

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Waimakariri District Council's Proposed District Plan

Hearing Streams 1 and 2 regarding: - Strategic Directions, Urban Form and Development and Sites and Areas of Significance to Māori

JOINT STATEMENT OF EVIDENCE OF

GRAEME MCCARRISON FOR

SPARK TRADING NEW ZEALAND LTD

AND

ANDREW KANTOR FOR CHORUS NEW ZEALAND LTD

AND

COLIN CLUNE FOR

ONE NZGROUP LTD (FORMERLY VODAFONE NEW ZEALAND LTD) AND

FORTYSOUTH

AND

FIONA MATTHEWS FOR

CONNEXA LTD

IN RELATION TO HEARING STREAMS 1 & 2 OF WAIMAKARIRI DISTRICT COUNCIL'S PROPOSED DISTRICT PLAN

28 APRIL 2023

1. EXECUTIVE SUMMARY

- 1.1 Spark, One NZ (formerly Vodafone), Chorus, and two recently established infrastructure companies, Connexa and FortySouth welcome the opportunity to provide this evidence. Connexa and FortySouth are responsible for, building, owning, operating, and maintaining the mobile tower infrastructure which Spark and One NZ attach their network equipment. Spark and One NZ remain telecommunication network operators providing customers the opportunity for digital connectivity. The diagrams in Appendix 1 give a general understanding of what each organisation is responsible for and highlights the split between passive structures and the active components of the Spark and One NZ wireless networks.
- 1.2 Telecommunications providers provide critical communications infrastructure that connects communities, promoting inclusivity, supports economic and environmental objectives, and is a critical part of our response to climate change. Telecommunications infrastructure is further highly dynamic and - unlike other infrastructure sectors - our network requirements are changing and evolving constantly and at a fast pace. Telecommunications infrastructure providers invest over \$1.5 billion every year¹ to maintain existing communications services, add capacity and resiliency to existing networks and connect new communities. For example, the increasing densification of the urban environment means we expect to replace over 40 towers every year to maintain existing services.
- 1.3 In parallel, Spark and One NZ are currently rolling out new 5G mobile networks, deploying over 1,000 new mobile sites and extending network coverage to regional communities. Chorus continues to expand its fibre network in urban and small rural settlements. The continuous technology upgrades are needed to keep up with the increasing demand from consumers and businesses – exponential growth in the use of data is continuing and each year the amount of data handled by telecommunications networks roughly doubles². Chorus, Spark, One NZ, and Connexa, along with other telecommunication providers, invest significantly every year in our networks to ensure New Zealanders have access to world class digital services.

¹ The New Zealand Commerce Commission, [Annual Telecommunications Monitoring Report – 2021 Key Facts](#), 17 March 2022 [at p25].

² The New Zealand Commerce Commission, [Annual Telecommunications Monitoring Report – 2021 Key Facts](#), 17 March 2022

- 1.4 Chorus is New Zealand's largest telecommunications infrastructure provider as a wholesale only provider of broadband services over fibre optic and copper networks..
- 1.5 Chorus is the Government's largest Ultrafast Broadband ("UFB") partner and recently completed the final stage of the UFB network build with fibre services now available to 87% of New Zealand addresses including 10 towns within the Waimakariri District.
- 1.6 We will present further corporate evidence at the Proposed District Plan Utilities hearing. The following evidence is focused on supporting our requested changes for recognition on the strategic directions, urban form and development and SASM.
- 1.7 We rely on regulatory frameworks both nationally, via the National Environmental Standards for Telecommunications Facilities 2016 (NESTF), and locally, via the Operative and Proposed Waimakariri District Plans, to appropriately enable the planning and funding for upgrading of existing networks and construction of new networks to support new growth areas and rural communities. The NESTF 2016 does not provide new telecommunication sites (cell-sites) in urban zones or in overlays such as SASM or Natural Features and Landscapes.
- 1.8 All network utility infrastructure is essential for new development and intensification. Strategic directions, objectives and policies ideally should give the same recognition to all network utility infrastructure. The specific listing of particular infrastructure such as three-waters infrastructure signals a preference or importance status above other infrastructure not listed. Consequently, we have requested that telecommunications, broadband and electricity be listed and recognised in key provisions where other council controlled or road controlling authority infrastructure is recognised. It is our experience that urban and rural communities cannot function without electricity and telecommunications infrastructure. In Aotearoa we are regularly reminded about the critical nature of electricity, telecommunications alongside water and roading infrastructure to our communities during and after natural disasters.
- 1.9 Given the extent of the sensitive natural features and landscapes alongside the sites and areas of significance to Māori, telecommunication infrastructure such and fibre and cellsites will need to be constructed in these areas. These areas are subject to growth and consequently high demand to new telecommunication services.

