Guidance on the Potential Location of Overground Telecommunications Infrastructure on Public Roads

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Abstract

This report addresses the engineering appropriateness of siting telecommunications equipment on the roads network.

It is very important to note that it does **not** deal in depth with associated planning issues. Items listed as potential opportunities in this report should not be considered to be definitive, as issues with respect to the implementation of the planning legislation will need to be taken into consideration and discussed with the relevant planning authorities.

Meetings are ongoing between the Irish Business and Employers Confederation (IBEC), the Telecommunications and Internet Federation (TIF), The Department of Communications, Energy and Natural Resources (DCENR), the Department of Transport, Tourism and Sport (DTTAS), the National Roads Authority (NRA) and the Country and City Management Association (CCMA), regarding the telecommunications equipment that network operators wish to have facilitated on the roads network, and the possible options to achieve this.

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1 Status of this Report

This report is draft and subject to ongoing review as a result of lessons learned.

2 Introduction

The Government's National Broadband Plan was published in August 2012. It followed detailed engagement with the telecommunications industry through the Next Generation Broadband Taskforce.

The Plan is a framework for the provision of high speed broadband through a combination of commercial and State investment. The Government sees high speed broadband as fundamental to Ireland's competitiveness and as a key component of modern society for the purposes of learning, health and citizenship – and of course, entertainment. The Plan is a clear expression of the importance of quality broadband infrastructure to the achievement of Ireland's economic and social objectives. It commits to a range of actions that are facilitating the rollout of infrastructure and services including addressing planning and road opening challenges, investment focused regulation and maximising the use of State assets where possible.

The Roadworks and Licensing Working Group was set up in July 2012 to address infrastructure issues which were identified by industry as creating barriers to deployment of services. The Group was tasked with reviewing the processes involved in the issuing of Road Opening Licences by both the NRA and Local Authorities to telecommunication and other Utility Companies, with a view to standardising guidance notes and licence certification. It is chaired by the Department of Transport Tourism and Sport (DTTAS), and includes members from the Department of Communications, Energy and Natural Resources (DCENR), the Department of Environment, Community and Local Government (DoECLG), the Local Government Management Agency (LGMA), the National Roads Authority (NRA), and the County and City Managers Association (CCMA).

In terms of mobile broadband infrastructure rollout, significant investment by the mobile telecommunication operators in the last number of years has resulted in the roll out 4G services and improvements to mobile services in general. In order to meet the continuing demand for high speed fixed wireless and mobile broadband services, mobile operators need to continue making significant infrastructure investments.

One of the barriers identified by the mobile industry in rolling out infrastructure is the processes related to obtaining licences to provide overground electronic communications infrastructure. As part of the Roadworks and Licensing Working Group to address such barriers, this report is aimed at providing advice to telecommunications operators as to how telecommunications infrastructure could be accommodated along all road types, including motorways. The report articulates certain considerations relevant to the identification of locations on the roads network that may be suitable for the installation of telecommunications infrastructure.

It is important to note that any sites referred to throughout the report, are indicative only, as the feasibility of utilising any part of the roads network will require detailed consideration for each specific proposal. While there may be a physical possibility of locating telecommunications infrastructure at a particular location, it will not necessarily be feasible when all other factors, including planning, are taken into consideration.

3 Telecommunications Infrastructure

3.1 Background Information provided by Telecommunications Industry

The aim of the Telecommunications industry is to provide service to their customers travelling on the roads network, or in premises adjacent to the roads network, by installing Radio Sites on lands adjacent to the roads and Telecommunications cables along the roads.

The function of these sites is to provide locations for the installation of telecommunication infrastructure required to provide radio mobile coverage to the area surrounding the site. These sites need to be located in all areas where coverage for mobile phones and data devices is required. Typically coverage is needed in all towns and along all main roads.

In order to provide coverage most effectively 'near line-of-sight' is needed from the antenna to the mobile units. For this reason high sites work most effectively and masts or high existing structures are needed to support the antennae. Equipment containers or equipment cabinets are needed adjacent to the masts/antennae.

The coverage from all radio sites fit together like a jigsaw - the location of each site must fit in with surrounding sites. Gaps in coverage create service difficulties for customers.

