



13/05/2025

**Shire of Gnowangerup**  
**28 Yougenup Road Gnowangerup WA 6335**

Sent via email: [gnpshire@gnowangerup.wa.gov.au](mailto:gnpshire@gnowangerup.wa.gov.au)

**Attention: Planning Department**

Dear Sir/Madam

**Re: Planning application for use and works of the land for Telecommunications Infrastructure (fixed wireless facility) at 71 Cecil Street, Gnowangerup WA 633 (described as Lot 403 on DP18603371)**

Service Stream Limited ('Applicant Contact') has been engaged by **nbn**<sup>™</sup> ('Applicant') to prepare and submit a town planning permit application for use and works of the land for Telecommunications Infrastructure (fixed wireless facility) at 71 Cecil Street, Gnowangerup WA 633 (described as Lot 403 on DP18603371)

**nbn**<sup>™</sup> has applied the Precautionary Approach in the Selection and Design of the proposed site in accordance with Sections 4.1 and 4.2 of the *Industry Code C564:2025 Mobile Phone Base Station Deployment*.

The facility will comprise:

- A 60m lattice tower (total height of 60.5m);
- A triangular headframe on the lattice tower;
- A 1200mm parabolic dish antenna and nine (x9) **nbn**<sup>™</sup> RF panel antennas;
- A 2.7m high chain-link security compound fence (compound area 10m x 12m), with 3m wide access gate;
- Three (x3) outdoor equipment cabinets at ground level, adjacent to the proposed tower;
- Associated feeder cables that will run underground from the equipment cabinets, and then internally within the tower to the antennas;
- Underground **nbn**<sup>™</sup> power mains approximately 130m long; and
- Ancillary equipment associated with operation of the proposed facility.

The proposal has undergone a rigorous site selection process regarding town planning and environmental constraints, telecommunication coverage objectives and landowner interest.

If you or your office would like more information in relation to the proposal, please contact the undersigned on 0455 214 172 or via [scott.sibly@servicestream.com.au](mailto:scott.sibly@servicestream.com.au).

Yours sincerely,



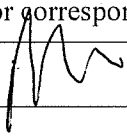

**Scott Sibly**  
**Senior Town Planning Consultant**  
**Service Stream Limited**  
**P: 0455 214 172**  
**E: [scott.sibly@servicestream.com.au](mailto:scott.sibly@servicestream.com.au)**

***Attachment/s:***

*Planning Report*

- a. Proposal drawings*
- b. EME Report*
- c. Application form and owners consent*

## Application for development approval

Owner details			
Name: Shire of Gnowangerup			
ABN (if applicable):			
Address: ...28 Yougenup Road, Gnowangerup WA ..... Postcode: ...6335			
Phone: 08 9827 1007	Fax:	Email:	
Work: .....	.....	gnpshire@gnowangerup.wa.gov.au	
Home: .....			
Mobile: .....			
Contact person for correspondence: David Nicholson			
Signature: 		Date: 12/5/2025	
Signature:		Date:	
<i>The signature of the owner(s) is required on all applications. This application will not proceed without that signature. For the purposes of signing this application an owner includes the persons referred to in the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 clause 62(2).</i>			
Applicant details (if different from owner)			
Name: NBN Co Limited C/- Service Stream Limited			
Address: 5/655 Collins Street Docklands VIC ..... Postcode: 3004			
Phone:	Fax:	Email:	
Work: .....	.....	scott.sibly@servicestream.com.au	
Home: .....			
Mobile: 0455 214 172			
Contact person for correspondence: Scott Sibly			
The information and plans provided with this application may be made available by the local government for public viewing in connection with the application. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Signature: 		Date: 11/04/2025	
Property details			
Lot No: 403	House/Street No: 71	Location No:	
Certificate of Title DP186033	Diagram or Plan No: .....	Vol. No: LR3148	Folio: 633
Title encumbrances (e.g. easements, restrictive covenants): .....			
Street name: Cecil Street		Suburb: Gnowangerup	
Nearest street intersection: house street			

**Proposed development**

Nature of development:       Works  
    Use  
    Works and use

Is an exemption from development claimed for part of the development?     Yes  No  
If yes, is the exemption for:     Works  
    Use

Description of proposed works and/or land use:  
telecommunications infrastructure  
.....

Description of exemption claimed (if relevant):  
.....

Nature of any existing buildings and/or land use: council depot

Approximate cost of proposed development: \$250,000

Estimated time of completion: 10 weeks

*OFFICE USE ONLY*

Acceptance Officer's initials:

Date received:

Local government reference No:

DATE OF ISSUE

07.05.25

DRAWING PACKAGE VERSION

01

GENERAL

6KAZ-6KAT-5105-T1	COVER SHEET	01
6KAZ-6KAT-5105-C1	SITE SPECIFIC NOTES	01
6KAZ-6KAT-5105-C2	OVERALL SITE PLAN	01
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ELECTRICAL

RF AND TX CONFIGURATIONS

6KAZ-6KAT-5105-A1	NBN ANTENNA CONFIGURATION	01
6KAZ-6KAT-5105-A2	NBN ANTENNA SETOUT PLAN	01

DESIGN DOCUMENTS

NBN STANDARD DOCUMENTS

NBN-STD-0001	STANDARD CONSTRUCTION NOTES	E
NBN-STD-0012	STANDARD COMPOUND FENCING DETAILS	F
NBN-STD-0016-SHT4	ENCLOSURE E6150 ODC BASE FRAME DETAILS	B
NBN-STD-0016-SHT5	B158 ODC BASE FRAME DETAILS	B
NBN-STD-0019	STANDARD SITE EARTHING LATTICE TOWER	E
NBN-STD-0021-SHT1	STANDARD EARTH BAR DETAILS	D
NBN-STD-0021-SHT2	SEB ALLOCATION TABLE - SHEET 1	C
NBN-STD-0021-SHT3	SEB ALLOCATION TABLE - SHEET 2	A
NBN-STD-0022	STANDARD METERBOX H-FRAME DETAILS	F
NBN-STD-0025-SHT1	STANDARD SIGNAGE DETAILS SHEET 1	D
NBN-STD-0025-SHT2	STANDARD SIGNAGE DETAILS SHEET 2	B
NBN-STD-0027-SHT14	STANDARD PDB / METERING SCHEMATIC - E6150	A
NBN-STD-0034-SHT4	STANDARD ODC SLAB - 3.6m x 1.0m	A
NBN-STD-0036	GPS ANTENNA MOUNT DETAILS	A

DISTRIBUTION

NBN	SHAIL GOPANI	1
SERVICESTREAM	ISABELLA ZHAO	1

SITE CODE: 6KAZ-6KAT-5105

GNOWANGERUP

71 CECIL STREET  
GNOWANGERUP  
WA 6335

RFNSA No: XXXXX



Australia's  
broadband  
network

Client:



Client:

Client:

Project:

NATIONAL BROADBAND  
NETWORK  
SITE No: 6KAZ-6KAT-5105  
GNOWANGERUP  
71 CECIL STREET  
GNOWANGERUP  
WA 6335

PRELIMINARY

01 07.05.25 PRELIMINARY YL  
Rev Date Revision Details



ServiceStream

DESIGNER: SP

CHECKED: PM

APPROVED: IZ

Drawing Title:  
COVER SHEET

Drawing No.  
6KAZ-6KAT-5105-T1

Revision  
01

# SITE INFORMATION:

## 1. SITE ADDRESS

LOT 403 ON DP 186033, 71 CECIL STREET, GNOWANGERUP, WA 6335.

## 2. GENERAL

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

## 3. SITE ACCESS

ENTER GNOWANGERUP VIA BROOMEHILL-GNOWANGERUP RD AND TURN RIGHT INTO QUINN STREET. TRAVEL 64.0m TOWARDS SOUTH WEST TO EXISTING GNOWANGERUP SHIRE COUNCIL DEPOT. TURN RIGHT INTO HOUSE STREET AND TRAVEL 40m TOWARDS NORTH WEST. DEPOT ACCESS GATES ARE LOCATED ON THE LEFT HAND SIDE. ENTER DEPOT AND TRAVEL 50m TOWARDS THE PROPOSED CANDIDATE LOCATION BY THE EXISTING GNOWANGERUP SHIRE COUNCIL DEPOT'S FENCE.

ACCESS CONTACT: DAVID NICHOLSON - SHIRE OF GNOWANGERUP (COUNCIL) 0436 108 676 OR david.nicholson@gnowangerup.wa.gov.au

## 4. EQUIPMENT

NBN OUTDOOR CABINETS E6150 (1-OFF) AND B158 (2-OFF) ON CONCRETE SLAB.

## 5. STRUCTURE

NBN 60m HIGH STEEL LATTICE TOWER WITH TRIANGULAR HEADFRAME.

## 6. ANTENNA ACCESS

ANTENNA ACCESS VIA TOWER MOUNTED ACCESS LADDER WITH FALL ARREST OR EWP BY 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 SITE:

- ELECTRICAL CABLING AND/OR TRIP HAZARDS
- EXCAVATION WORKS
- CRANE LIFTING WORKS
- MANUAL HANDLING
- WORKING AT HEIGHT
- EME EXCLUSION ZONES OF ANTENNAS ON FACILITY

## 9. ELECTRICAL SUPPLY

REFER TO DRGS. C2 AND C3 FOR ELECTRICAL DETAILS.

## 10. TRANSMISSION LINK & RF CONFIGURATION

REFER TO DRAWINGS 6KAZ-6KAT-5105-A1 AND A2 FOR DETAILS.

## 11. SITE SPECIFIC INFORMATION

TBC.

## 12. LATTICE TOWER WIND LOAD PARAMETERS

SITE TOPOGRAPHICAL DATA		
REGION	TERRAIN CATEGORY	TOPOGRAPHIC MULTIPLIER (Mt)
X	XX	XX

## 13. SITE SIGNAGE REQUIREMENTS

NBN CONTRACTOR NEED TO INSTALL SIGNAGE AS REQUIRED TO COMPLY WITH NBN STANDARD DRAWINGS NBN-STD-0025-SHTS 1 & 2.

