

	12.10.16	13.10.16	29.03.17			
DATE OF ISSUE						
DRAWING PACKAGE VERSION	1	2	3			

**GENERAL**

3M00-51-01-BELR-T1	COVER SHEET	01	02	03			
3M00-51-01-BELR-C1	SITE SPECIFIC NOTES	01	02	03			
3M00-51-01-BELR-C2	OVERALL SITE PLAN	01	02	03			
3M00-51-01-BELR-C3	SITE SETOUT PLAN	01	02	03			
3M00-51-01-BELR-C4	SITE ELEVATION AND DETAILS	01	02	03			

**ELECTRICAL**

**RF AND TX CONFIGURATIONS**

3M00-51-01-BELR-A1	NBN ANTENNA CONFIGURATION & SETOUT PLAN	01	02	03			
--------------------	---	----	----	----	--	--	--

**STRUCTURAL**

**CIVIL**

**MONOPOLE**

**LEASE**

**DISTRIBUTION**

ERICSSON	JORDAN ZANDER	1	1	1			
AURECON	LISA SHIELDS	1	1	1			

**SITE CODE: 3M00-51-01-BELR**

**BELLBRAE**

**1435 ANGELSEA ROAD**

**BELLBRAE**

**VIC 3228**

**RFNSA No: 3228017**

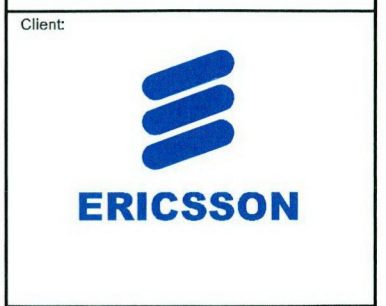
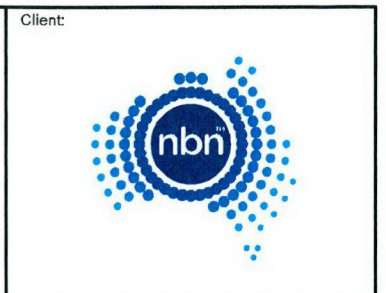


Australia's  
broadband  
network



**PROJECT SUMMARY**

PROPOSED NBN GREENFIELD 45m HIGH MONOPOLE WITH CIRCULAR HEADFRAME  
PROPOSED NBN OUTDOOR CABINETS ON CONCRETE SLAB ON GROUND



Project:  
NATIONAL BROADBAND NETWORK  
SITE No: 3M00-51-01-BELR  
BELLBRAE  
1435 ANGELSEA ROAD  
BELLBRAE  
VIC 3228

**PRELIMINARY**

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT



DESIGNER: KW  
CHECKED: LS  
APPROVED: GM

Drawing Title:  
**COVER SHEET**

Drawing No.	Revision
3M00-51-01-BELR-T1	03

# SITE INFORMATION:

## 1. SITE ADDRESS

1435 ANGELSEA ROAD, BELLBRAE VIC 3228

## 2. GENERAL

THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT NBN CONSTRUCTION STANDARDS, CURRENT AUSTRALIAN STANDARDS AND SPECIFICATIONS.

## 3. SITE ACCESS

2WD ACCESS OFF ANGLESEA ROAD VIA EXISTING ACCESS TRACK LEADING TO SITE LOCATION (APPROX. 535m).

## 4. EQUIPMENT

PROPOSED NEW NBN OUTDOOR CABINETS TO BE INSTALLED ON CONCRETE SLAB WITHIN NBN LEASE AREA.

## 5. STRUCTURE

PROPOSED NBN GREENFIELD 4.5m MONOPOLE WITH CIRCULAR HEADFRAME.

## 6. ANTENNA ACCESS

PROPOSED ANTENNA ACCESS USING ACCESS LADDER WITH LAD-SAF OR EWP, BY RIGGER QUALIFIED PERSONNEL ONLY.

