Prepared by:

Orion Consulting

CONSULT AUSTRALIA
Member Firm

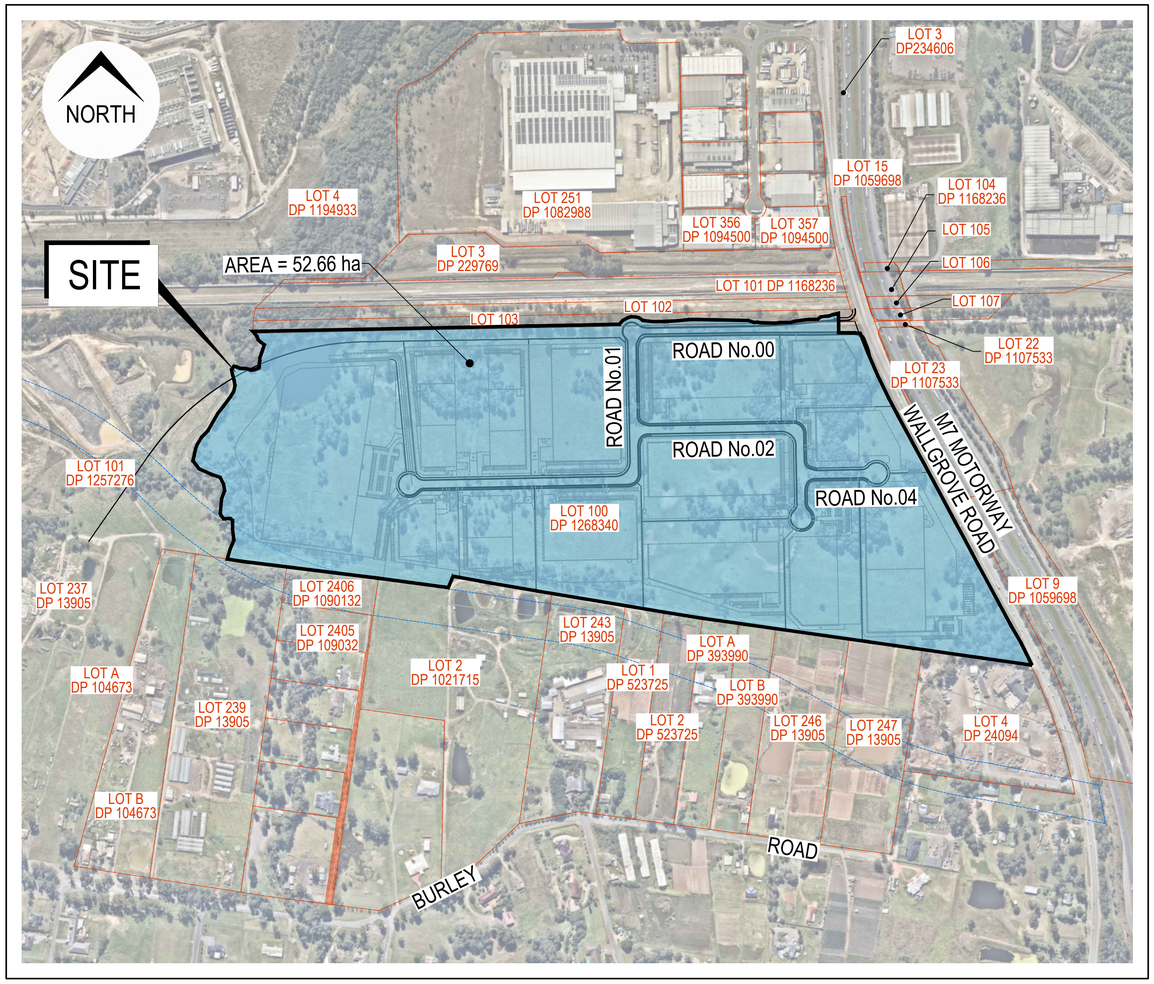
Prepared for:

GAZCORP

LGA:

Fairfield City
Celebrating diversity

SSD: 5248-MOD-1



SITE / LOCATION (Image courtesy of Nearmap 17.11.2021)

LOT 100 DP 1268340

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SIGNAGE, LINE MARKING & TRAFFIC CONTROL PLAN		
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CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

813 WALLGROVE ROAD, HORSLEY PARK
GAZCORP INDUSTRIAL ESTATE
ROAD & DRAINAGE DESIGN

ISSUED FOR **CONSTRUCTION**

Project No. 19-0108 Set No. 09 Milestone CC Plan 000 Revision C

NORTH

LOT 4 DP 1194933

LOT 251 DP 1082988

LOT 355 DP 1094500

LOT 358 DP 1094500

LOT 356 DP 1094500

LOT 357 DP 1094500

LOT 15 DP 1059698

LOT 3 DP 229769

LOT 104 DP 1168236

LOT 101 DP 1168236

LOT 105 DP 1168236

LOT 102

LOT 103

LOT 106

LOT 107

C

FOR SEPARATE BULK EARTHWORKS PLANS
REFER TO ORION CONSULTING PLANS.
PLAN REF: 19-0108-08-CC
COUNCIL REF:

REFER ENGINEERING PLAN CC-200

REFER ENGINEERING PLAN CC-202

REFER ENGINEERING PLAN CC-201

REFER ENGINEERING PLAN CC-203

ROAD No.00

ROAD No.01

ROAD No.03

ROAD No.04

WALLGROVE ROAD

SWALE 01b

SWALE 01a

LOT 10

LOT 11A

LOT 11B

LOT 11C

LOT 12A

LOT 12B

LOT 12C

LOT 13

LOT 14

LOT 2

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

LOT 3A

LOT 3B

LOT 4

LOT 23 DP 1107533

REEDY CREEK

30m SETBACK RIPARIAN ZONE

COORDINATEDS: MGA
DATUM: A.H.D.
COORDINATES ORIGIN: SSM 17361
LEVELS ORIGIN: RL 62.437

LOT 239 DP 13905

LOT 2406 DP 1090132

LOT 2405 DP 109032

LOT 2 DP 1021715

LOT 243 DP 13905

LOT 1 DP 523725

LOT 2 DP 523725

LOT A DP 393990

LOT B DP 393990

LOT 246 DP 13905

LOT 247 DP 13905

LOT 4 DP 24094

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - OVERHEAD LINE	OH	OH	OH
WATER	W	W	W
GAS	G	G	G
ELECTRICAL	E	E	E
SEWER	S	S	S
EXISTING STORM WATER	D		
CONTOUR LINE & LABEL		20.0	
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
STAGE 3, 4 & 5 LIMIT OF WORKS			
BUILDING / ENVELOPE			
ROAD, NUMBER, CONTROL LINE, CHAINAGE & CHAINAGE MARK	CH # ROAD +	CH # ROAD +	CH # ROAD +
COUNCIL STANDARD KERB & GUTTER OR DISH CROSSING		K&G DC	
EDGE OF BITUMEN		EOB	
STORMWATER DRAINAGE PIPE AND STRUCTURE			
STORMWATER DRAINAGE PIPE AND STUB			
TEMPORARY STORMWATER DRAINAGE PIPE			
EASEMENT (REFER LEGEND)	(A) (B) (C)	(A) (B) (C)	
SUBSOIL DRAIN		SS SS	
DIVERSION SWALE			
BATTER			
EXISTING EXTERNAL BOUNDARY			
PAD MOUNTED SUB STATION & EASEMENT			
DENOTES FREIGHT CORRIDOR			

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Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
C	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
B	MG	DH	AS	PB	09/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW
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Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1) SCALE 1:4000 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: GENERAL LAYOUT PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	001	C

Plotted Monday, 30 March 2020 2:57:48 PM File Name:C:\1305\data\ORION SYNOTDES-09-CC Industrial Site CC_20623DWGS\19-0108-09-CC-001.dwg

GENERAL NOTES

G1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH FAIRFIELD CITY COUNCIL'S WORKS SPECIFICATION CIVIL (CURRENT EDITION) AND/OR AS DIRECTED BY THE CERTIFYING AUTHORITY B

G2. SURVEY MARKS: -
a. SURVEY MARKS SHOWN THUS ▲ SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.

G3. THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY AT DEVELOPERS EXPENSE.

G4a. THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS.

G4b. ENTRY TO THE EXISTING WATER NSW (WNSW) CORRIDOR LOT 103 DP 1168236 MUST NOT OCCUR WITHOUT WNSW WRITTEN PERMISSION AND IN ACCORDANCE WITH THE APPROVED CONSTRUCTION LICENSE AREA.

G5. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.

G6. COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL. B

G7. TREES TO BE RETAINED ON SITE SHALL BE PROTECTED BY SUITABLE STURDY APPROVED PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF SITE WORKS. NO TREES TO BE REMOVED WITHOUT COUNCIL'S WRITTEN APPROVAL.

G8. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES, EXISTING INFRASTRUCTURE AND DEBRIS ETC.

G9. FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE AUTHORITY TO DO SO HAS BEEN OBTAINED FROM THE CERTIFYING AUTHORITY. B

G10. SITE FILL AREAS: - THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.

G11. ALL SITE FILLING TO BE COMPACTED TO 95% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S "WORKS SPECIFICATION" AND TO LEVEL 1 (AS 3798) GEOTECHNICAL SUPERVISION. B

G12. ALL CUT/FILL SURFACES SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS REQUIREMENTS.

G13. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.

G14. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.

G15. DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.

G16. ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS.

STORMWATER DRAINAGE NOTES

D1. STORMWATER DESIGN CRITERIA:
1:100 MAJOR SYSTEM
1:5 MINOR SYSTEM

D2. PIPES TO BE INSTALLED TO TYPE HS2 SUPPORT IN ACCORDANCE WITH AS 3725 (1989) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE (UNO). WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)

D3. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 AND AS/NZS 3500 3.2 & COUNCIL'S SPECIFICATIONS.

D4. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.

D5. GRATES AND COVERS SHALL CONFORM TO AS 3996 & FAIRFIELD CITY COUNCIL SPECIFICATIONS.

D6. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.

D7. DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND AND HAVE 3.0m OF SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS.

D8. ALL STORMWATER PIPES WITHIN ROADS TO BE STEEL REINFORCED CONCRETE PIPE (RCP) CLASS 2 MINIMUM UNO WITH MINIMUM 600mm COVER TO FSL. THE MINIMUM PIPE DIAMETER TO BE USED IS Ø375 mm B

D9. ALL INTERALLOTMENT DRAINAGE LINES SHALL BE LAID AT A MINIMUM GRADE OF 1% UNLESS OTHERWISE INDICATED.

D10. DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS (UNO).

D11. 200 MICRON OCEANGUARD PIT BASKETS TO BE INSTALLED IN ALL SURFACE INLET PITS WITHIN ROADS. B

SURVEY SET OUT INFORMATION NOTES

S1. ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF WORKS ONSITE.

S2. THE INFORMATION DETAILED ON THE CERTIFIED CONSTRUCTION CERTIFICATE PLANS TAKES PRECEDENCE OVER ALL ELECTRONIC INFORMATION PROVIDED. THE ORDER OF PRIORITY FOR USE OF ALL INFORMATION PROVIDED IS AS FOLLOWS:

a. CERTIFIED CONSTRUCTION CERTIFICATE DRAWINGS
b. 2D DRAFTING BASE (ELECTRONIC FILE)
c. 3D DTM (ELECTRONIC FILE)

S3. ANY DISCREPANCY BETWEEN ANY OF THE INFORMATION CONTAINED WITHIN THESE FILES IS TO BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CONSTRUCTION WHO WILL SEEK CLARIFICATION AND ISSUE INSTRUCTIONS ON THE APPROPRIATE COURSE OF ACTION.

EARTHWORKS NOTES

E1. EARTHWORKS ARE TO BE CARRIED OUT TO THE SATISFACTION OF THE CERTIFYING AUTHORITY. UNSUITABLE MATERIALS ARE TO BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION TESTING RESULTS FOR ALL AREAS THAT CONTAIN FILL IN EXCESS OF 250mm. B

E2. COMPACTION OF EARTHWORKS SHALL CONTINUE UNTIL A STANDARD DRY DENSITY RATIO OF 98% FOR SITE FILLING AND 100% FOR ROAD PAVEMENT SUBGRADES HAS BEEN ACHIEVED IN ACCORDANCE WITH TEST METHOD AS1289.5.3.1 OR AS.1289.5.1.1. THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'. WHERE IT IS PROPOSED TO USE TEST METHOD AS1289.5.8.1 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS. B

E3. A SUITABLE QUALIFIED GEOTECHNICAL ENGINEER, SHALL HAVE A LEVEL 1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS', AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS BY WRITTEN NOTIFICATION.

E4. IN AREAS TO BE FILLED WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS 1(V):4(H), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE COUNCIL OR GEOTECHNICAL ENGINEER.

E5. ALL BATTERS ARE TO BE SCARIFIED TO A DEPTH OF 50mm TO ASSIST WITH ADHESION OF TOP SOIL TO BATTER FACE.

E6. PROVIDE MINIMUM 100mm AND MAXIMUM 250mm TOPSOIL DEPTH ON FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. TOPSOILED AREAS TO BE STABILISED WITH APPROVED VEGETATION A MAXIMUM OF 14 DAYS AFTER TOPSOILING AND ARE TO BE WATERED TO ENSURE GERMINATION.

E7. THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION' PRODUCED BY LANDCOM.

E8. FOOTWAY AREA TO BE FULLY TURFED WITH COUCH GRASS, AND SHALL BE MAINTAINED AND REPLACED AS REQUIRED DURING THE CONSTRUCTION MAINTENANCE PERIOD, IN ACCORDANCE WITH CONDITION.

E9. ANY BLENDING OF TOPSOIL MUST BE APPROVED BY THE SUPERINTENDENT AND STRICTLY IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS SPECIFICATIONS.

CONSTRUCTION CERTIFICATE
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Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

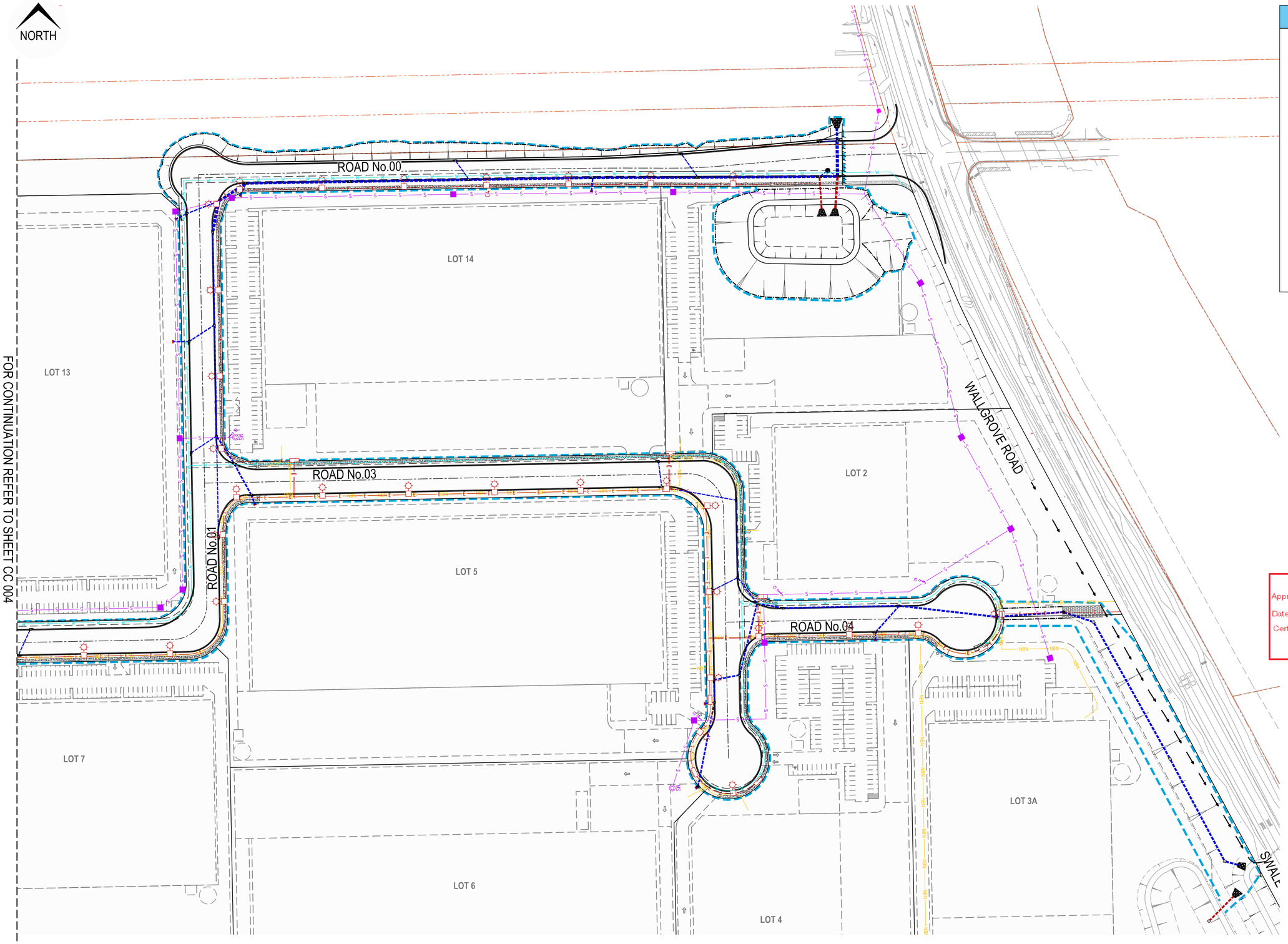
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: GENERAL NOTES

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	002	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\1stSolar\ORION SYNOTE\DES-09-CC Industrial Site CC_20923\DWGS\19-0108-09-CC-002.dwg

NORTH



LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - OVERHEAD LINE	OH	OH	OH
WATER	W	W	W
GAS	G	G	G
ELECTRICAL	E	E	E
SEWER	S	S	S
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
LIMIT OF WORKS			
STORMWATER DRAINAGE PIPE AND STRUCTURE			
STORMWATER DRAINAGE PIPE AND STUB			
EXISTING EXTERNAL BOUNDARY			
PAD MOUNTED SUB STATION & EASEMENT			

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NOTES:

1. SERVICE LOCATIONS SUBJECT TO FINAL SERVICE DESIGN APPROVALS

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0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SERVICES PLAN SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	003	B

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Stuff\data\ORION SYNY\1DES-09-CC-Industrial Site CC_200320\DWGS\19-0108-09-CC-003.dwg

NORTH

LOT 10
LOT 11C
LOT 11B
LOT 11A
LOT 12C
LOT 12B
LOT 12A
LOT 13
LOT 8
LOT 9
LOT 7
ROAD No.01
ROAD No.03
ROAD No.01
FOR CONTINUATION REFER TO SHEET CC 003

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - OVERHEAD LINE	OH	OH	OH
WATER	W	W	W
GAS	G	G	G
ELECTRICAL	E	E	E
SEWER	S	S	S
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
LIMIT OF WORKS			
STORMWATER DRAINAGE PIPE AND STRUCTURE			
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EXISTING EXTERNAL BOUNDARY			
PAD MOUNTED SUB STATION & EASEMENT			

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0 10 20 30 40 50 60 70 80 90 100
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By: Orion Consulting
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SERVICES PLAN SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	004	C

Printed:Monday, 30 March 2020 2:57:45 PM File Name:C:\1Job\Gazcorp\ORION-SYN\19DES-09-CC-Industrial Site CC_2062\3DWGS\19-0108-09-CC-004.dwg

NORTH

ROAD No.00

LOCKABLE GATE

LOT 14

EXISTING SEDIMENT BASIN 02
MINIMUM VOLUME 1700 m³

B

ROAD No.03

ROAD No.01

LOT 2

WALLGROVE ROAD

LOT 5

ROAD No.04

LOT 3A

EXISTING SEDIMENT BASIN 03
MINIMUM VOLUME 2450 m³

SWALE 01b

LOT 6

LOT 4

LOT 3B

FOR CONTINUATION REFER TO SHEET CC 101

LOT 3B

EXISTING SEDIMENT BASIN 03
MINIMUM VOLUME 2450 m³

SWALE 01a

INSET A

LEGEND

CONTOURS	10.0 — 20.0
STABILISED SITE ACCESS	
POSSIBLE STOCKPILE LOCATION	
SITE SECURITY FENCE	B B B
SEDIMENT FENCE	
DIVERSION SWALE / EARTH BANK	
STRAW / HAY BALE FILTER	
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	
OVERLAND CATCHMENT FLOW ARROWS	

NOTES:

1. WHERE PRACTICAL, SEDIMENT AND EROSION CONTROL MEASURES INSTALLED DURING BULK EARTHWORKS ARE TO REMAIN IN PLACE AND BE MAINTAINED ACCORDINGLY.
2. ALL LOTS TO BE STABILISED (HYDROMULCH OR EQUIVALENT) FOLLOWING BULK EARTHWORKS.

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

ADDED INTERIM DIRECTIONAL FLOW ARROWS
UPDATED DRAINAGE NETWORK

B

FOR CONTINUATION REFER TO INSET A

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

By: Orion Consulting
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JAS-ANZ
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SEDIMENT & EROSION CONTROL PLAN SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	100	B

Plotted:Monday, 30 March 2020 2:57:16 PM File Name:C:\12dSdata\ORION-SYNSTIDES-09-CC Industrial Site CC_2062\3DMODS\19-0108-09-CC-100.dwg

NORTH

REEDY CREEK

30m SETBACK RIPARIAN ZONE

EXISTING SEDIMENT BASIN 01
MINIMUM VOLUME 5000 m³

TRANSGRID EASEMENT

LOT 10

LOT 11A

LOT 11B

LOT 11C

LOT 12A

LOT 12B

LOT 12C

LOT 13

LOT 7

LOT 8

LOT 9

ROAD No.01

LEGEND

CONTOURS	10.0 — 20.0
STABILISED SITE ACCESS	
POSSIBLE STOCKPILE LOCATION	
SITE SECURITY FENCE	B B B
SEDIMENT FENCE	
DIVERSION SWALE / EARTH BANK	
STRAW / HAY BALE FILTER	
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	
OVERLAND CATCHMENT FLOW ARROWS	

NOTES:

1. WHERE PRACTICAL, SEDIMENT AND EROSION CONTROL MEASURES INSTALLED DURING BULK EARTHWORKS ARE TO REMAIN IN PLACE AND BE MAINTAINED ACCORDINGLY.
2. ALL LOTS TO BE STABILISED (HYDROMULCH OR EQUIVALENT) FOLLOWING BULK EARTHWORKS.

C

FOR CONTINUATION REFER TO SHEET CC 100

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 7
BLACKETT MAGUIRE + GOLDSMITH

ADDED INTERIM DIRECTIONAL FLOW ARROWS
UPDATED DRAINAGE NETWORK

C

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
C	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
B	MG	DH	AS	PB	09/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1) SCALE 1:4000 (A3)

For: GAZCORP

By: Orion Consulting
JAS-ANZ
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

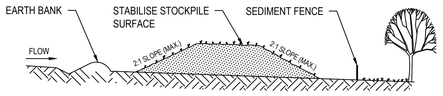
Title: SEDIMENT & EROSION CONTROL PLAN SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	101	C

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\1Z4S\data\ORION-SYNSTOR\S-19-0108-09-CC Industrial Site CC_20623\DWGS\19-0108-09-CC-101.dwg

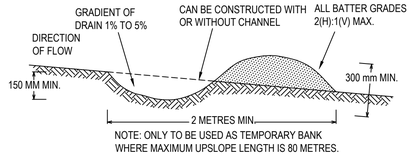
SEDIMENT & EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF ANY WORKS BEING CARRIED OUT. ALL SOIL AND EROSION MEASURES SHALL BE MAINTAINED AND KEPT IN PLACE FOR THE FULL DURATION OF THE WORKS AND SHALL ONLY BE REMOVED AT FINAL STABILISATION OF THE WORKS. WHERE IT IS NECESSARY TO UNDERTAKE STRIPPING IN ORDER TO CONSTRUCT A SEDIMENT CONTROL DEVICE ONLY SUFFICIENT GROUND SHALL BE STRIPPED TO ALLOW CONSTRUCTION.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED & MAINTAINED AS INDICATED ON THESE DRAWINGS. LOCATION AND EXTENT OF SOIL & WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT.
3. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ANY NECESSARY CONTROL IS IN PLACE EVEN THOUGH SUCH CONTROL MAY NOT BE SHOWN ON THE PLAN.
4. THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS & ALL EMPLOYEES OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION & POLLUTION TO DOWNSTREAM AREAS
5. APART FROM SEDIMENT BASINS, THE CONTRACTOR SHALL REGULARLY MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES & DESILT SUCH STRUCTURES PRIOR TO THE REDUCTION IN CAPACITY OF 30% DUE TO ACCUMULATED SEDIMENT. THE SEDIMENT SHALL BE DISPOSED OF ON SITE IN A MANNER APPROVED BY THE ENGINEER.
6. THE CONTRACTOR SHALLTEMPORARILY REHABILITATE WITHIN TEN (10) DAYS ANY DISTURBED AREAS PROVIDING A MINIMUM 60% COVER. FINAL REHABILITATION IS TO BE PROVIDED WITHIN A FURTHER 60 DAYS WITH A MINIMUM 70% COVER.
7. THE CONTRACTOR SHALL PROVIDE WATERING OF THE VEGETATED BATTERS FOR MAINTENANCE PERIOD. PLANT, MACHINERY AND VEHICLES SHALL NOT BE DRIVEN OVER GRASSED AREAS UNLESS ON AN APPROVED HAULAGE ROUTE.
8. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS QUICKLY AS POSSIBLE TO MINIMISE RISK OF EROSION.
9. SITE ACCESS SHALL BE RESTRICTED TO THE NOMINATED POINTS. THE CONTRACTOR SHALL PROVIDE STABILISED SITE ACCESS.
10. DUST AND SITE DISTURBANCE MUST BE KEPT TO A MINIMUM. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS MUST BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO REDUCE WIND EROSION. ERECT BARRIER FENCING TO MINIMISE LAND DISTURBANCE BY PREVENTING VEHICULAR AND PEDESTRIAN ACCESS TO AREAS BEING REHABILATATED AND LANDS THAT DO NOT NEED TO BE DISTURBED BY THIS PROJECT.
11. STOCKPILE TOPSOILS, SUBSOILS AND OTHER MATERIALS SEPARATELY.
12. TOPSOIL SHALL BE STORED IN LOW MOUNDS NO MORE THAN 2 METRES HIGH AND RE-USED WITHIN TWO MONTHS TO MAINTAIN ACTIVE POPULATIONS OF BENEFICIAL SOIL MICROBES & SEED.
13. PLACE ALL STOCKPILES AT LEAST FIVE METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS, ESPECIALLY EARTH BANKS AND ROADS. IF NECESSARY, EARTH BANKS OR DRAINS WILL BE CONSTRUCTED TO DIVERT LOCALISED RUN-ON.
14. TURN TOPSOIL STOCKPILES OVER TO AERATE THEM AT MONTHLY INTERVALS. ENSURE VEGETATION IS NOT INCORPORATED INTO THE SOIL.
15. AVOID REVERSING THE SOIL PROFILE MATERIALS DURING FILL OPERATIONS - REPLACE DISTURBED SOILS IN THEIR ORIGINAL ORDER.
16. ON COMPLETION OF MAJOR EARTHWORKS AND BEFORE ADDING TOPSOIL, LEAVE DISTURBED LANDS WITH A LOOSE SURFACE. ALTERNATELY, DISTURBED AREAS PREVIOUSLY COMPACTED BY CONSTRUCTION WORKS WILL BE RIPPED TO MORE THAN 200mm ALONG THE CONTOUR BEFORE APPLYING TOPSOIL
17. PROVIDING MATERIALS ARE AVAILABLE, SPREAD TOPSOIL TO A MINIMUM DEPTH OF 75mm IN REVEGETATION AREAS ON SLOPES OF 4(H):1(V) OR LESS AND TO A DEPTH OF 40 TO 60mm IN REVEGETATION AREAS STEEPER THAN 4:1.
18. LEAVE TOPSOIL IN A SCARIFIED OR ROUGH CONDITION ONCE REPLACED TO HELP MOISTURE INFILTRATION AND REDUCE SOIL EROSION.
19. ENSURE SOIL IS THOROUGHLY SOAKED TO A DEPTH OF 75mm (RAIN OR IRRIGATION) IMMEDIATELY BEFORE PLANTING.
20. HANDLE TOPSOIL ONLY WHEN IT IS MOIST (NOT WET OR DRY) TO AVOID DECLINE OF SOIL STRUCTURE
21. THE CONTRACTOR SHALL MAINTAIN A LOG BOOK DETAILING:
    - RECORDS OF ALL RAINFALL
    - CONDITION OF SOIL AND WATER MANAGEMENT STRUCTURES
    - ANY APPLICATION OF FLOCCULATING AGENTS TO SEDIMENT BASIN
    - VOLUMES OF ALL WATER DISCHARGED FROM SEDIMENT BASINS
    - ANY ADDITIONAL REMEDIAL WORKS REQUIRED.
22. THE LOG BOOK SHALL BE MAINTAINED ON A WEEKLY BASIS AND BE MADE AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. THE ORIGINAL LOG BOOK SHALL BE ISSUED TO THE PROJECT MANAGER AT THE COMPLETION OF WORKS
23. ALL ROAD EMBANKMENTS TO BE STABILISED AS PER LANDSCAPE ARCHITECTS DETAILS.
24. A SELF AUDITING PROGRAM SHOULD BE ESTABLISHED BASED ON A CHECK SHEET DEVELOPED FOR THE SITE. A SITE INSPECTION USING THE CHECK SHEET SHOULD BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE AND IMMEDIATELY FOLLOWING RAINFALL EVENTS THAT CAUSE RUNOFF.
25. UNDERTAKE THE SELF AUDIT BY:
    - WALKING AROUND THE SITE SYSTEMATICALLY (E.G. CLOCKWISE)
    - RECORDING THE CONDITION OF EVERY BMP EMPLOYED
    - RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH BMP
    - RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
    - FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER/SITE OPERATOR FOR THEIR INFORMATION
26. IN PARTICULAR, INSPECT:
    - LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE
    - ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES, ENSURING THEY ARE OPERATING CORRECTLY
    - AREAS THAT MIGHT SHOW WHETHER SEDIMENT OR OTHER POLLUTANTS ARE LEAVING THE SITE OR HAVE POTENTIAL TO DO SO
    - ALL DISCHARGE POINTS, TO ASSESS WHETHER THE EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO THE RECEIVING WATERS
27. A SITE INSPECTION USING THE CHECK SHEET WILL BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE, AND IMMEDIATELY FOLLOWING RAINFALL EVENTS GREATER THAN 5mm IN 24 HOURS.



CONSTRUCTION NOTES:
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. ALL STOCKPILES ARE TO BE LOCATED AND PLACED IN ACCORDANCE WITH THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
5. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) NO STABILISATION IS REQUIRED. REVIEW THE ADEQUACY OF SEDIMENT CONTROLS IF RAINFALL IS PREDICTED.
6. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) THE FOLLOWING ADDITIONAL CONTROLS ARE REQUIRED:
   -MAXIMUM BATTER SLOPE REDUCED TO 1:4
   -CONSTRUCT A CONTOUR DRAIN ON THE LOW SIDE OF THE STOCKPILE, AND DISCHARGING THROUGH A STRAW BALE OR 200mm HIGH GRAVEL DAM
   -ESTABLISH GRASS COVER TO SURFACE OF STOCKPILE WITHIN 14 DAYS, USING HYDROMULCH WITH A 75:25 MIX OF SEASONAL AND PERMANENT GRASS SEEDS, AND A STRAW MULCH THICKNESS OF NO LESS THAN 5mm.
7. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

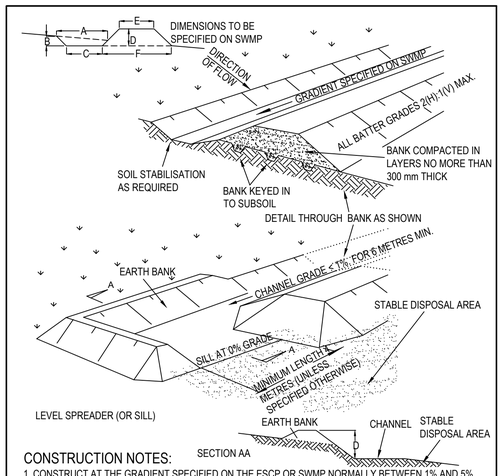
STOCKPILES — SD 4-1



NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

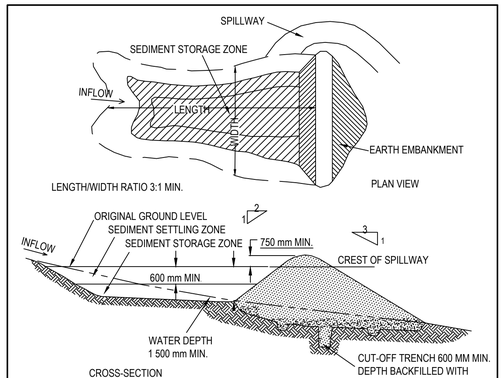
CONSTRUCTION NOTES:
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

EARTH BANK (LOW FLOW) — SD 5-5



CONSTRUCTION NOTES:
1. CONSTRUCT AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP,NORMALLY BETWEEN 1% AND 5%
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V-SHAPED, AT THE DIMENSIONS SHOWN ON THE SWMP.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION FOLLOWING TABLE 5.2 IN LANDCOM (2004).
7. WHERE DISCHARGING TO ERODIBLE LANDS, ENSURE THEY OUTLET THROUGH A PROPERLY CONSTRUCTED LEVEL SPREADER.
8. CONSTRUCT THE LEVEL SPREADER AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP,NORMALLY LESS THAN 1% OR LEVEL.
9. WHERE POSSIBLE, ENSURE THEY DISCHARGE WATERS ONTO EITHER STABILISED OR UNDISTURBED DISPOSAL SITES WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED. APPROVAL MIGHT BE REQUIRED TO DISCHARGE INTO OTHER SUBCATCHMENTS.

EARTH BANK (HIGH FLOWS) — SD 5-6



CONSTRUCTION NOTES:
1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500 MM DEEP AND 1,200 MM WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 PER CENT STANDARD PROCTOR DENSITY.
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100 MM TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100 MM TO 150 MM LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
7. CONSTRUCT THE EMERGENCY SPILLWAY. 8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.

EARTH BASIN - WET (APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY) — SD 6-4

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
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Scale:

For: GAZCORP

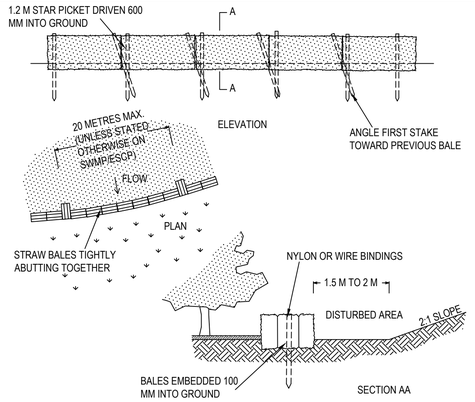
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SEDIMENT & EROSION CONTROL NOTES SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	102	B

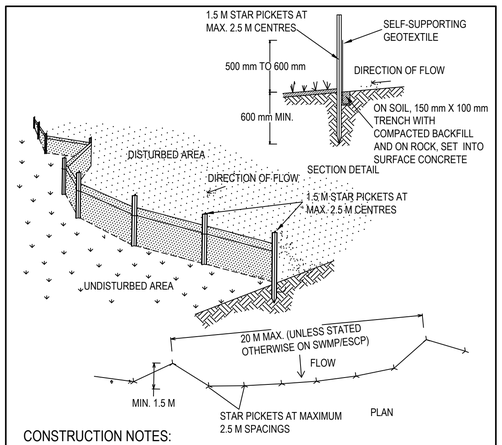
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CONSTRUCTION NOTES:

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75 mm TO 100 mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE.DRIVE THEM 600 mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

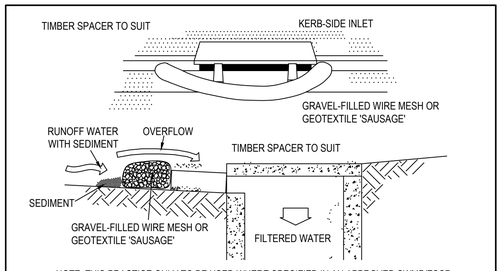
STRAW BALE FILTER — SD 6-7



CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE — SD 6-8

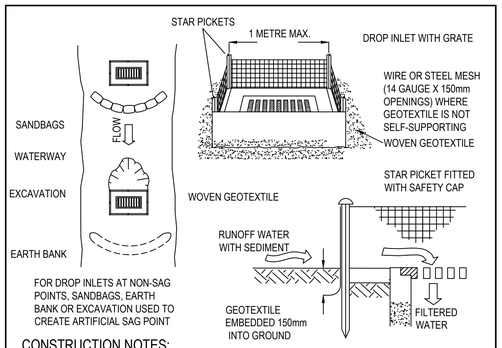


NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

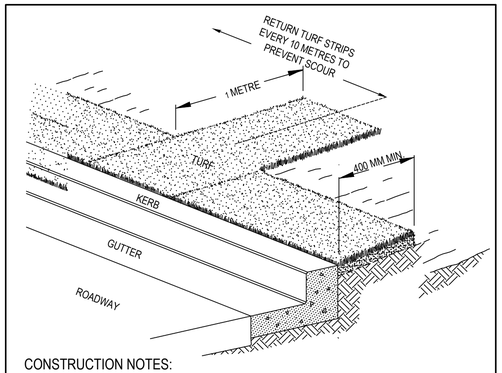
MESH AND GRAVEL INLET FILTER — SD 6-11



CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC.REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

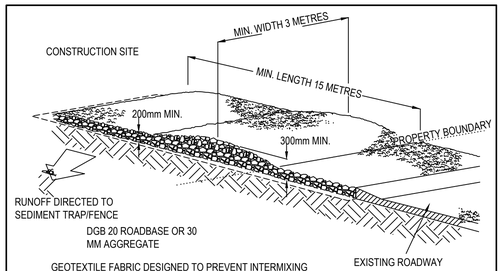
GEOTEXTILE INLET FILTER — SD 6-12



CONSTRUCTION NOTES:

1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.4 METRE LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m.
3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCP/SWMP.

KERBSIDE TURF STRIP — SD 6-13



GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOFABRIC MAY BE A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

CONSTRUCTION NOTES:

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS — SD 6-14

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SEDIMENT & EROSION CONTROL NOTES SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	103	B

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Jobs\data\ORION-SYNY\10ES-09-CC-Industrial Site CC_2062\3DWGS\19-0108-09-CC-103.dwg

NORTH

WATER NSW CORRIDOR STRICT ENTRY CONDITIONS AND CONSTRUCTION LICENSE REQUIREMENTS MUST BE ADHERED TO BY THE CONTRACTOR

LOT 102

LOT 103

PROPOSED UPGRADE OF WALLGROVE ROAD INTERSECTION. APPROVED BY TINSW. REF: SYD 12-00448. REFER PLANS BY ORION CONSULTING.

REFER TO DWG CC-206 FOR SCOUR PROTECTION DETAILS

MAKE SMOOTH CONNECTION WITH PAVEMENT. REFER TO PLANS PREPARED BY ORION CONSULTING FOR WALGROVE ROAD UPGRADE INFORMATION.

JELLYFISH BY OCEAN PROTECT

ROAD No.00

ROAD No.01

1200x600 RCBC

PROVIDE Ø600 CAPPED PIPE FOR FUTURE CONNECTION.

PROVIDE Ø525 CAPPED PIPE FOR FUTURE CONNECTION.

CAPPED PIPE FOR FUTURE CONNECTION.

SPLITTER PIT (1/13) REFER TO SHEET 530 FOR DETAILS

12m WIDE GRASS LINED BASIN EMERGENCY SPILLWAY FROM RL 62.5 AT 0.5% WITH 1V:4H BATTERS

LOT 14
RL 70.00

FOR CONTINUATION REFER TO SHEET CC 202

FOR CONTINUATION REFER TO SHEET CC 201

FOR CONTINUATION REFER TO SHEET CC 202

LEGEND

DRAINAGE FLUSH POINTS	FP

B UPDATED DRAINAGE NETWORK
ADDED FLUSH POINTS TO DRAINAGE NETWORK

KEY PLAN

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

PROPOSED UPGRADE OF WALLGROVE ROAD INTERSECTION. APPROVED BY TINSW. REF: SYD 12-00448. REFER PLANS BY ORION CONSULTING.

INSET 'A'

B CIVIL WORKS ON FUTURE LOTS BY OTHERS

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IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale: 0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 01 OF 04

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	200	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\1Jobs\dwg\ORION_SYN\01DES-09-CC Industrial Site CC_200230.DWG51510109-09-CC-200.dwg

FOR CONTINUATION REFER TO SHEET CC 200

FOR CONTINUATION REFER TO SHEET CC 202

NORTH

ROAD No.03

ROAD No.04

LOT 2
RL 67.00

LOT 5
RL 74.00

LOT 4
RL 72.00

LOT 6
RL 78.00

LOT 3A
RL 67.00

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CONSTRUCT 6m WIDE X 21m LONG REINFORCED TURF MAT BY GEOSYNTHETICS AUSTRALIA OR APPROVED EQUIVALENT TO MANUFACTURER'S SPECIFICATION.

REFER BELOW FOR TYPICAL SWALE PROFILE

PROVIDE Ø600 CAPPED PIPE FOR FUTURE CONNECTION.

CAPPED PIPE CONNECTIONS FOR FUTURE DRIVEWAY RAMP ONLY. REMAINING LOT 5 MUST DRIVE TO LOT 5 OSD TANK

CAPPED PIPE FOR FUTURE CONNECTION.

EXISTING CATCH DRAIN

WALLGROVE ROAD

SWALE 01b

CONSTRUCT PERMANENT STACKED ROCK HEADWALL AND RIPRAP SCOUR PROTECTION TO OUTLET. REFER SHEET CC-521 FOR DETAILS

CONSTRUCT PERMANENT STACKED ROCK HEADWALL AND RIPRAP SCOUR PROTECTION TO OUTLET. REFER SHEET CC-521 FOR DETAILS

INSET 'A'

ADDED FLUSH POINTS TO DRAINAGE NETWORK

B

KEY PLAN

3.0m 3.0m
3% 10%

TYPICAL SWALE DETAIL AA
SCALE N.T.S

FOR CONTINUATION REFER TO INSET 'A'

CIVIL WORKS ON FUTURE LOTS BY OTHERS

B

LEGEND

DRAINAGE FLUSH POINTS	FP

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ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: GAZCORP

By: Orion Consulting
JAS-ANZ
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 02 OF 04

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	201	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\Jobs\dwg\ORION-SYNO1\DES-99-CC Industrial\ Site CC_20623WGS19-0108-09-CC-201.dwg

FOR CONTINUATION REFER TO SHEET CC 200

FOR CONTINUATION REFER TO SHEET CC 203

FOR CONTINUATION REFER TO SHEET CC 201

NORTH

LOT 13
RL 70.50

LOT 14
RL 70.00

LOT 5
RL 74.00

ROAD No.01

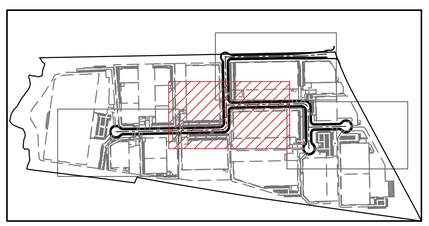
ROAD No.03

CAPPED PIPE FOR FUTURE CONNECTION.

PROVIDE Ø675 CAPPED PIPE FOR FUTURE CONNECTION.

PROVIDE Ø600 CAPPED PIPE FOR FUTURE CONNECTION.

KEY PLAN



LEGEND

DRAINAGE FLUSH POINTS	FP

UPDATED DRAINAGE NETWORK
ADDED FLUSH POINTS TO DRAINAGE NETWORK
B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

CIVIL WORKS ON FUTURE LOTS BY OTHERS
B

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Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: GAZCORP

By: Orion Consulting
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 03 OF 04

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	202	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\1Drift\data\ORION-SYNKY\DES\19-0108-09-CC-202.dwg

FOR OSD INFORMATION REFER TO INSET "A"

FOR CONTINUATION REFER TO SHEET CC 202

NORTH

LOT 10
RL 64.50

LOT 11A
RL 70.50

LOT 12A
RL 70.50

PROVIDE Ø450 STUB FOR POTENTIAL FUTURE CONNECTION

ROAD No.01

CAPPED PIPE FOR FUTURE CONNECTION.

PROVIDE Ø375 CAPPED PIPE FOR FUTURE CONNECTION

LOT 9
RL 71.00

LOT 8
RL 72.00

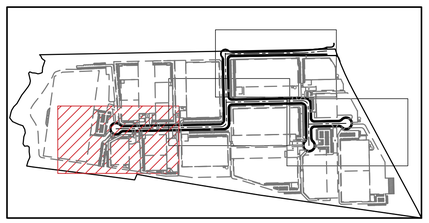
30m SETBACK RIPARIAN ZONE

CONSTRUCT HEADWALL AND SCOUR PROTECTION INTO EXISTING CHANNEL. REFER SHEET CC-520 FOR DETAILS

PROVIDE CAPPED PIPE FOR POSSIBLE FUTURE CONNECTION. DESIGN SUBJECT TO SEPARATE FUTURE APPROVAL OF LOT 9 AND LOT 10

CIVIL WORKS ON FUTURE LOTS BY OTHERS

INSET "A"
SCALE 1:500



KEY PLAN

LEGEND

DRAINAGE FLUSH POINTS	FP

UPDATED DRAINAGE NETWORK
ADDED FLUSH POINTS TO DRAINAGE NETWORK

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
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ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 04 OF 04

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	203	C

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\ORION\ORION-SYNSTOR\S-09-CC Industrial Site CC_2022\20\WDS\19-0108-09-CC-203.dwg

NORTH

LOT 356 DP 1094500
LOT 357 DP 1094500
LOT 3 DP 229769
LOT 101 DP 1168236
LOT 104 DP 1168236
LOT 105 DP 1168236
LOT 106
LOT 107
LOT 102
LOT 103
LOT 23 DP 1107533

TP201 TP202 TP203 TP204 TP205 TP206 TP207 TP208 TP209 TP210 TP211 TP212 TP213 TP214 TP215 TP216 TP217 TP218 TP219 TP220 TP221 TP222 TP223 TP224 TP225 TP226 TP227 TP228 TP229 TP230 TP231 TP232

BH1 BH101 BH102 BH103 BH104 BH105

ROAD No.00
ROAD No.01
ROAD No.03
ROAD No.04
WALLGROVE ROAD
SWALE 01a
SWALE 01b

LIMIT OF PAVEMENT CH 43.815. JOINT AS PER DETAIL

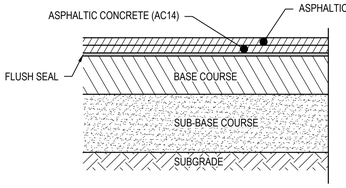
LOT 14
LOT 13
LOT 11C
LOT 12C
LOT 11B
LOT 12B
LOT 11A
LOT 12A
LOT 10
LOT 2
LOT 5
LOT 8
LOT 7
LOT 9
LOT 6
LOT 4
LOT 3A
LOT 3B

30m SETBACK RIPARIAN ZONE

LOT 239 DP 13905
LOT 2406 DP 1090132
LOT 2405 DP 109032
LOT 2 DP 1021715
LOT 243 DP 13905
LOT 1 DP 523725
LOT 2 DP 523725
LOT A DP 393990
LOT B DP 393990
LOT 246 DP 13905
LOT 247 DP 13905
LOT 4 DP 24094

LEGEND

PROPOSED PAVEMENT TYPE 1	
PROPOSED FOOTPATH PAVEMENT	
EXISTING PAVEMENT	
TEST PIT LOCATION FROM DOUGLAS PARTNERS REPORT 99735.00.R.003.Rev1 (DATED 20/04/2021)	



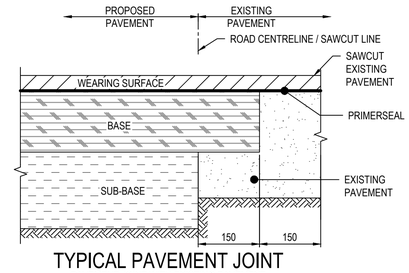
PAVEMENT DETAIL - TYPE 1
SCALE: NTS

PAVEMENT DESIGN BY DOUGLAS PARTNERS
REPORT REF: 99735.00.R.003.Rev1
(DATED 20/04/2021)

PAVEMENT TYPE 1 - RECOMMENDED PAVEMENT THICKNESS (mm)

SUB-BASE LAYER 1	BASECOURSE	WEARING COURSE	TOTAL
500mm (DGS20 OR DGS40)	150mm (DGB20)	25mm (AC10) 35mm (AC14)	710mm

C



TYPICAL PAVEMENT JOINT
PAVEMENT JOINT WITH EXISTING PAVEMENT
SCALE: NOT TO SCALE

NOTE:

1. PAVEMENTS TO BE COMPLETED IN ACCORDANCE WITH WITH COUNCIL REQUIREMENTS/SPECIFICATION AND AUSTROADS GUIDE TO PAVEMENT TECHNOLOGY PART 2: PAVEMENT STRUCTURAL DESIGN 2017 AND AS PER DOUGLAS PARTNERS REPORT REF. 99735.00.R.003.Rev1 (DATED 20/04/2021)
2. DESIGN SUBGRADE CBR VALUES AND ADOPTED TRAFFIC LOADINGS ARE NOTED, SEE RIGHT TABLE. SUBGRADE CBR AND THE RECOMMENDED PAVEMENT SHOULD BE VERIFIED AFTER PRELIMINARY BOXING.
3. PAVEMENT BASECOURSE AND SUB-BASE MATERIALS SHOULD COMPRISE RECYCLED OR HARD ROCK CRUSHED GRAVEL COMPLYING WITH RMS 3051 OR AS APPROVED BY COUNCIL.
4. ASPHALTIC CONCRETE WEARING COURSES SHOULD BE DESIGNED WITH A MINIMUM 40mm LAYER OF AC10 RESIDENTIAL MIX FROM 'AUSTROADS GUIDE TO PAVEMENT TECHNOLOGY – PART 4B ASPHALT'.
5. PAVEMENT/SUBGRADE COMPACTION SHOULD MEET COUNCIL'S MINIMUM SPECIFICATION WHICH IS AS FOLLOWS:
   BASECOURSE: 98% MODIFIED
   SUB-BASE: 98% MODIFIED
   SUBGRADE: 100% STANDARD
6. SUBGRADE CONDITIONS WILL BE ASSESSED AFTER BOXING AT THE TIME OF CONSTRUCTION. IF ADVERSE CONDITIONS ARE FOUND DURING SUBGRADE PREPARATION, DRYING OUT THE WET MATERIAL FROM SUBGRADE MAY BE REQUIRED DEPENDING UPON THE FIELD CONDITIONS AT THE TIME OF BOXING THE SUBGRADE. ALTERNATIVELY SUBGRADE REPLACEMENT WITH SELECT FILL MAY BE REQUIRED. HOWEVER THE EXTENT OF SUBGRADE TREATMENT SHOULD BE VERIFIED AFTER PRELIMINARY BOXING.
7. SUBSOIL DRAINS SHOULD BE INSTALLED TO A DEPTH PREFERABLY NOT LESS THAN 600mm BELOW FINISHED LEVEL OR AS DIRECTED BY COUNCIL ENGINEERS.
8. DEMOLITION OF TEMPORARY TURNING HEAD(S) / TEMPORARY ROAD(S) REQUIRES SUFFICIENT EXCAVATION OF ALL PAVEMENT MATERIALS (INCLUDING RESIDUE PAVEMENT MATERIALS) SO THAT NO CONTAMINATION FROM THESE ROADS REMAINS ON SITE. FURTHER, ANY SOILS ADJOINING THESE ROAD(S) / TURNING HEAD(S) POTENTIALLY AFFECTED BY RESIDUE PAVEMENT MATERIAL OR CONTAMINATED RUNOFF MUST BE INSPECTED AND REMOVED WHERE CONSIDERED AFFECTED OR CONTAMINATED. CONTAMINATED PAVEMENT MATERIALS AND SOILS ARE TO BE WASTE CLASSIFIED FOR EITHER DISPOSAL TO A LICENSED LANDFILL OR ASSESSED FOR POSSIBLE REUSE UNDER A NSW ENVIRONMENT PROTECTION AUTHORITY RESOURCE RECOVERY ORDER OR EXEMPTION.