2. INTRODUCTION

Graeme McCarrison

- 2.1 My full name is Graeme Ian McCarrison. I am the Engagement & Planning Manager at Spark New Zealand Trading Limited ("Spark"), a position I have held since February 2015. I am authorised to give this evidence on Spark's behalf.
- 2.2 I hold the qualification of Bachelor of Regional Planning (Honours) from Massey University. I am a full member of the New Zealand Planning Institute and have 38 years' experience in New Zealand and overseas. I have been on the board of the New Zealand Planning Institute ("NZPI") since April 2018. Between 2012 and April 2015 I was the chairperson of the Auckland branch of the New Zealand Planning Institute. In 2016 I was honoured with a NZPI Distinguished Service Award, and I received a best practice award for iwi engagement from NZPI in 2015.
- 2.3 During the last 38 years I have worked in the public sector in Auckland including as Director of Regulatory Services at Papakura District Council, Planning Manager for Waitakere City Council and in the private sector as a self-employed consultant and as a consultant at Murray North Partners. For the last ten years I have worked in the telecommunications sector. Prior to Spark I held the equivalent position at Chorus NZ Limited ("Chorus") (November 2011 to January 2015), where I advised both Chorus and Spark on resource management and government matters. I am involved in the review of all regional and district plans plus any related local government documents that have the potential to enable or impact the telecommunications industry. During the review of the Christchurch District Plan process, I led and facilitated the combined approach of Spark, Chorus, One NZ, 2degrees and Enable during the three years of our involvement.
- 2.4 I facilitate and co-ordinate a wide group of network utility organisations with national interests. The purpose of this group is to share information, identify opportunities to collaborate and engage on key documents relevant to network utilities. To ensure that the telecommunication industries interests are represented I organise a shared approach and resources that enables Spark, Connexa, Chorus, One NZ and FortySouth to be involved at a national level in every relevant Plan review across New Zealand and relevant legislation which includes a submission on the Natural and Built Environments Act exposure draft. We are currently involved in plan reviews and related documents across New Zealand including Otago, Dunedin, Auckland, Timaru, Wellington, Waimakariri, McKenzie, Tararua, Napier, Hastings, Nelson, Tasman, Far North, and Central Hawkes Bay.

2.5 I represented the Telecommunications Forum (TCF) on the Technical Advisory Group for the NESTF alongside my colleagues Andrew Kantor – Chorus, Colin Clune – One NZ, and Ben Blakemore – 2 Degrees. Since the NESTF 2016 amendments, the group made up of representatives from the Ministry of Business, Innovation and Employment ("MBIE"), Ministry for the Environment ("MfE"), and Local Government New Zealand ("LGNZ") meet at least annually to discuss and review the effectiveness of the NESTF. We are currently working on amendments to the NESTF and the first national planning framework under the proposed Natural and Built Environments bill.

Colin Clune

2.6 My full name is Colin William Clune. I am the Resource Management Planning Advisor at One NZ New Zealand Limited (One NZ). A position I have held since October 2014. Previously, I was an in-house contractor for One NZ, (September 2010 to September 2014), where I advised One NZ on resource management and government matters. I am authorised to give this evidence on One NZ's behalf.

2.7 I am also acting in an advisory role to Fortysouth, a new independent digital infrastructure partner, founded in 2022. One NZ (Previously Vodafone NZ) announced the sale of One NZ's passive mobile tower infrastructure business to Aotearoa Towers Group LP (ATG), an entity owned by funds managed by leading global investors InfraRed Capital Partners and Northleaf Capital Partners (the Transaction). Fortysouth was created to manage the mobile tower infrastructure on behalf of Aotearoa Towers Group LP (ATG).

