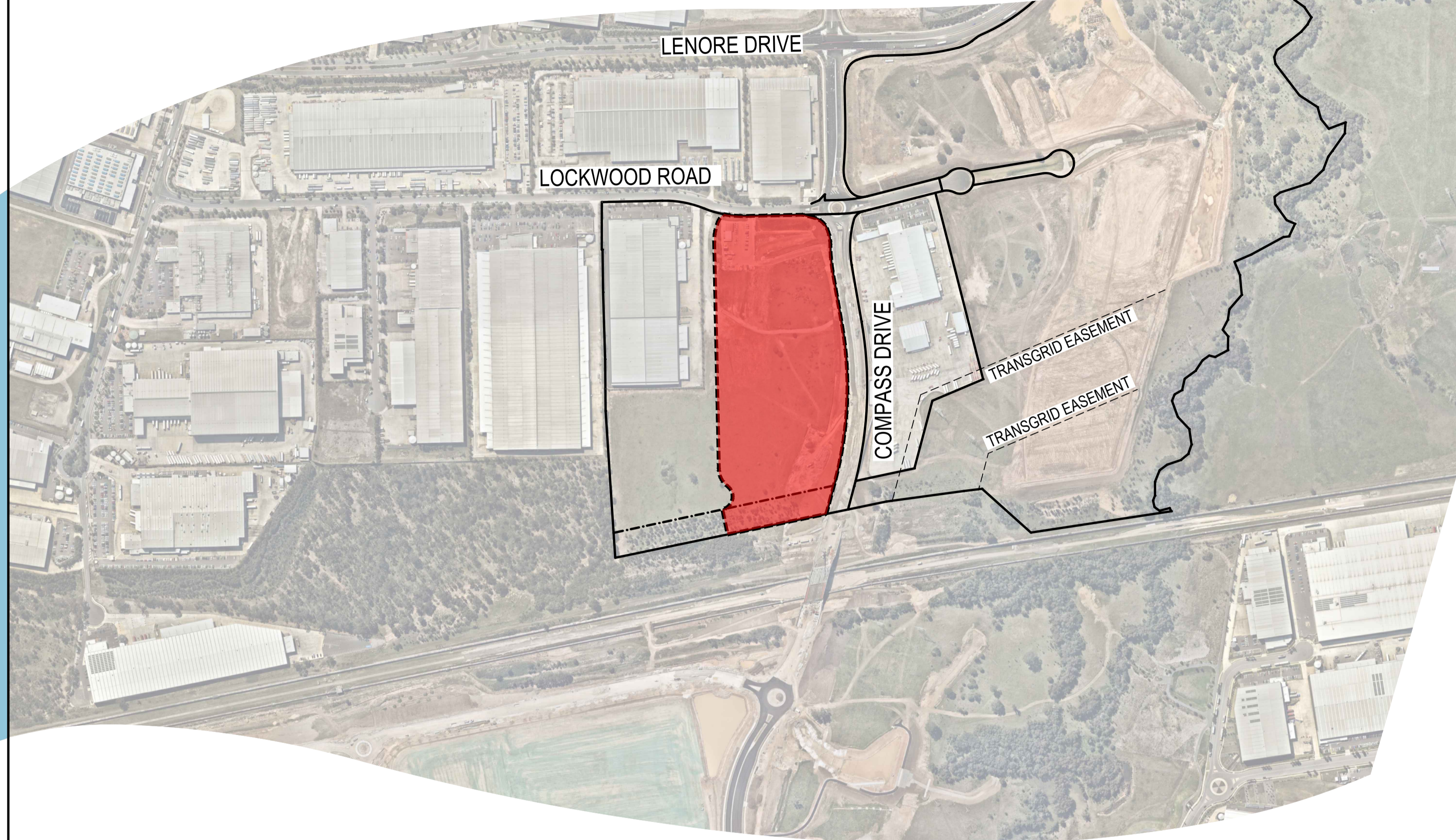


FITZPATRICK INVESTMENTS PTY LTD

ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5
 DEVELOPMENT APPLICATION No.2



DRAWING SCHEDULE

DRAWING NUMBER	DESCRIPTION
190050-05-DA2-C01.01	COVER SHEET AND DRAWING SCHEDULE
190050-05-DA2-C01.21	GENERAL NOTES
190050-05-DA2-C01.41	GENERAL ARRANGEMENT PLAN
190050-05-DA2-C05.01	SITWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 01
190050-05-DA2-C05.02	SITWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 02
190050-05-DA2-C11.01	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 01
190050-05-DA2-C11.02	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 02
190050-05-DA2-C14.01	SITWORKS DETAILS
190050-05-DA2-C20.01	PRE-DEVELOPMENT STORMWATER CATCHMENT PLAN
190050-05-DA2-C20.21	POST-DEVELOPMENT STORMWATER CATCHMENT PLAN
190050-05-DA2-C22.01	TURNING PATH PLAN - SHEET 01
190050-05-DA2-C23.01	SAFETY IN DESIGN

REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
			DRN	DES	VERIF	APPD
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				

Client

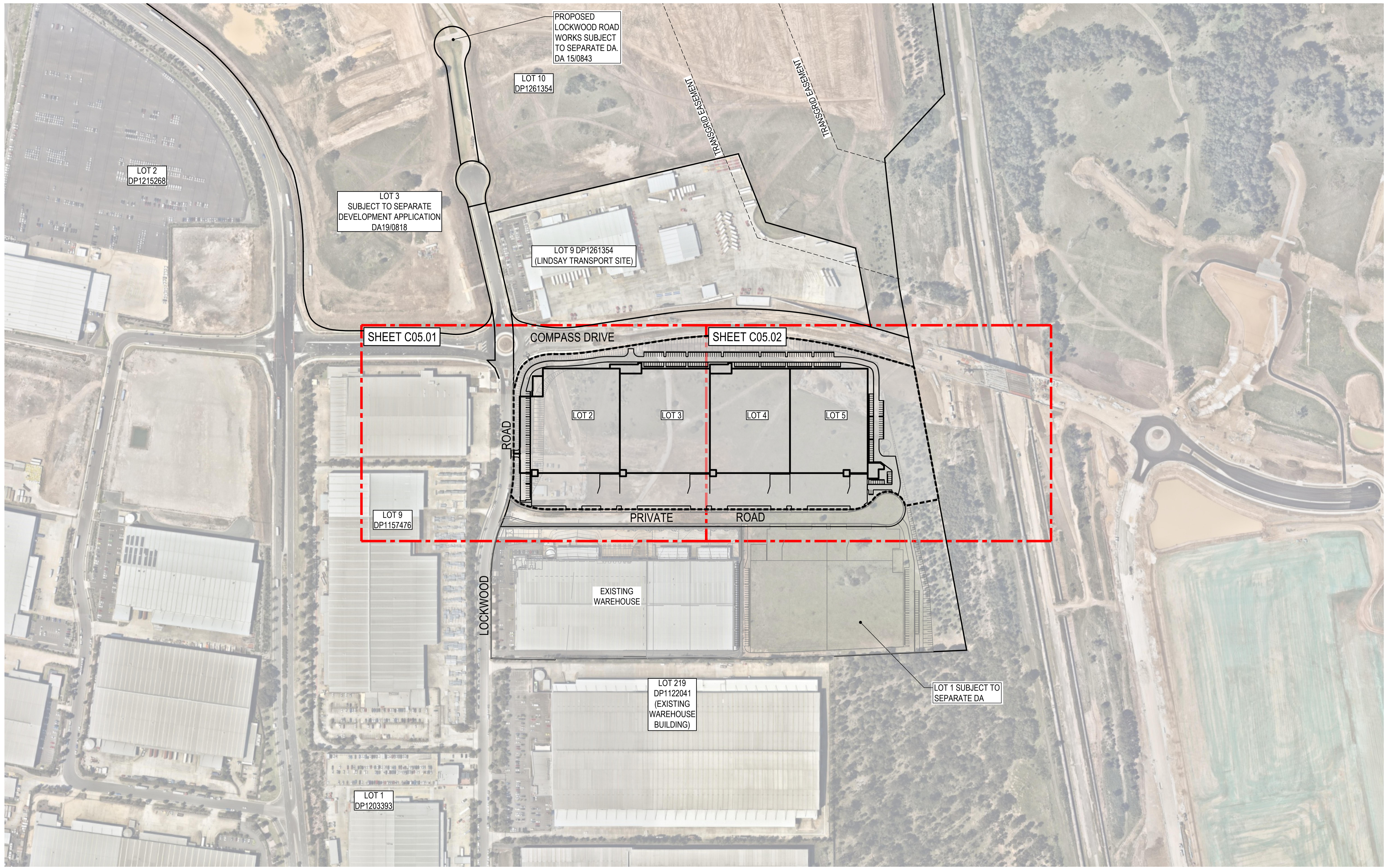
Scale

North

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 ABN: 71 624 801 690
 Phone: 02 9922 6135

Scale	1:5000	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Date	19/04/2021	Project Number/Drawing Number	190050-05-DA2-C01.01
Size	A1	Revision	1
Datum	MGA2020		



REV.	DATE	DESCRIPTION	MDH	DL	MKH	MKH
			DRN	DES.	VERIF.	APPD.
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				

Client

Scale

SCALE 1:2000 @A1

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Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
GENERAL ARRANGEMENT PLAN