## 7. EXISTING SERVICES

THE CONTRACTOR SHALL IDENTIFY AND CONFIRM THE LOCATION OF ALL RELEVANT EXISTING SERVICES AS REQUIRED PRIOR TO THE COMMENCEMENT OF WORKS.

## 8. EXISTING SITE HAZARDS

THE FOLLOWING HAZARDS ARE PRESENT ON THIS SITE:

- OVERHEAD POWER LINE ALONG ACCESS TRACK.
- AGRICULTURAL HOLDING WITH LIVESTOCK.
- ELECTRIC FENCE WITHIN VICINITY.

## 9. ELECTRICAL SUPPLY

REFER TO DRAWINGS 3M00-51-01-BELR-C2, C3 FOR DETAILS.

## 10. TRANSMISSION LINK & RF CONFIGURATION

REFER TABLE ON DRAWING 3M00-51-01-BELR-A1 FOR DETAILS.

## 11. SITE SPECIFIC INFORMATION

- EXCAVATED MATERIAL TO BE STOCKPILED AT LAND OWNERS DIRECTION.
- OVERHEAD POWER LINE ALONG ACCESS TRACK.
- AGRICULTURAL HOLDING WITH LIVESTOCK.
- ELECTRIC FENCE WITHIN VICINITY.
- APPROX 4No TREES TO BE SIDE TRIMMED FOR CONSTRUCTION ACCESS, REFER TO DWG C1

Client:



Client:



Client:

Project:

NATIONAL BROADBAND NETWORK  
 SITE No: 3M00-51-01-BELR  
 BELLBRAE  
 1435 ANGELSEA ROAD  
 BELLBRAE  
 VIC 3228

PRELIMINARY

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT
Rev	Date	Revision Details



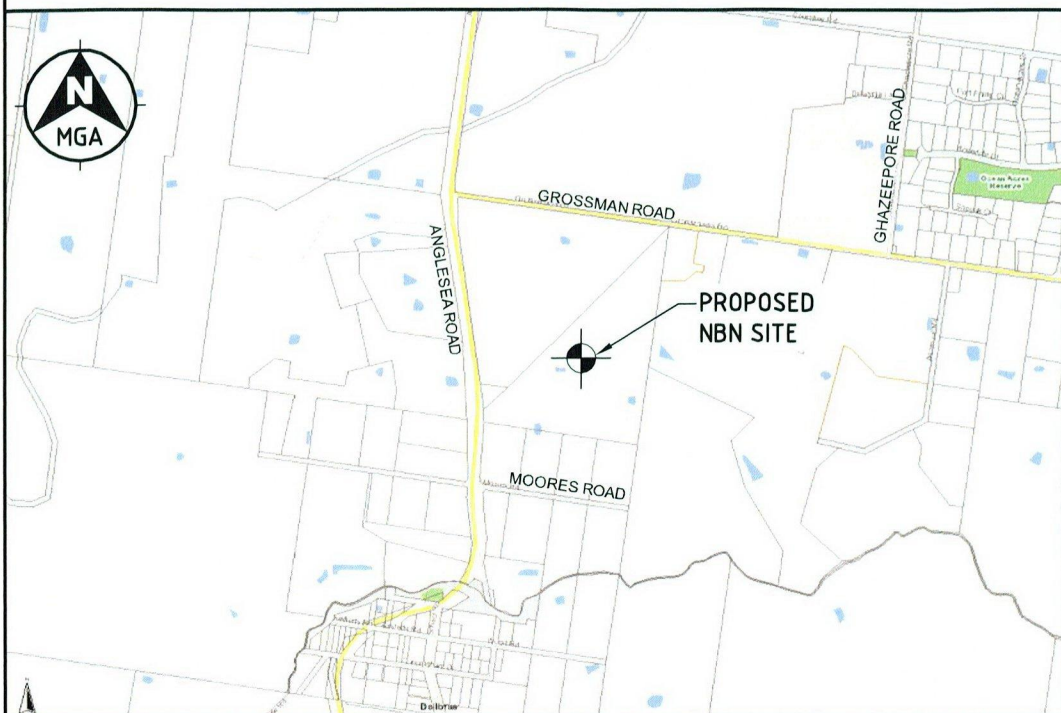
DESIGNER:	KW
CHECKED:	LS
APPROVED:	GM

Drawing Title:  
**SITE SPECIFIC NOTES**

Drawing No.	Revision
3M00-51-01-BELR-C1	03

SOUTH COAST SURVEY  
 4 APR 2017  
 PLANNING  
 DESIGN

# SITE LOCATION



COPYRIGHT © OPENSTREETMAP CONTRIBUTORS, CC BY-SA  
<http://www.openstreetmap.org>  
<http://creativecommons.org/licenses/by-sa/2.0/>  
 Use of this image is subject to the terms and conditions of the Creative Commons Attribution-ShareAlike 2.0 licence, the full licence of which can be accessed at <http://creativecommons.org/licenses/by-sa/2.0/legalcode>

## SITE CO-ORDINATES

### MONOPOLE LOCATION

DATUM: MGA (GDA94)	ZONE: 55
LATITUDE	-38.32076°
LONGITUDE	144.26881°
EASTING	261 236
NORTHING	5 755 065

### LEGEND

- EXISTING ACCESS GATE
- EXISTING POWER POLE
- NBN UNDERGROUND FIBRE
- NBN UNDERGROUND ELECTRICAL ROUTE
- PROPERTY BOUNDARY
- EXISTING FENCE
- EXISTING ELECTRIC FENCE
- EXISTING OVERHEAD ELECTRICAL LINE

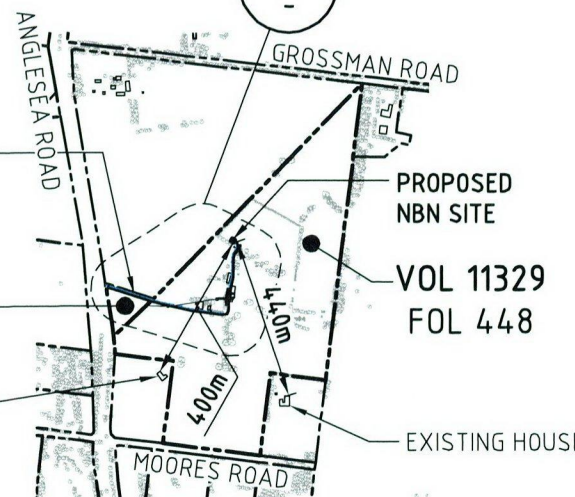


ACCESS ROUTE VIA EXISTING ACCESS TRACK (APPROX. 535m)

