



Application Number: DA/4673:AD2024/0000136

3 April 2024

Cook Shire Council
PO Box 3
Cooktown QLD 4895

RE: Information Request Response under section 13 of the *Development Assessment Rules*

Dear Cook Shire Council,

In accordance with Part 3 section 13 of the *Development Assessment Rules*, Downer on behalf of Telstra, provides response to Cook Shire Council's (Council) Information Request dated 16 January 2024 for the development application for a Telecommunications Small Cell Facility (the proposed facility) at Musgrave Roadhouse, Peninsula Developmental Road, Yarraden (Lot 1 on SP314593).

Information Request Response

Request Item 1: Sire Details

Please find attached with this letter, amended plans showing the requested items.

Request Item 2: Character Overlay code

The development has received an exemption certificate, please find attached with this letter.

Request Item 3: Flood and Other Coastal Hazards Overlay Code

As requested, an amended planning report is attached with this letter, please refer to section 5.3.1.3 of the report.

Downer would like to formally request Council to consider the above Information Request Response and please advise if any further information is required.

Yours sincerely

Liz Mansell
Wireless Senior Town Planner
Downer



DEVELOPMENT APPLICATION

**Proposed Telecommunications Facility at
Musgrave Roadhouse
Peninsula Developmental Road, Yarraden QLD 4892
Lot 1 SP 314593**

Prepared on behalf of Telstra Corporation Limited ACN 086 174 781
by Downer EDI Engineering Pty Limited ABN 66 057 593 503

Date | December 2023 (*amended*)
Reference | Musgrave Roadhouse

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1.0 Executive Summary

Proposed Development	Downer EDI Engineering Pty Limited (Downer) on behalf of Telstra Corporation Limited (Telstra) seeks to establish a new mobile phone small cell facility at Musgrave Roadhouse. The proposed scope of works is inclusive of the following: • The installation of a new 20m monopole (overall height including antenna protrusion 21.4m) • The installation of one (1) omni antenna on top of the monopole • The installation of one (1) equipment cabinet at the base of the monopole • The installation of one (1) GPS antenna on top of the cabinet • The installation of associated ancillary equipment including feeders, cabling, electrical equipment, signage and other associated equipment.
Coverage Objectives	It has been identified that there is a requirement to provide improved mobile phone coverage and capacity the roadhouse. The proposed facility will help improve customer voice and data services within the area to fulfil the defined stipulations.
Property Details	Address: Peninsula Developmental Road, Yarraden QLD 4892 Legal Description: Lot 1 SP314593
Property Owner	Mary McDowall
Relevant LGA, Zoning and Principal Designated Land Use	Local Government Area: Cook Shire Council Local Planning Policy: Cook Shire Council Planning Scheme 2017 Zoning: Rural
Applicant:	Telstra Corporation Ltd ACN 086 174 781 C/- Downer EDI Engineering Pty Limited ABN 66 057 593 503 Level 11, 135 Coronation Drive, Milton QLD 4064 Contact: Liz Mansell T 0418 698 701 Liz.Mansel@downergroup.com



2.0 Introduction

Downer EDI Limited (Downer) have been engaged by Telstra Corporation Ltd (Telstra) to design and construct a new telecommunications small cell facility at Musgrave Roadhouse, Peninsula Developmental Road, Yarraden QLD 4892

As part of Telstra's commitment to regional Australia, Telstra is excited to bring high-speed mobile internet to even more communities around the country as part of the Federal Government's Mobile Black Spot program.

Telstra, as a licensed telecommunications carrier, must operate under the provisions of the Telecommunications Act 1997 and the Telecommunications Code of Practice 1997. In some instances, the 1997 Act exempts carriers from the requirements of State and Territory planning legislation when the proposed facility is compliant with the Telecommunications (Low Impact Facilities) Determination 2018. In this instance the proposal is not deemed to be "low impact" as it involves the installation of a new 20m monopole and is therefore not exempt from planning requirements. Accordingly, a planning permit is sought from Cook Shire Council accordance with the Cook Shire Council Planning Scheme 2017.

An assessment of the environmental impacts associated with the proposed development and its compliance with the regulatory framework is discussed in Sections 5 and 6. Telstra, as a licensed carrier, must also operate under the provisions of the Communications Alliance Ltd Industry Code C564:2020 (the Deployment Code) for the Deployment of Mobile Base Station Infrastructure, and in particular, must adopt the precautionary approach as detailed under Section 8 and 4.2.3 of the Deployment Code. This report has been prepared in accordance with the Deployment Code.

It is deemed that the proposal demonstrates sufficient merit to warrant the requested development approval.

2.1 Why is a New Mobile Phone Small Cell Required?

The Federal Government's Mobile Black Spot Program has identified a need to improve mobile phone service to Musgrave Roadhouse.

This program will deliver mobile coverage to a large number of regional and remote communities who, for the first time, will be able to access fast mobile voice and data services. The improved coverage is increasing access to new technologies for key regional sectors like agriculture, transport, mining and tourism – technologies which rely on a fast, reliable and affordable mobile network.

The Mobile Black Spot Program builds upon significant investments already undertaken by Telstra to expand and upgrade our mobile network. Telstra's partnership with the Federal Government will involve Telstra investing up to \$290 million of their own funds to build over 880 new sites under all rounds of the Mobile Black Spot Program. This is over and above the billions of dollars Telstra have spent on our mobile network in recent years.

Telstra have worked with State and Local Governments, to attract tens of millions of dollars in additional targeted funding. This means we're able to deliver a combined investment of over \$640 million for regional telecommunications under the program.



Telstra is committed to providing improved mobile coverage to regional and remote Australia. In the five years to end June 2020, Telstra invested \$7.5bn in our mobile network nationally with \$3bn of that invested in regional areas alone. Telstra continues to invest significantly in maintaining and expanding our mobile network across Australia.

By way of a background:

Mobile phones and mobile broadband devices continue to play an important role in the lives of Australians. This includes providing the fundamental ability to be in contact with family and friends, operating businesses more efficiently and effectively as well as dialing triple 0 during a natural disaster or other emergency.

Because of the ever-growing demand for more data and better reception, mobile phone carriers such as Telstra continually have to upgrade and expand mobile phone networks to eliminate coverage black spots and to keep up with the demands and expectations placed upon them by the community.

As the incumbent telco Telstra knows how important access to modern telecommunications infrastructure is and in order to remedy the lack of mobile phone coverage in the aforementioned areas Telstra proposes a Telecommunications small cell facility at Musgrave Roadhouse.

3.0 Site Selection

Carriers and mobile phone network operators have an obligation under the Industry Deployment Code (C564:2020) to utilise and upgrade existing infrastructure as opposed to developing new sites. However, in this instance this was unachievable due to numerous constraints.

Telstra commences the site selection process with a search of potential sites that meet the network's technical requirements, with a view to also having the least possible impact on the surrounding area. Telstra applies and evaluates a range of criteria as part of this site selection process.

Telstra assesses the technical viability of potential sites through the use of computer modelling tools that produce predictions of the coverage that may be expected from these sites, as well as from the experience and knowledge of the radio engineers.

There are also a number of other important criteria that Telstra uses to assess options and select sites that may be suitable for a proposed new facility. These take into account factors other than the technical performance of the site, and include:

- The potential to co-locate on an existing telecommunications facility;
- The potential to locate on an existing building or structure;
- Visual impact and the potential to obtain relevant town planning approvals;
- Proximity to community sensitive locations and areas of environmental heritage;
- The potential to obtain tenure at the site; and
- The cost of developing the site and the provision of utilities (power, access to the facility and transmission links).

Accordingly, this section of the report will demonstrate the following:

- Colocation opportunities and existing telecommunications infrastructure within proximity to the proposed installation: and
- An analysis of the locations considered when determining an appropriate location for a new telecommunications installation within the required coverage area.

3.1 Colocation Opportunities

The Communications Alliance Ltd. Industry Code C564:2020 - Mobile Phone Base Station Deployment promotes the use of existing sites in order to mitigate the effects of facilities on the landscape. It should also be noted that as a first preference, Telstra attempts to utilise, where possible, any existing infrastructure or co-location opportunities.

Below is a map of existing and proposed telecommunications facilities surrounding the area. Given the distance between the existing facilities, the location of the proposed monopole is essential in providing the roadhouse within coverage.

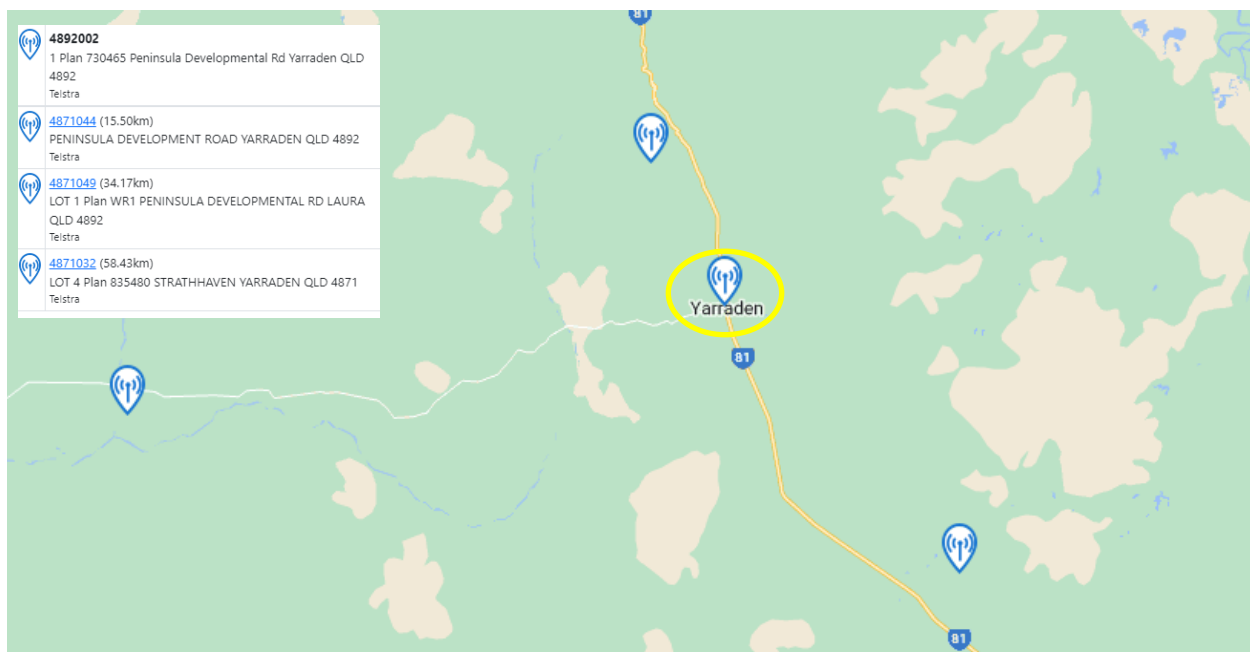


Figure 1 – Location of nearby existing telecommunications facilities (Source: www.rfnsa.com.au)

4.0 Scope of Works

The proposed scope of works is inclusive of the following:

- The installation of a new 20m monopole (overall height including antenna protrusion 21.4m)
- The installation of one (1) omni antenna on top of the monopole
- The installation of one (1) equipment cabinet at the base of the monopole
- The installation of one (1) GPS antenna on top of the cabinet
- The installation of associated ancillary equipment including feeders, cabling, electrical equipment, signage and other associated equipment.

As previously specified, Telstra has an obligation under the Industry Deployment Code to ensure that all suitable alternatives have been explored as part of the justification behind this development application. It is believed that proposed works as outlined above will not result in any adverse visual or environmental impacts to the surrounding environs within the locality.



4.2 Access to the Site

Access to the proposed site will be conducted through the existing site access through the existing caravan park entry gate, see site layout page on proposed plans. This route enables access off a roadway which will repeal any disruptions to traffic flow for construction vehicles during the build phase and any future required maintenance. The available access is of sufficient size for vehicle manoeuvring. Traffic management will be utilised during construction as necessary.

There is ample existing parking on site for vehicle activities during the construction phase. Given the minor amount of traffic generated by the proposal (expected to be 2 – 4 trips per year), it is not believed that any additional formal parking or manoeuvring areas are required.

4.3 Utilities

The final power design including the capacity of the supply will be confirmed in the detailed design phase, however, a major upgrade is not anticipated. Indicatively, a power upgrade is required at the existing meter on the subject site which will deliver power to the new proposed Telstra site. A standard power application will be submitted for approval and all new low voltage cable on the site will be installed underground.

The unmanned facility does not require access to water or sewer infrastructure. The proposal will not alter stormwater runoff from the site, given the very minimal hardstand area.

The site does not require any additional permits for the connection of a sewer/roadway.

5.0 Key Regulatory Framework

5.1 Federal Regulatory Framework

The following information provides a summary of the Federal legislation relevant to telecommunications development proposals.

5.1.1 Telecommunications Act 1997

The Telecommunications Act 1997 (the Act) came into operation on 1 July 1997. The Act provides a system for regulating telecommunications and the activities of carriers and service providers.

Under the Act, telecommunications carriers are no longer exempt from State and Territory planning laws except in three limited instances:

1. There are exemptions for the inspection of land, maintenance of facilities, installation of “low impact facilities”, subscriber connections and temporary defence facilities. These exemptions are detailed in the Telecommunications (Low-impact Facilities) Determination 2018 and these exemptions are subject to the Telecommunications Code of Practice 2018
2. A limited case-by-case appeals process exists to cover the installation of facilities in situations of national significance; and
3. There are some specific powers and immunities from the previous Telecommunications Act 1991.



5.1.2 Telecommunications Code of Practice 2018

The Telecommunications Code of Practice 2018 (The Code) authorizes a carrier to enter land, inspect land and install and maintain a facility. The Code emphasizes “best practice” for the installation of facilities, compliance with industry standards and minimization of adverse impacts, particularly in terms of degradation of the environment and visual impact. The proposal is considered to comply with “best practice” given the proposal will:

- Provide improved telecommunications and wireless internet coverage in the area;
- Be located on a non-residential site within the local area, which maximizes separation to residential and other sensitive uses; and
- Comprises the smallest configuration possible for the site to reduce the visual impact of the proposal, while providing appropriate coverage to the surrounding area.

5.1.3 Telecommunications (Low-impact Facilities) Determination 2018

The *Telecommunications (Low-impact Facilities) Determination 2018* came into effect in March 2018.

The *Determination* contains a list of Telecommunications Facilities that the Commonwealth will continue to regulate. These are facilities that are essential to maintaining telecommunications networks and are unlikely to cause significant community disruption during their installation or operation. These facilities are therefore considered to be ‘Low-impact’ and do not require planning approval under State or Territory laws.

The proposed facility does not fall under the *Determination* and, therefore, requires approval under State Planning Legislation.

5.1.4 Mobile Phone Base Station Deployment Code

The new Communications Alliance Ltd. *Industry Code C564:2020 – Mobile Phone Base Station Deployment* (referred to as the Deployment Code), replaced the 2018 version of the Deployment Code.

Similar to the previous Code, the Deployment Code does not change the existing regulatory regime for telecommunications at Local, State or Federal levels. However, it supplements the existing obligations on Carriers, particularly in relation to community consultation and the consideration of exposure to radio signals, sometimes known as electromagnetic energy (EME or EMR).

The *Code* imposes mandatory levels of notification and community consultation for sites complying with the *Telecommunications (Low-impact Facilities) Determination 2018*. It identifies varying levels of notification and/or consultation depending on the type and location of the proposed infrastructure.

The subject proposal, not being designated a ‘Low-impact’ Facility’, is not subject to the notification or consultation requirements associated with the Deployment Code. These processes are handled within the relevant State and Local consent procedures.

Nevertheless, the intent of the *Code* is to ensure Carriers follow a ‘precautionary approach’ to the siting of infrastructure away from sensitive land uses and this approach has been followed in the selection of this site, as demonstrated in the *Deployment Code* section 4.1 and 4.2 Precautionary Approach Checklists. The checklists will be uploaded to the RFNSA website, reference number 4892002.



Included in these section's Checklist is a statement of how the public's exposure to EME from the site has been minimised. All emissions from the site will be well within the requirements of the relevant Australian Standard. Details of this standard are contained in the following section.

This site has been selected and designed to comply with the requirements of the *Deployment Code* in so much as the precautionary approach has been adhered to and, as a result, the best design solution has been achieved.

5.1.5 Environment Protection and Biodiversity Conservation Act 1999

The Environmental Protection Biodiversity Conservation Act (the EPBC Act) controls matters of national environmental significance. The EPBC Act relates to matters of national environmental significance, including world heritage areas, natural heritage places (including declared RAMSAR wetland areas), listed threatened species in communities, listed migratory species, protection of environment on nuclear actions, and environment matters.

The proposal is not identified as having a significant impact on any of the above matters of national environmental significance. Therefore, the proposal does not require a referral to the Government Minister for the Environment for assessment.

5.1.6 Civil Aviation Safety Authority

The proposed structure is under 30m in height and therefore is not required to be reported in accordance with the CASA publication AC139.08 "Reporting Tall Structures".

5.2 State Regulatory Framework

5.2.1 Planning Act 2016

The proposed telecommunications facility is not considered a low-impact facility and is therefore subject to the Planning Act 2016 and Planning Regulation 2017. The proposal is for the start of a new use and therefore requires a development permit for a material change of use (MCU) prior to the commencement of the use on the site.

Assessment against Council's planning scheme identifies the proposed use as requiring Impact Assessment. Pursuant to section 43 of the Planning Act 2016, the application must therefore be assessed against assessment benchmarks of the Central Highlands Regional Council Planning Scheme 2016.

5.2.2 State Planning Policies

On 3 July 2017, the Queensland Government adopted its new single State Planning Policy (SPP). The SPP replaces the previous multiple policies in existence. The SPP sets out policies on matters of state interest in relation to planning and development and provides a key framework for the government's broader commitment to planning reform. The SPP identifies the state's interests in planning and development and how these are to be dealt with in planning instruments, Council development assessment processes and in designating land for community infrastructure.



All aspects of the SPP have been integrated with the planning scheme. As such, assessment against any applicable policies will be covered in the planning scheme assessment.

5.2.3 Referral Agencies

The State Assessment and Referral Agency (SARA) is the entity within the Department of State Development, Manufacturing, Infrastructure and Planning that is responsible for referrals of applications regarding a State interest. The State Development Assessment Provisions (SDAP) is an outcome of the SARA, which identifies State interests for development assessment.