Scale
1:2000

Date
19/04/2021

Size
A1

Datum
MGA2020

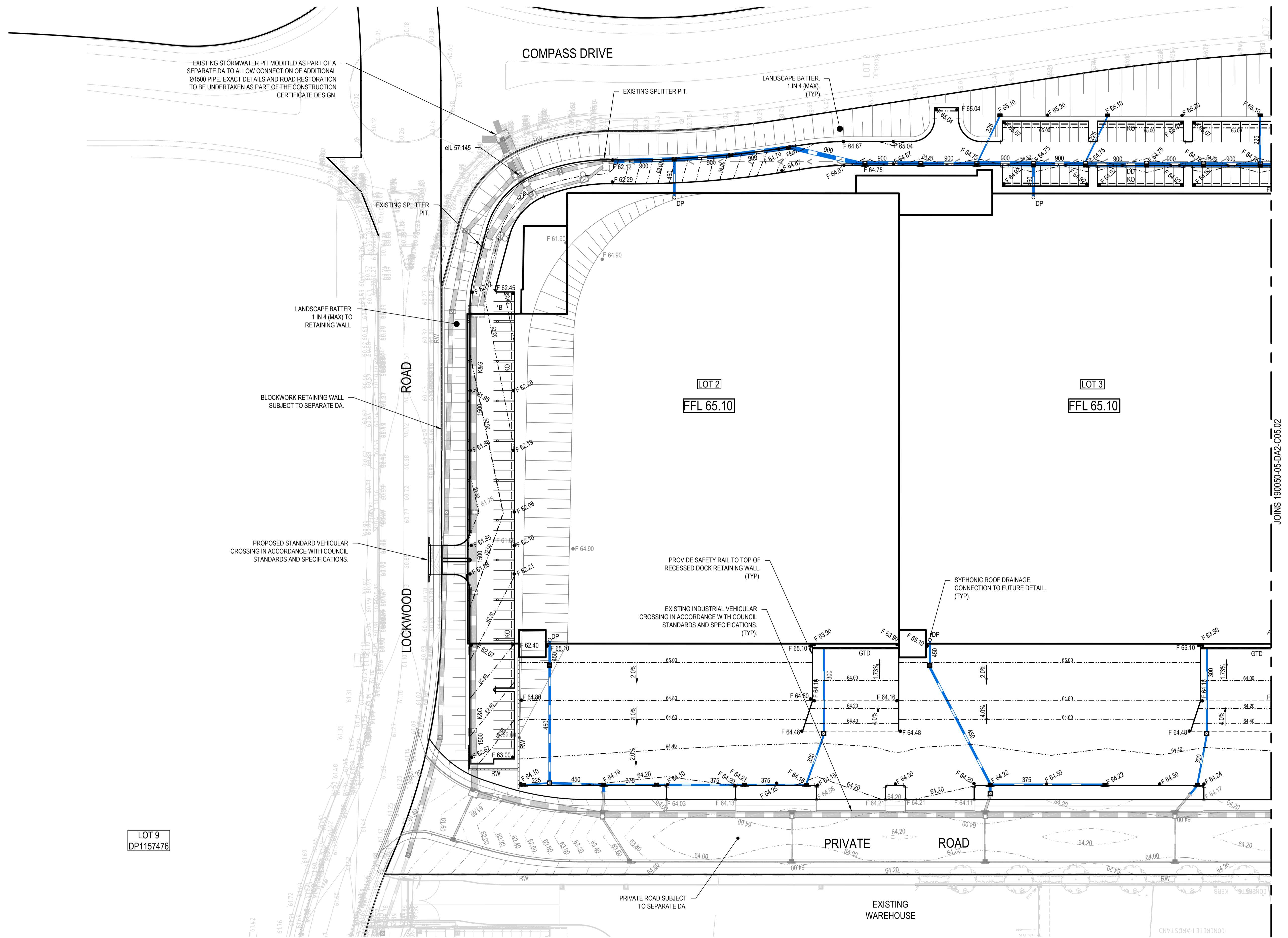
Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C01.41

Revision
1

LEGEND	
	SITE BOUNDARY
	CONTOUR
	BATTER
	BLOCKWORK RETAINING WALL
	CONTIGUOUS PILE RETAINING WALL
	KERB AND GUTTER
	DISH DRAIN
	LAYBACK
	FINISHED FLOOR LEVEL
	FINISHED LEVEL
	SWALE DRAIN
	PIPE SIZE
	STORMWATER DRAINAGE LINE FLOW DIRECTION
	STORMWATER LINE/PIT NUMBER
	KERB INLET PIT
	SURFACE INLET PIT/JUNCTION PIT
	GRATED TRENCH DRAIN

NOTE
 EROSION AND SEDIMENTATION CONTROL DETAILS CONSTRUCTED UNDER SEPARATE APPROVAL FOR BULK EARTHWORKS, PRIVATE ROAD AND LOT 1.
 REFER ENSPIRE DRG. 190050-05-DA1-C03.01 TO C03.31 FOR DETAILS



REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
REV	DATE	DESCRIPTION	DRN	DES.	VERIF.	APPD.
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				

Client

Scale

SCALE 1:500 @A1

North

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 Phone: 02 9922 6135

Project
 ERSKINE PARK INDUSTRIAL ESTATE
 LOCKWOOD ROAD, ERSKINE PARK
 LOTS 2, 3, 4 AND 5

Title
 SITWORKS AND STORMWATER MANAGEMENT PLAN

SHEET 01

Scale
 1:500

Date
 19/04/2021

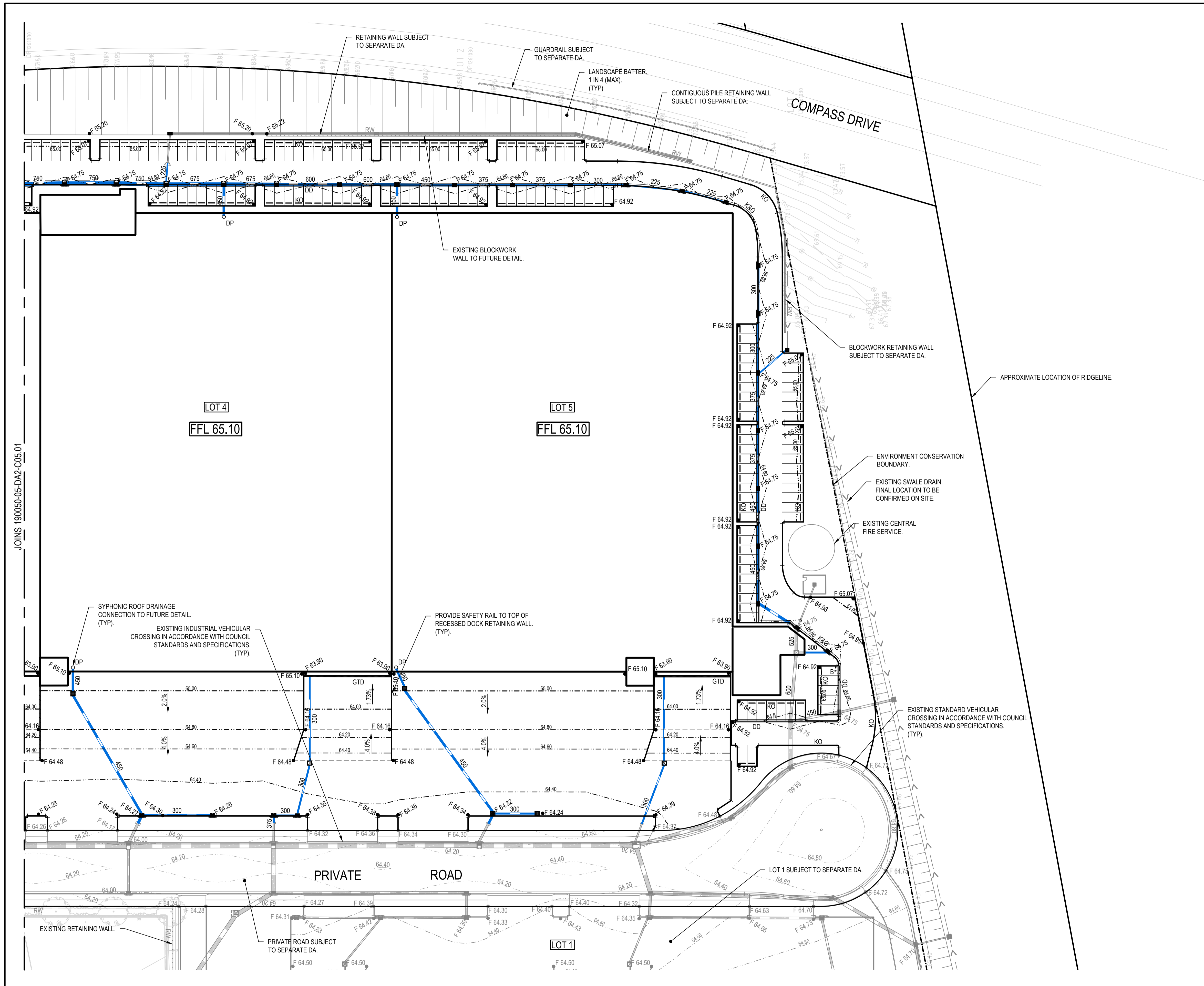
Size
 A1

Datum
 MGA2020

Status
FOR APPROVAL
 NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C05.01

Revision
1



LEGEND

	SITE BOUNDARY
	CONTOUR
	BATTER
	BLOCKWORK RETAINING WALL
	CONTIGUOUS PILE RETAINING WALL
	KERB AND GUTTER
	DISH DRAIN
	LAYBACK
	FINISHED FLOOR LEVEL
	FINISHED LEVEL
	SWALE DRAIN
	PIPE SIZE STORMWATER DRAINAGE LINE FLOW DIRECTION
	STORMWATER LINE/PIT NUMBER
	KERB INLET PIT
	SURFACE INLET PIT/JUNCTION PIT
	GTD
	GRADED TRENCH DRAIN