VOL 104-89 FOL 712

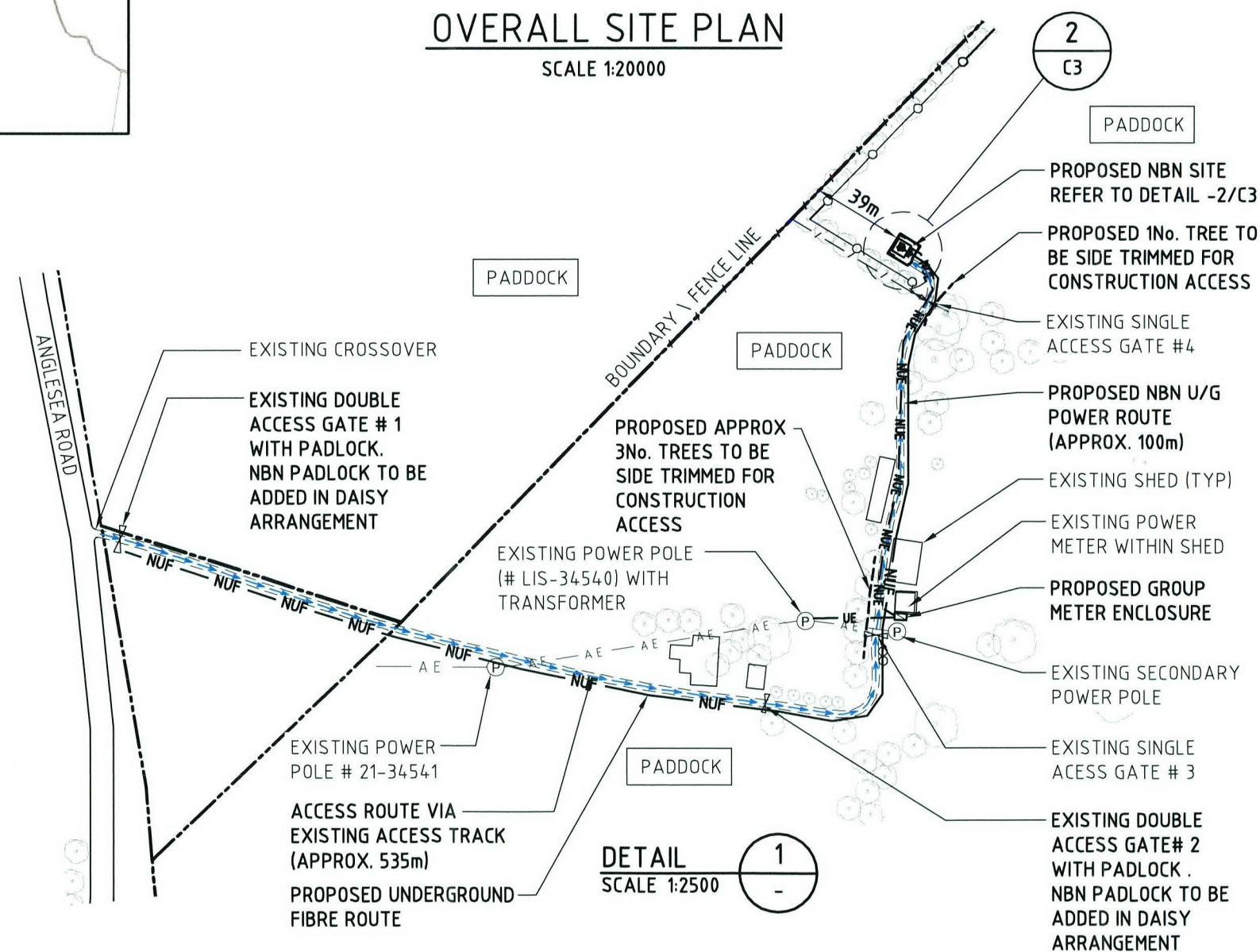
EXISTING HOUSE

1



## OVERALL SITE PLAN

SCALE 1:20000



DETAIL SCALE 1:2500

### NOTES:

1. THE NBN CONSUMERS MAINS ROUTE SHOWN ON THE DRAWINGS IS INDICATIVE ONLY. ELECTRICAL CONTRACTOR TO DETERMINE EXACT ROUTE. ELECTRICAL CONTRACTOR TO LOCATE AND IDENTIFY EXISTING U/G SERVICES PRIOR TO COMMENCEMENT OF WORK.
2. THIS DRAWING IS DIAGRAMMATIC ONLY AND SHOULD NOT BE SCALED. ALL DIMENSIONS, COORDINATES AND LEVELS ARE APPROXIMATE ONLY AND SUBJECT TO CONFIRMATION BY SURVEY.

