Preferred Design Alternative

REPLACING EXISTING WATER PIPE CROSSING THE BRIDGE WITH 400mm PIPE

PROPOSED 400 Ø PIPE

25150 25200 25250 25300 25350 25400 25450 25500

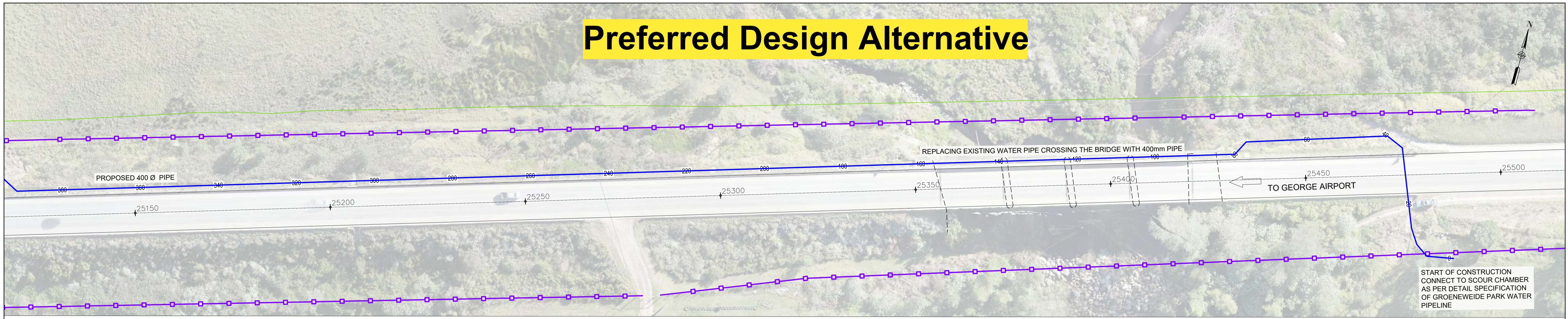TO GEORGE AIRPORT

START OF CONSTRUCTION
CONNECT TO SCOUR CHAMBER
AS PER DETAIL SPECIFICATION
OF GROENEWEIDE PARK WATER
PIPELINE

REDUCES FROM 400 Ø TO 315 Ø

24750 24800 24850 24900 24950 25000 25050 25100

PROPOSED 315 Ø PIPE

PROPOSED 315 Ø PIPE

24450 24500 24550 24600 24650 24700 24750

LEGEND
— EDGE OF ROAD
— FENCE
— CADASTRALS
— 5 m BUILDING LINE FROM FENCE
— PROPOSED NEW BULK WATER PIPELINE ROUTE

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

CONCEPT DESIGN

REVISIONS					DESIGNED	A TOOTLA						
					CHECKED	T CRONJE						
					DRAWN	A TOOTLA						
					CHECKED	T CRONJE						
	C00	16-05-2024	ISSUED FOR CONCEPT DESIGN PURPOSES	TC								
	NO.	DATE	DESCRIPTION	INITIAL								

SIGNED

SMEC South Africa

DATE

SMEC
South Africa
Member of the Surbana Jurong Group
PO Box 10633   13 Progress St
George 6530   George 6529
e-mail: george@smec.com   Tel (044) 873-5029
website: www.smec.com   Fax (044) 873-5086