A CERTIFIED ENVIRONMENTAL PRACTITIONER (A SITE CONTAMINATION SPECIALIST) MUST INSPECT THE SITE POST-EXCAVATION AND CONFIRM IN WRITING THAT THEY ARE SATISFIED (WHICH MAY INCLUDE THE NEED FOR TESTING) THAT NO RESIDUAL CONTAMINATION FROM THE TEMPORARY TURNING HEAD(S)/ROAD(S) REMAINS ON THE LAND. THE WRITTEN CONFIRMATION MUST BE PROVIDED TO THE PCA PRIOR TO THE ISSUE OF A SUBDIVISION CERTIFICATE FOR THE APPROVED LOTS THEREON, PRIOR TO THE RELEASE OF ANY BOND HELD FOR THE DEMOLITION WORKS.

PAVEMENT NOTE:

- CONTRACTOR TO CONFIRM CBR AND PAVEMENT DESIGN PRIOR TO CONSTRUCTION.
- PAVEMENT DESIGN TO COMPLY WITH ALL RELEVANT FCC DESIGN SPECIFICATIONS.

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

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Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1) SCALE 1:4000 (A3)

For: GAZCORP

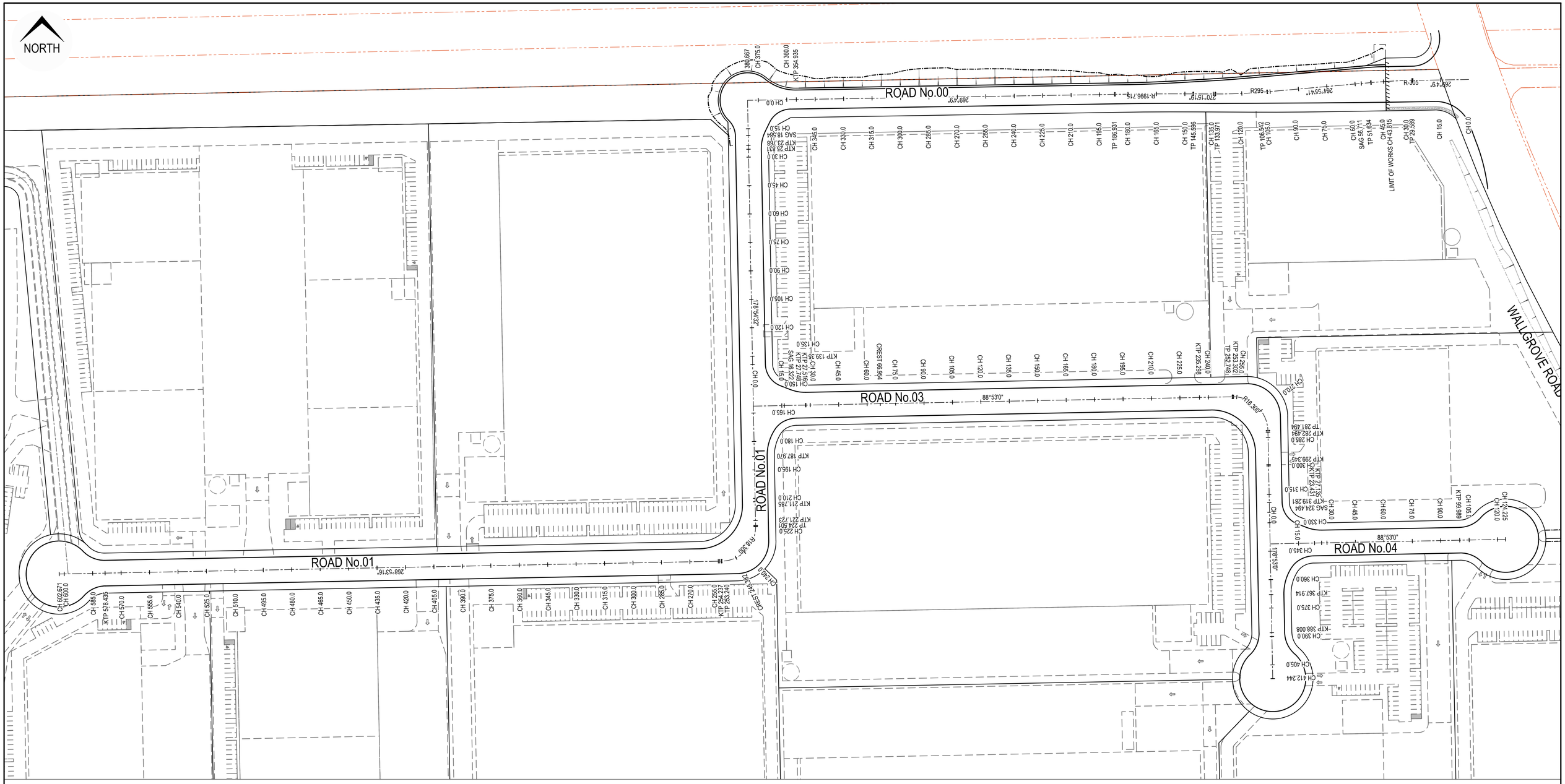
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: PAVEMENT PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	204	C

Printed:Monday, 30 March 2020 2:57:45 PM File Name:C:\Users\dallas\ORION-SYNO1\DES-19-CC Industrial Site CC_2582\DWGS\19-0108-09-CC-204.dwg



SETOUT TABLE ROAD No.00

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	301205.84	6255579.05	269°04'09.28"		
29.59	301176.25	6255578.57	269°04'09.28"		
40.61	301165.23	6255578.39		-305	22.045
51.63	301154.25	6255577.42	264°55'40.95"		
106.54	301099.55	6255572.56	264°55'40.95"		
120.26	301085.88	6255571.35		295	27.429
133.97	301072.16	6255571.41	270°15'19.34"		
145.6	301060.53	6255571.46	270°15'19.34"		
166.26	301039.86	6255571.55		-1996.715	41.336
186.93	301019.2	6255571.22	269°04'09.28"		
380.67	300825.49	6255568.07	269°04'09.28"		

SETOUT TABLE ROAD No.04

CHAINAGE	EASTING	NORTHING	BEARING
0	301101.08	6255334.07	88°53'00.11"
124.22	301225.28	6255336.49	88°53'00.11"

SETOUT TABLE ROAD No.01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300825.49	6255568.07	178°54'32.08"		
224.5	300829.76	6255343.61	178°54'32.08"		
238.87	300830.11	6255325.32		18.3	28.739
253.24	300811.82	6255324.97	268°53'16.02"		
602.67	300462.46	6255318.18	268°53'16.02"		

SETOUT TABLE ROAD No.03

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300828.56	6255406.74	88°53'00.19"		
252.75	301081.26	6255411.67	88°53'00.19"		
267.12	301099.56	6255412.02		18.3	28.746
281.49	301099.91	6255393.73	178°53'00.04"		
412.24	301102.46	6255263	178°53'00.04"		

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
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SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

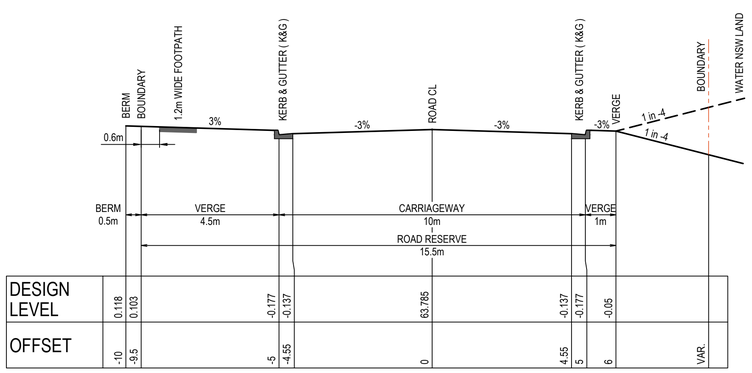
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: CONTROL LINE SETOUT PLAN

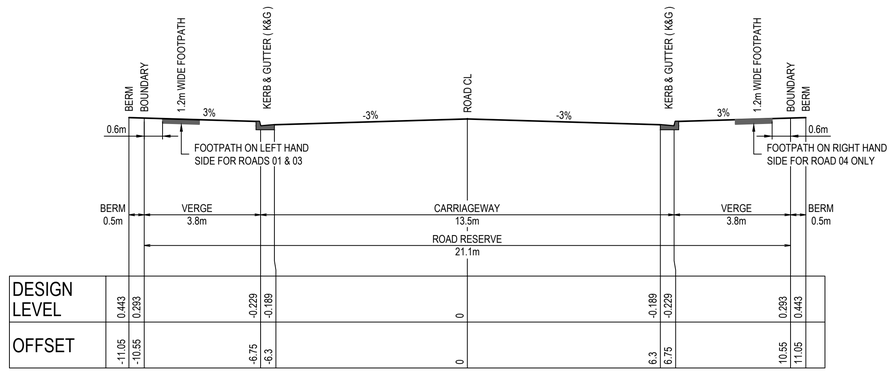
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	205	B

Plotted:Monday, 30 March 2020 2:47:46 PM File Name:C:\19JobsData\ORION-SYNSYDES-39\CC-Industrial Site CC_20822\DWGS\19-0108-09-CC-205.dwg



ROAD No.00 TYPICAL SECTION

SCALE 1:100 NATURAL



ROAD No.01, 03 & 04 TYPICAL SECTION

SCALE 1:100 NATURAL

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
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SCALE 1:100 (A1)
SCALE 1:200 (A3)

For: GAZCORP

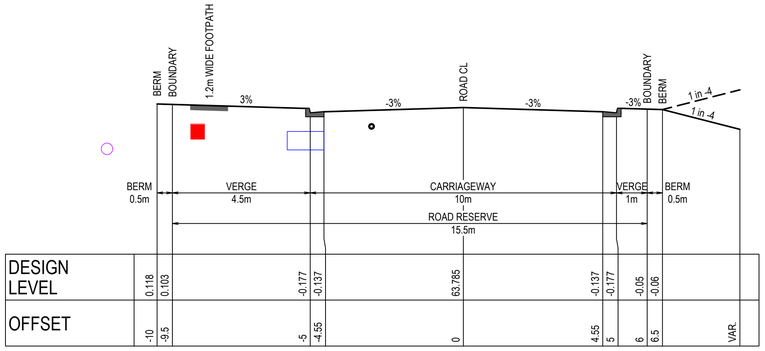
By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

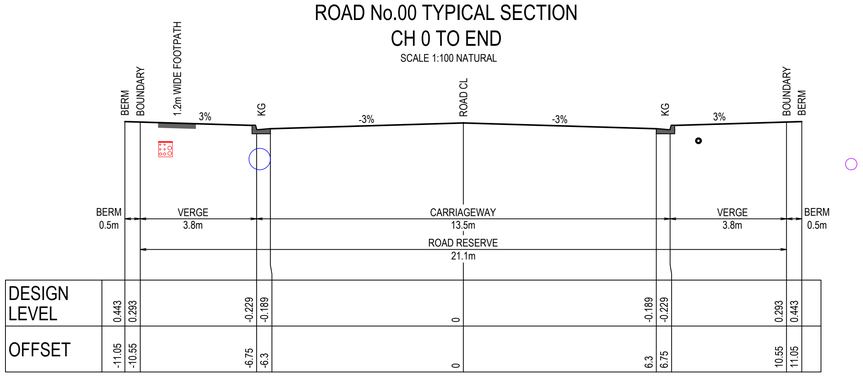
Title: TYPICAL ROAD CROSS SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	300	B

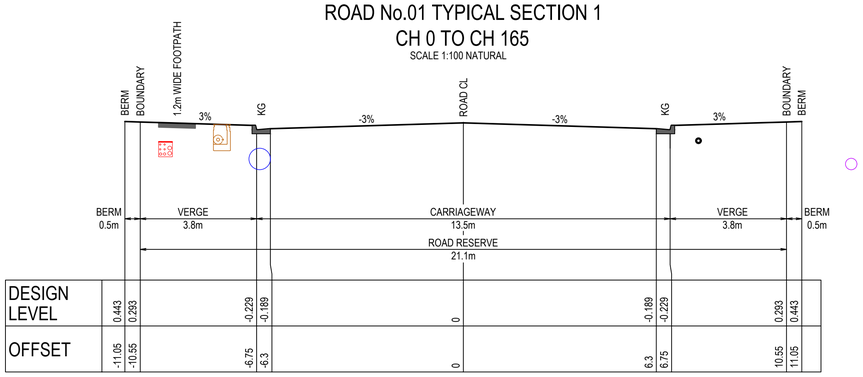
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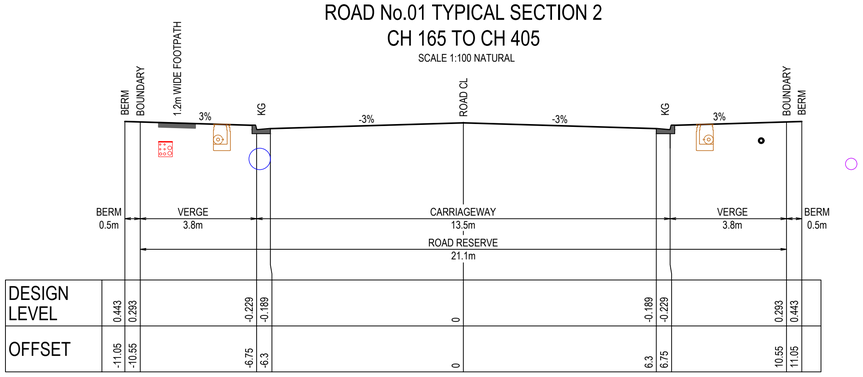
ROAD No.00 TYPICAL SECTION
CH 0 TO END
SCALE 1:100 NATURAL



ROAD No.01 TYPICAL SECTION 1
CH 0 TO CH 165
SCALE 1:100 NATURAL



ROAD No.01 TYPICAL SECTION 2
CH 165 TO CH 405
SCALE 1:100 NATURAL



ROAD No.01 TYPICAL SECTION 3
CH 405 TO END
SCALE 1:100 NATURAL

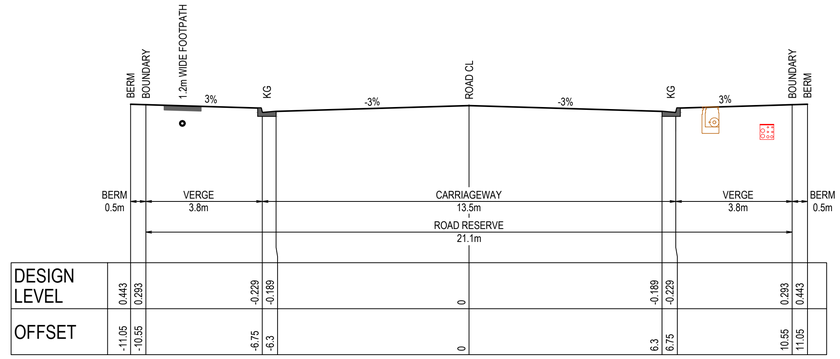
B UPDATED STANDARD SECTIONS

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

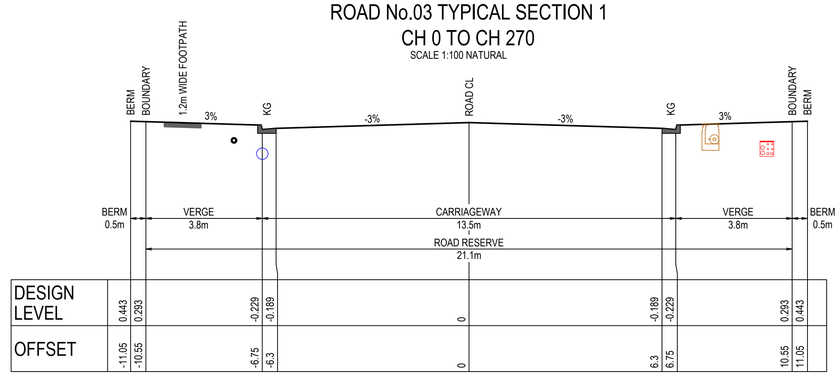
NOTE:
SERVICE LOCATIONS SUBJECT TO DETAILED DESIGN AND APPROVAL

LEGEND

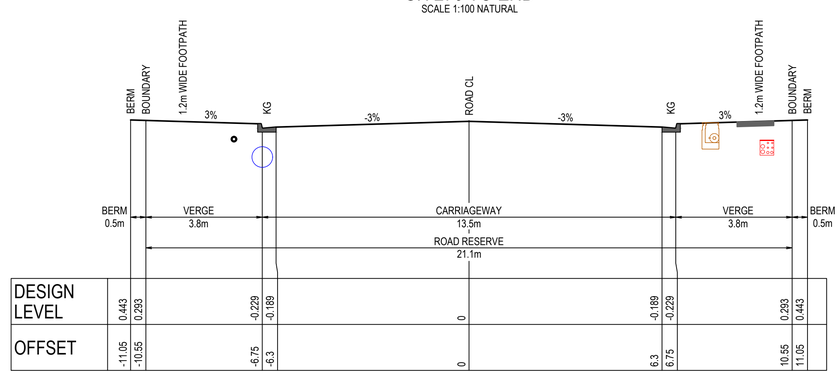
ELECTICAL UTILITY	
NBN UTILITY	
POTABLE WATERMAIN	
STORMWATER DRAINAGE	
SEWERAGE	



ROAD No.03 TYPICAL SECTION 1
CH 0 TO CH 270
SCALE 1:100 NATURAL



ROAD No.03 TYPICAL SECTION 2
CH 270 TO END
SCALE 1:100 NATURAL



ROAD No.04 TYPICAL SECTION
CH 0 TO END
SCALE 1:100 NATURAL

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale: 0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: TYPICAL SERVICES CROSS SECTIONS

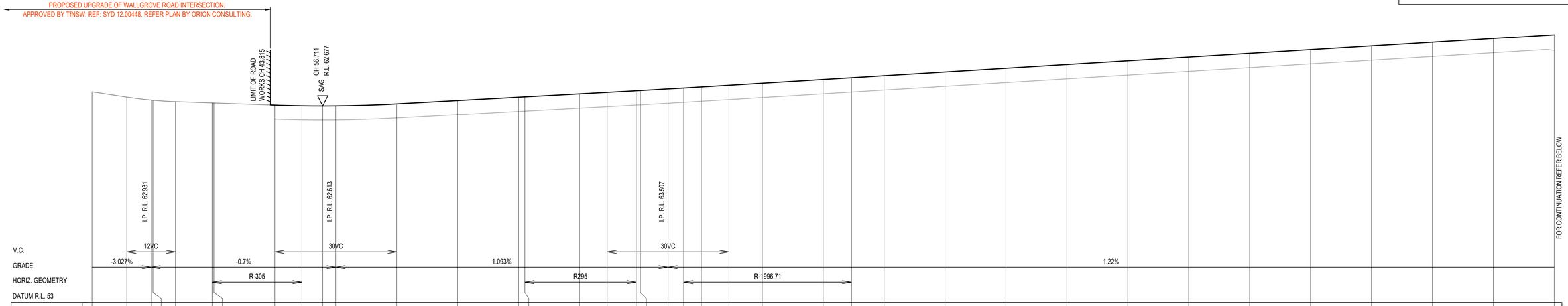
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	301	B

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LEGEND

FINISHED DESIGN SURFACE LEVEL

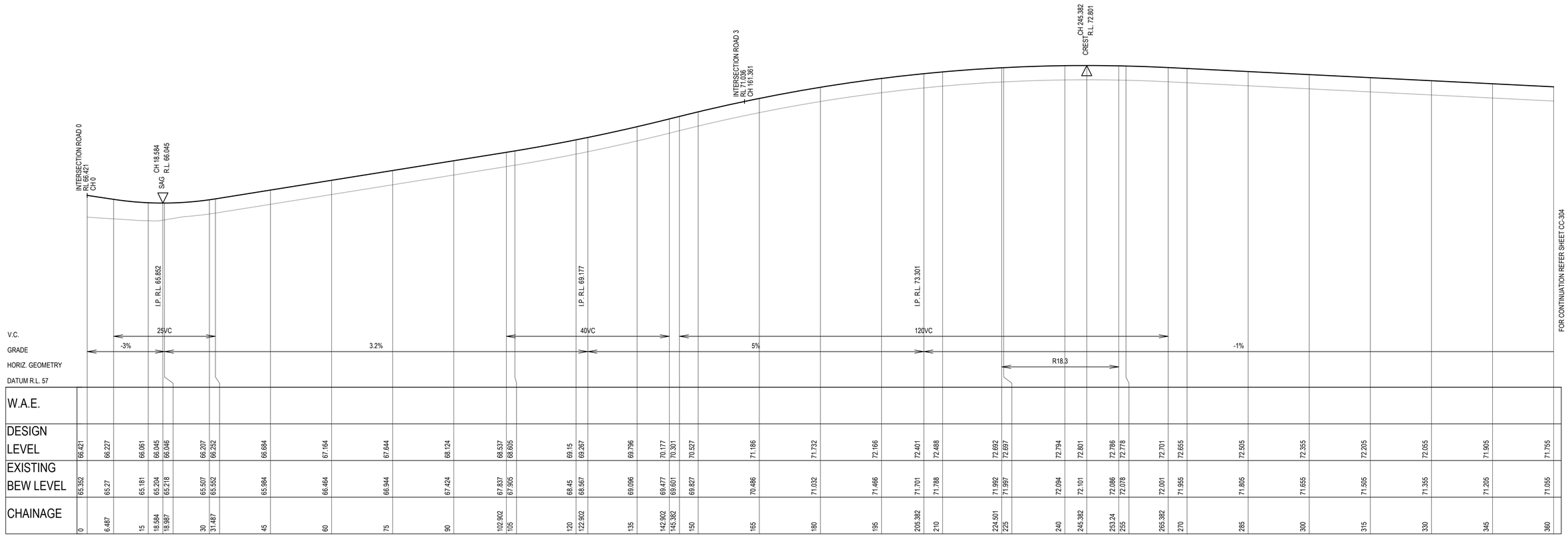
EXISTING BEW SURFACE



| | | |

LEGEND	
FINISHED DESIGN SURFACE LEVEL	———
EXISTING BEW SURFACE	———

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

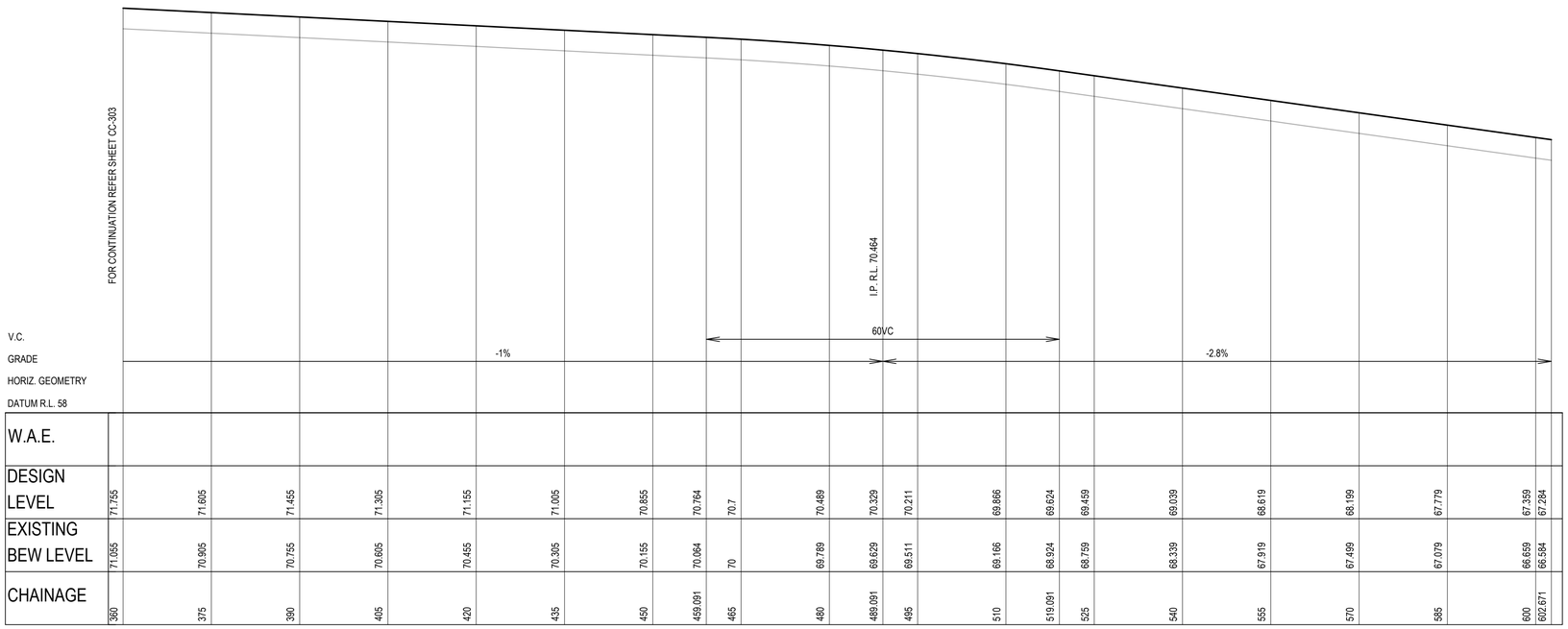


| | | |

LEGEND

FINISHED DESIGN SURFACE LEVEL

EXISTING BEW SURFACE

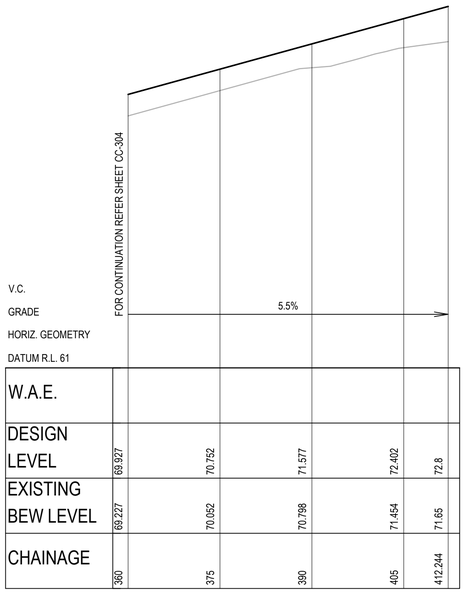


| | | |

LEGEND

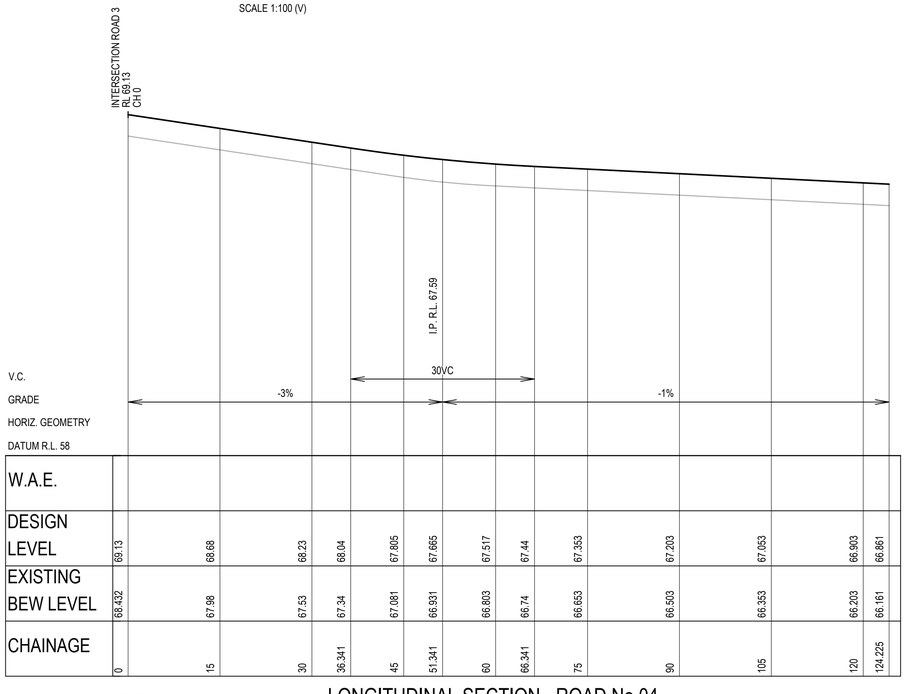
FINISHED DESIGN SURFACE LEVEL

EXISTING BEW SURFACE



LONGITUDINAL SECTION - ROAD No.03

SCALE 1:500 (H)
SCALE 1:100 (V)



LONGITUDINAL SECTION - ROAD No.04

SCALE 1:500 (H)
SCALE 1:100 (V)

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

B BEW SURFACE ADDED

ISSUED FOR **CONSTRUCTION**

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD LONGSECTION SHEET 04 OF 04

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	305	B

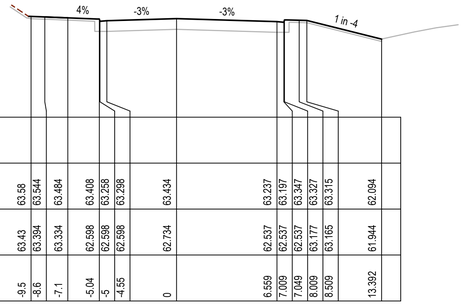
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ROAD No.00

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 57

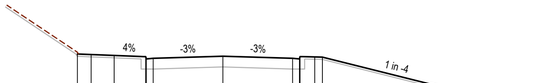
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ROAD No.00

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

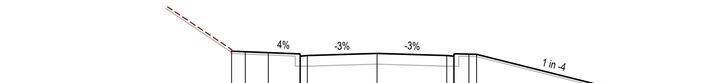
LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	65.217	65.181	65.121	65.045	64.895	64.935	65.071	64.935	64.895	65.045	65.024	65.012	62.649	
EXISTING BEW LEVEL	65.067	65.031	64.971	64.235	64.235	64.235	64.371	64.235	64.235	64.235	64.874	64.862	62.499	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	15.954	

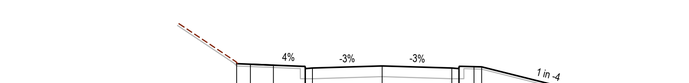
CH 270



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	65.4	65.364	65.304	65.228	65.078	65.118	65.254	65.118	63.078	65.228	65.208	65.195	62.727	
EXISTING BEW LEVEL	65.25	65.214	65.154	64.418	64.418	64.418	64.554	64.418	64.418	64.418	65.058	65.045	62.577	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	16.371	

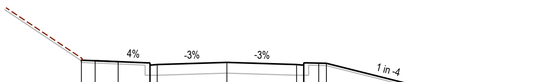
CH 285



DATUM R.L. 59

W.A.E.														
DESIGN LEVEL	65.583	65.547	65.487	65.411	65.261	65.301	65.437	65.301	65.261	65.411	65.391	65.378	63.263	
EXISTING BEW LEVEL	65.433	65.397	65.337	64.601	64.601	64.601	64.737	64.601	64.601	64.601	65.241	65.228	63.113	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	14.959	

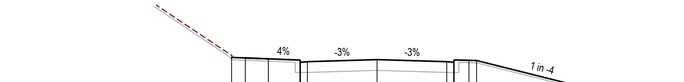
CH 300



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	64.688	64.632	64.572	64.496	64.346	64.386	64.522	64.386	64.346	64.496	64.475	64.463	62.501	
EXISTING BEW LEVEL	64.518	64.482	64.422	63.686	63.686	63.686	63.822	63.686	63.686	63.686	64.325	64.313	62.351	
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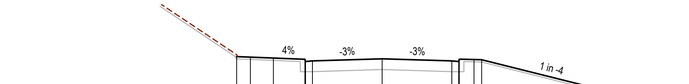
CH 225



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	64.851	64.815	64.755	64.679	64.529	64.569	64.705	64.569	64.529	64.679	64.658	64.646	62.564	
EXISTING BEW LEVEL	64.701	64.665	64.605	63.869	63.869	63.869	64.005	63.869	63.869	63.869	64.508	64.496	62.414	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	14.828	

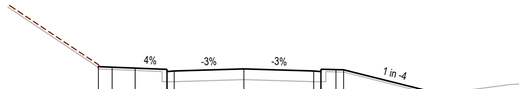
CH 240



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	65.034	64.998	64.938	64.862	64.712	64.752	64.888	64.752	64.712	64.862	64.841	64.829	62.606	
EXISTING BEW LEVEL	64.884	64.848	64.788	64.052	64.052	64.052	64.188	64.052	64.052	64.052	64.691	64.679	62.456	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	15.394	

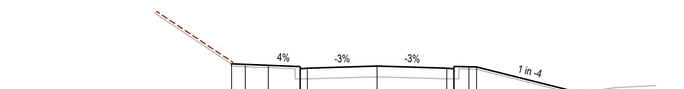
CH 255



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	64.119	64.083	64.023	63.947	63.797	63.837	63.973	63.836	63.796	63.946	63.926	63.914	62.304	
EXISTING BEW LEVEL	63.969	63.933	63.873	63.137	63.137	63.137	63.273	63.136	63.136	63.136	63.776	63.764	62.154	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.562	5.012	5.052	6.012	6.512	12.952	

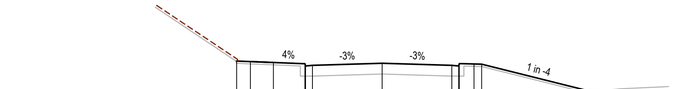
CH 180



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	64.302	64.266	64.206	64.13	63.98	64.02	64.156	64.02	63.98	64.13	64.109	64.097	62.418	
EXISTING BEW LEVEL	64.152	64.116	64.056	63.32	63.32	63.32	63.456	63.32	63.32	63.32	63.959	63.947	62.268	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.217	

CH 195



DATUM R.L. 58

W.A.E.														
DESIGN LEVEL	64.485	64.449	64.389	64.313	64.163	64.203	64.339	64.203	64.163	64.313	64.292	64.28	62.48	
EXISTING BEW LEVEL	64.335	64.299	64.239	63.503	63.503	63.503	63.639	63.503	63.503	63.503	64.142	64.13	62.33	
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.702	

CH 210

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 02 OF 12

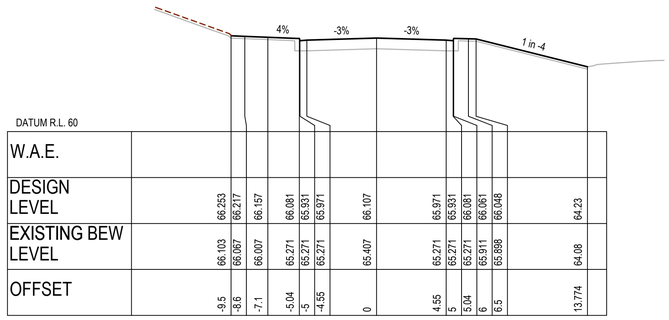
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	311	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\12dSdata\ORION SYNTIDES 09-CC Industrial Site CC 2063\2DWGS\dwf19-0108 09-CC D-OCE A1 TITLEBLOCK.dwg

ROAD No.00

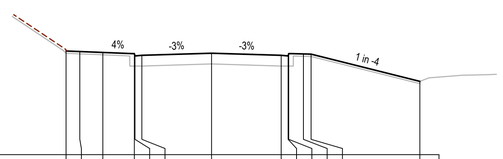
LEGEND

- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



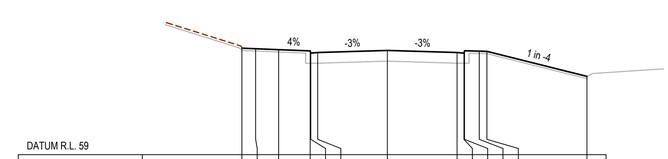
DATUM R.L. 60													
W.A.E.													
DESIGN LEVEL	66.253	66.217	66.157	66.081	65.931	65.971	66.107	65.971	65.931	66.081	66.061	66.048	64.23
EXISTING BEW LEVEL	66.103	66.067	66.007	65.271	65.271	65.271	65.407	65.271	65.271	65.271	65.911	65.898	64.08
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.774

CH 354.935



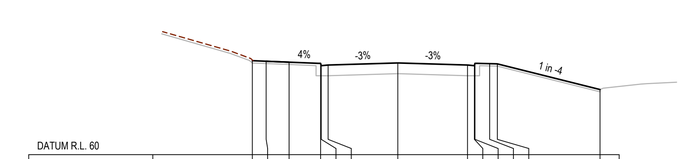
DATUM R.L. 59													
W.A.E.													
DESIGN LEVEL	66.766	65.73	65.67	65.594	65.444	65.484	65.62	65.484	65.444	65.394	65.574	65.561	63.785
EXISTING BEW LEVEL	65.616	65.58	65.52	64.784	64.784	64.784	64.92	64.784	64.764	64.784	65.424	65.411	63.635
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.603

CH 315



DATUM R.L. 59													
W.A.E.													
DESIGN LEVEL	65.949	65.913	65.853	65.777	65.627	65.667	65.603	65.667	65.627	65.777	65.757	65.744	64.111
EXISTING BEW LEVEL	65.799	65.763	65.703	64.967	64.967	64.967	65.103	64.967	64.967	64.967	65.607	65.594	63.961
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.032

CH 330



DATUM R.L. 60													
W.A.E.													
DESIGN LEVEL	66.132	66.096	66.036	65.96	65.81	65.85	65.986	65.85	65.81	65.96	65.94	65.927	64.251
EXISTING BEW LEVEL	65.982	65.946	65.886	65.15	65.15	65.15	65.266	65.15	65.15	65.15	65.79	65.777	64.101
OFFSET	-9.5	-8.6	-7.1	-5.04	-5	-4.55	0	4.55	5	5.04	6	6.5	13.203

CH 345

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

B BEW SURFACE ADDED

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 03 OF 12

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	312	B

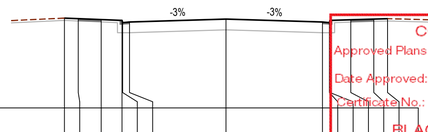
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ROAD No.01

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

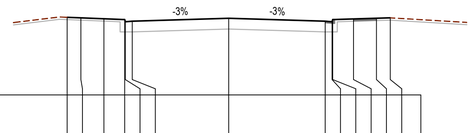
LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 64

W.A.E.																							
DESIGN LEVEL	69.861	69.825	69.765	69.717	69.567	69.607	69.796	69.607	69.567	69.717	69.753	69.798	69.825										
EXISTING BEW LEVEL	69.711	69.675	69.615	68.907	68.907	68.907	69.096	68.907	68.907	68.907	69.603	69.648	69.675										
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

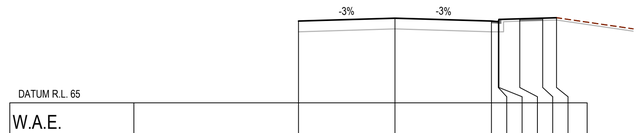
CH 135



DATUM R.L. 65

W.A.E.																							
DESIGN LEVEL	70.066	70.03	69.97	69.922	69.772	69.812	70.001	69.812	69.772	69.922	69.958	70.003	70.03										
EXISTING BEW LEVEL	69.916	69.88	69.82	69.112	69.112	69.112	69.301	69.112	69.112	69.808	69.853	69.88											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

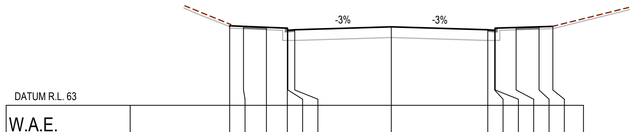
CH 139.319



DATUM R.L. 65

W.A.E.																							
DESIGN LEVEL	70.338	70.527	70.338	70.298	70.448	70.484	70.529	70.566															
EXISTING BEW LEVEL	69.638	69.827	69.638	69.638	69.638	70.334	70.379	70.406															
OFFSET	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55															

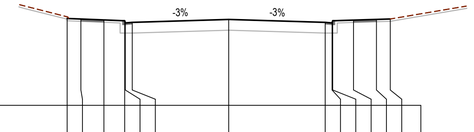
CH 150



DATUM R.L. 63

W.A.E.																							
DESIGN LEVEL	68.19	68.154	68.094	68.045	67.895	67.935	68.124	67.935	67.895	68.045	68.081	68.126	68.153										
EXISTING BEW LEVEL	68.04	68.004	67.944	67.235	67.235	67.235	67.424	67.235	67.235	67.235	67.931	67.976	68.003										
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

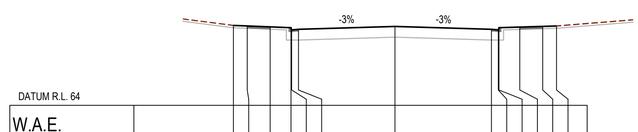
CH 90



DATUM R.L. 63

W.A.E.																							
DESIGN LEVEL	68.671	68.635	68.575	68.526	68.376	68.416	68.605	68.416	68.376	68.526	68.562	68.607	68.634										
EXISTING BEW LEVEL	68.521	68.485	68.425	67.716	67.716	67.716	67.905	67.716	67.716	68.412	68.457	68.484											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

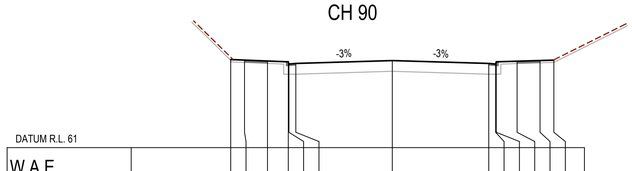
CH 105



DATUM R.L. 64

W.A.E.																							
DESIGN LEVEL	69.215	69.179	69.119	69.071	68.921	68.961	69.15	68.961	68.921	69.071	69.107	69.152	69.179										
EXISTING BEW LEVEL	69.065	69.029	68.969	68.261	68.261	68.261	68.45	68.261	68.261	68.957	69.002	69.029											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

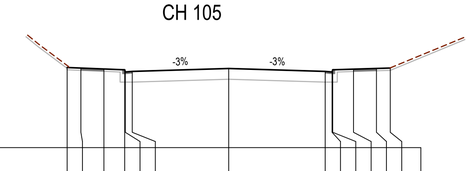
CH 120



DATUM R.L. 61

W.A.E.																							
DESIGN LEVEL	66.75	66.714	66.654	66.605	66.495	66.495	66.684	66.495	66.455	66.605	66.641	66.686	66.713										
EXISTING BEW LEVEL	66.6	66.564	66.504	65.795	65.795	65.795	65.984	65.795	65.795	65.795	66.491	66.536	66.563										
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

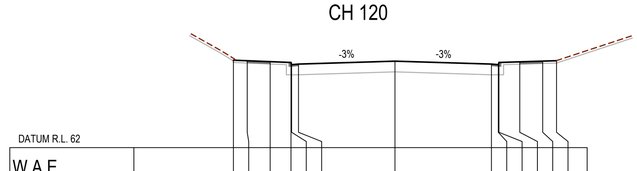
CH 45



DATUM R.L. 62

W.A.E.																							
DESIGN LEVEL	67.23	67.194	67.134	67.085	66.935	66.975	67.164	66.975	66.935	67.085	67.121	67.166	67.193										
EXISTING BEW LEVEL	67.08	67.044	66.984	66.275	66.275	66.275	66.464	66.275	66.275	66.971	67.016	67.043											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

CH 60



DATUM R.L. 62

W.A.E.																							
DESIGN LEVEL	67.71	67.674	67.614	67.565	67.415	67.455	67.644	67.455	67.415	67.565	67.601	67.646	67.673										
EXISTING BEW LEVEL	67.56	67.524	67.464	66.755	66.755	66.755	66.944	66.755	66.755	66.755	67.451	67.496	67.523										
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

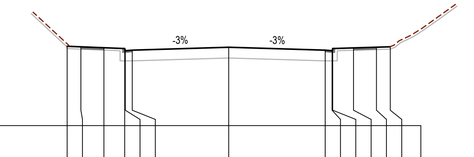
CH 75



DATUM R.L. 61

W.A.E.																							
DESIGN LEVEL	66.079	65.89	65.85	66	66.036	66.081	66.108																
EXISTING BEW LEVEL	65.379	65.19	65.19	65.19	65.886	65.931	65.958																
OFFSET	0	6.3	6.75	6.79	8.15	9.65	10.55																

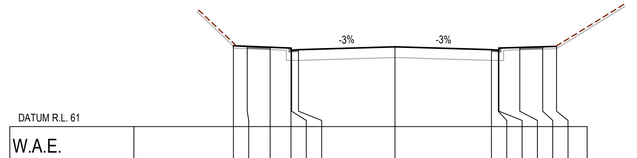
CH 23.768



DATUM R.L. 61

W.A.E.																							
DESIGN LEVEL	66.176	66.14	66.08	66.031	65.881	65.921	66.11	65.921	65.881	66.031	66.068	66.113	66.14										
EXISTING BEW LEVEL	66.026	65.99	65.93	65.221	65.221	65.221	65.41	65.221	65.221	65.918	65.963	65.99											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

CH 25.831



DATUM R.L. 61

W.A.E.																							
DESIGN LEVEL	66.272	66.236	66.176	66.128	65.978	66.018	66.207	66.018	65.978	66.128	66.164	66.209	66.236										
EXISTING BEW LEVEL	66.122	66.086	66.026	65.318	65.318	65.318	65.507	65.318	65.318	66.014	66.059	66.086											
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55										