An assessment of the proposal against the State assessment criteria determines that the proposal is located in a State Transport Corridor – State-controlled Road and Area within 25m of a State-controlled Road. Pursuant of Schedule 10, Division 4, Table 4, Item 1 of the Planning Regulation 2017, the application triggers referral to SARA. Specifically, the Schedule states:

Development application for a material change of use, other than an excluded material change of use, that is assessable development under a local categorising instrument, if all or part of the premises—

(a) are within 25m of a State transport corridor

In accordance with the above, the State code 1: Development in a state-controlled road environment has been prepared (Appendix E).

Additionally, the development is located in a State Heritage area, the proposal is currently seeking confirmation on whether the development can apply for and be accepted under a Heritage Exemption Certificate. Once an outcome on this is advise, the applicant will advise Council.

5.3 Local Regulatory Framework

The following information provides a summary of the local provisions relevant to telecommunications development proposal.

5.3.1 Cook Shire Council Planning Scheme 2017

The proposed telecommunications facility is located in the Rural Zone and under the Cook Shire Council Planning Scheme 2017, the use is not listed in the tables of assessment and therefore deemed Impact Assessable. The below sections address the relevant codes and frameworks of the Scheme.

5.3.1.2 Strategic Framework

The strategic framework sets the policy direction for the planning scheme and forms the basis for ensuring appropriate development occurs in the planning scheme area for the life of the scheme.



Musgrave Roadhouse is within the Rural area of the strategic map and as the roadhouse has specifically requested the facility to provide service to the roadhouse. The telecommunication facility supports the five themes of the policy as follows:

Economic Wellbeing

The proposed telecommunication facility will support economic wellbeing through location and tourism, where the facility will provide support and connectivity to ensure business and tourism of the roadhouse thrives. There is currently no wireless mobile service at the roadhouse. Providing mobile internet connectivity will further boost economic and social activity for the area. As the roadhouse is very remote, the facility will provide the opportunity for the occupiers and visitors to connect virtually to further support the business and social aspects for the roadhouse. Additionally, the mobile service provides opportunity to diversify and grow the tourism industry, where online socials and websites can put Musgrave Roadhouse on the map and further educate the community on its historical significance and outback nature.

Land Use Pattern

The proposed telecommunications facility will adhere to Council's *Community Plan 2011-2021*, where communications infrastructure is highlighted as a main need for the local residents. Given the need for communications at the roadhouse and the minor footprint of the facility, the proposal will be in line with Council's strategic outcomes for the Shire.

Environmental Wellbeing

This part of the policy is to ensure a balanced goal to achieve the protection of natural resources from incompatible uses. The proposed telecommunication facility adheres to the policy's strategic outcomes through locating the development in a location that avoids significant adverse environmental impacts, ensuring areas of environmental significance are protected and enhanced. As mentioned in Section 6.4 and 6.5 of this report, the development ensures erosion control, water quality and air quality are managed and protected.

Infrastructure and Servicing

Council's *Community Plan 2011-2021* identifies communication infrastructure as an important service to include in the Shire's infrastructure and servicing strategy. The proposed development will provide this which will provide essential infrastructure to the roadhouse. The telecommunications facility will not only provide the roadhouse and surrounds with economic value and support, it will also provide contact to emergency services in case of an emergency.

Strong Communities

The proposed telecommunications facility will help support the three themes in the Community Plan through keeping the remote roadhouse connected and safe when at home or in the area and during emergencies. Through providing an essential service that is now expected in most places people go. The development will respect identity and integrity of the area and Shire, locating in a spot that does not impact any cultural values and will further protect and enhance heritage and visual amenity.



5.3.1.2 Rural Zone

The purpose of the Rural Zone is to provide rural uses and activities and other uses and activities compatible with the existing and further rural uses, character and environment of the zone. The facility's location was selected by the roadhouse to service the roadhouse and will not impact on the existing or future uses of the roadhouse and surrounding rural uses. The facility will provide improved ongoing service for rural activities with appreciation of the existing character, landscape and community. The zoning is considered appropriate for the proposal, as it is considered a small-scale activity that will retain and protect rural uses, activities and environmentally sensitive areas, which is further demonstrated below.

Assessable benchmarks - Compliance
PO1 compliance: The scale, density and height of the proposed telecommunications facility will be higher than the prescribed 8.5m, totaling an overall height of 21.4m. This height is necessary to ensure the coverage objectives are fulfilled. The proposed antenna is required to be higher than the existing buildings and trees, so no obstructions diminish the required coverage to service the roadhouse.
PO2 compliance: The development will be over 50m from Peninsula Developmental Road.
PO3 compliance: The development will be unoccupied and will not require noise mitigation design.
PO4 compliance: Not applicable.
PO5 compliance: The development will be over 50m from Peninsula Developmental Road.
PO6 compliance: Not applicable.
PO7 compliance: Not applicable.
PO8 compliance: Not applicable.
PO9 compliance: As mentioned in PO1 compliance, the proposal is designed at a minimum height to service the roadhouse. The development will be a slimline design and located at the rear of the property so it is not impacting the existing amenity of the area. The development will not be overbearing or overshadowing.

5.3.1.3 Flood and Coastal Hazards Overlay

The proposal is situated in the Potential Flood Hazard area of the Flood and Coastal Hazards Overlay map. Further site information from the roadhouse management and owner have confirmed the site location has not experienced a flood event. Below demonstrates compliance with the Flood and Other Coastal Hazards Code.

Assessable benchmarks - Compliance
PO1 compliance: The proposed location has been selected by the landowner and approved by RF engineers to adequately service the property without impacting the current roadhouse use or aesthetic of the heritage character. A small cell is required to be located close to the target area (existing use), locating too far away will impact the desired coverage. No other location outside the flood overlay works in this aspect.
PO2 compliance: As mentioned above, there is no other suitable location for the proposed facility. As the facility will operate unoccupied and does not contain habitable development, the proposal is not required to be elevated. However, the proposed equipment cabinet can be elevated to design standard of 500mm protect the equipment in the event of a flood.



PO3 compliance: The development will not increase people at risk from flooding or number of people required for evacuation. The development will not shorten warning times or impact access or traffic on site. The proposal will provide essential mobile coverage to contact emergency services in the event of a flood.

PO4 compliance: The development will not be located in a medium or high hazard area.

6.0 Development Impacts

This section takes into consideration matters of relevance to the proposed development which is inclusive of issues relating to the environmental impacts of the proposal on the built and natural form, as well as the social and economic impacts the telecommunications facility will have on the locality.

As the proposed site is situated within a cleared portion of land, it is believed that the proposed facility will not result in environmental impacts towards the built and/or natural environments. The “footprint” of the proposal will not require any vegetation clearance. The following environmental, social and economic considerations have been made in reference to the proposal.

6.1 Heritage

In order to determine any possible natural or cultural values of state or national significance associated with the site a search was conducted through the relevant Heritage Registers. A Cultural Heritage Database and Register Search Report has shown 5 site points within the property and a 100m buffer (Appendix D). The proposed location is not in proximity to these points and a Cultural Heritage Risk Assessment (Appendix E) has identified the development as Category 2 or 3 where it is generally unlikely that the activity will harm cultural heritage and the activity will comply with the Duty of Care Guidelines. As noted in the risk assessment, in these circumstances, it is reasonable and practicable for the activity to proceed without further Cultural Heritage Assessment or consultation with the Aboriginal Party/ies. Note: Upon the discovery of a potential Cultural Heritage Find during Category 2 or 3 works, a stop works direction shall be initiated and the actions outlined in the Find – Stop – Notify – Manage Work Instruction must be followed immediately.

6.2 Noise and Vibration

There will be no noise or vibration impacts associated with the operation of the facility. The equipment shelter will emit only minimal noise from the air conditioning units, which will enable the equipment to stay within normal operating temperatures. It is believed that the operation of the air conditioning units will not result in any adverse noise impacts to the nearest sensitive noise receptors given the isolated location of the proposed equipment shelter in the context of the area.

During construction, there will be some minor excavation works which may introduce noise and vibration for a temporary period. Due to the isolated context of the development, it is anticipated that the construction and operation of the facility will not generate any adverse noise impacts on surrounding land uses.

6.3 Traffic



Mobile phone base stations are not significant generators of pedestrian or vehicular traffic. The site encompasses sufficient parking within the existing lot for construction vehicles and workers. During construction, a crane/EWP will be required to be temporarily mounted on site. It is not anticipated that there will be any adverse disruptions to the road during the construction phase or the ongoing operation of the facility. Throughout the lifecycle of the telecommunications facility, it is only required to be visited on a quarterly basis throughout the year for maintenance purposes.

Therefore, this proposal does not constitute any impacts to existing traffic flows within the locality. If a road closure is required for the erection and installation of equipment, the appropriate approvals will be obtained from the relevant authority (where applicable).

6.4 Erosion and Sediment Control

Erosion and sediment controls will be implemented prior to the commencement of any construction works and will be maintained throughout the construction phase to manage potential run off, water and air quality during construction.

The development will not induce any soil erosion or siltation. The proposal will immediately reinstate all sediment that is temporarily extracted to install the required structural footings. No external soil or sediment will be introduced to the existing vegetation.

Measures that are to be implemented include:

- All construction plant, equipment and vehicles are to be properly maintained and operated so as to alleviate excessive exhaust emissions;
- Waste loads leaving the site are to be covered at all times;
- Ensuring stock piles do not exceed 2.5m in height and wetting down any exposed areas and stockpiles as required;
- All dust generating construction activities are to cease during high wind conditions, unless operations can be controlled by localised watering or other control means; and
- Scaffolding will include mesh and shade cloth to reduce wind velocity and also to trap any wind-borne objects.

To ensure water quality is maintained, minor elements of storm water attenuation works will be provided including sandbags and hay bales to ensure excess sediment does not run off site. There are no hard-standing surfaces and/or drainage points within the immediate proximity of the construction site.

6.5 Health and Safety

Telstra understands that some people have genuine concerns about the levels of electromagnetic fields (EMF) that the proposed facility will emit and is committed to addressing those concerns responsibly. EMF is sometimes known as electromagnetic radiation (EMR) or electromagnetic energy (EME). Often, there is a misconception regarding the perceived health risks surrounding mobile phone base stations and Electromagnetic Energy (EME).

Electromagnetic fields are present everywhere in our environment – the earth, sun and ionosphere are all natural sources of EMF. Telstra and Downer rely on the expert advice of international and national health authorities including the World Health Organization (WHO) and the Australian Radiation



Protection and Nuclear Safety Agency (ARPANSA) for overall assessments of health and safety impacts. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has issued guidelines on levels of allowable public exposure to Radio Frequency (RF) fields, including guidelines on RF from mobile phones and base stations, which Telstra adheres to. These guidelines have a large safety margin built into them.

EME is non-ionising radiation, meaning that it has insufficient energy to break chemical bonds or remove electrons (ionisation). In contrast, ionising radiation (such as X-rays) can remove electrons from atoms and molecules thus leading to damage in biological tissue (Source: ARPANSA).

On numerous occasions over the past 10 years the Victorian Civil and Administrative Tribunal has ruled that in regard to EME, that it was obliged to apply the relevant regulatory standards as it finds them - not to pioneer standards of its own. It states that the creation of new standards is a matter for other authorities with special expertise such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

In addition, further information is available at: www.telstra.com.au/eme and EMF Explained Series www.emfexplained.info.

It is Telstra's obligation to comply with the mandated standard (RPS3) for EMF set by ARPANSA, which is based on the safety guidelines recommended by the WHO. The safety standard works by limiting the network signal to a level which will protect all people, in all environments, 24 hours a day.

To demonstrate compliance with the safety standard, an Environmental EME Report is available in Appendix B or via the RFNSA website www.rfnsa.com.au (search site number 4892002).

The EME Report predicts the maximum signal strength from the proposed facility at 1.5m above ground level is well within the allowable limit. This is typical of Telstra's responsible approach to network performance and environmental compliance.

Furthermore, the ARPANSA Fact sheet "Mobile Base Stations and Health" March 2015 states "Health authorities around the world, including ARPANSA and the WHO have examined the scientific evidence regarding possible health effects from base stations. Current research indicates that there are no established health effects from the low exposure to the RF EME exposure from mobile phone base station antennas."

Telstra undertakes further measures when designing the facility, to minimise the EME exposure to the general public, by installing the facility in accordance with the Australian Mobile Telecommunications Association (AMTA) Radio frequency (RF) Safety Compliance Program – Base Station Design Guidelines Engineering for Access Control to minimise EME.

Other preventative measures also include:

- Power Control network feature that automatically adjusts the power of the network transmission based on consumer demand.
- Varying the facility's transmit power to the minimal required level in order to save electricity and lower RF emissions from the facility.

Further information about EMF can be obtained from:

- Commonwealth Department of Health (ARPANSA): www.arpansa.gov.au
- Australian Communications and Media Authority (ACMA): www.acma.gov.au
- World Health Organisation (WHO): www.who.int/en/



7.0 Conclusion

The proposal at Musgrave Roadhouse seeks to provide new coverage to the area as part of the Federal Government's Mobile Phone Black Spot Program, providing much needed voice and data services to the area. The site has a number of characteristics that make it suitable for the construction of a new telecommunications facility in the manner proposed. The drawings respond to the principles of design, siting, construction and operation of telecommunications facilities as specified in the Code of Practice whilst meeting state and local planning policy objectives.

The proposed works provide the community with reliable 4G access which in turn supports the various rural industries in the region and forms part of a wider plan to ensure reliable and accessible coverage during emergency situations such as floods and bushfires.



Telstra, together with Downer have undertaken an assessment of the relevant matters as required by the Telecommunications Act 1997 and the Cook Shire Council Planning Scheme 2017. The proposal is considered appropriate in light of the relevant legislative, environmental, technical, radio coverage and public safety requirements.

Based upon the above, we respectfully request Cook Shire Council Council approve the application and issue a development permit for a telecommunications small cell facility at Musgrave Roadhouse, Peninsula Developmental Road, Yarraden, subject to reasonable and relevant conditions, and in accordance with the plans attached in **Appendix A**.



Appendix A – Proposed Plans



Appendix B – EME Report



Appendix C – Precautionary Approach Checklist (PAC) to Site Selection & Site Design and Traffic Light Model (TLM)



Appendix D – Cultural Heritage Search



Appendix E – Cultural Heritage Risk Assessment



Appendix F – State Code 1: Development in a state-controlled road environment



State code 1: Development in a state-controlled road environment

Table 1.2.1: Development in a state-controlled road environment

Performance Criteria	Acceptable Solutions	Applicants Response
Buildings and structures		
PO1 The location of buildings, structures, infrastructure, services and utilities does not create a safety hazard in a state-controlled road, or cause damage to, or obstruct road transport infrastructure.	AO1.1 Buildings, structures, infrastructure, services and utilities are not located in a state-controlled road. And	Complies: The proposed monopole is located on a lot that adjoins the a State-controlled road. As illustrated on the proposed plans the facility will be entirely located on the subject site and will utilise the existing access track. The proposal is not considered to interfere with the safe operations of the state-controlled road.
	AO1.2 Buildings, structures, infrastructure, services and utilities can be maintained without requiring access to a state-controlled road.	Complies: The proposal will utilise the existing access. The site will generate minimal trips per year and is not considered to create a safety hazard to the state-controlled road.
PO2 The design and construction of buildings and structures does not create a safety hazard by distracting users of a state-controlled road.	AO2.1 Facades of buildings and structures facing a state-controlled road are made of non-reflective materials. OR	Complies: The proposal will not be seen from the road. Thus, it is considered that the proposal will have no safety impact on the road network.
	AO2.2 Facades of buildings and structures do not reflect point light sources into the face of oncoming traffic on a state-controlled road. AND	Complies: The proposal will not reflect light sources into the face of traffic.
	AO2.3 External lighting of buildings and structures is not directed into the face of oncoming traffic on a state-controlled road and does not involve flashing or laser lights. AND	Complies: The proposal will not reflect light sources into the face of traffic.
	AO2.4 Advertising devices visible from a state-controlled road are located and designed in accordance with the Roadside Advertising.	Complies: The proposal does not involve advertising devices.
PO3	AO3.1	Not Applicable: The proposal does not involve a road, pedestrian or bikeway bridge over a state-controlled road.



Performance Criteria	Acceptable Solutions	Applicants Response
Road, pedestrian and bikeway bridges over a state-controlled road are designed and constructed to prevent projectiles from being thrown onto a state-controlled road.	Road, pedestrian and bikeway bridges over a state-controlled road include throw protection screens in accordance with section 4.9.3 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2014.	
Filling, excavation and retaining structures		
PO4 Filling and excavation does not interfere with, or result in damage to, infrastructure or services in a state-controlled road. Note: Information on the location of services and public utility plants in a state-controlled road can be obtained from the Dial Before You Dig service. Where development will impact on an existing or future service or public utility plant in a state-controlled road such that the service or public utility plant will need to be relocated, the alternative alignment must comply with the standards and design specifications of the relevant service or public utility provider, and any costs of relocation are to be borne by the developer.	No acceptable outcome is prescribed.	Complies: The proposal will utilise the existing access. Some minor earthworks will be required within the compound area to allow for the footings of the facility to be constructed, as indicated on the proposed plans. These minor works are will not damage infrastructure or services in a state-controlled road, particularly given the minor nature of the works and the separation distance from state-controlled road infrastructure.
PO5 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design Manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided	No acceptable outcome is prescribed.	Complies: Any proposed filling and excavation will not impact on the state-controlled road.
PO6	No acceptable outcome is prescribed.	Complies: Any proposed filling and excavation will not impact on the state-controlled road.



Performance Criteria	Acceptable Solutions	Applicants Response
Filling, excavation, building foundations and retaining structures do not cause ground water disturbance in a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided.		
PO7 Excavation, boring, piling, blasting or fill compaction during construction of a development does not result in ground movement or vibration impacts that would cause damage or nuisance to a state-controlled road, road transport infrastructure or road works. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with Road Planning and Design Manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided.	No acceptable outcome is prescribed	Complies: Any proposed filling and excavation will not impact on the state-controlled road.
PO8 Development involving the haulage of fill, extracted material or excavated spoil material exceeding 10,000 tonnes per year does not damage the pavement of a statecontrolled road. Note: It is recommended a pavement impact assessment is provided. Further information will be provided in the forthcoming document Guide to Traffic Impact	AO8.1 Fill, extracted material and spoil material is not transported to or from the development site on a state-controlled road.	Not Applicable: The proposal does not require fill material exceeding 10,000 tonnes per year.



