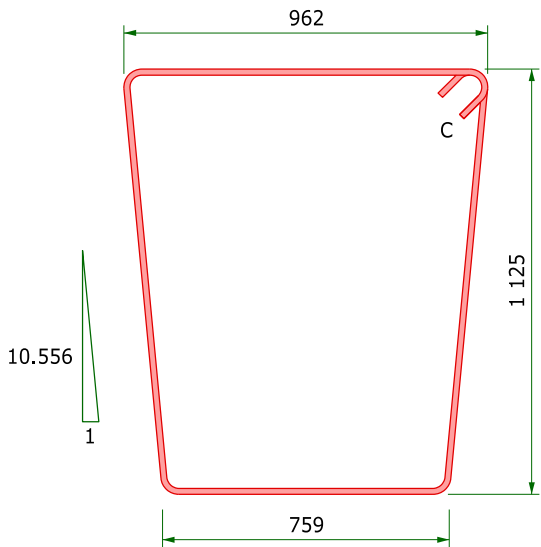
BZ Fitment bends USO



FZ Fitment bends



GZ Fitment bends
C = hook length



HZ Fitment bends
C = hook length
Alternately shape can be welded into a closed loop

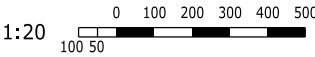
NON STANDARD BAR SHAPES

All shapes horizontally symmetrical

Note - the above dimensions are correct dimensions. They differ slightly from the dimensions given in standard TfNSW drawing B0213. If tooling is set to the TfNSW dimensions the RMS dimensions may be substituted for the above.

For general notes, see sheet 7

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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
PRESTRESSED BEAMS
REINFORCEMENT DETAILS - SHEET C

Wollondilly Shire Council

JOB NUMBER	B1849
DOCUMENT NUMBER	D109
SHEET OF	9 OF 13
REVISION	P1

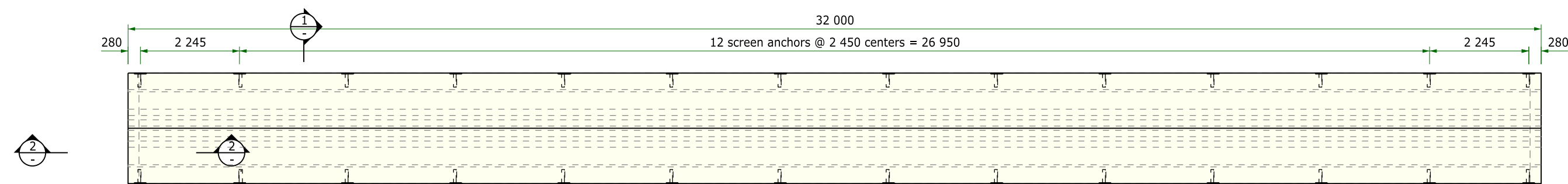
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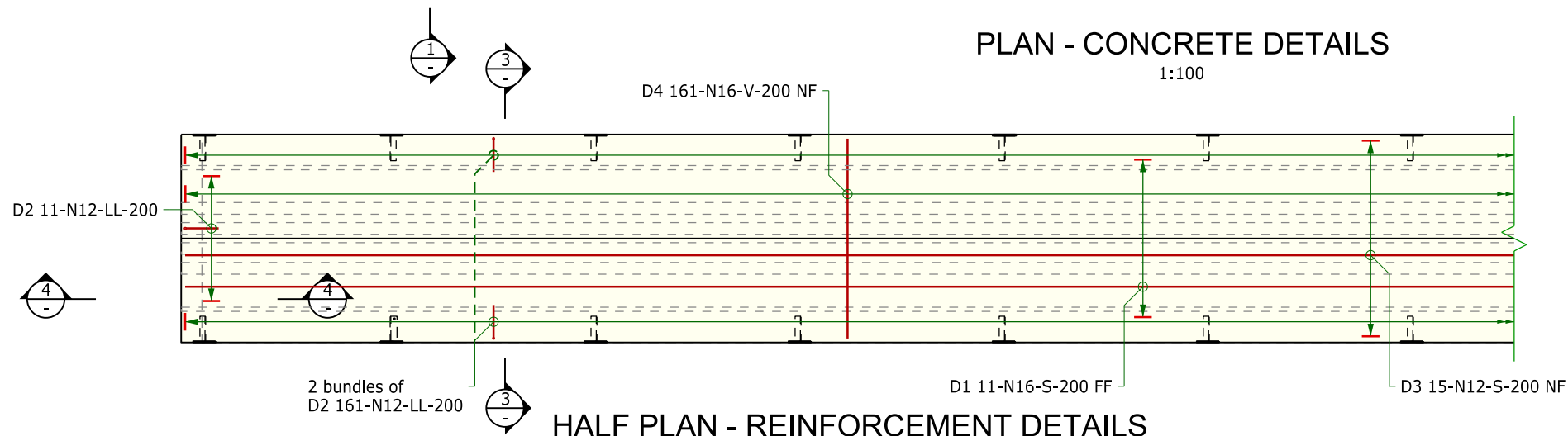
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21/07/2022 6:30:50 PM jim