Between all operators there are at present approximately 4,500 radio sites in the country. New spectrum distributed in a recent auction will mean that despite extensive site sharing many more sites will be required.

3.1.1 Masts

Mast types vary from slim wooden poles to substantial lattice masts. The most suitable site design for a particular location will depend on a number of factors, including the number of operators using the site, the height of mast required to cover the target area etc.

Typically in towns, antennae are 10m above ground and in rural areas are 24m above ground, although this is dependent on location.

There are a wide variety of site sizes, however;

- Urban solutions A small monopole type site with a roadside cabinet; pole similar to telegraph pole and cabinet 1.5m x 0.6m deep by 1.5m high.
- Typical site area for rural single user site; 10m x 5m
- Typical site area for a multi-user shared site; 15m x 10m

Sizes and shapes of radio sites are flexible depending on what is available. Use can often be made of irregular shaped pieces of ground.

Shared sites, used by a number of different operators, are possible. There are a range of possible sharing solutions including:

- Shared site separate masts
- Adjacent separate sites
- Shared mast
- Shared use of existing infrastructure as an antenna support structure.

If more than one mast is used, then typical spacing between masts is 10m.

The most suitable site design for a particular location will depend on a number of factors, including number of operators using the site, the height of mast required to cover the target area etc.

3.1.2 Antennae

Antennae used for the broadcast of mobile signals vary in length. They are typically between 0.8m and 2.0m long. Some 4G antennae are 2.6m in length. It may be possible for them to be mounted onto existing infrastructure in some cases instead of using a mast.

Microwave link antennae are also deployed at these sites. They are circular dishes used to link telecommunications between two fixed points. They vary in size from approximately 300mm to 1.6m in diameter.

3.1.3 Maintenance

Generally the equipment on a site would need one routine maintenance visit per two month period. Non-routine maintenance will also arise.

Each operator employs a specialist company to carry out maintenance of equipment on a site.

4 Overview of Legislation

4.1 Planning and Development Act 2000, as amended

The following section broadly indicates the current requirements for electronic communications infrastructure.

4.1.1 Licensing Requirements for Electronic Communications Infrastructure on Public Roads

Section 254 of the Planning and Development Act 2000, as amended, addresses the licensing of appliances and cables, etc, on public roads.

Section 254(1)(ee) of the Planning and Development Act 2000, (as inserted by the Communications Regulation Act 2002, section 54(1)), states that: "*a person shall not erect, construct, place or maintain overground electronic communications infrastructure and any associated physical infrastructure on, under, over or along a public road save in accordance with a licence granted by a planning authority under this section.*"

Section 254(7) of the Planning and Development Act 2000:

> "*development carried out in accordance with a licence under this section shall be exempted development for the purposes of this Act.*"

It should also be noted that licences under section 254 of the Planning and Development Act 2000 are granted by the planning authority for set periods of time, can be withdrawn at any time with removal at the developer's expense and involves a fee and/or a bond.

This report specifically considers overground infrastructure. If underground infrastructure is proposed, then the following is the situation:

The requirement under section 254 of the Planning and Development Act 2000 to obtain a licence does not apply to "*the erection, construction, placing or maintenance under a public road of a cable, wire or pipeline by a statutory undertaker*" – however, this is regulated by section 53 of the Communications Regulation Act 2002 (as amended):

> *53.—(1) A network operator shall not commence or carry out or cause to be commenced or carried out any roadworks unless—*
>
> *(a) the operator—*
>
> *(i) has obtained the prior written consent under subsection (3) of—*
>
> *(I) in the case of a national road, the NRA, or*
>
> *(II) in the case of any regional or local road, the road authority, in whose functional area the operator proposes to carry out the roadworks,*
>
> *or*
>
> *(ii) is deemed to have been granted consent under subsection (4), where the roadworks are emergency roadworks,*
>
> *or*
>
> *(b) the network operator or any person engaged by the network operator complies with any conditions contained in the consent.*

4.1.2 Development/Local Area Plans Policy

In relation to development/local area plans, section 254(5) of the Planning and Development Act 2000, specifically states that:

> *"in considering an application for a license under this section a planning authority, or the Board on appeal shall have regard to –*
>
> *the proper planning and sustainable development of the area;*
>
> *any relevant provisions of the development plan or local area plan…".*

Accordingly, in making a determination as to whether or not a licence will be granted, the planning authority must have regard to the relevant development plan.