GEORGE
THE CITY FOR ALL REASONS
PO Box 19   c/o York & Market St
George 6530   George 6529
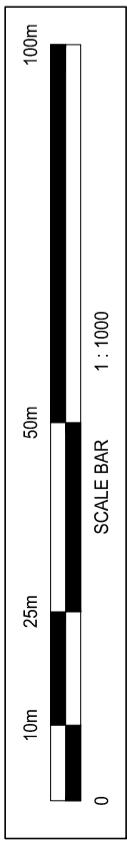e-mail: civilinfo@george.org.za   Tel (044) 801-9496
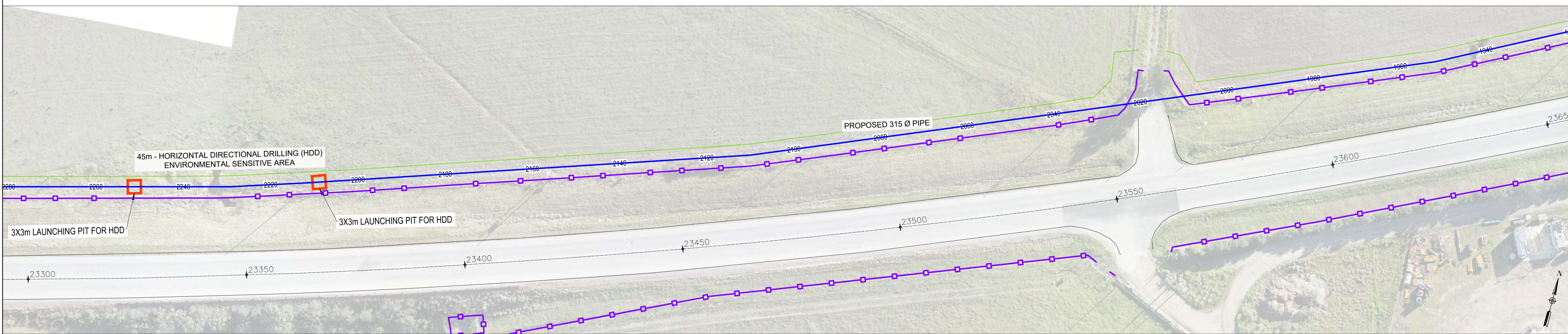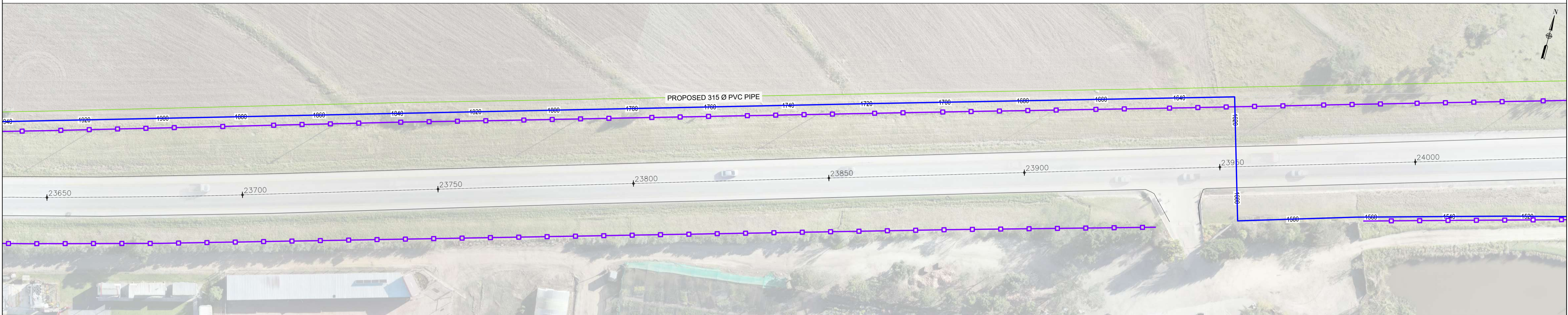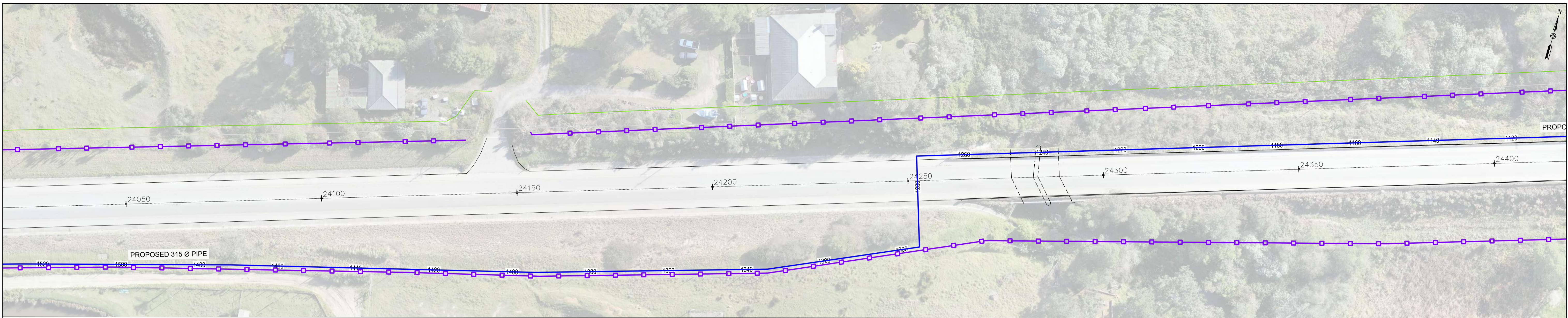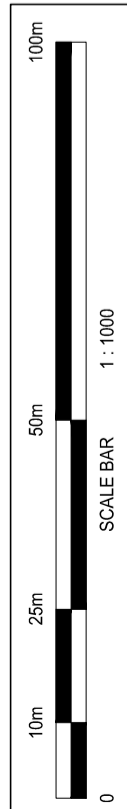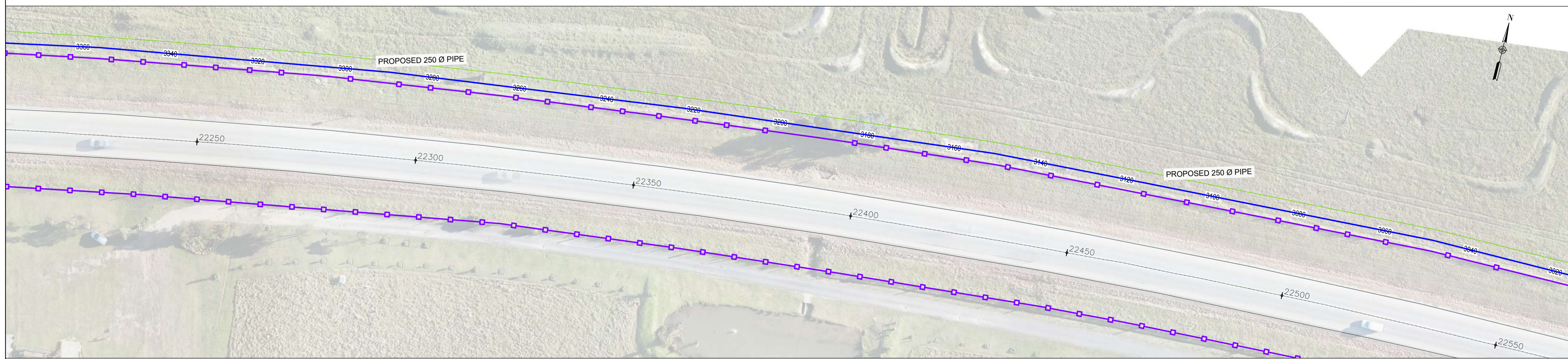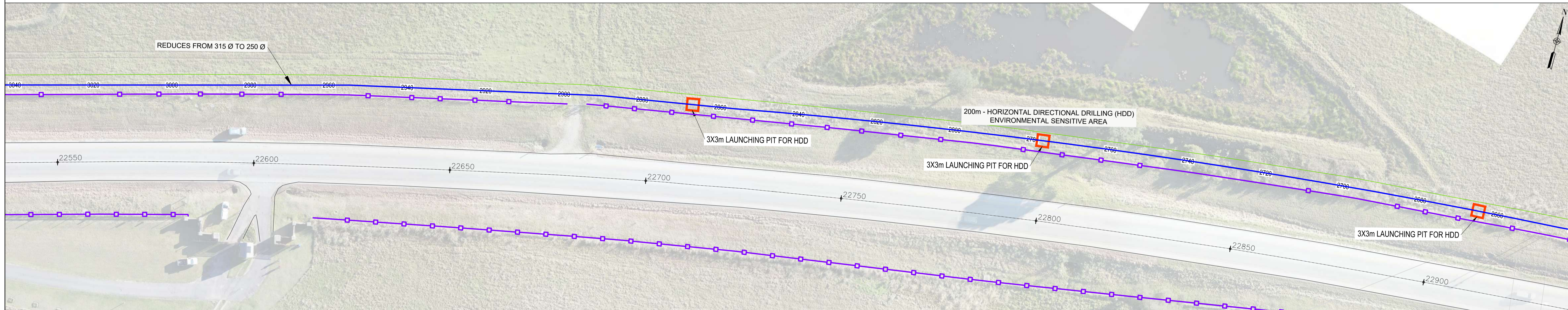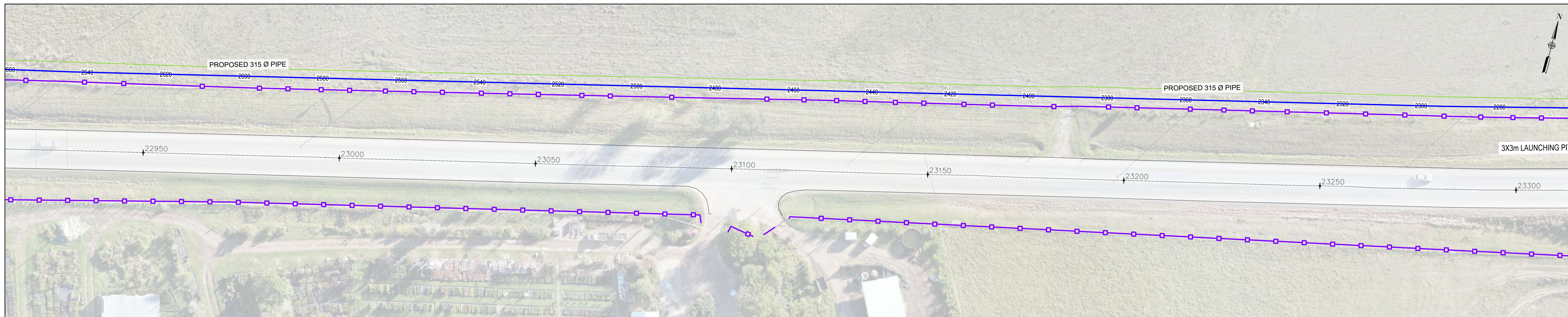website: www.george.org.za   Fax (044) 529-9872