## 14. SCOPE OF WORK:

### RF SCOPE

- NBN RF ANTENNAS (9-OFF) ON NEW MOUNTS. REFER TO DRGS. A1 AND A2 FOR DETAILS
- NBN TRIANGULAR HEADFRAME (1-OFF)
- NBN HYBRID FEEDER CABLES 6x12 (1-OFF), 9x18 (1-OFF)
- NBN CANISTERS (2-OFF)

### TX SCOPE

#### BROOMEHILL EAST LINK (DISH A):

- NBN  $\phi$ 1200 PARABOLIC ANTENNA (1-OFF) WITH NBN RAU'S (4-OFF), TX SPLITTERS (2-OFF) ON TRIANGULAR HEADFRAME
- NBN FEEDER CABLES LDF1-50 (4-OFF)

### GROUND WORKS:

- NBN OUTDOOR CABINETS E6150 (1-OFF) AND B158 (2-OFF) ON CONCRETE SLAB
- NBN OUTDOOR CABINET STEEL SUPPORT FRAMES (3-OFF)
- NBN 300mm WIDE CABLE LADDER BETWEEN CABINETS
- NBN GPS ANTENNA (1-OFF) ON CABLE TRAY
- SITE GROUP METER PANEL TO ACCOMMODATE COUNCIL AND NBN METER
- NBN SUBMAINS CABLE FROM SITE GROUP METER PANEL TO NBN SWITCHBOARD

Client:



Client:

Client:

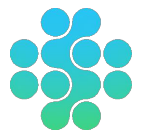
Project:

NATIONAL BROADBAND NETWORK  
 SITE No: 6KAZ-6KAT-5105  
 GNOWANGERUP  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

PRELIMINARY

01 07.05.25 PRELIMINARY YL

Rev Date Revision Details



**ServiceStream**

DESIGNER: SP

CHECKED: PM

APPROVED: IZ

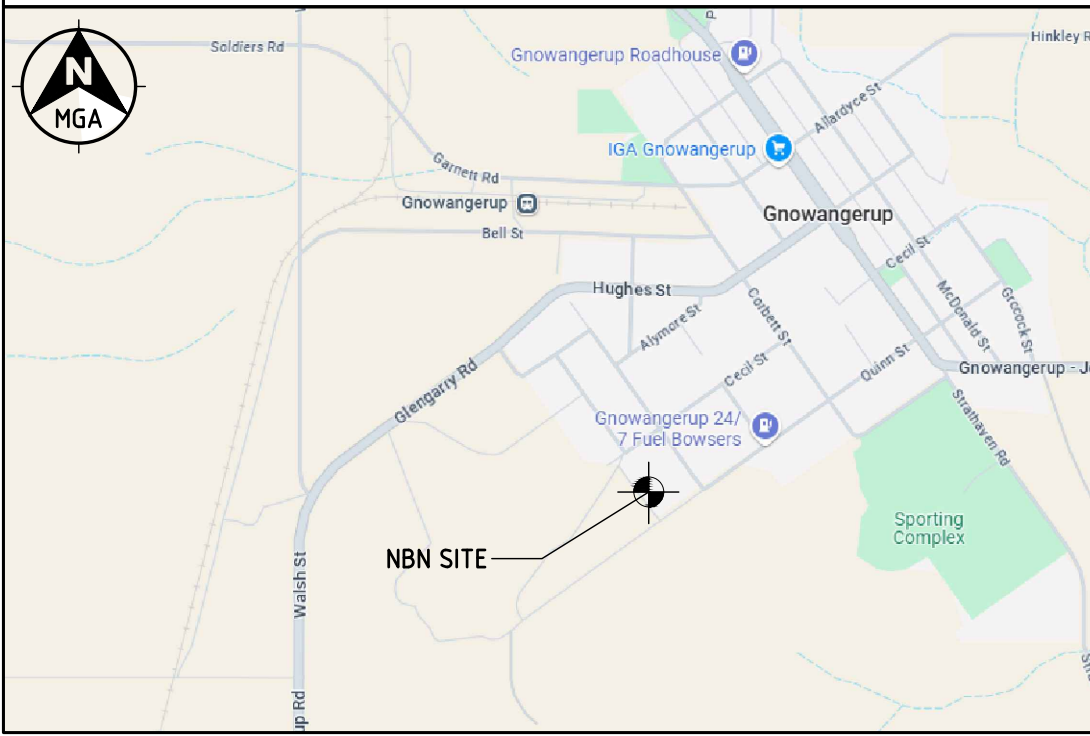
Drawing Title:

**SITE SPECIFIC NOTES**

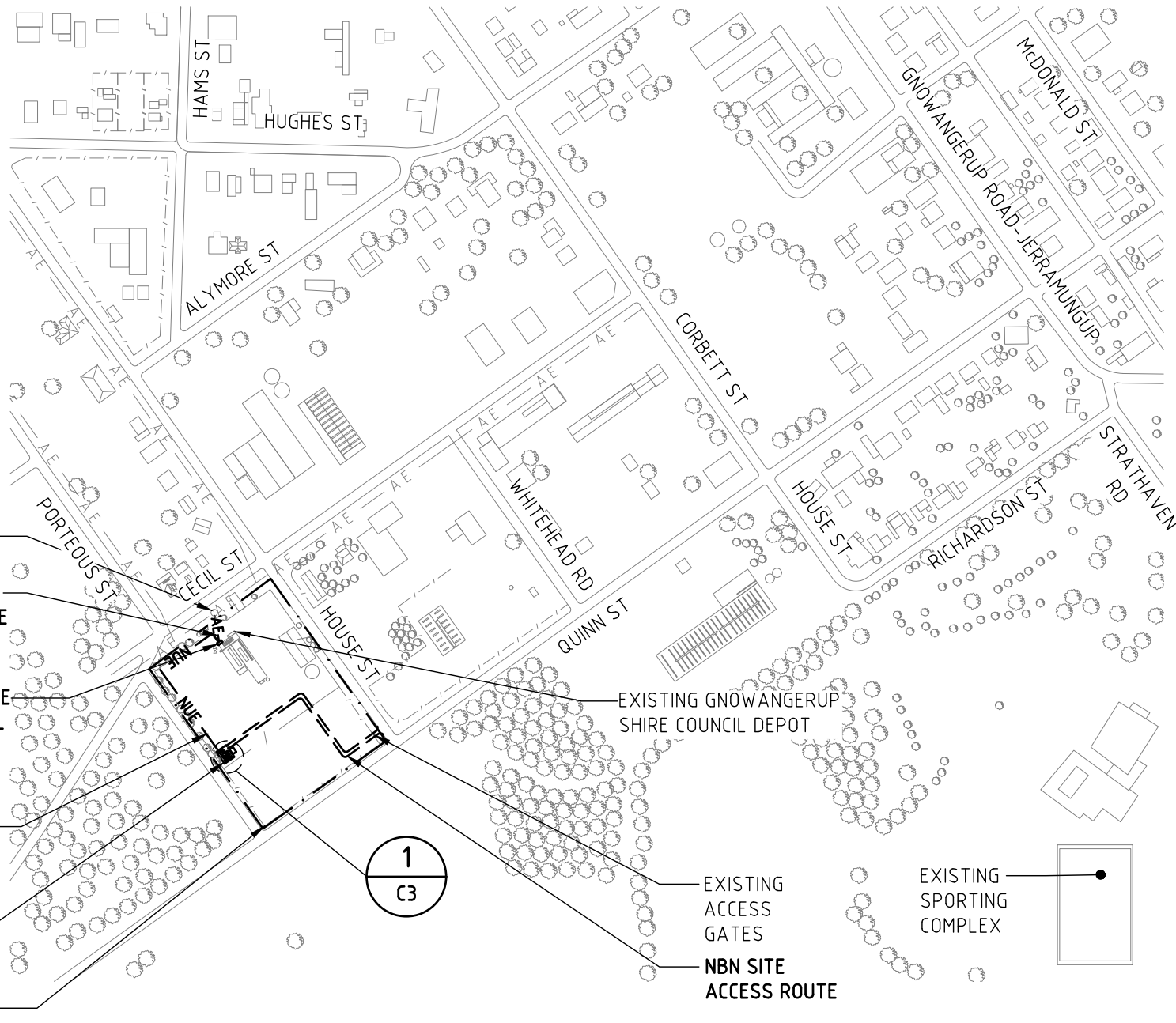
Drawing No.  
6KAZ-6KAT-5105-C1

Revision  
01

# SITE LOCATION



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EXISTING WESTERN POWER SERVICE POLE 606639

EXISTING OVERHEAD CONSUMER MAIN FROM EXISTING WESTERN POWER POLE TO POA ON COUNCIL DEPOT BUILDING TO BE UPGRADED TBC VIA PVA

EXISTING COUNCIL METER BOARD TO BE UPGRADED TO ACCOMMODATE COUNCIL AND NBN METERING. LOCATION INDICATIVE ONLY TBC VIA PVA

NBN UNDERGROUND SUBMAINS FROM SITE GROUP METER PANEL TO SWITCHBOARD. APPROX. 130m

NBN SITE LOCATION

LOT 403 ON DP 186033

EXISTING GNOWANGERUP SHIRE COUNCIL DEPOT

EXISTING ACCESS GATES

NBN SITE ACCESS ROUTE

EXISTING SPORTING COMPLEX

## SITE CO-ORDINATES

LATTICE TOWER LOCATION	
DATUM: MGA(GDA 94)	ZONE: 50H
EASTING	592684.29
NORTHING	6243649.18
LATITUDE	-33.943558°
LONGITUDE	118.002961°

## LEGEND

- A E — A E — AERIAL ELECTRICAL ROUTE
- NUE — NUE — NBN UNDERGROUND ELECTRICAL

DBYD JOB NO. 50024270  
 ENQUIRE DATE: 23/04/2025  
 CONTRACTOR TO REVALIDATE AT TIME OF CONSTRUCTION

## OVERALL SITE PLAN

SCALE 1:5000

Client:



Client:

Client:

Project:

NATIONAL BROADBAND NETWORK  
 SITE No: 6KAZ-6KAT-5105  
 GNOWANGERUP  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

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DESIGNER: SP  
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 APPROVED: IZ

Drawing Title:  
**OVERALL SITE PLAN**

Drawing No. 6KAZ-6KAT-5105-C2  
 Revision 01



NBN OUTDOOR CABINET E6150. REFER TO DRG. NBN-STD-0016-SHT 4 FOR DETAILS

NBN UNDERGROUND SUBMAINS FROM GROUP METER PANEL TO PDB

TEMPORARY GENERATOR SETUP AREA (3.5m x 2m)

NBN 300mm CABLE LADDER BETWEEN CABINETS

NBN OUTDOOR CABINETS B158 (2-OFF). REFER TO DRG. NBN-STD-0016-SHT 5 FOR DETAILS

75mm SINGLE SIZED GRAVEL OVER WEED MAT WITH TIMBER EDGE

NBN CONCRETE SLAB FOR ODU. REFER TO NBN-STD-0034-SHT4 FOR DETAILS

NBN METER BOX. REFER TO DRG. NBN-STD-0022 FOR DETAILS

NBN GPS UNIT (1-OFF). FIXED TO THE CABLE TRAY SUPPORT POST. REFER TO DRG. NBN-STD-0036 FOR DETAILS

NBN 300mm WIDE CABLE LADDER WITH (1-OFF) CABLE LADDER SUPPORT POST. REFER TO DRG. NBN-STD-0014 FOR DETAILS

NBN 60m HIGH STEEL LATTICE TOWER

NBN LATTICE TOWER FOUNDATION (6.5m x 6.5m)