Performance Criteria	Acceptable Solutions	Applicants Response
Assessment, Department of Transport and Main Roads, 2017		
PO9 Filling and excavation associated with the construction of vehicular access to a development does not compromise the operation or capacity of existing drainage infrastructure for a state-controlled road.	No acceptable outcome is prescribed.	Not Applicable: The proposal will utilise the existing access. Earthworks will be limited to minor foundation work for the compound as outlined in the proposed plans. As such, associated filling / excavation will not compromise the operation or capacity of drainage on a state-controlled road.
PO10 Fill material used on a development site does not result in contamination of a state-controlled road.	AO10.1 Fill material is free of contaminants including acid sulfate content. Note: Soils and rocks should be tested in accordance with AS 1289.0 – Methods of testing soils for engineering purposes and AS 4133.0-2005 – Methods of testing rocks for engineering purposes. AND	Complies: Any fill requirements will comply with the acceptable outcome. Any requirements can be conditioned in accordance with the acceptable outcome.
	AO10.2 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes.	Complies: Any fill requirements will comply with the acceptable outcome. Any requirements can be conditioned in accordance with the acceptable outcome.
PO11 Filling and excavation does not cause wind-blown dust nuisance in a state-controlled road.	AO11.1 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes. AND	Complies: Any fill requirements will comply with the acceptable outcome. Any requirements can be conditioned in accordance with the acceptable outcome.
	AO11.2 Dust suppression measures are used during filling and excavation activities such as wind breaks or barriers and dampening of ground surfaces.	Complies: Any fill requirements will comply with the acceptable outcome. Any requirements can be conditioned in accordance with the acceptable outcome.
Stormwater and drainage		
PO12 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a state-controlled road.	No acceptable outcome is prescribed.	Not Applicable: All services required for the ongoing operation of the facility 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. The proposed development includes only minimal hardstand surfaces and will not result in the surcharge of stormwater to the state-controlled road No stormwater, sewerage or waste management facilities are required.



Performance Criteria	Acceptable Solutions	Applicants Response
PO13 Run-off from the development site is not unlawfully discharged to a state-controlled road.	AO13.1 Development does not create any new points of discharge to a state-controlled road. AND	As above.
	AO13.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.4 of the Queensland Urban Drainage Manual, Department of Energy and Water Supply, 2013, provides further information on lawful points of discharge. AND	As above.
	AO13.3 Development does not worsen the condition of an existing lawful point of discharge to the state-controlled road	As above.
PO14 Run-off from the development site during construction does not cause siltation of stormwater infrastructure affecting a state-controlled road.	AO14.1 Run-off from the development site during construction is not discharged to stormwater infrastructure for a state-controlled road.	As above.
Vehicular access to a state-controlled road		
PO15 Vehicular access to a state-controlled road that is a limited access road is consistent with government policy for the management of limited access roads.	AO15.1 Development does not require new or changed access to a limited access road. Note: Limited access roads are declared by the transport chief executive under section 54 of the Transport Infrastructure Act 1994 and are identified in the DA mapping system. OR	Not Applicable: The proposal will utilise the existing access, which is not identified as a limited access road.
	AO15.2 A new or changed access to a limited access road is consistent with the limited access policy for the state-controlled road. Note: Limited access policies for limited access roads declared under the Transport Infrastructure Act 1994 can be obtained by contacting the relevant Department of Transport and Main Roads regional office. AND	As above.
	AO15.3	Not Applicable: The proposal does not include a service centre. As such, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	Where a new or changed access is for a service centre, access is consistent with the Service centre policy, Department of Transport and Main Roads, 2013 and the Access policy for roadside service centre facilities on limited access roads, Department of Transport and Main Roads, 2013, and the Service centre strategy for the state-controlled road. Note: The Service centre policy, Department of Transport and Main Roads, 2013, Access policy for roadside service centre facilities, Department of Transport and Main Roads, 2013 and the relevant Service centre strategy for a state-controlled road can be accessed by contacting the relevant Department of Transport and Main Roads regional office	
PO16 The location and design of vehicular access to a statecontrolled road (including access to a limited access road) does not create a safety hazard for users of a statecontrolled road or result in a worsening of operating conditions on a state-controlled road. Note: Where a new or changed access between the premises and a state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of Transport Infrastructure Act 1994 issued where sufficient information is provided.	AO16.1 Vehicular access is provided from a local government road.	Complies: Access will be taken from the existing access track, which is the only access to the site. Access from a local government Road cannot be provided in this instance.
	OR all of the following acceptable outcomes apply: AO16.2 Vehicular access for the development is consistent with the function and design of the state-controlled road. AND	As above.
	AO16.3 Development does not require new or changed access between the premises and the state-controlled road. Note: A decision under section 62 of the Transport Infrastructure Act 1994 outlines the approved conditions for use of an existing vehicular access to a state-controlled road. Current section 62 decisions can be obtained from the relevant Department of Transport and Main Roads regional office. AND	Complies: Access will be taken from the existing access track which is the only access to the site. Access from a local government Road cannot be provided in this instance.



Performance Criteria	Acceptable Solutions	Applicants Response
	AO16.4 Use of any existing vehicular access to the development is consistent with a decision under section 62 of the Transport Infrastructure Act 1994. Note: The development which is the subject of the application must be of an equivalent use and intensity for which the section 62 approval was issued and the section 62 approval must have been granted no more than 5 years prior to the lodgement of the application. AND	Complies: Access will be taken from the existing access track which is the only access to the site. Access from a local government Road cannot be provided in this instance.
	AO16.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in a road intersection or on the state-controlled road.	Complies: The proposal will not result in vehicles queuing in a road intersection or a state-controlled road.
PO17 Vehicular access to a state-controlled road or local government road (and associated road access works) are located and designed to not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian or cycle access to public passenger transport infrastructure and public passenger services.	AO17.1 Vehicular access and associated road access works are not located within 5 metres of existing public passenger transport infrastructure. AND	Complies: The proposed access will be taken from the existing access track, which is not identified as being within 5 metres of existing public passenger.
	AO17.2 The location and design of vehicular access for a development does not necessitate the relocation of existing public passenger transport infrastructure. AND	Complies: The proposed vehicular access does not require the location of public passenger transport infrastructure.
	AO17.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles using a vehicular access do not obstruct public passenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services. AND	Complies: The proposed access will be taken from the existing access, which is not identified as being within 5 metres of existing public passenger. No impact or obstruction to public passenger services is anticipated.
	AO17.4 The normal operation of public passenger transport infrastructure or public passenger	Complies: The proposed access will be from the existing access track which is not identified as a public passenger service. No impact or obstruction to public passenger services is anticipated.



Performance Criteria	Acceptable Solutions	Applicants Response
	services is not interrupted during construction of the development.	
Vehicular access to local roads within 100m of an intersection with a state-controlled road		
PO18 The location and design of vehicular access to a local road within 100 metres of an intersection with a state-controlled road does not create a safety hazard for users of a state-controlled road.	AO18.1 Vehicular access is located as far as possible from the state-controlled road intersection. AND	Not Applicable
	AO18.2 Vehicular access is in accordance with parts, 3, 4 and 4A of the Road Planning and Design Manual, 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016. AND	Not Applicable
	AO18.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in the intersection or on the state-controlled road.	Not Applicable
Planned upgrades		
PO19 Development does not impede delivery of planned upgrades of state-controlled roads.	AO19.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road. Note: Land required for the planned upgrade of a state-controlled road is identified in the DA mapping system. OR	Not Applicable: The subject site is not identified as land required for upgrade.
	AO19.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road.	Not Applicable: The subject site is not identified as land required for upgrade.
	AO19.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road are able to be	Not Applicable: The subject site is not identified as land required for upgrade.



Performance Criteria	Acceptable Solutions	Applicants Response
	readily relocated or removed without materially affecting the viability or functionality of the development. AND	
	AO19.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of the state-controlled road. AND	Not Applicable: The subject site is not identified as land required for upgrade.
	AO19.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state-controlled road. AND	Not Applicable: The subject site is not identified as land required for upgrade.
	AO19.6 Land is able to be reinstated to the pre-development condition at the completion of the use	Not Applicable: The subject site is not identified as land required for upgrade.
Network impacts		
PO20 Development does not result in a worsening of operating conditions on the state-controlled road network. Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified traffic impact assessment is provided. Further information will be provided in the forthcoming document Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.	No acceptable outcome is prescribed.	Complies: The proposed telecommunications facility will be accessed from the existing access track. The site will generate minimal trips per year and is not considered to create a worsening of operating conditions to the state-controlled road.
PO21 Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network.	AO21.1 The layout and design of the development directs traffic generated by the development to the local road network.	Performance Outcome: The proposal will be accessed from the existing access track off. The site will generate minimal trips per year and is not considered to create a worsening of operating conditions to the state-controlled road.
PO22	AO22.1	Not Applicable: The proposal does not require upgrade works.



Performance Criteria	Acceptable Solutions	Applicants Response
Upgrade works on, or associated with, a state controlled road are built in accordance with Queensland road design standards.	Upgrade works required as a result of the development are designed and constructed in accordance with the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016. Note: Road works in a state-controlled road require approval under section 33 of the Transport Infrastructure Act 1994 before the works commence	

Table 1.2.2: Environmental Emissions

Performance Criteria	Acceptable Solutions	Applicants Response
Noise		
Accommodation activities		
PO23 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state-controlled road or type 1 multimodal corridor in habitable rooms.	AO23.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria at all facades of the building envelope: a. ≤60 dB(A) L10 (18 hour) façade corrected (measured L90 (8 hour) free field between 10pm and 6am ≤40 dB(A)) b. ≤63 dB(A) L10 (18 hour) façade corrected (measured L90 (8 hour) free field between 10pm and 6am >40 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013. If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used. In some instances, the design of noise barriers and mounds to achieve the noise criteria above the ground floor may not be reasonable or practicable. In these instances, any relaxation of the criteria is at the discretion of the Department of Transport and Main Roads.	
	OR all of the following acceptable outcomes apply: AO23.2 Buildings which include a habitable room are setback the maximum distance possible from a statecontrolled road or type 1 multi-modal corridor. AND	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.
	AO23.3 Buildings are designed and oriented so that habitable rooms are located furthest from a statecontrolled road or type 1 multi-modal corridor. AND	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.
	AO23.4 Buildings (other than a relevant residential building or relocated building) are designed and constructed using materials which ensure that habitable rooms meet the following internal noise criteria: 1. ≤35 dB(A) Leq (1 hour) (maximum hour over 24 hours). Statutory note: Noise levels from a	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	state-controlled road or type 1 multi-modal corridor are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013. Habitable rooms of relevant residential buildings located within a transport noise corridor must comply with the Queensland Development Code MP4.4 Buildings in a transport noise corridor, Queensland Government, 2015. Transport noise corridors are mapped on the State Planning Policy interactive mapping system	
PO24 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state-controlled road or type 1 multimodal corridor in outdoor spaces for passive recreation.	AO24.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria in outdoor spaces for passive recreation: a. ≤ 57 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6am and 12 midnight ≤ 45 dB(A)) b. ≤ 60 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6am and 12 midnight > 45 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013. OR	
	AO24.2 Each dwelling has access to an outdoor space for passive recreation which is shielded from a statecontrolled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure. AND	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.
	AO24.3 Each dwelling with a balcony directly exposed to noise from a state-controlled road or type 1 multi-modal corridor has a continuous solid gap-free balustrade (other than gaps required for drainage purposes to comply with the Building Code of Australia).	Not Applicable: The proposal does not involve accommodation activities. Thus, this element of criteria is not applicable.
Childcare centres and educational establishments		
PO25 Development involving a: 1. childcare centre; or 2. educational establishment minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in indoor education areas and indoor play areas.	AO25.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria at all facades of the building envelope: a. ≤58 dB(A) L10 (1 hour) façade corrected (maximum hour during normal opening hours) 2. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise),	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013. If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used.	
	OR all of the following acceptable outcomes apply: AO25.2 Buildings which include indoor education areas and indoor play areas are setback the maximum distance possible from a state-controlled road or type 1 multimodal corridor. AND	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.
	AO25.3 Buildings are designed and oriented so that indoor education areas and indoor play areas are located furthest from the state-controlled road or type 1 multi-modal corridor. AND	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.
	AO25.4 Buildings are designed and constructed using materials which ensure indoor education areas and indoor play areas meet the following internal noise criteria: 1. ≤35 dB(A) Leq (1 hour) (maximum hour during opening hours). Statutory note:	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	Noise levels from a state-controlled road or type 1 multi-modal corridor are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013, is provided.	
PO26 Development involving a: 1. childcare centre; or 2. educational establishment minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in outdoor education areas and outdoor play areas.	AO26.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria in each outdoor education area or outdoor play area: a. ≤63 dB(A) L10 (12 hour) free field (between 6am and 6pm) 2. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013. OR	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	AO26.2 Each outdoor education area and outdoor play area is shielded from noise generated from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.	Not Applicable: The proposal does not involve childcare centres or educational establishments. Thus, this element of criteria is not applicable.
Hospitals		
PO27 Development involving a hospital minimises noise intrusion from a state-controlled road or type 1 multimodal corridor in patient care areas.	AO27.1 Hospitals are designed and constructed using materials which ensure patient care areas meet the following internal noise criteria: 1. ≤ 35 dB(A) Leq (1 hour) (maximum hour during opening hours). Statutory note: Noise levels from a state-controlled road or type 1 multi-modal corridor are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the State Development Assessment Provisions Supporting Information – Community Amenity (Noise), Department of Transport and Main Roads, 2013.	Not Applicable: The proposal does not involve a hospital. Thus, this element of criteria is not applicable.
Vibration		
Hospitals		
PO28 Development involving a hospital minimises vibration impacts from vehicles using a state-controlled road or type 1 multi-modal corridor in patient care areas.	AO28.1 Hospitals are designed and constructed to ensure vibration in the treatment area of a patient care area does not exceed a vibration dose value of 0.1m/s1.75. AND	Not Applicable: The proposal does not involve a hospital. Thus, this element of criteria is not applicable.



Performance Criteria	Acceptable Solutions	Applicants Response
	AO28.2 Hospitals are designed and constructed to ensure vibration in the ward area of a patient care area does not exceed a vibration dose value of 0.4m/s1.75. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified vibration assessment report is provided.	Not Applicable: The proposal does not involve a hospital. Thus, this element of criteria is not applicable.
Air and Light		
PO29 Development involving an accommodation activity minimises air quality impacts from a state-controlled road or type 1 multi-modal corridor in outdoor spaces for passive recreation.	AO29.1 Each dwelling has access to an outdoor space for passive recreation which is shielded from a state controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.	Not Applicable: The proposal does not involve a dwelling. Thus, this element of criteria is not applicable.
PO30 Development involving a: 1. childcare centre; or 2. educational establishment minimises air quality impacts from a state-controlled road or type 1 multi-modal corridor in outdoor education areas and outdoor play areas	AO30.1 Each outdoor education area and outdoor play area is shielded from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.	Not Applicable: The proposal does not include an outdoor education area or play area. Thus, this element of criteria is not applicable.
PO31 Development involving an accommodation activity or hospital minimises lighting impacts from a state-controlled road or type 1 multi-modal corridor.	AO31.1 Buildings for an accommodation activity or hospital are designed to minimise the number of windows or transparent/translucent panels facing a state-controlled road or type 1 multi-modal corridor. OR	Not Applicable: The proposal does not involve an accommodation activity. Thus, this element of criteria is not applicable.
	AO31.2 Windows facing a state-controlled road or type 1 multi-modal corridor include treatments to block light from a state-controlled road or type 1 multi-modal corridor.	Not Applicable: The proposal does not involve a use that includes windows.





POST CONSTRUCTION PHOTO



PART OF LOT 1 ON PLAN SP 314593

STRUCTURE OWNER - TELSTRA
STRUCTURE TYPE - 20m SEESAW
INGAL STEEL POLE GA12138

SITE STRUCTURE CO-ORDINATES (GDA94)	
GPS READING ACCURACY: $\pm 10\text{m}$	
CENTRE OF POLE	
LATITUDE	-14.78008° (GDA94)
LONGITUDE	143.50378° (GDA94)



Downer
Relationships creating success

SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 2, 2-2, 2-2, 3 & 4

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364WO002DOWNER L700	IN	PG	06.11.23	1

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DRAWING / DOCUMENT DESCRIPTION	DRAWING NUMBER	SHEET NO.	ISSUE NO.	ISSUE DATE	DRAWING STATUS		
					FOR CONSTRUCTION	AS BUILT	REFERENCE ONLY
PHOTOS AND SITE LAYOUT	Q117801	2	1	06/11/23	✓		
OVERALL SITE LAYOUT SHEET 1 OF 2	Q117801	2-1	1	06/11/23	✓		
OVERALL SITE LAYOUT SHEET 2 OF 2	Q117801	2-2	1	06/11/23	✓		
ELEVATION AND PHOTOS	Q117801	3	1	06/11/23	✓		
EME EXCLUSION ZONES	Q117801	4	1	06/11/23	✓		
SITE EARTHING	Q117801	G4	1	06/11/23	✓		
ELECTRICAL SPECIFICATION	Q117801	E0	1	06/11/23	✓		
AC POWER CONNECTION	Q117801	E2	1	06/11/23	✓		
RACK LAYOUT	Q117801	E5	1	06/11/23	✓		
STRUCTURAL CERTIFICATE - TP006F01 - 4014115.01	Q117801	Z1	1	06/11/23	✓		
REFERENCE DRAWINGS							
STANDARD CONSTRUCTION NOTES	017866P05	1	3	10/01/23	✓		
STANDARD STOCK FENCE	017866P11	1	2	13/01/23	✓		
CABLE FIXING TO MONOPOLE ALTERNATIVE DETAILS	017866P58	2	1	29/05/13	✓		
PRECAST FOUNDATION - MODULE 2 & 3 DETAILS	017866P189	30	3	02/06/23	✓		
PRECAST FOUNDATION 20m POLE REGION C GENERAL ARRANGEMENT SHT 1 OF 2	017866P189	32	3	02/06/23	✓		
PRECAST FOUNDATION 20m POLE REGION C GENERAL ARRANGEMENT SHT 2 OF 2	017866P189	33	3	02/06/23	✓		
PRECAST FOUNDATION - MODULE 4 DETAILS	017866P189	34	3	02/06/23	✓		
PRECAST FOUNDATION - SMALL CELL OUTDOOR CABINET SUPPORT DETAILS - ELEVATED	017866P189	46	3	02/06/23	✓		
GENERAL ARRANGEMENT OF 20m SEESAW POLE WITH 810 x 160 CLEAR ACCESS DOOR BASE PLATE MOUNTED FOR REGION C	GA12138	1	1	01/12/20	✓		
GENERAL ARRANGEMENT OF 20m SEESAW POLE WITH 810 x 160 CLEAR ACCESS DOOR BASE PLATE MOUNTED FOR REGION C	GA12138	2	1	01/12/20	✓		
GENERAL ARRANGEMENT OF TRANSITION PIECE FOR TQJ708006D-FT0 OMNI ANTENNA	GA12500	1	1	08/06/21	✓		

FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS - REFER TO FIDO DOCUMENTATION



COMPLIANCE BOX	
COMPLETED AS PER DESIGN	☐
ALTERATIONS IN RED	☐
NAME (PRINT)	
SIGNATURE	DATE

FOR CONSTRUCTION



SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

PHOTOS AND LOCALITY PLAN

LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG
NO.