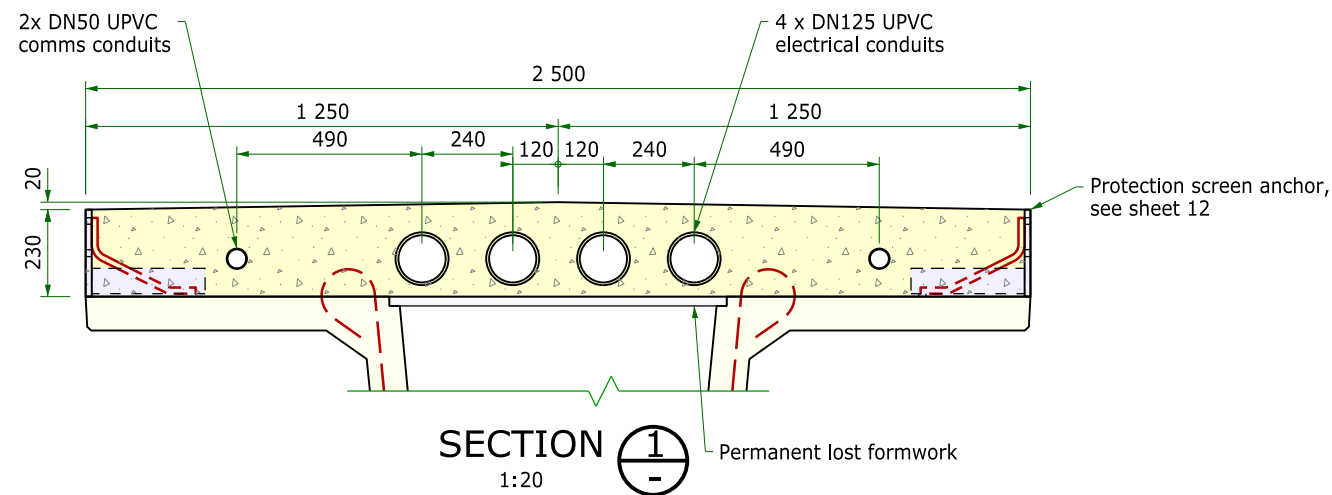
...B1849 D110 Deck slab.dgn



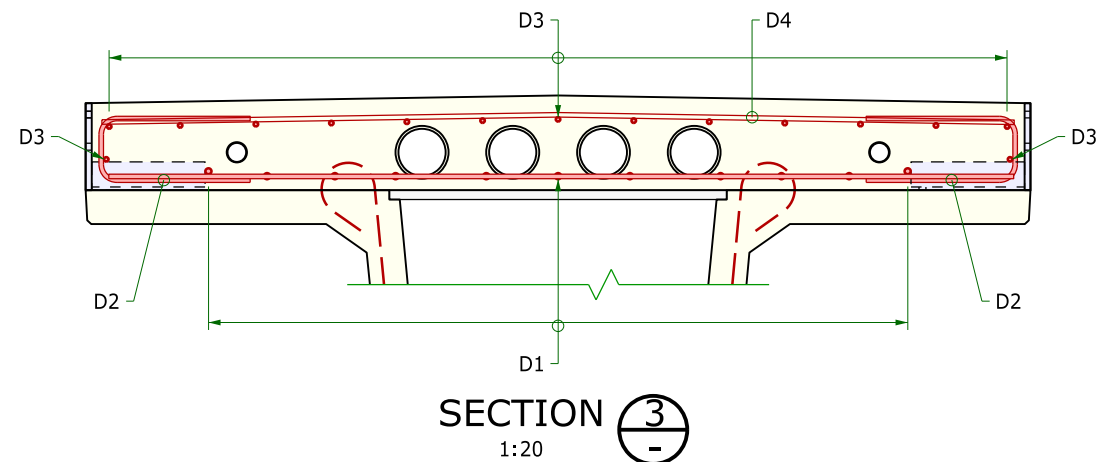
PLAN - CONCRETE DETAILS
1:100



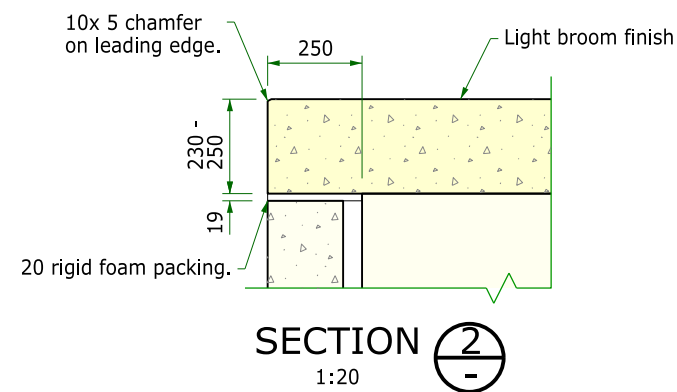
HALF PLAN - REINFORCEMENT DETAILS
1:100



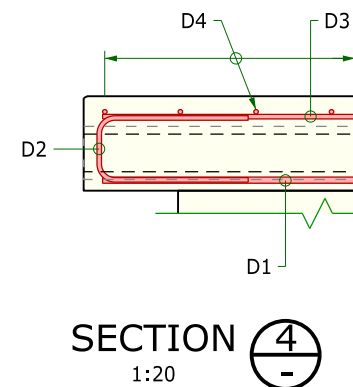
SECTION 1
1:20



SECTION 3
1:20



SECTION 2
1:20



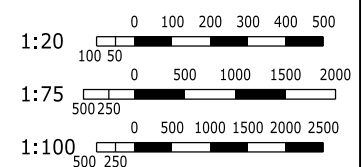
SECTION 4
1:20

General Notes

Dimensions in millimetres.
Concrete exposure classification B1.
Minimum 28 day compressive strength of concrete 40MPa.
Chamfer edges 20x20 and fillet re-entrant angles 20x20 USO.
NCF denotes no chamfer or fillet.
Nominal cover to reinforcement nearest to the concrete surface 35mm USO.
FF far face NF near face
EF each face LV length varies.
USO unless specified otherwise.
NSOP not shown on plan.
Lap lengths to be as follows USO:

Bar size	N12	N16	N20	N24	N28	N32
Horizontal bars with >300mm of concrete cast below the bar	450	600	...	...	...	...
Other bars	350	470	...	...	...	...