CH 30

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
813-913 WALLGROVE ROAD
INDUSTRIAL SITE
ROAD & DRAINAGE DESIGN

Title:
ROAD CROSS SECTION
SHEET 04 OF 12

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	313	B

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ROAD No.01

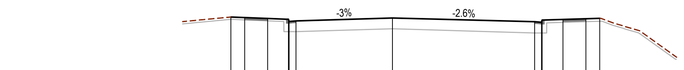
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.915	72.879	72.819	72.77	72.662	72.66	72.801	72.52	72.48	72.63	72.667	72.712	72.739	
EXISTING BEW LEVEL	72.653	72.617	72.557	71.848	71.848	71.848	72.101	71.78	71.78	71.78	72.476	72.521	72.548	
OFFSET	-12.678	-11.778	-10.278	-8.918	-8.878	-8.428	0	10.714	11.164	11.204	12.564	14.064	14.964	

CH 245.382



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.851	72.815	72.755	72.707	72.657	72.597	72.786	72.547	72.507	72.657	72.693	72.738	72.765	
EXISTING BEW LEVEL	72.701	72.665	72.605	71.897	71.897	71.897	72.086	71.807	71.807	71.807	72.503	72.548	72.575	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	9.283	9.733	9.773	11.133	12.633	13.533	

CH 253.24



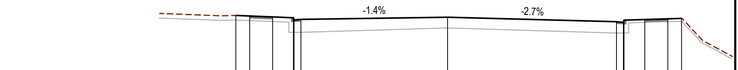
DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.756	72.72	72.66	72.612	72.462	72.502	72.692	72.441	72.401	72.551	72.587	72.632	72.659	
EXISTING BEW LEVEL	72.607	72.571	72.511	71.803	71.803	71.803	71.992	71.714	71.714	71.714	72.41	72.455	72.482	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	9.283	9.733	9.773	11.133	12.633	13.533	

CH 224.501



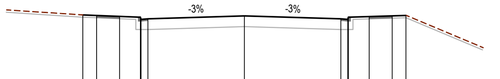
DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.763	72.727	72.667	72.618	72.468	72.508	72.697	72.443	72.403	72.553	72.59	72.635	72.662	
EXISTING BEW LEVEL	72.612	72.576	72.516	71.808	71.808	71.808	71.997	71.715	71.715	71.715	72.411	72.456	72.483	
OFFSET	-10.559	-9.659	-8.159	-6.799	-6.759	-6.309	0	9.417	9.867	9.907	11.267	12.767	13.667	

CH 225



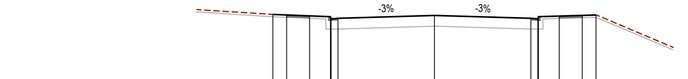
DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.911	72.875	72.815	72.767	72.617	72.657	72.794	72.5	72.46	72.61	72.646	72.691	72.718	
EXISTING BEW LEVEL	72.611	72.575	72.515	71.807	71.807	71.807	72.094	71.763	71.763	71.763	72.459	72.504	72.531	
OFFSET	-13.825	-12.925	-11.425	-10.065	-10.025	-9.575	0	11.03	11.48	11.52	12.88	14.38	15.28	

CH 240



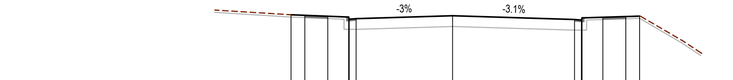
DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.553	72.517	72.457	72.409	72.259	72.299	72.488	72.299	72.259	72.409	72.445	72.49	72.517	
EXISTING BEW LEVEL	72.403	72.367	72.307	71.599	71.599	71.599	71.788	71.599	71.599	71.599	72.295	72.34	72.367	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 210



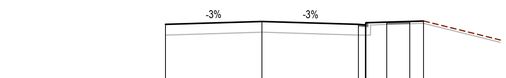
DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.584	72.548	72.488	72.44	72.29	72.33	72.519	72.33	72.29	72.44	72.476	72.521	72.548	
EXISTING BEW LEVEL	72.434	72.398	72.338	71.63	71.63	71.63	71.819	71.63	71.63	72.326	72.371	72.398		
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 211.785



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.727	72.691	72.631	72.582	72.432	72.472	72.661	72.417	72.377	72.527	72.563	72.608	72.635	
EXISTING BEW LEVEL	72.577	72.541	72.481	71.772	71.772	71.772	71.961	71.722	71.722	71.722	72.419	72.464	72.491	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	7.961	8.411	8.451	9.811	11.311	12.211	

CH 221.723



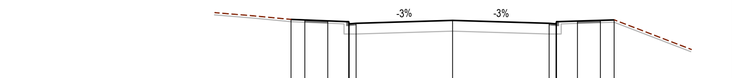
DATUM R.L. 65														
W.A.E.														
DESIGN LEVEL	70.997	71.186	70.997	70.357	71.107	71.143	71.188	71.215						
EXISTING BEW LEVEL	70.297	70.486	70.297	70.297	70.297	70.993	71.038	71.065						
OFFSET	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55						

CH 165



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.042	72.006	71.946	71.898	71.748	71.788	71.977	71.788	71.748	71.898	71.934	71.979	72.006	
EXISTING BEW LEVEL	71.892	71.856	71.796	71.088	71.088	71.088	71.277	71.088	71.088	71.784	71.829	71.856		
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 187.97



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	72.232	72.196	72.136	72.087	71.937	71.977	72.166	71.977	71.937	72.087	72.124	72.169	72.196	
EXISTING BEW LEVEL	72.082	72.046	71.986	71.277	71.277	71.277	71.466	71.277	71.277	71.277	71.974	72.019	72.046	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 195

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 05 OF 12

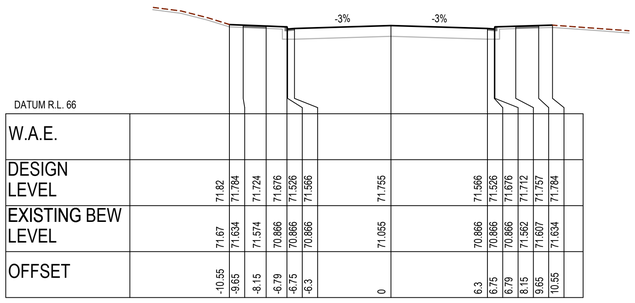
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	314	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\ORION\SYNXIS\DES-09-CC Industrial Site CC 220623\DWGS\Xref\19-0108-09-CC-D-CICE A1 TITLEBLOCK.dwg

ROAD No.01

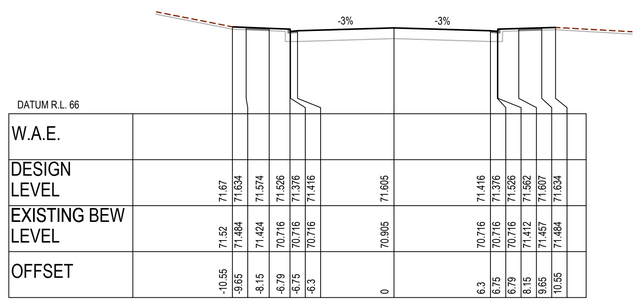
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



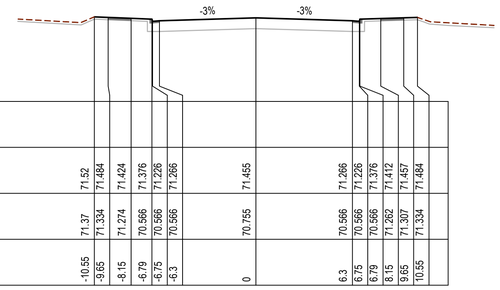
DATUM R.L. 66																					
W.A.E.																					
DESIGN LEVEL			71.82	71.784	71.724	71.676	71.526	71.566			71.755			71.566	71.526	71.676	71.712	71.757	71.784		
EXISTING BEW LEVEL			71.67	71.634	71.574	70.866	70.866	71.566			71.055			70.866	70.866	71.562	71.607	71.634			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 360



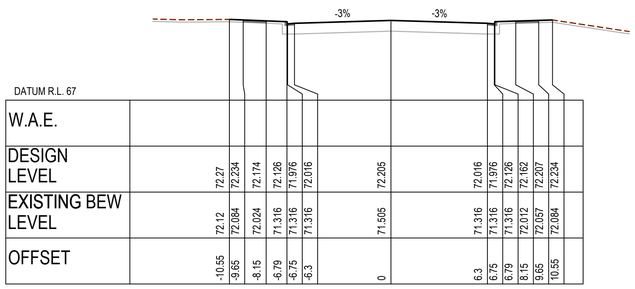
DATUM R.L. 66																					
W.A.E.																					
DESIGN LEVEL			71.67	71.634	71.574	71.526	71.376	71.416			71.605			71.416	71.376	71.526	71.562	71.607	71.634		
EXISTING BEW LEVEL			71.52	71.484	71.424	70.716	70.716	70.716			70.905			70.716	70.716	71.412	71.457	71.484			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 375



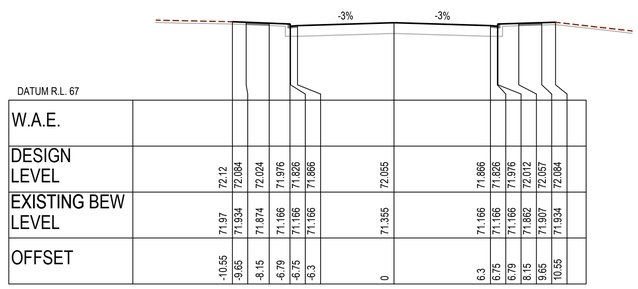
DATUM R.L. 66																					
W.A.E.																					
DESIGN LEVEL			71.52	71.484	71.424	71.376	71.226	71.266			71.455			71.266	71.226	71.376	71.412	71.457	71.484		
EXISTING BEW LEVEL			71.37	71.334	71.274	70.566	70.566	70.566			70.755			70.566	70.566	71.262	71.307	71.334			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 390



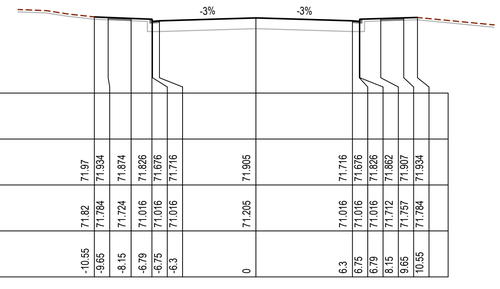
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.27	72.234	72.174	72.126	71.976	72.016			72.205			72.016	71.976	72.126	72.162	72.207	72.234		
EXISTING BEW LEVEL			72.12	72.084	72.024	71.316	71.316	71.316			71.505			71.316	71.316	72.012	72.057	72.084			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 315



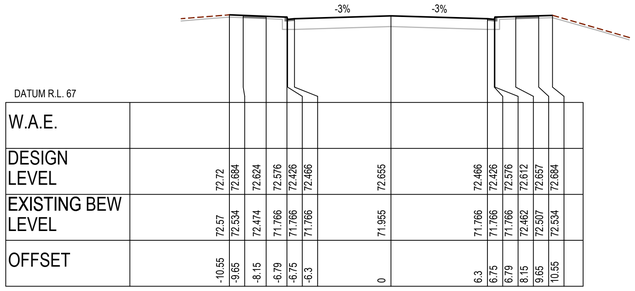
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.12	72.084	72.024	71.976	71.826	71.866			72.055			71.866	71.826	71.976	72.012	72.057	72.084		
EXISTING BEW LEVEL			71.97	71.934	71.874	71.166	71.166	71.166			71.355			71.166	71.166	71.862	71.907	71.934			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 330



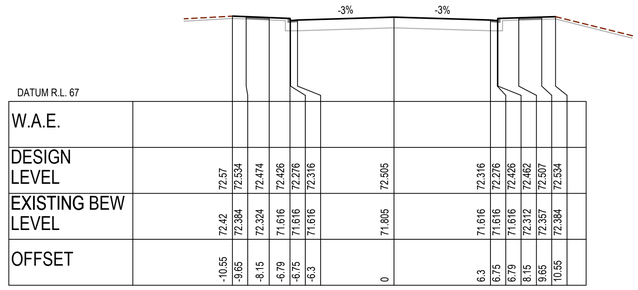
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			71.97	71.934	71.874	71.826	71.676	71.716			71.905			71.716	71.676	71.826	71.862	71.907	71.934		
EXISTING BEW LEVEL			71.82	71.784	71.724	71.016	71.016	71.016			71.205			71.016	71.016	71.712	71.757	71.784			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 345



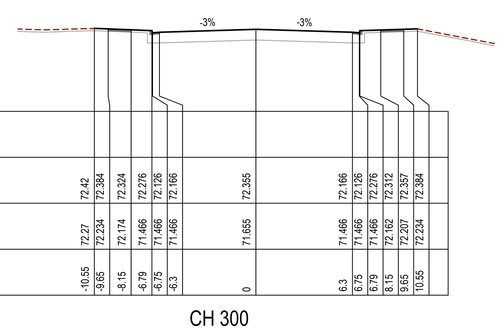
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.72	72.684	72.624	72.576	72.426	72.466			72.655			72.466	72.426	72.576	72.612	72.657	72.684		
EXISTING BEW LEVEL			72.57	72.534	72.474	71.766	71.766	71.766			71.955			71.766	71.766	72.462	72.507	72.534			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 270



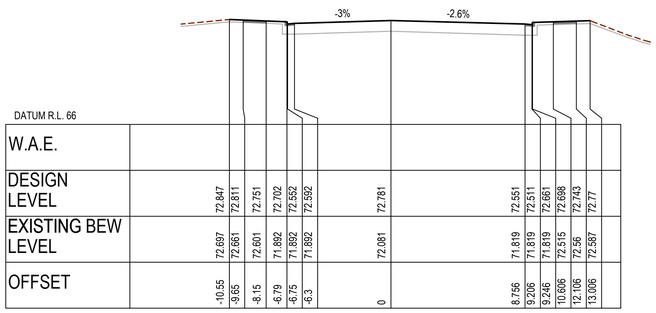
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.57	72.534	72.474	72.426	72.276	72.316			72.505			72.316	72.276	72.426	72.462	72.507	72.534		
EXISTING BEW LEVEL			72.42	72.384	72.324	71.616	71.616	71.616			71.805			71.616	71.616	72.312	72.357	72.384			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 285



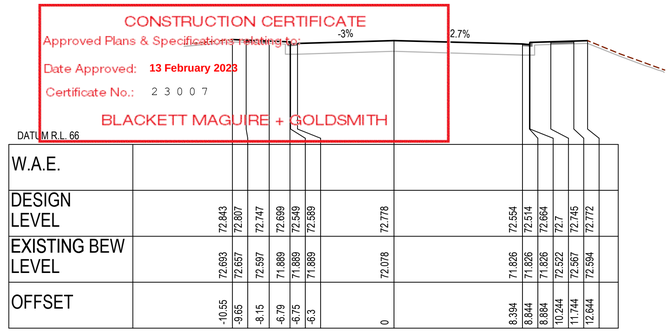
DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.42	72.384	72.324	72.276	72.126	72.166			72.355			72.166	72.126	72.276	72.312	72.357	72.384		
EXISTING BEW LEVEL			72.27	72.234	72.174	71.466	71.466	71.466			71.655			71.466	71.466	72.162	72.207	72.234			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 300



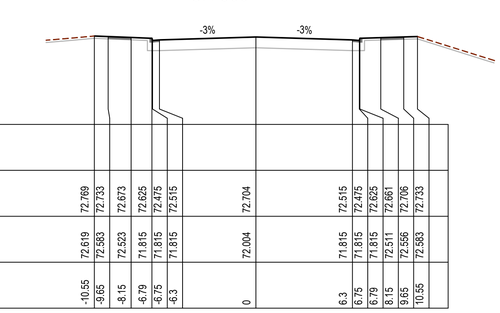
DATUM R.L. 66																					
W.A.E.																					
DESIGN LEVEL			72.847	72.811	72.751	72.702	72.552	72.592			72.781			72.551	72.511	72.661	72.698	72.743	72.77		
EXISTING BEW LEVEL			72.697	72.661	72.601	71.892	71.892	71.892			72.081			71.819	71.819	71.819	72.515	72.56	72.587		
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			8.756	9.206	9.246	10.606	12.106	13.006			

CH 254.237



DATUM R.L. 66																					
W.A.E.																					
DESIGN LEVEL			72.843	72.807	72.747	72.699	72.549	72.589			72.778			72.554	72.514	72.664	72.7	72.745	72.772		
EXISTING BEW LEVEL			72.693	72.657	72.597	71.889	71.889	71.889			72.078			71.826	71.826	71.826	72.522	72.567	72.594		
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			8.394	8.844	8.884	10.244	11.744	12.644			

CH 255



DATUM R.L. 67																					
W.A.E.																					
DESIGN LEVEL			72.769	72.733	72.673	72.625	72.475	72.515			72.704			72.515	72.475	72.625	72.661	72.706	72.733		
EXISTING BEW LEVEL			72.619	72.583	72.523	71.815	71.815	71.815			72.004			71.815	71.815	72.511	72.556	72.583			
OFFSET		-10.55	-9.65	-8.15	-6.79	-6.75	-6.3			0			6.3	6.75	6.79	8.15	9.65	10.55			

CH 265.098

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 06 OF 12

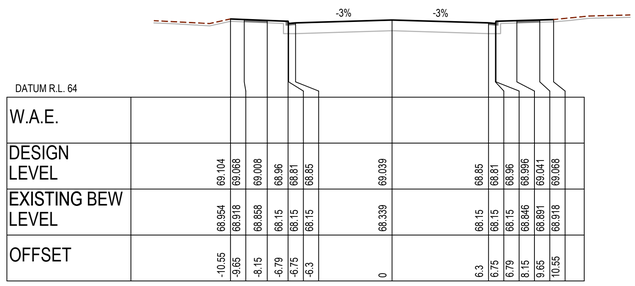
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	315	B

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ROAD No.01

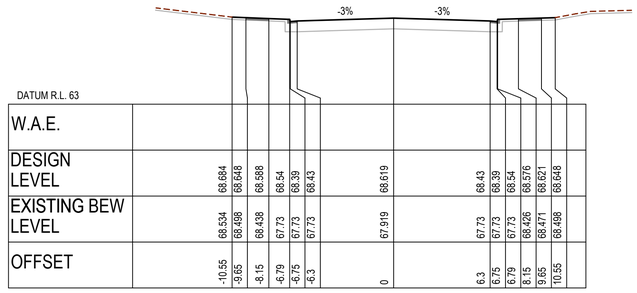
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



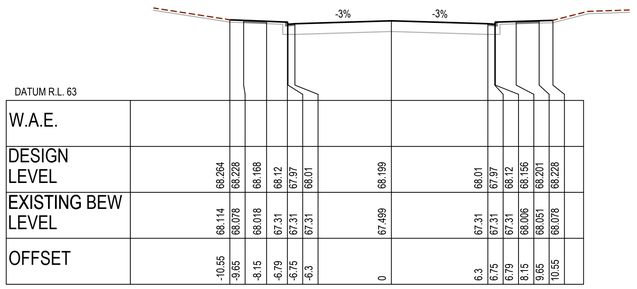
DATUM R.L. 64														
W.A.E.														
DESIGN LEVEL	69.104	69.068	69.008	68.96	68.81	68.85	69.039	68.85	68.81	68.96	68.996	69.041	69.068	
EXISTING BEW LEVEL	68.954	68.916	68.858	68.15	68.15	68.15	68.339	68.15	68.15	68.15	68.846	68.891	68.918	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 540



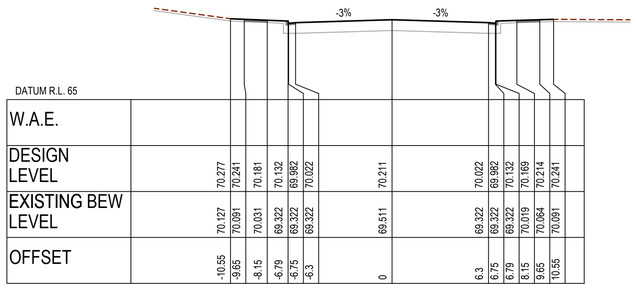
DATUM R.L. 63														
W.A.E.														
DESIGN LEVEL	68.684	68.648	68.588	68.54	68.39	68.43	68.619	68.43	68.39	68.54	68.576	68.621	68.648	
EXISTING BEW LEVEL	68.534	68.498	68.438	67.73	67.73	67.73	67.919	67.73	67.73	68.426	68.471	68.498		
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 555



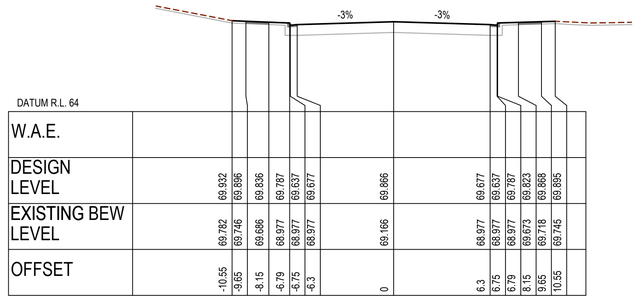
DATUM R.L. 63														
W.A.E.														
DESIGN LEVEL	68.264	68.228	68.168	68.12	67.97	68.01	68.199	68.01	67.97	68.12	68.156	68.201	68.228	
EXISTING BEW LEVEL	68.114	68.078	68.018	67.31	67.31	67.31	67.499	67.31	67.31	67.31	68.006	68.051	68.078	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 570



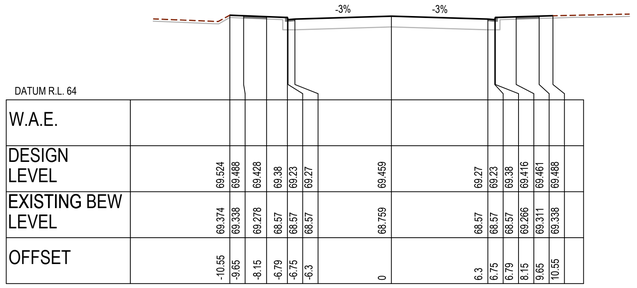
DATUM R.L. 65														
W.A.E.														
DESIGN LEVEL	70.277	70.241	70.181	70.132	69.982	70.022	70.211	70.022	69.982	70.132	70.169	70.214	70.241	
EXISTING BEW LEVEL	70.127	70.091	70.031	69.322	69.322	69.322	69.511	69.322	69.322	69.322	70.019	70.064	70.091	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 495



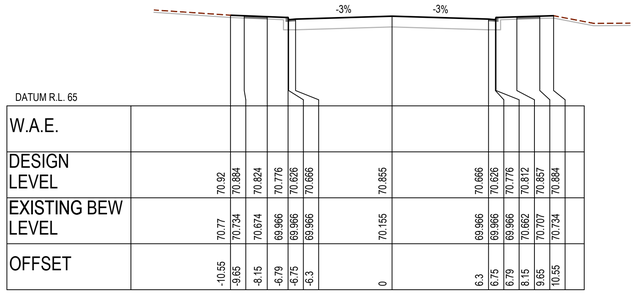
DATUM R.L. 64														
W.A.E.														
DESIGN LEVEL	69.932	69.896	69.836	69.787	69.637	69.677	69.866	69.677	69.637	69.787	69.823	69.868	69.895	
EXISTING BEW LEVEL	69.782	69.746	69.686	68.977	68.977	68.977	69.166	68.977	68.977	68.977	69.673	69.718	69.745	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 510



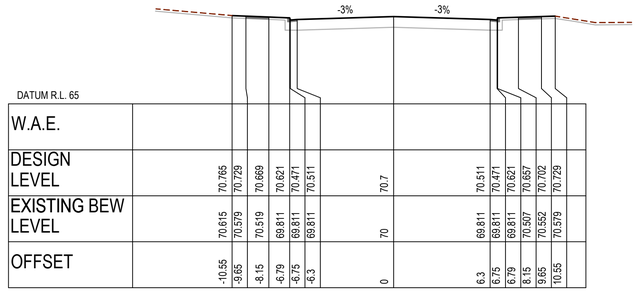
DATUM R.L. 64														
W.A.E.														
DESIGN LEVEL	69.524	69.488	69.428	69.38	69.23	69.27	69.459	69.27	69.23	69.38	69.416	69.461	69.488	
EXISTING BEW LEVEL	69.374	69.338	69.278	68.57	68.57	68.57	68.759	68.57	68.57	68.57	69.266	69.311	69.338	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 525



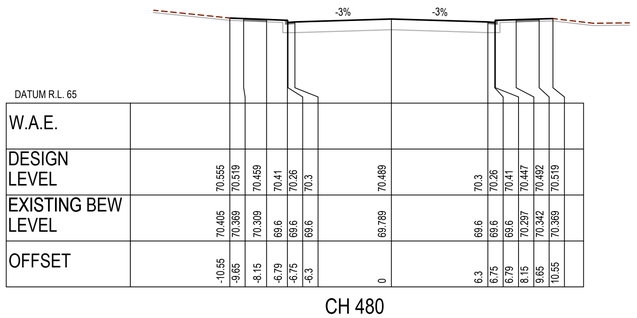
DATUM R.L. 65														
W.A.E.														
DESIGN LEVEL	70.92	70.884	70.824	70.776	70.626	70.666	70.855	70.666	70.626	70.776	70.812	70.857	70.884	
EXISTING BEW LEVEL	70.77	70.734	70.674	69.966	69.966	69.966	70.155	69.966	69.966	69.966	70.662	70.707	70.734	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 450



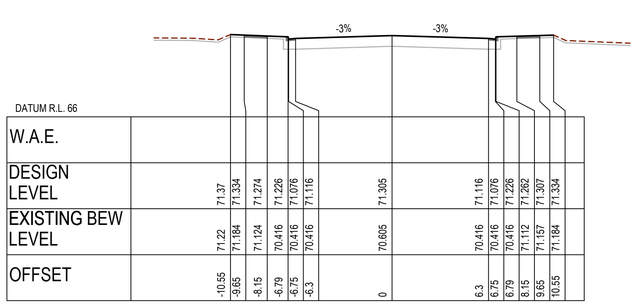
DATUM R.L. 65														
W.A.E.														
DESIGN LEVEL	70.765	70.729	70.669	70.621	70.471	70.511	70.7	70.511	70.471	70.621	70.657	70.702	70.729	
EXISTING BEW LEVEL	70.615	70.579	70.519	69.811	69.811	69.811	70	69.811	69.811	69.811	70.507	70.552	70.579	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 465



DATUM R.L. 65														
W.A.E.														
DESIGN LEVEL	70.555	70.519	70.459	70.41	70.26	70.3	70.489	70.3	70.26	70.41	70.447	70.492	70.519	
EXISTING BEW LEVEL	70.405	70.369	70.309	69.6	69.6	69.6	69.789	69.6	69.6	69.6	70.297	70.342	70.369	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

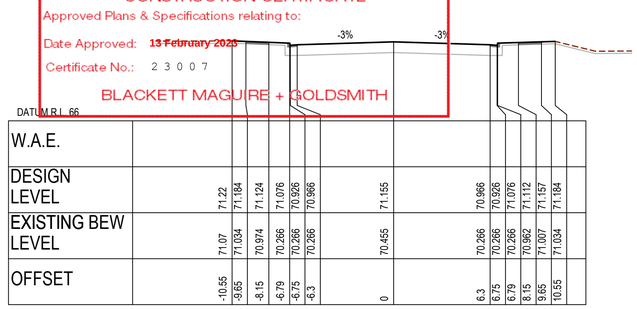
CH 480



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	71.37	71.334	71.274	71.226	71.076	71.116	71.305	71.116	71.076	71.226	71.262	71.307	71.334	
EXISTING BEW LEVEL	71.22	71.184	71.124	70.416	70.416	70.416	70.605	70.416	70.416	70.416	71.112	71.157	71.184	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

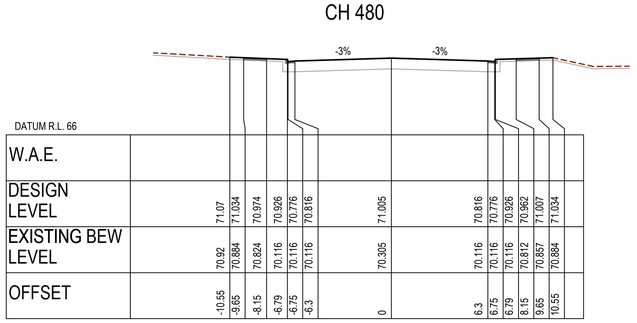
CH 405

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: ~~13 February 2023~~
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	71.22	71.184	71.124	71.076	70.926	70.966	71.155	70.966	70.926	71.076	71.112	71.157	71.184	
EXISTING BEW LEVEL	71.07	71.034	70.974	70.266	70.266	70.266	70.455	70.266	70.266	70.266	70.962	71.007	71.034	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 420



DATUM R.L. 66														
W.A.E.														
DESIGN LEVEL	71.07	71.034	70.974	70.926	70.776	70.816	71.005	70.816	70.776	70.926	70.962	71.007	71.034	
EXISTING BEW LEVEL	70.92	70.884	70.824	70.116	70.116	70.116	70.305	70.116	70.116	70.116	70.812	70.857	70.884	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 435

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 07 OF 12

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	316	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\Jobs\Valid\ORION-SYS\01DES-99-CC Industrial Site CC_2062\2D\WS\Work\19-0108-99-CC-D-DCE_A1_TITLEBLOCK.dwg

ROAD No.01

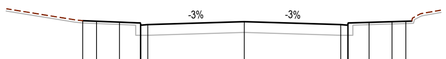
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND

FINISHED DESIGN SURFACE LEVEL

EXISTING BEW SURFACE

TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 63														
W.A.E.														
DESIGN LEVEL	68.028	67.992	67.932	67.883	67.733	67.773	67.962	67.773	67.733	67.883	67.92	67.965	67.992	
EXISTING BEW LEVEL	67.878	67.842	67.782	67.073	67.073	67.073	67.262	67.073	67.073	67.073	67.77	67.816	67.842	
OFFSET	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	

CH 578.435

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

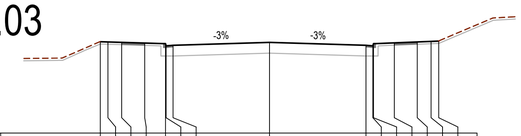
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 08 OF 12

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	317	B

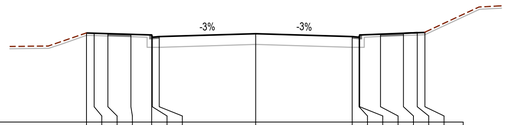
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ROAD No.03



DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	70.963	70.948	70.921	70.876	70.84	70.69	70.73	70.919	70.73	70.69	70.84	70.888	70.948	70.984	71.004	
EXISTING BEW LEVEL	70.813	70.798	70.771	70.726	70.03	70.03	70.03	70.219	70.03	70.03	70.738	70.798	70.834	70.854		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 120

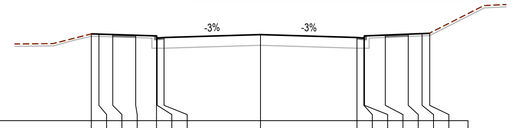


DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	70.813	70.798	70.771	70.726	70.69	70.54	70.58	70.769	70.58	70.54	70.69	70.738	70.798	70.834	70.854	
EXISTING BEW LEVEL	70.663	70.648	70.621	70.576	69.88	69.88	69.88	70.069	69.88	69.88	70.588	70.648	70.684	70.704		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 135

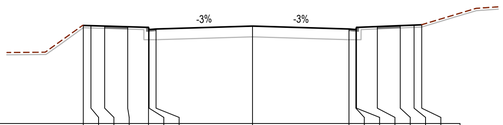
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



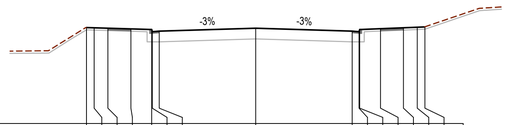
DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	70.663	70.648	70.621	70.576	70.54	70.39	70.43	70.619	70.43	70.39	70.54	70.588	70.648	70.684	70.704	
EXISTING BEW LEVEL	70.513	70.498	70.471	70.426	69.73	69.73	69.73	69.919	69.73	69.73	69.73	70.438	70.498	70.534	70.554	
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 150



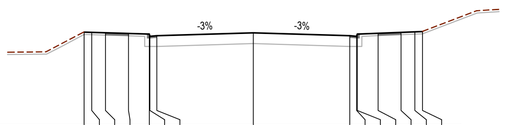
DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	71.402	71.387	71.36	71.315	71.279	71.129	71.169	71.358	71.169	71.129	71.279	71.328	71.388	71.424	71.444	
EXISTING BEW LEVEL	71.252	71.237	71.21	71.165	70.469	70.469	70.469	70.658	70.469	70.469	70.469	71.178	71.238	71.274	71.294	
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 75



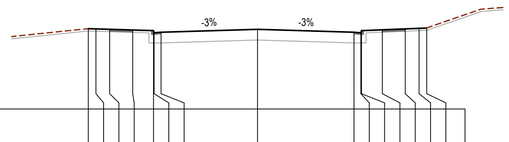
DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	71.263	71.248	71.221	71.176	71.14	70.99	71.03	71.219	71.03	70.99	71.14	71.188	71.284	71.304		
EXISTING BEW LEVEL	71.113	71.098	71.071	71.026	70.33	70.33	70.33	70.519	70.33	70.33	71.038	71.098	71.134	71.154		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 90



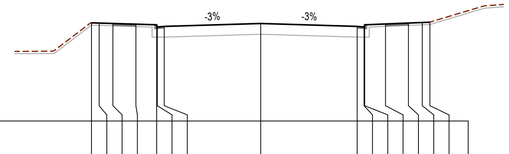
DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	71.113	71.098	71.071	71.026	70.99	70.84	70.88	71.069	70.88	70.84	70.99	71.038	71.098	71.134	71.154	
EXISTING BEW LEVEL	70.963	70.948	70.921	70.876	70.18	70.18	70.18	70.369	70.18	70.18	70.18	70.888	70.948	70.984	71.004	
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 105



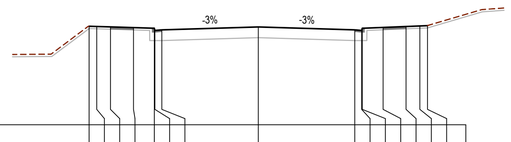
DATUM R.L. 66																
W.A.E.																
DESIGN LEVEL	71.246	71.231	71.204	71.159	71.123	71.013	71.013	71.202	71.013	70.973	71.123	71.171	71.231	71.267	71.287	
EXISTING BEW LEVEL	71.096	71.081	71.054	71.009	70.313	70.313	70.313	70.502	70.313	70.313	71.021	71.081	71.117	71.137		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 45



DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	71.409	71.394	71.367	71.322	71.285	71.135	71.175	71.364	71.175	71.135	71.285	71.334	71.394	71.43	71.45	
EXISTING BEW LEVEL	71.259	71.244	71.217	71.172	70.475	70.475	70.475	70.664	70.475	70.475	71.164	71.244	71.28	71.3		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

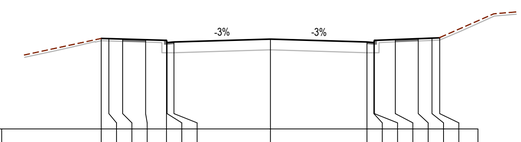
CH 60



DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	71.427	71.412	71.385	71.34	71.303	71.153	71.193	71.362	71.193	71.153	71.303	71.352	71.412	71.448	71.468	
EXISTING BEW LEVEL	71.277	71.262	71.235	71.19	70.493	70.493	70.493	70.682	70.493	70.493	71.202	71.262	71.298	71.318		
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

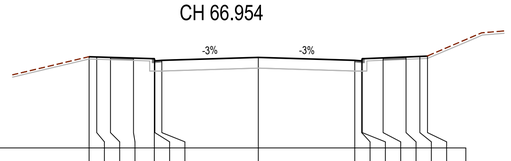
CH 66.954

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	70.909	70.894	70.867	70.822	70.786	70.636	70.676	70.865	70.676	70.636	70.786	70.834	70.894	70.93	70.95	
EXISTING BEW LEVEL	70.759	70.744	70.717	70.672	69.976	69.976	69.976	70.165	69.976	69.976	69.976	70.684	70.744	70.78	70.8	
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 27.748



DATUM R.L. 65																
W.A.E.																
DESIGN LEVEL	70.954	70.939	70.912	70.867	70.831	70.681	70.721	70.91	70.721	70.681	70.831	70.879	70.939	70.975	70.995	
EXISTING BEW LEVEL	70.804	70.789	70.762	70.717	70.021	70.021	70.021	70.21	70.021	70.021	70.021	70.729	70.789	70.825	70.845	
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05	

CH 30

ISSUED FOR CONSTRUCTION

B BEW SURFACE ADDED

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

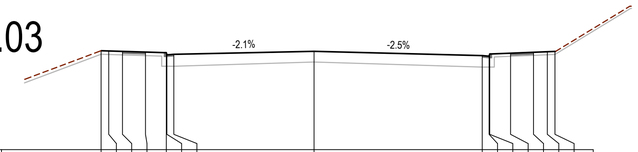
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 09 OF 12

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	318	B

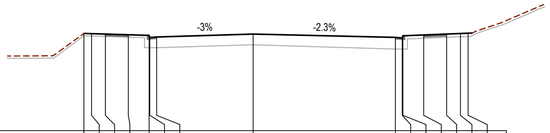
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ROAD No.03



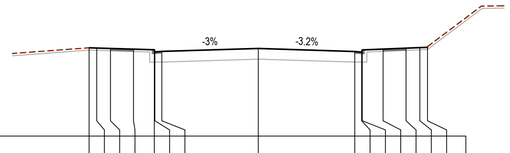
DATUM R.L. 63																		
W.A.E.																		
DESIGN LEVEL	69.457	69.442	69.415	69.37	69.334	69.184	69.224	69.419	69.139	69.099	69.249	69.298	69.358	69.394	69.414			
EXISTING BEW LEVEL	69.227	69.212	69.185	69.14	68.444	68.444	68.444	68.719	68.389	68.389	68.389	69.098	69.158	69.194	69.214			
OFFSET	-13.908	-13.408	-12.508	-11.008	-9.648	-9.608	-9.158	0	10.981	11.431	11.471	12.831	14.331	15.231	15.731			

CH 270



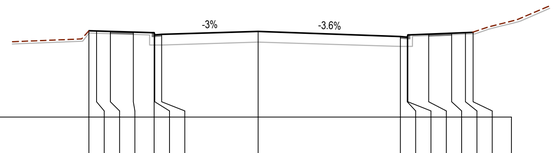
DATUM R.L. 63																		
W.A.E.																		
DESIGN LEVEL	69.348	69.333	69.306	69.261	69.224	69.074	69.114	69.304	69.087	69.047	69.197	69.245	69.305	69.341	69.361			
EXISTING BEW LEVEL	69.198	69.163	69.156	69.111	68.415	68.415	68.415	68.604	68.325	68.325	68.325	69.034	69.094	69.13	69.15			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	9.286	9.736	9.776	11.136	12.636	13.536	14.036			

CH 281.494



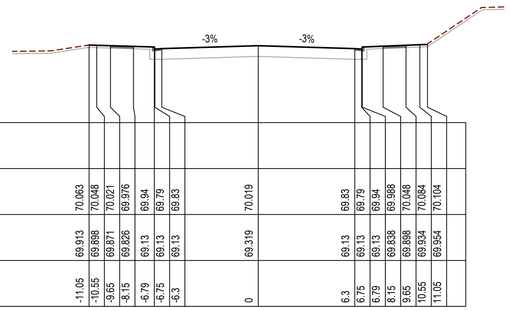
DATUM R.L. 64																		
W.A.E.																		
DESIGN LEVEL	69.763	69.748	69.721	69.676	69.64	69.49	69.53	69.719	69.519	69.479	69.629	69.677	69.737	69.773	69.793			
EXISTING BEW LEVEL	69.613	69.598	69.571	69.526	68.83	68.83	68.83	69.019	68.83	68.83	68.83	69.538	69.598	69.634	69.654			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.301	6.751	6.791	8.151	9.651	10.551	11.051			

CH 240



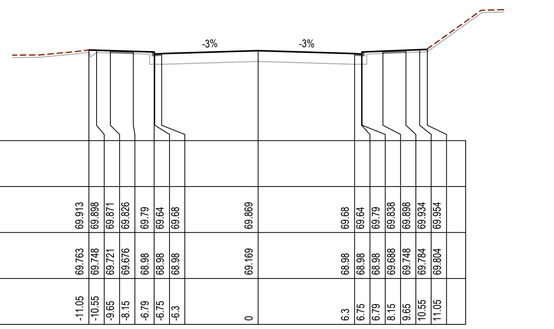
DATUM R.L. 64																		
W.A.E.																		
DESIGN LEVEL	69.635	69.62	69.593	69.548	69.512	69.362	69.402	69.591	69.257	69.217	69.367	69.415	69.475	69.511	69.531			
EXISTING BEW LEVEL	69.465	69.47	69.443	69.398	68.702	68.702	68.702	68.891	68.613	68.613	68.613	69.321	69.381	69.417	69.437			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	9.287	9.737	9.777	11.137	12.637	13.537	14.037			

CH 252.748



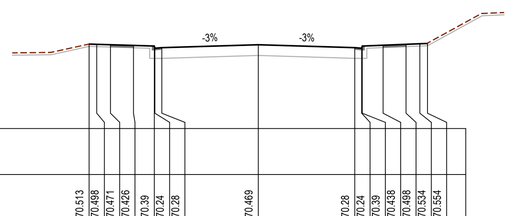
DATUM R.L. 65																		
W.A.E.																		
DESIGN LEVEL	70.063	70.048	70.021	69.976	69.94	69.79	69.83	70.019	69.83	69.79	69.94	69.988	70.048	70.084	70.104			
EXISTING BEW LEVEL	69.913	69.898	69.871	69.826	69.13	69.13	69.13	69.319	69.13	69.13	69.13	69.838	69.898	69.934	69.954			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 210



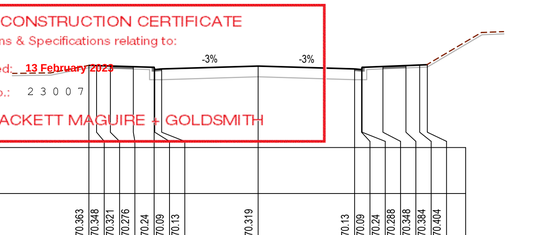
DATUM R.L. 64																		
W.A.E.																		
DESIGN LEVEL	69.913	69.898	69.871	69.826	69.79	69.64	69.68	69.869	69.68	69.64	69.79	69.888	69.948	69.984	70.004			
EXISTING BEW LEVEL	69.763	69.748	69.721	69.676	68.98	68.98	68.98	69.169	68.98	68.98	68.98	69.838	69.898	69.934	69.954			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 225



DATUM R.L. 65																		
W.A.E.																		
DESIGN LEVEL	70.513	70.498	70.471	70.426	70.39	70.24	70.28	70.469	70.28	70.24	70.39	70.438	70.498	70.534	70.554			
EXISTING BEW LEVEL	70.363	70.348	70.321	70.276	69.58	69.58	69.58	69.769	69.58	69.58	69.58	70.288	70.348	70.384	70.404			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 165



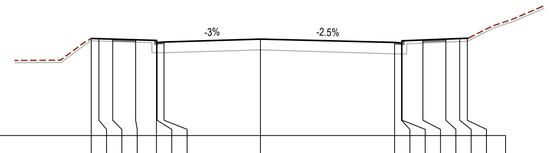
DATUM R.L. 65																		
W.A.E.																		
DESIGN LEVEL	70.363	70.348	70.321	70.276	70.24	70.09	70.13	70.319	70.13	70.09	70.24	70.288	70.348	70.384	70.404			
EXISTING BEW LEVEL	70.213	70.198	70.171	70.126	69.43	69.43	69.43	69.619	69.43	69.43	69.43	70.138	70.198	70.234	70.254			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 180

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

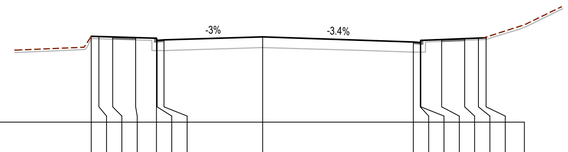
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



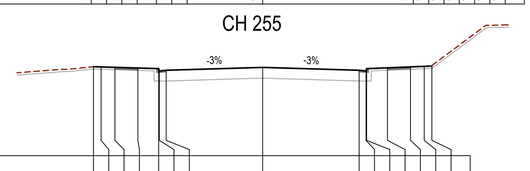
DATUM R.L. 63																		
W.A.E.																		
DESIGN LEVEL	69.338	69.323	69.296	69.251	69.215	69.065	69.105	69.294	69.077	69.037	69.187	69.235	69.295	69.331	69.351			
EXISTING BEW LEVEL	69.188	69.173	69.146	69.101	68.405	68.405	68.405	68.594	68.331	68.331	68.331	69.039	69.099	69.135	69.155			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	8.758	9.208	9.248	10.608	12.108	13.008	13.508			

CH 282.494



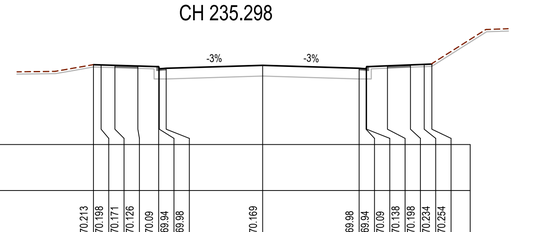
DATUM R.L. 64																		
W.A.E.																		
DESIGN LEVEL	69.607	69.592	69.565	69.52	69.484	69.334	69.374	69.569	69.234	69.194	69.344	69.393	69.453	69.478	69.509			
EXISTING BEW LEVEL	69.459	69.444	69.417	69.372	68.675	68.675	68.675	68.869	68.573	68.573	68.573	69.282	69.342	69.378	69.398			
OFFSET	-11.194	-10.694	-9.794	-8.294	-6.934	-6.894	-6.444	0	9.84	10.29	10.33	11.69	13.19	14.09	14.59			

CH 255



DATUM R.L. 64																		
W.A.E.																		
DESIGN LEVEL	69.81	69.795	69.768	69.723	69.687	69.537	69.577	69.766	69.577	69.537	69.687	69.735	69.795	69.831	69.851			
EXISTING BEW LEVEL	69.66	69.645	69.618	69.573	68.877	68.877	68.877	69.066	68.877	68.877	68.877	69.585	69.645	69.681	69.701			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 235.298



DATUM R.L. 65																		
W.A.E.																		
DESIGN LEVEL	70.213	70.198	70.171	70.126	70.09	69.94	69.98	70.169	69.98	69.94	70.09	70.138	70.198	70.234	70.254			
EXISTING BEW LEVEL	70.063	70.048	70.021	69.976	69.28	69.28	69.28	69.469	69.28	69.28	69.28	69.988	70.048	70.084	70.104			
OFFSET	-11.05	-10.55	-9.65	-8.15	-6.79	-6.75	-6.3	0	6.3	6.75	6.79	8.15	9.65	10.55	11.05			

CH 195

B BEW SURFACE ADDED

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: ROAD CROSS SECTION SHEET 10 OF 12

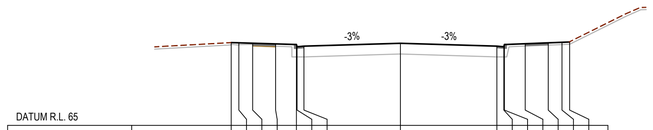
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	319	B