Q117801

SHT
NO.

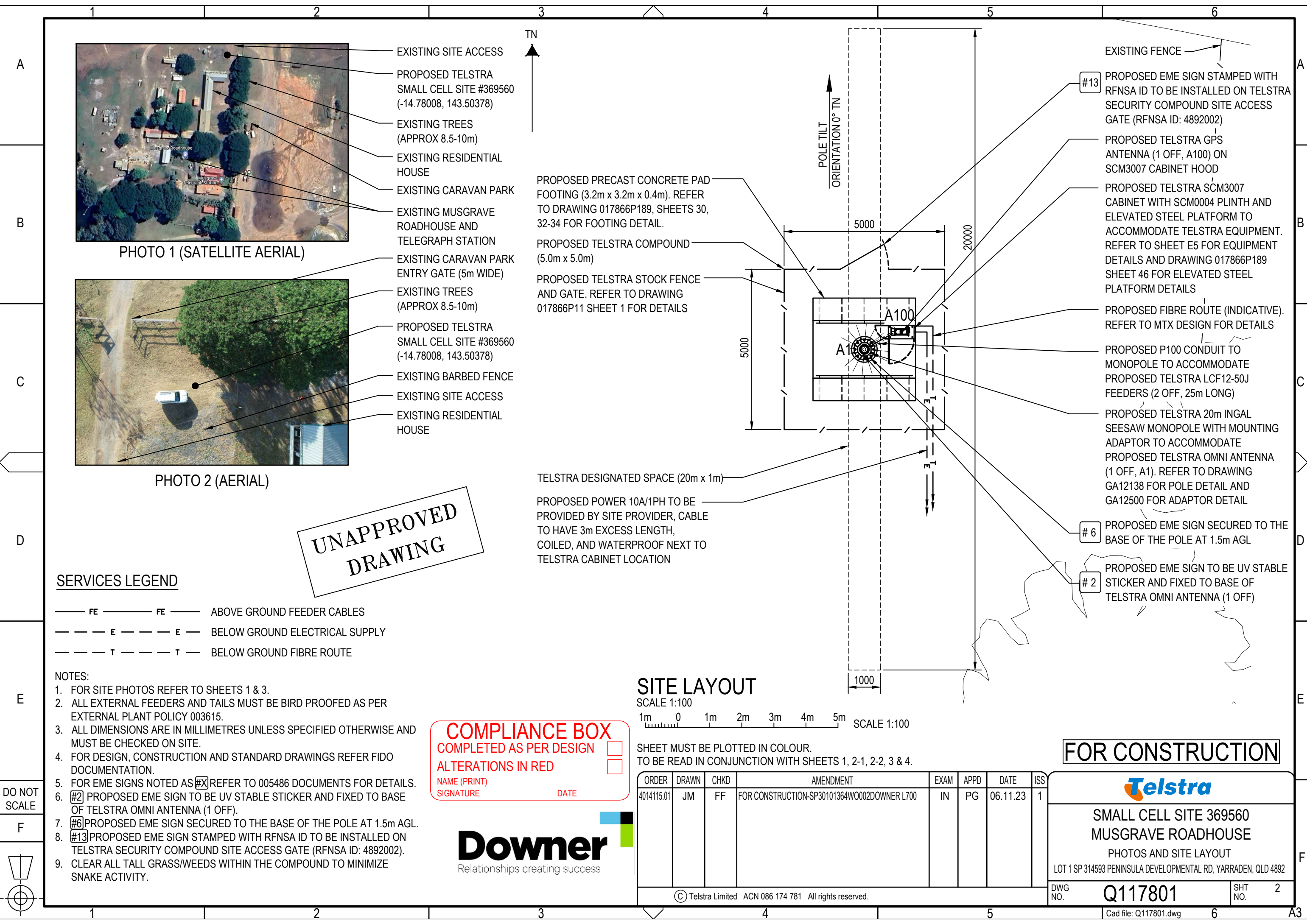


PHOTO 1 (SATELLITE AERIAL)



PHOTO 2 (AERIAL)

UNAPPROVED
DRAWING

SERVICES LEGEND

- FE FE ABOVE GROUND FEEDER CABLES
- E E BELOW GROUND ELECTRICAL SUPPLY
- T T BELOW GROUND FIBRE ROUTE

- NOTES:
- FOR SITE PHOTOS REFER TO SHEETS 1 & 3.
 - ALL EXTERNAL FEEDERS AND TAILS MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE AND MUST BE CHECKED ON SITE.
 - FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS REFER FIDO DOCUMENTATION.
 - FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
 - #2 PROPOSED EME SIGN TO BE UV STABLE STICKER AND FIXED TO BASE OF TELSTRA OMNI ANTENNA (1 OFF).
 - #6 PROPOSED EME SIGN SECURED TO THE BASE OF THE POLE AT 1.5m AGL.
 - #13 PROPOSED EME SIGN STAMPED WITH RFNSA ID TO BE INSTALLED ON TELSTRA SECURITY COMPOUND SITE ACCESS GATE (RFNSA ID: 4892002).
 - CLEAR ALL TALL GRASS/WEEDS WITHIN THE COMPOUND TO MINIMIZE SNAKE ACTIVITY.

COMPLIANCE BOX
COMPLETED AS PER DESIGN
ALTERATIONS IN RED
NAME (PRINT) SIGNATURE DATE

Downer
Relationships creating success

SITE LAYOUT

SCALE 1:100
1m 0 1m 2m 3m 4m 5m SCALE 1:100

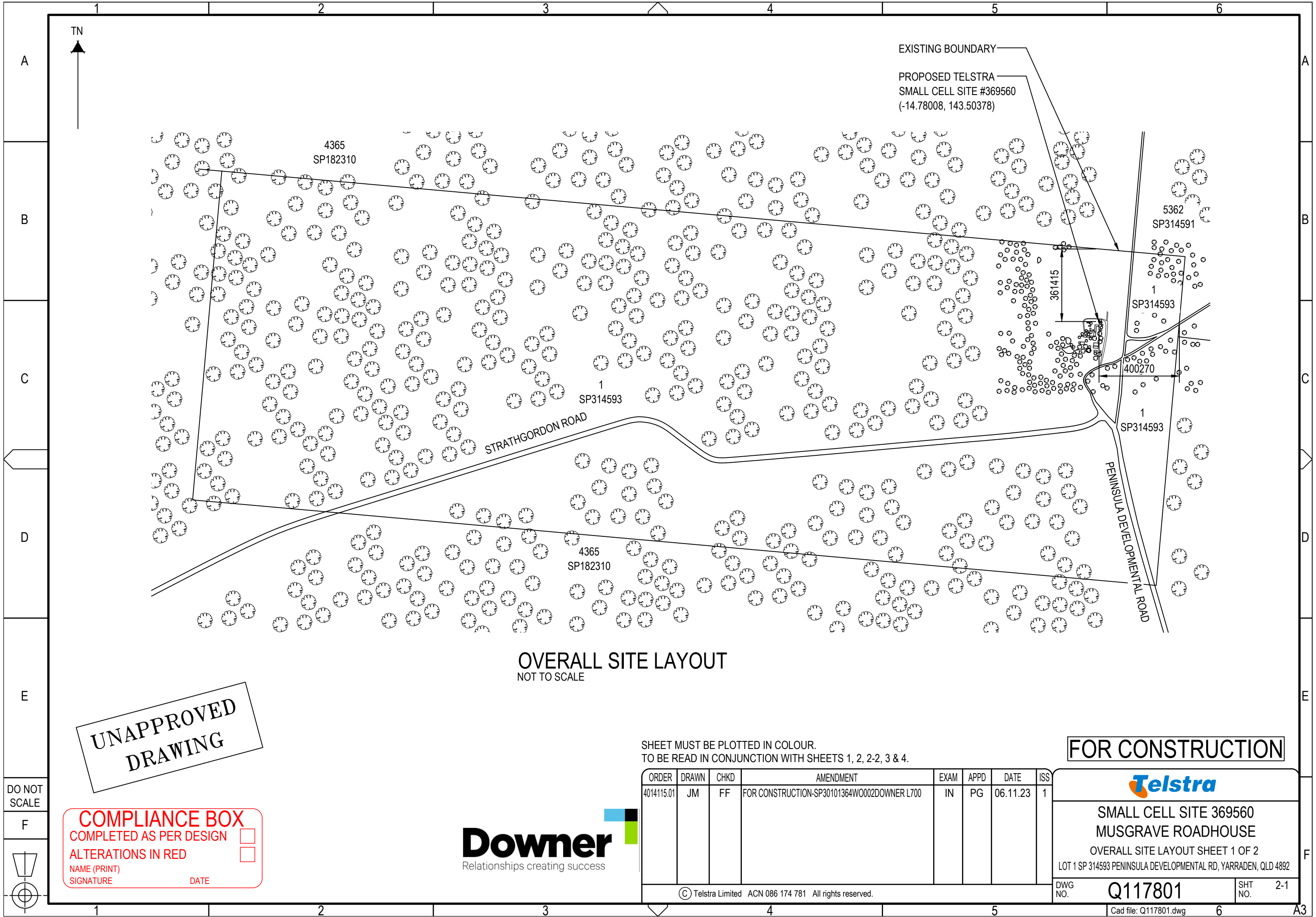
SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2-1, 2-2, 3 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

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FOR CONSTRUCTION

SMALL CELL SITE 369560 MUSGRAVE ROADHOUSE PHOTOS AND SITE LAYOUT LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892	
DWG NO. Q117801	SHT NO. 2

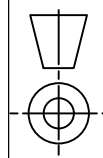


OVERALL SITE LAYOUT
NOT TO SCALE

UNAPPROVED
DRAWING

DO NOT
SCALE

F



COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT) _____
SIGNATURE _____ DATE _____



SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2, 2-2, 3 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

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FOR CONSTRUCTION



SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
OVERALL SITE LAYOUT SHEET 1 OF 2
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG
NO.

Q117801

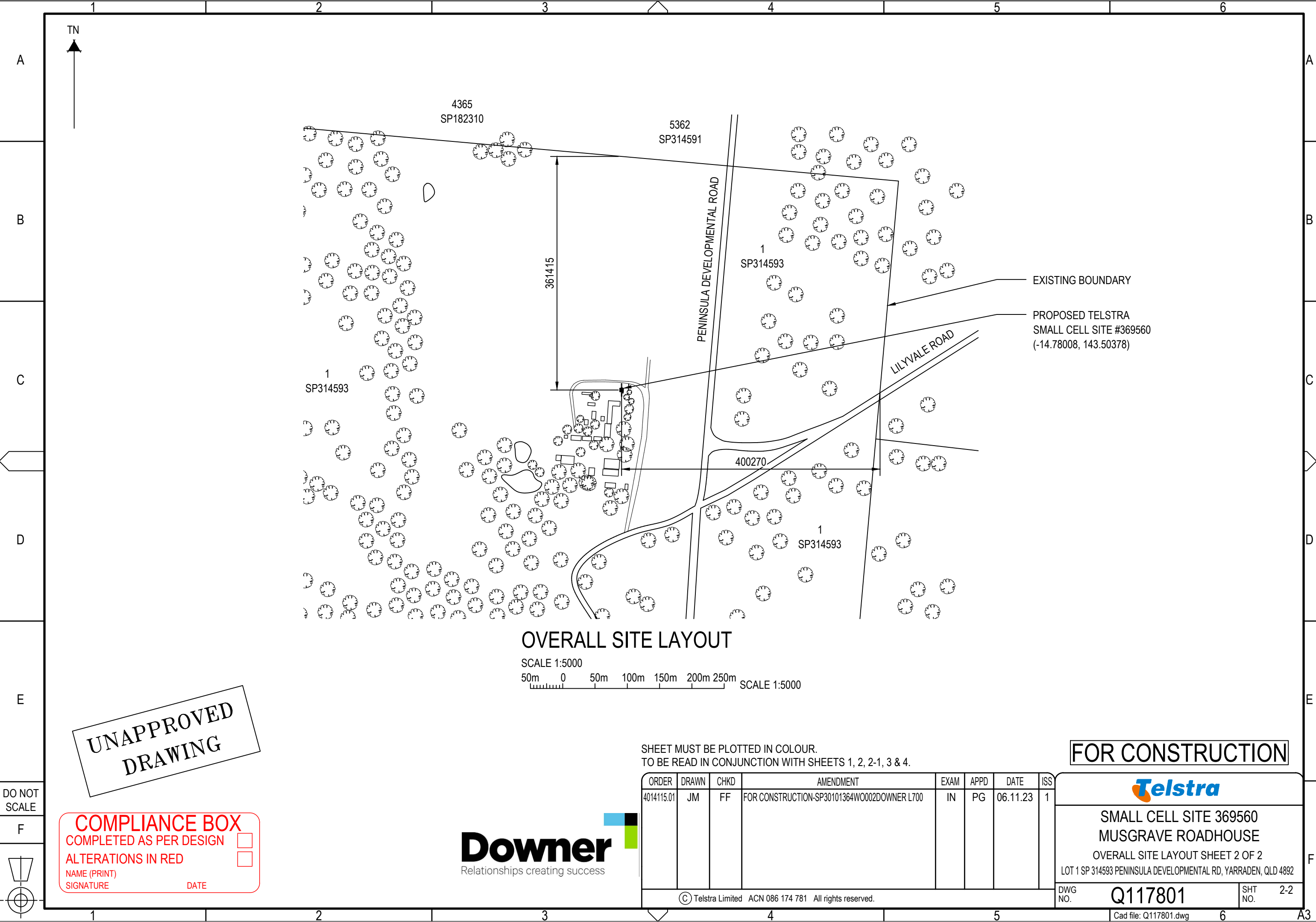
SHT
NO.

2-1

Cad file: Q117801.dwg

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A3



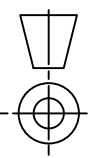
OVERALL SITE LAYOUT

SCALE 1:5000
50m 0 50m 100m 150m 200m 250m SCALE 1:5000

UNAPPROVED
DRAWING

DO NOT
SCALE

F



COMPLIANCE BOX

COMPLETED AS PER DESIGN ☐

ALTERATIONS IN RED ☐

NAME (PRINT) _____

SIGNATURE _____

DATE _____



SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2, 2-1, 3 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

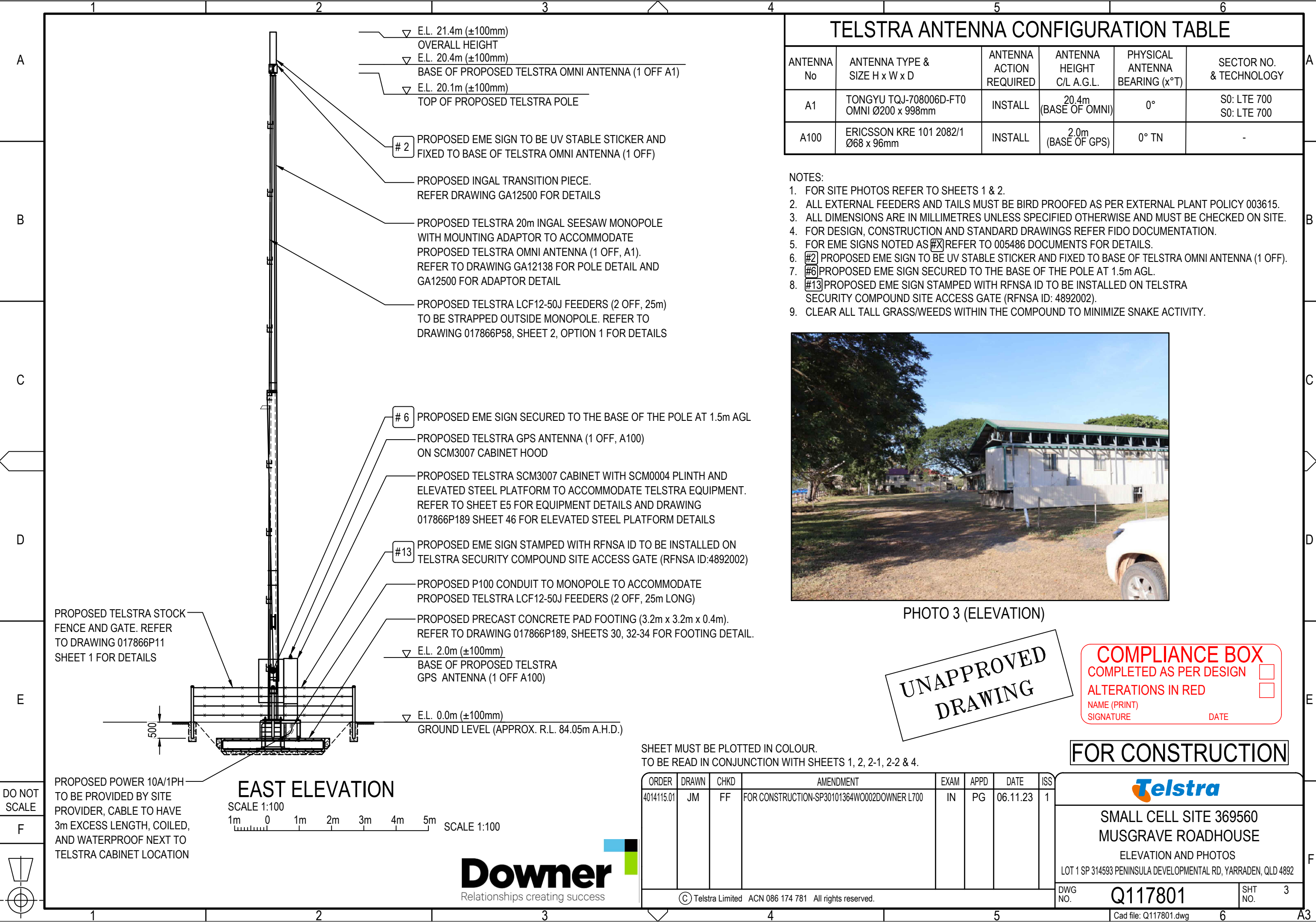
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FOR CONSTRUCTION



SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
OVERALL SITE LAYOUT SHEET 2 OF 2
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO. Q117801 SHT NO. 2-2



TELSTRA ANTENNA CONFIGURATION TABLE

ANTENNA No	ANTENNA TYPE & SIZE H x W x D	ANTENNA ACTION REQUIRED	ANTENNA HEIGHT C/L A.G.L.	PHYSICAL ANTENNA BEARING (x°T)	SECTOR NO. & TECHNOLOGY
A1	TONGYU TQJ-708006D-FT0 OMNI Ø200 x 998mm	INSTALL	20.4m (BASE OF OMNI)	0°	S0: LTE 700 S0: LTE 700
A100	ERICSSON KRE 101 2082/1 Ø68 x 96mm	INSTALL	2.0m (BASE OF GPS)	0° TN	-

- NOTES:
- FOR SITE PHOTOS REFER TO SHEETS 1 & 2.
 - ALL EXTERNAL FEEDERS AND TAILS MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE AND MUST BE CHECKED ON SITE.
 - FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS REFER FIDO DOCUMENTATION.
 - FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
 - #2 PROPOSED EME SIGN TO BE UV STABLE STICKER AND FIXED TO BASE OF TELSTRA OMNI ANTENNA (1 OFF).
 - #6 PROPOSED EME SIGN SECURED TO THE BASE OF THE POLE AT 1.5m AGL.
 - #13 PROPOSED EME SIGN STAMPED WITH RFNSA ID TO BE INSTALLED ON TELSTRA SECURITY COMPOUND SITE ACCESS GATE (RFNSA ID: 4892002).
 - CLEAR ALL TALL GRASS/WEEDS WITHIN THE COMPOUND TO MINIMIZE SNAKE ACTIVITY.