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George Municipality

DATE

**UPGRADE OF AIRPORT
BULK WATER PIPELINE**

**PREFERRED PIPELINE ROUTE
LAYOUT SHEET 01 OF 04**

SIZE	SCALE
A1	1:500

PROJECT DRAWING NUMBER
C1915 - 613 - 001

REV	SHEET No.
C00	01 OF 04

SCALE BAR 1:1000 1:500

PROPO

24050   24100   24150   24200   24250   24300   24350   24400

PROPOSED 315 Ø PIPE

PROPOSED 315 Ø PVC PIPE

23650   23700   23750   23800   23850   23900   23950   24000

PROPOSED 315 Ø PIPE

45m - HORIZONTAL DIRECTIONAL DRILLING (HDD)
ENVIRONMENTAL SENSITIVE AREA

3X3m LAUNCHING PIT FOR HDD

3X3m LAUNCHING PIT FOR HDD

23300   23350   23400   23450   23500   23550   23600   23650

NOTE:
1.   ALL DIMENSIONS TO BE CHECKED
     ON SITE BEFORE ANY WORK IS PUT
     IN HAND. REFER ANY
     DISCREPANCIES TO THE ENGINEER.

CONCEPT DESIGN

REVISIONS						
				DESIGNED	A TOOTLA	
				CHECKED	T CRONJE	
C00	16-05-2024	ISSUED FOR CONCEPT DESIGN PURPOSES	TC	DRAWN	A TOOTLA	
NO.	DATE	DESCRIPTION	INITIAL	CHECKED	T CRONJE	

SIGNED
SMEC South Africa
DATE

SIGNED
George Municipality
DATE

UPGRADE OF AIRPORT
BULK WATER PIPELINE

PREFERRED PIPELINE ROUTE
LAYOUT SHEET 02 OF 04

SIZE	SCALE
A1	1:500

PROJECT DRAWING NUMBER
C1915 - 613 - 002

REV	SHEET No.
C00	02 OF 04

SCALE BAR   1 : 500

PROPOSED 315 Ø PIPE

PROPOSED 315 Ø PIPE

3X3m LAUNCHING PIT

REDUCES FROM 315 Ø TO 250 Ø

200m - HORIZONTAL DIRECTIONAL DRILLING (HDD) ENVIRONMENTAL SENSITIVE AREA

3X3m LAUNCHING PIT FOR HDD

3X3m LAUNCHING PIT FOR HDD

3X3m LAUNCHING PIT FOR HDD

PROPOSED 250 Ø PIPE

PROPOSED 250 Ø PIPE

LEGEND

- EDGE OF ROAD
- FENCE
- CADASTRALS
- 5 m BUILDING LINE FROM FENCE
- PROPOSED NEW BULK WATER PIPELINE ROUTE

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

CONCEPT DESIGN

N

PROPOSED 250 Ø PIPE

PROPOSED 250 Ø PIPE

TO BLANCO

TO HEROLDS BAY

END OF CONSTRUCTION
CONNECTING TO EXISTING
WATER NETWORK

LEGEND
EDGE OF ROAD
FENCE
CADASTRALS
5 m BUILDING LINE FROM FENCE
PROPOSED NEW BULK WATER PIPELINE ROUTE

NOTE:
1. ALL DIMENSIONS TO BE CHECKED
    ON SITE BEFORE ANY WORK IS PUT
    IN HAND. REFER ANY
    DISCREPANCIES TO THE ENGINEER.