Andrew Kantor

2.8 My full name is Andrew Robert Kantor. I am Environmental Planning and Engagement Manager at Chorus, where I been employed since 2015. I am authorised to give this evidence on Chorus' behalf.

2.9 I hold the qualification of Master of Science (Environmental Science) from the University of Auckland and am an associate member of the New Zealand Planning Institute.

2.10 I have 16 years of resource management experience, comprising of roles for various infrastructure providers in New Zealand and overseas.

2.11 I am currently on the Technical Advisory Group for the NESTF amendments. I am also a participating member of the New Zealand Telecommunications Forum, working

to efficiently resolve regulatory, technical and policy issues associated with network telecommunications.

Fiona Matthews

2.12 My full name is Fiona Elisabeth Matthews. I am the Planning Manager at Connexa Limited (Connexa). I have held this position since October 2022. Previously, I was a Planner for Spark New Zealand, (May 2018 to September 2022), where I advised Spark on resource management and regulatory matters. I am authorised to give this evidence on Connexa's behalf.

2.13 I obtained a Bachelor of Science and a Post-Graduate Diploma of Environmental from Massey University. I have 12 years' experience in the resource management field, and in addition to my roles at Connexa and Spark I have had various local and central government roles. I hold an associate New Zealand Planning Institute Membership.

2.14 I am on the Technical Advisory Group for the National Environmental Standard Telecommunication Facilities amendments (NESTF amendments). I am also a participating member of the New Zealand Telecommunications Forum, which works to efficiently resolve regulatory, technical and policy issues associated with network telecommunications.

Scope of evidence

- 2.15 This statement of evidence covers the following areas:
- a. Critical and essential nature of telecommunication.
 - b. Inclusive approach to infrastructure
 - c. Connectivity experiences in Waimakariri district
 - d. National Environmental Standard for Telecommunication Facilities 2016
 - e. Telecommunications infrastructure in sensitive environments

3. CRITICAL AND ESSENTIAL NATURE OF TELECOMMUNICATION

3.1 Telecommunications infrastructure is critical and essential to a modern economy and connecting the 'system of systems' that supports New Zealand's economy and wellbeing of people and communities.

3.2 The Infrastructure Commission's discussion document on Infrastructure for a Better Future recognises the critical nature of telecommunications infrastructure. The report

notes that 'Increasing reliance on communications makes telecommunications infrastructure more critical.'³

- 3.3 Telecommunications plays a vital and important role in national resilience, demonstrated most recently through our national response to Covid-19, as recognised by the Infrastructure Commission: 'The Covid-19 pandemic is a reminder of the importance of a resilient, flexible and agile infrastructure system, as demonstrated, for instance, in the move to working from home, where telecommunications infrastructure has become a substitute for physical transport infrastructure.'⁴
- 3.4 New Zealand has multiple layers of networks (wireless, IoT and fixed line, plus satellite) and providers include:
- Wireless networks of Spark, One NZ, 2 degrees and Rural Connectivity Group (RCG) (a joint venture between Spark, One NZ and 2 degrees)
 - Fixed line networks operated by Chorus nationally and Enable in parts of Canterbury including Waimakariri. Note that Spark and One NZ have large fibre networks of their own.
 - Wireless Internet Service Providers (WISPs) – including Amuri Networks in Canterbury
 - International companies e.g. Starlink (SpaceX service), Amazon, Google
- 3.5 Our wireless telecommunications networks enable the provision of Emergency Mobile Alerts by the National Emergency Management Agency. These are messages about emergencies sent by authorised emergency agencies to capable mobile phones. The alerts are designed to keep people safe and are broadcast to all capable phones from cell towers within the emergency area.
- 3.6 Telecommunications infrastructure is a key enabler of future technologies that are expected to be one of the solutions to many of today's challenges, from climate change to lifting our productivity and innovation. The Climate Change Commission's final advice to the government for its emissions reduction plan notes precision agriculture as an example of the ways in which technology will help to improve

³ <https://www.infrastructure.govt.nz/assets/Uploads/Infrastructure-Strategy-Consultation-Document-June-2021.pdf>; p. 34

⁴ <https://www.infrastructure.govt.nz/assets/Uploads/Infrastructure-Strategy-Consultation-Document-June-2021.pdf>; p. 37

efficiency and reduce environmental impacts in agriculture – it requires digital connectivity and networks to be possible⁵.