Client:



Client:



Client:

GULF COAST SHIRE  
 4 APR 2017  
 PLANNING DEPARTMENT

Project:

NATIONAL BROADBAND NETWORK  
 SITE No: 3MOO-51-01-BELR  
 BELLBRAE  
 1435 ANGELSEA ROAD  
 BELLBRAE  
 VIC 3228

## PRELIMINARY

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT

Rev Date Revision Details



DESIGNER: KW  
 CHECKED: LS  
 APPROVED: GM

Drawing Title:  
**OVERALL SITE PLAN**

Drawing No. 3MOO-51-01-BELR-C2  
 Revision 03



PROPOSED NBN 1-OFF  $\phi$ 900 PARABOLIC ANTENNA (TO MORIAC)

PROPOSED NBN GPS UNIT (1-OFF)

PROPOSED NBN 300 WIDE CABLE LADDER (APPROX 3.3m LONG), WITH (1-OFF) CABLE LADDER SUPPORT POST

PROPOSED NBN 2.4m HIGH CHAINWIRE SECURITY FENCE WITH 3.0m WIDE ACCESS GATE

PROPOSED NBN MONOPOLE FOOTING (SHOWN INDICATIVELY)

PROPOSED NBN 45m MONOPOLE WITH CIRCULAR HEADFRAME

PROPOSED NBN 1-OFF  $\phi$ 1800 PARABOLIC ANTENNA (TO MT DUNEED)

PROPOSED NBN PANEL ANTENNAS (4-OFF)

PROPOSED NBN 1-OFF  $\phi$ 900 PARABOLIC ANTENNA (TO TORQUAY EAST)