Where a planning authority, which is called upon to issue a section 254 licence, is not the relevant road authority (as would be the case if the NRA were the road authority), the planning authority must consult with the road authority before granting the licence; Planning and Development Act, 2000, section 254(11).

4.1.3 Outside of Public Roads

Outside of public roads, all development requires planning permission, unless it is an exempted development. All exempted developments are listed in the Planning and Development Regulations 2001, as amended. Most of the exemptions contain certain conditions and limitations and there are also further restrictions on development listed under Article 9 of the Regulations.

Section 4 of the Planning and Development Act provides that the Minister may, by regulations, provide for any class of development to be exempted development. Such an amendment was included in the Planning and Development (Amendment) Regulations 2013, which introduced an amendment to Class 31 which now includes, amongst other things, overhead telecommunications including the erection of poles or other support structures provided that the poles or other support structures carrying the overhead lines do not exceed 10 metres in height and where the poles or other support structures carrying other equipment shall not exceed 10 metres in height and 0.6 metres in diameter measured at the widest point.

See Appendix C for the full list of exempted developments in Class 31.

4.1.4 Section 28 of the Planning and Development Act, 2000, Guidance

The Minister for the Environment, Community and Local Government has issued these guidelines under section 28 of the Planning and Development Act, 2000, as amended. Planning authorities and An Bord Pleanála are required to have regard to the guidelines in the performance of their functions under the Planning Acts. There are two main relevant section 28 Guidances

4.1.4.1 Spatial Planning and National Roads Guidelines for Planning Authorities, 2012

The Department of the Environment Community and Local Government "Spatial Planning and National Roads Guidelines for Planning Authorities, 2012" was issued under Section 28 of the Planning and Development Act, 2000, as amended.

These guidelines were jointly sponsored by DoECLG and DTTAS. They set out planning policy considerations relating to development affecting national roads (including motorways, national primary and national secondary roads) outside the 50/60 km/h speed limit zones for cities, towns and villages. Planning authorities and An Bord Pleanála are required to have regard to the guidelines in the performance of their functions under the Planning Acts.

The DoECLG Spatial Planning and National Roads Guidelines for Planning Authority's (2012) requires planning authorities to avoid the creation of any additional access point from new development or the generation of increased traffic from existing accesses to national roads to which speed limits greater than 60 km/h apply. This provision applies to all categories of development, including individual houses in rural areas, regardless of the housing circumstances of the applicant to avoid development that results in the creation of a new access (or the intensification of an existing private access) to a national road outside locations to which a 60km/h speed limit or lower applies.

The guidelines highlight the need for early engagement and dialogue between the NRA and planning authorities in respect of devising appropriate policies and objectives for managing development within the broader context of the national road network and functions. Most local authorities have included such provisions in their development plans in accordance with DoECLG policy.

4.1.4.2 Telecommunications Antennae and Support Structures Guidelines. DOECLG Circular Letter: PL 07/12 (October 2012)

The National Broadband Plan identifies a number of potential barriers to efficient Next Generation Broadband (NGB) rollout and the necessary actions required to address these barriers. A number of potential barriers in the planning area have been identified. These are addressed by way of an update of elements of Telecommunications Antennae and Support Structures Guidelines published in 1996, as indicated in DOECLG Circular Letter: PL 07/12 (October 2012). This circular can be found in Appendix B.

An overarching aim of the circular and the original Telecommunications Antennae and Support Structures Guidelines was, and continues to be, to ensure a consistent approach by the various planning authorities in the preparation of their development plans and in determining applications for planning permission.

- The issues identified in the 2012 Circular Letter had been identified as barriers to the deployment

of telecommunications infrastructure and include:

- » temporary planning permissions,
- » distance restrictions for telecoms infrastructure,
- » lodgement of bonds,
- » health and safety, and
- » the creation of a database of approved structures.