Development length to be 100% of the lap length above USO.
Reinforcement may be displaced slightly to clear embedded objects, holes and recesses.



PRELIMINARY DRAWING
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DRAWING SCALES TRUE AT A3

Bridge Design
Pty Ltd
ABN 63 145 429 063

CONSULT AUSTRALIA
Member Firm

ISO 9001:2008
REGISTERED #11004

DESIGN: JRA
VERIFIED: -
DRAWING: BNC
CHECKED: -

MANAGER, BRIDGE DESIGN PTY LTD
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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
DECK
REINFORCED CONCRETE DETAILS

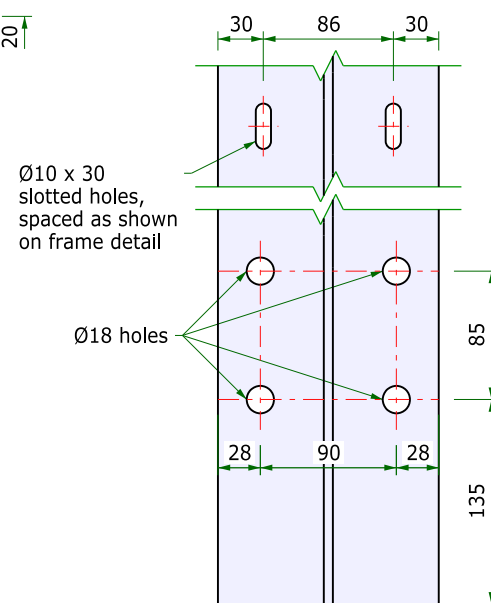
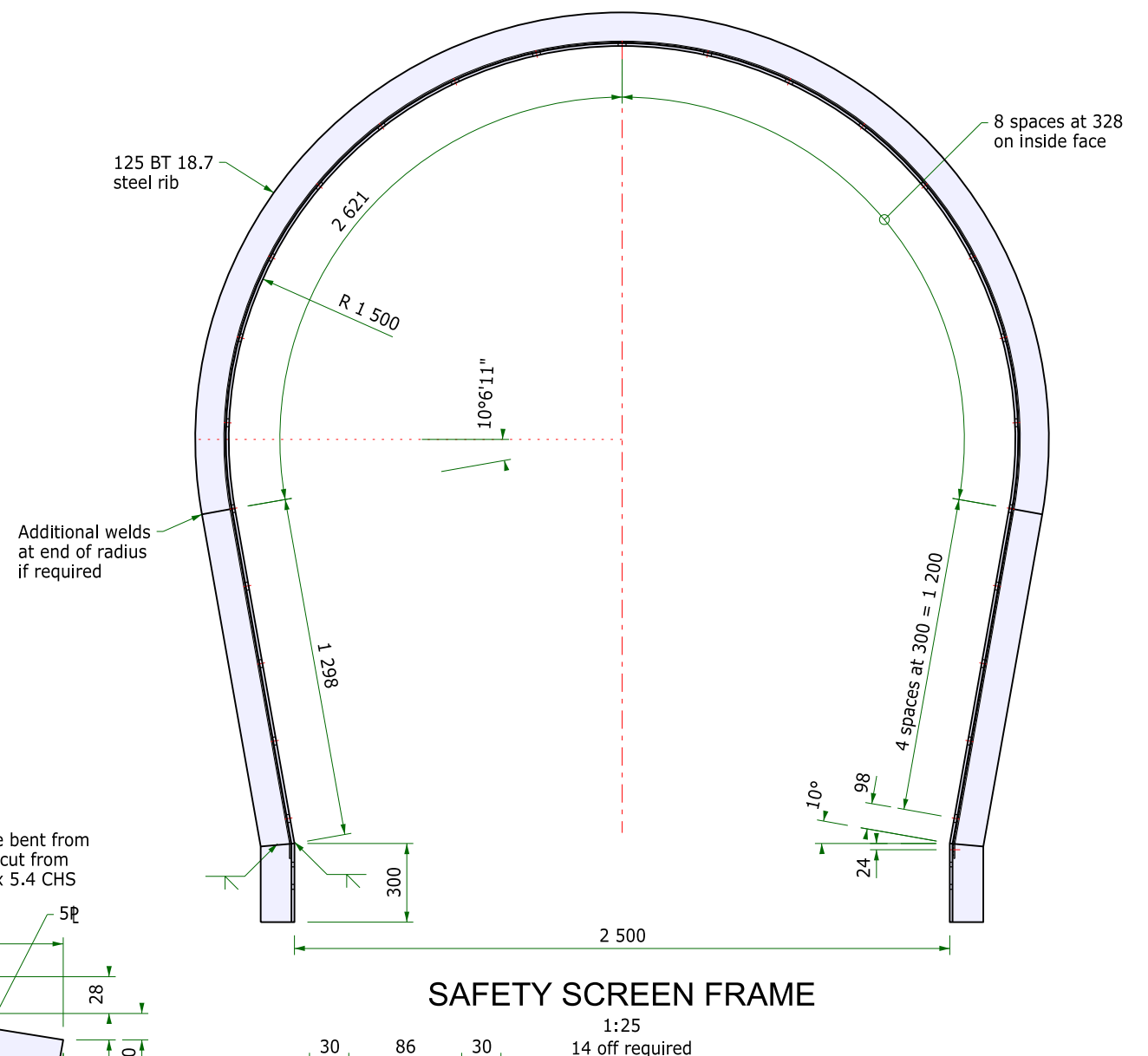
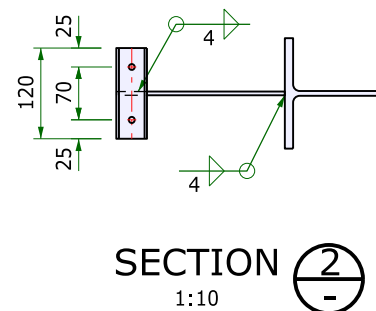
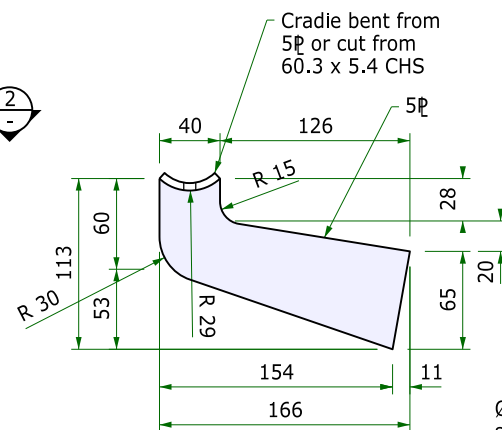
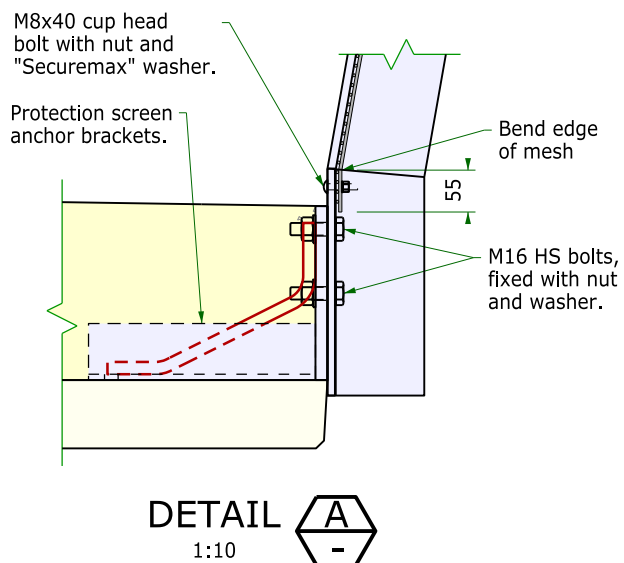
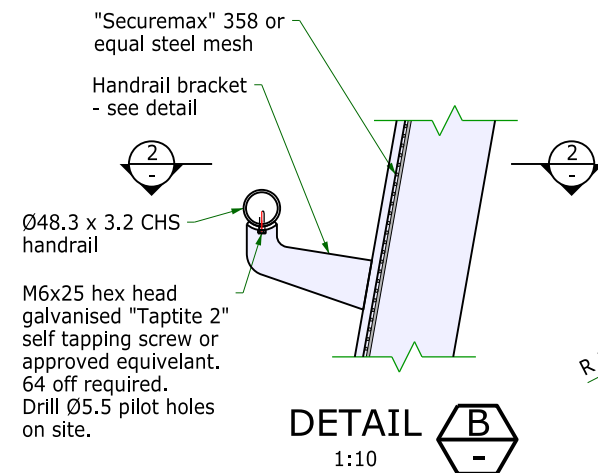
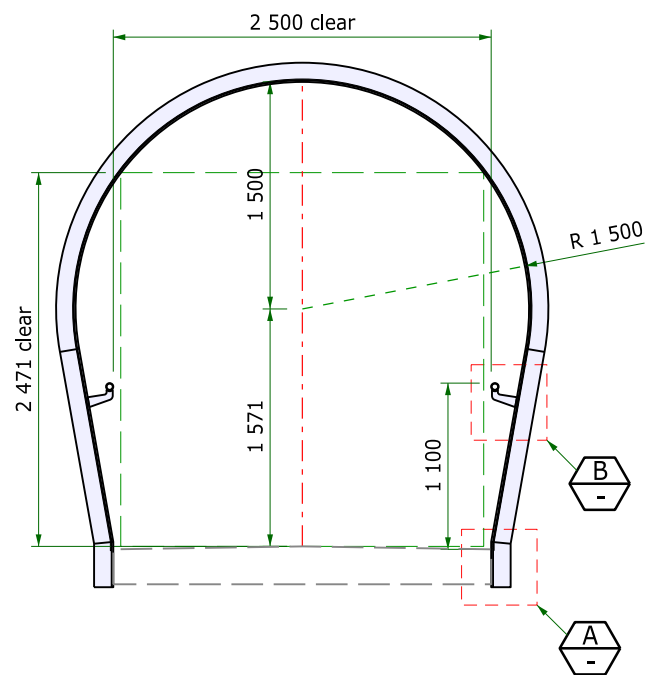
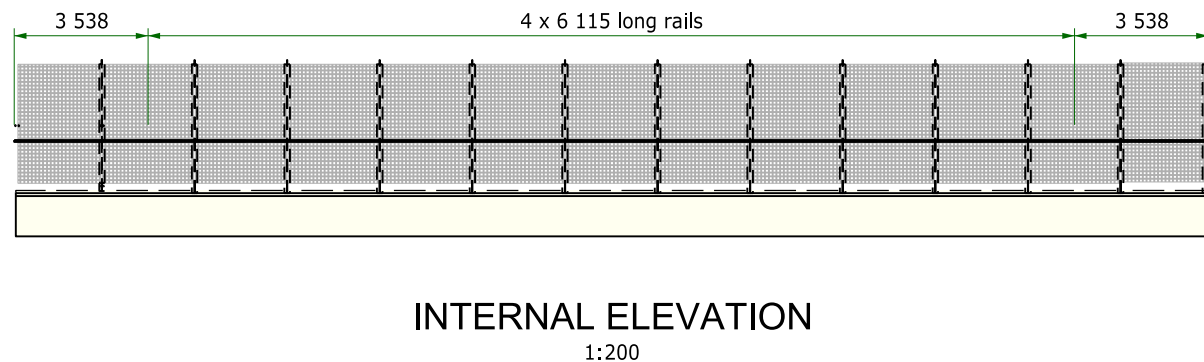
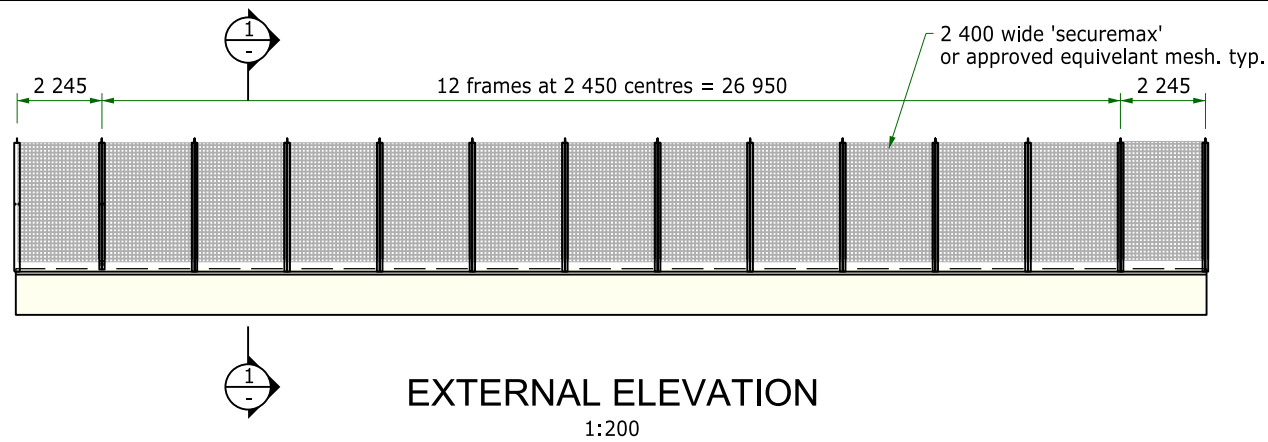
Wollondilly Shire Council