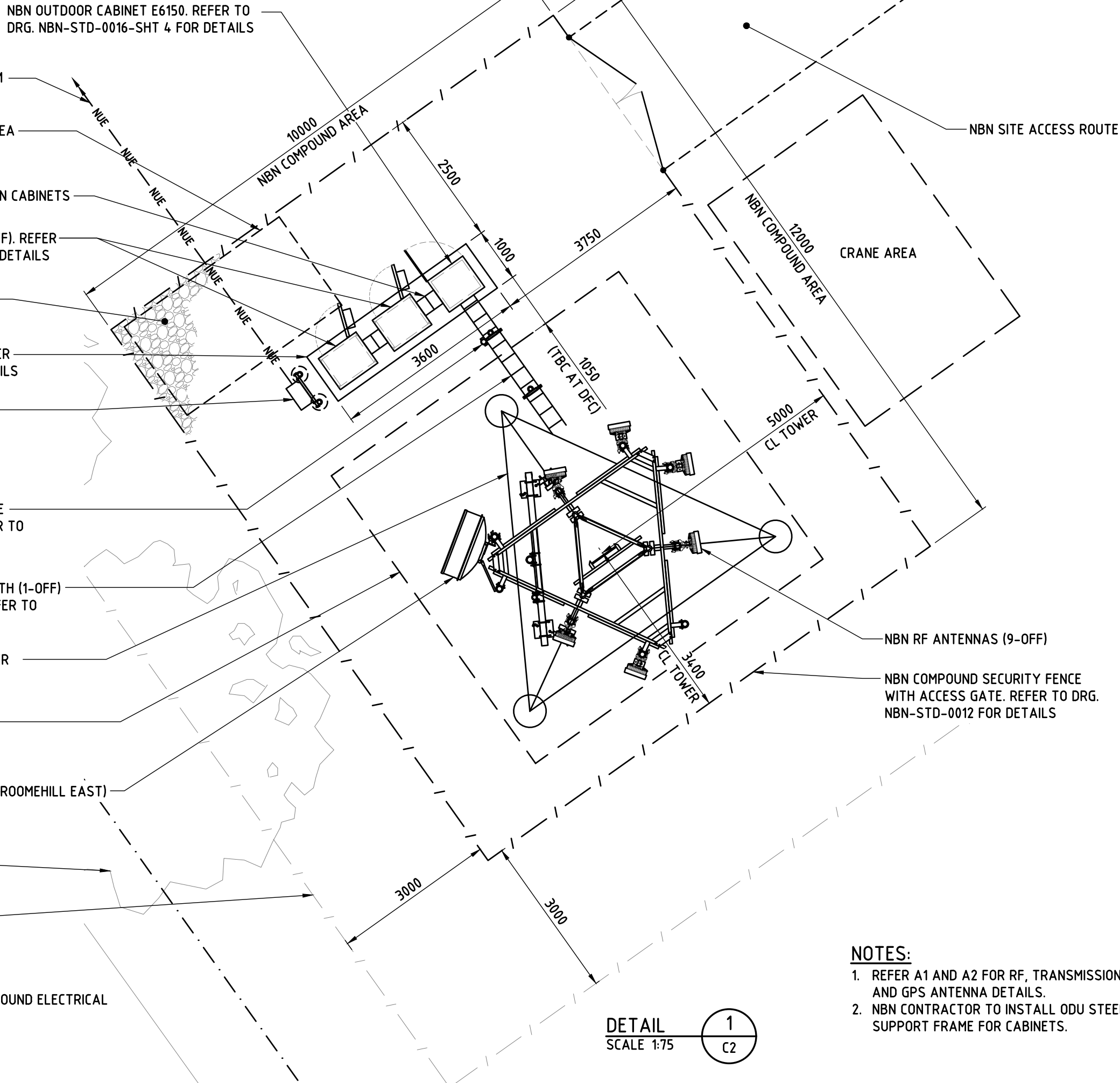
NBN TRANSMISSION ANTENNA (TO BROOMEHILL EAST)

EXISTING TREES

EXISTING FENCE

**LEGEND**

— NUE — NUE — NBN UNDERGROUND ELECTRICAL



Client:



Client:

Client:

Project:

**NATIONAL BROADBAND NETWORK**  
 SITE No: 6KAZ-6KAT-5105  
**GNOWANGERUP**  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

**PRELIMINARY**

01	07.05.25	PRELIMINARY	YL
Rev	Date	Revision Details	



**ServiceStream**

DESIGNER: SP  
 CHECKED: PM  
 APPROVED: IZ

Drawing Title:  
**SITE SETOUT PLAN**

Drawing No. 6KAZ-6KAT-5105-C3  
 Revision **01**

- NOTES:**
- REFER A1 AND A2 FOR RF, TRANSMISSION AND GPS ANTENNA DETAILS.
  - NBN CONTRACTOR TO INSTALL ODU STEEL SUPPORT FRAME FOR CABINETS.

**DETAIL**  
 SCALE 1:75

1  
C2

**NOTES:**

1. REFER A1 AND A2 FOR RF, TRANSMISSION AND GPS ANTENNA DETAILS.
2. NBN CONTRACTOR TO INSTALL ODU STEEL SUPPORT FRAME FOR CABINETS.

- EL 60.5m  
C/L NBN RF ANTENNAS (3-OFF)
- EL 60.0m  
TOP OF LATTICE TOWER  
C/L NBN RF ANTENNAS (3-OFF)  
C/L NBN TRANSMISSION ANTENNA (TO BROOMEHILL EAST)
- EL 59.5m  
C/L NBN RF ANTENNAS (3-OFF)
- EL 58.5m  
C/L NBN CANISTERS (2-OFF)

Client:



Client:

Client:

Project:  
**NATIONAL BROADBAND NETWORK**  
 SITE No: 6KAZ-6KAT-5105  
**GNOWANGERUP**  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

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 APPROVED: IZ

Drawing Title:  
**SITE ELEVATION AND DETAILS**

Drawing No. 6KAZ-6KAT-5105-C4	Revision 01
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- NBN GPS UNIT (1-OFF). FIXED TO THE CABLE TRAY SUPPORT POST. REFER TO DRG. NBN-STD-0036 FOR DETAILS
- NBN 300mm WIDE CABLE TRAY FROM ODU TO LATTICE TOWER
- NBN OUTDOOR CABINET E6150 (1-OFF). REFER TO DRG. NBN-STD-0016-SHT 4 FOR DETAILS
- NBN OUTDOOR CABINETS B158 (2-OFF). REFER TO DRG. NBN-STD-0016-SHT 5 FOR DETAILS
- NBN METER BOX. REFER TO DRG. NBN-STD-0022 FOR DETAILS
- NBN CONCRETE SLAB FOR ODU. REFER TO NBN-STD-0034-SHT4 FOR DETAILS

- NBN 60m HIGH STEEL LATTICE TOWER
- NBN CABLE FEEDERS TO BE RUN VIA CENTRALLY MOUNTED FEEDER BRACKET

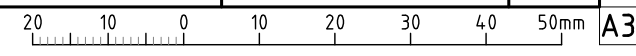
- NBN 2.7m HIGH COMPOUND SECURITY FENCE WITH ACCESS GATE. REFER TO DRG. NBN-STD-0012 FOR DETAILS

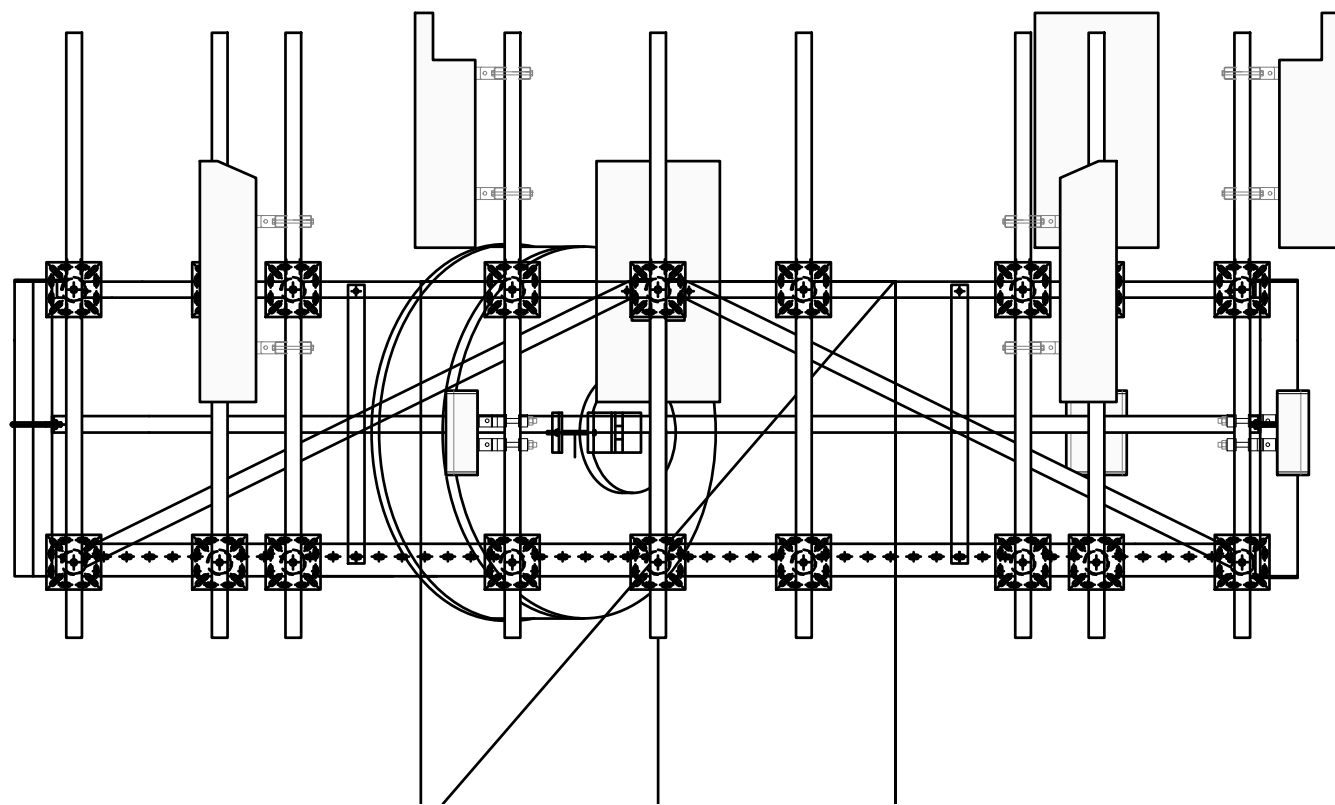
- EL 0.0m  
TOP OF FOUNDATION
- EL -0.15m (R.L 272.0m)  
FINISHED GROUND LEVEL

NBN TOWER FOUNDATION (INDICATIVE ONLY)

**SOUTH EAST ELEVATION**

SCALE 1:250





▼ EL 60.5m  
C/L NBN RF ANTENNAS (3-OFF)

▼ EL 60.0m  
C/L NBN RF ANTENNAS (3-OFF)  
C/L NBN TRANSMISSION ANTENNA (TO BROOMEHILL EAST)  
C/L NBN RAU'S (4-OFF), TX SPLITTERS (2-OFF)