NOTE

EROSION AND SEDIMENTATION CONTROL DETAILS CONSTRUCTED UNDER SEPARATE APPROVAL FOR BULK EARTHWORKS, PRIVATE ROAD AND LOT 1.
REFER ENSPIRE DRG. 190050-05-DA1-C03.01 TO C03.31 FOR DETAILS

JOINS 190050-05-DA2-C05.01

REV.	DATE	DESCRIPTION	MDH	DL	MKH	MKH
			DRN	DES.	IVERIF.	APPD.
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				

Client

Scale

SCALE 1:500 @A1

North

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Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
SITEWORKS AND STORMWATER MANAGEMENT PLAN

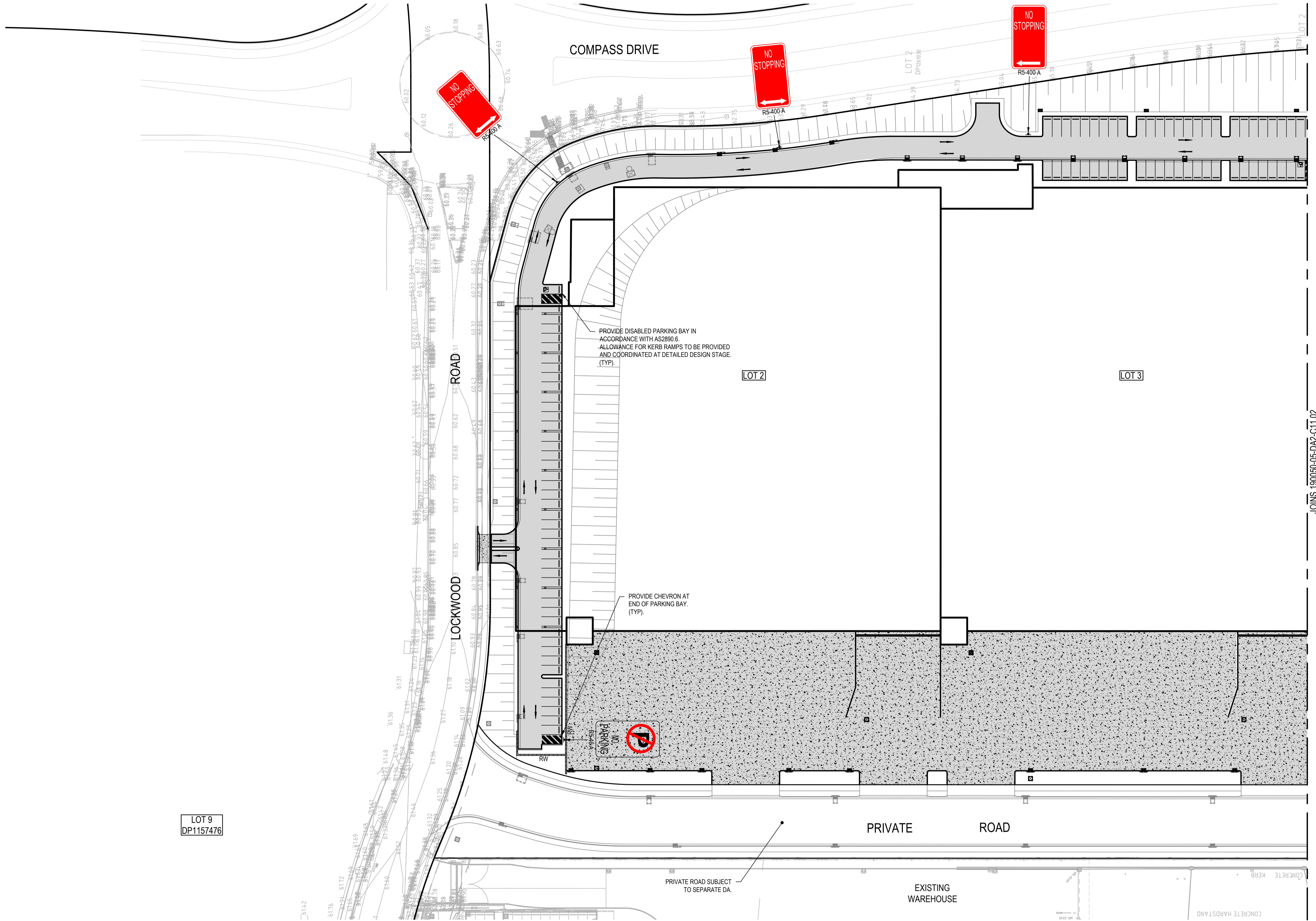
SHEET 02

Scale 1:500	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Date 19/04/2021	Project Number/Drawing Number 190050-05-DA2-C05.02
Size A1	Revision 1
Datum MGA2020	

LEGEND

- LOCAL ROAD
- COLLECTOR ROAD
- FOOTPATH
- CONCRETE HARDSTAND

NOTE:
REFER DRG. C14.01 FOR PAVEMENT DETAILS



JOINS 190050-05-DA2-C11.02

DATE PLOTTED: 22 October 2021 1:48 PM BY: GEORGE IZATT

REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION	MDH	DL	MKH	MKH
			DRN	DES.	VERIF.	APPD.

Client

Scale

SCALE 1:500 @A1

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Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
PAVEMENT, SIGNAGE AND LINEMARKING PLAN

SHEET 01

Scale
1:500

Date
19/04/2021

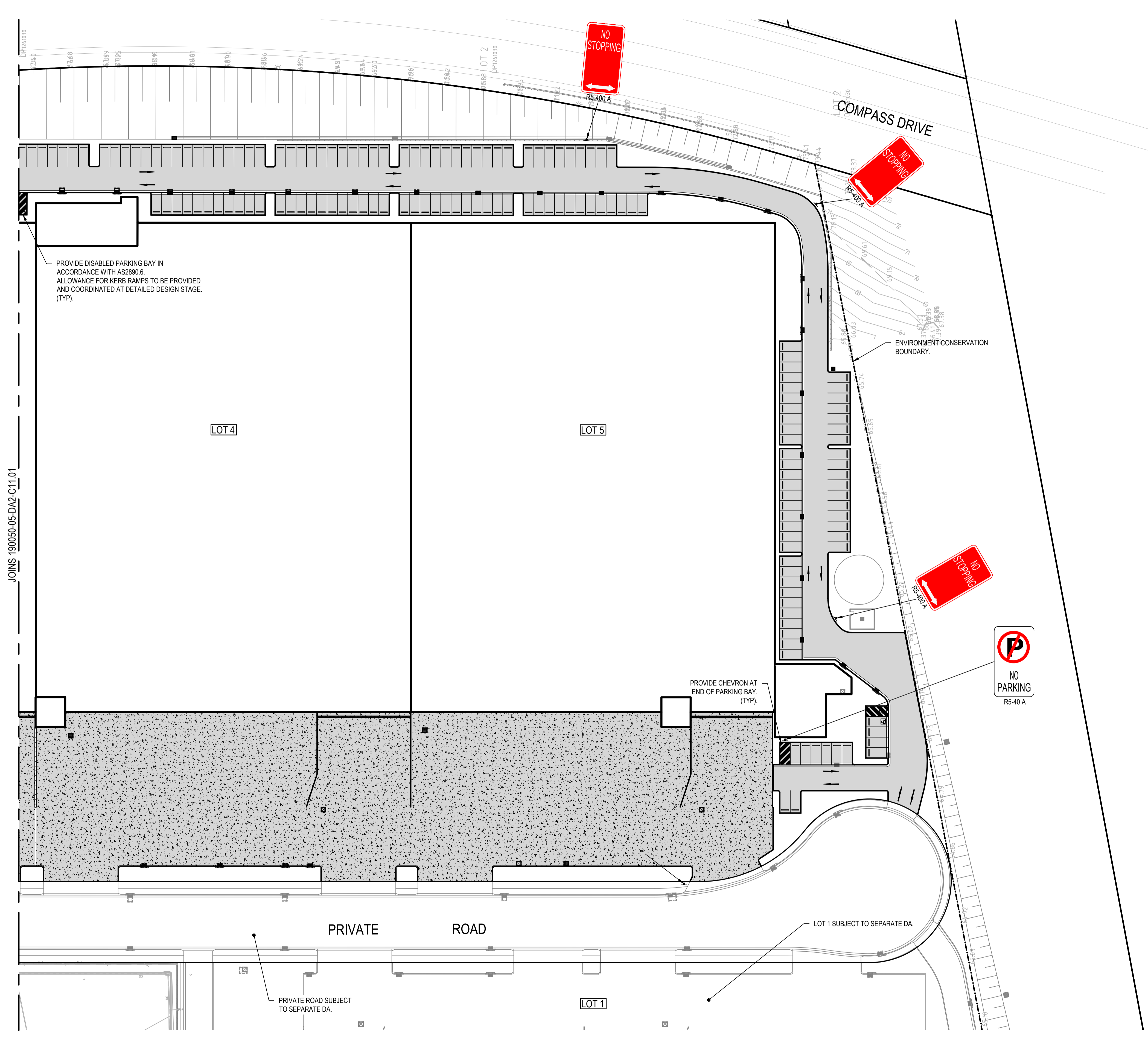
Size
A1

Datum
MGA2020

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C11.01

Revision
1



LEGEND

- LOCAL ROAD
- COLLECTOR ROAD
- FOOTPATH
- CONCRETE HARDSTAND

NOTE:
REFER DRG: C14.01 FOR PAVEMENT DETAILS

REV.	DATE	DESCRIPTION	MDH	DL	MKH	MKH
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION	MDH	DL	MKH	MKH
			DRN	DES.	IVERIF	APPD.