PROPOSED NBN 75mm THICK SINGLE SIZED GRAVEL OVER WEED MAT WITH TIMBER EDGE

PROPOSED NBN POWER DISTRIBUTION BOARD ON H-FRAME

PROPOSED NBN BBS (1-OFF) OUTDOOR CABINET

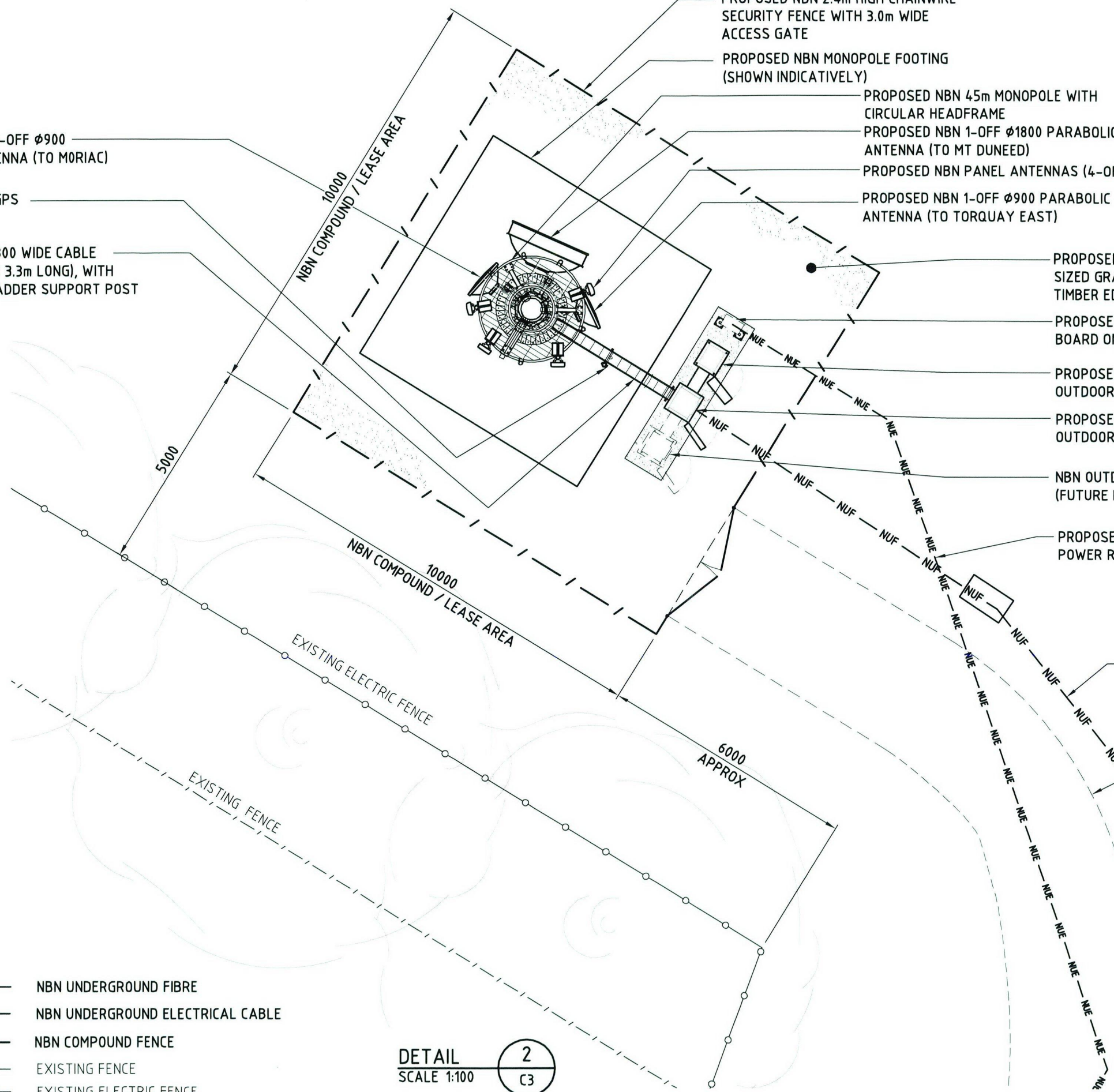
PROPOSED NBN RBS6120 (1-OFF) OUTDOOR CABINET ON CONCRETE SLAB

NBN OUTDOOR CABINET (FUTURE LOCATION)

PROPOSED NBN U/G POWER ROUTE

PROPOSED NBN FIBRE ROUTE

ACCESS ROUTE VIA EXISTING ACCESS TRACK



**LEGEND**

- NUF — NUF — NBN UNDERGROUND FIBRE
- NUE — NUE — NBN UNDERGROUND ELECTRICAL CABLE
- / — / — NBN COMPOUND FENCE
- / — / — EXISTING FENCE
- ○ — ○ — EXISTING ELECTRIC FENCE

DETAIL SCALE 1:100 2  
C3

Client:



Client:



Client:

SOUTH COAST SHIRE  
4 APR 2017  
PLANNING DEPARTMENT

Project:

NATIONAL BROADBAND NETWORK  
SITE No: 3MOO-51-01-BELR  
**BELLBRAE**  
1435 ANGELSEA ROAD  
BELLBRAE  
VIC 3228

**PRELIMINARY**

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT
Rev	Date	Revision Details



DESIGNER: KW

CHECKED: LS

APPROVED: GM

Drawing Title:  
**SITE SETOUT PLAN**

Drawing No. 3MOO-51-01-BELR-C3 Revision 03

▼ EL 40.0m  
C/L 1-OFF  $\phi$ 1800 NBN PARABOLIC ANTENNA (TO MT DUNEED)

▼ EL 46.0m TOP OF STRUCTURE  
▼ EL 45.0m TOP OF MOPOLE  
C/L NBN PANEL ANTENNAS (4-OFF)  
REMOTE RADIO UNIT (8-OFF)  
▼ EL 43.5m  
C/L 2-OFF NBN CANISTERS  
▼ EL 42.5m  
C/L 1-OFF  $\phi$ 900 NBN PARABOLIC ANTENNA (TO TORQUAY EAST)  
▼ EL 32.0  
C/L 1-OFF  $\phi$ 900 NBN PARABOLIC ANTENNA (TO MORIAC)

PROPOSED NBN GPS UNIT (1-OFF)  
PROPOSED NBN 300 WIDE CABLE LADDER (APPROX 3.3m LONG), WITH (1-OFF) CABLE LADDER SUPPORT POST  
PROPOSED NBN RBS6120 (1-OFF) & BBS (1-OFF) OUTDOOR CABINETS ON CONCRETE SLAB  
PROPOSED NBN POWER DISTRIBUTION BOARD ON H-FRAME  
PROPOSED NBN 2.4m HIGH CHAINWIRE SECURITY FENCE WITH 3.0m WIDE ACCESS GATE