JOB NUMBER	B1849
DOCUMENT NUMBER	D110
SHEET 10 OF 13	REVISION P1

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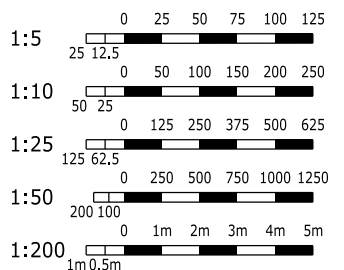
21/07/2022 6:25:30 PM jim

...B1849 d111 protection screen.dgn



General Notes

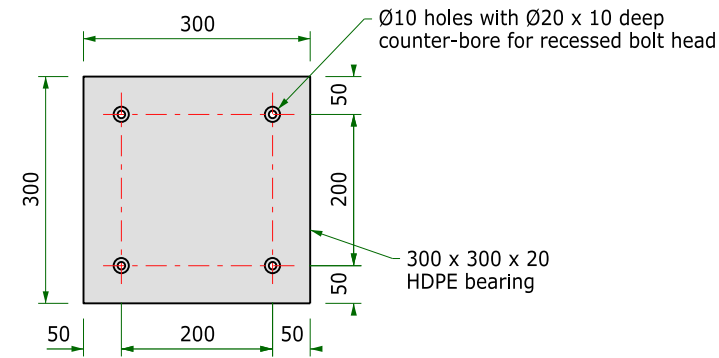
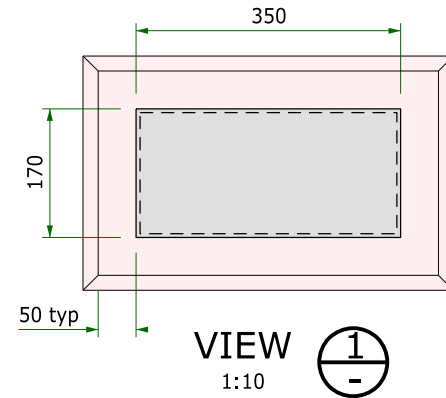
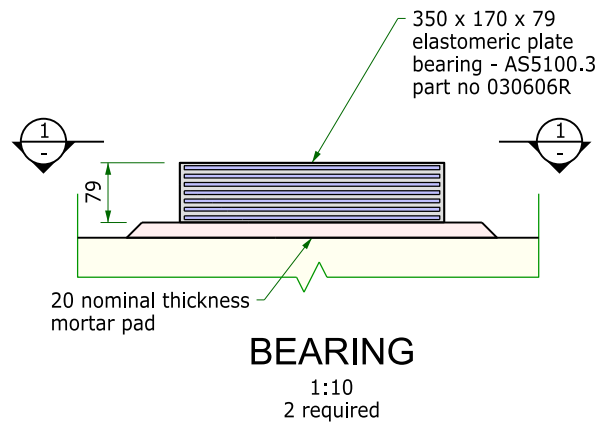
Dimensions in millimeters.
Steel sections grade 300 to AS3679.1.
Steel plate minimum grade 250 to AS3678.
Cold rolled hollow sections grade 350LO to AS1163 USO.
Bolting category 4.6/S to AS5100.6 USO.
HS denotes bolting category 8.8/TB to AS5100.6.
Welding electrodes E48xx or W50x.
Welding symbols to AS1101.3.
Surface protection - Hot dip galvanizing.
Hot dip bolts etc. to AS1214.
Construction Category CC2.
Welding category SP.
USO - unless specified otherwise.