PHOTO 3 (ELEVATION)

UNAPPROVED
DRAWING

COMPLIANCE BOX

COMPLETED AS PER DESIGN

ALTERATIONS IN RED

NAME (PRINT)

SIGNATURE

DATE

FOR CONSTRUCTION

SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2, 2-1, 2-2 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

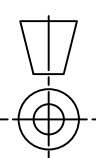
SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
ELEVATION AND PHOTOS
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

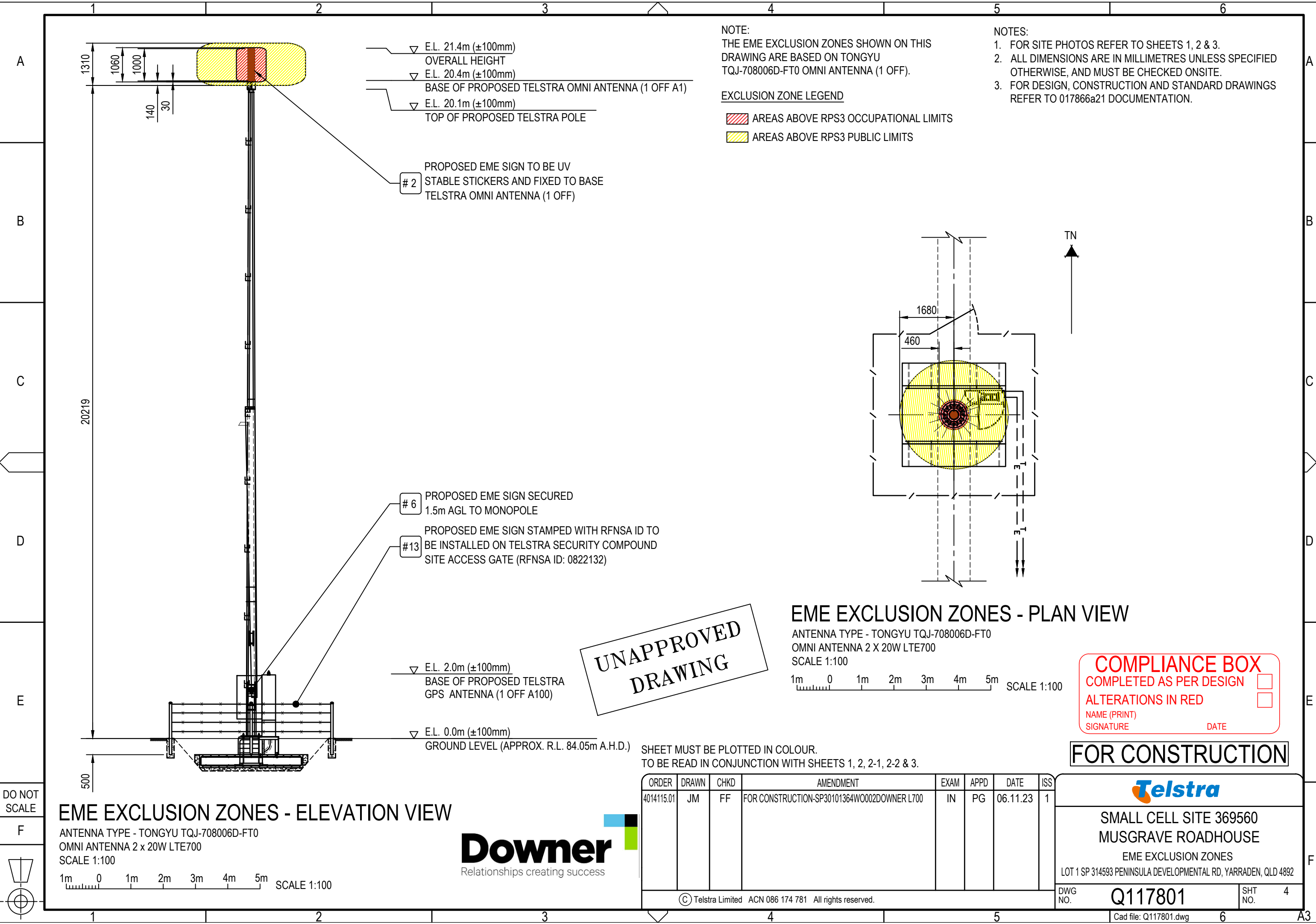
DWG NO. Q117801

SHT NO. 3

DO NOT
SCALE

F





NOTE:
THE EME EXCLUSION ZONES SHOWN ON THIS
DRAWING ARE BASED ON TONGYU
TQJ-708006D-FT0 OMNI ANTENNA (1 OFF).

EXCLUSION ZONE LEGEND

- AREAS ABOVE RPS3 OCCUPATIONAL LIMITS
- AREAS ABOVE RPS3 PUBLIC LIMITS

- NOTES:
- FOR SITE PHOTOS REFER TO SHEETS 1, 2 & 3.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE, AND MUST BE CHECKED ONSITE.
 - FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS REFER TO 017866a21 DOCUMENTATION.

EME EXCLUSION ZONES - PLAN VIEW

ANTENNA TYPE - TONGYU TQJ-708006D-FT0
OMNI ANTENNA 2 X 20W LTE700
SCALE 1:100

1m 0 1m 2m 3m 4m 5m SCALE 1:100

COMPLIANCE BOX

COMPLETED AS PER DESIGN

ALTERATIONS IN RED

NAME (PRINT)

SIGNATURE

DATE

FOR CONSTRUCTION

EME EXCLUSION ZONES - ELEVATION VIEW

ANTENNA TYPE - TONGYU TQJ-708006D-FT0
OMNI ANTENNA 2 x 20W LTE700
SCALE 1:100

1m 0 1m 2m 3m 4m 5m SCALE 1:100

UNAPPROVED
DRAWING

SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2, 2-1, 2-2 & 3.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

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SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

EME EXCLUSION ZONES

LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG
NO.

Q117801

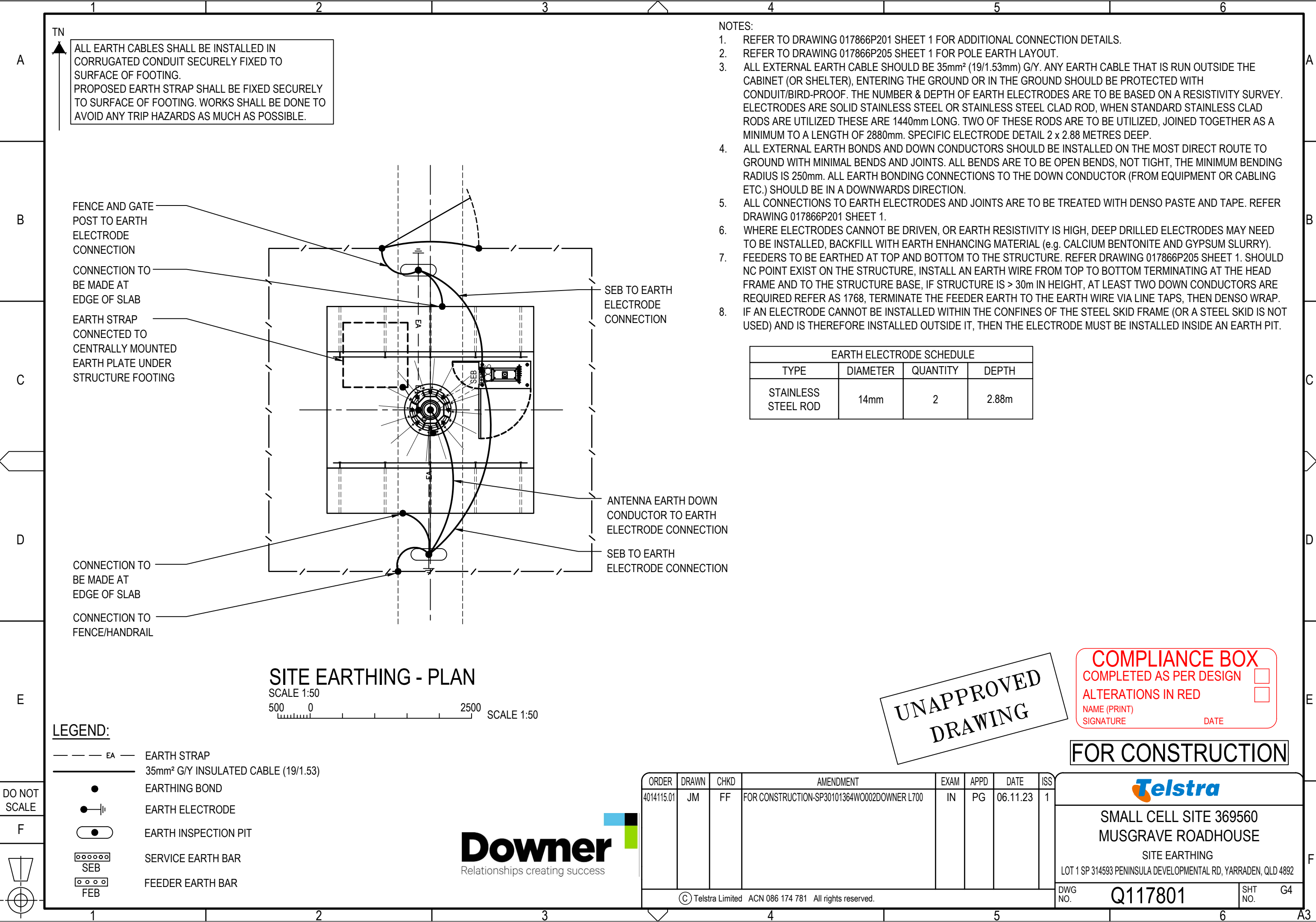
SHT
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4

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A3



ALL EARTH CABLES SHALL BE INSTALLED IN CORRUGATED CONDUIT SECURELY FIXED TO SURFACE OF FOOTING. PROPOSED EARTH STRAP SHALL BE FIXED SECURELY TO SURFACE OF FOOTING. WORKS SHALL BE DONE TO AVOID ANY TRIP HAZARDS AS MUCH AS POSSIBLE.

- NOTES:
- REFER TO DRAWING 017866P201 SHEET 1 FOR ADDITIONAL CONNECTION DETAILS.
 - REFER TO DRAWING 017866P205 SHEET 1 FOR POLE EARTH LAYOUT.
 - ALL EXTERNAL EARTH CABLE SHOULD BE 35mm² (19/1.53mm) G/Y. ANY EARTH CABLE THAT IS RUN OUTSIDE THE CABINET (OR SHELTER), ENTERING THE GROUND OR IN THE GROUND SHOULD BE PROTECTED WITH CONDUIT/BIRD-PROOF. THE NUMBER & DEPTH OF EARTH ELECTRODES ARE TO BE BASED ON A RESISTIVITY SURVEY. ELECTRODES ARE SOLID STAINLESS STEEL OR STAINLESS STEEL CLAD ROD, WHEN STANDARD STAINLESS CLAD RODS ARE UTILIZED THESE ARE 1440mm LONG. TWO OF THESE RODS ARE TO BE UTILIZED, JOINED TOGETHER AS A MINIMUM TO A LENGTH OF 2880mm. SPECIFIC ELECTRODE DETAIL 2 x 2.88 METRES DEEP.
 - ALL EXTERNAL EARTH BONDS AND DOWN CONDUCTORS SHOULD BE INSTALLED ON THE MOST DIRECT ROUTE TO GROUND WITH MINIMAL BENDS AND JOINTS. ALL BENDS ARE TO BE OPEN BENDS, NOT TIGHT, THE MINIMUM BENDING RADIUS IS 250mm. ALL EARTH BONDING CONNECTIONS TO THE DOWN CONDUCTOR (FROM EQUIPMENT OR CABLING ETC.) SHOULD BE IN A DOWNWARDS DIRECTION.
 - ALL CONNECTIONS TO EARTH ELECTRODES AND JOINTS ARE TO BE TREATED WITH DENSO PASTE AND TAPE. REFER DRAWING 017866P201 SHEET 1.
 - WHERE ELECTRODES CANNOT BE DRIVEN, OR EARTH RESISTIVITY IS HIGH, DEEP DRILLED ELECTRODES MAY NEED TO BE INSTALLED, BACKFILL WITH EARTH ENHANCING MATERIAL (e.g. CALCIUM BENTONITE AND GYPSUM SLURRY).
 - FEEDERS TO BE EARTHED AT TOP AND BOTTOM TO THE STRUCTURE. REFER DRAWING 017866P205 SHEET 1. SHOULD NC POINT EXIST ON THE STRUCTURE, INSTALL AN EARTH WIRE FROM TOP TO BOTTOM TERMINATING AT THE HEAD FRAME AND TO THE STRUCTURE BASE, IF STRUCTURE IS > 30m IN HEIGHT, AT LEAST TWO DOWN CONDUCTORS ARE REQUIRED REFER AS 1768, TERMINATE THE FEEDER EARTH TO THE EARTH WIRE VIA LINE TAPS, THEN DENSO WRAP.
 - IF AN ELECTRODE CANNOT BE INSTALLED WITHIN THE CONFINES OF THE STEEL SKID FRAME (OR A STEEL SKID IS NOT USED) AND IS THEREFORE INSTALLED OUTSIDE IT, THEN THE ELECTRODE MUST BE INSTALLED INSIDE AN EARTH PIT.

EARTH ELECTRODE SCHEDULE			
TYPE	DIAMETER	QUANTITY	DEPTH
STAINLESS STEEL ROD	14mm	2	2.88m

SITE EARTHING - PLAN
SCALE 1:50
500 0 2500 SCALE 1:50

- LEGEND:
- — — EA — EARTH STRAP
 - 35mm² G/Y INSULATED CABLE (19/1.53)
 - EARTHING BOND
 - —|| EARTH ELECTRODE
 - EARTH INSPECTION PIT
 - SEB SERVICE EARTH BAR
 - FEB FEEDER EARTH BAR



UNAPPROVED
DRAWING

COMPLIANCE BOX

COMPLETED AS PER DESIGN ☐

ALTERATIONS IN RED ☐

NAME (PRINT)

SIGNATURE

DATE

FOR CONSTRUCTION

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1

SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
SITE EARTHING
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO. Q117801

SHT NO. G4

A

B

C

D

E

DO NOT
SCALE

F

Downer
Relationships creating success

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W/O002DOWNER L700	IN	PG	06.11.23	1
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SMALL CELL SITE 369560 MUSGRAVE ROADHOUSE ELECTRICAL SPECIFICATION LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892		
DWG NO.	Q117801	SHT NO.
		E0

SMALL CELL ROADSIDE CABINET HAS PASSIVE COOLING AND ASSOCIATED FANS TO CATER FOR PROPOSED HEAT LOAD.

PROPOSED INSTALL BB6303 (1 OFF) AND RADIO2217 (1 OFF) IN PROPOSED SMALL CELL CABINET.

ALL INSTALLATION SHALL BE IN ACCORDANCE WITH TELSTRA DEPLOYMENT MANUALS FOR SMALL CELL.
REFER TO SHEET E5 FOR DETAILS.

PROVIDE AND INSTALL GPS ANTENNA AS PER TELSTRA SPECIFICATIONS FOR SMALL CELLS.

ALL LABELLING SHALL BE AS PER TELSTRA REQUIREMENTS FOR SMALL CELLS.

ALL EARTHING AND BONDING IS TO BE IN ACCORDANCE WITH THE TELSTRA EARTHING MANUAL 017866A07.

ALL CABINETS SHALL BE CONNECTED TO EARTHING SYSTEM AS PER TELSTRA REQUIREMENTS.

ALL EQUIPMENT INSTALLED IN THE PROPOSED SMALL CELL CABINETS ARE TO BE BONDED TO THE CABINET EARTH BAR.
FOR FEEDER EARTHING REFER TO DRAWING 017866P201 SHEET 11.

ALL BONDING CONDUCTORS ARE TO BE LABELLED AT BOTH ENDS IN ACCORDANCE WITH THE TELSTRA EARTHING MANUAL

SECTION 3.5.

- PROPOSED EARTH GRID ELECTRODES: 2 OFF
- PROPOSED EARTH GRID ELECTRODE LENGTH: 2.88m
- INSTALLATION METHOD: DRIVEN.

REFER TO SITE EARTHING PLAN FOR DETAILS.