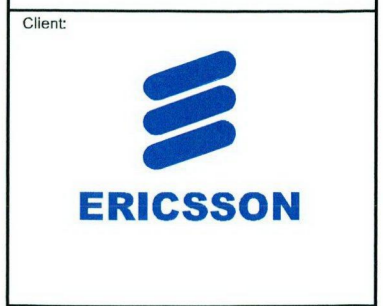
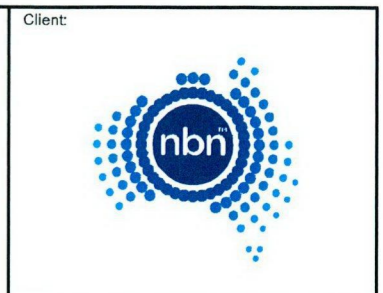
PROPOSED NBN 4.5m MONOPOLE WITH CIRCULAR HEADFRAME (CLIMB LADDER AND FALL ARREST OMITTED FOR CLARITY)  
PROPOSED NBN FEEDER CABLES TO BE RUN VERTICALLY INSIDE MONOPOLE

▼ EL 11.4m (APPROX.)  
EXISTING TREES

▼ EL 0.0m  
TOP OF FOUNDATION  
▼ EL -0.15m  
FINISHED GROUND LEVEL

NBN MONOPOLE FOUNDATION (SHOWN INDICATIVELY)

**NORTH EAST ELEVATION**  
SCALE 1:200



Project:  
NATIONAL BROADBAND NETWORK  
SITE No: 3M00-51-01-BELR  
BELLBRAE  
1435 ANGELSEA ROAD  
BELLBRAE  
VIC 3228

PRELIMINARY

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT
Rev	Date	Revision Details



DESIGNER: ODC  
CHECKED: JK  
APPROVED: GM

Drawing Title:  
**SITE ELEVATION AND DETAILS**

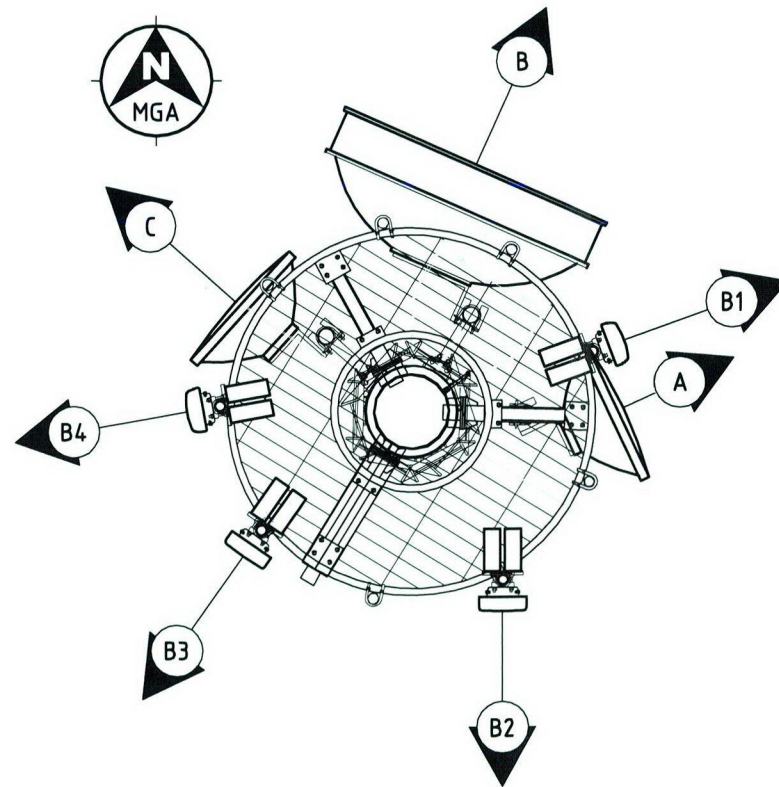
Drawing No. 3M00-51-01-BELR-C4  
Revision 03