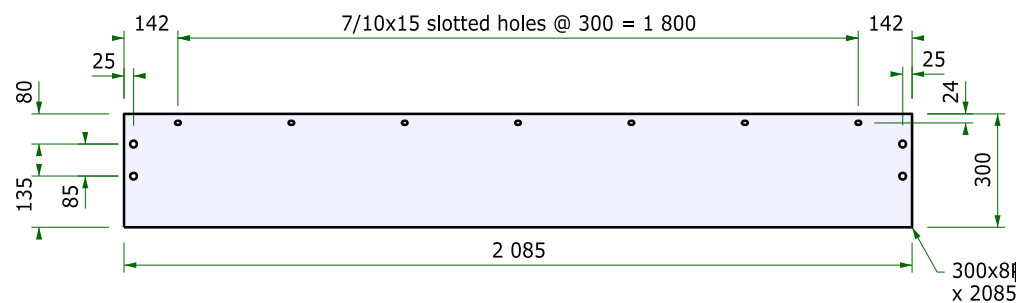
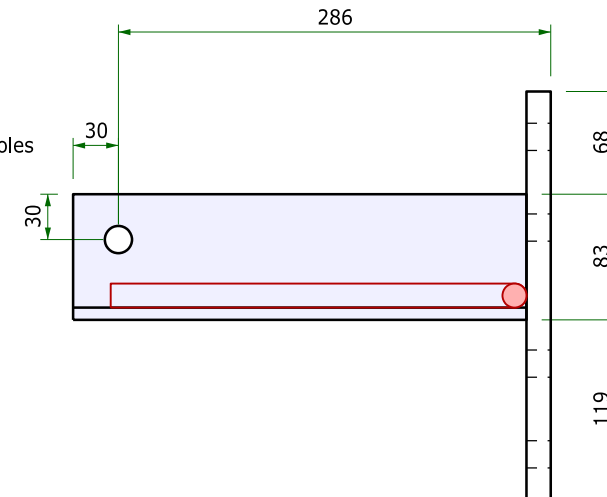
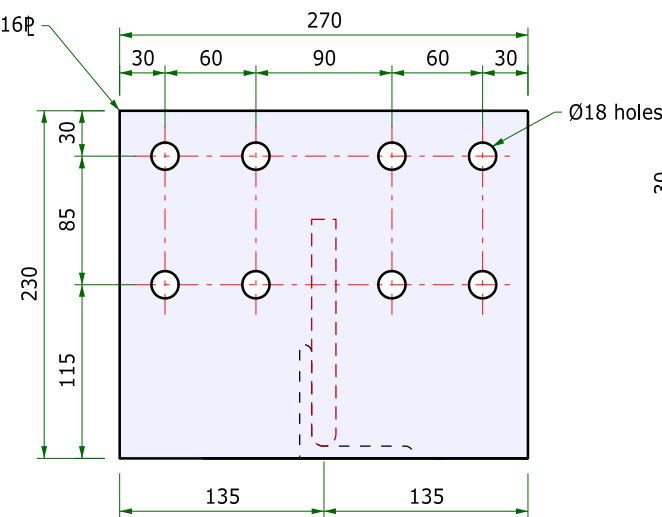
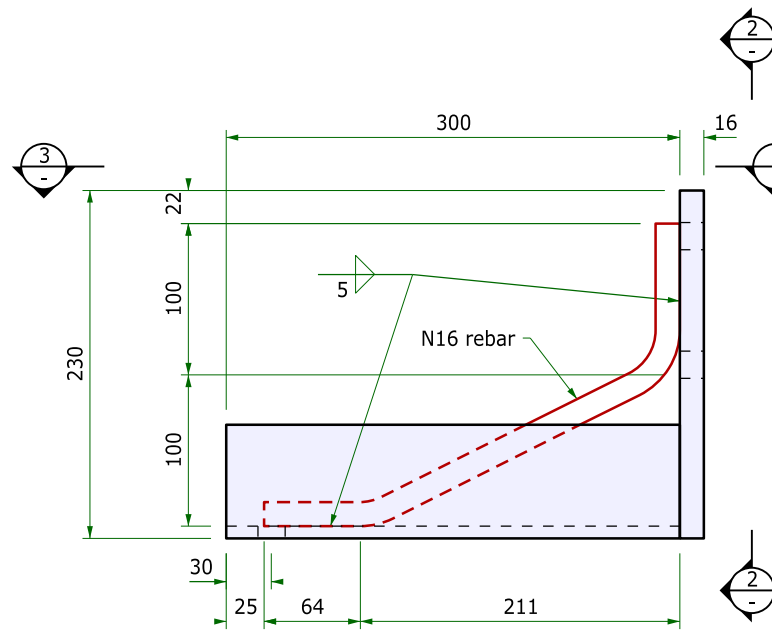
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21/07/2022 6:24:51 PM jim