- 3.7 The rollout of 5G and digital technology that it enables is critical to a well-functioning urban environment as it is widely expected to transform our cities and the ways in which we use other types of infrastructure⁶.

4. INCLUSIVE APPROACH TO INFRASTRUCTURE

- 4.1 It is our position that all infrastructure is critical and essential to supporting rural and urban communities. Consequently, policy and rule frameworks of the Proposed District Plan should not give priority or undue recognition over other infrastructure. Strategic directions, objectives and policies ideally should give the same recognition to all network utility infrastructure. The inclusion of specific listing of particular infrastructure as three-waters infrastructure signals a preference or importance status above other infrastructure not listed. We have requested that telecommunications, broadband and electricity be listed and recognised in certain strategic level provisions in the Proposed Plan. It is our experience that communities urban and rural cannot function without electricity and telecommunications infrastructure. In Aotearoa we regularly remembered about the critical nature of electricity, telecommunications alongside water and roading infrastructure to our communities during and after natural disasters.
- 4.2 The housing crisis, climate change, need protect environments such as our highly productive soils and bio-diverse environments triggered central government initiatives including the National Policy Statement Urban Development 2020 (NPS-UD) and Urban Development Act 2020 for the purpose of enabling urban development projects initiated, facilitated, or undertaken by Kāinga Ora–Homes and Communities and Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021. The latter significantly changes the traditional residential standards with an assumption of being able to build additional houses on the majority of residential zoned land and up to a height of 12m at the roof pitch.
- 4.3 The NESTF provisions are inadequate to accommodate new and upgraded cellsites to ensure that the antennas are higher than the building to ensure radiofrequency emissions compliance with regulation 55 of the NESTF and continue to provide

⁵ <https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf>; p. 306

⁶ <https://www.5gradar.com/features/what-is-5g-these-use-cases-reveal-all>

connectivity and coverage to the surrounding community. Recognition in the strategic objectives such as SD-02 and UFD policies of the need for telecommunications and connectivity as these set the direction for the lower order plan provisions including infrastructure which is critical both for applying for resource consents and suitably taking onto account infrastructure capacity and connections in land use change and development. [

Commented [CH1]: I think we are better to say sets the direction for the lower order plan provisions including infrastructure which is critical both for applying for resource consents and suitably taking onto account Infrastructure capacity and connections in land use change and development??

5. CONNECTIVITY EXPERIENCES IN WAIMAKARIRI DISTRICT

5.1 Waimakariri, Selwyn alongside Christchurch city are fast growing areas of Canterbury as witnessed by the number of plan changes (private and Council) for rezoning land to urban. We have submitted to highlight need to have policy and rules to ensure access to telecommunications in the growth areas both greenfields and intensified existing communities. It's been our experience that telecommunication networks infrastructure is not generally designed into the developments, especially provision for new cell-sites and occasionally fibre.

5.2 The Canterbury Mayoral Forum commissioned an independent assessment on connectivity challenges across the region including Waimakariri district. While the project focuses on black spot areas on the roading network it highlights the challenges to mobile/wireless coverage in Canterbury. The final report is dated December 2021 with recommendations recognises:

This project was initiated by the Canterbury Mayoral Forum which is made up of the Chair of Environment Canterbury and the Mayors of the 10 territorial authorities in Canterbury and followed on from Phase 1 of the project, which focussed solely on state highways and was delivered March 2021.

In our increasingly connected world, having access to mobile coverage in as many areas as possible is becoming enormously valuable and in some cases even essential for day to day operations. The Mayoral Forum recognises this significance and wanted to better understand the potential economic and social benefits of reducing mobile blackspots on improved productivity and logistics, safety and emergency operations and the tourism sector.