UNAPPROVED
DRAWING

COMPLIANCE BOX	
COMPLETED AS PER DESIGN	☐
ALTERATIONS IN RED	☐
NAME (PRINT)	
SIGNATURE	DATE

FOR CONSTRUCTION



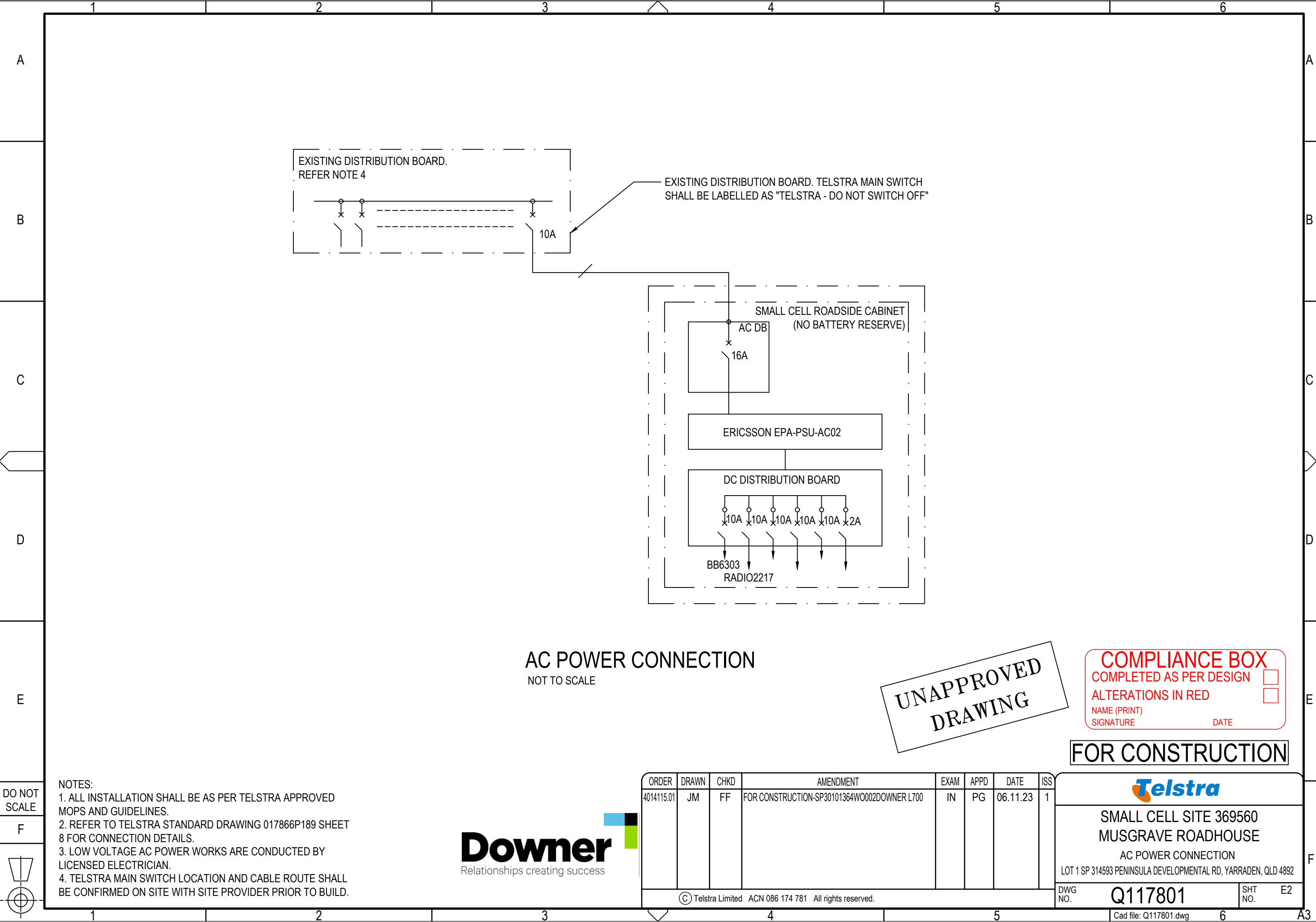
SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

ELECTRICAL SPECIFICATION

LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO.	Q117801	SHT NO.	E0
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Cad file: Q117801.dwg 6 A3



AC POWER CONNECTION
NOT TO SCALE

UNAPPROVED
DRAWING

COMPLIANCE BOX

COMPLETED AS PER DESIGN

ALTERATIONS IN RED

NAME (PRINT)

SIGNATURE

DATE

FOR CONSTRUCTION

DO NOT
SCALE

- NOTES:
- 1. ALL INSTALLATION SHALL BE AS PER TELSTRA APPROVED MOPS AND GUIDELINES.
 - 2. REFER TO TELSTRA STANDARD DRAWING 017866P189 SHEET 8 FOR CONNECTION DETAILS.
 - 3. LOW VOLTAGE AC POWER WORKS ARE CONDUCTED BY LICENSED ELECTRICIAN.
 - 4. TELSTRA MAIN SWITCH LOCATION AND CABLE ROUTE SHALL BE CONFIRMED ON SITE WITH SITE PROVIDER PRIOR TO BUILD.

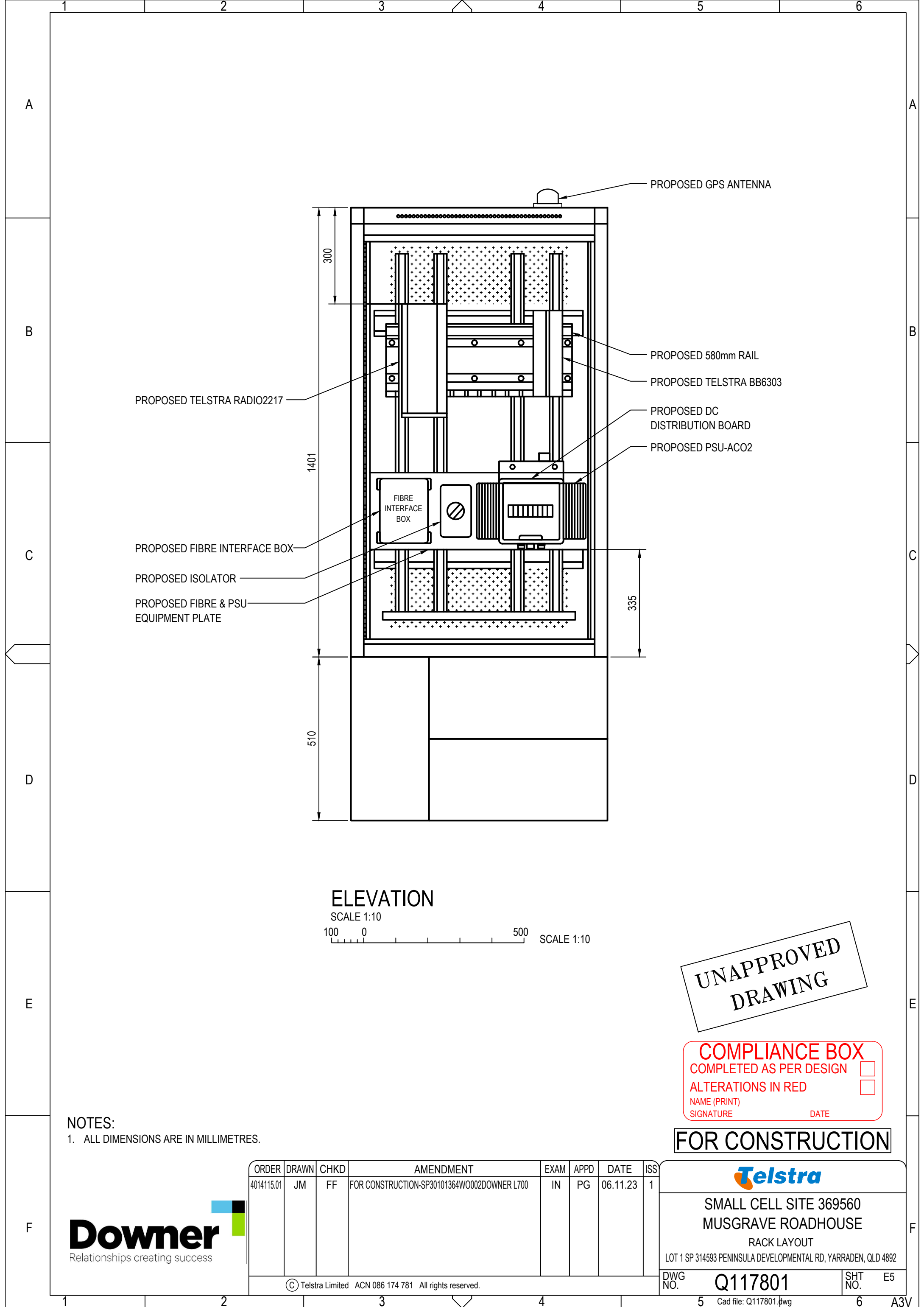


ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1
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SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
AC POWER CONNECTION
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO. Q117801

SHT NO. E2



ELEVATION
SCALE 1:10
100 0 500 SCALE 1:10

UNAPPROVED
DRAWING

COMPLIANCE BOX

COMPLETED AS PER DESIGN ☐

ALTERATIONS IN RED ☐

NAME (PRINT)

SIGNATURE

DATE

FOR CONSTRUCTION

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.



ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	06.11.23	1
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Telstra

SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
RACK LAYOUT
LOT 1 SP 314593 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO. Q117801 SHT NO. E5

Cad file: Q117801.dwg

Queensland Heritage Act 1992

Section 74 Exemption Certificate

Application no:	202401-20143 EC
Date application received:	10 January 2024
Date of decision:	16 January 2024
Applicant:	Telstra Corporation Ltd C/- Downer EDI Engineering Pty Ltd : Liz Mansell liz.mansell@downergroup.com
QHR place ID:	600431
QHR place name:	Musgrave Telegraph Station (former)
Location:	Peninsula Development Road MUSGRAVE 4892
Approval summary:	Development type: Building work - Construction of a telecommunications facility comprising – • 1 x 20m monopole • 1 x omni antenna • Supporting operation equipment

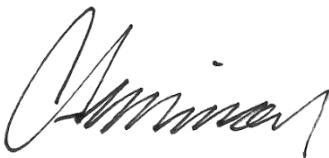
The application for an exemption certificate to carry out the development described above, is approved with conditions under section 74 of the *Queensland Heritage Act 1992*.

This exemption certificate attaches to the premises. Any person, including the owners, owners' successors in title and occupiers of the premises, may carry out development permitted by this exemption certificate and is bound by the conditions.

This exemption certificate only applies to development substantially started within 4 years of this decision.

Terms and phrases used in this document are defined principally in the *Queensland Heritage Act 1992*, and in the *Planning Act 2016* and its Regulation.

If more information is required, contact the project manager, Margaret Lawrence-Drew, Principal Heritage Officer on 0476 852 746 or via email margaret.lawrence-drew@des.qld.gov.au.



Anthony Simmons
Cultural Heritage Coordinator
Heritage
Department of Environment, Science and Innovation
Delegate for the Chief Executive
administering the *Queensland Heritage Act 1992*



Queensland Heritage Act 1992
Section 74 Exemption Certificate

Version 1.2 – 25 November 2020

Conditions of approval:

No.	Condition	Condition timing
1.	Scope of development approved Carry out the development as described in the application received on 10 January 2024 from the applicant Telstra Corporation Ltd C/- Downer EDI Engineering Pty Ltd : Liz Mansell and the documents listed in 'Approved documents'. In the case of a discrepancy between application documents and conditions, conditions take precedence. <i>(Reason - To ensure development is carried out as approved)</i>	At all times.
2.	Keep a copy of the approval on site A copy of this exemption certificate and a copy of any documents that describe the approved development must be retained at the State heritage place. <i>(Reason – To facilitate the monitoring of development for compliance purposes)</i>	For the duration of the development.
3.	Notify start of development Provide written notice of the start of development to Environmental Services and Regulation, Department of Environment and Science at palm@des.qld.gov.au . The notice must state: name of State heritage place, application number and condition number 3. <i>(Reason – To facilitate the monitoring of development for compliance purposes)</i>	No later than 2 business days prior to the commencement of the development.
4.	Photograph effect of development Submit photographs of the area where the development is undertaken, both before and after the development is completed to Environmental Services and Regulation, Department of Environment and Science at palm@des.qld.gov.au . The submission must state: name of State heritage place, application number and condition number 4. <i>(Reason – To facilitate the monitoring of development for compliance purposes and to ensure change is adequately recorded)</i>	Within 10 business days of completion of the development.
5.	Permit access to the State heritage place Permit access to the State heritage place by Department of Environment and Science officers if requested. <i>(Reason – To facilitate the monitoring of development for compliance purposes)</i>	For the duration of the development.
6.	Protect the State heritage place from damage Protect the existing features of the State heritage place from incidental damage and maintain protective measures to ensure the development does not result in damage to, or deterioration of, the State heritage place caused by weather, fire, vandalism, insects or other factors. <i>(Reason - To ensure the cultural heritage values of the State heritage place are appropriately recognised and managed)</i>	For the duration of the development.
7.	Report any damage to the State heritage place that occurs During development, should damage occur to any features of the State heritage place report such incidents immediately to Environmental Services and Regulation, Department of Environment and Science at palm@des.qld.gov.au . <i>(Reason - To ensure the cultural heritage values of the State heritage place are appropriately recognised and managed)</i>	Immediately, should damage occur.
8.	Excavation Any excavation must occur outside of the Tree Protection Zone of adjacent trees. <i>(Reason – To ensure existing vegetation is protected)</i>	For the duration of the development.

Queensland Heritage Act 1992
Section 74 Exemption Certificate

Version 1.2 – 25 November 2020

Approved documents:

Document no.		Document title	Date
<i>Small Cell Site 369560 Musgrave Roadhouse prepared by Telstra for construction by Downer</i>			
Q117801.1	1	<i>Photos and Locality Plan</i>	21/08/2023
Q117801.2	1	<i>Photos and Site Layout</i>	21/08/2023
Q117801.3	1	<i>Elevation and Photos</i>	21/08/2023
Q117801.4	1	<i>EME Exclusion Zones</i>	21/08/2023
Q117801.G4	1	<i>Site Earthing</i>	21/08/2023
Q117801.E0	1	<i>Electrical Specification</i>	21/08/2023
Q117801.E2	1	<i>AC Power Connection</i>	21/08/2023
Q117801.E5	1	<i>Rack Layout</i>	21/08/2023

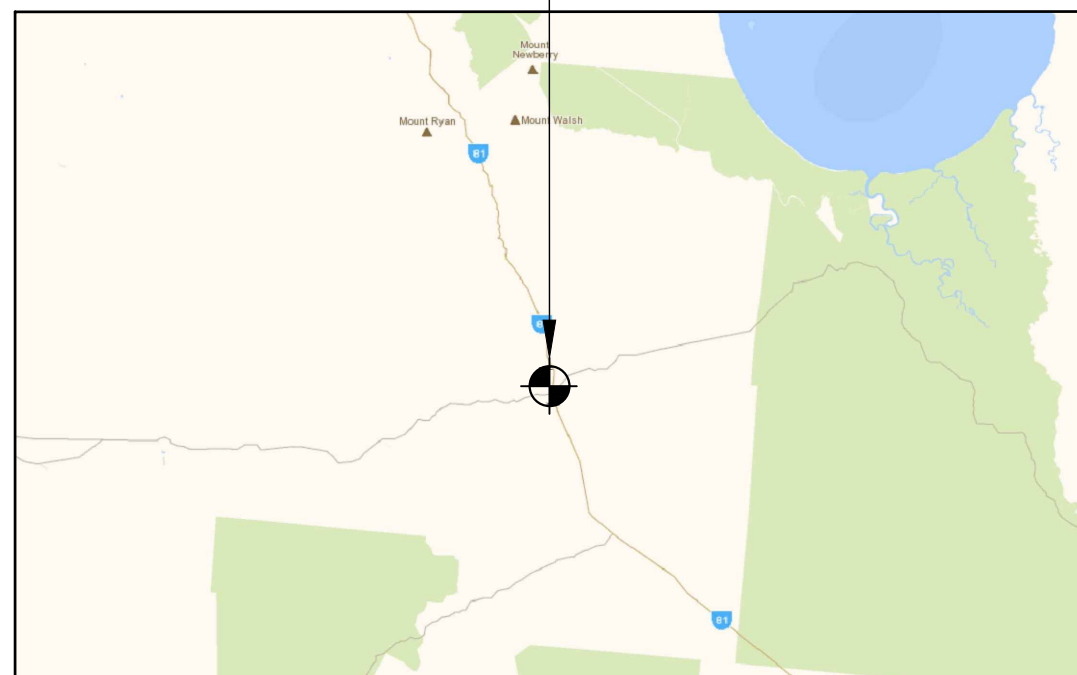
Take Notice: This certificate does not exempt the applicant from the need to obtain such other approvals as may be required under other legislation.