CONCEPT DESIGN

REVISIONS						
				DESIGNED	A TOOTLA	
				CHECKED	T CRONJE	
				DRAWN	A TOOTLA	
C00	16-05-2024	ISSUED FOR CONCEPT DESIGN PURPOSES	TC	CHECKED	T CRONJE	
NO.	DATE	DESCRIPTION	INITIAL			

SIGNED
SMEC South Africa
DATE

SMEC
South Africa
Member of the Surbana Jurong Group

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George 6530
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e-mail: civilinfo@george.org.za
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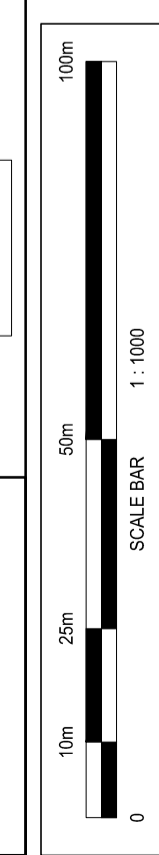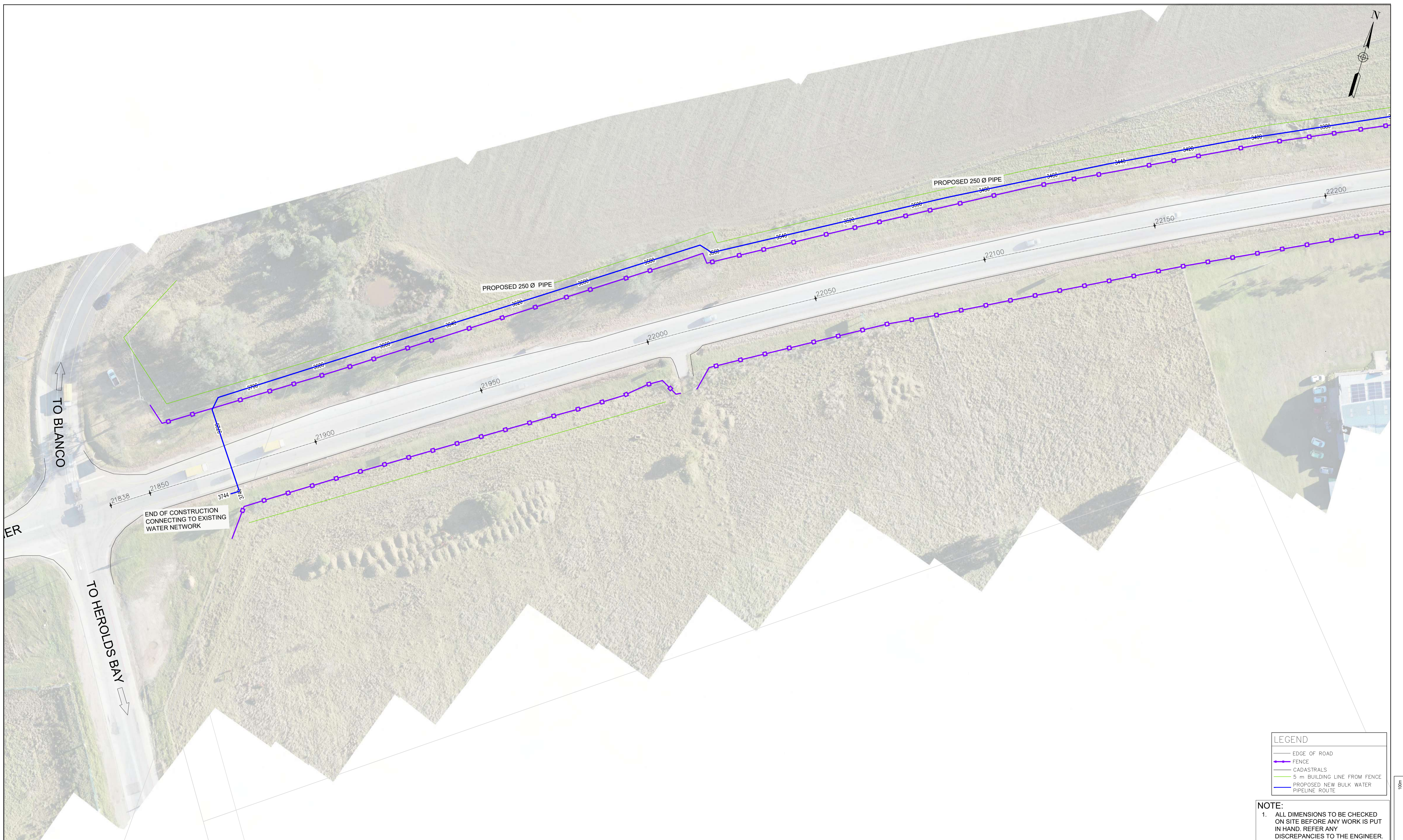c/o York & Market St
George 6529
Tel (044) 801-9496
Fax (044) 529-9872