5.3 The purpose of understanding the research is to have information alongside a ground testing process to enable Canterbury to advocate for targeted investment in mobile telecommunications infrastructure where it is likely to have the greatest impact on economic and social development in the region.

5.4 Over the last 12 months local MPs Sarah Pallett, Matt Dooney and Stuart Smith have been championing connectivity challenges being experienced by a range of communities across the Canterbury region. This includes connectivity in growth areas especially when the expansion of the mobile network has not been able to expand. This partly due to council and developers not talking to network providers to design both fibre and wireless connectivity into the growth areas.

5.5 There are common aspects to connectivity complaints received by the MPs, and Councillors representing the north canterbury communities but also by Spark, One NZ and Chorus, these are broadly:

- Limited or no wireless coverage;
- Wireless coverage but no capacity in the mobile networks to connect new customers;
- Fibre is not available;
- Copper network does not always support the digital expectations of users to access the digital services commonly available;
- Inability to effectively work from home.

4.6 Part of the solution to improving connectivity is to ensure that the regulatory regime including the District Plan supports provision of telecommunications within Waimakariri.

6. NATIONAL ENVIRONMENTAL STANDARD FOR TELECOMMUNICATION FACILITIES 2016

6.1 We rely primarily on the regulatory framework of the NESTF to upgrade the existing network and build new telecommunications infrastructure in roads and in rural zoned areas. Significant elements of telecommunication networks are provided for as permitted activities, reflecting their importance as a significant physical resource. However, regulated activities not complying with the relevant permitted activity standards in the NESTF remain subject to the relevant district plan. Resource consents to add additional height or build new higher cell sites triggered the new medium density developments as our cell sites need to be taller than these new buildings. Further, subpart 5 of the NESTF identifies certain types of district plan rules such as Sites and Areas of Significance to Māori and sensitive natural and built environments including Outstanding Natural Landscapes which still apply to regulated activities and where resource consent would otherwise be required in the relevant district plan.

- 6.2 Poles, antennas and cabinets are subject to all of these controls, whilst customer connection lines, aerial lines following existing telecommunications or power lines and underground lines may only be subject to some of these matters depending on circumstances. District Plan rules apply to new cell sites in urban zones as these are not covered by the NESTF 2016. District rules still apply to regulated activities in regard to the following:
- (a) Regulation 44 - Trees and vegetation in road reserve;
 - (b) Regulation 45 - Significant (scheduled) trees;
 - (c) Regulation 46 – Historic heritage (including cultural heritage);
 - (d) Regulation 47 – Visual amenity landscapes (e.g. significant ridgelines, view shafts etc);
 - (e) Regulation 48 – Significant habitats for indigenous vegetation;
 - (f) Regulation 49 – Significant habitats for indigenous fauna;
 - (g) Regulation 50 – Outstanding natural features and landscapes;
 - (h) Regulation 51 – Places adjoining the coastal marine area (in regard to specific coastal protection rules such as coastal yards etc); and
 - (i) Regulation 52 – Rivers and lakes (the regulations do not apply to works in, on, under or over the bed of any river, except that they apply to anything done over a river or a lake such as on a bridge).⁷ Regulation 52 confirms that any relevant regional rules apply in addition to the regulations that may be relevant.
- 6.3 Given the above, we constantly face challenges as a result of councils administering the NESTF particularly when it comes to determining which or if any regional or district plan provisions apply to a proposal. It can be difficult and complex especially when a proposal is in one or multiple sensitive environments (NESTF Subpart 5 environments). Within Waimakariri the permitted activities such building new cell sites in road under in settlements such as a large area Kaiapoi, Pegasus, Woodend or the beach communities the NESTF will not apply due to the SASM overlays. This area of north Canterbury is the subject to numerous and on-going complaints about the poor level of service especially to the mobile networks.
- 6.4 The NESTF enables the construction of the following (not a comprehensive list):
- New and upgrading of cabinets in the road reserve and outside the road reserve
 - Antennas on new poles in the road reserve
 - replacement, upgrading and co-location of existing poles and antennas outside road reserve in rural and urban areas
 - new poles and antennas in rural areas
 - telecommunications lines (underground, on the ground and overhead).