▼ EL 59.5m  
C/L NBN RF ANTENNAS (3-OFF)

▼ EL 58.5m  
C/L NBN CANISTERS (2-OFF)

**SOUTH EAST ELEVATION**

SCALE 1:25

Client:



Client:

Client:

Project:

NATIONAL BROADBAND NETWORK  
SITE No: 6KAZ-6KAT-5105  
GNOWANGERUP  
71 CECIL STREET  
GNOWANGERUP  
WA 6335

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CHECKED: PM  
APPROVED: IZ

Drawing Title:  
**STRUCTURAL  
EQUIPMENT DETAIL  
EXPANDED VIEW**

Drawing No. 6KAZ-6KAT-5105-C4-1	Revision <b>01</b>
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NBN RF ANTENNA CONFIGURATION - 2300MHz & 3400MHz

Client:



SECTOR	RF ANTENNA DETAIL								MAIN FEEDER DETAIL				RRU DETAIL				RF TAIL		RET CABLE				
	TYPE	DIMENSION HxWxD	C/L HEIGHT	AZIMUTH (TN)	E-TILT		MECH TILT	ANTENNA ACTION REQUIRED	TYPE	OVERALL LENGTH	CANISTER HEIGHT	CANISTER TO RRU LENGTH	FEEDER ACTION REQUIRED	TYPE	LOCATION	C/L HEIGHT	ANTENNA PORT	RRU ACTION REQUIRED	TYPE	LENGTH	LENGTH		
S1	ERICSSON AIR6419	929x506x208	60m	350°	P1&P2	2°	0°	INSTALL	H&S HYBRID MKII 9x18 F1	70m	58.5m	4m	INSTALL										
B1	ERICSSON AIR3219	776x408x199	60.5m	350°	P1&P2	2°	0°	INSTALL				4m	INSTALL										
S2	ERICSSON AIR6419	929x506x208	60m	80°	P1&P2	2°	0°	INSTALL				4m	INSTALL										
B2	ERICSSON AIR3219	776x408x199	60.5m	80°	P1&P2	2°	0°	INSTALL				4m	INSTALL										
S3	ERICSSON AIR6419	929x506x208	60m	200°	P1&P2	2°	0°	INSTALL	H&S HYBRID MKII 6x12 F2	70m	58.5m	4m	INSTALL										
B3	ERICSSON AIR3219	776x408x199	60.5m	200°	P1&P2	2°	0°	INSTALL				4m	INSTALL										

Client:

Client:

NBN RF ANTENNA CONFIGURATION - 2600MHz

SECTOR	RF ANTENNA DETAIL								MAIN FEEDER DETAIL				RRU DETAIL				RF TAIL		RET CABLE		
	TYPE	DIMENSION HxWxD	C/L HEIGHT	AZIMUTH (TN)	E-TILT		MECH TILT	ANTENNA ACTION REQUIRED	TYPE	OVERALL LENGTH	CANISTER HEIGHT	CANISTER TO RRU LENGTH	FEEDER ACTION REQUIRED	TYPE	LOCATION	C/L HEIGHT	ANTENNA PORT	RRU ACTION REQUIRED	TYPE	LENGTH	LENGTH
K1	ERICSSON AIR5322 N257	290x200x136	59.5m	350°	P1&P2	0°	5.5°	INSTALL	H&S HYBRID MKII 9x18 F1	70m	58.5m	4m	INSTALL								
K2	ERICSSON AIR5322 N257	290x200x136	59.5m	80°	P1&P2	0°	5.5°	INSTALL	H&S HYBRID MKII 6x12 F2	70m	58.5m	4m	INSTALL								
K3	ERICSSON AIR5322 N257	290x200x136	59.5m	200°	P1&P2	0°	5.5°	INSTALL				4m	INSTALL								

Project:

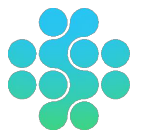
NATIONAL BROADBAND NETWORK  
 SITE No: 6KAZ-6KAT-5105  
 GNOWANGERUP  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

NBN TRANSMISSION AND GPS ANTENNA CONFIGURATION

SECTOR	ANTENNA DETAIL						RAU DETAIL			MAIN FEEDER DETAIL			TX SPLITTERS DETAILS	
	TYPE	DIMENSION	C/L HEIGHT	AZIMUTH (TN)	DESTINATION	ANTENNA ACTION REQUIRED	COUNT	TYPE	ACTION	TYPE	OVERALL LENGTH	ACTION	COUNT	ACTION
A	PARABOLIC ANT3 A 1.2 7/8 HPX	φ1200	60m	291°	BROOMEHILL EAST	INSTALL	4	ML6365	INSTALL	LDF1-50	4 x 70m	INSTALL	2	INSTALL
GPS	KRE 101 2395/2	φ77 x 72	2.5m	N/A	N/A	INSTALL	N/A	N/A	N/A	LDF1-50	8m	INSTALL	N/A	N/A

01 07.05.25 PRELIMINARY YL

Rev Date Revision Details



ServiceStream

DESIGNER: SP

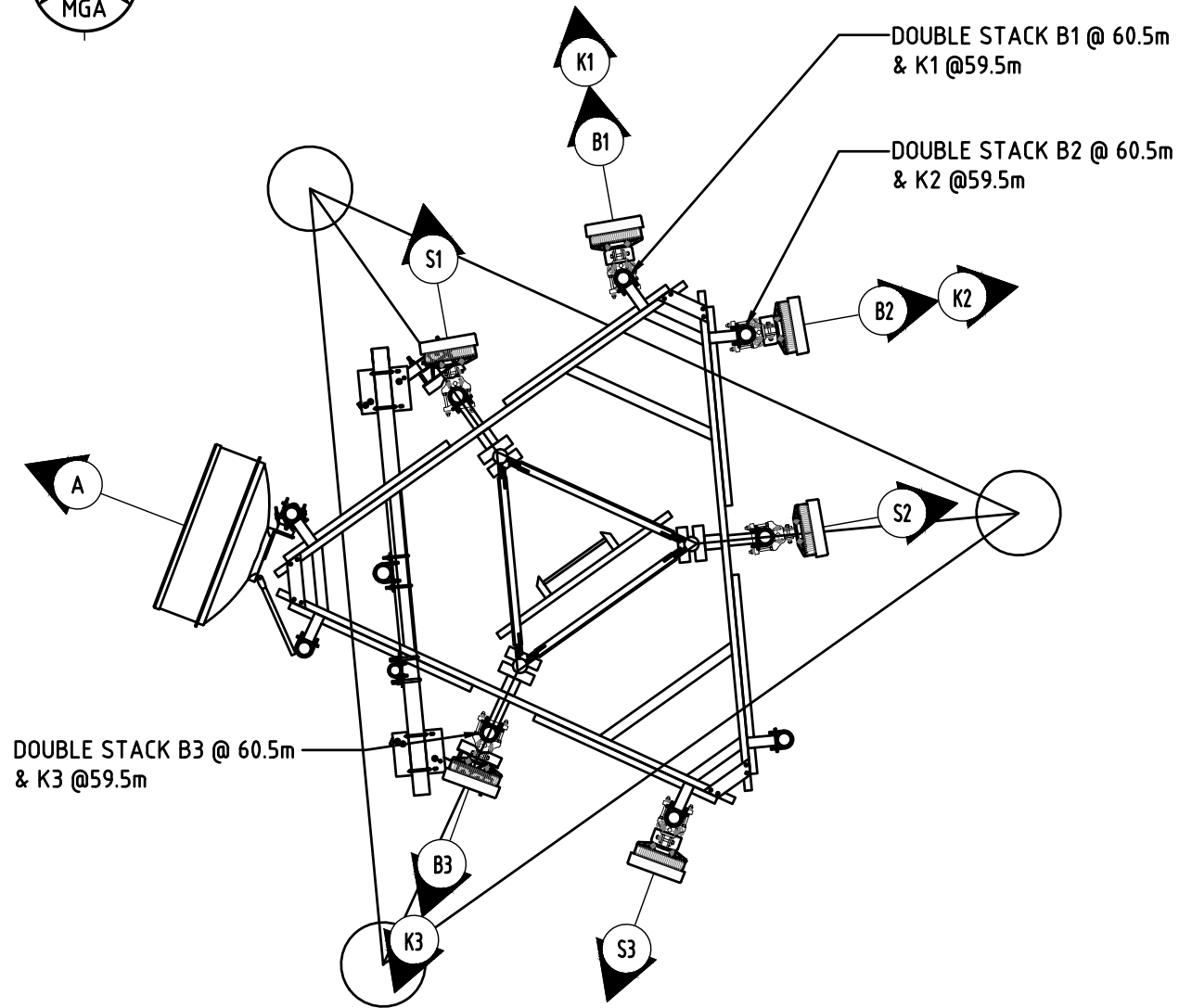
CHECKED: PM

APPROVED: IZ

Drawing Title:  
**NBN ANTENNA CONFIGURATION**

Drawing No.  
 6KAZ-6KAT-5105-A1

Revision  
 01



## NBN ANTENNA SETOUT PLAN

SCALE 1:50

Client:



Client:

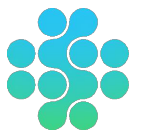
Client:

Project:

NATIONAL BROADBAND NETWORK  
 SITE No: 6KAZ-6KAT-5105  
 GNOWANGERUP  
 71 CECIL STREET  
 GNOWANGERUP  
 WA 6335

PRELIMINARY

Rev	Date	Revision Details	Y/L
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**NBN ANTENNA SETOUT PLAN**

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# Planning Report

Development Application for  
Telecommunications Infrastructure

71 Cecil Street, Gnowangerup WA 6335 (Lot 403 on  
DP186033)



**NBN Site Reference: NBN-6KAZ-6KAT-5105**

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## Document control

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# EXECUTIVE SUMMARY

<b>Proposal</b>	<p><b>nbn™</b> propose to install a new fixed wireless facility at 71 Cecil Street, Gnowangerup WA 6335 comprised of the installation of the following:</p> <ul style="list-style-type: none"> <li>• A 60m lattice tower (total height of 60.5m);</li> <li>• A triangular headframe on the lattice tower;</li> <li>• A 1200mm parabolic dish antenna and nine (x9) <b>nbn™</b> RF panel antennas;</li> <li>• A 2.7m high chain-link security compound fence (compound area 10m x 12m), with 3m wide access gate;</li> <li>• Three (x3) outdoor equipment cabinets at ground level, adjacent to the proposed tower;</li> <li>• Associated feeder cables that will run underground from the equipment cabinets, and then internally within the tower to the antennas;</li> <li>• Underground <b>nbn™</b> power mains approximately 130m long; and</li> <li>• Ancillary equipment associated with operation of the proposed facility.</li> </ul>	
<b>Purposes</b>	<p>The proposed facility is necessary to provide <b>nbn™</b> fixed wireless coverage to Gnowangerup.</p>	
<b>Property Details</b>	<p>Property description: Lot 403 on DP18603371 Street Address: 71 Cecil Street, Gnowangerup WA 6335</p>	
<b>Town Planning Scheme</b>	<p>Council: Shire of Gnowangerup Zone: Industry</p>	
<b>Applicable Planning Policies</b>	<b>Relevant State &amp; Local Planning Policies</b>	<b>Complies</b>
	Planning and Environment Act 2005	Yes
	Planning and Development (Local Planning Schemes) Regulations 2015	Yes
	SPP 5.2 Telecommunications Infrastructure	Yes
	Shire of Gnowangerup Local Planning Scheme No.2	Yes
<b>Application</b>	<p>Use and works of the land for the purposes of telecommunications infrastructure</p>	
<b>Applicant</b>	<p>Service Stream Limited on behalf of nbn™ Our Ref: NBN – NBN-6KAZ-6KAT-5105</p>	

# 1 INTRODUCTION

The **nbn**<sup>™</sup> rollout is an upgrade to Australia's existing telecommunications network. It is designed to provide Australians with access to fast, affordable and reliable internet.