Client

Scale

SCALE 1:500 @A1

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North

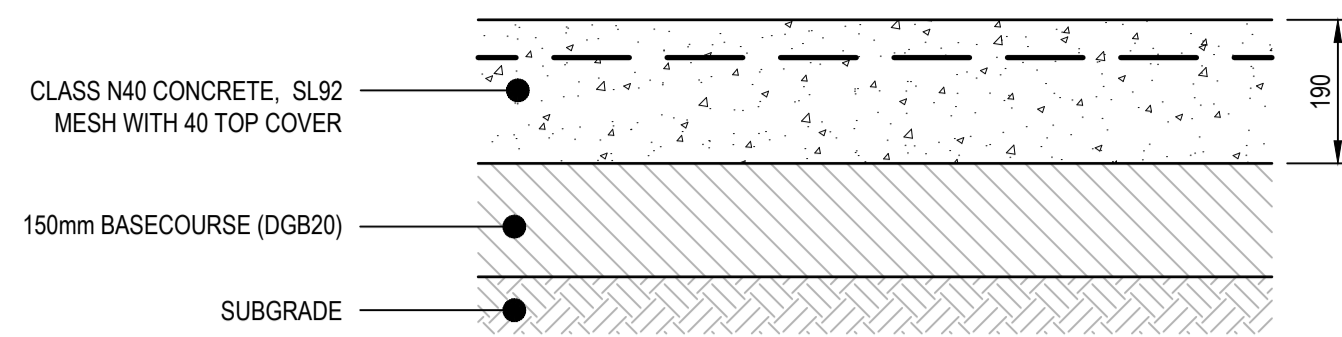
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ABN: 71 624 801 690
Phone: 02 9922 6135

Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
PAVEMENT, SIGNAGE AND LINEMARKING PLAN

SHEET 02

Scale 1:500	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION
Date 19/04/2021	Project Number/Drawing Number 190050-05-DA2-C11.02
Size A1	Revision 1
Datum MGA2020	

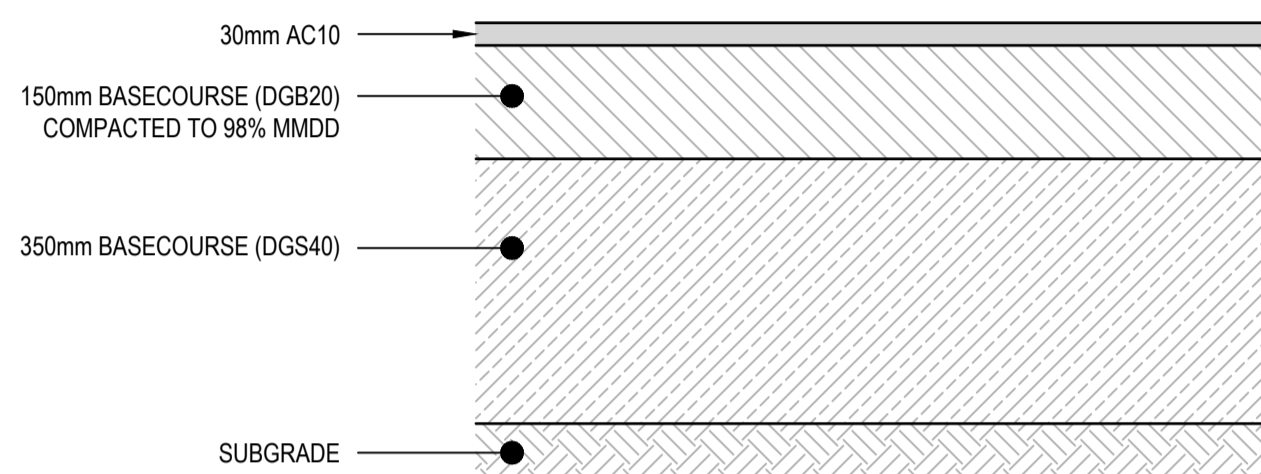


HARDSTAND RIGID PAVEMENT

SCALE 1:10

NOTES:

1. MIN CBR 3.0% (CONTRACTOR TO CONFIRM ONSITE).
2. DESIGN LOADING = 1x10⁶ ESA's
3. PRIME AND TACK COAT BASECOURSE SURFACE PRIOR TO PLACEMENT OF AC WEARING COURSE.

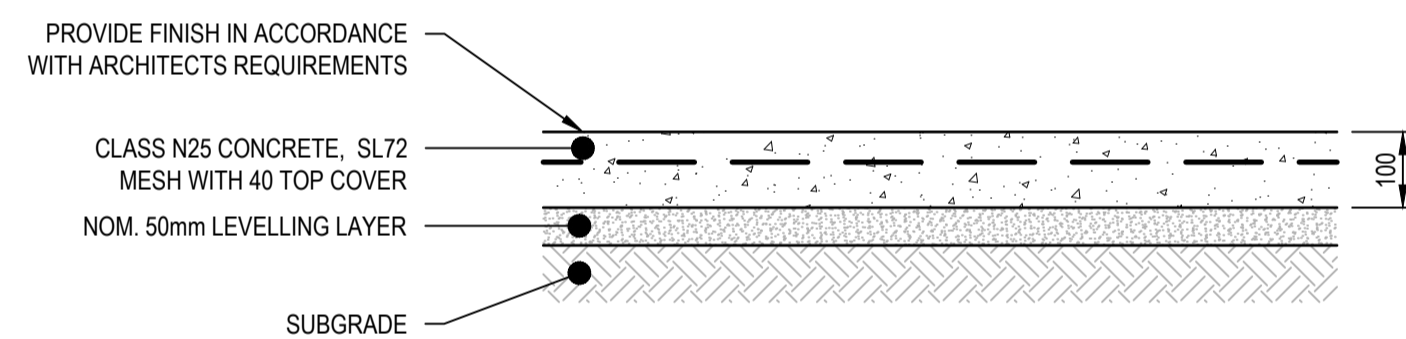


CARPARK FLEXIBLE PAVEMENT

SCALE 1:10

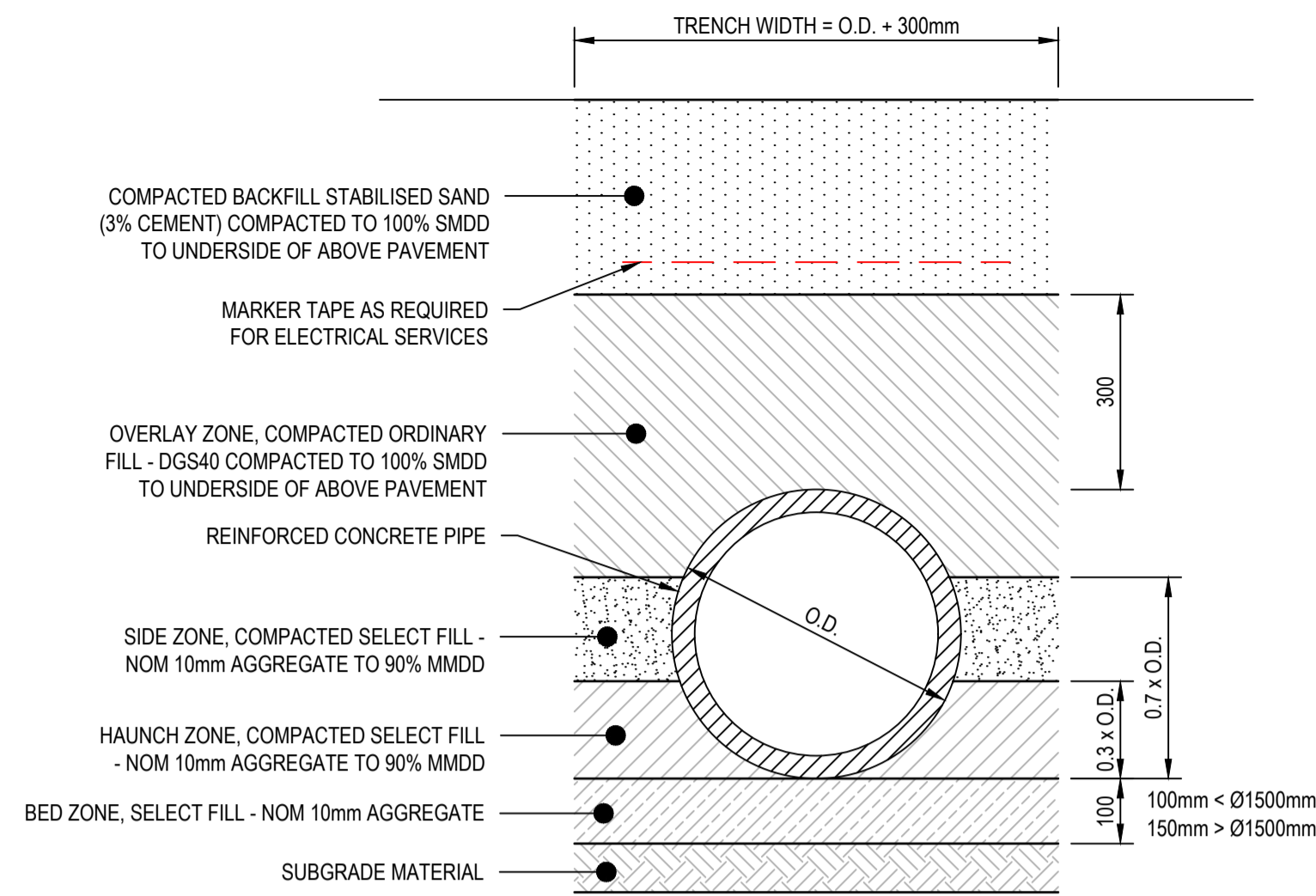
NOTES:

1. MIN CBR 3.0% (CONTRACTOR TO CONFIRM ONSITE).
2. DESIGN LOADING = 5x10⁶ ESA's
3. PRIME AND TACK COAT BASECOURSE SURFACE PRIOR TO PLACEMENT OF AC WEARING COURSE.