SIGNED
George Municipality
DATE

**UPGRADE OF AIRPORT
BULK WATER PIPELINE**

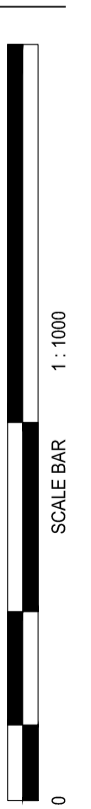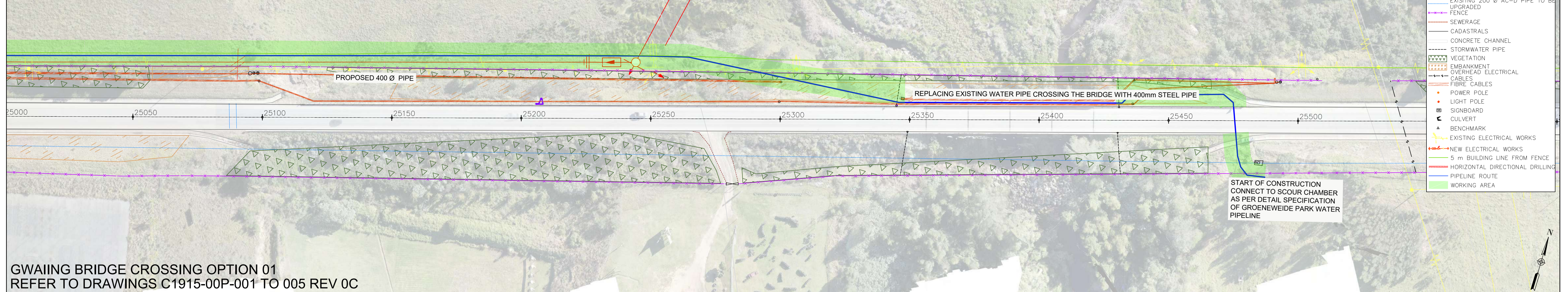**PREFERRED PIPELINE ROUTE
LAYOUT SHEET 04 OF 04**

SIZE	SCALE
A1	1:500

PROJECT DRAWING NUMBER
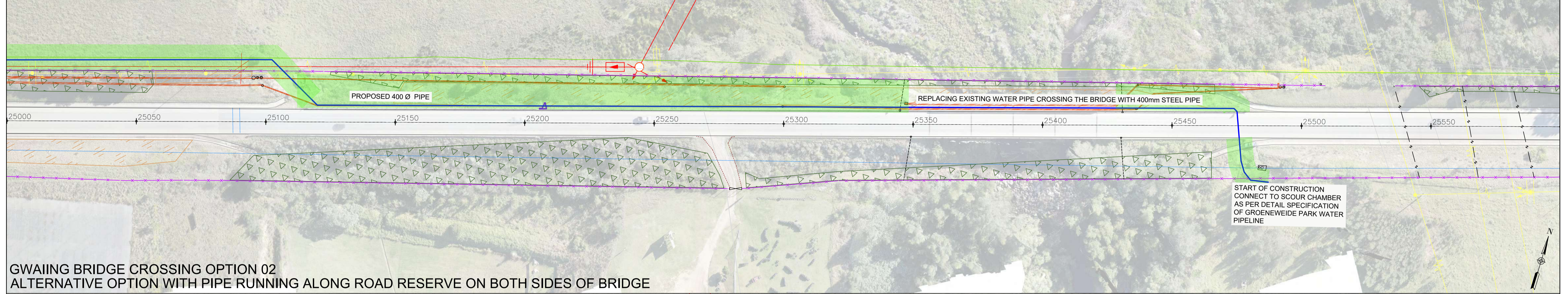C1915 - 613 - 004

REV	SHEET No.
C00	04 OF 04

SCALE BAR 1:1000

Preferred & Non-Preferred Design Alternatives

Non-Preferred Design Alternative - Gwaiing Bridge Crossing (Option 01)

PROPOSED 400 Ø PIPE

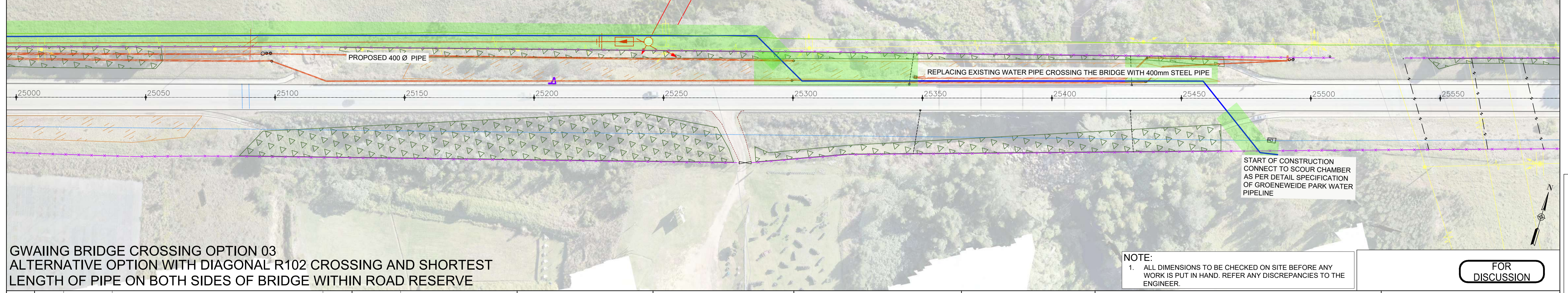REPLACING EXISTING WATER PIPE CROSSING THE BRIDGE WITH 400mm STEEL PIPE

START OF CONSTRUCTION CONNECT TO SCOUR CHAMBER AS PER DETAIL SPECIFICATION OF GROENEWEIDE PARK WATER PIPELINE

GWAIING BRIDGE CROSSING OPTION 01
REFER TO DRAWINGS C1915-00P-001 TO 005 REV 0C

25000 25050 25100 25150 25200 25250 25300 25350 25400 25450 25500

Preferred Design Alternative - Gwaiing Bridge Crossing (Option 02)