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ROAD No.03

NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



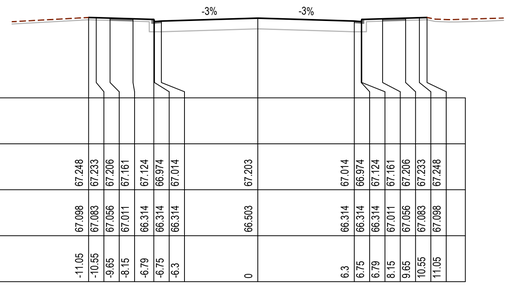
DATUM R.L. 65

| | | |

ROAD No.04

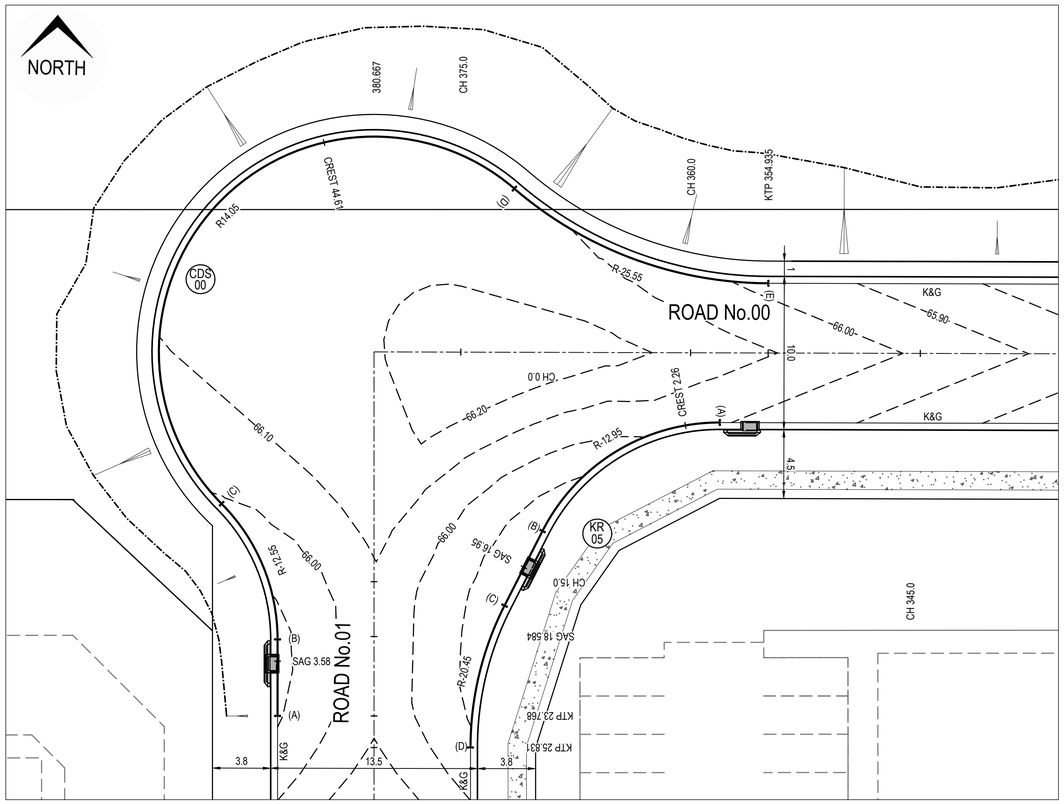
NOTE:
VERGE TO EXTEND TO EXISTING BEW SURFACE OUTSIDE THE ROAD RESERVE AT MIN 1% GRADE

LEGEND
- FINISHED DESIGN SURFACE LEVEL
- EXISTING BEW SURFACE
- TOPSOIL SURFACE PLACED OVER BEW



DATUM R.L. 62

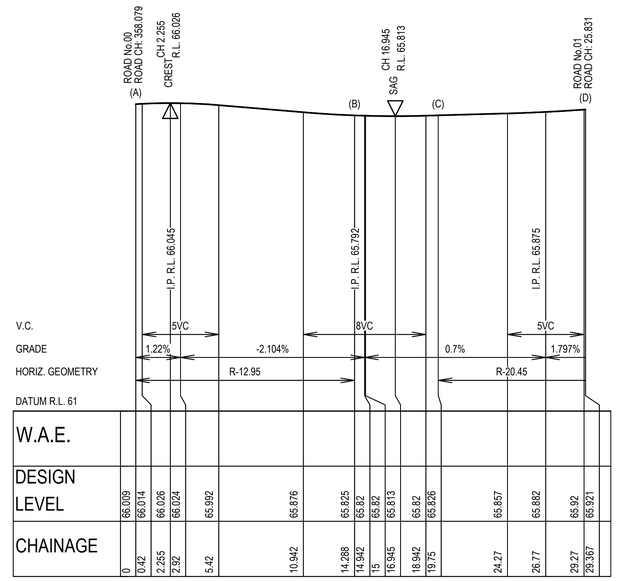
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KERB RETURN CDS00 & KR05

SCALE 1:200

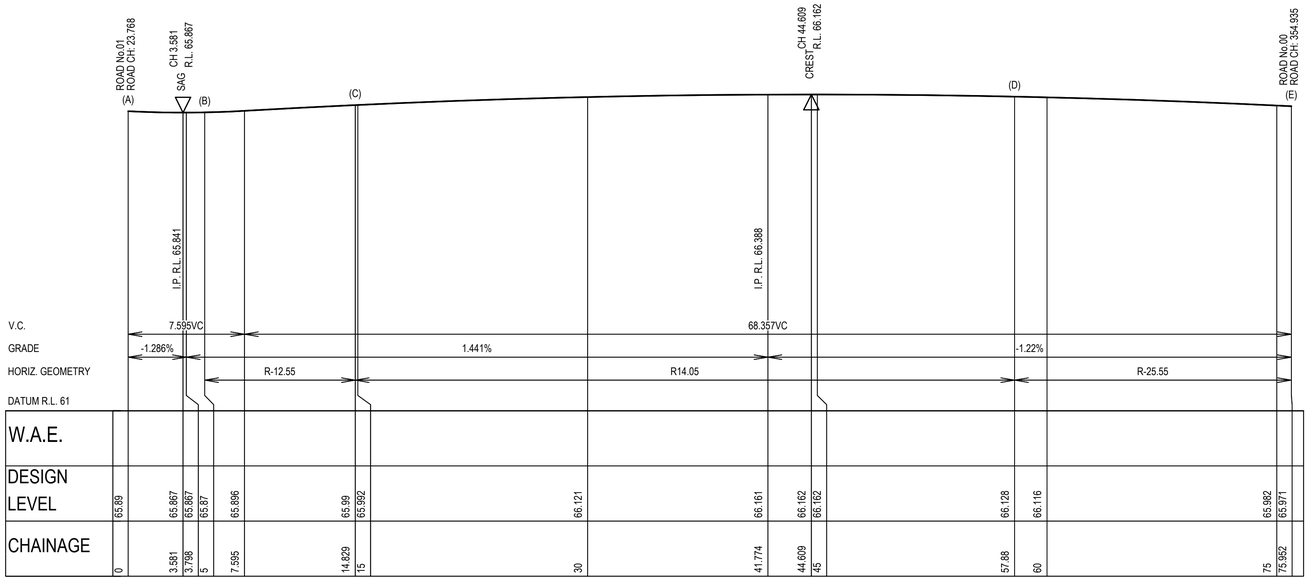
NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER



W.A.E.														
DESIGN LEVEL	66.009	66.014	66.026	66.024	65.992	65.876	65.825	65.82	65.82	65.813	65.82	65.826	65.857	65.882	65.92	65.921
CHAINAGE	0	10.42	2.255	2.92	5.42	10.942	14.288	14.942	15	16.945	18.942	19.75	24.27	26.77	29.27	29.367

KERB RETURN KR05

SCALE 1:200 (H)
SCALE 1:50 (V)



W.A.E.																
DESIGN LEVEL	65.89	65.867	65.867	65.87	65.896	65.99	65.992	66.121	66.161	66.162	66.162	66.128	66.116	65.982	65.971
CHAINAGE	0	3.581	3.798	5	7.595	14.829	15	30	41.774	44.609	45	57.88	60	75	75.962

KERB RETURN CDS00

SCALE 1:200 (H)
SCALE 1:50 (V)

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

SETOUT TABLE CDS00

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300819.64	6255544.19	358°54'32.08"		
5	300819.55	6255549.19	358°54'32.08"		
9.91	300819.45	6255554.37		-12.55	9.829
10	300818.47	6255554.04	336°04'54.98"		
14.83	300815.72	6255557.97	314°02'04.60"		
20	300812.74	6255562.16	335°07'15.61"		
25.59	300806.01	6255567.37		14.05	21.525
30	300811.98	6255571.92	15°54'03.30"		
36.35	300815.02	6255577.44	41°48'55.35"		
40	300817.77	6255579.81	56°40'50.99"		
47.12	300824.03	6255587.51		14.05	21.525
50	300827.31	6255582	97°27'38.68"		
57.88	300834.44	6255578.9	129°35'46.11"		
60	300836.13	6255577.62	124°50'33.00"		
66.92	300841.71	6255572.89		-25.55	18.072
70	300845.23	6255573.63	102°25'03.14"		
75.95	300851.14	6255573.04	89°04'09.28"		

SETOUT TABLE KR05

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300848.15	6255563.89	269°04'09.28"		
7.14	300840.18	6255563.76		-12.95	14.288
10	300839.17	6255560.07	224°49'31.44"		
14.29	300836.7	6255556.59	205°51'18.69"		
19.75	300834.32	6255551.67	205°51'18.69"		
20	300834.21	6255551.45	205°09'13.44"		
24.56	300832.19	6255547.26		-20.45	9.618
29.37	300832.28	6255542.37	178°54'32.08"		

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
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SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

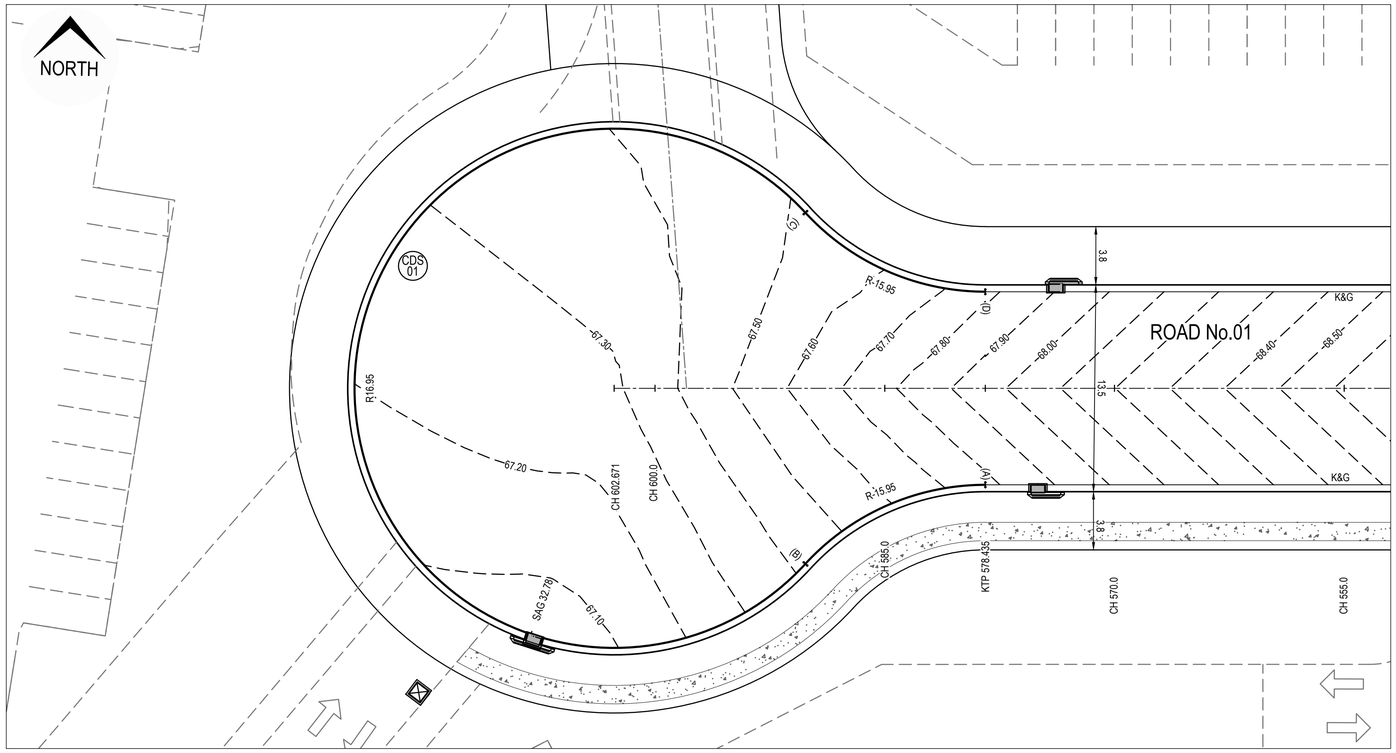
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: KERB RETURN LAYOUT & LONG SECTION SHEET 01 OF 06

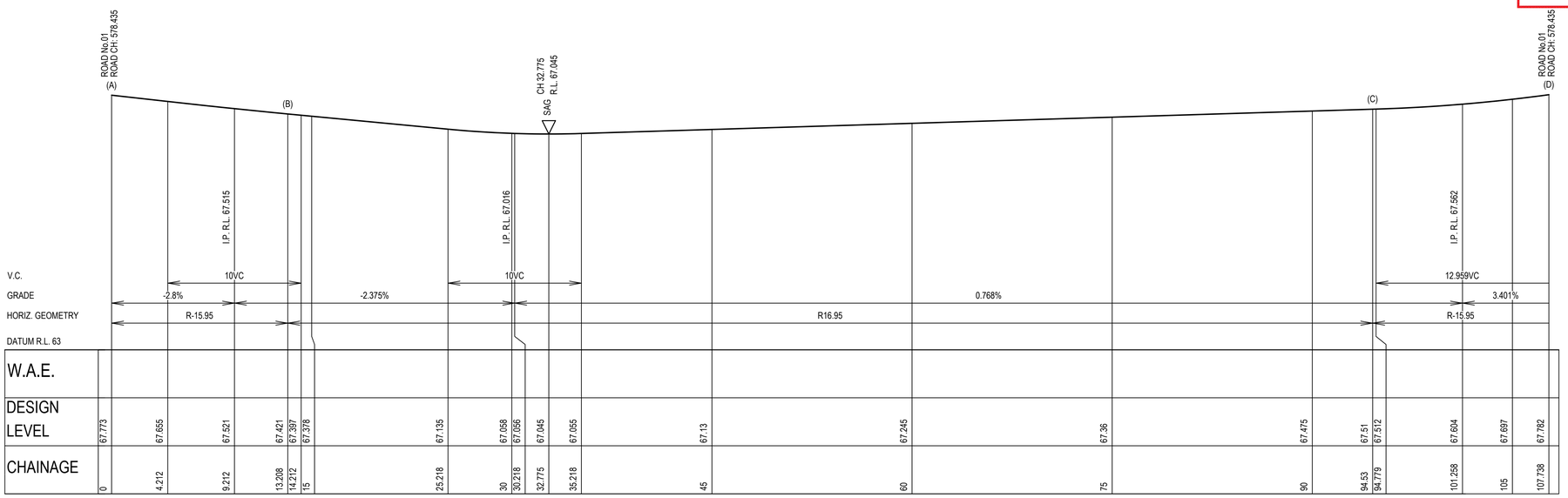
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	400	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\ORIS data\ORION-SYNO1\DES-19-0108-09-CC-400.dwg

NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER



KERB RETURN CDS01
SCALE 1:200



KERB RETURN CDS01
SCALE 1:200 (H)
SCALE 1:50 (V)

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

SETOUT TABLE CDS01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300486.81	6255312.36	268°53'16.02"	0	300486.81
6.6	300479.8	6255312.22		6.6	300479.8
10	300477.51	6255309.14	232°57'56.39"	10	300477.51
13.21	300475.16	6255306.97	221°26'32.39"	13.21	300475.16
20	300469.78	6255302.9	244°24'05.96"	20	300469.78
26.76	300463.62	6255293.89		26.76	300463.62
30	300460.04	6255301.41	278°12'16.12"	30	300460.04
40	300451.11	6255305.59	312°00'26.27"	40	300451.11
40.32	300450.88	6255305.8	313°04'21.48"	40.32	300450.88
50	300446.02	6255314.03	345°48'36.42"	50	300446.02
53.87	300438.14	6255317.71		53.87	300438.14
60	300446.49	6255323.87	19°36'46.57"	60	300446.49
67.42	300450.41	6255330.11	44°42'10.57"	67.42	300450.41
70	300452.35	6255331.8	53°24'56.72"		
80	300461.63	6255335.11	87°13'06.87"		
80.98	300462.68	6255342.5		16.95	27.107
90	300471.19	6255332.71	121°01'17.02"		
94.53	300474.72	6255329.89	136°19'59.66"		
100	300479.09	6255326.65	116°40'58.63"		
101.13	300479.56	6255324.82		-15.95	13.208
107.74	300486.56	6255324.95	88°53'16.02"		

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:200 (A1) SCALE 1:400 (A3)
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SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

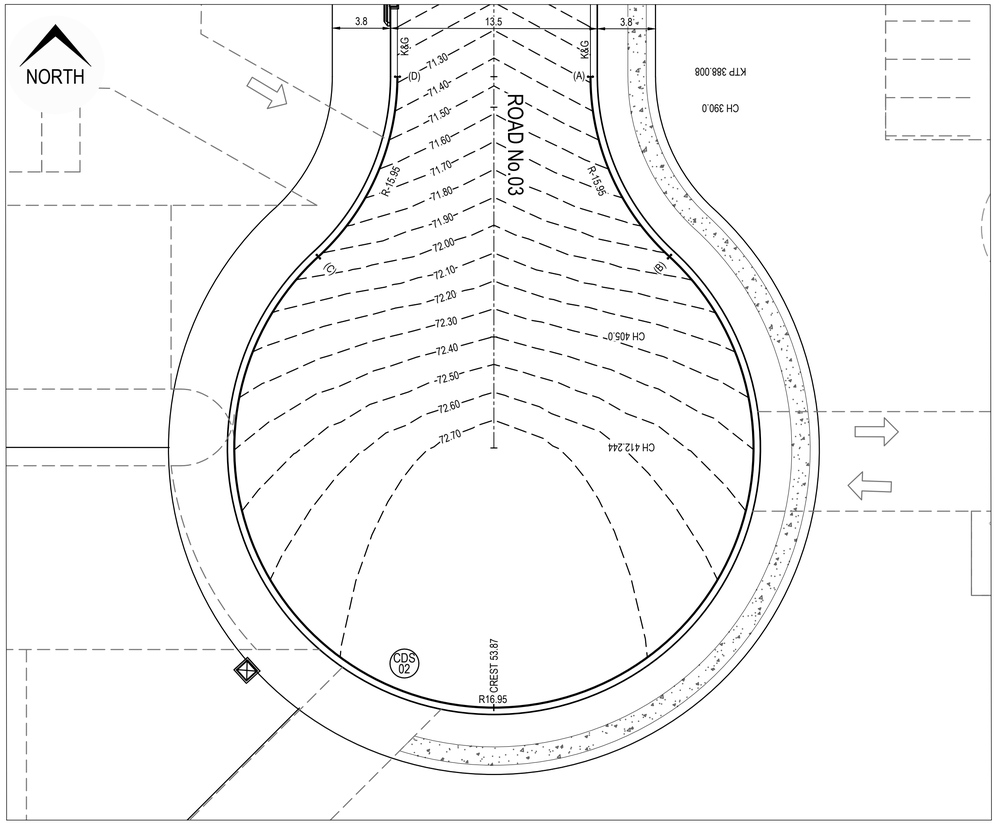
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: KERB RETURN LAYOUT & LONG SECTION SHEET 02 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	401	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\12d\Global\ORION-SYNG\1DES-09-CC Industrial Site CC_2062320WGS\19-0108-09-CC-401.dwg

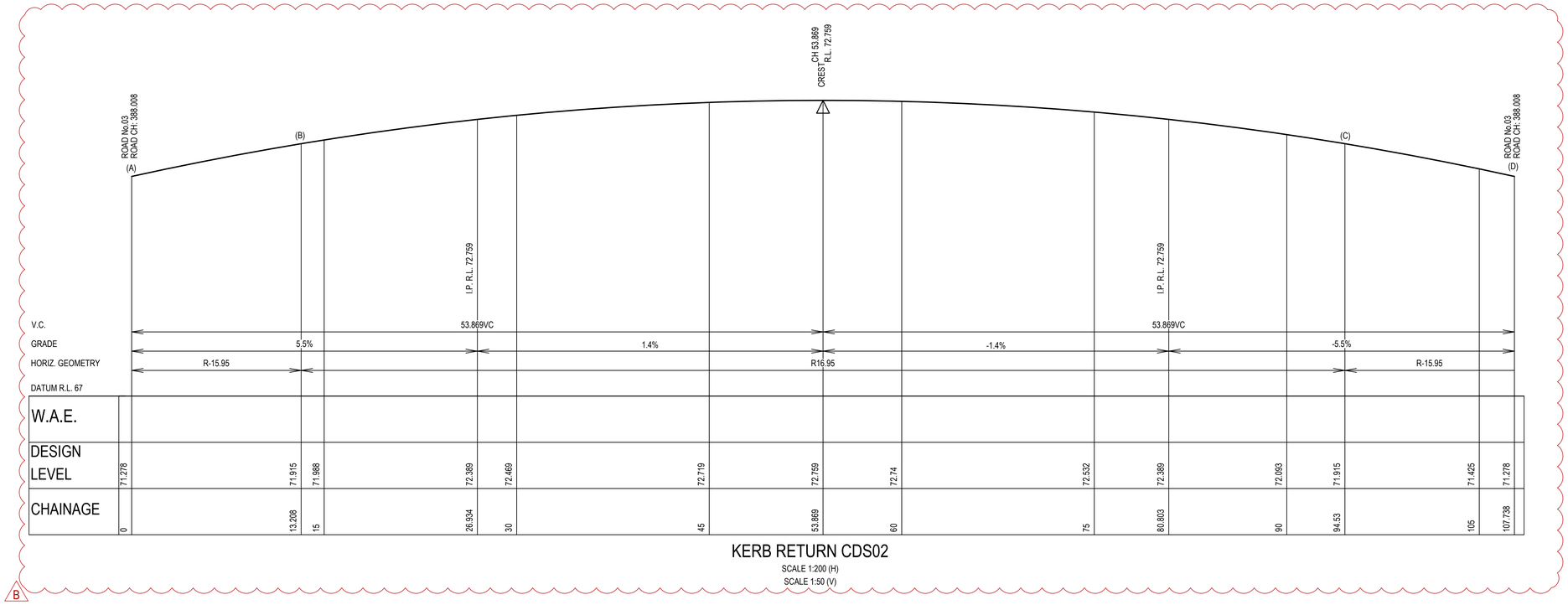


KERB RETURN CDS02

SCALE 1:200

NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



KERB RETURN CDS02

SCALE 1:200 (H)

SCALE 1:50 (V)

B

SETOUT TABLE CDS02					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	301108.29	6255287.35	178°53'00.04"		
6.6	301108.43	6255280.35		-15.95	13.208
10	301111.5	6255278.06	142°57'40.41"		
13.21	301113.68	6255275.71	131°26'16.40"		
20	301117.75	6255270.33	154°23'49.98"		
26.76	301126.75	6255264.17		16.95	27.107
30	301119.24	6255260.58	188°12'00.13"		
40	301115.06	6255251.66	222°00'10.28"		
40.32	301114.84	6255251.43	223°04'05.49"		
50	301106.62	6255246.57	255°48'20.43"		
53.87	301102.94	6255238.69		16.95	27.107
60	301096.77	6255247.03	289°36'30.58"		
67.42	301090.54	6255250.95	314°41'54.58"		
70	301088.85	6255252.9	323°24'40.74"		
80	301085.53	6255262.18	357°12'50.89"		
80.98	301078.14	6255263.22		16.95	27.107
90	301087.94	6255271.74	31°01'01.04"		
94.53	301090.76	6255275.26	46°19'43.67"		
100	301094	6255279.64	26°40'42.64"		
101.13	301095.83	6255280.1		-15.95	13.208
107.74	301095.69	6255287.11	358°53'00.04"		

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:200 (A1) SCALE 1:400 (A3)
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SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

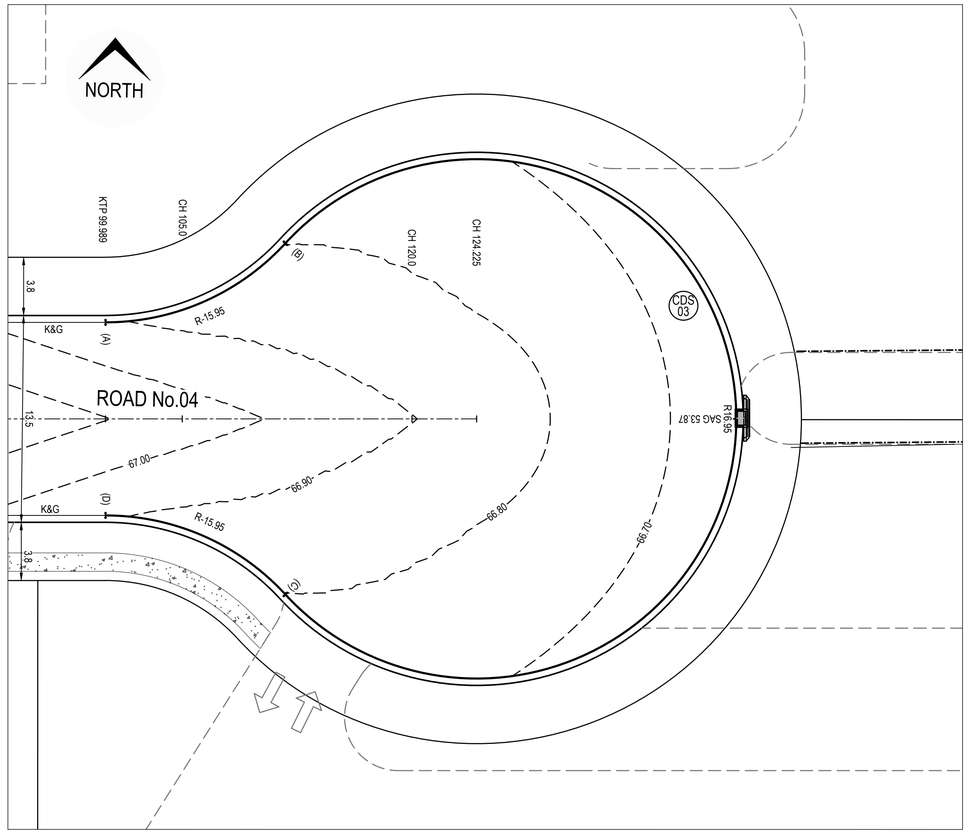
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: KERB RETURN LAYOUT & LONG SECTION SHEET 03 OF 06

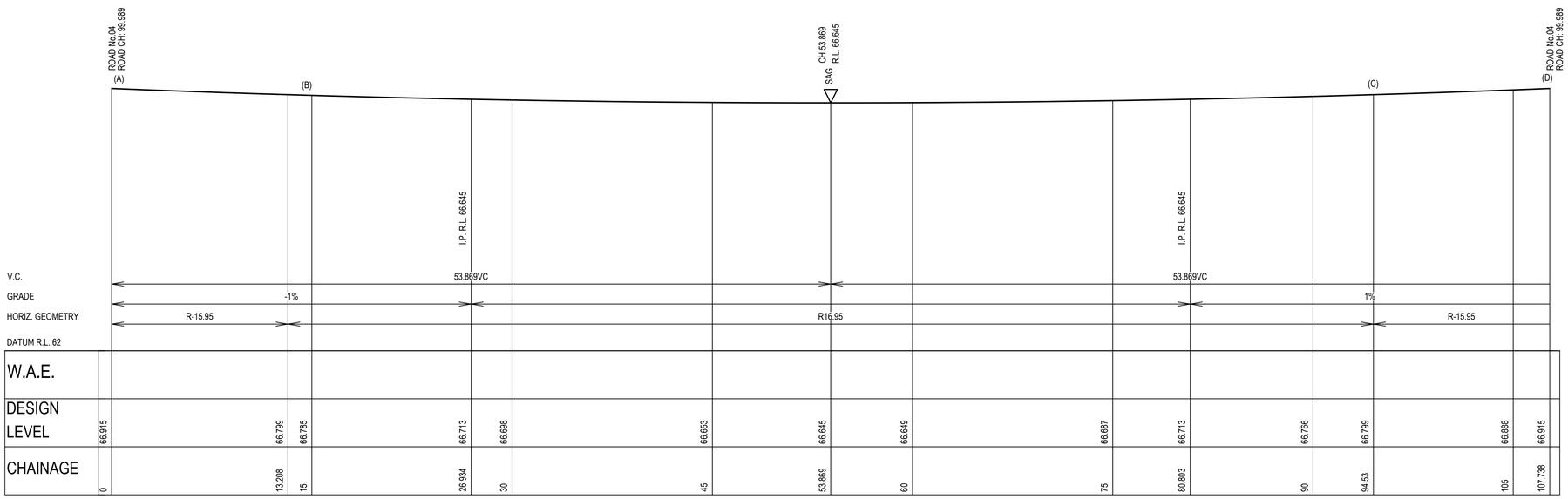
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	402	B

Plotted:Monday, 30 March 2020 2:47:45 PM File Name:C:\1JobS\data\ORION-SYN\01DES-09-CC-Industrial Site CC_200320\DWGS\19-0108-09-CC-402.dwg

NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER



KERB RETURN CDS03
SCALE 1:200



KERB RETURN CDS03
SCALE 1:200 (H)
SCALE 1:50 (V)

SETOUT TABLE CDS03					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	301200.92	6255342.32	88°53'00.11"		
6.6	301207.93	6255342.45		-15.95	13.208
10	301210.22	6255345.53	52°57'40.49"		
13.21	301212.57	6255347.71	41°26'16.48"		
20	301217.95	6255351.78	64°23'50.06"		
26.76	301224.11	6255360.78		16.95	27.107
30	301227.7	6255353.27	98°12'00.21"		
40	301236.62	6255349.09	132°00'10.36"		
40.32	301236.85	6255348.87	133°04'05.57"		
50	301241.71	6255340.65	165°48'20.51"		
53.87	301249.59	6255336.96		16.95	27.107
60	301241.25	6255330.8	199°36'30.66"		
67.42	301237.33	6255324.57	224°41'54.66"		
70	301235.38	6255322.88	233°24'40.81"		
80	301226.1	6255319.56	267°12'50.96"		
80.98	301225.06	6255312.17		16.95	27.107
90	301216.54	6255321.96	301°01'01.12"		
94.53	301213.02	6255324.79	316°19'43.75"		
100	301208.64	6255328.02	296°40'42.72"		
101.13	301208.18	6255329.86		-15.95	13.208
107.74	301201.17	6255329.72	268°53'00.11"		

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
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SCALE 1:200 (A1) SCALE 1:400 (A3)
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SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

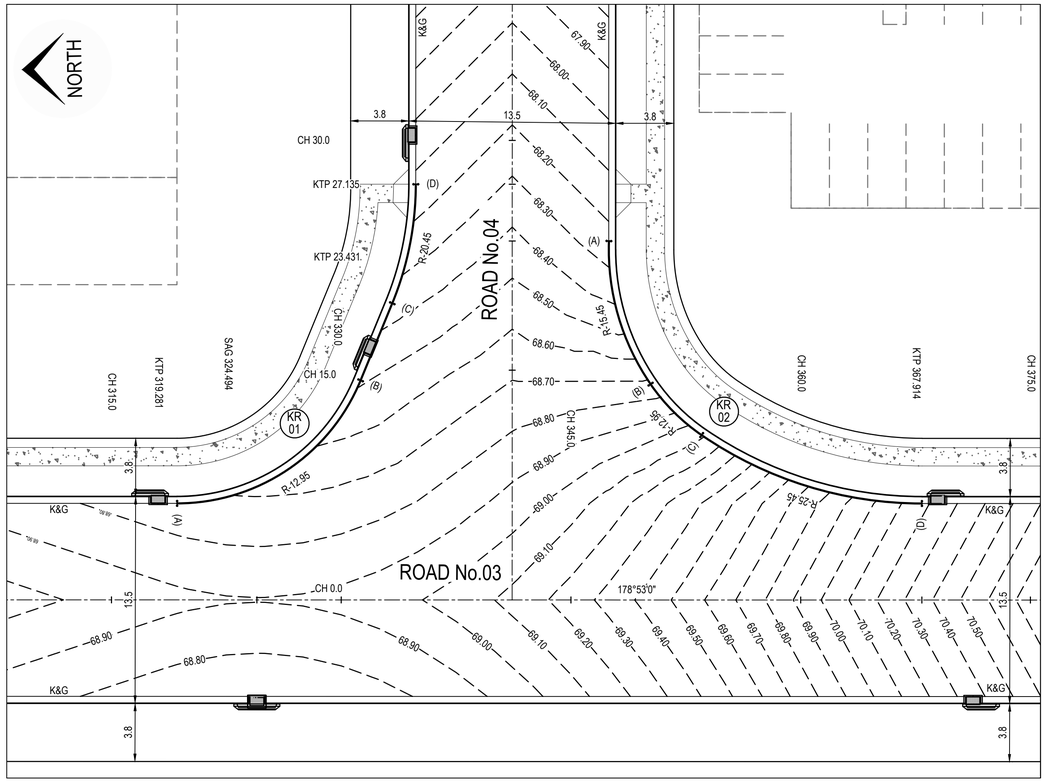
Project:
813-913 WALLGROVE ROAD
INDUSTRIAL SITE
ROAD & DRAINAGE DESIGN

Title:
KERB RETURN LAYOUT
& LONG SECTION
SHEET 04 OF 06

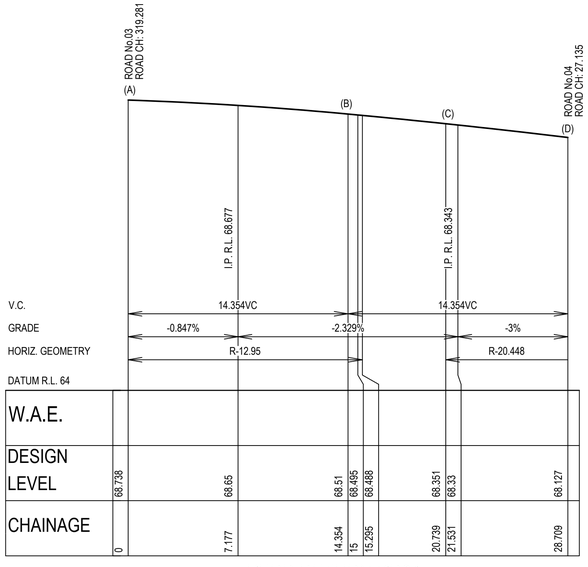
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	403	B

Printed:Monday, 30 March 2020 2:47:46 PM File Name:C:\130\Detail\ORION-SYN\0105ES-39-CC- Industrial Site CC_20820\DWGS\19-0108-39-CC-403.dwg

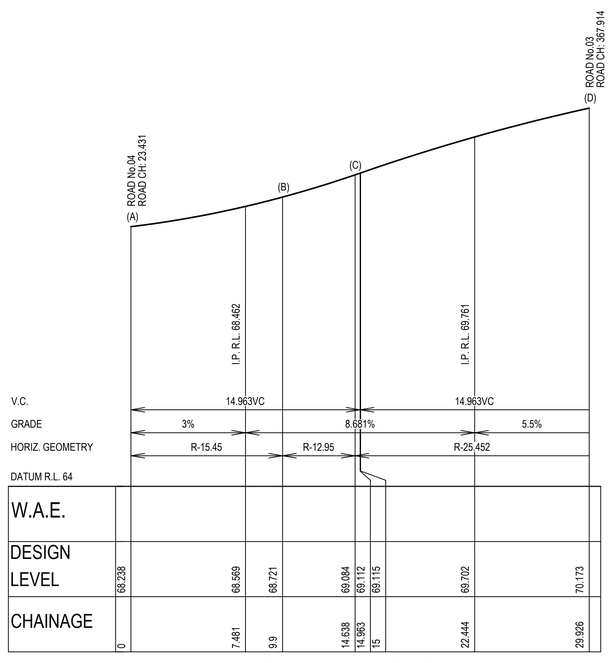
NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER



KERB RETURN KR01 & KR02
SCALE 1:200



KERB RETURN KR01
SCALE 1:200 (H)
SCALE 1:50 (V)



KERB RETURN KR02
SCALE 1:200 (H)
SCALE 1:50 (V)

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Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

SETOUT TABLE KR01

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	301106.95	6255356.07	178°53'02.83"		
7.65	301107.12	6255347.39		-12.95	15.295
10	301110.8	6255347.11	134°38'22.93"		
15.29	301115.21	6255344.25			
20	301119.6	6255342.55	111°12'42.77"		
20.74	301120.29	6255342.28			
24.72	301124.05	6255340.82		-20.448	7.969
28.71	301128.08	6255340.9	88°52'56.91"		

SETOUT TABLE KR02

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	301124.63	6255328.22	270°59'51.47"		
4.95	301119.5	6255328.31		-15.45	9.9
9.9	301115.34	6255325.31	234°17'07.12"		
10	301115.26	6255325.25	233°50'32.84"		
12.27	301113.39	6255323.91		-12.95	4.738
14.64	301112.08	6255321.91	213°19'24.78"		
20	301109.62	6255317.16	201°15'07.76"		
22.28	301107.75	6255315.33		-25.452	15.288
29.93	301107.9	6255307.45	178°54'28.75"		

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:200 (A1) SCALE 1:400 (A3)
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SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

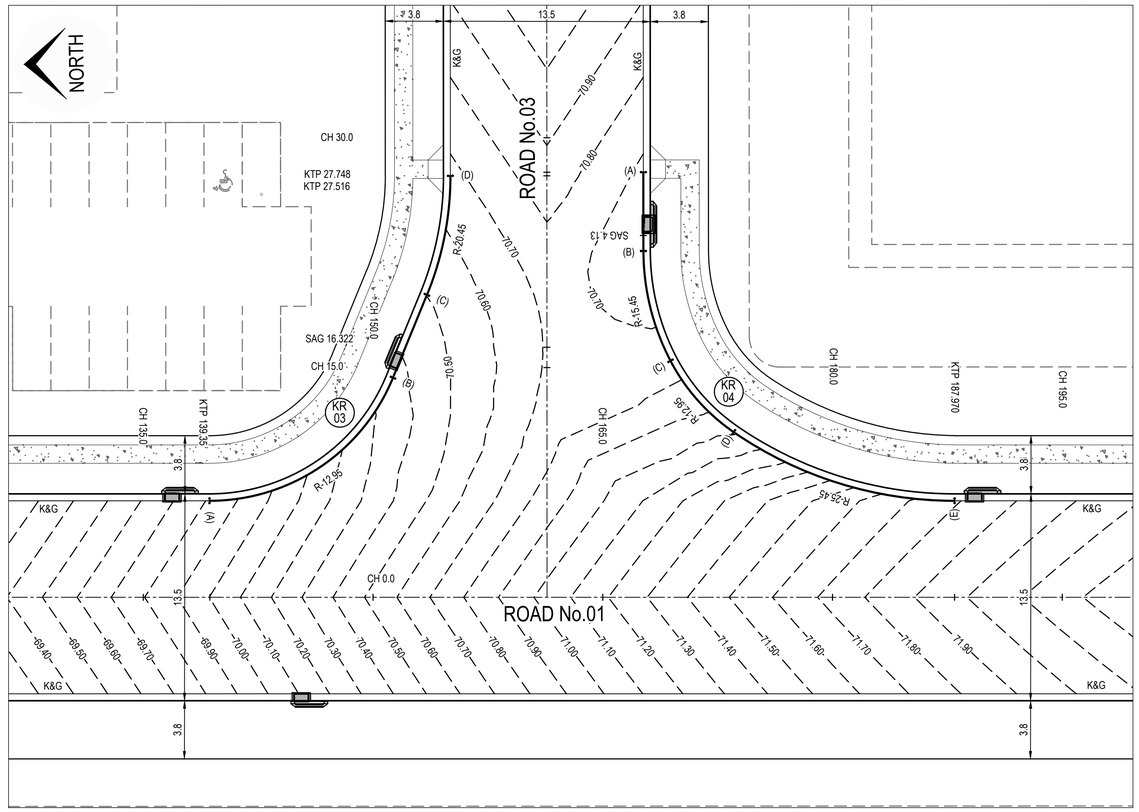
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: KERB RETURN LAYOUT & LONG SECTION SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	404	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\12d5\data\ORION-SYD\12D\SS-09-CC Industrial Site CC_20623\DWGS\19-0108-09-CC-404.dwg

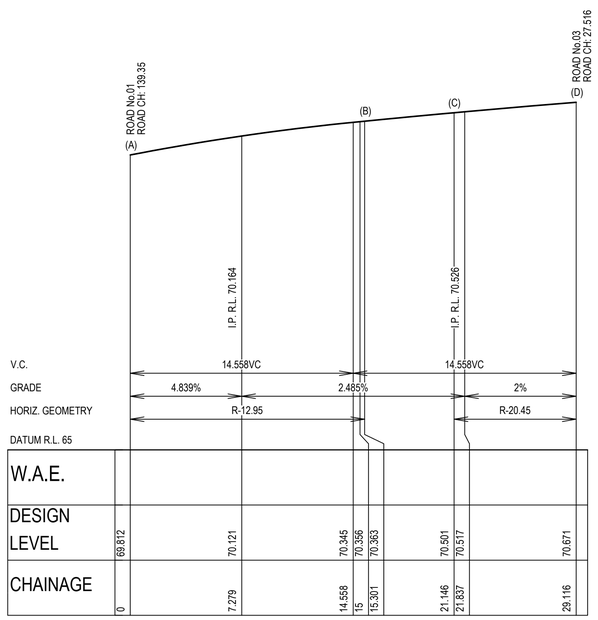


KERB RETURN KR03 & KR04

SCALE 1:200

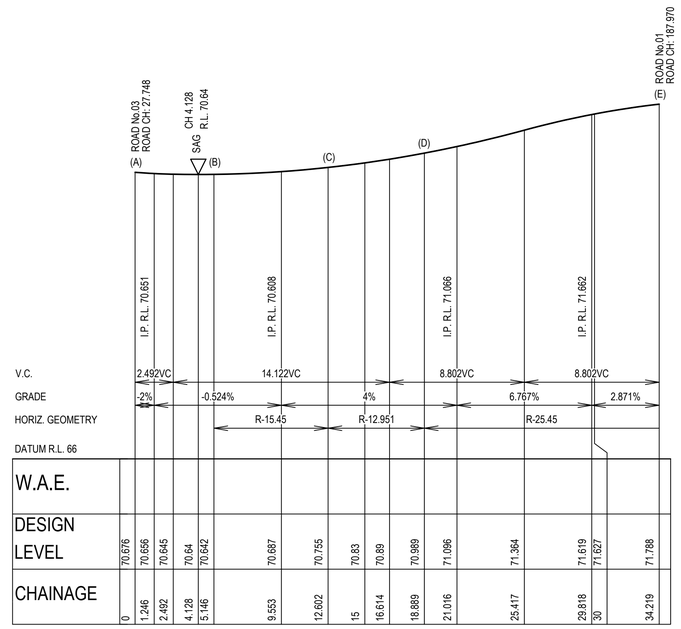
NOTE:
1) KERB RETURNS ARE SETOUT TO THE LIP OF GUTTER

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



KERB RETURN KR03

SCALE 1:200 (H)
SCALE 1:50 (V)



KERB RETURN KR04

SCALE 1:200 (H)
SCALE 1:50 (V)

SETOUT TABLE KR03

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300834.44	6255428.9	178°54'32.08"		
7.65	300834.61	6255420.21		-12.95	15.301
10	300838.28	6255419.93	134°39'54.24"		
15.3	300842.7	6255417.07	111°12'41.29"		
20	300847.08	6255415.37	111°12'41.29"		
21.15	300848.15	6255414.96	111°12'41.29"		
25.13	300851.91	6255413.5		-20.45	7.969
29.12	300855.95	6255413.58	88°53'00.19"		

SETOUT TABLE KR04

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	300856.43	6255400.98	268°53'00.19"		
5.15	300851.28	6255400.88	268°53'00.19"		
8.87	300847.48	6255400.81		-15.45	7.455
10	300846.52	6255400.03	250°53'00.76"		
12.6	300844.15	6255398.98	241°14'07.53"		
15.75	300841.34	6255397.44		-12.951	6.287
18.89	300839.57	6255394.76	213°25'21.37"		
20	300838.98	6255393.82	210°55'13.36"		
26.55	300835.22	6255388.16		-25.45	15.331
30	300835.64	6255384.46	188°24'26.29"		
34.22	300835.37	6255380.26	178°54'32.08"		

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

JAS-ANZ
SUSTAINABLE REGISTRATION ISO 9001 ISO 14001 ISO 45001
WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: KERB RETURN LAYOUT & LONG SECTION SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	405	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\1Drift\Orion\ORION-SYNSY\1DRS-09-CC Industrial Site CC_20623\DWGS\19-0108-09-CC-405.dwg

NORTH

FOR CONTINUATION REFER TO SHEET CC 501

ROAD No.00
ROAD No.01
ROAD No.03
ROAD No.04
WALLGROVE ROAD

23\01 0.1026ha
01\08 0.0552ha
01\09 0.1070ha
01\10 0.1160ha
01\11 0.1279ha
01\12 0.0951ha
20\01 0.0755ha
16\01 0.0895ha
01\13 0.1702ha
01\06 0.0688ha
09\02 0.1261ha
01\05 0.0759ha
08\02 0.0788ha
08\01 1.5764ha
01\03 0.0547ha
01\04 0.0394ha
01\02 0.1101ha
11\01 0.2134ha
11\02 0.2254ha
11\03 0.0640ha
11\04 0.0481ha
02\07 0.0312ha
02\08 0.0235ha
02\09 0.0665ha
02\10 0.1776ha
12\01 0.1962ha
13\02 0.1244ha
07\01 0.1037ha
06\01 0.1047ha
22\01 0.0977ha
22\02 0.1165ha
01\01 3.1320ha
02\05 0.0964ha
02\04 0.1395ha
03\01 2.9024ha
02\01 3.3278ha
13\01 2.5414ha
10\01 2.9364ha
BASIN 02 2.9651ha
BASIN 03 3.9014ha

LOT 13
LOT 14
LOT 2
LOT 5
LOT 7
LOT 6
LOT 4
LOT 3A
LOT 3B

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	1/1 0.1760ha
DESIGN CATCHMENT AND BOUNDARY	
INTERIM BASIN CATCHMENT & BOUNDARY	B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

UPDATED DRAINAGE NETWORK & CATCHMENTS
ADDED OSD BASIN CATCHMENTS
B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale: 0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: STORMWATER CATCHMENT PLAN SHEET 01 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	500	B

Plotted Monday, 30 March 2020 2:57:48 PM File Name:C:\Jobs\data\ORION SYNOTDES-09-CC Industrial Site CC_20623DWG\SI-19-0108-09-CC-500.dwg

NORTH

REEDY CREEK

30m SETBACK RIPARIAN ZONE

LOT 10

BASIN 01
13.5943ha

LOT 11C

LOT 12C

LOT 11B

LOT 12B

LOT 11A

LOT 12A

LOT 13

ROAD No.01

03\06
0.1890ha

03\05
0.0658ha

05\02
0.2130ha

03\04
0.1701ha

03\03
0.0418ha

03\02
0.0827ha

04\01
0.1083ha

LOT 9

14\01
1.0564ha

LOT 8

15\01
1.9881ha

LOT 7

03\01
2.9024ha

FOR CONTINUATION REFER TO SHEET CC-500

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	1/1 0.1760ha
DESIGN CATCHMENT AND BOUNDARY	
INTERIM BASIN CATCHMENT & BOUNDARY	

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

UPDATED DRAINAGE NETWORK & CATCHMENTS
ADDED OSD BASIN CATCHMENTS
B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
C	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
B	MG	DH	AS	PB	09/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
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SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

By: Orion Consulting

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: STORMWATER CATCHMENT PLAN SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	501	C

Printed:Monday, 30 March 2020 2:43:46 PM File Name:C:\1Job\Detail\ORION-SYN\01DES\19-0108-09-CC-Industrial Site CC_20820\DWGS\19-0108-09-CC-501.dwg

NORTH

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	1/1 0.1760ha
INTERIM BASIN CATCHMENT & BOUNDARY	
BYPASS CATCHMENT & BOUNDARY	

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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Scale:
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SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: OSD BASIN CATCHMENT PLAN

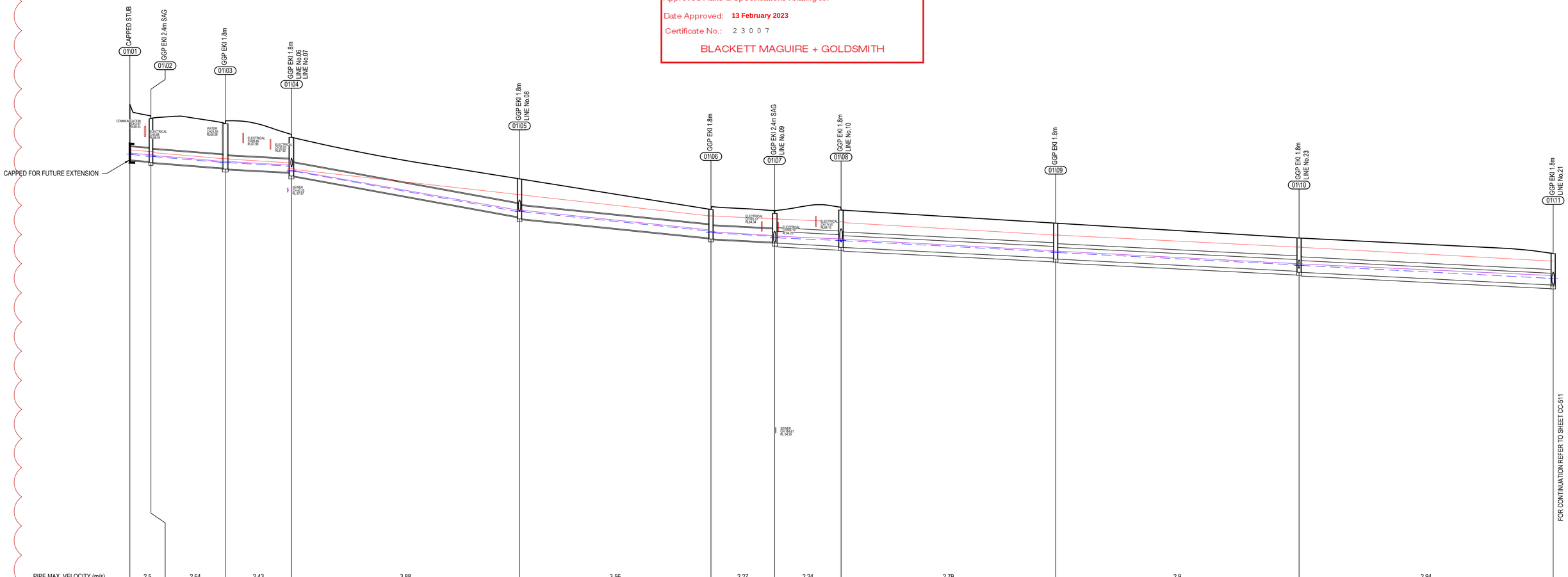
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	502	A