CONCRETE FOOTPATH

SCALE 1:10

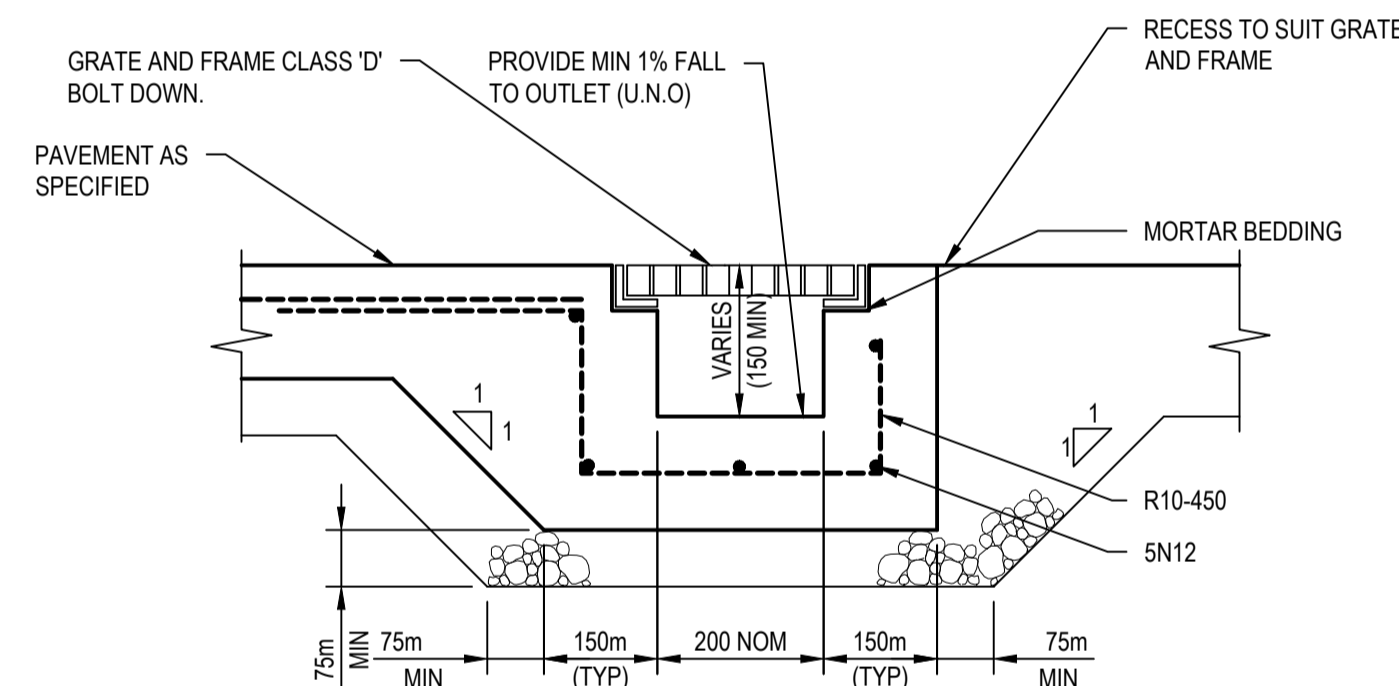


TYPICAL PIPE TRENCH - UNDER ROADS

SCALE 1:10

NOTES:

1. TRENCH WIDTH MAY NEED TO BE INCREASED SUBJECT TO ACHIEVING COMPACTION. ENSURE MINIMUM 300mm CLEARANCE BETWEEN, WHEN USING MULTIPLE PIPES TO ACHIEVE ADEQUATE COMPACTION.
2. MINIMUM PIPE COVER UNDER ROADS TO BE 600mm U.N.O. FOR CLASS '2' PIPES.
3. THE CONTRACTOR SHALL ENSURE THAT SHORING OF TRENCHES IS INSTALLED AS REQUIRED BY STATUTORY REQUIREMENTS.
4. ENSURE BACKFILLING COMPACTION MEETS THE FOLLOWING STANDARDS:
 - 4.1 TRENCHES UNDER PAVED AREAS / BUILDING - 100% SMDD



GRADED TRENCH DRAIN (GTD)

SCALE 1:10

NOTE:
1. COUNCIL'S STANDARDS SHOWN ON PENRITH CITY COUNCIL STANDARD DRAWINGS SD1001, SD1002, SD1003/1, SD1003/2, SD1004, SD2001/1, SD2001/2, SD2001/3, SD2003 AND SD2004 ARE TO BE USED UNLESS NOTED OTHERWISE.

REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				

Client

Scale 0 200 400 600 800 1000mm North

SCALE 1:10 @A1

0 500 1000 1500 2000mm @A1

SCALE 1:20

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Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Scale
AS SHOWN

Date
19/04/2021

Size
A1

Datum
MGA2020

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C14.01

Revision
1

LEGEND	
GC-05 0.0388ha	PRE-DEVELOPMENT CATCHMENTS
	PIT No. CATCHMENT AREA
	FLOW DIRECTION (5%)
	FLOW DIRECTION (1%)



LOT 9
DP1157476

LOT 9 DP1261354
(LINDSAY TRANSPORT SITE)

A-01
17.33ha

EXISTING
WAREHOUSE

ENVIRONMENT CONSERVATION
BOUNDARY.

REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
REV	DATE	DESCRIPTION	DRN	DES.	VERIF.	APPD.
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION	MDH	DL	MKH	MKH

Client

Scale

North

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Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
PRE-DEVELOPMENT STORMWATER
CATCHMENT PLAN

Scale
1:1000

Date
19/04/2021

Size
A1

Datum
MGA2020

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C20.01

Revision
1

LEGEND	
	POST-DEVELOPMENT CATCHMENTS
	SITE AREA DRAINING TO PIT AND PIPE NETWORK 17.13ha
	SITE AREA DRAINING TO LOCKWOOD ROAD AS OVERLAND FLOW 0.20ha



LOT 9
DP1157476

REV	DATE	DESCRIPTION	MDH	DL	MKH	MKH
REV	DATE	DESCRIPTION	DRN	DES.	VERIF.	APPD.
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION	MDH	DL	MKH	MKH

Client

Scale

SCALE 1:1000 @A1

North

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ABN: 71 624 801 690
Phone: 02 9922 6135

Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
POST-DEVELOPMENT STORMWATER
CATCHMENT PLAN

Scale
1:1000

Date
19/04/2021

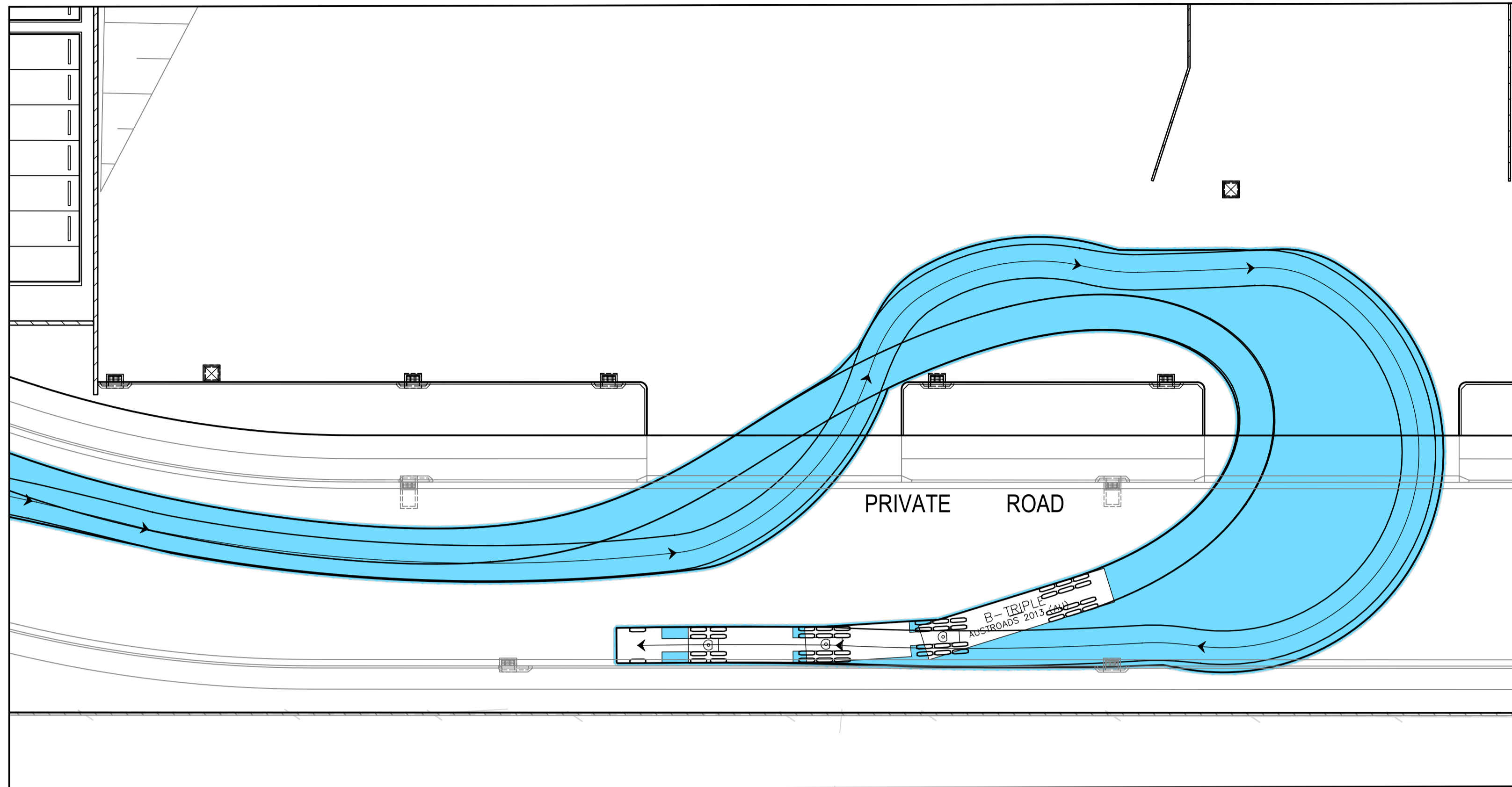
Size
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Datum
MGA2020