PROPOSED 400 Ø PIPE

REPLACING EXISTING WATER PIPE CROSSING THE BRIDGE WITH 400mm STEEL PIPE

START OF CONSTRUCTION CONNECT TO SCOUR CHAMBER AS PER DETAIL SPECIFICATION OF GROENEWEIDE PARK WATER PIPELINE

GWAIING BRIDGE CROSSING OPTION 02
ALTERNATIVE OPTION WITH PIPE RUNNING ALONG ROAD RESERVE ON BOTH SIDES OF BRIDGE

25000 25050 25100 25150 25200 25250 25300 25350 25400 25450 25500 25550

Non-Preferred Design Alternative - Gwaiing Bridge Crossing (Option 03)

PROPOSED 400 Ø PIPE

REPLACING EXISTING WATER PIPE CROSSING THE BRIDGE WITH 400mm STEEL PIPE

START OF CONSTRUCTION CONNECT TO SCOUR CHAMBER AS PER DETAIL SPECIFICATION OF GROENEWEIDE PARK WATER PIPELINE

GWAIING BRIDGE CROSSING OPTION 03
ALTERNATIVE OPTION WITH DIAGONAL R102 CROSSING AND SHORTEST
LENGTH OF PIPE ON BOTH SIDES OF BRIDGE WITHIN ROAD RESERVE

25000 25050 25100 25150 25200 25250 25300 25350 25400 25450 25500 25550

LEGEND
- EDGE OF ROAD
- EXISTING 200 Ø AC-D PIPE TO BE UPGRADED
- FENCE
- SEWERAGE
- CADASTRALS
- CONCRETE CHANNEL
- STORMWATER PIPE
- VEGETATION
- EMBANKMENT
- OVERHEAD ELECTRICAL CABLES
- FIBRE CABLES
- POWER POLE
- LIGHT POLE
- SIGNBOARD
- CULVERT
- BENCHMARK
- EXISTING ELECTRICAL WORKS
- NEW ELECTRICAL WORKS
- 5 m BUILDING LINE FROM FENCE
- HORIZONTAL DIRECTIONAL DRILLING
- PIPELINE ROUTE
- WORKING AREA

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

FOR DISCUSSION

REVISIONS	NO.	DATE	DESCRIPTION	INITIAL
	C01	10-04-2024	FOR DISCUSSION PURPOSES	TC
	C00	09-04-2024	FOR DISCUSSION PURPOSES	TC

DESIGNED A TOOTLA
CHECKED T CRONJE
DRAWN A TOOTLA
CHECKED T CRONJE

SIGNED
SMEC South Africa
DATE

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Member of the Surbana Jurong Group
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website: www.smec.com
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PO Box 19 George 6530
e-mail: civilinfo@george.org.za
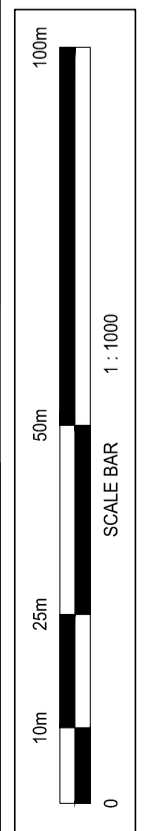c/o York & Market Street George 6529
Tel (044) 801 9496
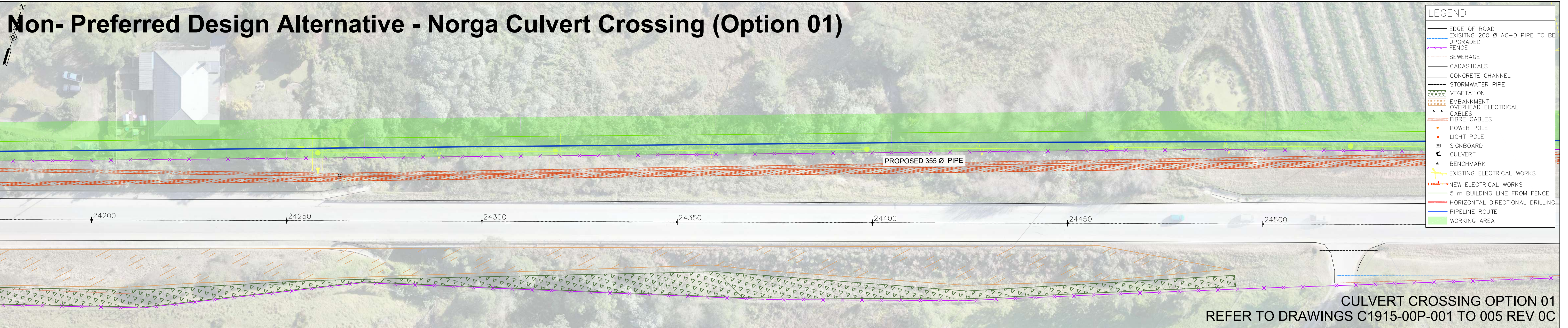Fax (086) 529 9872