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\1Job\data\ORION SYNOTDES-09-CC Industrial Site CC_20623DWGS\19-0108-09-CC-502.dwg

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LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL

CONSTRUCTION CERTIFICATE
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Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
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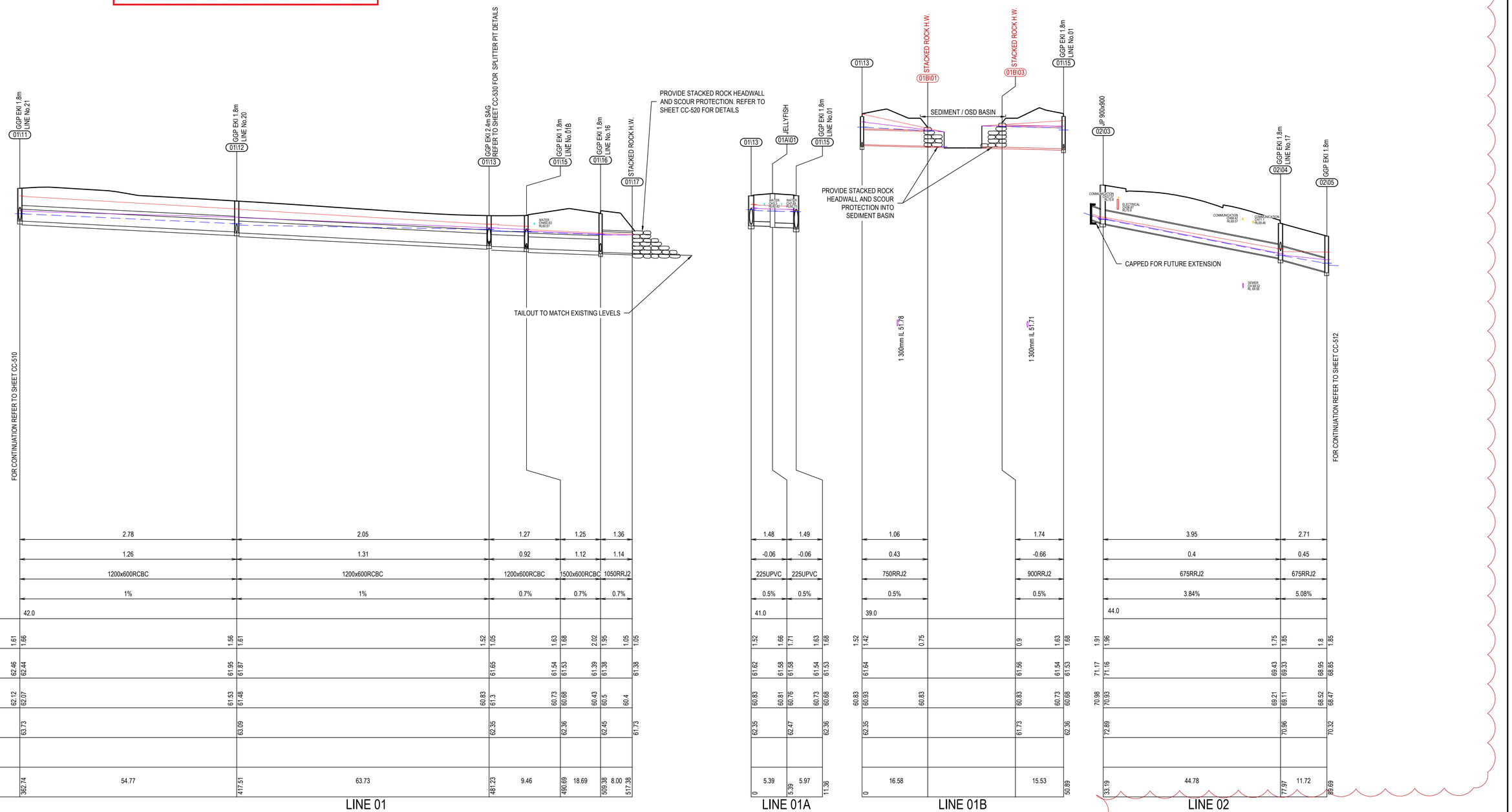


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LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL

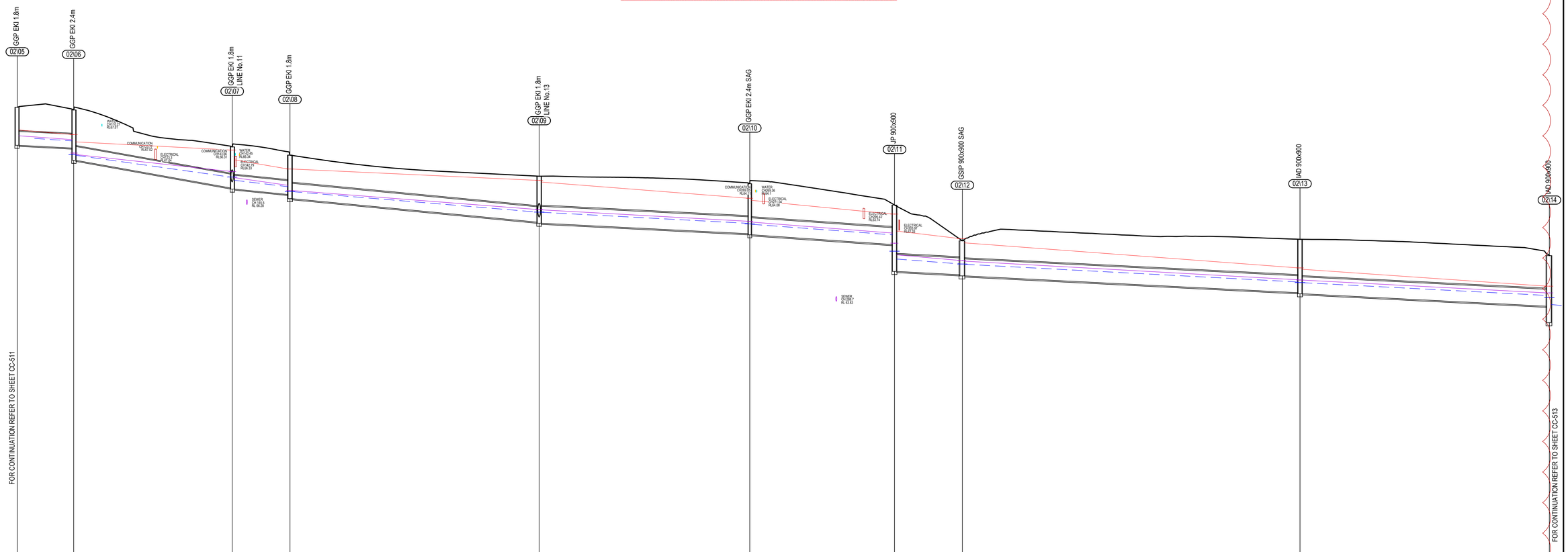


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LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL

CONSTRUCTION CERTIFICATE
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Date Approved: 13 February 2023
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



PIPE MAX. VELOCITY (m/s)		1.96	2.88	2.6	2.85	3.02	3.35	2.42	3	3.12			
DISCHARGE (cu.m/s)		0.45	0.48	0.71	0.72	1.08	1.14	1.14	1.14	1.14			
PIPE SIZE (mm) & CLASS		675RRJ2	675RRJ2	675RRJ2	750RRJ2	825RRJ2	825RRJ2	825RRJ2	825RRJ2	825RRJ2			
DESIGN GRADE		1%	3.5%	1.9%	1.89%	1%	1.36%	1%	1%	1%			
DATUM R.L		44.0											
DEPTH TO INVERT	1.8	1.85	1.86	2.45	2	2.05	1.92	2.12	2.23	2.28	2.44	2.49	1.92	3.23	1.66	1.71	2.6	2.85	2.46	3.26
5 YR HGL LEVEL	68.95	68.85	68.69	67.98	66.92	66.77	66.46	66.22	65.22	65.22	64.67	64.63	64.12	62.94	62.7	62.69	61.83	61.79	61.17	60.73
INVERT LEVEL	68.52	68.47	68.33	67.74	66.39	66.34	65.87	64.73	64.68	64.17	64.12	63.64	62.34	62.17	62.12	61.3	61.25	60.65	60.71	
SURFACE LEVEL	70.32		70.19		68.39		67.99		66.97		66.61		65.57		63.83		63.9		63.11	
ROAD CHAINAGE																				
PIPE CHAINAGE	89.69	13.7	103.39	38.52	141.91	14.04	155.94	60.55	216.49	51.18	267.67	35.17	302.84	16.49	319.33	82.03	401.36	60.6	461.96	

LINE 02

ISSUED FOR CONSTRUCTION

B

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:500 (A1) SCALE 1:1000 (A3)
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SCALE 1:100 (A1) SCALE 1:200 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTION SHEET 03 OF 07

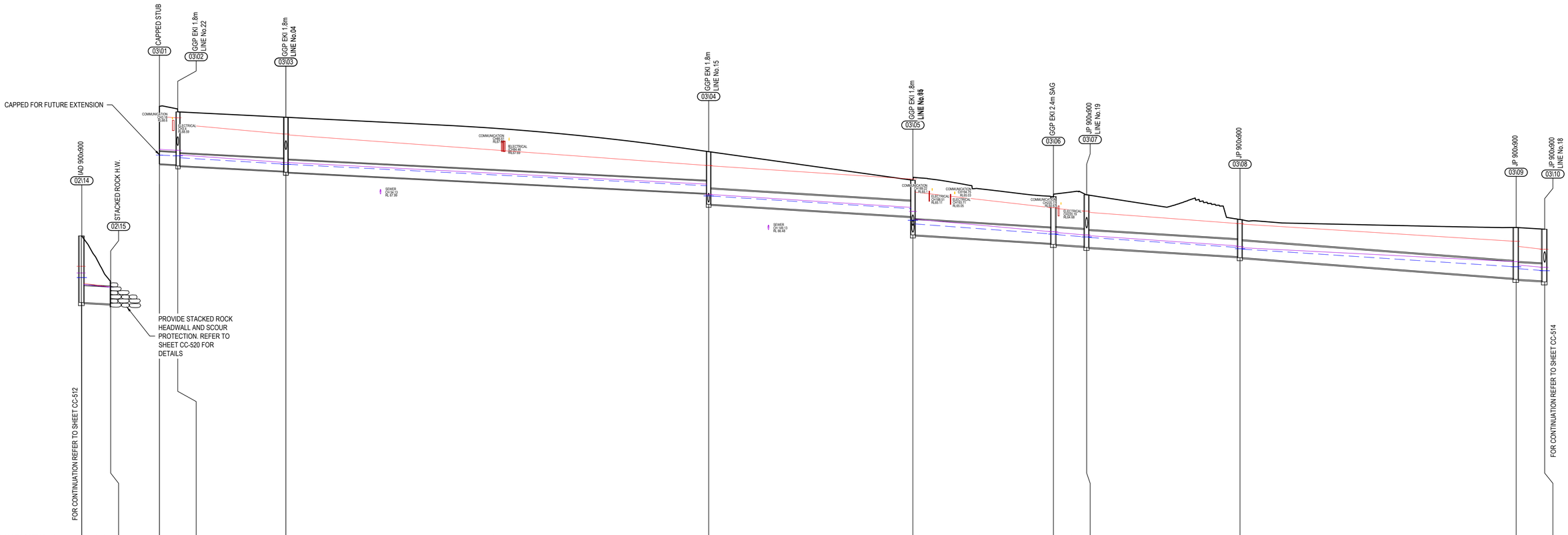
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	512	B

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CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

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LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL

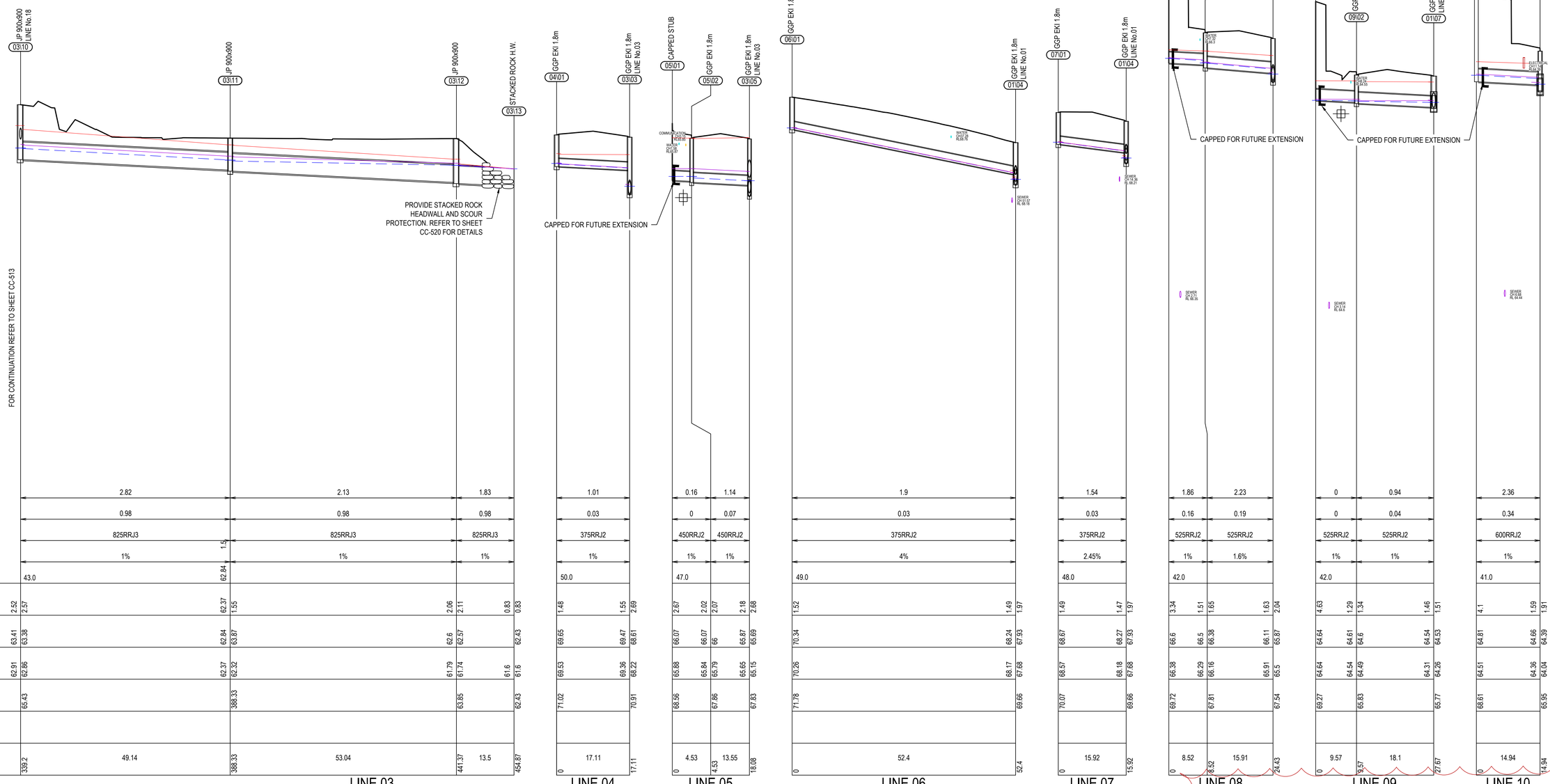


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LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL
- CONNECTION PROVIDED FOR FUTURE WAREHOUSE OPTIONS

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH



	LINE 03													LINE 04			LINE 05			LINE 06			LINE 07			LINE 08				LINE 09				LINE 10		
PIPE MAX. VELOCITY (m/s)	2.82					2.13					1.83			1.01			0.16	1.14		1.9			1.54			1.86	2.23			0	0.94			2.36		
DISCHARGE (cu.m/s)	0.98					0.98					0.98			0.03			0	0.07		0.03			0.03			0.16	0.19			0	0.04			0.34		
PIPE SIZE (mm) & CLASS	825RRJ3					825RRJ3					825RRJ3			375RRJ2			450RRJ2	450RRJ2		375RRJ2			375RRJ2			525RRJ2	525RRJ2			525RRJ2	525RRJ2			600RRJ2		
DESIGN GRADE	1%					1%					1%			1%			1%	1%		4%			2.45%			1%	1.6%			1%	1%			1%		
DATUM R.L	43.0													50.0			47.0			49.0			48.0			42.0				42.0				41.0		
DEPTH TO INVERT	2.52	2.57						62.37	1.55				2.06	2.11		0.83	0.83	1.48		1.55	2.69	2.67		2.02	2.07	2.18	2.68	1.52		1.49	1.97	1.49		1.47	1.97	3.34	1.51	1.65	1.63	2.04	4.63	1.29	1.34	1.46	1.51	4.1		1.59	1.91
5 YR HGL LEVEL	63.41	63.38						62.84	63.87				62.6	62.57		62.43	62.43	69.65		69.47	68.61	66.07		66.07	66	65.87	65.69	70.34		68.24	67.93	68.67		68.27	67.93	66.6	66.5	66.38	66.11	65.87	64.64	64.61	64.6	64.54	64.53	64.81		64.66	64.39
INVERT LEVEL	62.91	62.86						62.37	62.32				61.79	61.74		61.6	61.6	69.53		69.36	68.22	65.88		65.84	65.79	65.65	65.15	70.26		68.17	67.68	68.57		68.18	67.68	66.38	66.29	66.16	65.91	65.5	64.64	64.54	64.49	64.31	64.26	64.51		64.36	64.04
SURFACE LEVEL	65.43					388.33					63.85			71.02			68.56			71.78			70.07			69.72				69.27				68.61			65.95
ROAD CHAINAGE																																					
PIPE CHAINAGE	339.2	49.14				388.33	53.04				441.37	13.5		0	17.11		0	4.53	13.55		0	52.4		0	15.92		0	8.52	15.91			0	9.57	18.1			0	14.94		
	454.87													17.11			18.08			52.4			15.92			24.43				27.67				14.94		

ISSUED FOR CONSTRUCTION

B

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au
SUSTAINABLE ADVANTAGE CERTIFICATION ISO 9001 ISO 14001 ISO 45001 JAS-ANZ WWW.IAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTION SHEET 05 OF 07

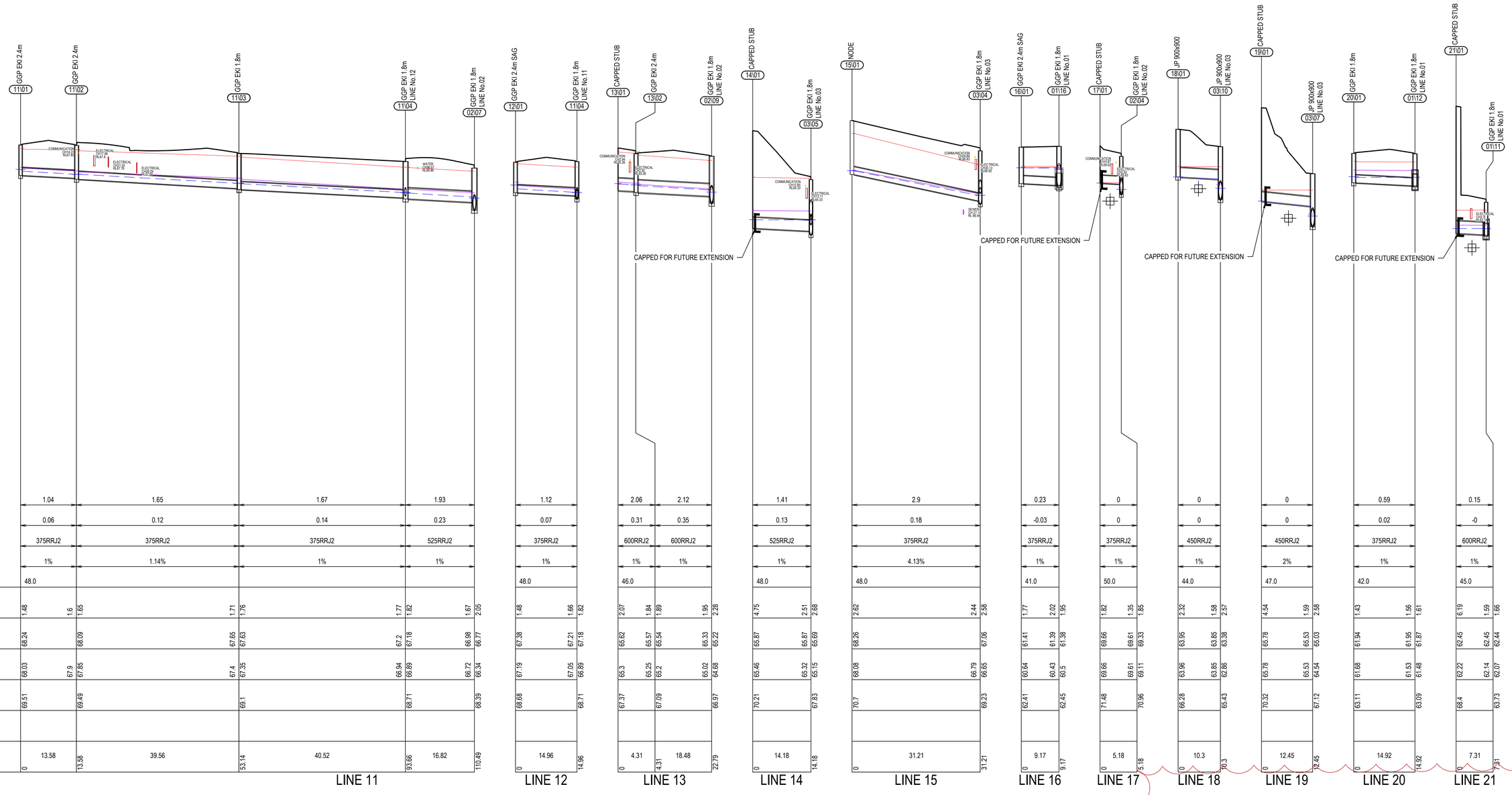
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	514	B

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CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

NOTE:
SERVICE LEVELS AND ALLIGNMENTS ARE SUBJECT TO FINAL DESIGN APPROVALS. LEVELS AND LOCATIONS SHOWN ON DRAINAGE LONGSECTIONS ARE FOR INFORMATION ONLY.

LEGEND
- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL
- CONNECTION PROVIDED FOR FUTURE WAREHOUSE OPTIONS



	LINE 11				LINE 12	LINE 13		LINE 14	LINE 15	LINE 16	LINE 17	LINE 18	LINE 19	LINE 20	LINE 21
PIPE MAX. VELOCITY (m/s)	1.04	1.65	1.67	1.93	1.12	2.06	2.12	1.41	2.9	0.23	0	0	0	0.59	0.15
DISCHARGE (cu.m/s)	0.06	0.12	0.14	0.23	0.07	0.31	0.35	0.13	0.18	-0.03	0	0	0	0.02	-0
PIPE SIZE (mm) & CLASS	375RRJ2	375RRJ2	375RRJ2	525RRJ2	375RRJ2	600RRJ2	600RRJ2	525RRJ2	375RRJ2	375RRJ2	375RRJ2	450RRJ2	450RRJ2	375RRJ2	600RRJ2
DESIGN GRADE	1%	1.14%	1%	1%	1%	1%	1%	1%	4.13%	1%	1%	1%	2%	1%	1%
DATUM R.L	48.0				48.0	46.0		48.0	48.0	41.0	50.0	44.0	47.0	42.0	45.0
DEPTH TO INVERT	1.48 1.6	1.65 1.71	1.76 1.77	1.82 1.67 2.05	1.48 1.66 1.82	2.07 1.84 1.89 1.95 2.28		4.75 2.51 2.68	2.62 2.44 2.58	1.77 2.02 1.95	1.82 1.35 1.85	2.32 1.58 2.57	4.54 1.59 2.58	1.43 1.56 1.61	6.19 1.59 1.66
5 YR HGL LEVEL	68.24 68.09	67.65	67.63	67.2 67.18 66.98 66.77	67.38 67.21 67.18	65.62 65.57 65.54 65.33 65.22		65.87 65.87 65.69	68.26 67.06	61.41 61.39 61.38	69.66 69.61 69.33	63.95 63.85 63.38	65.78 65.53 65.03	61.94 61.95 61.87	62.45 62.45 62.44
INVERT LEVEL	68.03 67.9	67.85 67.4	67.35	66.94 66.89 66.72 66.34	67.19 67.05 66.89	65.3 65.25 65.2 65.02 64.68		65.46 65.32 65.15	68.08 66.79 66.65	60.64 60.43 60.5	69.66 69.61 69.11	63.96 63.85 62.86	65.78 65.53 64.54	61.68 61.53 61.48	62.22 62.14 62.07
SURFACE LEVEL	69.51 69.49	69.1	68.71	68.39	68.68 68.71	67.37 67.09 66.97		70.21 67.83	70.7 69.23	62.41 62.45	71.48 70.96	66.28 65.43	70.32 67.12	63.11 63.09	68.4 63.73
ROAD CHAINAGE															
PIPE CHAINAGE	0 13.58	13.58 39.56	53.14 40.52	93.66 16.82 110.49	0 14.96 14.96	0 4.31 4.31 18.48 22.79		0 14.18 14.18	0 31.21 31.21	0 9.17 9.17	0 5.18 5.18	0 10.3 10.3	0 12.45 12.45	0 14.92 14.92	0 7.31 7.31

ISSUED FOR CONSTRUCTION

B

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTION SHEET 06 OF 07

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	515	B

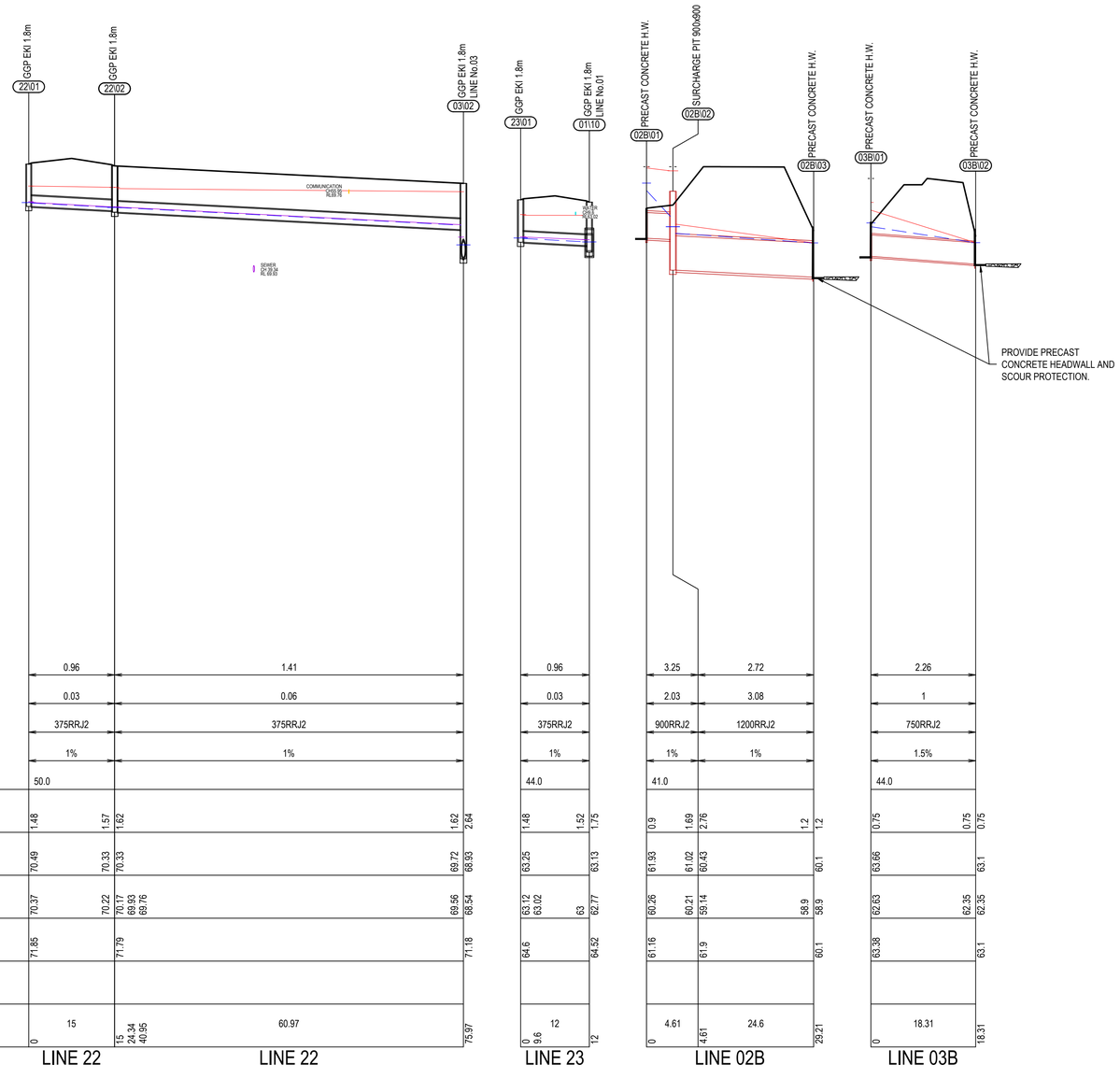
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NOTE:

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LEGEND

- DESIGN SURFACE LEVEL
- 100 YEAR HGL
- 20 YEAR HGL
- 5 YEAR HGL



	LINE 22		LINE 22		LINE 23		LINE 02B		LINE 03B	
PIPE MAX. VELOCITY (m/s)	0.96		1.41		0.96		3.25	2.72	2.26	
DISCHARGE (cu.m/s)	0.03		0.06		0.03		2.03	3.08	1	
PIPE SIZE (mm) & CLASS	375RRJ2		375RRJ2		375RRJ2		900RRJ2	1200RRJ2	750RRJ2	
DESIGN GRADE	1%		1%		1%		1%	1%	1.5%	
DATUM R.L	50.0				44.0		41.0		44.0	
DEPTH TO INVERT	1.48	1.57	1.62	2.64	1.48	1.52 1.75	0.9	1.69 2.76 1.2 1.2	0.75	0.75 0.75
5 YR HGL LEVEL	70.49	70.33	70.33	69.72 68.93	63.25	63.13	61.93	61.02 60.43 60.1	63.66	63.1
INVERT LEVEL	70.37	70.22	70.17 69.93 69.76	69.56 68.54	63.12 63.02	63 62.77	60.26	60.21 59.14 58.9 58.9	62.63	62.35 62.35
SURFACE LEVEL	71.85		71.79	71.18	64.6	64.52	61.16	61.9 60.1	63.38	63.1
ROAD CHAINAGE										
PIPE CHAINAGE	0 15		15 24.34 40.95	75.97	0 9.6	12	0 4.61	4.61 24.6 29.21	0	18.31

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

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Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTION SHEET 07 OF 07

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	516	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\ORION\ORION-SYNDITE\DS-19-0108-09-CC-516.dwg

PIT SCHEDULE

PIT NAME	PIT TYPE	EASTING	NORTHING	SETOUT RL	PIT DEPTH	COMMENTS
(-)	(-)	(m)	(m)	(m)	(m)	(-)
01\01	CAPPED STUB	300854.96	6255395.47	71.33	2.830	
01\02	GGP EKI 2.4m SAG	300853.03	6255400.92	70.60	2.230	PROVIDE CLASS D GRATE
01\03	GGP EKI 1.8m	300843.74	6255416.67	70.35	2.310	PROVIDE CLASS D GRATE
01\04	GGP EKI 1.8m	300834.39	6255431.34	69.66	1.970	PROVIDE CLASS D GRATE
01\05	GGP EKI 1.8m	300833.29	6255489.43	67.54	2.040	PROVIDE CLASS D GRATE
01\06	GGP EKI 1.8m	300832.36	6255538.20	65.98	1.510	PROVIDE CLASS D GRATE
01\07	GGP EKI 2.4m SAG	300836.01	6255554.12	65.77	1.510	PROVIDE CLASS D GRATE
01\08	GGP EKI 1.8m	300850.12	6255563.92	65.95	1.910	PROVIDE CLASS D GRATE
01\09	GGP EKI 1.8m	300904.80	6255564.81	65.28	1.840	PROVIDE CLASS D GRATE
01\10	GGP EKI 1.8m	300966.82	6255565.82	64.52	1.750	PROVIDE CLASS D GRATE
01\11	GGP EKI 1.8m	301031.58	6255566.83	63.73	1.660	PROVIDE CLASS D GRATE
01\12	GGP EKI 1.8m	301086.34	6255566.97	63.09	1.610	PROVIDE CLASS D GRATE
01\13	GGP EKI 2.4m SAG	301150.07	6255567.45	62.35	1.520	PROVIDE CLASS D GRATE
01\14	NODE			62.35	1.570	
01\15	GGP EKI 1.8m	301159.52	6255567.52	62.36	1.680	PROVIDE CLASS D GRATE
01\16	GGP EKI 1.8m	301159.35	6255585.31	62.45	2.020	PROVIDE CLASS D GRATE
01\17	STACKED ROCK H.W.	301158.54	6255613.78	61.35	1.050	
01A\01	GPT			62.47	1.710	
01B\01	STACKED ROCK H.W.	301151.52	6255546.33	61.58	0.750	
01B\03	STACKED ROCK H.W.	301158.10	6255546.48	61.73	0.900	
02\01	NODE			76.75	4.310	
02\02	JP 900x900	301073.40	6255239.22	74.86	2.810	PROVIDE CLASS D LID
02\03	JP 900x900	301086.62	6255248.17	72.89	1.960	PROVIDE CLASS D LID
02\04	GGP EKI 1.8m	301095.59	6255292.14	70.96	1.850	PROVIDE CLASS D GRATE
02\05	GGP EKI 1.8m	301094.91	6255303.85	70.32	1.850	PROVIDE CLASS D GRATE
02\06	GGP EKI 2.4m	301107.92	6255306.42	70.19	2.450	PROVIDE CLASS D GRATE
02\07	GGP EKI 1.8m	301117.30	6255343.44	68.39	2.050	PROVIDE CLASS D GRATE
02\08	GGP EKI 1.8m	301131.30	6255340.96	67.99	2.120	PROVIDE CLASS D GRATE
02\09	GGP EKI 1.8m	301191.83	6255342.14	66.97	2.280	PROVIDE CLASS D GRATE
02\10	GGP EKI 2.4m SAG	301242.22	6255336.82	66.61	2.490	PROVIDE CLASS D GRATE
02\11	JP 900x900	301277.76	6255339.30	65.57	3.230	PROVIDE CLASS D LID
02\12	GSIP 900x900 SAG	301293.42	6255334.13	63.83	1.710	PROVIDE CLASS D GRATE
02\13	IAD 900x900			63.90	2.650	PROVIDE CLASS D GRATE
02\14	IAD 900x900			63.11	3.260	PROVIDE CLASS D GRATE
02\15	STACKED ROCK H.W.	301368.79	6255207.18	60.87	1.100	
02B\01	PRECAST CONCRETE H.W.	300199.16	6255379.47	61.16	0.900	
02B\02	IAD 900x900			61.90	3.800	PROVIDE CLASS D GRATE
02B\03	PRECAST CONCRETE H.W.	300169.98	6255380.75	60.10	1.200	
03\01	CAPPED STUB	300670.28	6255310.98	71.45	2.820	
03\02	GGP EKI 1.8m	300670.21	6255315.92	71.18	2.640	PROVIDE CLASS D GRATE
03\03	GGP EKI 1.8m	300643.74	6255315.40	70.91	2.690	PROVIDE CLASS D GRATE
03\04	GGP EKI 1.8m	300540.23	6255313.39	69.23	2.580	PROVIDE CLASS D GRATE
03\05	GGP EKI 1.8m	300490.24	6255312.42	67.83	2.680	PROVIDE CLASS D GRATE
03\06	GGP EKI 2.4m SAG	300457.60	6255301.95	67.04	2.340	PROVIDE CLASS D GRATE
03\07	JP 900x900	300450.08	6255298.09	67.12	2.580	PROVIDE CLASS D LID
03\08	JP 900x900	300428.08	6255267.66	65.91	1.870	PROVIDE CLASS D LID
03\09	JP 900x900	300418.82	6255200.69	65.52	2.540	PROVIDE CLASS D LID
03\10	JP 900x900	300413.52	6255196.14	65.43	2.570	PROVIDE CLASS D LID
03\11	JP 900x900	300364.86	6255202.96	63.87	1.550	PROVIDE CLASS D LID
03\12	JP 900x900	300312.37	6255210.58	63.85	2.110	PROVIDE CLASS D LID
03\13	STACKED ROCK H.W.	300301.05	6255203.22	62.43	0.830	
03B\01	PRECAST CONCRETE H.W.	301353.76	6255177.73	63.38	0.750	
03B\02	PRECAST CONCRETE H.W.	301366.65	6255190.73	63.10	0.750	
04\01	GGP EKI 1.8m	300654.00	6255328.20	71.02	1.480	PROVIDE CLASS D GRATE
05\01	CAPPED STUB	300491.16	6255330.02	68.56	2.670	
05\02	GGP EKI 1.8m	300491.16	6255325.04	67.86	2.070	PROVIDE CLASS D GRATE
06\01	GGP EKI 1.8m	300835.39	6255378.95	71.78	1.520	PROVIDE CLASS D GRATE
07\01	GGP EKI 1.8m	300821.96	6255422.66	70.07	1.490	PROVIDE CLASS D GRATE
08\01	CAPPED STUB	300811.88	6255480.68	69.72	3.340	
08\02	GGP EKI 1.8m	300820.85	6255480.77	67.81	1.650	PROVIDE CLASS D GRATE
09\01	CAPPED STUB	300810.58	6255543.29	69.27	4.630	
09\02	GGP EKI 2.4m SAG	300819.58	6255547.60	65.83	1.340	PROVIDE CLASS D GRATE
10\01	NODE			68.61	4.100	
11\01	GGP EKI 2.4m	301065.89	6255417.67	69.51	1.480	PROVIDE CLASS D GRATE
11\02	GGP EKI 2.4m	301067.60	6255405.10	69.49	1.650	PROVIDE CLASS D GRATE
11\03	GGP EKI 1.8m	301106.14	6255397.82	69.10	1.760	PROVIDE CLASS D GRATE
11\04	GGP EKI 1.8m	301106.93	6255357.31	68.71	1.820	PROVIDE CLASS D GRATE
12\01	GGP EKI 2.4m SAG	301094.45	6255350.61	68.68	1.480	PROVIDE CLASS D GRATE
13\01	CAPPED STUB	301179.28	6255324.54	67.37	2.070	
13\02	GGP EKI 2.4m	301179.46	6255329.30	67.09	1.890	PROVIDE CLASS D GRATE
14\01	CAPPED STUB	300493.51	6255298.17	70.21	4.750	
15\01	NODE			70.70	2.620	
16\01	GGP EKI 2.4m SAG	301150.22	6255584.74	62.41	1.770	PROVIDE CLASS D GRATE
17\01	CAPPED STUB	301090.00	6255291.54	71.48	1.820	
18\01	JP 900x900	300423.66	6255194.31	66.28	2.320	PROVIDE CLASS D LID
19\01	CAPPED STUB	300461.69	6255293.60	70.32	4.540	
20\01	GGP EKI 1.8m	301078.00	6255578.42	63.11	1.430	PROVIDE CLASS D GRATE
21\01	CAPPED STUB	301030.88	6255559.11	68.40	6.190	
22\01	GGP EKI 1.8m	300737.45	6255329.82	71.85	1.480	PROVIDE CLASS D GRATE
22\02	GGP EKI 1.8m	300731.17	6255317.10	71.79	1.620	PROVIDE CLASS D GRATE
23\01	GGP EKI 1.8m	300960.03	6255574.81	64.60	1.480	PROVIDE CLASS D GRATE

B

NOTES:

1. MODELLED USING 12D - DYNAMIC METHOD
2. COLEBROOK WHITE ROUGHNESS FACTOR
   RC PIPES - 0.6mm
   PVC PIPES - 0.015mm
3. RRJ2 DENOTES RUBBER RING JOINT CLASS 2 PIPE ALL PVC PIPES TO BE CLASS SH OR EQUIVALENT
4. THE PRESSURE CHANGE COEFFICIENT 'K' HAS BEEN DETERMINED USING MISSOURI CHARTS AND HARE'S EQUATIONS.
5. PITS ARE TO HAVE STEP IRONS IF DEEPER THAN 0.9m.
6. PITS DEEPER THAN 2.0m ARE STRUCTURALLY DESIGNED.
7. CONCRETE 32MPa COMPRESSIVE STRENGTH AT 28 DAYS.
8. ALL GRATED PIT COVERS IN ROADS ARE TO BE BICYCLE SAFE.
9. PIT BLOCKAGE FACTORS:
   MINOR STORM 5YR ARI
   PITS ON GRADE 30%
   PITS ON SAG 50%
10. MINOR STORM 20YR ARI
    PITS ON GRADE 30%
    PITS ON SAG 50%
11. MAJOR STORM 100YR ARI
    PITS ON GRADE 30%
    PITS ON SAG 50%

B

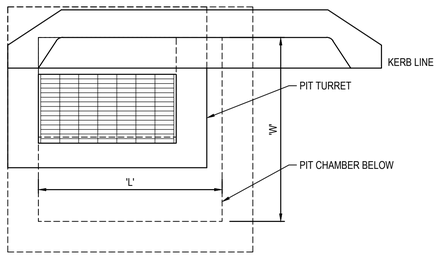
PIT TYPE:

G.G.P.	GRATED GULLY PIT
G.S.I.P.	GRATED SURFACE INLET PIT
R.S.I.P	RAISED SURFACE INLET PIT
J.P.	JUNCTION PIT
H.W.	HEADWALL

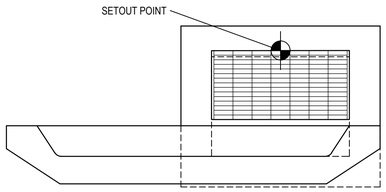
LAND USE:

ROAD ONLY	95% IMPERVIOUS
LOTS	DIRECT FLOWS FROM LOTS INPUT TO MODEL TO DUPLICATE OSD CONTROLLED FLOW IN DEVELOPED CONDITIONS.

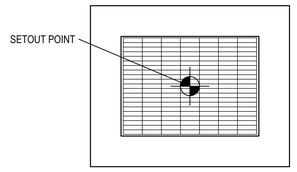
CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



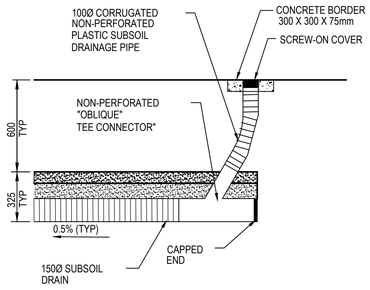
PIT CHAMBER DIMENSION
(TYPICAL)
SCALE 1:20

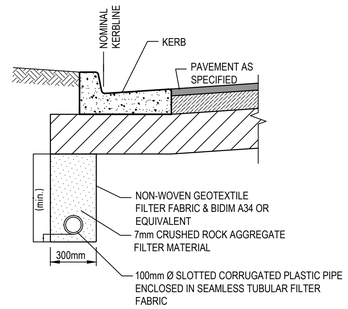


SETOUT DETAIL KERB INLET PIT
(LINTEL)
SCALE 1:20

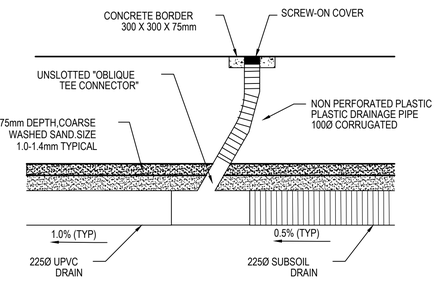


SETOUT DETAIL
GRATED SURFACE INLET PIT (G.S.I.P.) &
RAISED SURFACE INLET PIT (R.S.I.P.)
SCALE 1:20





SUBSOIL TYPICAL SECTION
(SIMILAR TO OTHER KERB TYPES)
SCALE 1:20



RODDING EYE/SUBSOIL DETAIL
SCALE 1:20

B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	520	B

Plotted:Monday, 30 March 2020 2:57:48 PM File Name:C:\12d\Data\ORION SYNOTDES-09-CC Industrial Site CC_2062\DWGS\19-0108-09-CC-520.dwg

STRUCTURAL NOTES

1. APPROVED STRUCTURAL DESIGN NOTES TAKE PRECEDENCE OVER STRUCTURAL AND CONCRETE NOTES IN THIS SET.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 AND OTHER RELEVANT CODES.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

CONCRETE

1. CONCRETE QUALITY:

ELEMENT	AS 3600 F'C	MAX SIZE AGGREGATE	MAX SLUMP	CEMENT TYPE
SLABS	32 MPa	20 mm	75 mm	C
WALLS	32 MPa	20 mm	75 mm	C
BLINDING SLABS	15 MPa	20 mm	75 mm	A

2. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY COUNCIL'S ENGINEER.
3. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE 50mm TO ALL SURFACES UNLESS NOTED OTHERWISE.
4. CONSTRUCTION JOINTS NOT INDICATED SHALL BE LOCATED AND FORMED TO THE APPROVAL OF COUNCIL'S ENGINEER.
5. A BOND BREAKING MATERIAL IS TO BE PLACED BETWEEN CONTACTING SURFACES AT CONTRACTION JOINTS.
6. NO PENETRATIONS, RECESSES OR CHASES OTHER THAN THOSE INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS UNLESS APPROVED IN WRITING BY COUNCIL'S ENGINEER.
7. UNLESS SHOWN OTHERWISE ALL EXTERNAL AND RE-ENTRANT CORNERS SHALL BE CHAMFERED 25mm.
8. SLABS TO BE CURED AND KEPT MOIST FOR 7 DAYS MINIMUM.
9. NO CONCRETE TO BE POURED WHEN SITE TEMPERATURE EXCEEDS 35° OR FALLS BELOW 5°C.

REINFORCEMENT

1. REINFORCEMENT STEEL QUALITY:

REINFORCEMENT TYPE	GRADE	SAA CODE	SYMBOL
WELDING GRADE DEFORMED	500	AS 4671	N
PLAIN ROUND	230	AS 1302	R
FABRIC	500	AS 4671	SL, RL, L

1.1. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE POSITION.

1.2. ALL REINFORCEMENT SHALL BE SECURELY TIED AND POSITIONED ACCURATELY BY MEANS OF STEEL OR PLASTIC CHAIRS OR OTHER APPROVED ACCESSORIES. MASONRY BLOCKS WILL NOT BE PERMITTED

.

1.3. PROVIDE COUNCIL'S ENGINEER WITH 24 HOURS NOTICE OF REINFORCEMENT BEING READY FOR INSPECTION. NO CONCRETE IS TO BE POURED WITHOUT APPROVAL OF COUNCIL'S ENGINEER.

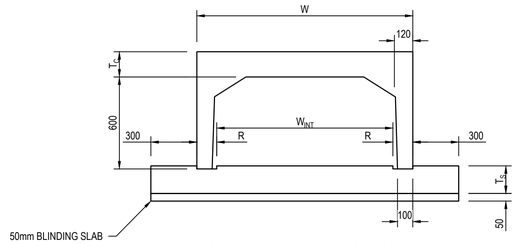
1.4. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION INDICATED. THE APPROVAL OF COUNCIL'S ENGINEER SHALL BE OBTAINED FOR ANY OTHER SPLICE.

1.5. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS INDICATED ON THE STRUCTURAL DRAWINGS OR WITH WRITTEN APPROVAL OF COUNCIL'S ENGINEER.

1.6. MINIMUM LAP OF REINFORCEMENT SHALL BE AS SHOWN IN TABLE 13.1.2.2(A) OF AS 3600 UNLESS SHOWN OTHERWISE. LAPS FOR MESH SHALL BE 1.5 TIMES THE NOMINAL WIRE SPACING OR APPROVED EQUIVALENT.