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

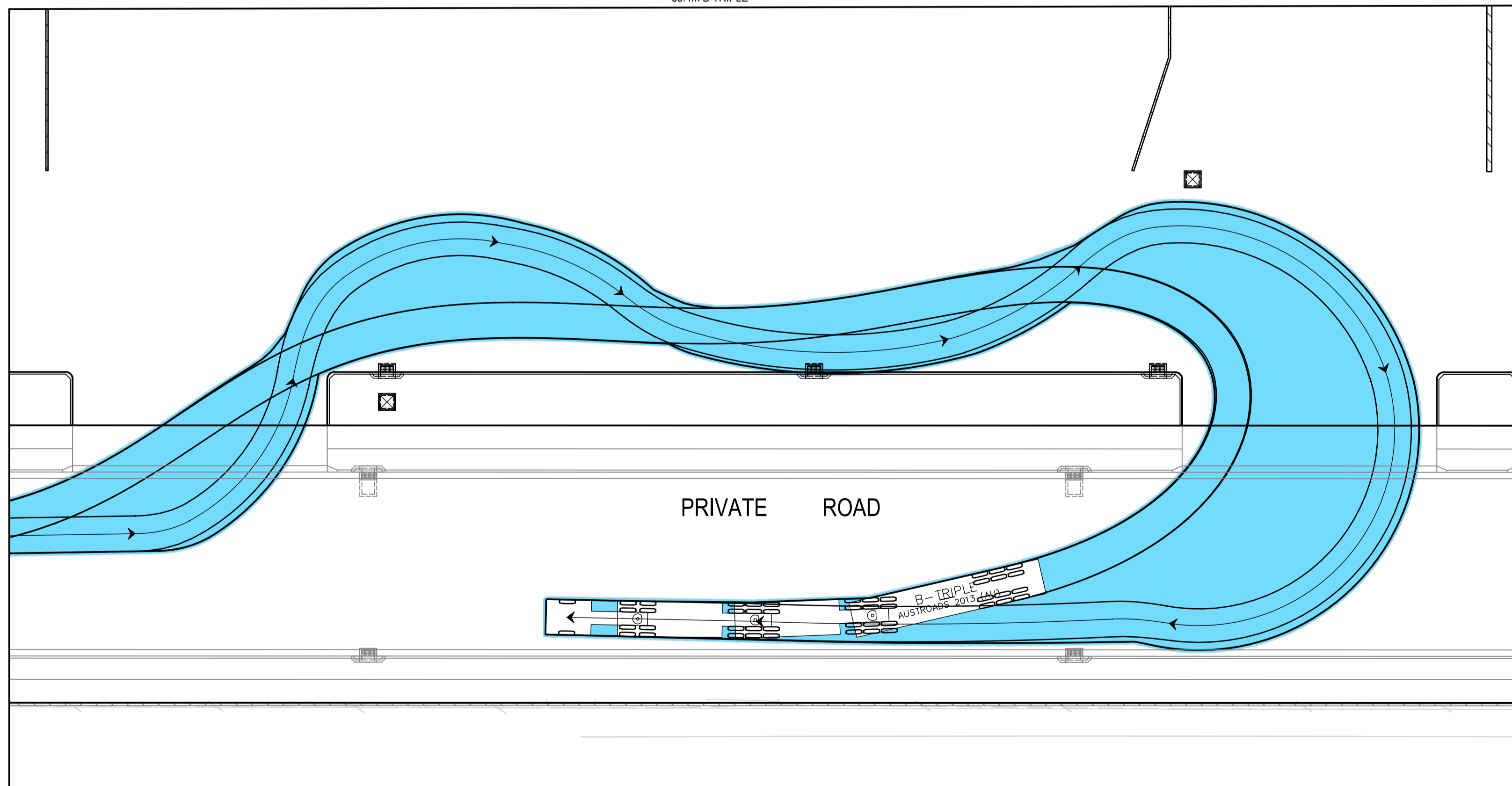
Project Number/Drawing Number
190050-05-DA2-C20.21

Revision
1



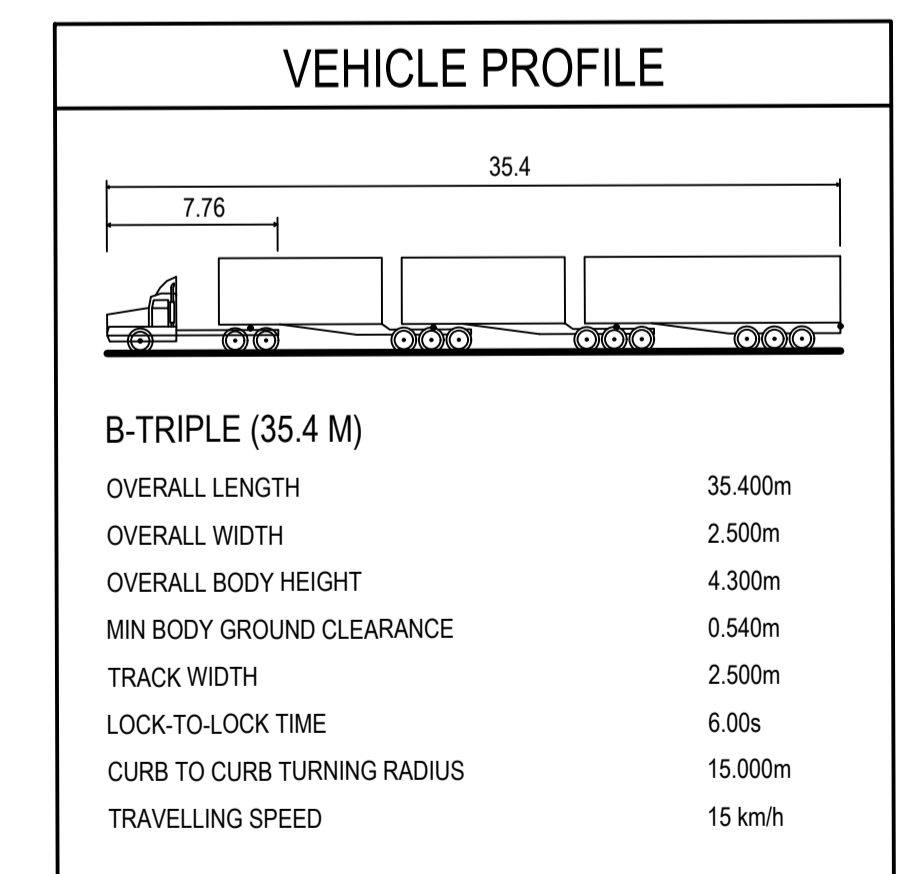
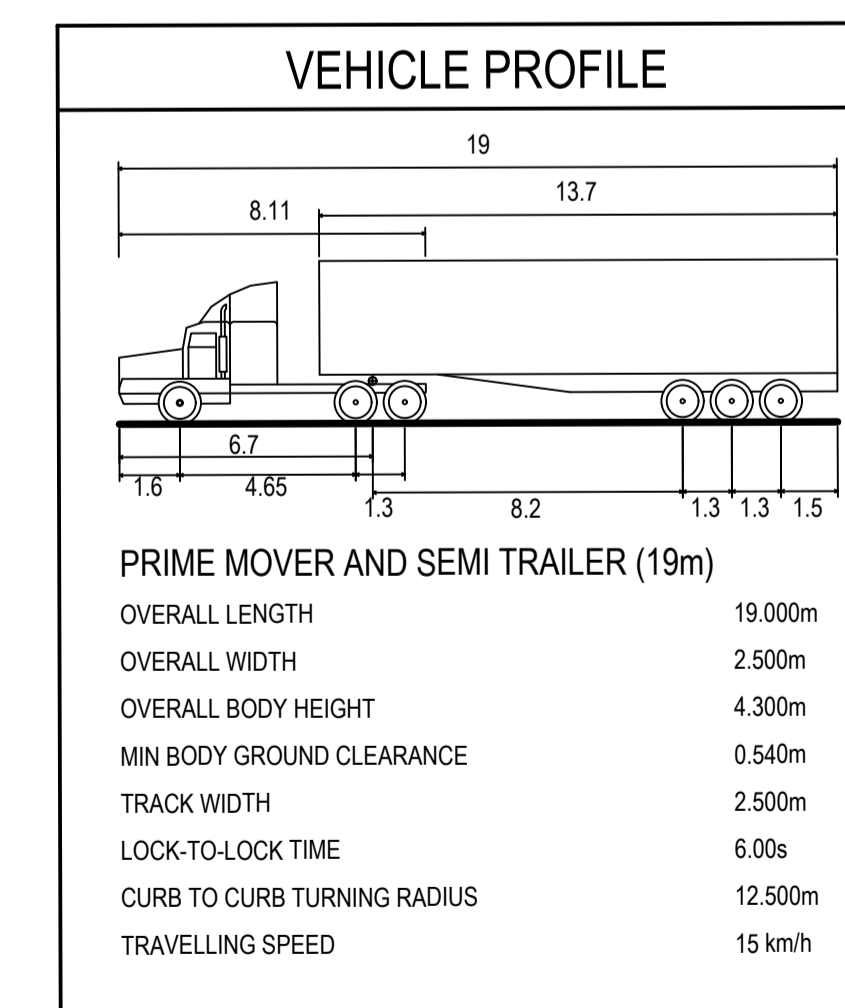
LOT 2 ACCESS TURN PATH