**nbn**<sup>™</sup> plans to upgrade the existing telecommunications network in the most cost-efficient way using best-fit technology and taking into consideration existing infrastructure.

**nbn**<sup>™</sup> has engaged Service Stream Limited to act on its behalf to design and deliver new fixed wireless equipment and infrastructure within the broader network which is already in operation.

To support the fixed wireless component of this network, **nbn**<sup>™</sup> requires a fixed wireless site to provide internet coverage to the locality of Gnowangerup. The proposed facility will be located at 71 Cecil Street, Gnowangerup WA 6335 (Lot 403 on DP186033).

The site is a Gnowangerup Shire Council Depot (owned by Crown Land WA and Primary Interest Holder Shire of Gnowangerup), with good existing access and power available. The proposed facility is located on the southwestern side of the site well away from existing council assets.

Prior to confirming this site as the preferred location for a fixed wireless facility, an in-depth site selection process was undertaken. This process matched potential candidates against five key factors, namely:

- The ability of the site to provide acceptable coverage levels to the area;
- The ability of the site to provide line of sight (LoS) to other facilities;
- Town planning considerations (such as zoning, surrounding land uses, environmental significance and visual impact);
- Construction feasibility and cost; and
- The ability of **nbn**<sup>™</sup> to secure a lease agreement with the landowner.

This planning report will provide assessment in respect of the relevant planning legislation and guidelines, and demonstrates site selection on the basis of the following:

- The proposal is designed to comply with state planning legislation and policy;
- The site is designed to achieve the required coverage objectives for the area;
- The site is designed to be appropriately located and sited to minimise visual impact on the immediate and surrounding area;
- The proposal is designed to operate within the regulatory framework of Commonwealth, State and Local Government;
- The proposal has been designed to ensure only minimal environmental impact will result from the proposal
- The facility is designed to operate within all current and relevant standards and is regulated by the Australian Communications and Media Authority.

## 1.1 Consultation with Council

The property team at the Shire of Gnowangerup has been consulted on the proposal and were supportive.

## 1.2 Owner's Consent

Owner's consent has been received for 71 Cecil Street, Gnowangerup WA 6335 (Lot 403 on DP186033) which has been submitted as part of this Development Application.

## 2 BACKGROUND

### 2.1 nbn™ and the National Broadband Network

**nbn™** is the organisation responsible for overseeing the upgrade of Australia's existing telecommunications network and for providing wholesale services to retail service providers. The **nbn™** is designed to provide Australians with access to fast, affordable and reliable internet and landline phone services.

**nbn™** plans to upgrade the existing telecommunications network in the most cost-efficient way using best-fit technology and taking into consideration existing infrastructure.

The **nbn™**'s fixed wireless network uses cellular technology to transmit signals to and from a small antenna fixed on the outside of a home or business, which are able to achieve Line of Sight (LoS) towards the fixed wireless facility.

**nbn™**'s fixed wireless network is designed to offer service providers with wholesale access speeds of up to 50Mbps for downloads and 20Mbps for uploads<sup>1</sup>.

### 2.2 What is Fixed Wireless and how is it different to Mobile Broadband?

The **nbn**'s fixed wireless network, which uses advanced technology commonly referred to as LTE or 4G, is engineered to deliver services to a fixed number of premises within each coverage area.

This means that the bandwidth per household is designed to be more consistent than mobile wireless, even in peak times of use.

Unlike a mobile wireless service where speeds can be affected by the number of people moving into and out of the area, the speed available in a fixed wireless network is designed to remain relatively steady.

### 2.3 The Fixed Wireless Network – Interdependencies

Although fixed wireless facilities are submitted to Council as standalone developments, for planning purposes, they are highly interdependent. Each fixed wireless facility is connected to another to form a chain of facilities that link back to the fibre network. This is called the 'transmission network'.

The transmission network requires LoS from facility to facility until it reaches the fibre network via a hub site. The fixed wireless network will remain unconnected without the transmission network and a break in this chain can have flow on effects to multiple communities.

A typical fixed wireless facility will include a number of antennas mounted above a structure on a headframe. Each antenna is designed to cover a set area to maximise signal strength. In turn, these network antennas communicate to a small antenna installed on the roof of each customer's home or business.

The nature of the Fixed Wireless network is visually demonstrated through **Figure 1** below.

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<sup>1</sup> **nbn™** is designing the **nbn** to provide these speeds to our wholesale customers, telephone and internet service providers. End user experience including the speeds actually achieved over the **nbn** depends on some factors outside **nbn™**'s control like equipment quality, software, broadband plans and how the end user's service provider designs its network.

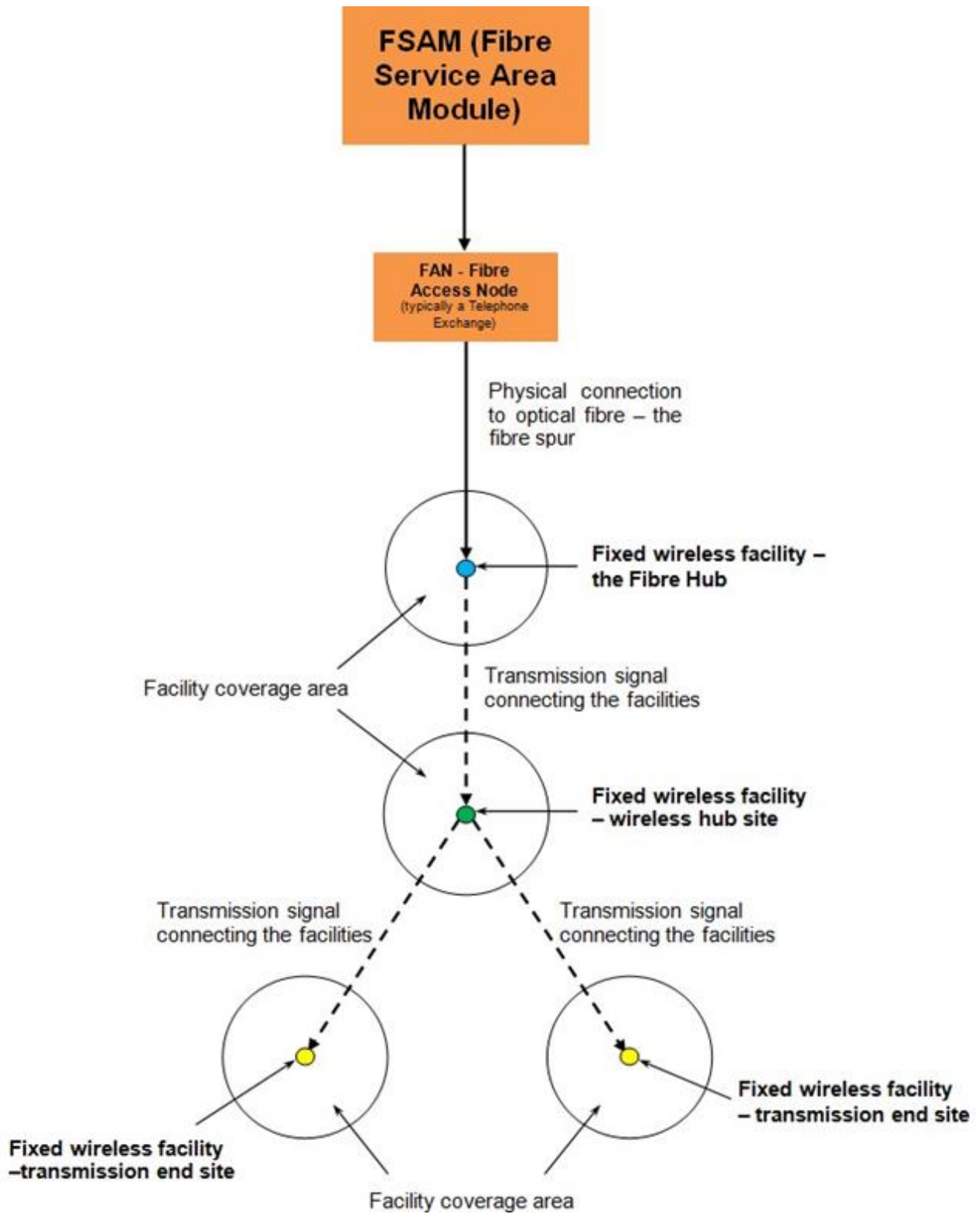


Figure 1 The Fixed Wireless Network

# 3 SITE SELECTION

Planning for a new fixed wireless broadband facility is a complex process. **nbn**<sup>™</sup> conducts a rigorous multi-stage scoping process, as outlined in this section of the planning report.

## 3.1 Identification of areas requiring Fixed Wireless coverage

**nbn**<sup>™</sup> Fixed Wireless locations are determined by many factors including the availability of both the **nbn**<sup>™</sup> Fibre transit network and the availability of Point of Interconnect (POI) facilities to allow for the installation of nbn fibre equipment.

**nbn**<sup>™</sup> uses a number of methods to identify those parts of Australia that require fixed wireless coverage. When an area is identified as requiring fixed wireless coverage, investigations are undertaken to determine the measures required to provide this coverage.

**nbn**<sup>™</sup> has identified a requirement to provide a fixed wireless facility at Gnowangerup. The facility is designed to provide fixed wireless internet services to premises in Gnowangerup and surrounding areas. Furthermore, the site is designed to achieve LoS to a Fibre Hub Facility known as Broomehill East Link.

## 3.2 Site Selection Parameters

**nbn**<sup>™</sup> generally identifies an area where the requirement for a Fixed Wireless facility would be highest known as a 'search area.' A preliminary investigation of the area is then undertaken, in conjunction with radio frequency engineers, planning and property consultants and designers to identify possible locations to establish a facility.

Generally speaking, new sites must be located within, or immediately adjacent to, the identified search area. Search areas are produced by radio frequency engineers who work on the network and are areas where a facility is technically feasible and can meet nbn coverage objectives.