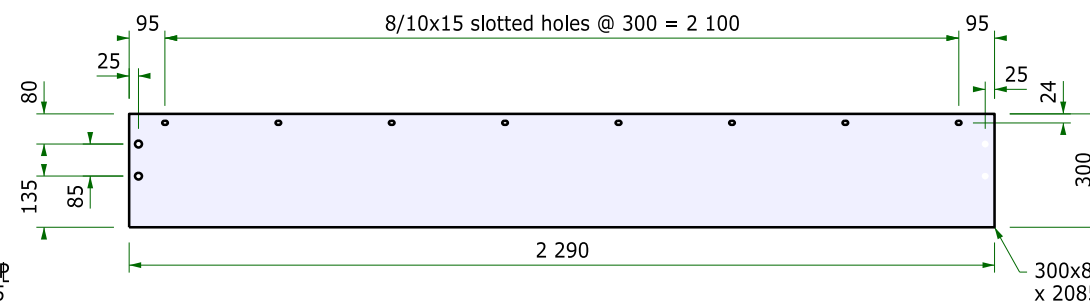
...1B1849 d112 miscellaneous.dgn



HDPE SIDE THRUST BEARING
1:10
4 off required



DECK EDGE STRIP 1
1:20
4 off required



DECK EDGE STRIP 2
1:20
4 off required

General Notes
Dimensions are in millimetres.
Steel sections grade 300 to AS3679.1.
Steel plate minimum grade 250 to AS3678 USO.
Welding electrodes E48xx or W50x.
Welding symbols to AS1101.3.
Surface protection - hot dip galvanizing USO.



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DRAWING SCALES TRUE AT A3



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VERIFIED:
DRAWING:
CHECKED:

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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
**BEARINGS AND MISCELLANEOUS STEELWORK
DETAILS**

Wollondilly Shire Council
JOB NUMBER **B1849**
DOCUMENT NUMBER **D112**
SHEET 12 OF 13
REVISION **P1**

100mm on original

200mm on original

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21/07/2022 6:35:27 PM jim

...B1849 d113 Bar Shapes.dgn

Shape Code	Australian Standard Bar Shape	Shape Code	Australian Standard Bar Shape	Shape Code	Australian Standard Bar Shape	Shape Code	Non standard shape - TfNSW Code	Shape Code	Non standard shape
S		RC		LH		Q			
L		VL		SP		W			
LL		VV				Y			
H		J		B					
HH		LJ		C					
F		JJ		E					
V		A		G					
U		R		K					
T		HT		M					
SH		XT		N					
CC		CT		P					

GENERAL NOTES

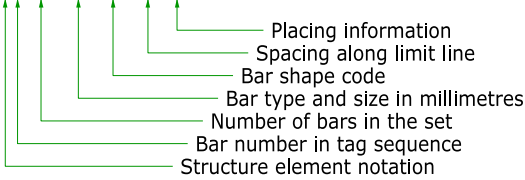
Australian standard bar shapes are in accordance with AS1100.501.
Bar size is the nominal diameter in millimetres or the AS4671 fabric size.

Bars shall be deformed bar grade D500N to AS4671 USO.

W denotes plain bar grade D500L to AS4671.
R denotes plain bar grade R250N to AS4671.
RL and SL denotes welded reinforcing fabric, rectangular and square respectively.

Bar Marking

The reinforcement on the drawings is described by the following notation:
A2 10-N16-S-300FF



Structure element notations:

Q - Piles
A - Abutments/ Abutment A
B - Abutment B
P - Pier
G - Girder
D - Deck

Welding of Reinforcement

Welding required to develop full strength laps to AS1554.3
Section 3.2 and Table F4.

Weld material; E48xx, W50x or W50xx minimum.
Throat depth is minimum and includes "S" plus reinforcement. For "S" and "W" refer to AS1554.3
Testing - 100% visual. Inspect each layer of multi-pass welds.

ISSUED FOR APPROVAL
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DRAWING SCALES TRUE AT A3

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Pty Ltd ABN 63 145 429 063

ISO 9001:2008
REGISTERED FIRM

CONSULT AUSTRALIA
Member Firm

DESIGN: JRA
VERIFIED:
DRAWING: MMO
CHECKED:

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Station Street
FOOTBRIDGE OVER RAILWAY LINE
at 0.45km east of Menangle Road
**REINFORCEMENT
BAR SHAPES**