1.7. REINFORCEMENT MUST NOT BE CONTINUOUS THROUGH CONTRACTION JOINTS.

1.8. MINIMUM RADIUS FOR BENDS IN REINFORCEMENT TO BE 4 BAR DIAMETERS (DB) UNLESS NOTED OTHERWISE.



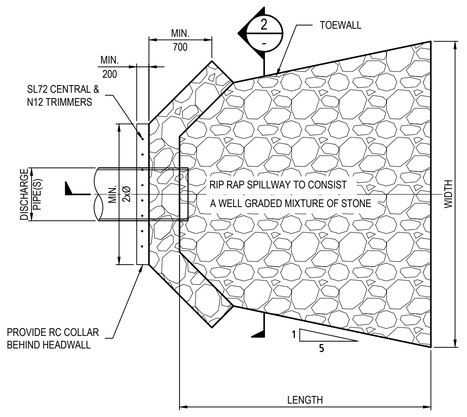
TYPICAL BOX CULVERT DETAIL

N.T.S.

DIMENSION TABLE					
CULVERT SIZE	W	W_{INT}	R	T_S	T_C
1200x600	1410	1150	130	180	165
1500x600	1710	1450	125	175	175

NOTE:

1. IF CAST INSITU CULVERT BASE SLABS ARE TO BE USED THEY ARE TO BE STRUCTURALLY CERTIFIED PRIOR TO CONSTRUCTION.
2. IF PRECAST CULVERT BASE SLABS ARE TO BE USED THEY ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.

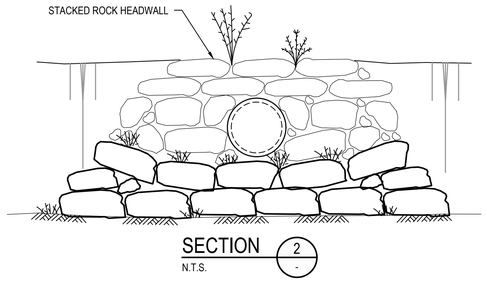


PLAN VIEW

TYPICAL STACKED ROCK HEADWALL

SCALE-1:50



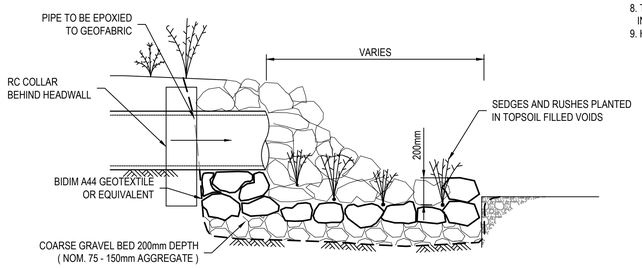


SECTION 2

N.T.S.

NOTES: - STACKED ROCK HEADWALLS

1. BACKFILL IS TO BE GRANULAR, FREE DRAINING AND COMPACTED TO 95% MAXIMUM DRY DENSITY.
2. FOUNDATION TO BE APPROVED FOR 200 kPa BEARING CAPACITY.
3. ROCK IS TO BE SOUND DURABLE BASALT OR OTHER MATERIAL APPROVED BY COUNCIL ENGINEER.
4. ROCKS SHALL BE PLACED IN SUCH A MANNER THAT THEY ARE STABLE AND INTERLOCKING AND LAID ROUGHLY COURSED AND BEDDED ON THEIR BROADEST BASE.
5. EACH ROCK SHALL BE:
   - ELONGATED TO ALLOW STACKING ON THE LONGEST AXIS.
   - ANGULAR IN SHAPE (PROMOTES INTERLOCKING)
   - FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATERIAL.
6. WALL CONSTRUCTION TO BE SUPERVISED BY A SUITABLY.
7. AIR VOIDS SHALL NOT EXCEED 30% VOLUME.
8. THE TOP COURSE OF ROCKS ON EMBANKMENT AND ADJACENT TO PIPE SHALL BE MORTARED INTO POSITION.
9. HEADWALL ROCK SPECIFICATION:
   BREADTH (B): 0.4 TO 0.6m
   WIDTH (W): 0.4 TO 0.6m
   LENGTH (L): 2x (B OR W) < L < 3 x (B OR W)



SECTION 1

N.T.S.

DIMENSION TABLE			
PIPE DIA	LENGTH	WIDTH	d50 (MIN)
750	3000	1950	300
825	3000	2100	300
1050	3000	2250	300
1200	3000	2250	300

ROCK RIPRAP NOTES:

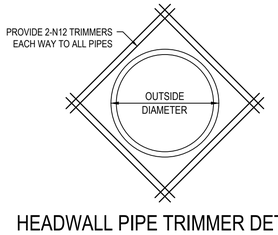
1. ALL RIPRAP MUST CONSIST OF HARD, DURABLE ANGULAR RUN-OF-QUARRY ROCK; RESISTANT TO WEATHERING & WATER ACTION; FREE FROM OVERBURDEN, SPOIL, SHALE & ORGANIC MATERIAL; & SHALL MEET THE GRADATION REQUIREMENTS SPECIFIED.
2. ROUNDED STONES/BOULDERS WILL NOT BE ACCEPTABLE.
3. SHALE & ROCK WITH SHALE SEAMS WILL NOT BE ACCEPTABLE.
4. ROCKS ARE TO BE PLACED OVER A 200mm LAYER OF ANGULAR COBBLES D50=140mm.
5. ALL ROCK & COBBLES TO BE PACKED WITH TOPSOIL. GAPS IN RIPRAP TO BE PLANTED AS SPECIFIED IN VMP, OR WITH SUITABLE NATIVE GRASSES/SEDGES.
6. RIPRAP SHALL BE PLACED ON THE PREPARED SLOPE IN A MANNER THAT WILL PRODUCE A REASONABLY WELL GRADED MASS OF STONE WITH THE MINIMUM PRACTICAL PERCENTAGE OF VOIDS.
7. LARGER STONES SHALL BE WELL DISTRIBUTED & THE ENTIRE MASS OF STONE SHALL CONFORM TO THE GRADATION SPECIFIED BY THE ENGINEERING PLANS.
8. THE MINIMUM THICKNESS OF THE RIPRAP LAYER IS TO BE 1.5 TIMES THE d50 ROCK SIZE & NOT BE LESS THAN 300mm FOR PRACTICAL PLACEMENT.
9. THE RIPRAP THICKNESS SHOULD BE INCREASED BY 50% WHEN THE RIPRAP IS PLACED UNDERWATER - UNLESS THE CONTRACTOR CAN OVERCOME UNCERTAINTIES ASSOCIATED WITH THIS TYPE OF PLACEMENT.
10. THE MINIMUM DENSITY OF STONE USED SHALL NOT BE LESS THAN 2200 kg/cu.m.
    TYPICAL ROCK WEIGHT RANGES FOR RIPRAP ARE:
    M50 - 60kg (NOM 300MD)
    M15 - 25kg
    M100 - 120kg
11. PLACE OVERSIZED ROCKS (BAFFLE BLOCKS) EVENLY DISTRIBUTED ACROSS THE ROCK MASS.
    H=150mm MIN

ROCK SIZING FOR ROCK APRONS / RIP RAP

CRITICAL VELOCITY ON THRESHOLD OF MOVEMENT OF ROCK

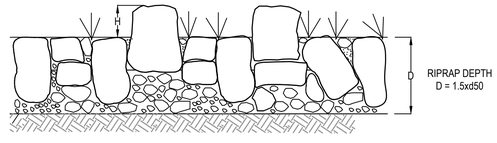
ds (mm)	CRITICAL VELOCITY (m/s) SANDSTONE 2.1 (TONNE/m³)	BASALT 2.7 (TONNE/m³)	GRANITE 2.5 (TONNE/m³)
100	1.59	1.97	1.85
150	1.94	2.42	2.27
200	2.25	2.79	2.62
250	2.51	3.12	2.93
300	2.75	3.42	3.21
400	3.18	3.95	3.71
500	3.55	4.41	4.15
600	3.89	4.83	4.54
700	4.20	5.22	4.91
800	4.49	5.58	5.24
900	4.76	5.92	5.56
1000	5.02	6.24	5.86
1200	5.50	6.84	6.42
1500	6.15	7.64	7.18

TABLE DERIVED FROM ISBASH EQUATION AND SOURCED "HYDRAULIC DESIGN CRITERIA", VOLUME 1 BY US CORPS. OF ENGINEERS (REVISED NOVEMBER 1987)



HEADWALL PIPE TRIMMER DETAIL

N.T.S.



RIPRAP DETAIL

N.T.S

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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Scale:

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE DETAILS

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	521	A

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Jobs\Active\ORION-SYN\19DES-09-CC-Industrial Site CC_20020\DWGS\19-0108-09-CC-521.dwg

HYDROLOGY 5YR

PIT NAME	PIT TYPE	CATCHMENT AREA	PERCENT IMPERVIOUS	Tc IMP	Tc PERV	CRITICAL STORM	APPROACH FLOW	CAPTURED FLOW	UNCAPTURED FLOW	GRATE DEPTH	ROAD GRADE	ROAD CROSSFALL	BYPASS PIT	BYPASS CHANNEL FLOW	U/S FLOW WIDTH	U/S VxD	COMMENTS
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(-)
01\01	CAPPED STUB	1.275	20.000	10.000	12.000	25.000	350.000	350.000	0.000	0.000							
01\02	GGP EKI SAG 2.4m	0.110	95.000	5.000	10.000	25.000	43.000	61.000	0.000	82.000	1.300	2.800	01\03	0.000			
01\03	GGP EKI 1.8m	0.055	95.000	5.000	10.000	15.000	0.000	0.000	0.000	47.000	2.400	3.100	01\04	14.000	0.710	0.050	
01\04	GGP EKI 1.8m	0.039	95.000	5.000	10.000	15.000	14.000	14.000	0.000	57.000	4.600	3.000	01\05	26.000	1.040	0.070	
01\05	GGP EKI 1.8m	0.076	95.000	5.000	10.000	25.000	26.000	25.000	2.000	58.000	3.200	3.000	01\06	26.000	1.060	0.060	
01\06	GGP EKI 1.8m	0.069	95.000	5.000	10.000	5.000	26.000	24.000	1.000	21.000	3.000	3.000	01\07	1.000	0.240	0.010	
01\07	GGP EKI SAG 2.4m		0.000			15.000	2.000	14.000	0.000	35.000	0.300	3.000	01\08	0.000	0.300	0.010	
01\08	GGP EKI 1.8m	0.055	95.000	5.000	10.000	25.000	8.000	8.000	0.000	73.000	1.200	3.000	01\09	37.000	1.580	0.060	
01\09	GGP EKI 1.8m	0.107	85.000	5.000	10.000	25.000	35.000	31.000	5.000	78.000	1.200	3.000	01\10	43.000	1.740	0.070	
01\10	GGP EKI 1.8m	0.116	85.000	5.000	10.000	25.000	43.000	36.000	8.000	81.000	1.200	3.000	01\11	50.000	1.840	0.070	
01\11	GGP EKI 1.8m	0.128	85.000	5.000	10.000	25.000	50.000	39.000	10.000	77.000	1.200	3.000	01\12	42.000	1.720	0.060	
01\12	GGP EKI 1.8m	0.095	85.000	5.000	10.000	25.000	42.000	35.000	7.000	87.000	1.200	3.000	01\13	62.000	2.050	0.080	
01\13	GGP EKI SAG 2.4m	0.170	85.000	5.000	10.000	15.000	62.000	58.000	3.000	80.000	0.300	3.000	16\01	8.000			
01\14	NODE - NO INFLOW		0.000			15.000	8.000	0.000	8.000	82.000	0.200	3.000	01\13	9.000	1.880	0.010	
01\15	GGP EKI 1.8m		0.000			5.000	9.000	9.000	0.000	1.000	0.400		01\14	0.000	0.970	0.020	
01\16	GGP EKI 1.8m		0.000			15.000	0.000	0.000	0.000	37.000	0.800	3.000	16\01	3.000	0.430	0.010	
01\17	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
01A\01	GPT		0.000			5.000	0.000	0.000	0.000	0.000		3.000					
01B\01	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
01B\03	HW In - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02\01	NODE - FULL INFLOW	1.480	15.000	10.000	12.000	25.000	403.000	403.000	0.000	60.000			02\04	46.000	1.150	0.110	
02\02	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\03	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\04	GGP EKI 1.8m	0.139	95.000	5.000	10.000	5.000	49.000	40.000	9.000	35.000	5.500	3.000	02\05	9.000	0.400	0.040	
02\05	GGP EKI 1.8m		0.000			15.000	9.000	9.000	0.000	58.000	5.500	3.000	12\01	27.000	1.060	0.070	
02\06	GGP EKI 2.4m	0.096	95.000	5.000	10.000	25.000	34.000	33.000	1.000	66.000	5.500	3.000	13\02	41.000	1.320	0.080	
02\07	GGP EKI 1.8m	0.031	95.000	5.000	10.000	15.000	8.000	8.000	0.000	39.000	2.500	2.200	02\08	8.000	0.450	0.040	
02\08	GGP EKI 1.8m	0.023	95.000	5.000	10.000	25.000	8.000	8.000	0.000	62.000	3.000	3.000	02\09	23.000	1.190	0.050	
02\09	GGP EKI 1.8m	0.066	95.000	5.000	10.000	15.000	23.000	22.000	1.000	71.000	1.000	3.000	02\10	24.000	1.510	0.040	
02\10	GGP EKI SAG 2.4m	0.178	95.000	5.000	10.000	5.000	62.000	58.000	0.000	79.000	0.200		02\12	0.000	0.000	0.000	
02\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\12	GSIP SAG 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\13	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\14	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\15	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02B\01	HW In - Precast Concrete		0.000			5.000	2030.000	2030.000	0.000	0.000							
02B\02	IAD 900x900		0.000			5.000	1050.000	1050.000	0.000	0.000							
02B\03	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
03\01	CAPPED STUB	1.219	20.000	10.000	12.000	25.000	335.000	335.000	0.000	0.000							
03\02	GGP EKI 1.8m	0.083	95.000	5.000	10.000	15.000	33.000	29.000	4.000	61.000	1.000	3.000	03\03	17.000	1.180	0.040	
03\03	GGP EKI 1.8m	0.042	95.000	5.000	10.000	25.000	17.000	17.000	0.000	76.000	1.000	3.000	03\04	45.000	1.660	0.070	
03\04	GGP EKI 1.8m	0.170	95.000	5.000	10.000	15.000	59.000	44.000	15.000	62.000	2.800	3.000	03\05	30.000	1.210	0.070	
03\05	GGP EKI 1.8m	0.066	95.000	5.000	10.000	15.000	35.000	31.000	5.000	48.000	2.800	3.000	03\06	13.000	0.730	0.040	
03\06	GGP EKI SAG 2.4m	0.189	95.000	5.000	10.000	5.000	69.000	60.000	0.000	81.000	0.400		LOST	0.000			
03\07	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\08	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\09	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\10	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\12	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\13	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
03B\01	HW In - Precast Concrete		0.000			5.000	1000.000	1000.000	0.000	0.000							
03B\02	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
04\01	GGP EKI 1.8m	0.108	95.000	5.000	10.000	25.000	39.000	33.000	6.000	78.000	1.000	3.000	03\06	56.000	1.750	0.090	
05\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
05\02	GGP EKI 1.8m	0.213	95.000	5.000	10.000	25.000	76.000	76.000	0.000	0.000	2.800	3.000					
06\01	GGP EKI 1.8m	0.105	95.000	5.000	10.000	15.000	36.000	31.000	5.000	55.000	2.700	3.000	01\02	22.000	0.970	0.060	
07\01	GGP EKI 1.8m	0.104	95.000	5.000	10.000	25.000	36.000	32.000	5.000	58.000	4.900	3.000	08\02	28.000	1.060	0.070	
08\01	CAPPED STUB	0.568	30.000	10.000	12.000	25.000	158.000	158.000	0.000	19.000			08\02	4.000	0.220	0.030	
08\02	GGP EKI 1.8m	0.079	95.000	5.000	10.000	15.000	32.000	29.000	3.000	62.000	3.200	3.000	09\02	30.000	1.180	0.070	
09\01	CAPPED STUB		0.000			15.000	0.000	0.000	0.000	18.000			09\02	4.000	0.210	0.040	
09\02	GGP EKI SAG 2.4m	0.126	95.000	5.000	10.000	5.000	46.000	44.000	0.000	68.000	0.600	3.000	01\07	0.000			
10\01	NODE - FULL INFLOW	1.233	20.000	10.000	12.000	25.000	338.000	338.000	0.000	27.000			01\08	8.000	0.310	0.050	
11\01	GGP EKI 2.4m	0.213	95.000	5.000	10.000	25.000	71.000	57.000	14.000	76.000	1.000	3.000	11\03	31.000	1.670	0.050	
11\02	GGP EKI 2.4m	0.225	95.000	5.000	10.000	25.000	77.000	60.000	17.000	84.000	1.300	3.200	12\01	52.000	1.920	0.070	
11\03	GGP EKI 1.8m	0.064	95.000	5.000	10.000	25.000	31.000	28.000	3.000	58.000	0.600	2.800	11\04	14.000	1.050	0.040	
11\04	GGP EKI 1.8m	0.048	95.000	5.000	10.000	15.000	14.000	14.000	0.000	42.000	1.000	3.000	02\07	8.000	0.530	0.030	
12\01	GGP EKI SAG 2.4m	0.196	95.000	5.000	10.000	15.000	77.000	75.000	0.000	93.000	0.300	3.000	11\04	0.000	0.000	0.000	
13\01	CAPPED STUB	1.118	20.000	10.000	12.000	25.000	307.000	307.000	0.000	20.000			13\02	2.000	0.230	0.020	
13\02	GGP EKI 2.4m	0.124	90.000	5.000	10.000	15.000	43.000	39.000	4.000	82.000	1.000	3.000	02\10	38.000	1.890	0.050	
14\01	CAPPED STUB	0.465	20.000	10.000	12.000	25.000	128.000	128.000	0.000	23.000			03\05	5.000	0.270	0.040	
15\01	NODE - FULL INFLOW	0.663	10.000	10.000	12.000	25.000	179.000	179.000	0.000	44.000			03\04	14.000	0.590	0.050	
16\01	GGP EKI SAG 2.4m	0.090	95.000	5.000	10.000	5.000	24.000	24.000	0.000	48.000	0.100	3.000	LOST	0.000	0.000	0.000	
17\01	CAPPED STUB		0.000			15.000	0.000	0.000	0.000	21.000			02\04	3.000	0.250	0.030	
18\01	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
19\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
20\01	GGP EKI 1.8m	0.075	95.000	5.000	10.000	15.000	28.000	25.000	2.000	66.000	1.300	3.000	16\01	22.000	1.330	0.040	
21\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
22\01	GGP EKI 1.8m	0.098	95.000	5.000	10.000	25.000	34.000	30.000	4.000	78.000	1.000	3.000	04\01	39.000	1.730	0.060	
22\02	GGP EKI 1.8m	0.116	95.000	5.000	10.000	25.000	41.000	34.000	7.000	74.000	1.000	3.000	03\02	33.000	1.610	0.060	
23\01	GGP EKI 1.8m	0.103	95.000	5.000	10.000	15.000	35.000	31.000	5.000	68.000	1.200	3.000	20\01	28.000	1.400	0.050	

NOTE:
LOT CATCHMENTS DESIGNED TO MATCH PRE FLOWS AS PER REPORT.

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
JAS-ANZ
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 01 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	522	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\1905data\ORION SYNOTDES-09-CC Industrial Site CC_2908230WSS-19-0108-09-CC-522.dwg

HYDRAULICS 5YR

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V'head)	WSE LOSS (Kw.V'head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
01\01 to 01\02	675.000	RRJ2	5.360	1.500	25.000	351.000	0.310	2.490	68.500	68.420	0.050	0.200	0.000	0.010	0.000	68.786	68.694	1.720	1.620	2.530	
01\02 to 01\03	675.000	RRJ2	17.750	1.500	25.000	411.000	0.370	2.630	68.370	68.103	0.050	0.980	0.000	0.020	0.000	68.677	68.387	1.630	1.540	1.908	
01\03 to 01\04	675.000	RRJ2	16.110	1.000	25.000	411.000	0.450	2.410	68.053	67.892	0.098	0.250	0.000	0.000	0.000	68.384	68.210	1.080	1.340	2.001	
01\04 to 01\05	675.000	RRJ2	60.760	3.640	25.000	489.000	0.280	3.730	67.794	65.584	0.087	0.760	0.000	0.000	0.000	68.039	65.871	3.570	1.100	1.743	
01\05 to 01\06	675.000	RRJ2	48.780	2.000	25.000	699.000	0.540	3.560	65.497	64.521	0.050	0.470	0.000	0.000	0.000	65.868	64.876	2.030	0.750	1.665	
01\06 to 01\07	(2x)675	RRJ2	16.230	1.000	25.000	724.000	0.400	2.270	64.471	64.309	0.050	0.620	0.000	0.010	0.000	64.785	64.605	1.110	0.730	1.184	
01\07 to 01\08	1200x600	RCBC	16.940	1.000	25.000	783.000	0.320	2.240	64.259	64.090	0.050	0.530	0.000	0.010	0.000	64.530	64.394	0.800	0.720	1.233	
01\08 to 01\09	1200x600	RCBC	54.680	1.000	25.000	1122.000	0.550	2.790	64.040	63.493	0.050	0.730	0.000	0.010	0.000	64.384	63.812	1.050	1.000	1.552	
01\09 to 01\10	1200x600	RCBC	62.030	1.000	25.000	1154.000	0.560	2.900	63.443	62.823	0.050	0.370	0.000	0.000	0.000	63.781	63.148	1.020	0.910	1.495	
01\10 to 01\11	1200x600	RCBC	64.760	1.000	25.000	1220.000	0.590	2.930	62.773	62.125	0.050	0.380	0.000	0.000	0.000	63.126	62.469	1.010	0.820	1.393	
01\11 to 01\12	1200x600	RCBC	54.770	1.000	25.000	1247.000	0.610	2.640	62.075	61.527	0.050	0.400	0.000	0.050	0.000	62.432	62.146	0.520	0.770	1.262	
01\12 to 01\13	1200x600	RCBC	63.730	1.000	25.000	1288.000	0.630	1.850	61.477	60.840	-0.460	0.410	0.000	0.080	0.000	62.095	61.838	0.400	0.680	0.942	
01\13 to 01\14	1200x600	RCBC	1.720	0.500	25.000	1311.000	0.900	2.260	61.300	61.291	0.510	0.560	0.000	0.050	0.000	61.785	61.771	0.820	0.260	0.512	
01\14 to 01\15	1200x600	RCBC	7.740	0.700	25.000	1312.000	0.830	1.820	60.781	60.727	0.050	0.260	0.000	0.010	0.000	61.757	61.690	0.870	0.780	0.576	
01\15 to 01\16	1500x600	RCBC	18.690	0.700	25.000	1350.000	0.600	1.500	60.677	60.546	0.050	2.030	0.000	0.110	0.000	61.577	61.422	0.830	0.890	0.667	
01\16 to 01\17	1050.000	RRJ2	28.030	0.700	25.000	1380.000	0.560	1.640	60.496	60.300		0.210	0.000	0.030	0.000	61.392	61.352	0.140	-0.730	1.026	
01\13 to 01A\01	225.000	UPVC	5.390	0.500	15.000	36.000	1.140	0.910	60.834	60.807	0.050	2.600	0.000	0.060	0.000	61.794	61.751	0.800	1.310	0.512	
01A\01 to 01\15	225.000	UPVC	5.970	0.500	15.000	38.000	1.190	0.950	60.757	60.727	0.050	1.180	0.000	0.040	0.000	61.734	61.690	0.740	1.420	0.716	
01\13 to 01B\01	750.000	RRJ2	20.720	0.500	5.000	0.000	1.300	0.000	60.934	60.830	0.000	1.800	0.000	0.000	0.000	61.834	61.580	1.230	-0.860	0.512	
01B\03 to 01\15	900.000	RRJ2	20.640	0.500	5.000	0.000	0.000	0.000	60.830	60.727	0.050	0.000	0.000	0.000	0.000	61.729	61.690	0.190	-1.030	1.870	
02\01 to 02\02	675.000	RRJ2	17.230	2.000	25.000	404.000	0.310	3.180	72.444	72.100	0.050	0.000	0.000	0.000	0.000	72.705	72.360	2.000	2.100	4.047	
02\02 to 02\03	675.000	RRJ2	15.960	6.700	25.000	404.000	0.170	4.730	72.050	70.980	0.050	0.740	0.000	0.000	0.000	72.248	71.170	6.750	1.280	2.605	
02\03 to 02\04	675.000	RRJ2	44.780	3.840	25.000	404.000	0.230	3.950	70.930	69.209	0.096	0.750	0.000	0.000	0.000	71.155	69.428	3.860	1.120	1.739	
02\04 to 02\05	675.000	RRJ2	11.720	5.080	25.000	445.000	0.220	2.710	69.114	68.519	0.050	0.820	0.000	0.030	0.000	69.327	68.949	3.230	1.100	1.606	
02\05 to 02\06	675.000	RRJ2	13.700	1.000	25.000	453.000	0.540	1.960	68.469	68.332	0.593	1.860	0.000	0.100	0.000	68.852	68.685	1.220	1.150	1.368	
02\06 to 02\07	675.000	RRJ2	38.520	3.500	25.000	485.000	0.280	2.880	67.739	66.391	0.050	2.100	0.000	0.030	0.000	67.985	66.925	2.750	1.120	2.178	
02\07 to 02\08	675.000	RRJ2	14.040	1.900	25.000	710.000	0.610	2.600	66.341	66.074	0.200	1.640	0.000	0.150	0.000	66.770	66.456	2.240	1.360	1.467	
02\08 to 02\09	750.000	RRJ2	60.550	1.890	25.000	717.000	0.430	2.850	65.874	64.731	0.050	0.040	0.000	0.000	0.000	66.219	65.222	1.650	1.150	1.772	
02\09 to 02\10	825.000	RRJ2	51.180	1.000	25.000	1077.000	0.690	3.020	64.681	64.170	0.050	0.480	0.000	0.010	0.000	65.215	64.675	1.060	1.410	1.743	
02\10 to 02\11	825.000	RRJ2	35.170	1.360	25.000	1135.000	0.630	3.350	64.120	63.643	1.306	0.490	0.000	0.020	0.000	64.630	64.116	1.460	1.100	1.958	
02\11 to 02\12	825.000	RRJ2	16.490	1.000	25.000	1135.000	0.730	2.420	62.336	62.172	0.050	2.090	0.000	0.380	0.000	62.941	62.700	1.460	0.860	2.245	
02\12 to 02\13	825.000	RRJ2	82.030	1.000	25.000	1137.000	0.730	3.000	62.122	61.301	0.050	0.700	0.000	0.010	0.000	62.686	61.825	1.050	0.890	1.127	
02\13 to 02\14	825.000	RRJ2	60.600	1.000	25.000	1138.000	0.730	3.120	61.251	60.645	0.800	0.200	0.000	0.000	0.000	61.793	61.169	1.030	1.650	2.105	
02\14 to 02\15	825.000	RRJ2	7.060	1.000	25.000	1136.000	0.730	2.120	59.845	59.775	0.020	1.990	0.000	0.370	0.000	60.739	60.600	1.970	0.220	2.036	
02B\01 to 02B\02	900.000	RRJ2	4.610	1.000	5.000	2030.000	1.120	3.250	60.258	60.212	1.069	0.500	0.000	0.260	0.000	61.926	61.024	19.580	2.190	0.572	
02B\02 to 02B\03	1200.000	RRJ2	24.600	1.000	5.000	3080.000	0.790	2.720	59.143	58.897		1.080	0.000	0.230	0.000	60.429	60.097	1.350	0.550	2.099	
03\01 to 03\02	600.000	RRJ2	4.490	1.000	25.000	334.000	0.500	1.860	68.632	68.587	0.050	0.200	0.000	0.010	0.000	69.057	69.027	0.670	2.100	2.385	
03\02 to 03\03	600.000	RRJ2	26.480	1.000	25.000	424.000	0.640	2.020	68.537	68.272	0.050	2.120	0.000	0.100	0.000	68.930	68.621	1.170	1.990	2.149	
03\03 to 03\04	600.000	RRJ2	103.520	1.000	25.000	474.000	0.710	2.510	68.222	67.187	0.534	0.420	0.000	0.000	0.000	68.609	67.562	1.010	1.410	2.301	
03\04 to 03\05	750.000	RRJ2	50.000	1.200	25.000	695.000	0.530	2.920	66.654	66.054	0.900	0.680	0.000	0.010	0.000	67.059	66.440	1.240	0.990	2.166	
03\05 to 03\06	750.000	RRJ2	34.410	1.200	25.000	920.000	0.700	2.510	65.154	64.741	0.050	2.110	0.000	0.180	0.000	65.692	65.202	1.420	1.490	1.960	
03\06 to 03\07	825.000	RRJ2	8.150	1.200	25.000	977.000	0.570	3.000	64.691	64.593	0.050	0.270	0.000	0.020	0.000	65.175	65.057	1.450	1.590	1.767	
03\07 to 03\08	825.000	RRJ2	37.550	1.200	25.000	978.000	0.570	3.020	64.543	64.092	0.050	0.500	0.000	0.030	0.000	65.032	64.541	1.310	0.950	2.061	
03\08 to 03\09	825.000	RRJ2	67.610	1.500	25.000	980.000	0.510	2.890	64.042	63.028	0.050	0.390	0.000	0.020	0.000	64.461	63.596	1.280	0.930	1.434	
03\09 to 03\10	825.000	RRJ2	6.990	1.000	25.000	978.000	0.680	2.540	62.978	62.908	0.050	0.680	0.000	0.090	0.000	63.506	63.408	1.400	1.650	1.923	
03\10 to 03\11	825.000	RRJ3	49.140	1.000	25.000	980.000	0.630	2.820	62.858	62.367	0.050	0.870	0.000	0.030	0.000	63.378	62.842	1.090	0.390	2.028	
03\11 to 03\12	825.000	RRJ3	53.040	1.000	25.000	980.000	0.630	2.130	62.317	61.787	0.050	0.200	0.000	0.040	0.000	62.792	62.596	0.370	0.670	1.031	
03\12 to 03\13	825.000	RRJ3	13.500	1.000	25.000	980.000	0.630	1.830	61.737	61.602		0.670	0.000	0.050	0.000	62.573	62.427	1.080		1.249	
03B\01 to 03B\02	750.000	RRJ2	18.310	1.500	5.000	1000.000	0.730	2.260	62.627	62.352		0.500	0.000	0.130	0.000	63.662	63.102	3.060	1.100	1.554	
04\01 to 03\03	375.000	RRJ2	17.110	1.000	25.000	33.000	0.170	1.010	69.533	69.361	1.139	4.500	0.000	0.030	0.000	69.650	69.468	1.060	1.100	1.336	
05\01 to 05\02	450.000	RRJ2	4.530	1.000	15.000	2.000	-0.010	0.160	65.884	65.839	0.050	0.200	0.000	0.000	0.000	66.071	66.071	0.000	1.690	2.487	
05\02 to 03\05	450.000	RRJ2	13.550	1.000	15.000	75.000	0.240	1.140	65.789	65.654	0.500	9.700	0.000	0.090	0.000	65.999	65.870	0.950	1.610	1.792	
06\01 to 01\04	375.000	RRJ2	49.740	3.950	15.000	31.000	0.080	1.890	70.262	68.300	0.505	4.500	0.000	0.000	0.000	70.342	68.373	3.960	1.100	1.440	
07\01 to 01\04	375.000	RRJ2	14.690	1.820	25.000	32.000	0.120	1.340	68.577	68.311	0.516	9.700	0.000	0.010	0.000	68.676	68.400	1.880	1.100	1.380	
08\01 to 08\02	525.000	RRJ2	8.520	1.000	25.000	158.000	0.340	1.860	66.379	66.294	0.134	0.200	0.000	0.010	0.000	66.601	66.504	1.140	1.100	3.116	
08\02 to 01\05	525.000	RRJ2	15.910	1.600	25.000	187.000	0.320	2.230	66.160	65.905	0.408	1.230	0.000	0.010	0.000	66.380	66.109	1.700	1.100	1.416	
09\01 to 09\02	525.000	RRJ2	9.570	1.000	5.000	0.000	0.000	0.000	64.636	64.540	0.050	0.000	0.000	0.000	0.000	64.636	64.614	0.230	0.460	4.633	
09\02 to 01\07	525.000	RRJ2	18.100	1.000	25.000	44.000	0.090	0.940	64.490	64.309	0.050	9.700	0.000	0.020	0.000	64.599	64.540	0.330	0.800	1.214	
10\01 to 01\08	600.000	RRJ2	14.940	1.000	25.000	339.000	0.510	2.360	64.508	64.358	0.319	0.000	0.000	0.000	0.000	64.813	64.662	1.010	1.100	3.798	
11\01 to 11\02	375.000	RRJ2	13.580	1.000	25.000	57.000	0.300	1.040	68.033	67.897	0.050	9.700	0.000	0.090	0.000	68.237	68.092	1.070	1.100	1.188	
11\02 to 11\03	375.000	RRJ2	39.560	1.140	25.000	117.000	0.580	1.650	67.847	67.396	0.050	2.550	0.000	0.010	0.000	68.091	67.650	1.110	1.130	1.401	
11\03 to 11\04	375.000	RRJ2	40.520	1.000	25.000	143.000	0.750	1.670	67.346	66.941	0.050	1.980	0.000	0.020	0.000	67.630	67.200	1.060	1.340	1.452	
11\04 to 02\07	525.000	RRJ2	16.820	1.000	25.000	231.000	0.500	1.930	66.891	66.723	0.382	1.130	0.000	0.020	0.000	67.176	66.984	1.140	1.270	1.510	
12\01 to 11\04	375.000	RRJ2	14.960	1.000	25.000	75.000	0.390	1.120	67.195	67.045	0.154	9.700	0.000	0.180	0.000	67.379	67.209	1.140	1.100	1.112	
13\01 to 13\02	600.000	RRJ2	4.310	1.000	25.000	307.000	0.460	2.060	65.295	65.252	0.050	0.200	0.000	0.010	0.000	65.621	65.570	1.180	1.350	1.735	
13\02 to 02\09	600.000	RRJ2	18.480	1.000	25.000	347.000	0.520	2.120	65.202	65.017	0.336	1.120	0.000	0.030	0.000	65.538	65.325	1.150	1.270	1.521	
14\01 to 03\05	525.000	RRJ2	14.180	1.000	25.000	125.000	0.270	1.410	65.463	65.321	0.167	0.200	0.000	0.020	0.000	65.872	65.870	0.010	2.100	4.332	
15\01 to 03\04	375.000	RRJ2	31.210	4.130	25.000	179.000	0.460	2.900	68.078	66.789	0.135	0.000	0.000	0.000	0.000	68.257	67.064	3.820	2.100	2.445	
16\01 to 01\16	375.000	RRJ2	9.170	1.000	5.000	29.000	0.160	0.270	60.638	60.546	0.050	4.630	0.000	0.010	0.000	61.431	61.422	0.100	1.360	0.974	
17\01 to 02\04	375.000	RRJ2	5.180	1.000	5.000	0.000	0.000	0.000	69.660	69.608	0.495	0.000	0.000	0.000	0.000	69.660	69.609	0.990	1.100	1.815	
18\01 to 03\10	450.000	RRJ2	10.300	1.000	5.000	0.000	0.000	0.000	63.955	63.852	0.994	0.000	0.000	0.000	0.000	63.955	63.852	1.000	1.100	2.325	
19\01 to 03\07	450.000	RRJ2	12.450	2.000	5.000	0.000	0.000	0.000	65.780	65.531	0.988	0.000	0.000	0.000	0.000	65.780	65.531	2.000	1.100	4.545	
20\01 to 01\12	375.000	RRJ2	14.920	1.000	25.000	25.000	0.140	0.590	61.676	61.527	0.050	9.700	0.000	0.070	0.000	62.153	62.146	0.050	1.050	0.934	
21\01 to 01\11	600.000	RRJ2	7.310	1.000	5.000	-3.000	-0.010	0.150	62.216	62.143	0.068	1.940	0.000	0.010	0.000	62.473	62.469	0.050	1.100	5.929	
22\01 to 22\02	375.000	RRJ2	15.000	1.000	25.000	30.000	0.170	0.960	70.368	70.218	0.050	9.700	0.000	0.010	0.000	70.490	70.333	1.050	1.100	1.347	
22\02 to 03\02	375.000	RRJ2	60.970	1.000	25.000	64.000	0.360	1.410	70.168	69.559	1.021	4.790	0.000	0.000	0.000	70.331	69.715	1.010	1.200	1.453	
23\01 to 01\10	375.000	RRJ2	12.000	1.000	25.000	30.000	0.170	0.960	63.119	62.999	0.226	9.700	0.000	0.020	0.000	63.251	63.128	1.020	1.100	1.334	

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 02 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	523	B

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Jobs\data\ORION SYNY\19DES-09-CC Industrial Site CC_200330\DWGS\19-0108-09-CC-523.dwg

HYDROLOGY 20YR

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (Ha)	PERCENT IMPERVIOUS (%)	Tc IMP (min)	Tc PERV (min)	CRITICAL STORM (min)	APPROACH FLOW (L/s)	CAPTURED FLOW (L/s)	UNCAPTURED FLOW (L/s)	GRATE DEPTH (mm)	ROAD GRADE (%)	ROAD CROSSFALL (%)	BYPASS PIT (-)	BYPASS CHANNEL FLOW (L/s)	U/S FLOW WIDTH (m)	U/S VxD (m/s^2)	COMMENTS (-)
01\01	CAPPED STUB	1.275	20.000	10.000	12.000	25.000	453.000	453.000	0.000	0.000							
01\02	GGP EKI SAG 2.4m	0.110	95.000	5.000	10.000	15.000	58.000	79.000	0.000	95.000	1.300	2.800	01\03	0.000			
01\03	GGP EKI 1.8m	0.055	95.000	5.000	10.000	15.000	0.000	0.000	0.000	52.000	2.400	3.100	01\04	18.000	0.850	0.050	
01\04	GGP EKI 1.8m	0.039	95.000	5.000	10.000	25.000	18.000	18.000	0.000	62.000	4.600	3.000	01\05	34.000	1.190	0.080	
01\05	GGP EKI 1.8m	0.076	95.000	5.000	10.000	15.000	34.000	30.000	4.000	63.000	3.200	3.000	01\06	35.000	1.250	0.070	
01\06	GGP EKI 1.8m	0.069	95.000	5.000	10.000	5.000	35.000	30.000	4.000	33.000	3.000	3.000	01\07	4.000	0.380	0.020	
01\07	GGP EKI SAG 2.4m		0.000			15.000	5.000	20.000	0.000	43.000	0.300	3.000	01\08	0.000	0.340	0.010	
01\08	GGP EKI 1.8m	0.055	95.000	5.000	10.000	25.000	10.000	10.000	0.000	78.000	1.200	3.000	01\09	46.000	1.750	0.070	
01\09	GGP EKI 1.8m	0.107	85.000	5.000	10.000	25.000	44.000	36.000	8.000	85.000	1.200	3.000	01\10	58.000	1.970	0.080	
01\10	GGP EKI 1.8m	0.116	85.000	5.000	10.000	25.000	58.000	44.000	14.000	89.000	1.200	3.000	01\11	68.000	2.100	0.080	
01\11	GGP EKI 1.8m	0.128	85.000	5.000	10.000	25.000	68.000	49.000	19.000	85.000	1.200	3.000	01\12	57.000	1.970	0.080	
01\12	GGP EKI 1.8m	0.095	85.000	5.000	10.000	25.000	57.000	43.000	14.000	96.000	1.200	3.000	01\13	85.000	2.330	0.090	
01\13	GGP EKI SAG 2.4m	0.170	85.000	5.000	10.000	15.000	85.000	75.000	9.000	93.000	0.300	3.000	16\01	15.000			
01\14	NODE - NO INFLOW		0.000			15.000	15.000	0.000	15.000	95.000	0.200	3.000	01\13	17.000	2.310	0.020	
01\15	GGP EKI 1.8m		0.000			5.000	17.000	17.000	0.000	18.000	0.400		01\14	0.000	1.380	0.030	
01\16	GGP EKI 1.8m		0.000			15.000	0.000	0.000	0.000	41.000	0.800	3.000	16\01	4.000	0.490	0.020	
01\17	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
01A\01	GPT		0.000			5.000	0.000	0.000	0.000	0.000		3.000					
01B\01	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
01B\03	HW In - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02\01	NODE - FULL INFLOW	1.480	15.000	10.000	12.000	25.000	522.000	522.000	0.000	65.000			02\04	59.000	1.300	0.120	
02\02	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\03	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\04	GGP EKI 1.8m	0.139	95.000	5.000	10.000	5.000	63.000	47.000	15.000	43.000	5.500	3.000	02\05	14.000	0.560	0.060	
02\05	GGP EKI 1.8m		0.000			15.000	14.000	14.000	0.000	62.000	5.500	3.000	12\01	34.000	1.210	0.080	
02\06	GGP EKI 2.4m	0.096	95.000	5.000	10.000	25.000	43.000	39.000	4.000	71.000	5.500	3.000	13\02	54.000	1.520	0.100	
02\07	GGP EKI 1.8m	0.031	95.000	5.000	10.000	15.000	10.000	10.000	0.000	44.000	2.500	2.200	02\08	11.000	0.580	0.040	
02\08	GGP EKI 1.8m	0.023	95.000	5.000	10.000	15.000	11.000	11.000	0.000	66.000	3.000	3.000	02\09	30.000	1.350	0.060	
02\09	GGP EKI 1.8m	0.066	95.000	5.000	10.000	15.000	30.000	27.000	3.000	78.000	1.000	3.000	02\10	33.000	1.730	0.050	
02\10	GGP EKI SAG 2.4m	0.178	95.000	5.000	10.000	5.000	86.000	79.000	0.000	95.000	0.200		02\12	0.000	0.000	0.000	
02\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\12	GSIP SAG 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\13	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\14	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\15	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02B\01	HW In - Precast Concrete		0.000			5.000	2030.000	2030.000	0.000	0.000							
02B\02	IAD 900x900		0.000			5.000	1050.000	1050.000	0.000	0.000							
02B\03	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
03\01	CAPPED STUB	1.219	20.000	10.000	12.000	25.000	433.000	433.000	0.000	0.000							
03\02	GGP EKI 1.8m	0.083	95.000	5.000	10.000	15.000	46.000	37.000	9.000	69.000	1.000	3.000	03\03	26.000	1.450	0.050	
03\03	GGP EKI 1.8m	0.042	95.000	5.000	10.000	25.000	26.000	25.000	2.000	82.000	1.000	3.000	03\04	59.000	1.870	0.080	
03\04	GGP EKI 1.8m	0.170	95.000	5.000	10.000	15.000	77.000	53.000	24.000	70.000	2.800	3.000	03\05	45.000	1.460	0.080	
03\05	GGP EKI 1.8m	0.066	95.000	5.000	10.000	15.000	51.000	40.000	11.000	57.000	2.800	3.000	03\06	22.000	1.050	0.060	
03\06	GGP EKI SAG 2.4m	0.189	95.000	5.000	10.000	5.000	99.000	83.000	0.000	98.000	0.400		LOST	0.000			
03\07	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\08	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\09	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\10	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\12	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\13	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
03B\01	HW In - Precast Concrete		0.000			5.000	1000.000	1000.000	0.000	0.000							
03B\02	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
04\01	GGP EKI 1.8m	0.108	95.000	5.000	10.000	25.000	53.000	41.000	12.000	86.000	1.000	3.000	03\06	77.000	2.000	0.100	
05\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
05\02	GGP EKI 1.8m	0.213	95.000	5.000	10.000	25.000	97.000	97.000	0.000	0.000	2.800	3.000					
06\01	GGP EKI 1.8m	0.105	95.000	5.000	10.000	15.000	47.000	38.000	9.000	61.000	2.700	3.000	01\02	32.000	1.170	0.070	
07\01	GGP EKI 1.8m	0.104	95.000	5.000	10.000	15.000	46.000	37.000	8.000	63.000	4.900	3.000	08\02	38.000	1.250	0.080	
08\01	CAPPED STUB	0.568	30.000	10.000	12.000	25.000	204.000	204.000	0.000	21.000			08\02	5.000	0.240	0.040	
08\02	GGP EKI 1.8m	0.079	95.000	5.000	10.000	15.000	43.000	35.000	7.000	67.000	3.200	3.000	09\02	41.000	1.380	0.080	
09\01	CAPPED STUB		0.000			15.000	0.000	0.000	0.000	20.000			09\02	5.000	0.230	0.050	
09\02	GGP EKI SAG 2.4m	0.126	95.000	5.000	10.000	5.000	62.000	58.000	0.000	80.000	0.600	3.000	01\07	0.000			
10\01	NODE - FULL INFLOW	1.233	20.000	10.000	12.000	25.000	438.000	438.000	0.000	30.000			01\08	10.000	0.340	0.060	
11\01	GGP EKI 2.4m	0.213	95.000	5.000	10.000	15.000	92.000	68.000	24.000	85.000	1.000	3.000	11\03	45.000	1.960	0.060	
11\02	GGP EKI 2.4m	0.225	95.000	5.000	10.000	25.000	97.000	70.000	26.000	93.000	1.300	3.200	12\01	74.000	2.230	0.090	
11\03	GGP EKI 1.8m	0.064	95.000	5.000	10.000	15.000	45.000	37.000	8.000	66.000	0.600	2.800	11\04	22.000	1.330	0.040	
11\04	GGP EKI 1.8m	0.048	95.000	5.000	10.000	15.000	22.000	21.000	1.000	48.000	1.000	3.000	02\07	10.000	0.720	0.040	
12\01	GGP EKI SAG 2.4m	0.196	95.000	5.000	10.000	15.000	106.000	102.000	0.000	112.000	0.300	3.000	11\04	0.000	0.000	0.000	
13\01	CAPPED STUB	1.118	20.000	10.000	12.000	25.000	397.000	397.000	0.000	21.000			13\02	3.000	0.250	0.020	
13\02	GGP EKI 2.4m	0.124	90.000	5.000	10.000	25.000	57.000	49.000	8.000	91.000	1.000	3.000	02\10	53.000	2.180	0.060	
14\01	CAPPED STUB	0.465	20.000	10.000	12.000	25.000	165.000	165.000	0.000	25.000			03\05	7.000	0.290	0.050	
15\01	NODE - FULL INFLOW	0.663	10.000	10.000	12.000	25.000	232.000	232.000	0.000	48.000			03\04	18.000	0.740	0.060	
16\01	GGP EKI SAG 2.4m	0.090	95.000	5.000	10.000	5.000	33.000	33.000	0.000	57.000	0.100	3.000	LOST	0.000	0.000	0.000	
17\01	CAPPED STUB		0.000			15.000	0.000	0.000	0.000	24.000			02\04	4.000	0.270	0.030	
18\01	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
19\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
20\01	GGP EKI 1.8m	0.075	95.000	5.000	10.000	25.000	37.000	31.000	5.000	73.000	1.300	3.000	16\01	30.000	1.550	0.050	
21\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
22\01	GGP EKI 1.8m	0.098	95.000	5.000	10.000	15.000	43.000	36.000	8.000	85.000	1.000	3.000	04\01	53.000	1.980	0.070	
22\02	GGP EKI 1.8m	0.116	95.000	5.000	10.000	25.000	52.000	41.000	11.000	82.000	1.000	3.000	03\02	46.000	1.860	0.070	
23\01	GGP EKI 1.8m	0.103	95.000	5.000	10.000	15.000	44.000	36.000	8.000	74.000	1.200	3.000	20\01	37.000	1.590	0.060	

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 23007
BLACKETT MAGUIRE + GOLDSMITH

B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
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Scale:

For: GAZCORP

By: Orion Consulting
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Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 03 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	524	B

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\1905data\ORION-SYNOTDES-09-CC Industrial Site CC_20923DWGS\19-0108-99-CC-524.dwg