While the operational and geographical aspects of deploying new facilities are primary factors, there are also many other issues that influence network design, which should be considered.

Some of the issues that are considered throughout selection include:

- the availability and suitability of land;
- the ability to find a willing landowner to host the proposal;
- topographical constraints affecting network LoS and network time protocol;
- construction constraints;
- occupational health and safety; and
- cost constraints.

These compounding factors often severely restrict the available search area within which a facility can be established to provide fixed wireless broadband services to a local community.

## 3.3 Candidate Sites

### 3.3.1 Opportunities to Co-locate

The existing RFNSA Site No: 6335002 at 53 Yougenup Road Gnowangerup WA 6335 was investigated for possible colocation. This site contains a 30m Steel Lattice Tower owned by Amplitel Pty Ltd with Telstra being the only carrier on the tower.

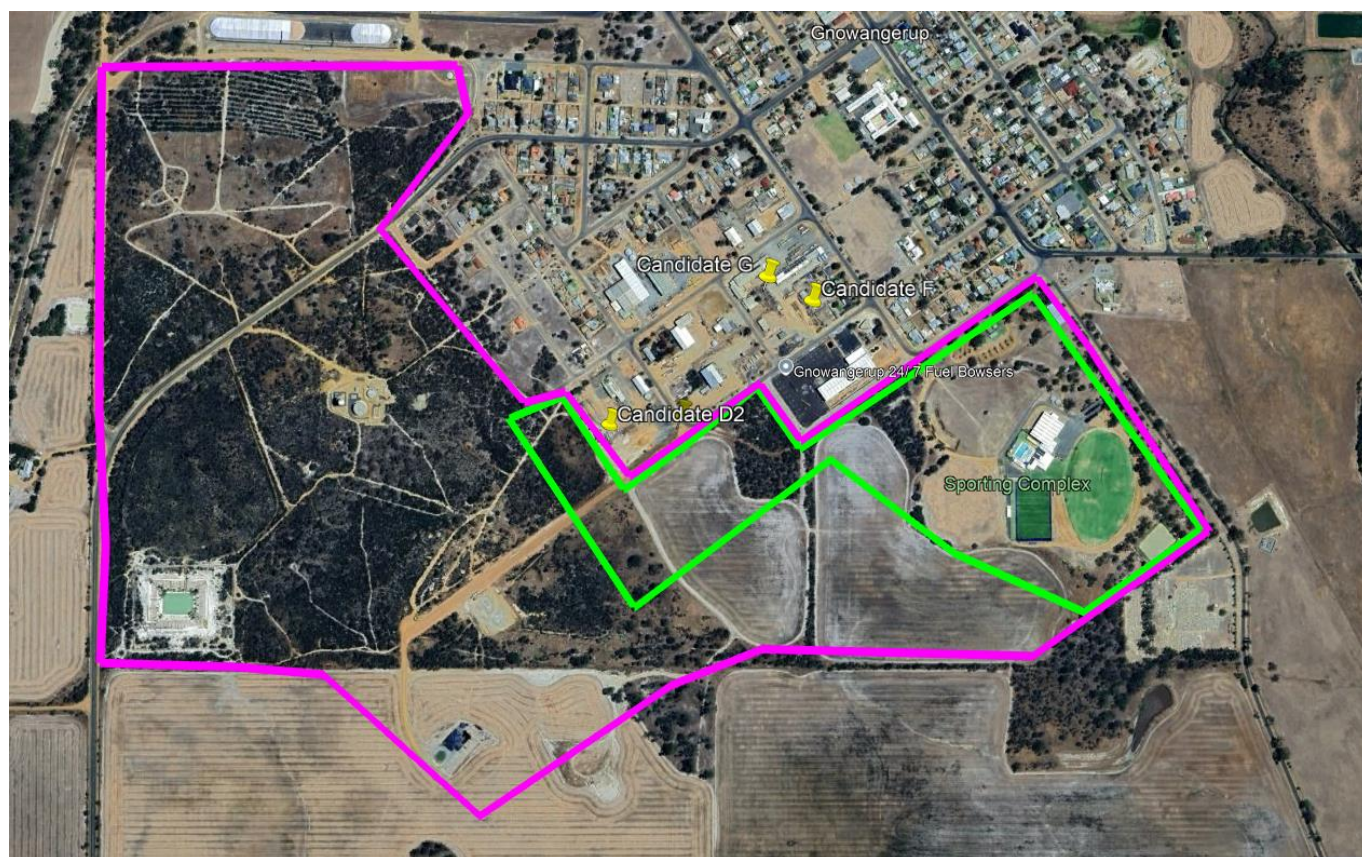
It is confirmed that both the location & structure height does not meet objectives for NBN Radio Frequency (RF) or transmission (TX) assessments.

### 3.3.2 Existing Structures

There are existing council lattice towers on the site, however these heights will also not meet objectives for NBN RF or transmission TX assessments.

### 3.3.3 New Site Candidates

Following desktop and field investigations of a large number of potential candidates, a total of three candidates as shown in Figure 2 below were selected to be explored in-depth following site design visits and assessment of ground conditions. The green outline signifies the primary search area, and the purple outline signifies the secondary search area.



**Figure 2 Candidate Locations**

A summary of the candidate sites that were considered in detailed is outlined below in Table 1, including a description of the opportunities and constraints that each site presented.

Candidate	Address and Lot Number	Facility Type	Description
D2	71 Cecil Street, Gnowangerup WA 6335 (Lot 403 on DP186033)	60m Lattice Tower	This site is owned by Crown Land WA and Primary Interest Holder Shire of Gnowangerup. The site is located on flat, mostly cleared land

Candidate	Address and Lot Number	Facility Type	Description
			<p>within the Industry Zone and is currently used as a Council depot.</p> <p>The site has good vehicle access and power is available on site.</p> <p>The site is in close proximity to a residential area, with closest dwelling approx. 140m to the north.</p> <p>While the proposed 60m tower will be visible from the nearby residential area, the presence of existing towers on the subject site will minimise the visual impact. Clustering with the existing towers in an Industrial Zone is a favourable planning outcome, rather than constructing a new tower on another site where they will be more prominent.</p> <p>This site also scored high for RF and TX assessments.</p> <p><b>For these reasons Candidate D2 was selected to accommodate the proposed facility.</b></p>
F	42 Quinn Street, Gnowangerup WA 6335	60m Lattice Tower	<p>No existing power supply/tenant in this property lot. Nearest power poles are around 120m away from the proposed candidate location at the intersection of Quinn Street and Corbett Street and the other pole at intersection of Quinn Street and Formby Street.</p> <p>This was also the least preferred location for TX when linking to Broomehill East. With the proposed structure likely needing to be 5m - 10m higher for LoS.</p> <p>This site would also be a new addition to the area, (not clustered with other existing towers like Candidate D2).</p> <p>For these reasons, as Candidate F was not selected.</p>
G	15 Corbett Street, Gnowangerup WA 6335	60m Lattice Tower	<p>This was not a preferred location for TX when linking to Broomehill East. With the proposed</p>

Candidate	Address and Lot Number	Facility Type	Description
			<p>structure likely needing to be 5m -10m higher for LoS.</p> <p>This site would also be a new addition to the area, (not clustered with other existing towers like Candidate D2.</p> <p>For these reasons, as Candidate G was not selected.</p>

## 4 SUBJECT SITE & SURROUNDS

The telecommunications facility is proposed to be located at 71 Cecil Street, Gnowangerup WA 6335 (Lot 403 on DP186033).

This is a Council depot site on the edge of town, with good existing vehicle access (no upgrades required) and power connections available (upgrade required). The site on the southwest side of the lot was selected to be well away from Council assets and buildings.



Figure 3 Locality Map

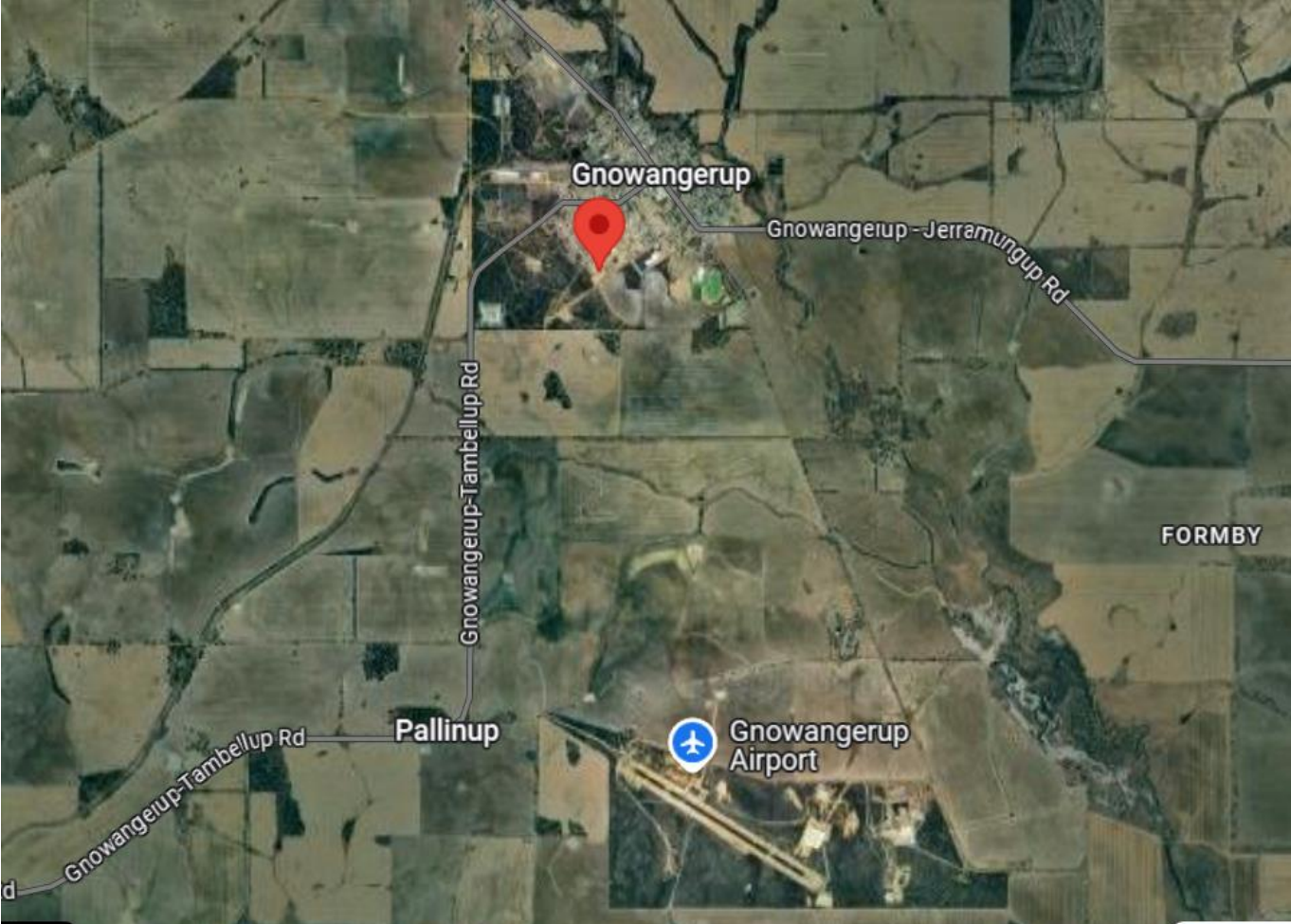


Figure 4 Site Map

The lot is of standard rectangular shape and contains Council depot buildings and lattice communication towers (x2).