POST CONSTRUCTION PHOTO

EXEMPTION CERTIFICATE Ref: 202401-20143 EC
DATE: 16 January 2024

NODE CODE MXVH RFNSA SITE NO. 4892002



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PART OF LOT 1 ON PLAN 730465

STRUCTURE OWNER - TELSTRA
STRUCTURE TYPE - 20m SEESAW
INGAL STEEL POLE

SITE STRUCTURE CO-ORDINATES (GDA94)
GPS READING ACCURACY: $\pm 10\text{m}$
CENTRE OF POLE

LATITUDE	-14.78008° (GDA94)
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LONGITUDE	143.50378° (GDA94)
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Downer

Relationships creating success

SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 2, 3 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISSUED
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364WO002DOWNER L700	IN	PG	21.08.23	1

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DRAWING / DOCUMENT DESCRIPTION	DRAWING NUMBER	SHEET NO.	ISSUE NO.	ISSUE DATE	DRAWING STATUS		
					FOR CONSTRUCTION	AS BUILT	REFERENCE ONLY
PHOTOS AND SITE LAYOUT	Q117801	2	1	21/08/23	✓		
ELEVATION AND PHOTOS	Q117801	3	1	21/08/23	✓		
EME EXCLUSION ZONES	Q117801	4	1	21/08/23	✓		
SITE EARTHING	Q117801	G4	1	21/08/23	✓		
ELECTRICAL SPECIFICATION	Q117801	E0	1	21/08/23	✓		
AC POWER CONNECTION	Q117801	E2	1	21/08/23	✓		
RACK LAYOUT	Q117801	E5	1	21/08/23	✓		
REFERENCE DRAWINGS							
STANDARD CONSTRUCTION NOTES	017866P05	1	3	10/01/23	✓		
STANDARD STOCK FENCE	017866P11	1	2	13/01/23	✓		
CABLE FIXING TO MONOPOLE ALTERNATIVE DETAILS	017866P58	2	1	29/05/13	✓		
LAST GASP POWER SYSTEM	017866P189	8	1	28/08/19	✓		
PRECAST FOUNDATION - MODULE 2 & 3 DETAILS	017866P189	30	2	12/04/21	✓		
PRECAST FOUNDATION 20m POLE REGION C GENERAL ARRANGEMENT SHT 1 OF 2	017866P189	32	2	12/04/21	✓		
PRECAST FOUNDATION 20m POLE REGION C GENERAL ARRANGEMENT SHT 2 OF 2	017866P189	33	2	12/04/21	✓		
PRECAST FOUNDATION - MODULE 4 DETAILS	017866P189	34	2	12/04/21	✓		
PRECAST FOUNDATION - SMALL CELL OUTDOOR CABINET SUPPORT DETAILS - ELEVATED	017866P189	46	2	12/04/21	✓		
GENERAL ARRANGEMENT OF 20m SEESAW POLE WITH 810 x 190 CLEAR ACCESS DOOR BASE PLATE MOUNTED FOR REGION C	GA12138	1	1	01/12/20	✓		
GENERAL ARRANGEMENT OF 20m SEESAW POLE WITH 810 x 190 CLEAR ACCESS DOOR BASE PLATE MOUNTED FOR REGION C	GA12138	2	1	01/12/20	✓		
GENERAL ARRANGEMENT OF TRANSITION PIECE FOR TQJ708006D-FT0 OMNI ANTENNA	GA12500	1	1	08/06/21	✓		

FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS - REFER TO FIDO DOCUMENTATION

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DRAWING**

COMPLIANCE BOX

COMPLETED AS PER DESIGN

ALTERATIONS IN RED

NAME (PRINT) _____

DATE _____

FOR CONSTRUCTION



SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

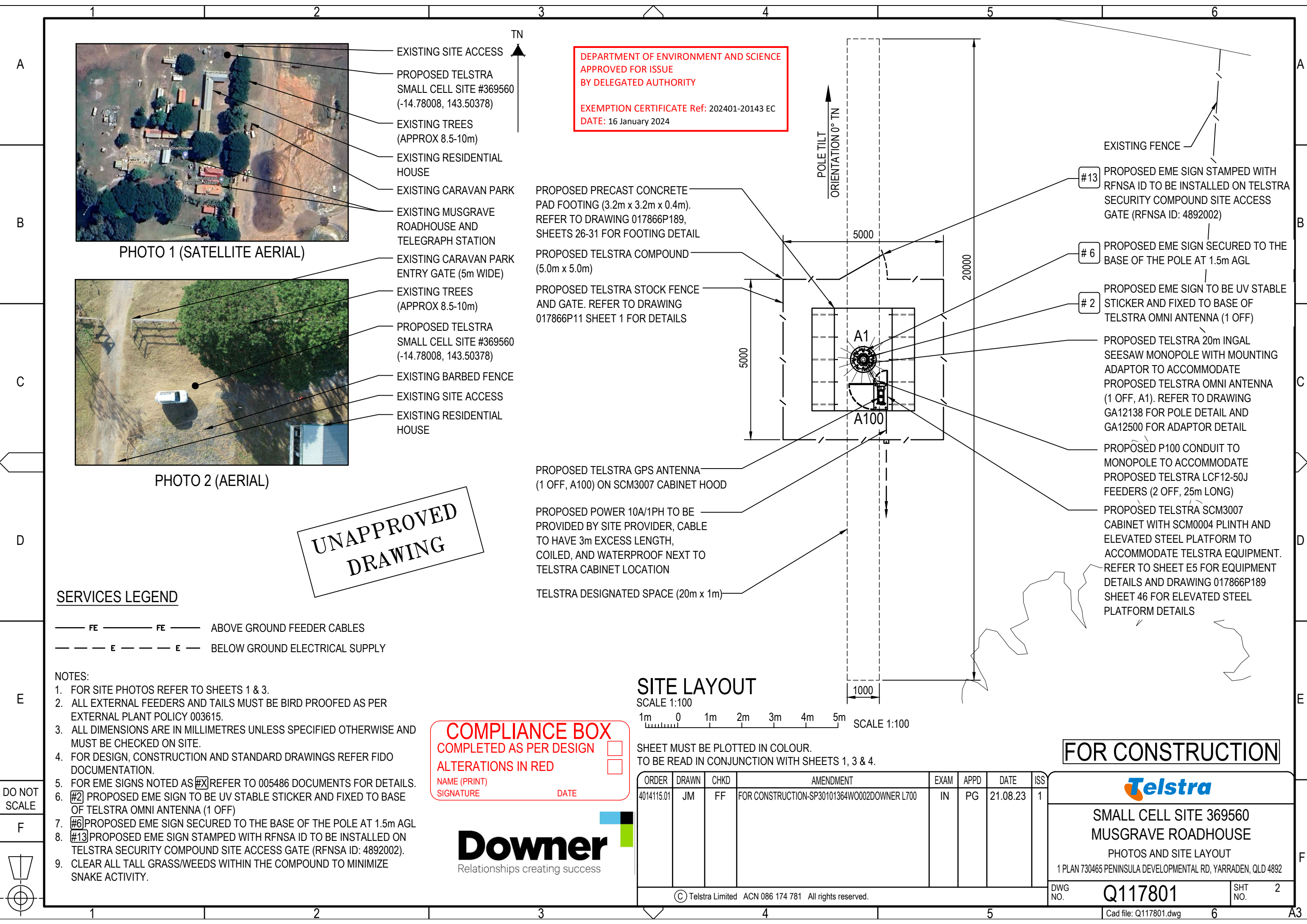
PHOTOS AND LOCALITY PLAN

1 PLAN 730465 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG	
NO	

Q117801

SHT	1
NO	



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SERVICES LEGEND

- FE FE ABOVE GROUND FEEDER CABLES
- E E BELOW GROUND ELECTRICAL SUPPLY

- NOTES:
- FOR SITE PHOTOS REFER TO SHEETS 1 & 3.
 - ALL EXTERNAL FEEDERS AND TAILS MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE AND MUST BE CHECKED ON SITE.
 - FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS REFER FIDO DOCUMENTATION.
 - FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
 - #2 PROPOSED EME SIGN TO BE UV STABLE STICKER AND FIXED TO BASE OF TELSTRA OMNI ANTENNA (1 OFF)
 - #6 PROPOSED EME SIGN SECURED TO THE BASE OF THE POLE AT 1.5m AGL
 - #13 PROPOSED EME SIGN STAMPED WITH RFNSA ID TO BE INSTALLED ON TELSTRA SECURITY COMPOUND SITE ACCESS GATE (RFNSA ID: 4892002).
 - CLEAR ALL TALL GRASS/WEEDS WITHIN THE COMPOUND TO MINIMIZE SNAKE ACTIVITY.

COMPLIANCE BOX
COMPLETED AS PER DESIGN
ALTERATIONS IN RED
NAME (PRINT) SIGNATURE DATE

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SITE LAYOUT

SCALE 1:100

1m 0 1m 2m 3m 4m 5m SCALE 1:100

SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 3 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	21.08.23	1

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SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

PHOTOS AND SITE LAYOUT

1 PLAN 730465 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG
NO.

Q117801

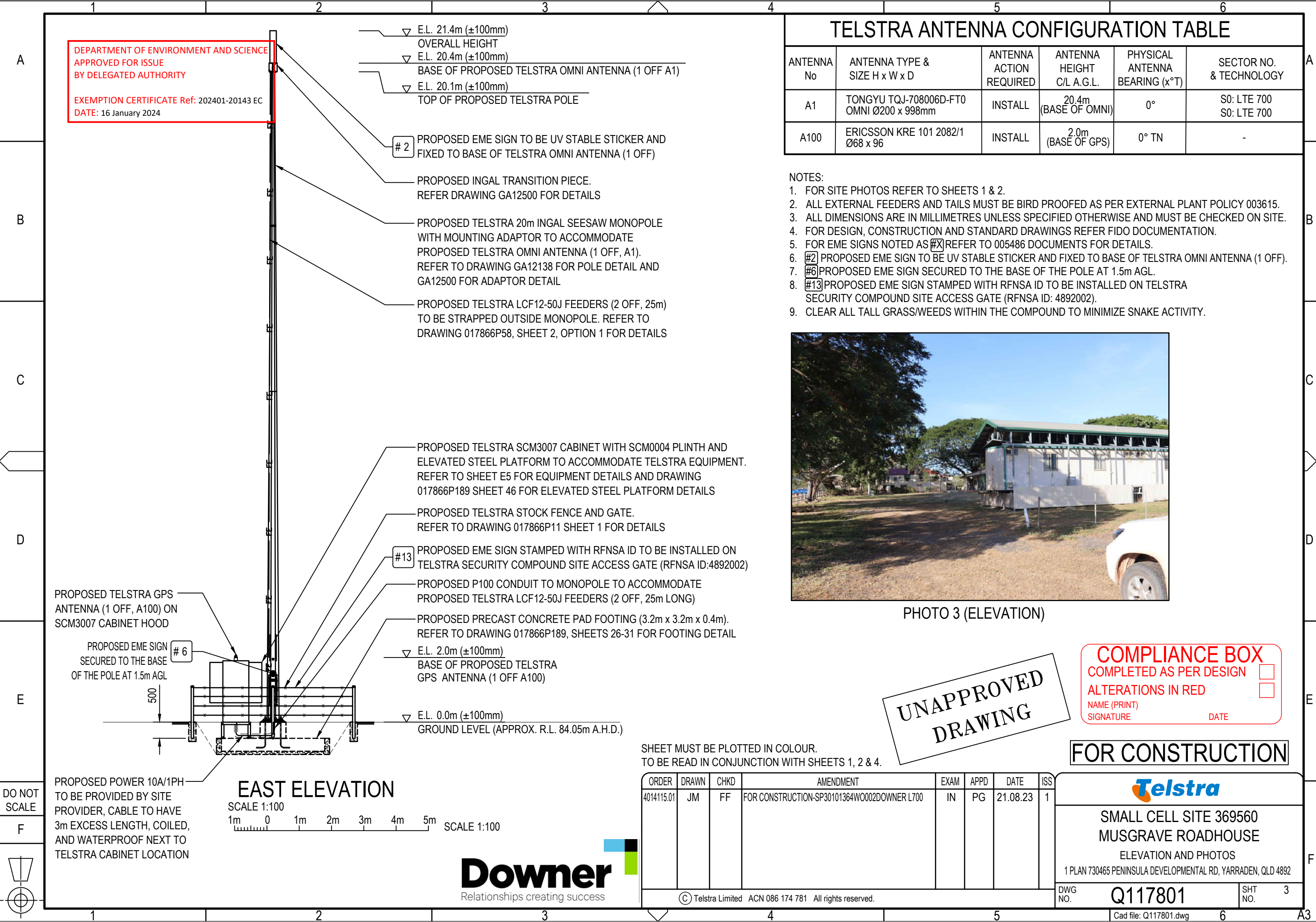
SHT
NO.

2

Cad file: Q117801.dwg

6

A3



TELSTRA ANTENNA CONFIGURATION TABLE

ANTENNA No	ANTENNA TYPE & SIZE H x W x D	ANTENNA ACTION REQUIRED	ANTENNA HEIGHT C/L A.G.L.	PHYSICAL ANTENNA BEARING (x°T)	SECTOR NO. & TECHNOLOGY
A1	TONGYU TQJ-708006D-FT0 OMNI Ø200 x 998mm	INSTALL	20.4m (BASE OF OMNI)	0°	S0: LTE 700 S0: LTE 700
A100	ERICSSON KRE 101 2082/1 Ø68 x 96	INSTALL	2.0m (BASE OF GPS)	0° TN	-

- NOTES:
- FOR SITE PHOTOS REFER TO SHEETS 1 & 2.
 - ALL EXTERNAL FEEDERS AND TAILS MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE AND MUST BE CHECKED ON SITE.
 - FOR DESIGN, CONSTRUCTION AND STANDARD DRAWINGS REFER FIDO DOCUMENTATION.
 - FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
 - #2 PROPOSED EME SIGN TO BE UV STABLE STICKER AND FIXED TO BASE OF TELSTRA OMNI ANTENNA (1 OFF).
 - #6 PROPOSED EME SIGN SECURED TO THE BASE OF THE POLE AT 1.5m AGL.
 - #13 PROPOSED EME SIGN STAMPED WITH RFNSA ID TO BE INSTALLED ON TELSTRA SECURITY COMPOUND SITE ACCESS GATE (RFNSA ID: 4892002).
 - CLEAR ALL TALL GRASS/WEEDS WITHIN THE COMPOUND TO MINIMIZE SNAKE ACTIVITY.



PHOTO 3 (ELEVATION)

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DO NOT
SCALE

F

PROPOSED POWER 10A/1PH
TO BE PROVIDED BY SITE
PROVIDER, CABLE TO HAVE
3m EXCESS LENGTH, COILED,
AND WATERPROOF NEXT TO
TELSTRA CABINET LOCATION

EAST ELEVATION

SCALE 1:100

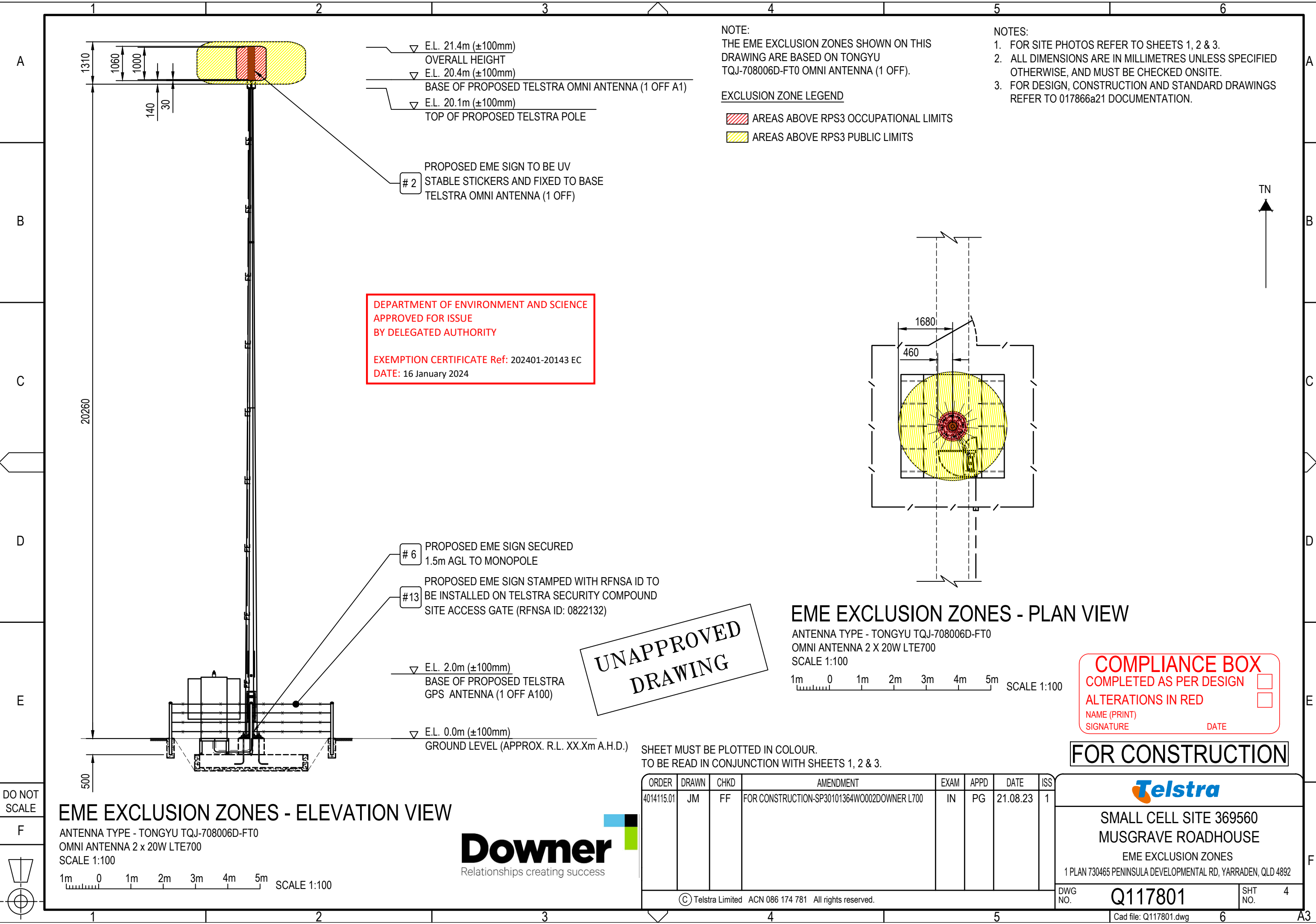
1m 0 1m 2m 3m 4m 5m SCALE 1:100



SHEET MUST BE PLOTTED IN COLOUR.
TO BE READ IN CONJUNCTION WITH SHEETS 1, 2 & 4.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	21.08.23	1

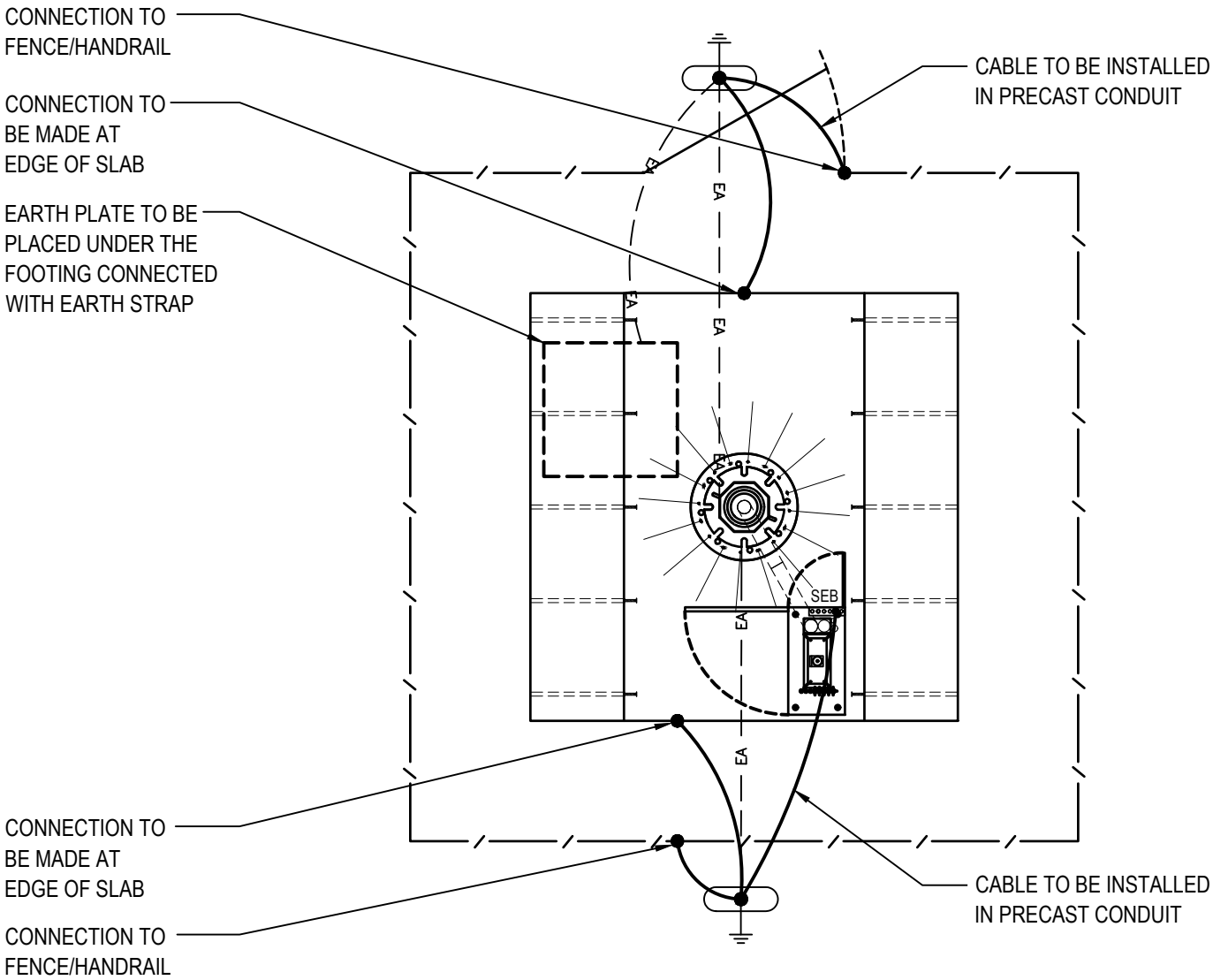
SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
ELEVATION AND PHOTOS
1 PLAN 730465 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892



ALL EARTH CABLES SHALL BE INSTALLED IN CORRUGATED CONDUIT SECURELY FIXED TO SURFACE OF FOOTING. PROPOSED EARTH STRAP SHALL BE FIXED SECURELY TO SURFACE OF FOOTING. WORKS SHALL BE DONE TO AVOID ANY TRIP HAZARDS AS MUCH AS POSSIBLE.