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George Municipality
DATE

UPGRADE OF AIRPORT BULK PIPELINE

PROPOSED PIPELINE ROUTE OPTIONS AND ASSOCIATED WORKING AREA GWAIING RIVER BRIDGE CROSSING

SIZE A1
SCALE 1:750

PROJECT DRAWING NUMBER
C1951 - 611 - 001
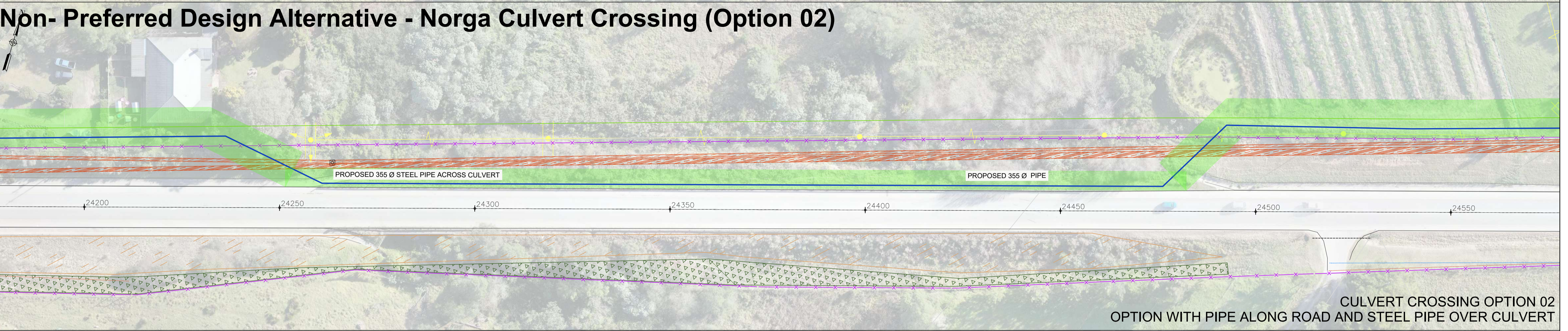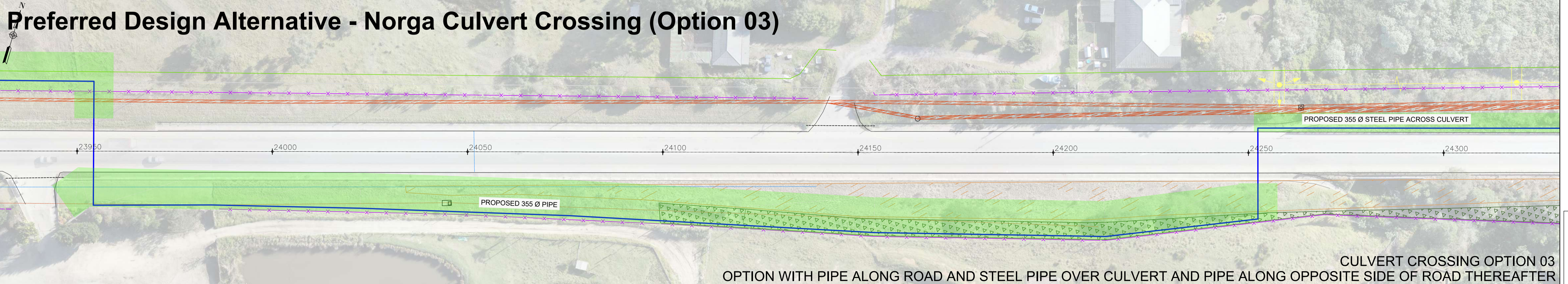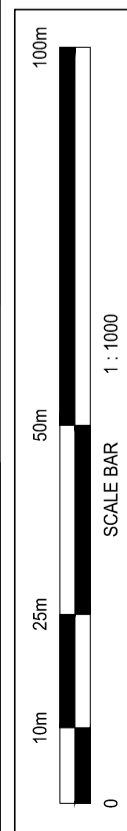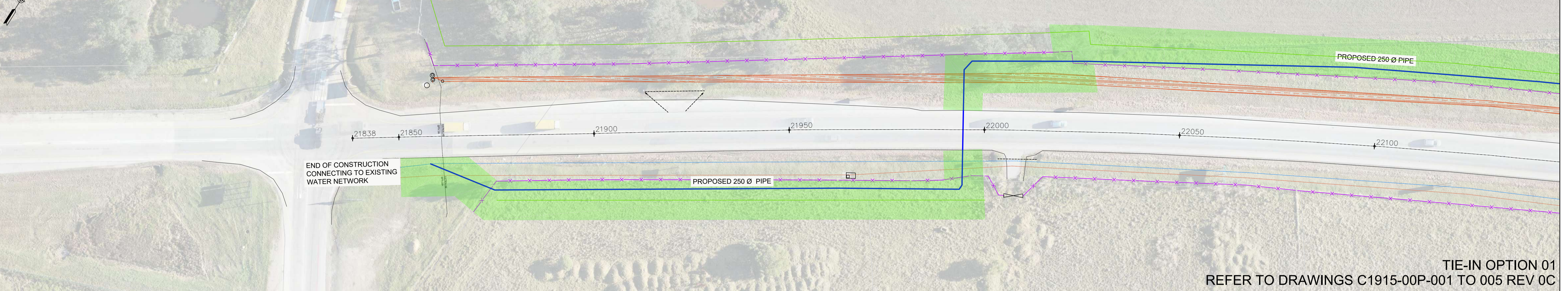
REV C01
SHEET No. 01 OF 03

SCALE BAR 1:1000

Non- Preferred Design Alternative - Norga Culvert Crossing (Option 01)

PROPOSED 355 Ø PIPE

24200 24250 24300 24350 24400 24450 24500

CULVERT CROSSING OPTION 01
REFER TO DRAWINGS C1915-00P-001 TO 005 REV 0C

Non- Preferred Design Alternative - Norga Culvert Crossing (Option 02)

PROPOSED 355 Ø STEEL PIPE ACROSS CULVERT

PROPOSED 355 Ø PIPE

24200 24250 24300 24350 24400 24450 24500 24550

CULVERT CROSSING OPTION 02
OPTION WITH PIPE ALONG ROAD AND STEEL PIPE OVER CULVERT

Preferred Design Alternative - Norga Culvert Crossing (Option 03)