SOUTH COAST SLIDE  
 4 APR 2017  
 PLANNING  
 PRELIMINARY

NBN ANTENNA CONFIGURATION - 3400MHZ

SECTOR	SYMBOL	PANEL ANTENNA DETAIL								MAIN FEEDER DETAIL				RRU DETAIL				RF TAIL H&S 1/2" BIRD PROOFED LISCA CABLE	RET CABLE 1/TSR 484 21/2000		
		TYPE	DIMENSION HxWxD	C/L HEIGHT	AZIMUTH (TN)	P1 & P2 E-TILT	P3 & P4 E-TILT	MECH TILT	ANTENNA ACTION REQ	TYPE	OVERALL LENGTH	CANISTER HEIGHT	CANISTER TO RRU LENGTH	FEEDER ACTION REQ	TYPE	LOCATION	C/L HEIGHT	ANTENNA PORT	RRU ACTION REQ	LENGTH	LENGTH
B1	B1	ARGUS SSPX310R	750x300x115	45m	70°	8°	8°	0°	INSTALL	H&S HYBRID MKII 6/6 (27.5mm)	55m	43.5m	3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	1 + 3	INSTALL	1.5m	2m
B2	B2	ALPHA AW3497	957x319x100	45m	180°	4°	4°	0°	INSTALL				3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	2 + 4	INSTALL	1.5m	
B3	B3	ALPHA AW3497	957x319x100	45m	215°	4°	4°	0°	INSTALL				3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	1 + 3	INSTALL	1.5m	2m
B4	B4	ARGUS SSPX310R	750x300x115	45m	260°	4°	4°	0°	INSTALL				3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	2 + 4	INSTALL	1.5m	
										H&S HYBRID MKII 3/3 (22mm)	55m	43.5m	3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	1 + 3	INSTALL	1.5m	2m
													3m	INSTALL	RRUS2218	BEHIND ANTENNA	45m	2 + 4	INSTALL	1.5m	

ANTENNA	SYMBOL	ANTENNA DETAIL						MAIN FEEDER DETAIL			RAU DETAIL
		TYPE	DIMENSION	C/L HEIGHT	AZIMUTH (TN)	DESTINATION	ANTENNA ACTION REQ	TYPE	OVERALL LENGTH	FEEDER ACTION REQ	ACTION REQ
A	A	PARABOLIC	φ900	42.5m	65°	TORQUAY EAST	INSTALL	1-OFF LDF1-50	52m	INSTALL	1-OFF INSTALL
B	B	PARABOLIC	φ1800	40m	24°	MT DUNEED	INSTALL	1-OFF LDF1-50	50m	INSTALL	1-OFF INSTALL
C	C	PARABOLIC	φ900	32m	312°	MORIAC	INSTALL	1-OFF LDF1-50	42m	INSTALL	1-OFF INSTALL
GPS		KRE 101 2082/1	φ69x96	2.5m	N/A		INSTALL	1x LDF1-50	7m	INSTALL	



ANTENNA SETOUT PLAN

SCALE 1:50

Client:



Client:



Client:

Project:

NATIONAL BROADBAND NETWORK  
SITE No: 3M00-51-01-BELR  
BELLBRAE  
1435 ANGELSEA ROAD  
BELLBRAE  
VIC 3228

PRELIMINARY

03	29.03.17	TX TOPOLOGY RE-ROUTE AND ADD FIBRE RUN
02	13.10.16	PRELIMINARY ISSUE
01	12.10.16	PRELIMINARY ISSUE DRAFT
Rev	Date	Revision Details

SURF COAST SHIRE  
4 APR 2017



DESIGNER: KW  
CHECKED: LS  
APPROVED: GM

Drawing Title:  
NBN ANTENNA  
CONFIGURATION  
& SETOUT PLAN

Drawing No. 3M00-51-01-BELR-A1  
Revision 03