Wollondilly Shire Council

JOB NUMBER	B1849
DOCUMENT NUMBER	D113
SHEET OF	13 OF 13
REVISION	P1

100mm on original

200mm on original

Attachment 2 – AHIMS extensive search

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 6570_MenangleUpdates

Client Service ID : 703031

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
52-2-3022	PAD2 Mt Taurus	AGD	56	290905	6221068	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	1915,1992	
52-2-4513	2016 Mt Gilead Site 7 AFT	GDA	56	293139	6220792	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>		Ms.Vanessa Hardy				<u>Permits</u>		
52-2-4563	SSM-ST-003	GDA	56	291877	6221080	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>		Kayandel Archaeological Services, Miss.Meggan Walker				<u>Permits</u>	4856	
52-2-4202	SSM4	GDA	56	292267	6221433	Open site	Valid	Habitation Structure : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>		Ms.Tamika Goward				<u>Permits</u>	4856	
52-2-4564	SSM-ST-001	GDA	56	292268	6221471	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>		Kayandel Archaeological Services, Miss.Meggan Walker				<u>Permits</u>	4856	
52-2-4312	MGA21	GDA	56	293105	6220997	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>		Navin Officer Heritage Consultants Pty Ltd				<u>Permits</u>		
52-2-4326	MG PAD32	GDA	56	293495	6222115	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>		Navin Officer Heritage Consultants Pty Ltd, Mrs.Nicola Hayes				<u>Permits</u>		
52-2-4677	Mount Taurus Crest	GDA	56	290564	6221023	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>		Extent Heritage Pty Ltd - Pyrmont - Individual users, Miss.Rebekah Hawkins				<u>Permits</u>		
52-2-4675	Waterway Corridor: Foot Onslow Creek	GDA	56	290836	6221104	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>		Extent Heritage Pty Ltd - Pyrmont - Individual users, Miss.Rebekah Hawkins				<u>Permits</u>		
52-2-3021	PAD1	AGD	56	291071	6221478	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>		Doctor.Julie Dibden				<u>Permits</u>	1915,1992	
52-2-4565	SSM-ST-002	GDA	56	292198	6221489	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>		Kayandel Archaeological Services, Miss.Meggan Walker				<u>Permits</u>	4856	

Report generated by AHIMS Web Service on 26/07/2022 for Kate Morris for the following area at Lat, Long From : -34.1385, 150.7281 - Lat, Long To : -34.1176, 150.7612. Number of Aboriginal sites and Aboriginal objects found is 27

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
52-2-4561	SSM-AS-001	GDA	56	292296	6221412	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services, Miss. Meggan Walker					Permits	4856	
52-2-4286	MG PAD31	GDA	56	293509	6222167	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd, Mrs. Nicola Hayes					Permits		
52-2-4562	SSM-GG-001	GDA	56	292031	6221226	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Kayandel Archaeological Services, Miss. Meggan Walker					Permits	4856	
52-2-4206	SSM PAD2	GDA	56	292293	6221262	Open site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : -		
	Contact	Recorders	Kayandel Archaeological Services, Ms. Tamika Goward, Ms. Natalie Stiles					Permits	4856	
52-2-4207	SSM PAD1	GDA	56	292070	6222244	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Ms. Tamika Goward					Permits		
52-2-4203	SSM3	GDA	56	292343	6221472	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms. Tamika Goward					Permits	4856	
52-2-3720	Bulli Site 40	AGD	56	292395	6220053	Closed site	Valid	Art (Pigment or Engraved) : 1		
	Contact	Recorders	Ms. Renee Regal					Permits		
52-2-4318	MG PAD34	GDA	56	293435	6222077	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd, Mrs. Nicola Hayes					Permits		
52-2-4205	SSM1	GDA	56	292189	6221321	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms. Tamika Goward					Permits	4856	
52-2-4204	SSM2	GDA	56	292345	6221709	Open site	Valid	Artefact : -		
	Contact	Recorders	Ms. Tamika Goward					Permits		
52-2-4305	MGA10	GDA	56	293354	6222000	Open site	Valid	Artefact : 1		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
52-2-4532	2016 Mt Gilead Site 11 AFT	GDA	56	293516	6220764	Open site	Valid	Artefact : 1		
	Contact	Recorders	Ms. Vanessa Hardy, Virtus Heritage Pty Ltd - Pottsville					Permits		
52-2-3916	MPRP 9 Menangle Park Rezoning Project 9	GDA	56	292951	6222494	Open site	Valid	Artefact : 6		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, AECOM Australia Pty Ltd - Sydney, Ms. Norn					Permits		
52-2-4324	MG PAD35	GDA	56	293268	6222102	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd, Mrs. Nicola Hayes					Permits		

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
52-2-4317	MG PAD33	GDA	56	293481	6222103	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd,Mrs.Nicola Hayes					<u>Permits</u>		
52-2-4516	2016 Mt Gilead Site 10 AFT	GDA	56	293139	6220792	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms.Vanessa Hardy					<u>Permits</u>		

** Site Status

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Contact Us

Niche Environment and Heritage

Sydney
Brisbane
Cairns
Port Macquarie
Illawarra
Coffs Harbour
Central Coast
Gold Coast
Canberra



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Our services

Ecology and biodiversity

Terrestrial
Freshwater
Marine and coastal
Research and monitoring
Wildlife Schools and training

Heritage management

Aboriginal heritage
Historical heritage
Conservation management
Community consultation
Archaeological, built and landscape values

Environmental management and approvals

Impact assessments
Development and activity approvals
Rehabilitation
Stakeholder consultation and facilitation
Project management

Environmental offsetting

Offset strategy and assessment (NSW, QLD, Commonwealth)
Accredited BAM assessors (NSW)
Biodiversity Stewardship Site Agreements (NSW)
Offset site establishment and management
Offset brokerage
Advanced Offset establishment (QLD)