- This circular can be found in Appendix B.

4.2 Roads Act 1993, as amended (the Act)

Sections 13(10)(a) and (b) of the Act state:

(10) (a) A person who, without lawful authority or the consent of a road authority—

(i) defaces a public road by writing or by any other means,

(ii) damages a public road,

(iii) excavates a public road,

(iv) (I) places or deposits any material or thing on a public road,

(II) permits dung or urine from an animal owned by him or any material or thing which falls from a vehicle owned or used by him, to be left on a public road, or

(III) does any other thing,

such that the material, thing, dung or urine or the doing of such other thing is a hazard or potential hazard to persons using a public road or obstructs or interferes with the safe use of a public road or the maintenance of a public road, shall be guilty of an offence.

(b) A consent under paragraph (a) may be given by the road authority subject to such conditions, restrictions or requirements as it thinks fit and any person who fails to comply with such conditions, restrictions or requirements shall be guilty of an offence.

Accordingly, once a licence has been obtained under section 254 of the Planning and Development Act, 2000, the requirement to obtain consent under section 13(10) of the Act should no longer be regarded as applying.

Similarly, once planning permission has been obtained under Part III of the Planning and Development Act 2000, the requirement to obtain consent under section 13(10) of the Act should no longer be regarded as applying.

4.2.1 Motorways

Provisions in the Act pertaining to motorways are predicated on ensuring that safety for road users is maximised and the capacity of the infrastructure is protected. Thus specific provisions apply to motorways over and above those applying to all other road types.

Section 43(2) the Act states that *"a person shall not have or be entitled to direct access from any land adjoining a motorway to the motorway, or from the motorway to such land, nor shall such a right to direct access be granted at any time"*.

Based on this, legislative change would be required in order to allow access for overground telecoms equipment to motorway lands from any land adjacent to a motorway.

Section 53(1)(a) of the Act states that "*The powers conferred on any State authority, statutory undertaker or local authority by or under any enactment to carry out works along, adjoining, in, on, under or over any land shall not be exercised by that authority or undertaker in relation to any land comprised in a motorway, busway or protected road otherwise than with the consent of the Authority (in the case of a national road) or the Minister (in the case of a regional road or a local road).*"

Based on this, legislative change would not be required to facilitate access to suitable areas within motorway lands if access to the motorway were to take place at an existing interchange.

However, as stated above, any proposed works in the vicinity of a motorway must have the consent of the NRA, regardless of any other powers/consents that are in place. The NRA has an obligation under the Act to ensure

"*the provision of a safe and efficient network of national roads*". Accordingly, the NRA has a basic concern that the deployment and ongoing access needs for overground telecoms infrastructure is incompatible with the safe operation of motorways.

4.2.2 Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks [OJ 23/05/2014 L155 p1]

Directive 2014/61/EU was adopted to reduce the costs of deploying high speed broadband infrastructure. The Directive addresses a number of obligations to member states for this purpose including a requirement to allow electronic communications networks providers to access the networks of other network providers, including roads and public lighting network, under fair and reasonable terms, unless there are objective reasons to the contrary.

The Department of Communications, Energy and Natural Resources will propose legislative change and administrative actions to transpose the Directive during 2015 in order to meet the transposition deadline set in the Directive of 1 January 2016.

4.3 Some Relevant Legal Definitions

See Appendix D for some relevant legal definitions.

5 Consideration of Opportunities to Facilitate Telecommunications Infrastructure on the Roads Network

It is important to note that the locations along the roads network and the types of telecommunications infrastructure being referred to in Table A, and throughout the report, are indications only, as the feasibility of utilising these parts of the roads network will require detailed consideration for each specific proposal. The type of telecommunications equipment will be an important factor in these considerations. While there may be a physical possibility of locating telecommunications infrastructure at a particular location, it will not necessarily be feasible when all other factors, including planning, are taken into consideration.

5.1 Safety

The safety of road users, and of those carrying out site visits, is paramount when considering the suitability of individual sites. A key determinant in any decision would be to ascertain that no adverse impact on road user safety would arise, no restrictions on the driver's visibility, no obstruction of footpaths or cycle-paths would be caused, etc.