SCALE 1:250
35.4m B-TRIPLE



LOT 3 ACCESS TURN PATH

SCALE 1:250
35.4m B-TRIPLE



REV.	DATE	DESCRIPTION	MDH	DL	MKH	MKH
1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION				
			DRN	DES.	IVERIF	APPD.

Client

Scale

SCALE 1:250 @A1

North

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Phone: 02 9922 6135

Project
ERSKINE PARK INDUSTRIAL ESTATE
LOCKWOOD ROAD, ERSKINE PARK
LOTS 2, 3, 4 AND 5

Title
TURNING PATH PLAN

SHEET 01

Scale
1:250

Date
19/04/2021

Size
A1

Datum
MGA2020

Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
190050-05-DA2-C22.01

Revision
1

SAFETY IN DESIGN REPORT

INTRODUCTION

ENSPIRE HAS BEEN APPOINTED BY FITZPATRICK INVESTMENTS PTY LTD TO PREPARE DESIGN DOCUMENTATION FOR ROADS, STORMWATER PIT AND PIPE INFRASTRUCTURE, SERVICES AND SEDIMENT BASIN FOR ERSKINE PARK INDUSTRIAL ESTATE. THIS SAFETY IN DESIGN REPORT HAS BEEN DEVELOPED IN PARALLEL WITH THE DESIGN TO IDENTIFY POTENTIAL HAZARDS TO WORK HEALTH AND SAFETY AND DEVELOP RISK ASSESSMENT METHODS TO POTENTIALLY REDUCE THE LIKELIHOOD AND SEVERITY OF HAZARDS.

THIS SAFETY IN DESIGN REPORT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORK HEALTH AND SAFETY ACT 2011 AND THE WORK HEALTH AND SAFETY REGULATION PART 6.2 CLAUSE 295. UNDER THE WORK HEALTH AND SAFETY ACT DESIGNERS HAVE THE RESPONSIBILITY TO ENSURE THEIR DESIGN ELIMINATES OR MINIMISES RISKS TO HEALTH AND SAFETY AND GIVE ADEQUATE INFORMATION TO PEOPLE COMMISSIONING THE DESIGN AND UNDERTAKING CONSTRUCTION, OPERATION AND MAINTENANCE ACTIVITIES BASED ON THE DESIGN.

THIS REPORT SPECIFIES POTENTIAL HEALTH AND SAFETY RISKS AND HAZARDS ASSOCIATED WITH THE DESIGN ELEMENTS DOCUMENTED IN THIS DRAWING PACKAGE TO RELEVANT PERSONNEL DURING THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE PROCESS AND ASSESSES THEIR LIKELIHOOD AND CONSEQUENCES. THIS REPORT PROPOSES ACTIONS AND STRATEGIES AGAINST RISKS IDENTIFIED TO ACHIEVE EFFECTIVE MITIGATION OF THE RISKS AND HAZARDS, AND ASSESSES RESIDUAL RISKS BASED ON CONTROL MEASURES BEING IMPLEMENTED. ANY SAFETY ISSUES UNRESOLVED THROUGH DESIGN ARE ALSO IDENTIFIED FOR THEIR APPROPRIATE MANAGEMENT.

THE INFORMATION CONTAINED IN THIS SAFETY IN DESIGN REPORT HAS BEEN PREPARED PRIOR TO THE COMMENCEMENT OF THE WORK ON SITE. IT DOES NOT TAKE ACCOUNT OF ANY MATTERS OR INFORMATION WHICH MAY COME TO LIGHT AFTER THAT TIME. WHEN A DESIGN IS ALTERED, AN ADDITIONAL REVIEW MUST BE CONDUCTED TO ENSURE NEW RISKS HAVE BEEN CAPTURED DUE TO MODIFICATION OF THE DESIGN. ADDITIONALLY, CLIENTS ARE REQUIRED TO INFORM ENSPIRE OF ANY EXISTING RISKS AND HAZARDS IN THE AREA WHERE CONSTRUCTION WILL TAKE PLACE.

THE RISKS IDENTIFIED IN THIS SAFETY IN DESIGN REPORT ARE PROJECT AND DESIGN SPECIFIC RISKS WHICH WOULD NOT BE EASILY RECOGNIZED BY A REASONABLY COMPETENT STAKEHOLDER. IT DOES NOT ADDRESS THE COMMON-PLACE HAZARDS OR HAZARDS WHERE KNOWN SOLUTIONS APPLY, AND WHICH ARE ASSOCIATED WITH CONSTRUCTION, OPERATION AND MAINTENANCE GENERALLY. THESE COMMON-PLACE HAZARDS MUST BE CONTROLLED BY THE APPLICATION OF NORMAL GOOD MANAGEMENT PRACTICES.

THIS DESIGN REPORT ASSUMES THAT DURING CONSTRUCTION, OPERATION AND MAINTENANCE OF THE DEVELOPMENT, THE PRINCIPAL WILL ENGAGE EXPERIENCED AND COMPETENT PERSONNEL AS PART OF THE RESPECTIVE TENDER EVALUATION PROCESS. IT IS THE HEAD CONTRACTOR'S OBLIGATION TO PREPARE AND IMPLEMENT SITE SPECIFIC WORK HEALTH AND SAFETY MANAGEMENT PLANS TO MITIGATE COMMON RISKS ASSOCIATED WITH GENERAL CONSTRUCTION AND OPERATION ACTIVITIES IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY ACT 2011.

PROPOSED WORKS

THE SCOPE OF THE MAIN ACTIVITIES INVOLVED IN THESE WORKS ARE:

- DESIGN OF ROADS, STORMWATER INFRASTRUCTURE AND SERVICES;
- CONSTRUCTION OF ROADS, STORMWATER INFRASTRUCTURE AND SERVICES;
- SITE VISITS AND INSPECTIONS;
- POST CONSTRUCTION OPERATION AND MAINTENANCE.

INFORMATION TRANSFER

SAFETY IN DESIGN RELIES ON EFFECTIVE DOCUMENTATION AND COMMUNICATION BETWEEN EVERYONE INVOLVED IN THE LIFE CYCLE OF THE DESIGN ELEMENTS. IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY REGULATION 2017, THE DESIGNER MUST PROVIDE A COPY OF THIS SAFETY IN DESIGN REPORT TO THE PRINCIPAL CONTRACTOR IN PARALLEL WITH THE COMPLETED DESIGN DOCUMENTATION AND ENSURE THAT THE FOLLOWING ACTIONS ARE UNDERTAKEN:

- ONSITE SAFETY INDUCTIONS, INCLUDING HAZARDS IDENTIFIED IN THIS REPORT, SHOULD BE CONDUCTED FOR ALL STAFF;
- SAFETY MANAGEMENT PLANS SHOULD BE PREPARED FOR THE HAZARDS IDENTIFIED IN THIS REPORT;
- THERE SHOULD BE NO VARIATION ON DESIGN REQUIREMENTS WITHOUT CONSULTATION WITH THE ORIGINAL DESIGNERS;
- ONSITE MANAGEMENT OF CONTRACTORS TO ENSURE THAT HAZARDS THAT ARISE THROUGH STARTING/COMPLETION OF JOBS DOES NOT OCCUR; AND
- THIS DESIGN MAY INTERFACE WITH OTHER PLANS AND ACCOUNT SHOULD BE TAKEN OF ANY INTERFACE ISSUES.

IT IS RECOMMENDED THAT THIS SAFETY IN DESIGN REPORT BE PASSED ONTO ANY PARTICIPANT IN THE PROJECT WHO MAY EXTEND THE DESIGN OR FURTHER DEVELOP THE DESIGN.

SAFE DESIGN PROCESS

A SAFE DESIGN PROCESS SHOULD BE ENGAGED EARLY IN THE DEVELOPMENT OF THE DESIGN TO IDENTIFY ALL CONCEIVABLE RISKS AND HAZARDS THAT MAY AFFECT THE FUNDAMENTALS OF THE DESIGN AND AVOID UNNECESSARY REWORK. IT SHOULD BE IMPLEMENTED THROUGH A STRUCTURED APPROACH ACROSS EACH PHASE OF THE DESIGN PROCESS.