HYDRAULICS 20YR

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V'head)	WSE LOSS (Kw.V'head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
01\01 to 01\02	675.000	RRJ2	5.360	1.500	25.000	453.000	0.410	2.600	68.500	68.420	0.050	0.200	0.000	0.020	0.000	68.853	68.766	1.620	1.620	2.466	
01\02 to 01\03	675.000	RRJ2	17.750	1.500	25.000	530.000	0.480	2.710	68.370	68.103	0.050	1.040	0.000	0.030	0.000	68.739	68.447	1.650	1.540	1.836	
01\03 to 01\04	675.000	RRJ2	16.110	1.000	25.000	531.000	0.580	2.550	68.053	67.892	0.098	0.250	0.000	0.010	0.000	68.441	68.263	1.110	1.340	1.941	
01\04 to 01\05	675.000	RRJ2	60.760	3.640	25.000	624.000	0.360	3.770	67.794	65.584	0.087	0.770	0.000	0.000	0.000	68.074	65.943	3.510	1.100	1.709	
01\05 to 01\06	675.000	RRJ2	48.780	2.000	25.000	892.000	0.690	3.720	65.497	64.521	0.050	0.490	0.000	0.010	0.000	65.937	64.935	2.050	0.750	1.593	
01\06 to 01\07	(2x)675	RRJ2	16.230	1.000	25.000	924.000	0.510	2.380	64.471	64.309	0.050	0.640	0.000	0.020	0.000	64.835	64.650	1.140	0.730	1.126	
01\07 to 01\08	1200x600	RCBC	16.940	1.000	25.000	1000.000	0.410	2.250	64.259	64.090	0.050	0.530	0.000	0.010	0.000	64.612	64.475	0.810	0.720	1.150	
01\08 to 01\09	1200x600	RCBC	54.680	1.000	25.000	1438.000	0.700	2.950	64.040	63.493	0.050	0.730	0.000	0.020	0.000	64.456	63.873	1.070	1.000	1.470	
01\09 to 01\10	1200x600	RCBC	62.030	1.000	25.000	1469.000	0.720	3.040	63.443	62.823	0.050	0.380	0.000	0.010	0.000	63.851	63.299	0.890	0.910	1.424	
01\10 to 01\11	1200x600	RCBC	64.760	1.000	25.000	1495.000	0.730	2.940	62.773	62.125	0.050	0.390	0.000	0.090	0.000	63.245	62.984	0.400	0.820	1.223	
01\11 to 01\12	1200x600	RCBC	54.770	1.000	25.000	1538.000	0.750	2.660	62.075	61.527	0.050	0.380	0.000	0.100	0.000	62.969	62.548	0.770	0.770	0.747	
01\12 to 01\13	1200x600	RCBC	63.730	1.000	25.000	1600.000	0.780	2.220	61.477	60.840	-0.460	0.410	0.000	0.090	0.000	62.522	62.082	0.690	0.680	0.539	
01\13 to 01\14	1200x600	RCBC	1.720	0.500	25.000	1631.000	1.120	2.310	61.300	61.291	0.510	0.380	0.000	0.080	0.000	62.000	62.000	0.000	0.260	0.268	
01\14 to 01\15	1200x600	RCBC	7.740	0.700	25.000	1629.000	1.030	2.260	60.781	60.727	0.050	0.260	0.000	0.060	0.000	61.946	61.873	0.940	0.780	0.347	
01\15 to 01\16	1500x600	RCBC	18.690	0.700	25.000	1681.000	0.750	1.870	60.677	60.546	0.050	2.040	0.000	0.210	0.000	61.670	61.493	0.950	0.890	0.485	
01\16 to 01\17	1050.000	RRJ2	28.030	0.700	25.000	1711.000	0.690	2.000	60.496	60.300		0.210	0.000	0.040	0.000	61.475	61.352	0.440	-0.730	0.956	
01\13 to 01A\01	225.000	UPVC	5.390	0.500	25.000	42.000	1.320	1.060	60.834	60.807	0.050	2.450	0.000	0.100	0.000	61.998	61.953	0.830	1.310	0.268	
01A\01 to 01\15	225.000	UPVC	5.970	0.500	15.000	39.000	1.220	0.980	60.757	60.727	0.050	1.170	0.000	0.050	0.000	61.908	61.873	0.590	1.420	0.514	
01\13 to 01B\01	750.000	RRJ2	20.720	0.500	5.000	0.000	1.810	0.000	60.934	60.830	0.000	1.800	0.000	0.010	0.000	62.072	61.580	2.370	-0.860	0.268	
01B\03 to 01\15	900.000	RRJ2	20.640	0.500	5.000	0.000	-0.770	0.000	60.830	60.727	0.050	0.500	0.000	0.000	0.000	61.730	61.870	-0.680	-1.030	1.870	
02\01 to 02\02	675.000	RRJ2	17.230	2.000	25.000	523.000	0.410	3.410	72.444	72.100	0.050	0.000	0.000	0.000	0.000	72.745	72.399	2.010	2.100	4.007	
02\02 to 02\03	675.000	RRJ2	15.960	6.700	25.000	523.000	0.220	5.010	72.050	70.980	0.050	0.740	0.000	0.010	0.000	72.280	71.196	6.790	1.280	2.571	
02\03 to 02\04	675.000	RRJ2	44.780	3.840	25.000	523.000	0.290	4.210	70.930	69.209	0.096	0.750	0.000	0.000	0.000	71.191	69.459	3.870	1.120	1.703	
02\04 to 02\05	675.000	RRJ2	11.720	5.080	25.000	565.000	0.280	2.710	69.114	68.519	0.050	0.800	0.000	0.080	0.000	69.356	69.127	1.950	1.100	1.527	
02\05 to 02\06	675.000	RRJ2	13.700	1.000	25.000	579.000	0.690	1.990	68.469	68.332	0.593	1.860	0.000	0.200	0.000	68.931	68.743	1.370	1.150	1.190	
02\06 to 02\07	675.000	RRJ2	38.520	3.500	25.000	615.000	0.360	2.910	67.739	66.391	0.050	2.100	0.000	0.070	0.000	68.019	67.196	2.140	1.120	2.101	
02\07 to 02\08	675.000	RRJ2	14.040	1.900	25.000	905.000	0.780	2.840	66.341	66.074	0.200	1.620	0.000	0.300	0.000	66.900	66.523	2.690	1.360	1.196	
02\08 to 02\09	750.000	RRJ2	60.550	1.890	25.000	914.000	0.550	2.920	65.874	64.731	0.050	0.050	0.000	0.000	0.000	66.272	65.348	1.530	1.150	1.719	
02\09 to 02\10	825.000	RRJ2	51.180	1.000	25.000	1374.000	0.880	3.130	64.681	64.170	0.050	0.480	0.000	0.020	0.000	65.332	64.774	1.090	1.410	1.618	
02\10 to 02\11	825.000	RRJ2	35.170	1.360	25.000	1452.000	0.800	3.450	64.120	63.643	1.306	0.500	0.000	0.040	0.000	64.738	64.202	1.520	1.100	1.831	
02\11 to 02\12	825.000	RRJ2	16.490	1.000	25.000	1450.000	0.930	2.810	62.336	62.172	0.050	2.090	0.000	0.570	0.000	63.142	62.872	1.640	0.860	1.855	
02\12 to 02\13	825.000	RRJ2	82.030	1.000	25.000	1449.000	0.930	3.070	62.122	61.301	0.050	0.700	0.000	0.040	0.000	62.837	61.932	1.100	0.890	0.955	
02\13 to 02\14	825.000	RRJ2	60.600	1.000	25.000	1446.000	0.930	3.220	61.251	60.645	0.800	0.200	0.000	0.010	0.000	61.918	61.294	1.030	1.650	1.980	
02\14 to 02\15	825.000	RRJ2	7.060	1.000	25.000	1445.000	0.930	2.700	59.845	59.775	0.020	1.990	0.000	0.570	0.000	60.725	60.600	1.770	0.220	1.812	
02B\01 to 02B\02	900.000	RRJ2	4.610	1.000	5.000	2030.000	1.120	3.250	60.258	60.212	1.069	0.500	0.000	0.260	0.000	61.926	61.024	19.580	2.190	0.572	
02B\02 to 02B\03	1200.000	RRJ2	24.600	1.000	5.000	3080.000	0.790	2.720	59.143	58.897		1.080	0.000	0.230	0.000	60.429	60.097	1.350	0.550	2.099	
03\01 to 03\02	600.000	RRJ2	4.490	1.000	25.000	432.000	0.650	1.940	68.632	68.587	0.050	0.200	0.000	0.020	0.000	69.339	69.298	0.910	2.100	2.108	
03\02 to 03\03	600.000	RRJ2	26.480	1.000	25.000	544.000	0.820	2.120	68.537	68.272	0.050	2.120	0.000	0.230	0.000	69.068	68.699	1.390	1.990	1.878	
03\03 to 03\04	600.000	RRJ2	103.520	1.000	25.000	606.000	0.910	2.600	68.222	67.187	0.534	0.450	0.000	0.000	0.000	68.696	67.637	1.020	1.410	2.212	
03\04 to 03\05	750.000	RRJ2	50.000	1.200	25.000	889.000	0.670	3.070	66.654	66.054	0.900	0.650	0.000	0.010	0.000	67.133	66.504	1.260	0.990	2.088	
03\05 to 03\06	750.000	RRJ2	34.410	1.200	25.000	1167.000	0.880	2.840	65.154	64.741	0.050	2.110	0.000	0.380	0.000	65.925	65.312	1.780	1.490	1.525	
03\06 to 03\07	825.000	RRJ2	8.150	1.200	25.000	1243.000	0.730	3.030	64.691	64.593	0.050	0.300	0.000	0.040	0.000	65.277	65.155	1.500	1.590	1.649	
03\07 to 03\08	825.000	RRJ2	37.550	1.200	25.000	1244.000	0.730	3.170	64.543	64.092	0.050	0.500	0.000	0.040	0.000	65.119	64.616	1.340	0.950	1.963	
03\08 to 03\09	825.000	RRJ2	67.610	1.500	25.000	1245.000	0.650	2.910	64.042	63.028	0.050	0.390	0.000	0.050	0.000	64.528	63.849	1.000	0.930	1.331	
03\09 to 03\10	825.000	RRJ2	6.990	1.000	25.000	1247.000	0.870	2.550	62.978	62.908	0.050	0.680	0.000	0.170	0.000	63.682	63.572	1.570	1.650	1.670	
03\10 to 03\11	825.000	RRJ2	49.140	1.000	25.000	1238.000	0.800	2.840	62.858	62.367	0.050	0.870	0.000	0.040	0.000	63.540	63.019	1.060	0.390	1.861	
03\11 to 03\12	825.000	RRJ2	53.040	1.000	25.000	1224.000	0.790	2.370	62.317	61.787	0.050	0.200	0.000	0.040	0.000	62.987	62.690	0.560	0.670	0.847	
03\12 to 03\13	825.000	RRJ2	13.500	1.000	25.000	1224.000	0.790	2.290	61.737	61.602		0.670	0.000	0.090	0.000	62.603	62.427	1.300		1.155	
03B\01 to 03B\02	750.000	RRJ2	18.310	1.500	5.000	1000.000	0.730	2.260	62.627	62.352		0.500	0.000	0.130	0.000	63.662	63.102	3.060	1.100	1.554	
04\01 to 03\03	375.000	RRJ2	17.110	1.000	25.000	41.000	0.220	1.050	69.533	69.361	1.139	4.500	0.000	0.040	0.000	69.664	69.480	1.080	1.100	1.314	
05\01 to 05\02	450.000	RRJ2	4.530	1.000	25.000	-6.000	-0.020	0.260	65.884	65.839	0.050	0.200	0.000	0.000	0.000	66.435	66.435	0.000	1.690	2.123	
05\02 to 03\05	450.000	RRJ2	13.550	1.000	25.000	93.000	0.300	1.170	65.789	65.654	0.500	9.700	0.000	0.150	0.000	66.434	66.305	0.950	1.610	1.428	
06\01 to 01\04	375.000	RRJ2	49.740	3.950	25.000	38.000	0.100	1.970	70.262	68.300	0.505	4.500	0.000	0.000	0.000	70.349	68.380	3.960	1.100	1.431	
07\01 to 01\04	375.000	RRJ2	14.690	1.820	15.000	37.000	0.150	1.360	68.577	68.311	0.516	9.700	0.000	0.020	0.000	68.685	68.407	1.890	1.100	1.364	
08\01 to 08\02	525.000	RRJ2	8.520	1.000	25.000	205.000	0.440	1.980	66.379	66.294	0.134	0.200	0.000	0.010	0.000	66.635	66.537	1.150	1.100	3.080	
08\02 to 01\05	525.000	RRJ2	15.910	1.600	25.000	240.000	0.410	2.330	66.160	65.905	0.408	1.290	0.000	0.020	0.000	66.415	66.139	1.730	1.100	1.372	
09\01 to 09\02	525.000	RRJ2	9.570	1.000	15.000	-1.000	0.000	0.070	64.636	64.540	0.050	0.200	0.000	0.000	0.000	64.692	64.690	0.020	0.460	4.577	
09\02 to 01\07	525.000	RRJ2	18.100	1.000	25.000	61.000	0.130	0.880	64.490	64.309	0.050	9.700	0.000	0.070	0.000	64.616	64.624	-0.040	0.800	1.138	
10\01 to 01\08	600.000	RRJ2	14.940	1.000	25.000	439.000	0.660	2.510	64.508	64.358	0.319	0.000	0.000	0.000	0.000	64.865	64.714	1.010	1.100	3.746	
11\01 to 11\02	375.000	RRJ2	13.580	1.000	25.000	68.000	0.360	1.050	68.033	67.897	0.050	9.700	0.000	0.110	0.000	68.387	68.248	1.020	1.100	1.083	
11\02 to 11\03	375.000	RRJ2	39.560	1.140	25.000	137.000	0.680	1.670	67.847	67.396	0.050	2.620	0.000	0.070	0.000	68.202	67.898	0.770	1.130	1.245	
11\03 to 11\04	375.000	RRJ2	40.520	1.000	15.000	169.000	0.890	1.660	67.346	66.941	0.050	1.950	0.000	0.070	0.000	67.848	67.368	1.180	1.340	1.204	
11\04 to 02\07	525.000	RRJ2	16.820	1.000	25.000	293.000	0.630	1.990	66.891	66.723	0.382	1.170	0.000	0.030	0.000	67.361	67.196	0.980	1.270	1.341	
12\01 to 11\04	375.000	RRJ2	14.960	1.000	25.000	102.000	0.540	1.120	67.195	67.045	0.154	9.700	0.000	0.210	0.000	67.540	67.368	1.150	1.100	0.969	
13\01 to 13\02	600.000	RRJ2	4.310	1.000	25.000	397.000	0.600	2.130	65.295	65.252	0.050	0.200	0.000	0.010	0.000	65.703	65.655	1.110	1.350	1.654	
13\02 to 02\09	600.000	RRJ2	18.480	1.000	25.000	446.000	0.670	2.190	65.202	65.017	0.336	1.200	0.000	0.060	0.000	65.599	65.377	1.200	1.270	1.437	
14\01 to 03\05	525.000	RRJ2	14.180	1.000	25.000	163.000	0.350	1.430	65.463	65.321	0.167	0.200	0.000	0.020	0.000	66.321	66.305	0.110	2.100	3.882	
15\01 to 03\04	375.000	RRJ2	31.210	4.130	25.000	232.000	0.600	3.010	68.078	66.789	0.135	0.000	0.000	0.000	0.000	68.287	67.142	3.670	2.100	2.415	
16\01 to 01\16	375.000	RRJ2	9.170	1.000	25.000	40.000	0.210	0.360	60.638	60.546	0.050	3.190	0.000	0.020	0.000	61.506	61.493	0.140	1.360	0.884	
17\01 to 02\04	375.000	RRJ2	5.180	1.000	5.000	0.000	0.000	0.000	69.660	69.608	0.495	0.000	0.000	0.000	0.000	69.660	69.609	0.990	1.100	1.815	
18\01 to 03\10	450.000	RRJ2	10.300	1.000	5.000	0.000	0.000	0.000	63.955	63.852	0.994	0.000	0.000	0.000	0.000	63.955	63.852	1.000	1.100	2.325	
19\01 to 03\07	450.000	RRJ2	12.450	2.000	5.000	0.000	0.000	0.000	65.780	65.531	0.988	0.000	0.000	0.000	0.000	65.780	65.531	2.000	1.100	4.545	
20\01 to 01\12	375.000	RRJ2	14.920	1.000	15.000	69.000	0.390	0.680	61.676	61.527	0.050	9.700	0.000	0.070	0.000	62.600	62.548	0.350	1.050	0.488	
21\01 to 01\11	600.000	RRJ2	7.310	1.000	25.000	-86.000	-0.140	0.300	62.216	62.143	0.068	2.060	0.000	0.010	0.000	63.008	62.984	0.330	1.100	5.393	
22\01 to 22\02	375.000	RRJ2	15.000	1.000	25.000	36.000	0.200	0.970	70.368	70.218	0.050	9.700	0.000	0.020	0.000	70.511	70.353	1.050	1.100	1.318	
22\02 to 03\02	375.000	RRJ2	60.970	1.000	25.000	76.000	0.430	1.470	70.168	69.559	1.021	3.110	0.000	0.000	0.000	70.351	69.731	1.020	1.200	1.432	
23\01 to 01\10	375.000	RRJ2	12.000	1.000	25.000	35.000	0.200	0.960	63.119	62.999	0.226	9.700	0.000	0.060	0.000	63.297	63.299	-0.020	1.100	1.247	

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
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JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 04 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	525	B

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Jobs\data\ORION-SYNY\19DES-09-CC-Industrial Site CC_200230\DWGS\19-0108-09-CC-525.dwg

HYDROLOGY 100YR

PIT NAME	PIT TYPE	CATCHMENT AREA	PERCENT IMPERVIOUS	Tc IMP	Tc PERV	CRITICAL STORM	APPROACH FLOW	CAPTURED FLOW	UNCAPTURED FLOW	GRATE DEPTH	ROAD GRADE	ROAD CROSSFALL	BYPASS PIT	BYPASS CHANNEL FLOW	U/S FLOW WIDTH	U/S VxD	COMMENTS
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(-)
01\01	CAPPED STUB	1.275	20.000	5.000	10.000	25.000	723.000	723.000	0.000	0.000							
01\02	GGP EKI SAG 2.4m	0.110	95.000	5.000	10.000	20.000	69.000	93.000	0.000	106.000	1.300	2.800	01\03	0.000			
01\03	GGP EKI 1.8m	0.055	95.000	5.000	10.000	20.000	0.000	0.000	0.000	54.000	2.400	3.100	01\04	21.000	0.940	0.060	
01\04	GGP EKI 1.8m	0.039	95.000	5.000	10.000	20.000	21.000	20.000	0.000	65.000	4.600	3.000	01\05	40.000	1.290	0.080	
01\05	GGP EKI 1.8m	0.076	95.000	5.000	10.000	20.000	40.000	34.000	6.000	67.000	3.200	3.000	01\06	41.000	1.350	0.080	
01\06	GGP EKI 1.8m	0.069	95.000	5.000	10.000	5.000	41.000	34.000	102.000	92.000	3.000	3.000	01\07	74.000	2.060	0.090	
01\07	GGP EKI SAG 2.4m		0.000			20.000	76.000	98.000	0.000	163.000	0.300	3.000	01\08	0.000	0.370	0.010	
01\08	GGP EKI 1.8m	0.055	95.000	5.000	10.000	20.000	12.000	12.000	0.000	82.000	1.200	3.000	01\09	53.000	1.860	0.070	
01\09	GGP EKI 1.8m	0.107	85.000	5.000	10.000	20.000	51.000	40.000	11.000	89.000	1.200	3.000	01\10	68.000	2.100	0.080	
01\10	GGP EKI 1.8m	0.116	85.000	5.000	10.000	20.000	68.000	49.000	19.000	94.000	1.200	3.000	01\11	81.000	2.270	0.090	
01\11	GGP EKI 1.8m	0.128	85.000	5.000	10.000	20.000	81.000	55.000	81.000	92.000	1.200	3.000	01\12	74.000	2.190	0.090	
01\12	GGP EKI 1.8m	0.095	85.000	5.000	10.000	25.000	74.000	50.000	58.000	106.000	1.200	3.000	01\13	121.000	2.690	0.110	
01\13	GGP EKI SAG 2.4m	0.170	85.000	5.000	10.000	20.000	121.000	145.000	9.000	146.000	0.300	3.000	16\01	65.000			
01\14	NODE - NO INFLOW		0.000			5.000	65.000	0.000	65.000	148.000	0.200	3.000	01\13	56.000	4.100	0.050	
01\15	GGP EKI 1.8m		0.000			5.000	56.000	43.000	13.000	137.000	0.400		01\14	19.000	3.730	0.060	
01\16	GGP EKI 1.8m		0.000			5.000	0.000	0.000	0.000	44.000	0.800	3.000	16\01	4.000	0.600	0.020	
01\17	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
01A\01	GPT		0.000			5.000	0.000	0.000	0.000	0.000		3.000					
01B\01	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
01B\03	HW In - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02\01	NODE - FULL INFLOW	1.480	15.000	10.000	12.000	20.000	820.000	820.000	0.000	68.000			02\04	69.000	1.400	0.130	
02\02	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\03	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\04	GGP EKI 1.8m	0.139	95.000	5.000	10.000	5.000	73.000	52.000	21.000	49.000	5.500	3.000	02\05	20.000	0.760	0.070	
02\05	GGP EKI 1.8m		0.000			20.000	20.000	20.000	0.000	65.000	5.500	3.000	12\01	40.000	1.310	0.080	
02\06	GGP EKI 2.4m	0.096	95.000	5.000	10.000	20.000	50.000	44.000	6.000	75.000	5.500	3.000	13\02	65.000	1.640	0.110	
02\07	GGP EKI 1.8m	0.031	95.000	5.000	10.000	20.000	14.000	14.000	0.000	47.000	2.500	2.200	02\08	12.000	0.680	0.040	
02\08	GGP EKI 1.8m	0.023	95.000	5.000	10.000	20.000	12.000	12.000	0.000	70.000	3.000	3.000	02\09	35.000	1.450	0.060	
02\09	GGP EKI 1.8m	0.066	95.000	5.000	10.000	20.000	35.000	30.000	4.000	82.000	1.000	3.000	02\10	39.000	1.870	0.060	
02\10	GGP EKI SAG 2.4m	0.178	95.000	5.000	10.000	5.000	102.000	95.000	0.000	107.000	0.200		02\12	0.000	0.000	0.000	
02\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
02\12	GSIP SAG 900x900		0.000			5.000	0.000	0.000	126.000	106.000			LOST	111.000	2.670	0.100	
02\13	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\14	IAD 900x900		0.000			5.000	0.000	0.000	0.000	0.000			LOST	0.000	0.000	0.000	
02\15	HW Out - Stacked Rock		0.000			5.000	0.000	0.000	0.000	0.000							
02B\01	HW In - Precast Concrete		0.000			5.000	2340.000	2340.000	0.000	0.000							
02B\02	IAD 900x900		0.000			5.000	4430.000	4430.000	0.000	0.000							
02B\03	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
03\01	CAPPED STUB	1.219	20.000	10.000	12.000	20.000	627.000	627.000	0.000	0.000							
03\02	GGP EKI 1.8m	0.083	95.000	5.000	10.000	20.000	56.000	43.000	13.000	74.000	1.000	3.000	03\03	33.000	1.620	0.060	
03\03	GGP EKI 1.8m	0.042	95.000	5.000	10.000	20.000	33.000	29.000	4.000	86.000	1.000	3.000	03\04	70.000	2.000	0.090	
03\04	GGP EKI 1.8m	0.170	95.000	5.000	10.000	20.000	90.000	59.000	31.000	74.000	2.800	3.000	03\05	56.000	1.620	0.090	
03\05	GGP EKI 1.8m	0.066	95.000	5.000	10.000	20.000	63.000	47.000	17.000	63.000	2.800	3.000	03\06	30.000	1.230	0.070	
03\06	GGP EKI SAG 2.4m	0.189	95.000	5.000	10.000	5.000	124.000	103.000	0.000	112.000	0.400		LOST	0.000			
03\07	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\08	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\09	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\10	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\11	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\12	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
03\13	HW Out - Stacked Rock					5.000	0.000	0.000	0.000	0.000							
03B\01	HW In - Precast Concrete		0.000			5.000	1440.000	1440.000	0.000	0.000							
03B\02	HW Out - Precast Concrete					5.000	0.000	0.000	0.000	0.000							
04\01	GGP EKI 1.8m	0.108	95.000	5.000	10.000	20.000	64.000	47.000	17.000	91.000	1.000	3.000	03\06	94.000	2.170	0.110	
05\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
05\02	GGP EKI 1.8m	0.213	95.000	5.000	10.000	20.000	113.000	113.000	0.000	0.000	2.800	3.000					
06\01	GGP EKI 1.8m	0.105	95.000	5.000	10.000	20.000	55.000	42.000	13.000	65.000	2.700	3.000	01\02	38.000	1.290	0.080	
07\01	GGP EKI 1.8m	0.104	95.000	5.000	10.000	20.000	54.000	42.000	12.000	67.000	4.900	3.000	08\02	46.000	1.360	0.090	
08\01	CAPPED STUB	0.568	30.000	10.000	12.000	20.000	331.000	331.000	0.000	22.000			08\02	5.000	0.260	0.040	
08\02	GGP EKI 1.8m	0.079	95.000	5.000	10.000	20.000	51.000	40.000	11.000	71.000	3.200	3.000	09\02	50.000	1.520	0.090	
09\01	CAPPED STUB		0.000			20.000	0.000	0.000	0.000	21.000			09\02	6.000	0.240	0.050	
09\02	GGP EKI SAG 2.4m	0.126	95.000	5.000	10.000	5.000	74.000	106.000	10.000	119.000	0.600	3.000	01\07	0.000			
10\01	NODE - FULL INFLOW	1.233	20.000	5.000	5.000	5.000	660.000	660.000	0.000	31.000			01\08	12.000	0.360	0.070	
11\01	GGP EKI 2.4m	0.213	95.000	5.000	10.000	20.000	107.000	75.000	32.000	91.000	1.000	3.000	11\03	58.000	2.180	0.070	
11\02	GGP EKI 2.4m	0.225	95.000	5.000	10.000	20.000	112.000	78.000	35.000	98.000	1.300	3.200	12\01	88.000	2.400	0.090	
11\03	GGP EKI 1.8m	0.064	95.000	5.000	10.000	20.000	58.000	44.000	14.000	72.000	0.600	2.800	11\04	30.000	1.550	0.050	
11\04	GGP EKI 1.8m	0.048	95.000	5.000	10.000	20.000	30.000	27.000	3.000	53.000	1.000	3.000	02\07	14.000	0.900	0.040	
12\01	GGP EKI SAG 2.4m	0.196	95.000	5.000	10.000	20.000	126.000	122.000	0.000	125.000	0.300	3.000	11\04	0.000	0.000	0.000	
13\01	CAPPED STUB	1.118	20.000	10.000	12.000	20.000	590.000	590.000	0.000	23.000			13\02	3.000	0.260	0.020	
13\02	GGP EKI 2.4m	0.124	90.000	5.000	10.000	20.000	68.000	55.000	13.000	96.000	1.000	3.000	02\10	63.000	2.330	0.070	
14\01	CAPPED STUB	0.465	20.000	10.000	12.000	20.000	256.000	256.000	0.000	27.000			03\05	8.000	0.310	0.050	
15\01	NODE - FULL INFLOW	0.663	10.000	5.000	5.000	5.000	461.000	461.000	0.000	51.000			03\04	21.000	0.830	0.070	
16\01	GGP EKI SAG 2.4m	0.090	95.000	5.000	10.000	5.000	59.000	55.000	0.000	77.000	0.100	3.000	LOST	0.000	0.000	0.000	
17\01	CAPPED STUB		0.000			20.000	0.000	0.000	0.000	25.000			02\04	5.000	0.290	0.030	
18\01	JP 900x900		0.000			5.000	0.000	0.000	0.000	0.000							
19\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
20\01	GGP EKI 1.8m	0.075	95.000	5.000	10.000	20.000	44.000	36.000	35.000	87.000	1.300	3.000	16\01	55.000	2.030	0.070	
21\01	CAPPED STUB		0.000			5.000	0.000	0.000	0.000	0.000							
22\01	GGP EKI 1.8m	0.098	95.000	5.000	10.000	20.000	51.000	40.000	11.000	90.000	1.000	3.000	04\01	64.000	2.130	0.080	
22\02	GGP EKI 1.8m	0.116	95.000	5.000	10.000	20.000	60.000	45.000	15.000	86.000	1.000	3.000	03\02	56.000	2.020	0.070	
23\01	GGP EKI 1.8m	0.103	95.000	5.000	10.000	20.000	51.000	40.000	11.000	78.000	1.200	3.000	20\01	44.000	1.730	0.070	

NOTE:
LOT CATCHMENTS DESIGNED TO MATCH PRE FLOWS AS PER REPORT.

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

B

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	526	B

Plotted:Monday, 30 March 2020 2:57:46 PM File Name:C:\1905data\ORION-SYNOTDES-09-CC Industrial Site CC_20923DWGS\19-0108-09-CC-526.dwg

HYDRAULICS 100YR

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V'head)	WSE LOSS (Kw.V'head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
01\01 to 01\02	675.000	RRJ2	5.360	1.500	5.000	723.000	0.650	3.050	68.500	68.420	0.050	0.200	0.000	0.030	0.000	69.018	68.935	1.550	1.620	2.304	
01\02 to 01\03	675.000	RRJ2	17.750	1.500	25.000	790.000	0.710	2.930	68.370	68.103	0.050	0.930	0.000	0.050	0.000	68.885	68.588	1.670	1.540	1.667	
01\03 to 01\04	675.000	RRJ2	16.110	1.000	25.000	790.000	0.870	2.730	68.053	67.892	0.098	0.250	0.000	0.020	0.000	68.571	68.378	1.200	1.340	1.801	
01\04 to 01\05	675.000	RRJ2	60.760	3.640	25.000	884.000	0.510	3.870	67.794	65.584	0.087	0.740	0.000	0.110	0.000	68.132	67.192	1.550	1.100	1.546	
01\05 to 01\06	675.000	RRJ2	48.780	2.000	25.000	1250.000	0.970	3.930	65.497	64.521	0.050	0.440	0.000	0.100	0.000	67.161	66.057	2.260	0.750	0.344	
01\06 to 01\07	(2x)675	RRJ2	16.230	1.000	25.000	1272.000	0.700	2.540	64.471	64.309	0.050	0.600	0.000	0.110	0.000	66.042	65.944	0.600	0.730	-0.080	
01\07 to 01\08	1200x600	RCBC	16.940	1.000	25.000	1408.000	0.570	2.960	64.259	64.090	0.050	0.550	0.000	0.110	0.000	65.925	65.779	0.860	0.720	-0.170	
01\08 to 01\09	1200x600	RCBC	54.680	1.000	25.000	1818.000	0.890	3.020	64.040	63.493	0.050	0.900	0.000	0.170	0.000	65.736	65.128	1.110	1.000	0.166	
01\09 to 01\10	1200x600	RCBC	62.030	1.000	25.000	1856.000	0.900	3.110	63.443	62.823	0.050	0.330	0.000	0.100	0.000	65.124	64.561	0.910	0.910	0.150	
01\10 to 01\11	1200x600	RCBC	64.760	1.000	25.000	1944.000	0.950	3.060	62.773	62.125	0.050	0.360	0.000	0.110	0.000	64.547	63.822	1.120	0.820	-0.094	
01\11 to 01\12	1200x600	RCBC	54.770	1.000	25.000	1995.000	0.970	2.800	62.075	61.527	0.050	0.380	0.000	0.110	0.000	63.807	63.194	1.120	0.770	-0.092	
01\12 to 01\13	1200x600	RCBC	63.730	1.000	20.000	2024.000	0.990	2.810	61.477	60.840	-0.460	0.370	0.000	0.080	0.000	63.182	62.494	1.080	0.680	-0.106	
01\13 to 01\14	1200x600	RCBC	1.720	0.500	25.000	2034.000	1.400	2.830	61.300	61.291	0.510	0.380	0.000	0.150	0.000	62.350	62.335	0.870	0.260	-0.144	
01\14 to 01\15	1200x600	RCBC	7.740	0.700	25.000	2034.000	1.280	2.830	60.781	60.727	0.050	0.260	0.000	0.080	0.000	62.261	62.145	1.500	0.780	-0.125	
01\15 to 01\16	1500x600	RCBC	18.690	0.700	25.000	2098.000	0.930	2.330	60.677	60.546	0.050	1.830	0.000	0.350	0.000	61.803	61.589	1.140	0.890	0.213	
01\16 to 01\17	1050.000	RRJ2	28.030	0.700	25.000	2147.000	0.870	2.480	60.496	60.300		0.210	0.000	0.040	0.000	61.577	61.352	0.800	-0.730	0.859	
01\13 to 01A\01	225.000	UPVC	5.390	0.500	25.000	50.000	1.570	1.260	60.834	60.807	0.050	2.010	0.000	0.130	0.000	62.374	62.292	1.520	1.310	-0.144	
01A\01 to 01\15	225.000	UPVC	5.970	0.500	25.000	50.000	1.580	1.260	60.757	60.727	0.050	1.170	0.000	0.080	0.000	62.219	62.145	1.240	1.420	0.175	
01\13 to 01B\01	750.000	RRJ2	20.720	0.500	5.000	0.000	2.550	0.000	60.934	60.830	0.000	1.800	0.000	0.020	0.000	62.473	61.580	4.310	-0.860	-0.144	
01B\03 to 01\15	900.000	RRJ2	20.640	0.500	5.000	0.000	-1.650	0.000	60.830	60.727	0.050	0.500	0.000	0.010	0.000	61.730	62.139	-1.980	-1.030	1.870	
02\01 to 02\02	675.000	RRJ2	17.230	2.000	5.000	820.000	0.640	3.810	72.444	72.100	0.050	0.000	0.000	0.000	0.000	72.836	72.491	2.000	2.100	3.916	
02\02 to 02\03	675.000	RRJ2	15.960	6.700	5.000	820.000	0.350	5.320	72.050	70.980	0.050	0.740	0.000	0.010	0.000	72.357	71.270	6.810	1.280	2.488	
02\03 to 02\04	675.000	RRJ2	44.780	3.840	5.000	820.000	0.460	4.500	70.930	69.209	0.096	0.750	0.000	0.020	0.000	71.254	69.678	3.520	1.120	1.625	
02\04 to 02\05	675.000	RRJ2	11.720	5.080	5.000	819.000	0.400	2.740	69.114	68.519	0.050	0.570	0.000	0.210	0.000	69.535	69.509	0.220	1.100	1.283	
02\05 to 02\06	675.000	RRJ2	13.700	1.000	5.000	819.000	0.970	2.420	68.469	68.332	0.593	1.670	0.000	0.370	0.000	69.212	68.992	1.610	1.150	0.808	
02\06 to 02\07	675.000	RRJ2	38.520	3.500	25.000	836.000	0.490	3.000	67.739	66.391	0.050	2.020	0.000	0.440	0.000	68.635	68.239	1.030	1.120	1.197	
02\07 to 02\08	675.000	RRJ2	14.040	1.900	25.000	1183.000	1.020	3.390	66.341	66.074	0.200	1.890	0.000	0.550	0.000	67.766	67.316	3.210	1.360	0.153	
02\08 to 02\09	750.000	RRJ2	60.550	1.890	25.000	1151.000	0.690	2.860	65.874	64.731	0.050	0.060	0.000	0.000	0.000	67.316	66.764	0.910	1.150	0.675	
02\09 to 02\10	825.000	RRJ2	51.180	1.000	25.000	1786.000	1.150	3.340	64.681	64.170	0.050	0.410	0.000	0.100	0.000	66.683	65.894	1.540	1.410	0.201	
02\10 to 02\11	825.000	RRJ2	35.170	1.360	25.000	1880.000	1.040	3.620	64.120	63.643	1.306	0.510	0.000	0.130	0.000	65.796	65.125	1.910	1.100	0.712	
02\11 to 02\12	825.000	RRJ2	16.490	1.000	25.000	1879.000	1.210	3.520	62.336	62.172	0.050	1.840	0.000	0.820	0.000	64.301	63.933	2.230	0.860	0.440	
02\12 to 02\13	825.000	RRJ2	82.030	1.000	20.000	1754.000	1.130	3.280	62.122	61.301	0.050	0.830	0.000	0.200	0.000	63.728	62.509	1.490	0.890	-0.105	
02\13 to 02\14	825.000	RRJ2	60.600	1.000	25.000	1757.000	1.130	3.290	61.251	60.645	0.800	0.200	0.000	0.070	0.000	62.444	61.624	1.350	1.650	1.392	
02\14 to 02\15	825.000	RRJ2	7.060	1.000	25.000	1762.000	1.130	3.300	59.845	59.775	0.020	1.720	0.000	0.850	0.000	60.795	60.600	2.760	0.220	1.482	
02B\01 to 02B\02	900.000	RRJ2	4.610	1.000	5.000	853.000	0.470	1.340	60.258	60.212	1.069	0.500	0.000	0.050	0.000	62.714	62.612	2.210	2.190	-0.002	
02B\02 to 02B\03	1200.000	RRJ2	24.600	1.000	5.000	5283.000	1.350	4.670	59.143	58.897		1.860	0.000	1.860	0.000	60.750	60.097	2.650	0.550	0.146	
03\01 to 03\02	600.000	RRJ2	4.490	1.000	20.000	630.000	0.950	2.230	68.632	68.587	0.050	0.200	0.000	0.040	0.000	70.945	70.883	1.380	2.100	0.481	
03\02 to 03\03	600.000	RRJ2	26.480	1.000	25.000	727.000	1.090	2.570	68.537	68.272	0.050	1.900	0.000	0.370	0.000	70.560	70.093	1.760	1.990	0.293	
03\03 to 03\04	600.000	RRJ2	103.520	1.000	25.000	789.000	1.190	2.790	68.222	67.187	0.534	0.430	0.000	0.040	0.000	70.048	68.560	1.440	1.410	0.819	
03\04 to 03\05	750.000	RRJ2	50.000	1.200	25.000	1234.000	0.930	3.150	66.654	66.054	0.900	0.790	0.000	0.100	0.000	68.541	67.892	1.300	0.990	0.670	
03\05 to 03\06	750.000	RRJ2	34.410	1.200	25.000	1546.000	1.170	3.500	65.154	64.741	0.050	1.840	0.000	0.690	0.000	67.239	66.488	2.180	1.490	-0.063	
03\06 to 03\07	825.000	RRJ2	8.150	1.200	25.000	1622.000	0.950	3.240	64.691	64.593	0.050	0.260	0.000	0.060	0.000	66.452	66.322	1.600	1.590	0.473	
03\07 to 03\08	825.000	RRJ2	37.550	1.200	25.000	1598.000	0.940	3.240	64.543	64.092	0.050	0.500	0.000	0.070	0.000	66.260	65.713	1.460	0.950	0.797	
03\08 to 03\09	825.000	RRJ2	67.610	1.500	25.000	1592.000	0.840	2.980	64.042	63.028	0.050	0.390	0.000	0.110	0.000	65.684	64.850	1.230	0.930	0.198	
03\09 to 03\10	825.000	RRJ2	6.990	1.000	25.000	1593.000	1.110	2.980	62.978	62.908	0.050	0.680	0.000	0.250	0.000	64.599	64.459	2.000	1.650	0.669	
03\10 to 03\11	825.000	RRJ2	49.140	1.000	25.000	1598.000	1.030	2.990	62.858	62.367	0.050	0.870	0.000	0.180	0.000	64.281	63.552	1.480	0.390	0.974	
03\11 to 03\12	825.000	RRJ2	53.040	1.000	25.000	1600.000	1.030	2.990	62.317	61.787	0.050	0.200	0.000	0.040	0.000	63.532	62.881	1.230	0.670	0.313	
03\12 to 03\13	825.000	RRJ2	13.500	1.000	25.000	1602.000	1.030	3.000	61.737	61.602		0.670	0.000	0.220	0.000	62.663	62.427	1.750		0.965	
03B\01 to 03B\02	750.000	RRJ2	18.310	1.500	5.000	1440.000	1.060	3.260	62.627	62.352		0.500	0.000	0.270	0.000	64.240	63.102	6.210	1.100	0.836	
04\01 to 03\03	375.000	RRJ2	17.110	1.000	25.000	48.000	0.250	1.080	69.533	69.361	1.139	4.500	0.000	0.080	0.000	70.106	70.093	0.080	1.100	0.875	
05\01 to 05\02	450.000	RRJ2	4.530	1.000	25.000	-56.000	-0.200	0.540	65.884	65.839	0.050	0.200	0.000	0.010	0.000	67.885	67.864	0.460	1.690	0.673	
05\02 to 03\05	450.000	RRJ2	13.550	1.000	20.000	105.000	0.340	1.120	65.789	65.654	0.500	9.700	0.000	0.130	0.000	67.842	67.892	-0.370	1.610	-0.002	
06\01 to 01\04	375.000	RRJ2	49.740	3.950	20.000	42.000	0.110	2.020	70.262	68.300	0.505	4.500	0.000	0.010	0.000	70.355	68.384	3.960	1.100	1.425	
07\01 to 01\04	375.000	RRJ2	14.690	1.820	20.000	42.000	0.160	1.360	68.577	68.311	0.516	9.700	0.000	0.030	0.000	68.692	68.413	1.900	1.100	1.352	
08\01 to 08\02	525.000	RRJ2	8.520	1.000	25.000	412.000	0.880	2.220	66.379	66.294	0.134	0.200	0.000	0.040	0.000	67.451	67.400	0.600	1.100	2.270	
08\02 to 01\05	525.000	RRJ2	15.910	1.600	20.000	378.000	0.640	2.620	66.160	65.905	0.408	1.090	0.000	0.140	0.000	67.371	67.192	1.120	1.100	0.406	
09\01 to 09\02	525.000	RRJ2	9.570	1.000	25.000	-101.000	-0.230	0.500	64.636	64.540	0.050	0.200	0.000	0.000	0.000	65.955	65.953	0.020	0.460	3.314	
09\02 to 01\07	525.000	RRJ2	18.100	1.000	25.000	127.000	0.270	0.870	64.490	64.309	0.050	9.700	0.000	0.130	0.000	65.936	65.944	-0.040	0.800	-0.125	
10\01 to 01\08	600.000	RRJ2	14.940	1.000	25.000	697.000	1.050	2.680	64.508	64.358	0.319	0.000	0.000	0.000	0.000	65.893	65.779	0.760	1.100	2.718	
11\01 to 11\02	375.000	RRJ2	13.580	1.000	20.000	74.000	0.390	1.090	68.033	67.897	0.050	9.700	0.000	0.120	0.000	69.306	69.283	0.170	1.100	0.159	
11\02 to 11\03	375.000	RRJ2	39.560	1.140	20.000	148.000	0.730	1.650	67.847	67.396	0.050	2.770	0.000	0.100	0.000	69.233	68.969	0.670	1.130	0.210	
11\03 to 11\04	375.000	RRJ2	40.520	1.000	20.000	188.000	0.990	1.700	67.346	66.941	0.050	1.950	0.000	0.080	0.000	68.924	68.435	1.210	1.340	0.134	
11\04 to 02\07	525.000	RRJ2	16.820	1.000	20.000	330.000	0.710	1.980	66.891	66.723	0.382	1.180	0.000	0.080	0.000	68.419	68.239	1.070	1.270	0.274	
12\01 to 11\04	375.000	RRJ2	14.960	1.000	20.000	121.000	0.640	1.150	67.195	67.045	0.154	9.190	0.000	0.210	0.000	68.603	68.435	1.120	1.100	0.025	
13\01 to 13\02	600.000	RRJ2	4.310	1.000	25.000	589.000	0.890	2.340	65.295	65.252	0.050	0.200	0.000	0.040	0.000	67.166	67.110	1.300	1.350	0.185	
13\02 to 02\09	600.000	RRJ2	18.480	1.000	25.000	645.000	0.970	2.380	65.202	65.017	0.336	1.010	0.000	0.150	0.000	67.022	66.764	1.400	1.270	-0.095	
14\01 to 03\05	525.000	RRJ2	14.180	1.000	25.000	274.000	0.590	1.530	65.463	65.321	0.167	0.200	0.000	0.020	0.000	67.938	67.892	0.320	2.100	2.258	
15\01 to 03\04	375.000	RRJ2	31.210	4.130	20.000	455.000	1.180	4.120	68.078	66.789	0.135	0.000	0.000	0.000	0.000	70.081	68.560	4.870	2.100	0.622	
16\01 to 01\16	375.000	RRJ2	9.170	1.000	25.000	58.000	0.310	0.530	60.638	60.546	0.050	3.580	0.000	0.040	0.000	61.589	61.589	0.000	1.360	0.788	
17\01 to 02\04	375.000	RRJ2	5.180	1.000	25.000	-1.000	-0.010	0.000	69.660	69.608	0.495	1.640	0.000	0.000	0.000	69.683	69.676	0.140	1.100	1.792	
18\01 to 03\10	450.000	RRJ2	10.300	1.000	25.000	-26.000	-0.090	0.480	63.955	63.852	0.994	0.970	0.000	0.030	0.000	64.463	64.459	0.040	1.100	1.817	
19\01 to 03\07	450.000	RRJ2	12.450	2.000	25.000	-60.000	-0.150	0.490	65.780	65.531	0.988	0.500	0.000	0.070	0.000	66.324	66.322	0.020	1.100	4.001	
20\01 to 01\12	375.000	RRJ2	14.920	1.000	5.000	98.000	0.560	0.890	61.676	61.527	0.050	5.890	0.000	0.050	0.000	63.195	63.194	0.010	1.050	-0.088	
21\01 to 01\11	600.000	RRJ2	7.310	1.000	20.000	-179.000	-0.290	0.630	62.216	62.143	0.068	2.090	0.000	0.040	0.000	63.849	63.822	0.370	1.100	4.553	
22\01 to 22\02	375.000	RRJ2	15.000	1.000	25.000	57.000	0.320	0.970	70.368	70.218	0.050	9.700	0.000	0.090	0.000	71.083	71.041	0.280	1.100	0.764	
22\02 to 03\02	375.000	RRJ2	60.970	1.000	20.000	108.000	0.620	1.500	70.168	69.559	1.021	7.000	0.000	0.100	0.000	70.995	70.883	0.180	1.200	0.745	
23\01 to 01\10	375.000	RRJ2	12.000	1.000	20.000	125.000	0.710	1.130	63.119	62.999	0.226	9.700	0.000	0.080	0.000	64.534	64.561	-0.220	1.100	0.049	

B

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:

For: GAZCORP

By: Orion Consulting
JAS-ANZ SUSTAINABLE ISO 9001 ISO 14001 ISO 45001 WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

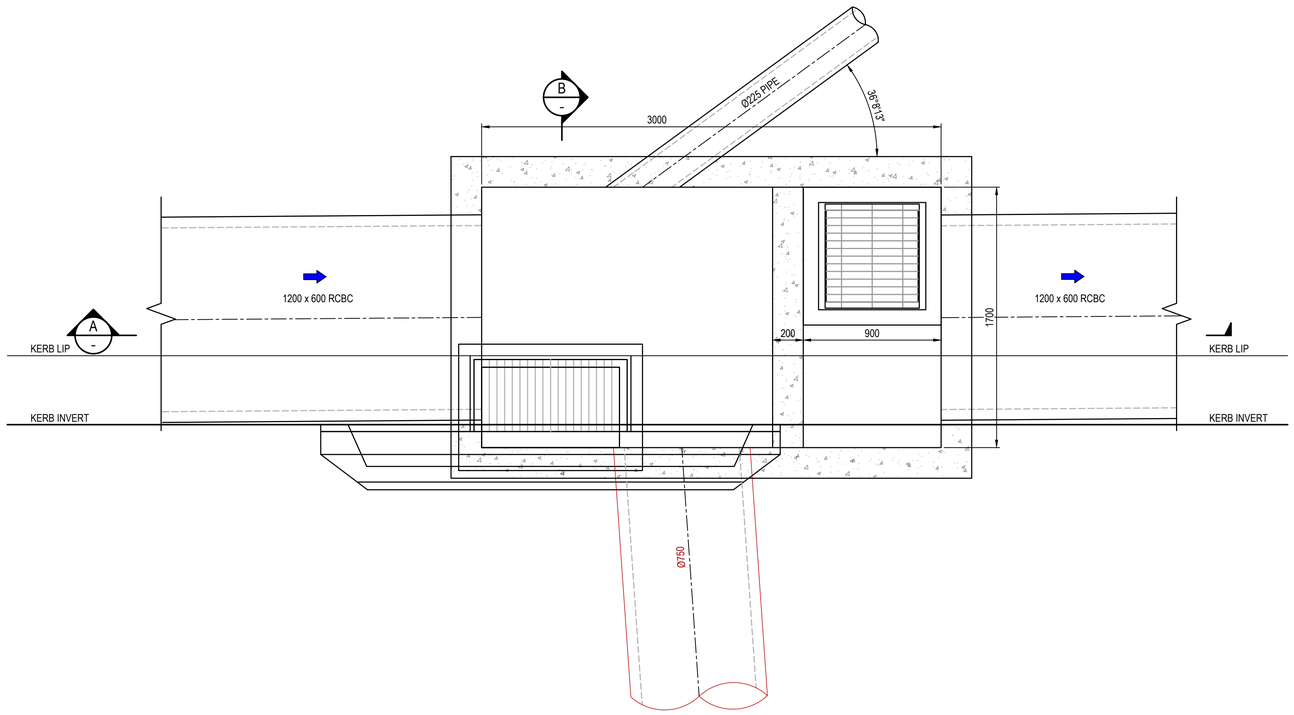
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: DRAINAGE CALCULATIONS PLAN SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	527	B

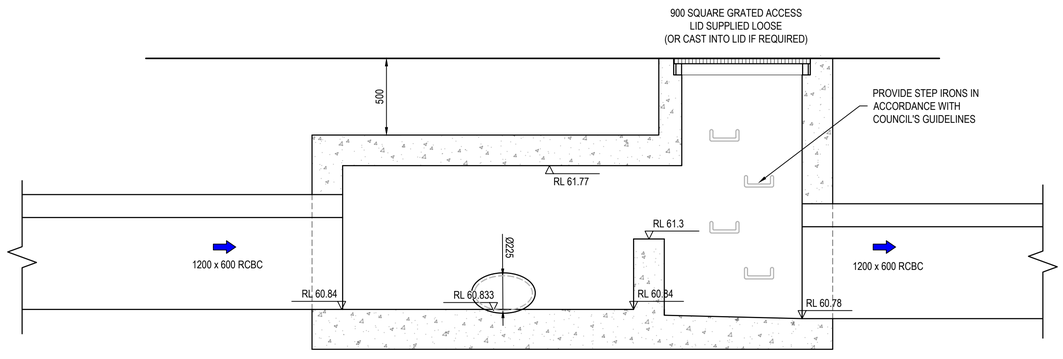
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NOTE:
SPLITTER PIT TO BE DESIGNED AND CERTIFIED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER.