The lot is flat and generally cleared of vegetation.

The lot is within the Industrial Zone and generally well separated to dwellings (closest dwelling 140 metres away).

The site is over 3.5km from the Gnowangerup Airport, which is a certified CASA aerodrome. No Obstacle Limitation Surface (OLS) mapping can be found for this airport. It is noted that only structures greater than 100m require referral to CASA as per Section 139 of the Civil Aviation Safety Regulations 1998.

A tall structure report will still be provided to CASA given the structure height.

# 5 THE DEVELOPMENT APPLICATION

## 5.1 The nbn™ Fixed Wireless Facility and Equipment Details

The development application seeks approval for the use and works of a telecommunications facility, comprising a 60-metre lattice tower, antennas, transmission equipment and ground equipment within a secure compound which measures approximately 120m<sup>2</sup>.

The specific components of the proposed installation are described below:

- A 60m lattice tower (total height of 60.5m);
- A triangular headframe on the lattice tower;
- A 1200mm parabolic dish antenna and nine (x9) NBN RF panel antennas;
- A 2.7m high chain-link security compound fence (compound area 10m x 12m), with 3m wide access gate;
- Three (x3) outdoor equipment cabinets at ground level, adjacent to the proposed tower.
- Associated feeder cables that will run underground from the equipment cabinets, and then internally within the tower to the antennas;
- The installation of underground **nbn™** power mains approximately 130m long; and
- Ancillary equipment associated with operation of the proposed facility.

This **nbn™** Fixed Wireless facility is a wireless hub site within the network, providing **nbn™** broadband coverage to Gnowangerup.

**Figure 5** below identifies the location of the structure (Candidate D2).



**Figure 5 Site Location**

Please refer to the proposed drawings in **Appendix A** for details of the facility and site compound.

## 5.2 Construction Schedule

During the construction phase, trucks will be used to deliver the equipment to the site and a crane will be utilised to lift the equipment into place. Any traffic impacts associated with construction will be of a short-term duration and are not anticipated to adversely impact on the surrounding road network. In the unlikely event that road closure will be required, **nbn™** will apply to the relevant authorities for permission.

A total construction period of approximately ten weeks (including civil works and network integration and equipment commissioning) is anticipated.

Construction activities will involve four basic stages:

- Stage 1 (Week 1) – Site preparation works, including field testing, excavation and construction of foundations;
- Stage 2 (Weeks 2, 3 and 4) – Construction of the lattice tower;
- Stage 3 (Weeks 5 and 6) – Construction of the equipment shelter and fences;
- Stage 4 (Weeks 7 – 10) – Installation of antennas and radio equipment, as well as equipment testing.

Once operational, the facility will function on a continuously unstaffed basis and will typically only require maintenance works three times a year.

# 6 RELEVANT PLANNING LEGISLATION AND CONTROLS

## 6.1 Commonwealth Legislation

As a licensed telecommunications carrier, **nbn**<sup>™</sup> must operate under the provisions of the *Telecommunications Act 1997* and the following supporting legislation:

- *Telecommunications Code of Practice 2021* (as amended);
- *Telecommunications (Low-impact Facilities) Determination 2018* (as amended); and
- *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

### 6.1.1 Telecommunications Act 1997

This legislation establishes the criteria for ‘low impact’ telecommunication facilities. If a proposed facility satisfies the requirements of a ‘low impact’ facility, the development is exempt from the planning approval process.

Further clarification of the term ‘low impact’ is provided in the Telecommunications Act 1997 and the *Telecommunications (Low Impact Facilities) Determination 2018*, which was gazetted subsequent to the Act. The *Telecommunications (Low Impact Facilities) Determination 2018* establishes certain facilities, which cannot be considered ‘low impact’ facilities.

The proposed facility is not considered to be low impact under the definitions contained in the Commonwealth legislation as it involves the construction of a new lattice tower.

### 6.1.2 Telecommunications Code of Practice 2021

The Federal Government established the Telecommunications Code of Practice 2021, setting out the conditions under which a carrier must operate when undertaking a prescribed activity. However, it is noted that construction of a new lattice tower under a planning permit application would not fall under a prescribed activity. The code of practice sets out design, planning and installation requirements for carriers to install facilities in accordance with industry ‘best practice’, and to:

“... minimise the potential degradation of the environment and the visual amenity associated with the facilities.” [Section 1A.4(3), Telecommunications Code of Practice 2021].

Best practice also involves the carrier complying with any relevant industry code or standard that is registered by the Australian Communications and Media Authority (ACMA) under Part 6 of the Act.

### 6.1.3 Telecommunications (Low-impact Facilities) Determination 2018

The *Telecommunications (Low-impact Facilities) Determination 2018* identifies both the type of facilities that can be “Low-impact”, and the areas in which these facilities can be installed. Importantly, this current facility is not defined as a “low impact facility” and is therefore subject to State and Territory Planning Laws and Regulation.

### 6.1.4 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* obliges telecommunications carriers to consider ‘matters of national environmental significance’. Under this legislation, an action will require approval from the Minister of Environment if the action has or is likely to have an impact on a matter of ‘national environmental significance’. According to the *EPBC Act 1999*, there are seven matters of national significance which must be considered.

All relevant EPBC matters have been considered. It is not anticipated that the proposal will have a significant impact on any matters of national environmental significance. Accordingly, approval from the Minister of Environment is not required in this instance.

## 6.2 Planning and Development Act 2005

The principal legislation regulating land use and development in WA is the *Planning and Development Act 2005 (P & D Act)*.

The project is consistent with the relevant provisions of the *P & D Act* as it promotes the sustainable use and development of land.

### 6.2.1 Planning and Development (Local Planning Schemes) Regulations 2015

The *Planning and Development (Local Planning Schemes) Regulations 2015* outline the requirements for development approval.

The project meets required development provisions to enable approval including consistency with the local planning scheme.

## 6.3 State Environmental Planning Schemes and Policy

### 6.3.1 Metropolitan Region Scheme

Pursuant to the Clause 22 of the Metropolitan Region Scheme, the site has local government zoning and therefore is subject to local authority approval only.

It is also noted that the site is not subject to any metropolitan region scheme zoning.

### 6.3.2 SPP 5.2 Telecommunications Infrastructure

The project has been assessed against the SPP5.2 Telecommunications Infrastructure and is consistent with this policy.

Table 5. Response to policy measures of State Planning Policy 5.2: Telecommunications Infrastructure

5 Policy Measures	
<b>5.1 Visual Impacts</b> For telecommunications infrastructure to be effective, structures are generally located prominently, at high points in the landscape or on top of buildings, where they are more likely to be visible to the public. The planning authority may exercise discretion in addressing the visual impacts of telecommunications infrastructure. Visual impacts of an infrastructure development proposal should be assessed by applying the following set of policy measures to guide the location, siting and design of the structure.	
<b>5.1.1 The benefit of improved telecommunications services should be balanced with the visual impact on the surrounding area.</b>	
Measure	Comments
i) Assessment of the visual impact of development proposals for telecommunications infrastructure should be made on a case-by-case basis;	Noted

<p>ii) Telecommunications infrastructure should be sited and designed to minimise visual impact and whenever possible:</p>	<p><b>COMPLIES</b></p> <p>State Planning Policy 5.2 (Telecommunications Infrastructure) does not state that proposed telecommunication infrastructure can have no impact on visual amenity.</p> <p>Rather the State Administrative Tribunal has continuously ruled that it will be unavoidable that telecommunications facilities will have a visual impact.</p> <p>The proposed telecommunication infrastructure has been designed and sited to minimise visual impact, as far as possible without detracting from the objective of delivering a telecommunications network to the community. This has been done by clustering the proposed lattice towers with other existing communication towers on site and locating the site on an industrial lot on the outskirts of town, well separated to dwellings.</p>
<p>a) be located where it will not be prominently visible from significant viewing locations such as scenic routes, lookouts and recreation sites;</p>	<p><b>COMPLIES</b></p> <p>The proposed lattice tower will not be prominently visible from any significant viewing locations. As there are no such locations in the nearby vicinity.</p>
<p>b) be located to avoid detracting from a significant view of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land;</p>	<p><b>COMPLIES</b></p> <p>There are no existing views of heritage items, significant landmarks, or panoramas on, or nearby, the site.</p>
<p>c) not be located on sites where environmental, cultural heritage, social and visual landscape values may be compromised and</p>	<p><b>COMPLIES</b></p> <p>The proposal is on gently sloping cleared reserve land with no environmental, social, visual or cultural significance.</p> <p>Whilst the site is within Aboriginal Cultural Heritage (ACH) Register, the site is highly disturbed and developed with no specific heritage places on site.</p>
<p>d) display design features, including scale, materials, external colours and finishes that are sympathetic to the surrounding landscape;</p>	<p><b>COMPLIES</b></p> <p>External finishes and materials will be sympathetic to the surrounding landscape with factory grey finish and non-reflective.</p>
<p>iii) In addition to the existing exemptions under the Telecommunication Act, local governments should consider exempting telecommunications</p>	<p><i>Noted – no such exemptions are provided in the Gnowangerup planning scheme.</i></p>

<p>infrastructure from the requirement for development approval where:</p> <p>a) The infrastructure has a maximum height of 30 metres from finished ground level;</p> <p>b) The proposal complies with the policy measures outlined in this policy; and</p> <p>c) The proponent has undertaken notification of the proposal in a similar manner to ‘low impact facilities’ as defined and set out in the Mobile Phone Base Station Deployment Industry Code (C564:2011);</p>	
<p>iv) Telecommunications infrastructure should be located where it will facilitate continuous network coverage and/or improved telecommunications services to the community; and</p>	<p><b>COMPLIES</b></p> <p>The proposal meets the RF and TX objectives of <b>nbn™</b> networks, providing the required coverage to the Gnowangerup area.</p>
<p>v) Telecommunications infrastructure should be collocated and whenever possible:</p>	<p><b>COMPLIES</b></p> <p>Colocation opportunities were explored and did not meet required RF or TX objectives.</p>
<p>a) Cables and lines should be located within an existing underground conduit or duct; and</p>	<p><b>COMPLIES</b></p> <p>Existing conduits will be utilised where possible.</p>
<p>B) Overhead lines and towers should be co-located with existing infrastructure and/or within existing infrastructure corridors and/or mounted on existing or proposed buildings</p>	<p><b>COMPLIES</b></p> <p>No overhead lines are proposed.</p>

### 6.3.3 State Planning Policy

The site is impacted by SPP 3.7 Bush Fire Prone Area.