PROPOSED 355 Ø STEEL PIPE ACROSS CULVERT

PROPOSED 355 Ø PIPE

23950 24000 24050 24100 24150 24200 24250 24300

CULVERT CROSSING OPTION 03
OPTION WITH PIPE ALONG ROAD AND STEEL PIPE OVER CULVERT AND PIPE ALONG OPPOSITE SIDE OF ROAD THEREAFTER

LEGEND

- EDGE OF ROAD
- EXISTING 200 Ø AC-D PIPE TO BE UPGRADED
- FENCE
- SEWERAGE
- CADASTRALS
- CONCRETE CHANNEL
- STORMWATER PIPE
- VEGETATION
- EMBANKMENT
- OVERHEAD ELECTRICAL
- CABLES
- FIBRE CABLES
- POWER POLE
- LIGHT POLE
- SIGNBOARD
- CULVERT
- BENCHMARK
- EXISTING ELECTRICAL WORKS
- NEW ELECTRICAL WORKS
- 5 m BUILDING LINE FROM FENCE
- HORIZONTAL DIRECTIONAL DRILLING
- PIPELINE ROUTE
- WORKING AREA

NOTE:
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FOR DISCUSSION

Non-Preferred Design Alternative - Tie-in to Existing (Option 01)

PROPOSED 250 Ø PIPE

PROPOSED 250 Ø PIPE

END OF CONSTRUCTION CONNECTING TO EXISTING WATER NETWORK

21838 21850 21900 21950 22000 22050 22100

TIE-IN OPTION 01
REFER TO DRAWINGS C1915-00P-001 TO 005 REV 0C

Non-Preferred Design Alternative - Tie-in to Existing (Option 02)

PROPOSED 250 Ø PIPE

END OF CONSTRUCTION CONNECTING TO EXISTING WATER NETWORK

21838 21850 21900 21950 22000 22050 22100

TIE-IN OPTION 02
ALTERNATIVE OPTION WITH TIE-IN TO EXISTING JUST AFTER R102 CROSSING

Preferred Design Alternative - Tie-in to Existing (Option 03)

PROPOSED 250 Ø PIPE

END OF CONSTRUCTION CONNECTING TO EXISTING WATER NETWORK

21838 21850 21900 21950 22000 22050 22100

TIE-IN OPTION 03
ALTERNATIVE OPTION WITH TIE-IN TO EXISTING AT R102 & R404 INTERSECTION

LEGEND
- EDGE OF ROAD
- EXISTING 200 Ø AC-D PIPE TO BE UPGRADED
- FENCE
- SEWERAGE
- CADASTRALS
- CONCRETE CHANNEL
- STORMWATER PIPE
- VEGETATION
- EMBANKMENT
- OVERHEAD ELECTRICAL CABLES
- FIBRE CABLES
- POWER POLE
- LIGHT POLE
- SIGNBOARD
- CULVERT
- BENCHMARK
- EXISTING ELECTRICAL WORKS
- NEW ELECTRICAL WORKS
- 5 m BUILDING LINE FROM FENCE
- HORIZONTAL DIRECTIONAL DRILLING
- PIPELINE ROUTE
- WORKING AREA

NOTE:
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FOR DISCUSSION

REVISIONS					
C01	10-04-2024	FOR DISCUSSION PURPOSES	TC		
C00	09-04-2024	FOR DISCUSSION PURPOSES	TC		
NO.	DATE	DESCRIPTION	INITIAL		

DESIGNED A TOOTLA
CHECKED T CRONJE
DRAWN A TOOTLA
CHECKED T CRONJE

SIGNED
SMEC South Africa
DATE

SIGNED
George Municipality
DATE

UPGRADE OF AIRPORT BULK PIPELINE

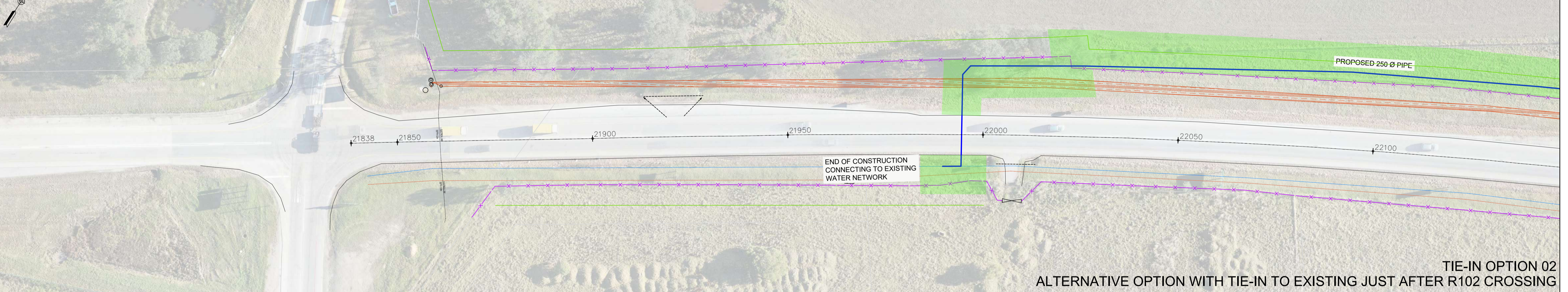**PROPOSED PIPELINE ROUTE OPTIONS AND ASSOCIATED WORKING AREA TIE-IN WITH EXISTING**

SIZE	SCALE
A1	1:500

PROJECT DRAWING NUMBER
C1951 - 611 - 002

REV	SHEET No.
C01	02 OF 03