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BY DELEGATED AUTHORITY

EXEMPTION CERTIFICATE Ref: 202401-20143 EC
DATE: 16 January 2024



SITE EARTHING - PLAN
SCALE 1:50
500 0 2500 SCALE 1:50

- NOTES:
- REFER TO DRAWING 017866P201 SHEET 1 FOR ADDITIONAL CONNECTION DETAILS. REFER TO DRAWING 017866P205 SHEET 1 FOR POLE EARTH LAYOUT.
 - ALL EARTH STRAPS TO BE 50 x 3mm HOT DIPPED GALVANISED MS FLAT AND LAID TO A MINIMUM DEPTH OF 500mm.
 - THE NUMBER & DEPTH OF EARTH ELECTRODES ARE TO BE BASED ON A RESISTIVITY SURVEY. ELECTRODES ARE SOLID STAINLESS STEEL OR STAINLESS STEEL CLAD ROD, WHEN STANDARD STAINLESS CLAD RODS ARE UTILISED THESE ARE 1440mm LONG. TWO OF THESE RODS ARE TO BE UTILISED, JOINED TOGETHER AS A MINIMUM TO A LENGTH OF 2880mm. SPECIFIC ELECTRODE DETAIL 2 x 2.88 METRES DEEP.
 - 19/1.53mm GREEN & YELLOW COPPER CABLE SHALL BE RUN FROM THE ANTENNA STRUCTURE AND TERMINATE AT THE ELECTRODE NEAREST STRUCTURE, THIS CONDUCTOR IS THEN TO CONTINUE ON TO THE SERVICE EARTH BAR. FOR FURTHER DETAIL ON EARTHING THE ANTENNA STRUCTURE TO THE RING EARTH REFER DRAWING 017866P205 SHEET 1.
 - EARTH RESISTANCE OBJECTIVE IS 5 OHMS. EARTH RESISTANCE MEASUREMENTS ARE TO BE UNDERTAKEN AS PER WORK INSTRUCTION 017866W01, RESULTS ARE TO BE RECORDED ON FORM 017866F07.
 - IF OBJECTIVE IS NOT ACHIEVED, REPORT RESULTS TO DESIGN ENGINEER.
 - ALL CONNECTIONS TO EARTH ELECTRODES AND JOINTS ARE TO BE TREATED WITH DENSO PASTE AND TAPE. REFER DRAWING 017866P201 SHEET 1.
 - WHERE ELECTRODES CANNOT BE DRIVEN, OR EARTH RESISTIVITY IS HIGH, DEEP DRILLED ELECTRODES MAY NEED TO BE INSTALLED, BACKFILL WITH EARTH ENHANCING MATERIAL (e.g. CALCIUM BENTONITE AND GYPSUM SLURRY).
 - WHERE FENCING IS REQUIRED, INTERCONNECT TO FENCE POSTS AT GATE AS SHOWN, AND ALSO TO ADDITIONAL FENCE POST AT OPPOSITE SIDE OF COMPOUND TO THE GATES. REFER DRAWING 017866P201 SHEET 1.
 - FEEDERS TO BE EARTHED AT TOP AND BOTTOM TO THE STRUCTURE. REFER DRAWING 017866P205 SHEET 1. SHOULD NO POINT EXIST ON THE STRUCTURE, INSTALL AN EARTH WIRE FROM TOP TO BOTTOM TERMINATING AT THE HEAD FRAME AND TO THE STRUCTURE BASE, IF STRUCTURE IS > 30m IN HEIGHT, AT LEAST TWO DOWN CONDUCTORS ARE REQUIRED. REFER AS1768, TERMINATE THE FEEDER EARTH TO THE EARTH WIRE VIA LINE TAPS, THEN DENSO WRAP.
 - WHERE THE FEEDER RUN IS > 2m BETWEEN THE SHELTER AND STRUCTURE ADDITIONAL EARTH TO BE PROVIDED ON FEEDER EARTH BAR IMMEDIATELY BEFORE THE FEEDER ENTERS THE BUILDING OR TO FEEDER EARTH BAR INSIDE SHELTER FOR UNDERGROUND FEEDER ENTRY. FOR UNDERGROUND ENTRY ALWAYS EARTH TO THE INTERNAL FEEDER EARTH BAR, FOR RRU INSTALLATIONS A FEEDER EARTH BAR IS ALWAYS REQUIRED AT THE FEEDER ENTRY AND BONDED TO EARTH AS PER 017866a07. FOR INTERNAL FEEDER EARTH BAR BONDING AT RRU INSTALLATIONS REFER DRAWING 017866P201 SHEET 20. FOR HYBERFLEX EARTHING DETAIL REFER DETAIL 017866P201 SHEET 12.
 - ALL MAJOR EARTH BONDS ARE TO BE LABELLED AT BOTH ENDS INDICATING THE CABLES ORIGIN.

EARTH ELECTRODE SCHEDULE			
TYPE	DIAMETER	QUANTITY	DEPTH
STAINLESS STEEL ROD	14mm	2	2.88m
EARTH GRID SCHEDULE			
TYPE		DIMENSIONS	
HOT DIPPED GALVANISED MS FLAT		50 x 3mm	

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ALTERATIONS IN RED ☐
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FOR CONSTRUCTION

LEGEND:

- EA --- EARTH STRAP
35mm² G/Y INSULATED CABLE (19/1.53)
● CONNECTION (LINE TAP) S/I 151/550
● EARTH ELECTRODE
○ EARTH INSPECTION PIT
○○○○○ SEB
SERVICE EARTH BAR

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SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
SITE EARTHING

1 PLAN 730465 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG
NO.

Q117801

SHT
NO.

G4

DEPARTMENT OF ENVIRONMENT AND SCIENCE
APPROVED FOR ISSUE
BY DELEGATED AUTHORITY

EXEMPTION CERTIFICATE Ref: 202401-20143 EC
DATE: 16 January 2024

- THESE SPECIFICATION
- TELSTRA CIVIL DESIGN MANUAL
- TELSTRA EARTHING MANUAL
- ALL REFERENCED TELSTRA STANDARD DOCUMENTATION
- AS / NZS3000
- AS / NZS3008
- AS / NZS3015
- AS / NZS3017
- AS / NZS1768
- AS / ACIF S006

ALL LOW VOLTAGE AC POWER WORKS SHALL BE COMPLETED BY LICENSED ELECTRICIAN IN ACCORDANCE WITH INSTALLATION RULES AND RELEVANT SAFETY PRACTICES APPLICABLE TO SITE.

ALL WORKS SHALL BE AS PER TELSTRA SPECIFICATIONS AND APPROVED MOPS INCLUDING LABELLING.
CONTRACTOR SHALL MAKE THEMSELVES AWARE OF ALL SITE CONDITIONS AND SAFETY REQUIREMENTS PRIOR TO
COMMENCING ANY WORK ON SITE.

CONTRACTOR TO VALIDATE ALL APPROVALS AND OUTAGES REQUIRED TO CONDUCT PROPOSED WORKS. THIS INCLUDES BUT IS NOT LIMITED TO ANY DONOR SITES AND/OR FAR END SITES WHICH MAY BE IMPACTED DUE TO PROPOSED WORKS.

ALL CONTRACTORS WORKING ON TELSTRA FACILITIES SHALL BE TELSTRA ACCREDITED AS PER TELSTRA PROTOCOLS.

10A / 1P SUPPLY SHALL BE PROVIDED BY SITE PROVIDER. PROVIDE AND INSTALL 10A / 1P CB IN NEXT AVAILABLE POSITION IN DISTRIBUTION BOARD OF MOTEL ROOM BUILDING AS TELSTRA MAIN SWITCH. TELSTRA MAIN SWITCH SHALL BE LABELLED AS "TELSTRA - DO NOT SWITCH OFF".

PROVIDE AND INSTALL 2C+E 6mm Cu / XLPE MULTICORE MAINS FROM TELSTRA MAIN SWITCH TO 16A / 1P MCB IN AC DB OF PROPOSED TELSTRA SMALL CELL CABINET.

TELSTRA MAINS SHALL BE INSTALLED ON THE STEEL FLOOR BEAM STRUCTURE AND THEN UNDERGROUND IN 50mm UPVC CONDUIT. ALL EXPOSED CONDUITS SHALL BE UV PROTECTED.
APPROXIMATE CABLE RUN IS 40m.

TELSTRA MAIN SWITCH LOCATION AND PROPOSED CABLE ROUTE SHALL BE CONFIRMED ON SITE WITH SITE PROVIDER PRIOR TO BUILD.
NO METERING IS REQUIRED ON SITE FOR TELSTRA.

SMALL CELL ROADSIDE CABINET HAS PASSIVE COOLING AND ASSOCIATED FANS TO CATER FOR PROPOSED HEAT LOAD.

PROPOSED INSTALL ERICSSON EPA-PSU-AC (1 OFF) IN PROPOSED SMALL CELL CABINET. ERICSSON PSU-AC SHALL BE POWERED DIRECTLY FROM 16A/1P MCB IN AC DB OF SMALL CELL CABINET.
NO BATTERY RESERVE IS DESIGNED FOR THIS SITE.

PROPOSED INSTALL BB6303 (1 OFF) AND RADIO2217 (1 OFF) IN PROPOSED SMALL CELL CABINET.

PROPOSED BB6303 AND RADIO2217 SHALL BE SUPPLIED VIA A 10A MCB EACH FROM DC DISTRIBUTION BOARD WITHIN SMALL CELL CABINET.

ALL INSTALLATION SHALL BE IN ACCORDANCE WITH TELSTRA DEPLOYMENT MANUALS FOR SMALL CELL ON SKID FRAME.
REFER TO SHEET E5 FOR DETAILS.

PROVIDE AND INSTALL GPS ANTENNA AS PER TELSTRA SPECIFICATIONS FOR SMALL CELLS.

ALL LABELLING SHALL BE AS PER TELSTRA REQUIREMENTS FOR SMALL CELLS.

ALL EARTHING AND BONDING IS TO BE IN ACCORDANCE WITH THE TELSTRA EARTHING MANUAL 017866A07.

ALL CABINETS SHALL BE CONNECTED TO EARTHING SYSTEM AS PER TELSTRA REQUIREMENTS.

ALL EQUIPMENT INSTALLED IN THE PROPOSED SMALL CELL CABINETS ARE TO BE BONDED TO THE CABINET EARTH BAR.
FOR FEEDER EARTHING REFER TO DRAWING 017866P201 SHEET 11.

ALL BONDING CONDUCTORS ARE TO BE LABELLED AT BOTH ENDS IN ACCORDANCE WITH THE TELSTRA EARTHING MANUAL

SECTION 3.5.

- PROPOSED EARTH GRID ELECTRODES: 2 OFF
- PROPOSED EARTH GRID ELECTRODE LENGTH: 2.88M
- INSTALLATION METHOD: DRIVEN.

REFER TO SITE EARTHING PLAN FOR DETAILS.

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DRAWING**

COMPLIANCE BOX	
COMPLETED AS PER DESIGN	☐
ALTERATIONS IN RED	☐
NAME (PRINT)	
SIGNATURE	DATE

FOR CONSTRUCTION

SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE

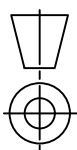
ELECTRICAL SPECIFICATION
1 PLAN 730465 PENINSULA DEVELOPMENTAL RD. YARRADEN. QLD 4892

DWG NO.	Q117801	SHT NO.	E0
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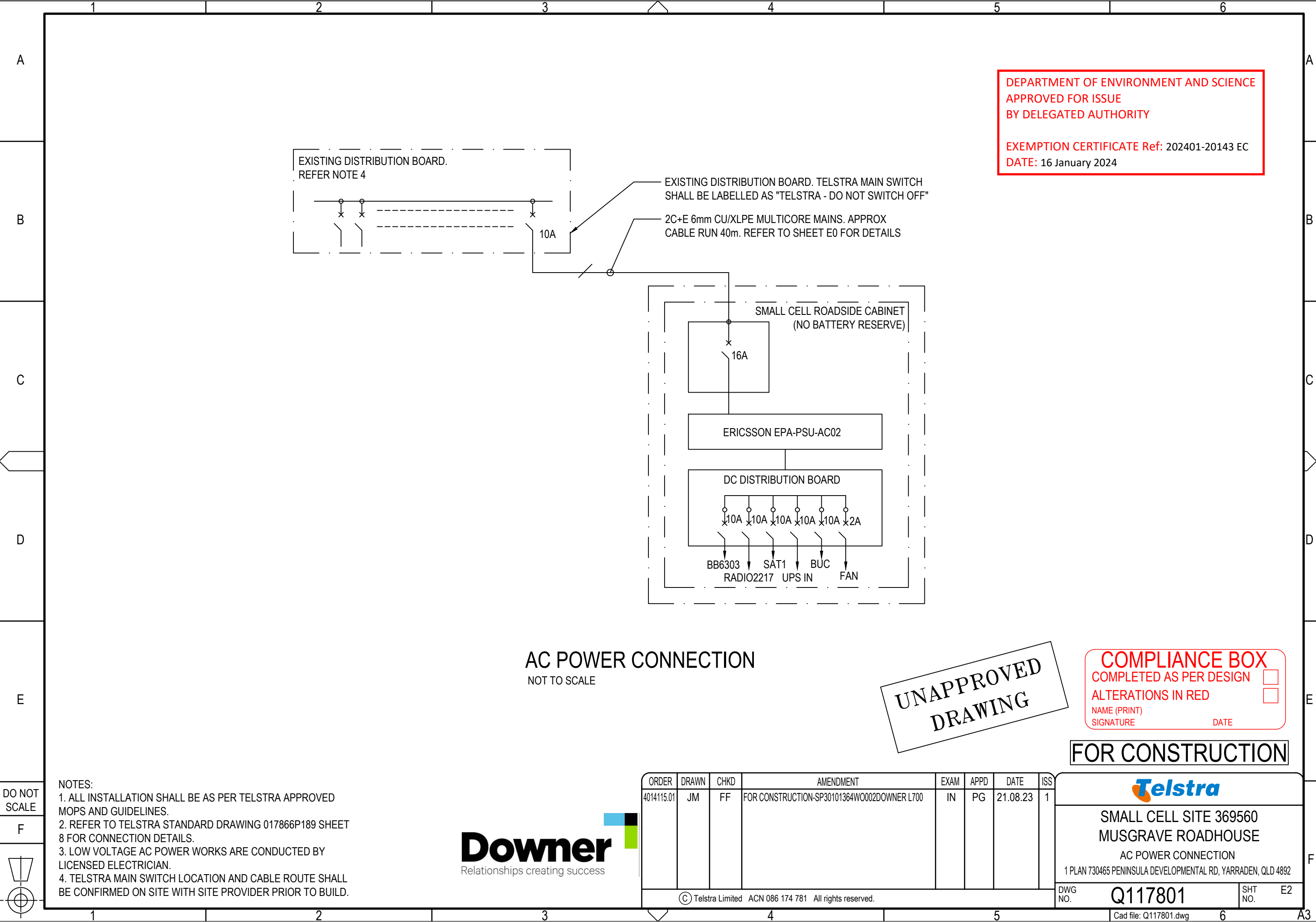
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ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISSUED
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AC POWER CONNECTION
NOT TO SCALE

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COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT) _____
SIGNATURE _____ DATE _____

FOR CONSTRUCTION

- NOTES:
- 1. ALL INSTALLATION SHALL BE AS PER TELSTRA APPROVED MOPS AND GUIDELINES.
 - 2. REFER TO TELSTRA STANDARD DRAWING 017866P189 SHEET 8 FOR CONNECTION DETAILS.
 - 3. LOW VOLTAGE AC POWER WORKS ARE CONDUCTED BY LICENSED ELECTRICIAN.
 - 4. TELSTRA MAIN SWITCH LOCATION AND CABLE ROUTE SHALL BE CONFIRMED ON SITE WITH SITE PROVIDER PRIOR TO BUILD.



ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4014115.01	JM	FF	FOR CONSTRUCTION-SP30101364W0002DOWNER L700	IN	PG	21.08.23	1

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SMALL CELL SITE 369560
MUSGRAVE ROADHOUSE
AC POWER CONNECTION
1 PLAN 730465 PENINSULA DEVELOPMENTAL RD, YARRADEN, QLD 4892

DWG NO. Q117801 SHT NO. E2