DELIVERY OF SAFE DESIGN FOR EACH DESIGN PHASE OF THE PROJECT HAS BEEN CARRIED OUT FOLLOWING THE STEPS BELOW:

- STEP 1: PRELIMINARY RISK IDENTIFICATION
THE DESIGNER/DESIGN TEAM TO CONDUCT A PRELIMINARY ASSESSMENT AND IDENTIFY ANY POTENTIAL RISKS RELEVANT TO THE SCOPE OF DESIGN WORKS. WITH PROJECTS INVOLVING MULTIPLE DISCIPLINES, THE DESIGNER/DESIGN TEAM TO ATTEND SAFETY IN DESIGN WORKSHOP AND IDENTIFY RISKS IN CONSULTATION WITH OTHER KEY PROJECT STAKEHOLDERS.
- STEP 2: RISK ASSESSMENT AND MITIGATION
THE DESIGNER/DESIGN TEAM TO ASSESS THE LIKELIHOOD AND SEVERITY OF EACH HAZARD AND DEVELOP CONTROLS AND MEASURES TO ELIMINATE OR MINIMISE THE CONSEQUENCES OF THE HAZARD.
- STEP 3: VERIFICATION
ENSPIRE TO PERFORM INTERNAL VERIFICATION ON THE SAFE DESIGN RISK REGISTER PRIOR TO ISSUING TO THE CONTRACTOR AND CLIENT.
- STEP 4: REVIEW DESIGN
THE DESIGNER/DESIGN TEAM TO IDENTIFY ANY ALTERATIONS IN DESIGN AND REVIEW AND UPDATE RISK REGISTER ACCORDINGLY.

PROJECT REPRESENTATIVES

ORGANISATION	PROJECT ROLE	MAIN CONTACT	CONTACT DETAILS
FITZPATRICK INVESTMENTS PTY LTD	DEVELOPMENT PROPONENT	PHILIP GRECH	TEL: (02) 8117 5284 EMAIL: phil@g@fitzpatrickproperty.com.au ADD: 22-24 JUNCTION STREET FOREST LODGE NSW 2037
ENSPIRE SOLUTIONS	CIVIL DESIGN CONSULTANT	MICHAEL HODGES	TEL: 9922 6135 EMAIL: michael.hodges@enspiresolutions.com.au ADD: 205/275 ALFRED STREET N NORTH SYDNEY NSW 2060

QUALITATIVE MEASURES OF LIKELIHOOD OR FREQUENCY

LEVEL	MEASURE	CRITERIA
1	RARE	WOULD ONLY OCCUR IN HIGHLY EXCEPTIONAL CIRCUMSTANCES THAT ARE UNLIKELY TO EXIST IN ANY PHASE OF THE DEVELOPMENT'S LIFECYCLE PERIOD. EXTREMELY REMOTE CHANGE OF OCCURRENCE IN DEVELOPMENT'S LIFECYCLE PERIOD. 'ONCE IN A LIFETIME' EVENT.
2	UNLIKELY	NOT LIKELY TO OCCUR IN THE DEVELOPMENT'S LIFECYCLE PERIOD. A SMALL, BUT REMOTE CHANCE OF OCCURRENCE DUE TO CIRCUMSTANCES / SITUATIONS THAT COULD ARISE.
3	POSSIBLE	LIKELY TO OCCUR AT LEAST ONCE BUT NOT EXPECTED TO OCCUR MUCH MORE THAT THIS IN THE DEVELOPMENT'S LIFECYCLE PERIOD.
4	LIKELY	LIKELY TO OCCUR MORE THAN ONCE IN THE DEVELOPMENT'S LIFECYCLE PERIOD BUT NOT AN 'EVERYDAY' OCCURRENCE. PRECONDITIONS WILL ARISE AT TIMES THROUGHOUT THE PERIOD.
5	ALMOST CERTAIN	WILL OCCUR. CIRCUMSTANCES OR SITUATIONS ARE LIKELY TO ARISE OFTEN THROUGHOUT THE DEVELOPMENT'S LIFECYCLE PERIOD WHICH PROVIDES THE OPPORTUNITY FOR CRYSTALLISATION OF RISK. EXPECT FREQUENT, REGULAR OCCURRENCES.

QUALITATIVE MEASURES OF IMPACT - CONSEQUENCE SEVERITY


LEVEL	MEASURE	CRITERIA
1	INSIGNIFICANT	NO INJURIES; NO ENVIRONMENTAL IMPACT.
2	MINOR	FIRST AID; ENVIRONMENTAL RELEASE IMMEDIATELY CONTAINED.
3	MODERATE	MEDICAL TREATMENT; ENVIRONMENTAL RELEASE NOT IMMEDIATELY CONTAINED WITH NO DETRIMENTAL EFFECTS.
4	MAJOR	LOST TIME AND/OR LONG-TERM INJURY/ILLNESS; ENVIRONMENTAL RELEASE NOT IMMEDIATELY CONTAINED WITH TOXIC EFFECTS.
5	CATASTROPHIC	FATALITY; RELEASE TO THE ENVIRONMENT WITH LONG TERM OR PERMANENT TOXIC EFFECTS.

MATRIX FOR DETERMINATION OF RISK LEVEL

CONSEQUENCE	LIKELIHOOD				
	RARE (1)	UNLIKELY (2)	POSSIBLE (3)	LIKELY (4)	ALMOST CERTAIN (5)
CATASTROPHIC (5)	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	VERY HIGH
MAJOR (4)	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH
MODERATE (3)	MODERATE	MODERATE	HIGH	HIGH	VERY HIGH
MINOR (2)	LOW	LOW	MODERATE	HIGH	VERY HIGH
INSIGNIFICANT (1)	LOW	LOW	LOW	MODERATE	HIGH

SAFE DESIGN RISK REGISTER

ITEM	ACTIVITY	HAZARD	STAGE	INITIAL RISK			DESIGN ACTION	RESIDUAL RISK			PERSON RESPONSIBLE FOR CONTROLS	STATUS
				LIKELIHOOD	CONSEQUENCE	RISK LEVEL		LIKELIHOOD	CONSEQUENCE	RISK LEVEL		
1	SEDIMENT BASIN OPERATION	FALLING INTO BASIN WHICH HOLDS WATER	CONSTRUCTION	2	5	VERY HIGH	- PROVIDE MAN-PROOF FENCE TO PERIMETER. - MAINTAIN WATER LEVELS IN BASIN. - MINIMISE PERMANENT WATER DEPTH.	2	3	MODERATE	CONTRACTOR	ACTION ASSIGNED
2	TREE REMOVAL	- FALL FROM HEIGHT - CRUSH INJURY FROM FALLING TREE	CONSTRUCTION	2	5	VERY HIGH	- CERTIFIED ARBORIST USING BEST PRACTICES RESPONSIBLE FOR TREE REMOVAL.	2	3	MODERATE	CONTRACTOR	ACTION ASSIGNED
3	PIPE TRENCHING	FALL INTO DEEP EXCAVATIONS	CONSTRUCTION	1	4	HIGH	- PROVIDE SAFETY BARRIERS - PROVIDE BENCHING	1	2	LOW	CONTRACTOR	ACTION ASSIGNED
4	RETAINING WALL CONSTRUCTION	CRUSHING INJURY	CONSTRUCTION	2	5	VERY HIGH	- APPROPRIATE RETAINING WALL SYSTEM SPECIFIED TO MINIMISE HANDLING. - RETAINED HEIGHT ASSUMES NO LATERAL RESTRAINT AT LOW SIDE OF WALL PRIOR TO FORMATION OF FINISHED SURFACE LEVEL.	1	3	MODERATE	CONTRACTOR	ACTION ASSIGNED
5	WORKING ADJACENT TO EXISTING LOCKWOOD ROAD AND COMPASS DRIVE	COLLISION WITH ONGOING TRAFFIC	CONSTRUCTION	3	5	VERY HIGH	- APPLY WORK BARRICADES/TRAFFIC MANAGEMENT CONTROLS AT LOCKWOOD ROAD INTERSECTION WITH DISTRIBUTION DRIVE. - WHEN AVAILABLE, WORK DURING LOW TRAFFIC TIMES. - CONTRACTOR TO OBTAIN AND CARRY OUT APPROVED TRAFFIC MANAGEMENT CONTROLS AS NOTED IN ENSPIRE'S GENERAL NOTES AND LEGENDS 190050-05-DA-C01.21. - INSTALL TRAFFIC BARRIER TO COMPASS DRIVE (WEST SIDE).	1	4	HIGH	CONTRACTOR	ACTION ASSIGNED

Client	Scale	North																
<table border="1"> <tr> <td>1</td> <td>22/10/2021</td> <td>ISSUED FOR DEVELOPMENT APPLICATION</td> <td>MDH</td> <td>DL</td> <td>MKH</td> <td>MKH</td> </tr> <tr> <td>REV.</td> <td>DATE</td> <td>DESCRIPTION</td> <td>DRN.</td> <td>DES.</td> <td>VERIF.</td> <td>APPD.</td> </tr> </table>	1	22/10/2021	ISSUED FOR DEVELOPMENT APPLICATION	MDH	DL	MKH	MKH	REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.	 <p>Enspire Solutions Pty Ltd 205/275 Alfred Street N, North Sydney NSW 2060 ABN: 71 624 801 690 Phone: 02 9922 6135</p>	<p>Project ERSKINE PARK INDUSTRIAL ESTATE LOCKWOOD ROAD, ERSKINE PARK LOTS 2, 3, 4 AND 5</p> <p>Title SAFETY IN DESIGN</p>	<p>Scale N.T.S</p> <p>Date 19/04/2021</p> <p>Size A1</p> <p>Datum MGA2020</p>	<p>Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION</p> <p>Project Number/Drawing Number 190050-05-DA2-C23.01</p> <p>Revision 1</p>
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REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.												