⁷ NESTF Regulation 8.

6.5 The district plan provides for:

- new poles and antennas in the urban zones
- provision for customer connections
- policy framework
- regulated equipment in all areas not meeting NESTF permitted standards
- consenting framework for sensitive overlays, subpart 5 matters of the NESTF.

6.6 Within the roads are the old copper and new fibre networks. The majority of the new fibre network is underground and requires earthworks to lay it. Commonly the earthworks are laid a depth of 0.5m to 1.0m. To enable to customers to connect to the fixed line network ie fibre a customer connection has to be taken from the distribution line in the road into the customer property. Generally, customer connections are underground and require shallow earthworks.

6.7 It is noted that there are existing national critical fibre distribution lines in state highway 1 as shown on the following map.



Key

Spark – pink 1337km

Chorus - blue (noting that Spark and others will have commercial issues) 7742km

Other providers teal blue (noting that Spark and others will have commercial issues) 630km

- 6.8 A cell tower and cabinets constructed in the road or on private property has normally small approximately 5 to 10m³ and shallow, approximately 1m to 1.5 depth, earthwork requirement. Structural requirements for a specific location can increase or change the standard construction design.

- 6.9 We are anticipating the need to apply for more resource consents to establish cellsites in areas with medium density developments as of the NESTF not being fit for purpose as shown in the following examples.



- 6.10 The attached photos above and below are from a new Kainga Ora development being built in Northcote, Auckland. The light pole shown in the photo's measures approx. 6m tall and 155mm wide. The adjacent buildings measure 10m in height. The light poles are too low and narrow to be able to use NESTF regulations 26 and 27 for antennas on existing poles in the road and regulations 28 and 29 for new poles in the road. The 10m residential buildings are below the 15m minimum height for residential houses under regulations 36 and 37. Consequently, the NESTF provides no permitted options, therefore we depend on the district plan to enable wireless connectivity for intensified development areas. These will be controlled activities under regulation 14 if the proposal is a permitted activity under the district plan.



7. TELECOMMUNICATIONS INFRASTRUCTURE IN SENSITIVE ENVIRONMENTS

- 7.1 Waimakariri recognised the diversity of amazing and sensitive natural features and landscapes alongside the sites and areas of significance to Māori. It can be extremely challenging to provide telecommunications network because the infrastructure needs to traverse sensitive landscapes and other significant environments into locations that communities or businesses expect coverage and services. There will no doubt be

times when infrastructure is required to be located in sensitive environments to support and service both urban and rural environments. Given this, it is critical that the proposed Waimakariri provide an enabling framework that recognises the functional and operational needs of such infrastructure to locate in sensitive environments.

- 7.2 Building telecommunication infrastructure in the road that already traverse protected and sensitive environments in Waimakariri District such as the SASM or ONL is a common and practical location to build. The road environment in particular has previously been disturbed and is a recognised corridor for infrastructure, more than just roading/transport.
- 7.3 We recognise and respect the Wāhi Tapu overlay are buffer areas around silent file areas. As indicated in our submission we are happy to work with the Council and Ngāi Tūāhuriri on any rule amendments.