State Planning Policy 3.7 Planning in Bushfire Prone Areas identified bushfire prone areas across the State. Section 6.7 of this policy states *‘there is a presumption against introduction or intensification of development or land use in an area that has or will, on completion, have an extreme BHL and/or where BAL-40 or BAL-FZ applies unless it meets the definition of unavoidable development’*.

S5.7 of the 2021 Guidelines for Planning in Bushfire prone Areas State Planning *‘Unavoidable development may include critical State infrastructure such as railway lines, telecommunication facilities, ...Applications for unavoidable development will only be supported where they meet the policy requirements of SPP3.7’*.

S5.4 of the Guidelines also exempt unavoidable development from bushfire criteria (i.e. Maximum BAL ratings).

Therefore, no further consideration of bushfire risk is required.

## 6.4 Local Government Regulatory Framework

Shire of Gnowangerup Local Planning Scheme No.2

This application is seeking to obtain a planning permit for the use and works of telecommunication infrastructure which is defined under the Planning Scheme as:

*means land used to accommodate any part of the infrastructure of a telecommunications network and includes any line, equipment, apparatus, tower, antenna, tunnel, duct, hole, pit or other structure used, or for use in or in connection with, a telecommunications network;*

### 6.4.1 Zoning

The subject lot is zoned Industrial under the Shire of Gnowangerup Local Planning Scheme No.2. Within Table 1 – Zoning Table of the planning scheme, telecommunication infrastructure in the industrial zone is listed as 'D' meaning that the use is not permitted unless the local government has exercised its discretion by granting planning approval.

The Industrial Zone aims to;

- *To provide for manufacturing industry, the storage and distribution of goods and associated uses, which by the nature of their operations should be separated from residential areas.*

The proposal is consistent with the objective of the zone by not impacting the operation of an existing uses on site, or the potential future industrial use of the lot. This is done by selecting a small compound area of 120m<sup>2</sup> on the edge of the lot on the southwest side.



Figure 6 Zoning Map and Location of the Site

### 6.4.2 Development within the Industry Zone

Provision 5.12 *Development within the Industry Zone* requires development to:

*5.12.1 The impact of development within the Industry Zone is to be contained within the extent of that zone in terms of odour, electrical interference, fumes, service, vapour, steam or other potentially negative outputs.*

*5.12.2 Subdivision within Industry Zone is to be in accordance with a guide plan adopted by the local government which provides for remnant vegetation protection and waterway protection and where considered appropriate by the local government, visual amenity as viewed from Residential Zones and public roads to the local government's satisfaction.*

As outlined above, the proposal is for a non-industrial use that will not proposal is consistent with the objective of the zone by not impacting the operation of an existing uses on site, or the potential future industrial use of the lot. No subdivision is proposed.

## 7 LIKELY IMPACTS OF THE DEVELOPMENT

### 7.1 Visual Impact

While the proposed 60m tower will still be visible from the residential area in the township, the presence of existing communication towers on the subject site will minimise the visual impact. Clustering with the existing towers in an Industrial Zone is a favourable planning outcome, rather than constructing a new tower on another site where they will be more prominent.

The site is also located on the edge of town and away from main roads which will further reduce its prominence. External finishes and materials will be sympathetic to the surrounding landscape with factory grey finish and non-reflective.

### 7.2 Flora and Fauna

The site is largely cleared of vegetation and altered, therefore no further assessment on flora and fauna is required.

### 7.3 Aboriginal and Non-Aboriginal Heritage

Whilst the site is within Aboriginal Cultural Heritage (ACH) Register, the site is highly disturbed and developed with no specific heritage places on site. No further assessment aboriginal cultural heritage is therefore required.

### 7.4 Bushfire Risk

Whilst the site is within a Bush Fire Prone Area, no further assessment for telecommunications infrastructure is required.

### 7.5 Electrical Interference

The **nbn**<sup>™</sup> fixed wireless network is licensed by the Australian Communications and Media Authority (ACMA) for the exclusive use of the OFDMA9800 frequency band. As **nbn**<sup>™</sup> is the exclusive licensee of this sub-band, emissions from **nbn**<sup>™</sup> equipment within the frequency band should not cause interference.

Filters will also help to ensure that each facility meets the ACMA specifications for emission of spurious signals outside the **nbn**<sup>™</sup> frequency allocations. **nbn**<sup>™</sup> intends to promptly investigate any interference issues that are reported.

## 7.6 Erosion, Sedimentation Control and Waste Management

All erosion and sediment control mitigation measures will comply with the Building Code of Australia, The Blue Book, and local Council standards where applicable. In addition, contractors must comply with the 'nbn<sup>™</sup> Construction Specification' that requires contractors to undertake the necessary erosion and sediment control measures to protect the surrounding environment.

## 7.7 Traffic Generation

After the construction period, the only traffic generated by the base station will be that associated with maintenance vehicles. In this respect, it is estimated that maintenance of the facility will generate only three to four visits per year and will remain unattended at all other times. The traffic generation will therefore be minimal and not sufficient to create any adverse impacts.

## 7.8 Utility Services

All services required for the ongoing operation of the base station are capable of being provided to the facility without impacting on the supply or reliability of these services to any existing consumers in the locality.

## 7.9 Noise

Noise and vibration emissions associated with the proposed facility will be limited to the initial construction phase. There will be some low-level noise from the ongoing operation of air conditioning equipment associated with the equipment shelter, once installed. Noise emanating from the air conditioning equipment is at a comparable level to a domestic air conditioning installation and will generally accord with the background noise levels prescribed by Australian Standard AS1055.

## 7.10 Social and Economic Impacts

Access to fast internet is an essential service in modern society. Initially, small to medium business customers accounted for a significant part of the demand for broadband technology, but internet services have now been embraced by the general public. Usage of internet services continues to widen as new technologies become progressively more affordable and accessible to the wider community.

The new **nbn**<sup>™</sup> network is designed to provide the community with access to fast and reliable internet services. A reliable internet service is important to help promote the economic growth of communities, and the facility is anticipated to have significant social and economic benefits for the local community.

## 7.11 Public Safety – Radiofrequency Emissions

In relation to public safety and specifically Electromagnetic Emissions (EME) and public health, **nbn**<sup>™</sup> network operates within the operational standards set by the Australian Communication and Media Authority (ACMA) and Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). ARPANSA is a Federal Government agency incorporated under the Health and Ageing portfolio and is charged with the responsibility for protecting the

health and safety of both people and the environment from the harmful effects of radiation (ionising and non-ionising).

All **nbn**<sup>™</sup> network installations are designed and certified by qualified professionals in accordance with all relevant Australian Standards. This helps to ensure that the **nbn**<sup>™</sup> facility does not result in any increase in the level of risk to the public.

This facility is to be operated in compliance with the mandatory standard for human exposure to EME. The EME Report associated with this site is attached in Appendix B. The report shows that the maximum predicted EME will well within the maximum exposure limit.

Moreover, all **nbn**<sup>™</sup> network equipment has the following features, all of which help to minimise the amounts of energy used and emitted:

- Dynamic/Adaptive Power Control is a network feature that automatically adjusts the power and hence minimises EME from the facility.
- Varying the facility's transmit power to the minimal required level, minimising EME from the network, and
- Discontinuous transmission, a feature that reduces EME emissions by automatically switching the transmitter off when no data is being sent.

## 7.12 The Public Interest

The public benefits of access to high quality broadband have been widely acknowledged for many years. Broadband access is now more than ever considered an integral component of daily life, so much so that its absence is considered a social and economic disadvantage.

Across the Gnowangerup LGA, the Fixed Wireless network is designed to service rural and rural residential communities that have traditionally been significantly disadvantaged both in terms of basic access to broadband and in terms of the quality and reliability of broadband that these communities receive.

The Government's National Map illustrates the substantial disparity and inequity in service between larger townships and smaller communities, and often even within individual rural communities.

The proposed **nbn**<sup>™</sup> facility is expected to have significant benefit for residents, businesses and educational establishments in Gnowangerup. It will assist by providing improved internet services within the area. Furthermore, the proposal has been designed to minimise environmental impact.

## 8 Conclusion

The **nbn**<sup>™</sup> facility proposed has been sited in a manner which allows **nbn**<sup>™</sup> to provide broadband services to Gnowangerup effectively and efficiently. The facility has been strategically sited and designed to ensure that the target coverage area is able to be provided with **nbn**<sup>™</sup> broadband services and that line of sight will be able to be achieved to an adjoining facility.

The selected site is clustered with existing communication towers, is largely free of environmental constraints, will not impact the objectives of the zone and is separated from dwellings within the township.

The proposed **nbn**<sup>™</sup> facility is expected to have significant benefit for residents, businesses and educational establishments in the Gnowangerup area. It will assist by providing improved internet services and contribute socially and economically within the area. Furthermore, the proposal has been designed to minimise environmental impact.

Given the considerable merit of this application, we respectfully request that Council considers the limited impacts and expected public benefits of the proposed facility in assessing this Development Application.

## Appendix A – Proposal Drawings

## Appendix B – EME

## **Appendix C– Application form and owner’s consent**

# Electromagnetic energy report

Location	GNOWANGERUP, 71 Cecil Street, GNOWANGERUP WA 6335		
Date	01/04/2025	RFNSA No.	6335008

This report contains **calculated** electromagnetic energy (EME) exposure levels from the wireless technology base station listed above.

EME levels for this site have been **calculated** as a percentage of the limit given by the [Australian Safety Standard](#). This report is produced according to a technical [methodology](#) developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

*EME levels below 100% comply with the Australian Safety Standard and are safe for the public.*

## Service operators and technology at the site

NBN				
4G, 5G				

For more information on the infrastructure at this site, such as specific wireless technologies, visit <http://www.rfnsa.com.au/6335008>.

## Calculated EME levels

Areas of interest	Maximum EME level (% of limit)	Safe level (<100%)
Environmental EME Level (1.5m above ground out to 500m from site)	4.05%	YES
No locations identified		

## About electromagnetic energy

Many things in our everyday lives produce electromagnetic energy including natural sources like the sun, and artificial sources like broadcast media, electric power, microwave ovens, and wireless technology like Wi-Fi and mobile phones.

The EME that you are exposed to from mobile phone towers is low, and similar to your exposure from broadcast transmissions such as radio and TV.

It is the [assessment of ARPANSA](#) that there is no credible health risk from exposure to the low-level EME associated with telecommunications and wireless technology below the limits set in the Australian Safety Standard.

## Further information

**ARPANSA** (The Australian Radiation Protection and Nuclear Safety Agency) [www.arpansa.gov.au](http://www.arpansa.gov.au)

**ACMA** (The Australian Communications and Media Authority) [www.acma.gov.au/eme-5g-and-you#eme](http://www.acma.gov.au/eme-5g-and-you#eme)