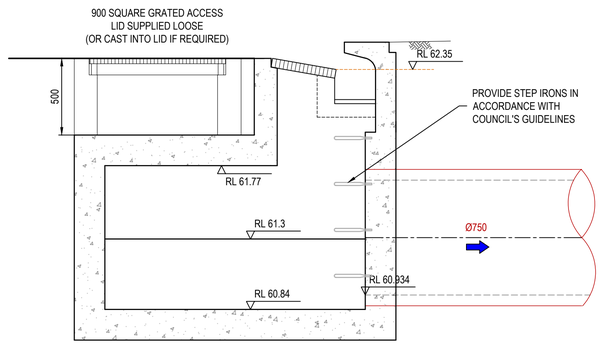


SPLITTER PIT 01/13
SCALE 1:20

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH



SECTION A
SCALE 1:20



SECTION B
SCALE 1:20

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

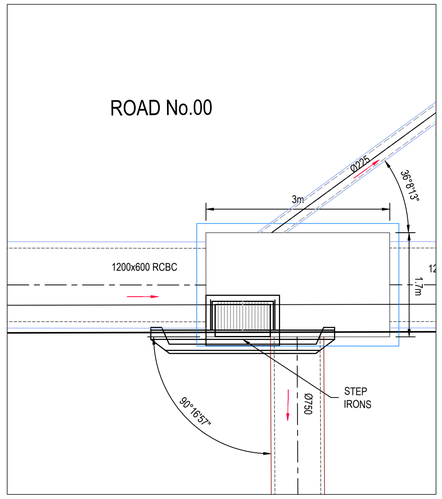
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: SPLITTER PIT DETAIL PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	530	B

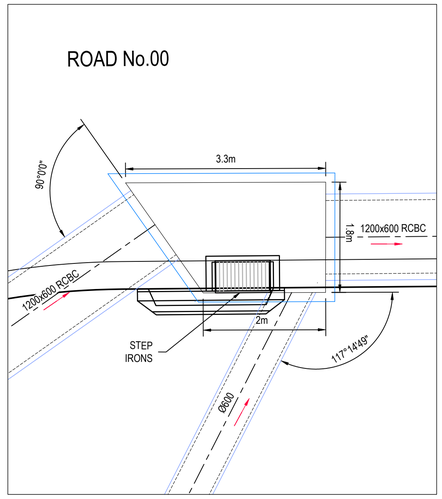
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NORTH



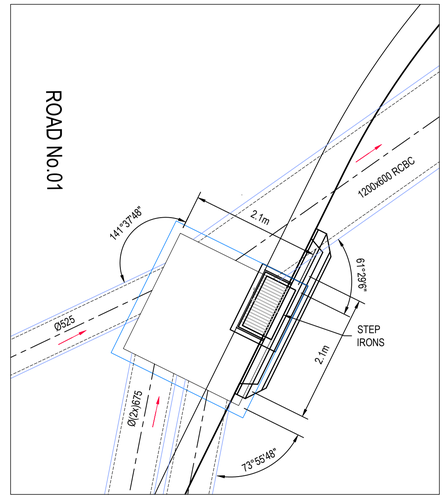
PIT No.01/13

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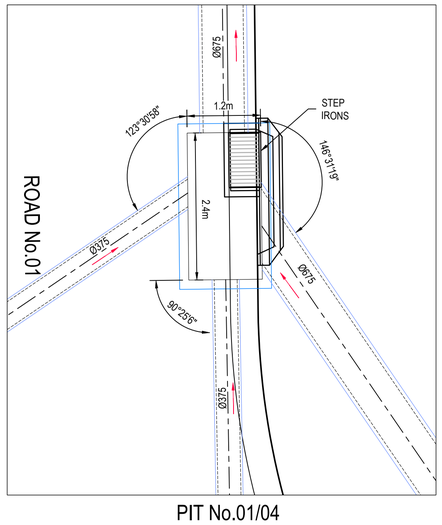
PIT No.01/08

SCALE 1:50



PIT No.01/07

SCALE 1:50



PIT No.01/04

SCALE 1:50

NOTE:

PITS SUBJECT TO STRUCTURAL DESIGN AND CERTIFICATION PRIOR TO CONSTRUCTION.

CONSTRUCTION CERTIFICATE

Approved Plans & Specifications relating to:

Date Approved: **13 February 2023**

Certificate No.: 2 3 0 0 7

BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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Scale:

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

SCALE 1:50 (A1) SCALE 1:100 (A3)

For: GAZCORP

By: Orion Consulting

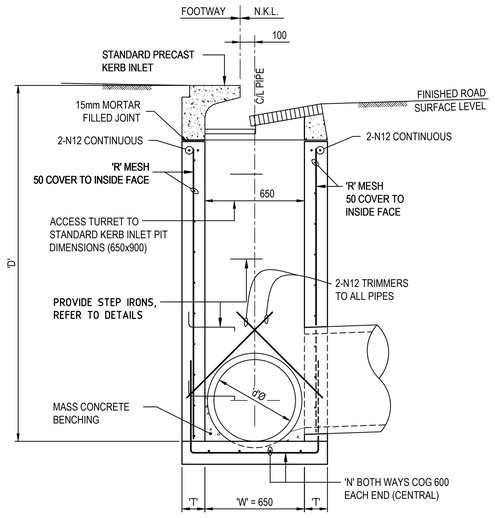
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: PIT GEOMETRY PLAN

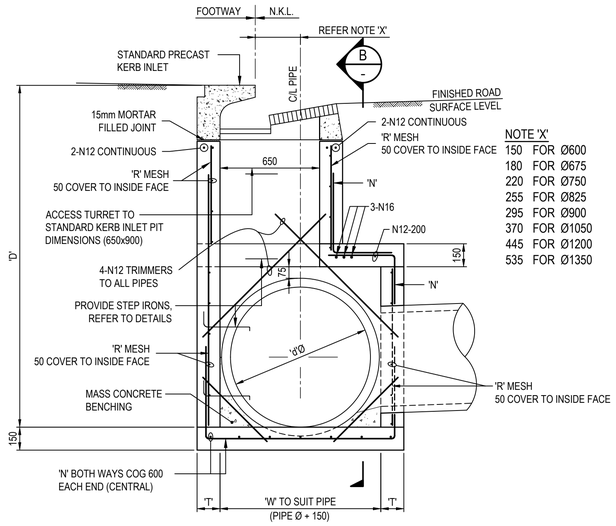
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	540	A

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STANDARD GRATED KERB INLET PIT FOR PIPES UP TO ø525

SCALE: 1:20

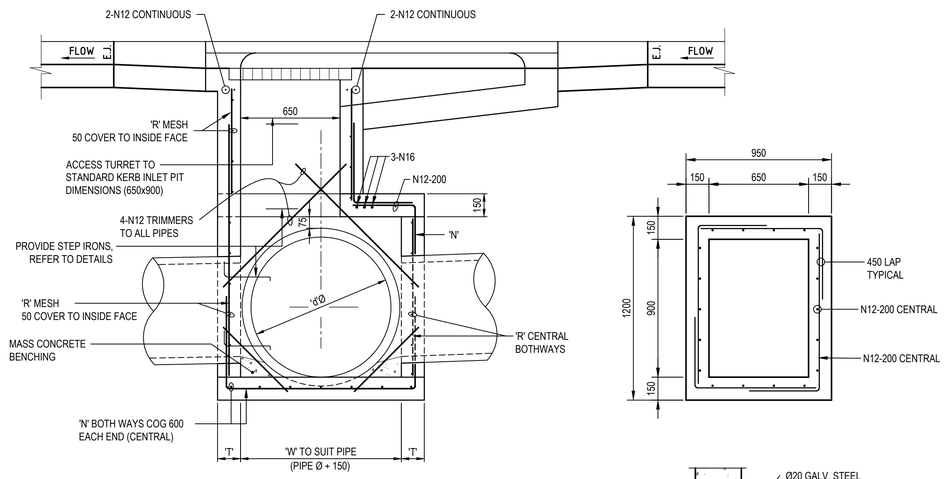


NOTE 'X'

150	FOR	Ø600
180	FOR	Ø675
220	FOR	Ø750
255	FOR	Ø825
295	FOR	Ø900
370	FOR	Ø1050
445	FOR	Ø1200
535	FOR	Ø1350

STANDARD GRATED KERB INLET PIT FOR PIPES FROM ø600 TO ø1350

(ENLARGED CHAMBER)
SCALE: 1:20



3. CONCRETE STRENGTH - UNLESS NOTED OTHERWISE

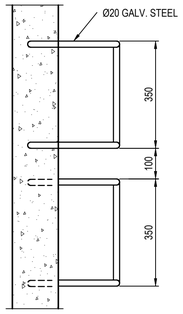
ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

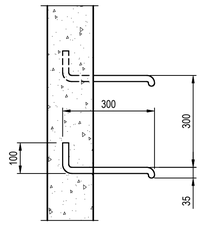
4. COVER - UNLESS NOTED OTHERWISE

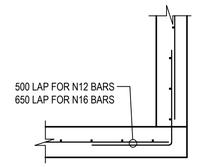
ELEMENT	INTERIOR	EXTERIOR
PITS	50mm	
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		

NOTES:

1. ALL NON-STANDARD PITS TO BE AUSPITS PRECAST OR SIMILAR AND AUSPITS STRUCTURAL COMPLIANCE CERTIFICATE TO BE PROVIDED.
2. DETAILS ON THIS PLAN ARE GENERIC AND FOR INFORMATION PURPOSES ONLY. ALL STRUCTURAL PITS ARE TO BE DESIGNED AND CERTIFIED BY A QUALIFIED STRUCTURAL ENGINEER.







TYPICAL CORNER DETAIL

SCALE 1:20

NOTE:

1. FOR PIT SIZE REFER TO TABLE (900 MIN LONG).
2. REINFORCING MESH IS TO BE BENT TO LAP 300 AROUND ALL CORNERS. VERTICAL BARS ARE NOT TO BE CUT. ALTERNATLY PROVIDE N12 "L" BARS (500x500) AT 400 VERTICAL CTS.
3. COMPRESSIVE STRENGTH (F'c) FOR CAST IN SITU CONCRETE SHALL BE A MINIMUM 32 MPa AT 28 DAYS.
4. TOP OF BENCHING SHALL BE ½ OF OUTLET PIPE DIAMETER.
5. 100mm SUBSOIL DRAINAGE PIPE 3000 LONG WRAPPED IN FABRIC SOCK TO BE PROVIDE ADJACENT TO INLET PIPES.
6. ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP.
7. PIT GRATE TO BE 'WELDLOK' GULLY GRATE GG 78-50 OR APPROVED EQUIVALENT.
8. DURING INSTALLATION OF GRATE AND FRAME CONTRACTOR IS TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE (REFER TO INSTALLATION TOLERANCE).
9. PROVIDE STEP IRONS AS INDICATED FOR PITS DEEPER THAN 1200.
10. N12 AT 200 CENTRAL MAY BE USED IN LEIU OF MESH. LAP 500 AT CORNERS

PIPE DIA. 'dØ'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	FABRIC/COV 'R'	LEGS BAR 'N'	
375	~~650~~	~~800~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~650~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	
	~~650~~	~~1600~~	150	SL82	N12 AT 200	
	~~650~~	~~2000~~	150	SL82	N12 AT 200	
	650	**2400**	**150**	**SL82**	**N12 AT 200**	
	650	**4800**	**150**	**SL82**	**N12 AT 200**	
450	~~650~~	~~800~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~650~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	
	~~650~~	~~1600~~	150	SL82	N12 AT 200	
	~~650~~	~~2000~~	150	SL82	N12 AT 200	
	650	**2400**	**150**	**SL82**	**N12 AT 200**	
525	~~650~~	~~800~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~650~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	
	~~650~~	~~1600~~	150	SL82	N12 AT 200	
	~~650~~	~~2000~~	150	SL82	N12 AT 200	
	650	**2400**	**150**	**SL82**	**N12 AT 200**	
	650	**4700**	**150**	**SL92**	**N12 AT 200**	

NOTE:

1. FOR PIT SIZE REFER TO TABLE (900 MIN LONG).
2. REINFORCING MESH IS TO BE BENT TO LAP 300 AROUND ALL CORNERS. VERTICAL BARS ARE NOT TO BE CUT. ALTERNATLY PROVIDE N12 "L" BARS (500x500) AT 400 VERTICAL CTS.
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8. DURING INSTALLATION OF GRATE AND FRAME CONTRACTOR IS TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE (REFER TO INSTALLATION TOLERANCE).
9. PROVIDE STEP IRONS AS INDICATED FOR PITS DEEPER THAN 1200.
10. N12 AT 200 CENTRAL MAY BE USED IN LEIU OF MESH. LAP 500 AT CORNERS

PIPE DIA. 'dØ'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	FABRIC/COV 'R'	LEGS BAR 'N'	
600	~~850~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~850~~	~~1600~~	150	~~SL82~~	~~N12 AT 200~~	
	~~850~~	~~2000~~	150	SL82	N12 AT 200	
	850	**2400**	**150**	**SL82**	**N12 AT 200**	
675	~~940~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~940~~	~~1600~~	150	~~SL82~~	~~N12 AT 200~~	
	~~940~~	~~2000~~	150	SL82	N12 AT 200	
	940	**2400**	**150**	**SL82**	**N12 AT 200**	
750	~~1020~~	~~1200~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~1020~~	~~1600~~	150	~~SL82~~	~~N12 AT 200~~	
	~~1020~~	~~2000~~	150	SL82	N12 AT 200	
	1020	**2400**	**150**	**SL82**	**N12 AT 200**	
825	~~1100~~	~~1600~~	150	~~SL82~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~1100~~	~~2000~~	150	SL82	N12 AT 200	
	1100	2400	150	SL82	N12 AT 200	
900	~~1180~~	~~1600~~	150	~~SL82~~	~~N12 AT 200~~	
	~~1180~~	~~2000~~	150	SL82	N12 AT 200	
	1180	**2400**	**150**	**SL82**	**N12 AT 200**	
1050	~~1345~~	~~1600~~	150	~~SL92~~	~~N12 AT 200~~	REFER TO FAIRFIELD CITY COUNCIL'S STANDARD DRAWING
	~~1345~~	~~2000~~	150	SL92	N12 AT 200	
	1345	**2400**	**150**	**SL92**	**N12 AT 200**	
	1345	2800	150	SL92	N12 AT 200	
1200	1510	2000	150	SL102	N12 AT 200	
	1510	2400	150	SL102	N12 AT 200	
	1510	2800	150	SL102	N12 AT 200	
1350	1510	2800	150	SL102	N12 AT 200	

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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SCALE 1:20 (A1) SCALE 1:40 (A3)
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For: GAZCORP

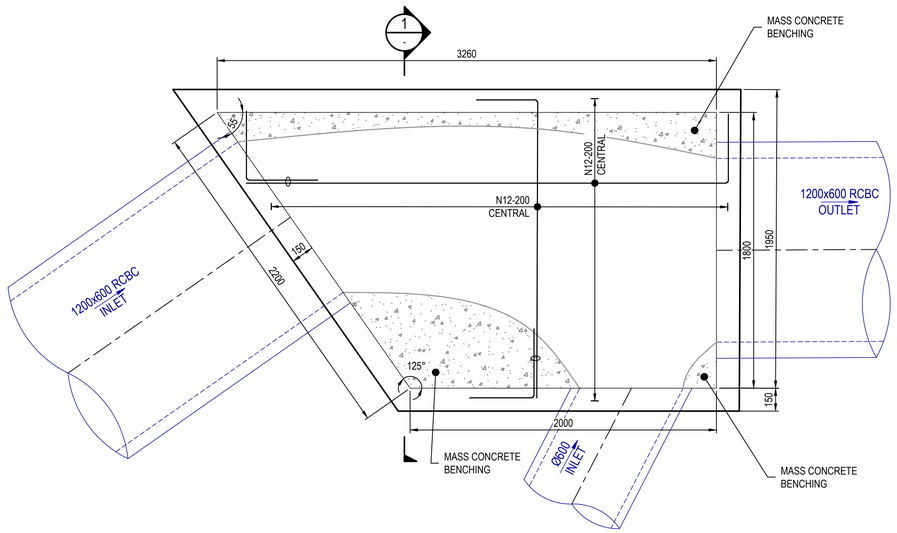
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: TYPICAL STRUCTURAL PIT DETAILS

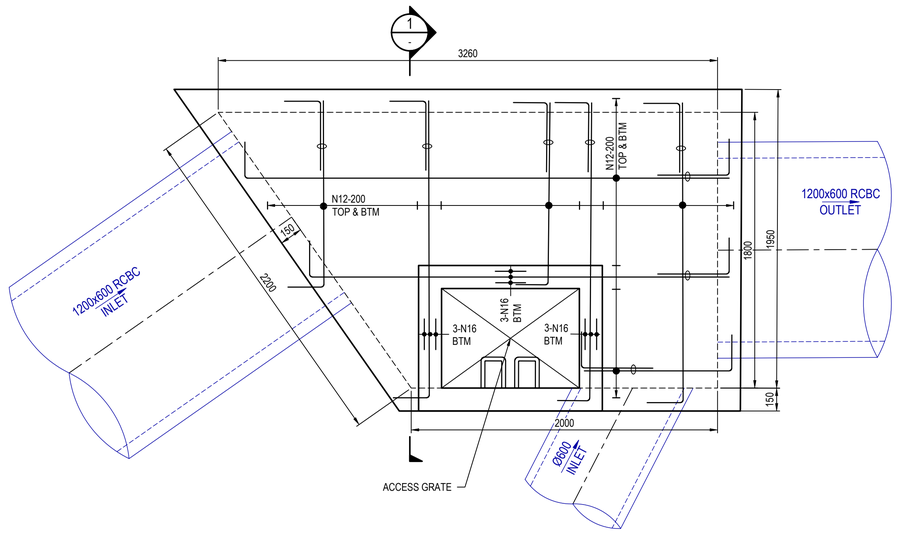
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	541	A

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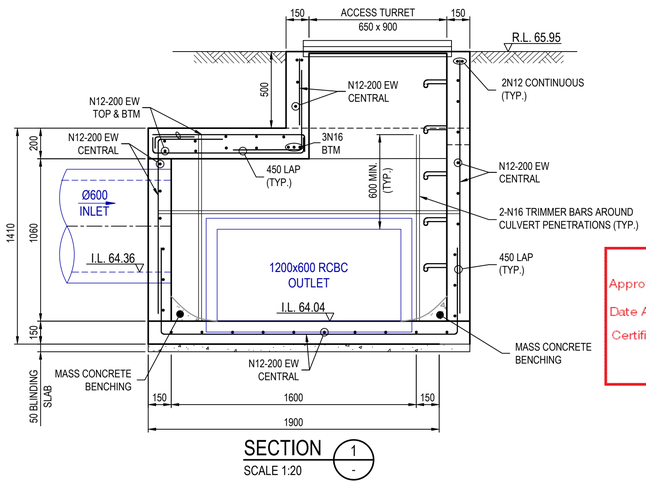
PIT No.01/08 BASE - 150 THICK

SCALE 1:20



PIT No.01/08 ROOF - 200 THICK

SCALE 1:20



SECTION 1 / -

SCALE 1:20

CONSTRUCTION CERTIFICATE

Approved Plans & Specifications relating to:

Date Approved: **13 February 2023**

Certificate No.: 2 3 0 0 7

BLACKETT MAGUIRE + GOLDSMITH

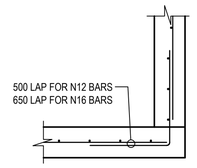
NOTES:

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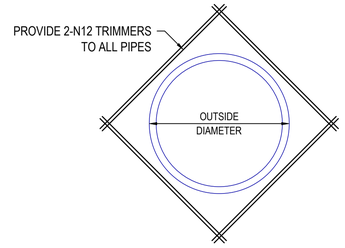
ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

2. COVER - UNLESS NOTED OTHERWISE

ELEMENT	INTERIOR	EXTERIOR
PITS	50mm	
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		



TYPICAL CORNER DETAIL



TYPICAL PIPE TRIMMER DETAIL

ISSUED FOR CONSTRUCTION

Rev	Date	Revision Description
A	15/06/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

CF Drawn | DH Design | AS Check | DH Appd.

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Scale: 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

SCALE 1:20 (A1) SCALE 1:40 (A3)

For: GAZCORP

By: Orion Consulting

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

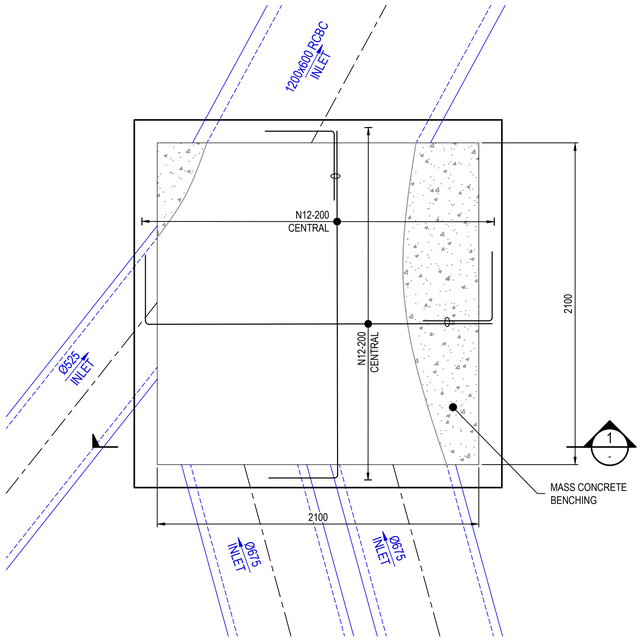
JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: PIT 01/08 STRUCTURAL PLAN

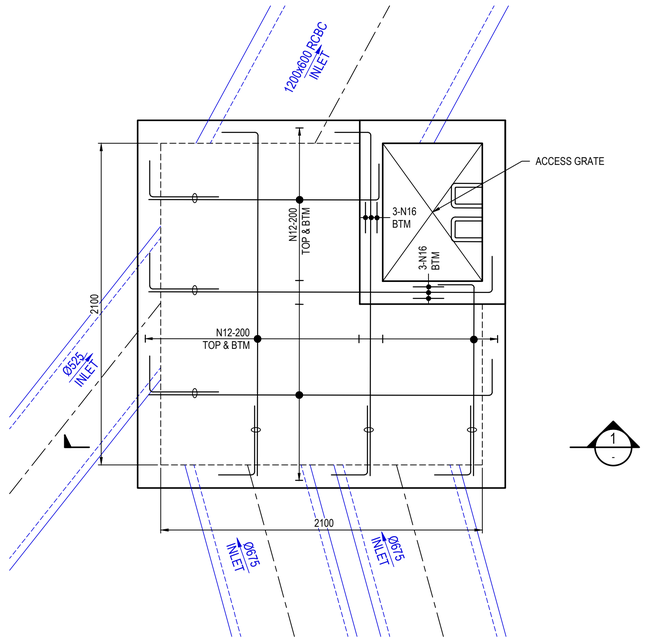
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	542	A

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PIT No.01/07 BASE - 150 THICK

SCALE 1:20



PIT No.01/07 ROOF - 200 THICK

SCALE 1:20

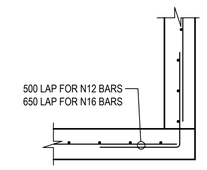
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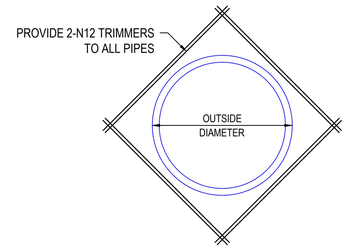
ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

2. COVER - UNLESS NOTED OTHERWISE

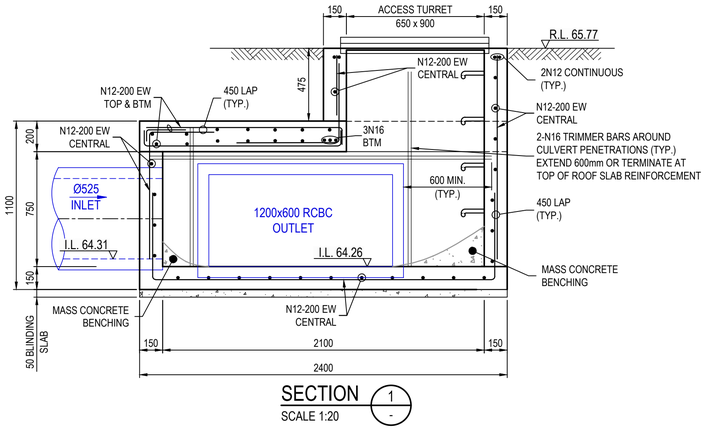
ELEMENT	INTERIOR	EXTERIOR
PITS	50mm	
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		



TYPICAL CORNER DETAIL



TYPICAL PIPE TRIMMER DETAIL



SECTION 1 / -

SCALE 1:20

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: **13 February 2023**
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	15/06/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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Scale: 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)

For: GAZCORP

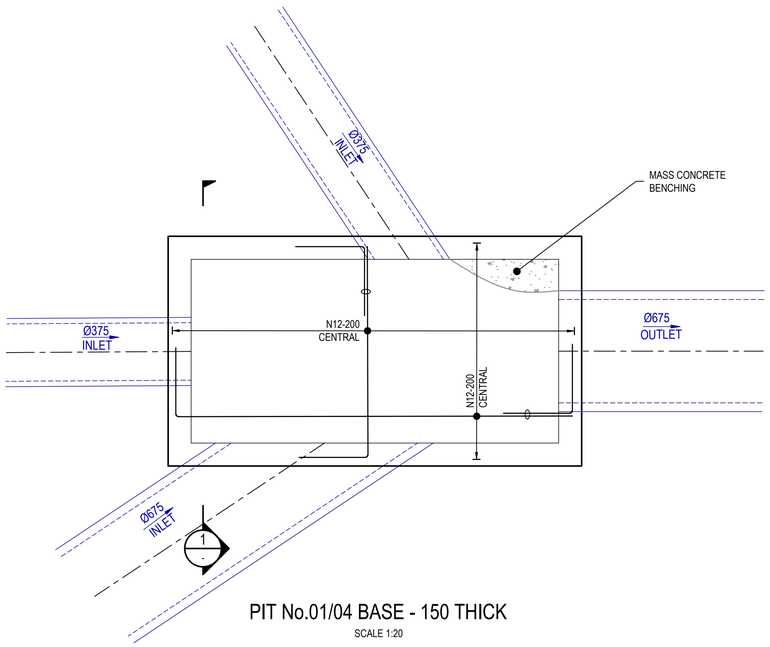
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD
INDUSTRIAL SITE
ROAD & DRAINAGE DESIGN

Title: PIT 01/07
STRUCTURAL PLAN

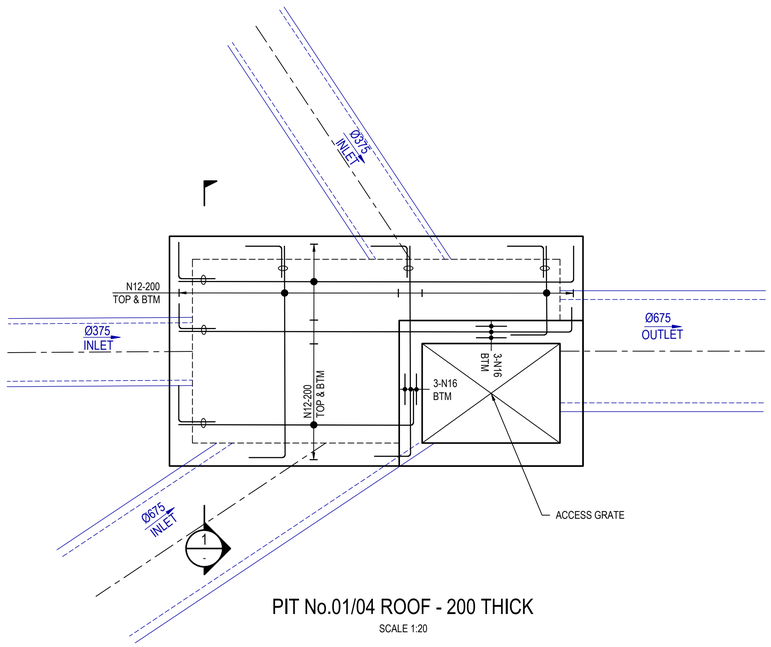
Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	543	A

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PIT No.01/04 BASE - 150 THICK

SCALE 1:20



PIT No.01/04 ROOF - 200 THICK

SCALE 1:20

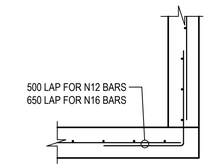
NOTES:

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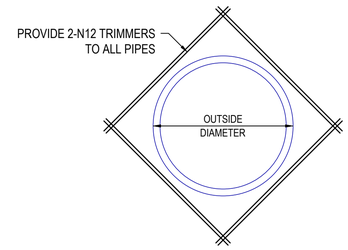
ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

2. COVER - UNLESS NOTED OTHERWISE

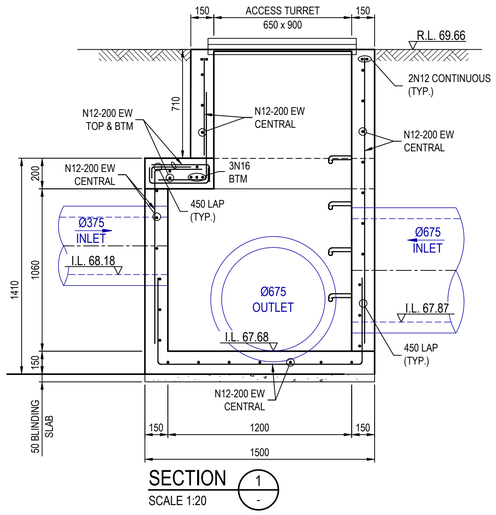
ELEMENT	INTERIOR	EXTERIOR
PITS	50mm	
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		



TYPICAL CORNER DETAIL



TYPICAL PIPE TRIMMER DETAIL



SECTION 1 / -

SCALE 1:20

CONSTRUCTION CERTIFICATE

Approved Plans & Specifications relating to:

Date Approved: **13 February 2023**

Certificate No.: 2 3 0 0 7

BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Date	Revision Description
A	15/06/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

Drawn: CF | Design: DH | Check: AS | Appd: DH

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Scale: 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
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For: GAZCORP

By: Orion Consulting

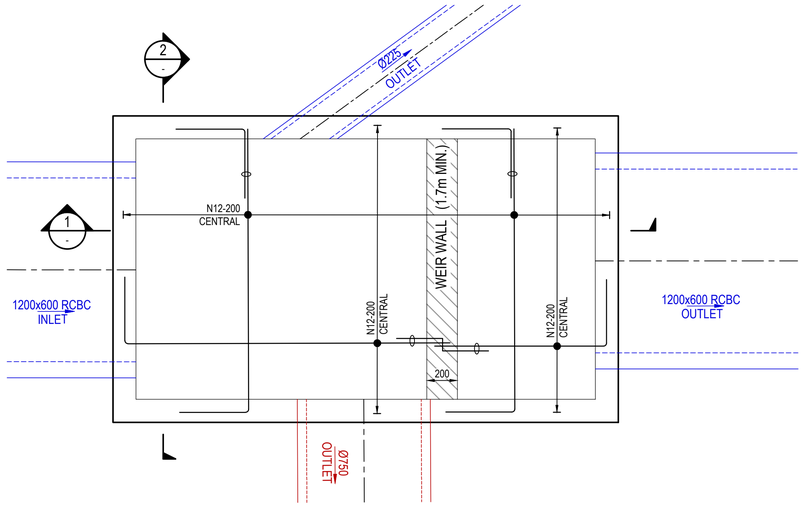
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: PIT 01/04 STRUCTURAL PLAN

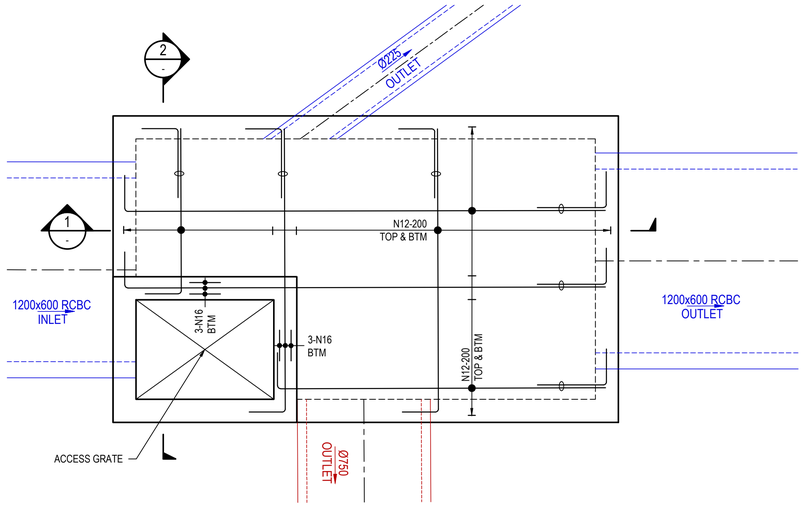
Project No.	Set No.	Milestone	Plan	Revision
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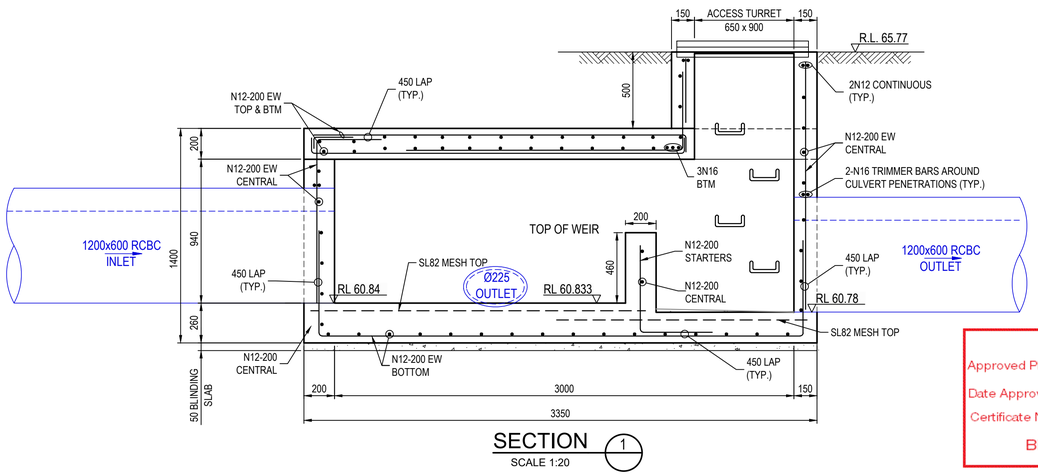
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SCALE 1:20



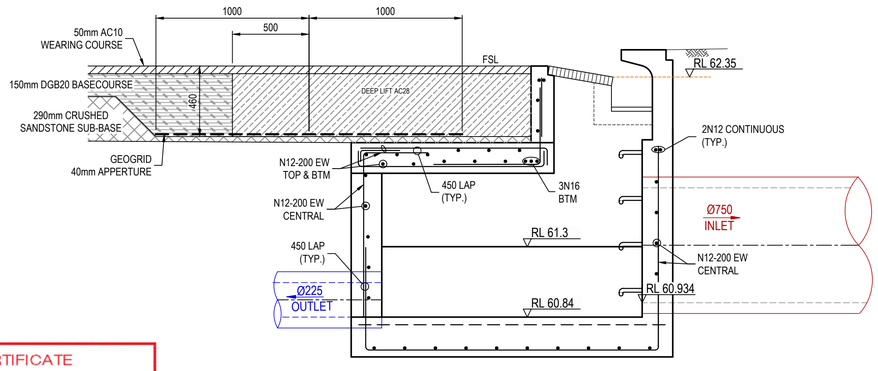
PIT No.01/13 ROOF - 200 THICK

SCALE 1:20



SECTION 1

SCALE 1:20



SECTION 2

SCALE 1:20

CONSTRUCTION CERTIFICATE

Approved Plans & Specifications relating to:

Date Approved: **13 February 2023**

Certificate No.: 2 3 0 0 7

BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR **CONSTRUCTION**

Rev	Date	Revision Description
A	15/06/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

Drawn: CF | Design: DH | Check: AS | Appd.: DH

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SCALE 1:20 (A1) SCALE 1:40 (A3)

For: GAZCORP

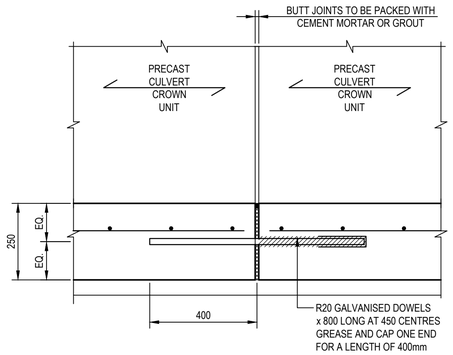
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: 813-913 WALLGROVE ROAD
INDUSTRIAL SITE
ROAD & DRAINAGE DESIGN

Title: PIT 01/13
STRUCTURAL PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	545	A

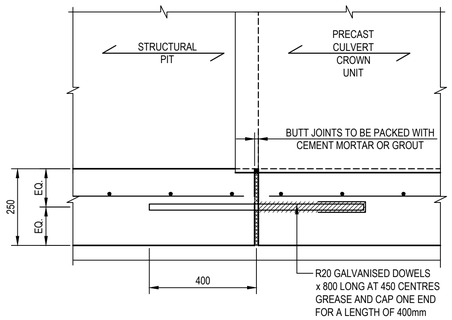
Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\1Old\Stall\ORION-SYNO1\DES-09-CC Industrial Site CC_2062\DWGS\19-0108-09-CC-545.dwg



TYPICAL CULVERT CONSTRUCTION JOINT (CJ)

SCALE 1:10

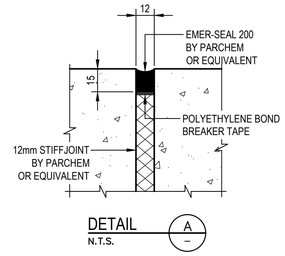
NOTE: JOINT TO ALIGN WITH JOINT IN CROWN UNIT



TYPICAL CULVERT–PIT DOWEL JOINT

SCALE 1:10

NOTE: JOINT TO ALIGN WITH JOINT IN CROWN UNIT



DETAIL A

N.T.S.

NOTES:

1. CONCRETE STRENGTH - UNLESS NOTED OTHERWISE

ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
BASE	40	80mm	20mm	GP

2. COVER - UNLESS NOTED OTHERWISE

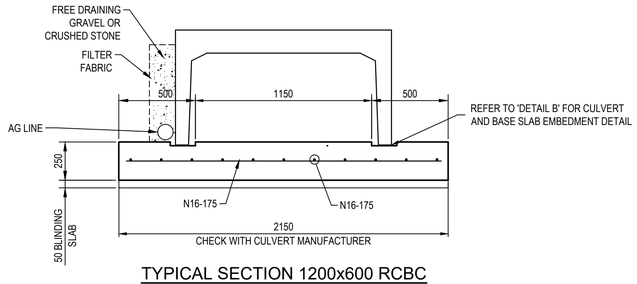
ELEMENT	INTERIOR	EXTERIOR
PITS		45mm
SLAB TOP		45mm
SLAB BOTTOM		45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		

3. PIPE INVERT LEVELS ARE FOR INFORMATION ONLY. REFER TO RELEVANT DRAINAGE LONGITUDINAL SECTIONS FOR ALL R.L.'S.

4. 4–N16 TRIMMERS TYPICAL FOR ALL OPENINGS IN WALLS FOR PIPES.

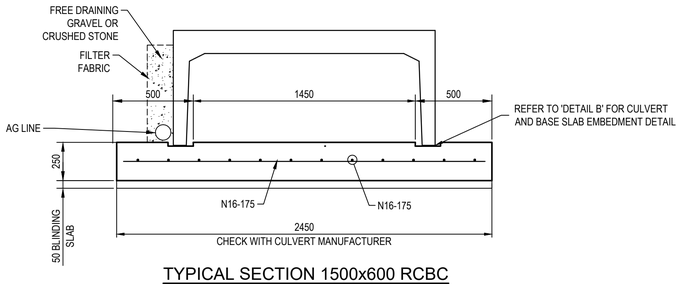
NOTE:

CULVERT BASE HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 200 kPa, TO BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION



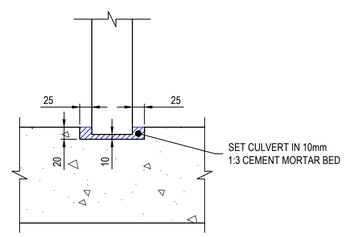
TYPICAL SECTION 1200x600 RCBC

SCALE 1:20



TYPICAL SECTION 1500x600 RCBC

SCALE 1:20



DETAIL B

N.T.S.

CONSTRUCTION CERTIFICATE

Approved Plans & Specifications relating to:

Date Approved: **13 February 2023**

Certificate No.: 2 3 0 0 7

BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
A	CF	DH	AS	DH	15/06/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS

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Scale: 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

SCALE 1:20 (A1) SCALE 1:40 (A3)

For: GAZCORP

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

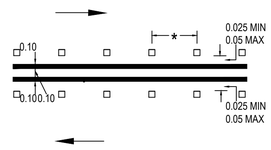
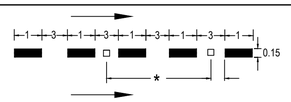
Project: 813-913 WALLGROVE ROAD INDUSTRIAL SITE ROAD & DRAINAGE DESIGN

Title: CULVERT BASE SLAB STRUCTURAL DETAILS

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	546	A

Plotted Monday, 30 March 2020 2:57:46 PM File Name:C:\2d5\data\ORION-SYNO\1DES-09-CC Industrial Site CC_20623\DWGS\19-0108-09-CC-546.dwg

NORTH

LINE TYPE	USE	DIMENSIONS (m) (FOR DIMENSIONS SHOWN * SEE MARKER SPACING COLUMN.)	COLOUR	RAISED MARKER TYPE	MARKER SPACING ( ) (m)* NORMAL SPACING (A)	MARKER SPACING ( ) (m)* ALTERNATIVE SPACING (B)
BB	1. 1. REPLACES DIVIDING (SEPARATION) LINE IF RESTRICTED SIGHT DISTANCE FOR BOTH DIRECTIONS OR 2. APPROACH TO MEDIAN ISLAND OR 3. APPROACHES TO A PEDESTRIAN CROSSING		WHITE		12	12
C1	DEFINES EDGE OF THROUGH CARRIAGEWAY ADJACENT TO TURNING LANE, FREEWAY RAMP, BUS BAY AND START OR FINISH OF AUXILIARY LANE		WHITE	W	8	8

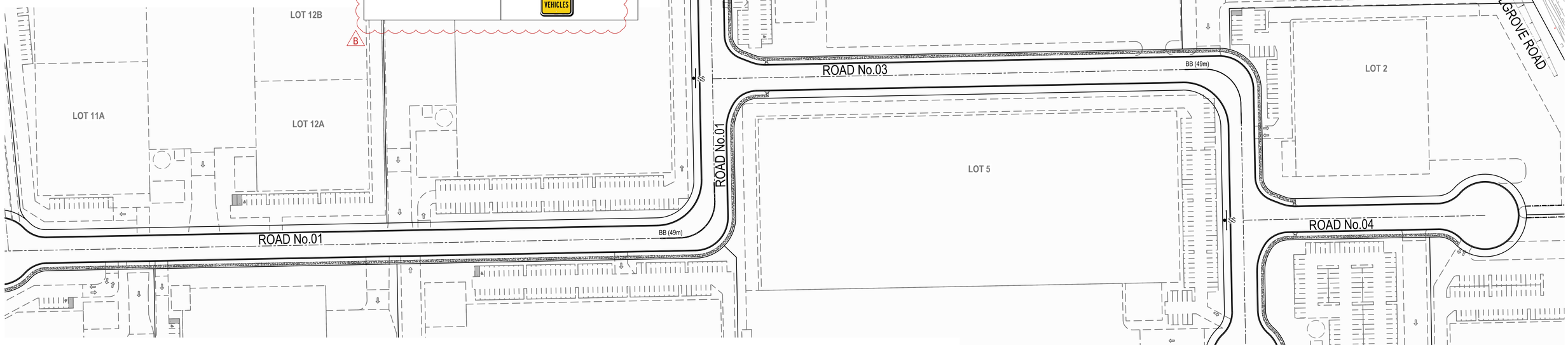
PAVEMENT ARROW LEGEND

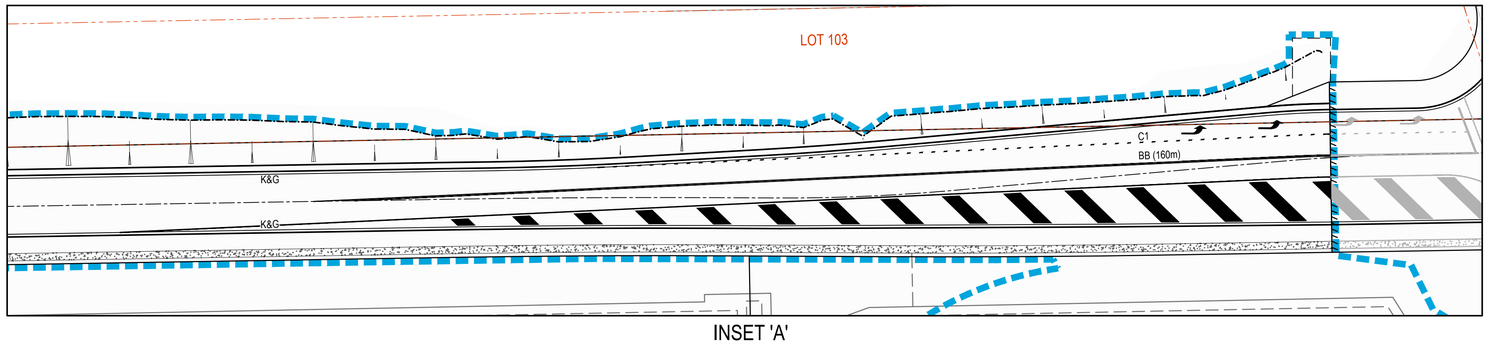
ARROW TYPE	USE	SHAPE
UA3(L)	TRAFFIC IN LANE MUST TURN LEFT	

LEGEND

STREET SIGN	SS
WARNING SIGN	WATCH FOR TURNING VEHICLES

NOTE:
SIGNAGE AND LINEMARKING SUBJECT TO APPROVAL BY TRAFFIC COMMITTEE





INSET 'A'
SCALE 1:500

CONSTRUCTION CERTIFICATE
Approved Plans & Specifications relating to:
Date Approved: 13 February 2023
Certificate No.: 2 3 0 0 7
BLACKETT MAGUIRE + GOLDSMITH

ISSUED FOR CONSTRUCTION

Rev	Drawn	Design	Check	Appd.	Date	Revision Description
B	CF	DH	AS	DH	12/05/2022	ISSUED FOR CONSTRUCTION - CERTIFIER COMMENTS
A	MG	DH	DH	AS	04/03/2022	ISSUED FOR CERTIFIER / CLIENT REVIEW

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: GAZCORP

By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
813-913 WALLGROVE ROAD
INDUSTRIAL SITE
ROAD & DRAINAGE DESIGN

Title:
SIGNAGE & LINEMARKING PLAN

Project No.	Set No.	Milestone	Plan	Revision
19-0108	09	CC	800	B

Printed:Monday, 30 March 2020 2:57:48 PM File Name:C:\1Jobs\data\ORION-SYNY\19ES-09-CC_Industrial Site CC_2062\3DWGS\19-0108-09-CC-800.dwg