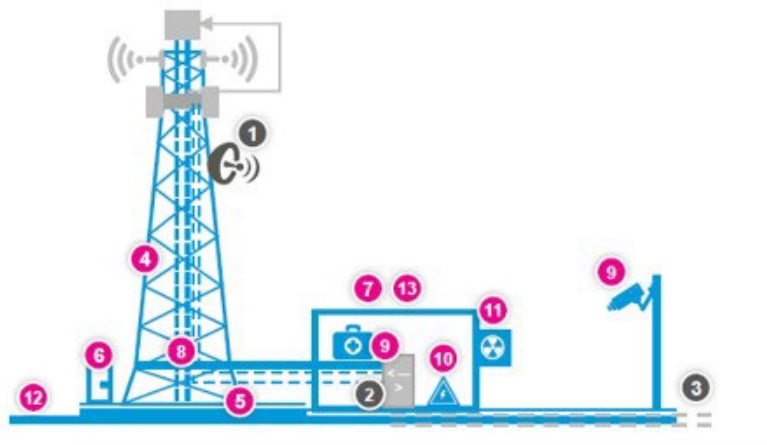
GRAEME MCCARRISON, COLIN CLUNE, ANDREW KANTOR, AND FIONA MATTHEWS

28 April 2023

Appendix 1 Connexa & FortySouth

Spark / Connexa asset split on a typical macro tower

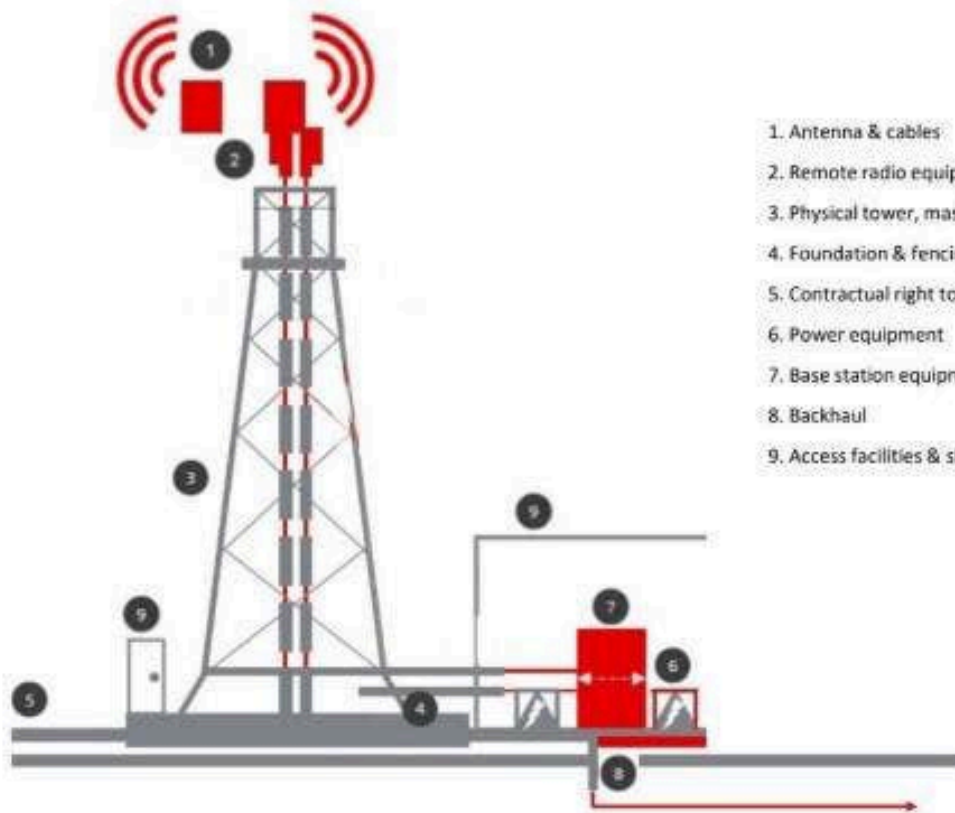
Standard configuration of a Macro tower



Asset / Equipment	Ownership
1 Active radio-transmission equipment	Spark / third parties
2 Backhaul router	
3 Backhaul fibre	
4 Transmission masts and towers	Connexa
5 Fencing / gates	
6 Access facilities	
7 Huts (incl. rack space and cabinets)	
8 Rooftop walkways / ladders	
9 Fire suppression and security systems ⁽²⁾	
10 DC power, back-up generators and batteries	
11 Airconditioning units	
12 Mobile only freehold sites	
13 Other passive equipment	

FortySouth





- | | |
|----------------------------------------------|---------|
| 1. Antenna & cables | Active |
| 2. Remote radio equipment | Active |
| 3. Physical tower, masts & pole | Passive |
| 4. Foundation & fencing | Passive |
| 5. Contractual right to occupy site area | Passive |
| 6. Power equipment | Active |
| 7. Base station equipment | Active |
| 8. Backhaul | Active |
| 9. Access facilities & shelter/service rooms | Passive |