Action No 65 of the Government's Road Safety Strategy 2013-2020 is as follows: "Reduce the number of access points outside speed limit areas on national roads by 5% by 2020." Speed limit areas in this context are 30km/h, 50km/h or 60km/h speed limits. Therefore, when selecting a suitable site, if possible locate the access point on a non-national road.

There is an area at the side of the road called the clear zone. The aim is to make the area adjacent to the carriageway as clear of obstacles/hazards as possible so that if someone loses control and leaves the road, they do not hit an obstacle that will cause them harm. This is the concept of "forgiving roadsides". Any telecommunications infrastructure would need to be erected at a safe location outside of the clear zone. The clear zone is officially described as "the total width of traversable land on either side of the road/carriageway, within the road boundary, which is to be kept clear of unprotected hazards". This width is available for use by errant vehicles. The clear zone for a particular location depends on the slope of the terrain, the horizontal alignment and the design speed for the road. NRA Design Manual for Roads and Bridges, NRA TD19, shows how it is calculated. As an example, a straight on a motorway with a design speed of 120km/h and a relatively flat side slope has a clear zone of 10m. For unimproved sections of road, it is likely that there will not be much space between the edge of the carriageway and the road boundary/fenceline. In this case, if there is space that appears to be a potential site for telecoms equipment, the equipment would need to be located as near to the boundary as possible, protected by safety fencing if possible, and in a location where vehicles are unlikely to hit it, such as on a straight, and not on the outside of a bend.

5.2 Traffic Management

On rural roads, traffic management is likely to be required for all site visits, whether for routine maintenance, for repair, for replacement/upgrading/decommissioning/removal or for any other purpose. On urban roads, depending on the location of the telecoms equipment, there may or may not be a requirement for traffic management during site visits.

5.3 Areas with speed limit of 60km/h or less

In areas with speed limit of 60km/h or less, the Design Manual for Urban Roads and Streets, applies. This publication is jointly sponsored by DoECLG and DTTAS.

5.4 Consideration of suitability of locations

Set out at Table A are a list of considerations and comments that may be relevant in the consideration of whether a particular site is suitable or not.

The roads have been divided into the following categories:

- Urban Roads
- Rural Regional and Local Roads
- Rural Single Carriageway National Roads
- Motorways & Dual Carriageways
- On-road infrastructure

Table A

Consideration of Opportunities to Facilitate Telecommunications Infrastructure on the Roads Network			
Urban Roads			
	General	**Opportunities**	**Comment**
	In the case of urban roads, there are generally few opportunities to cater for large, stand-alone masts. There may be opportunities in the vicinity of some roundabouts. There are, however, likely to be more opportunities to accommodate small telecoms antennae / cabinets within the streetscape. Also, it may be feasible to erect new poles to accommodate telecommunications infrastructure.	Opportunities are generally limited to locations where a wide verge or footpath allows the accommodation of small cabinets/antennae and/or the erection of stand-alone poles to accommodate telecommunications infrastructure.	Stand-alone poles are the preferred option in urban areas, as there are ongoing operational and maintenance issues relating to accommodating electronic equipment on lighting columns.
Rural Regional & Local Roads			
	General	**Opportunities**	**Comment**
	On rural sections of the regional and local road network, the boundaries are generally extremely tight and the widths of road reservations are such that there are unlikely to be many suitable locations to safely accommodate telecoms infrastructure. Wider reservations may be found where an old national road has been reclassified as regional or local, following the construction of a new national road along a new alignment.	There may be a limited number of locations where local improvements/ realignments such as taking out a bad bend have taken place, and the original road remains in situ. However these are likely to be few and far between, as most local authorities will have eliminated areas such as these. There are occasional laybys, and these may provide opportunities to accommodate telecoms infrastructure. There may be opportunities adjacent to bridges, or other areas where there is likely to be a wider verge.	

Rural Single Carriageway National Roads			
	General	**Opportunities**	**Comment**
	As in the case of regional and local roads, most of the unimproved sections of national roads will not have many opportunities within the road reservation to accommodate roadside telecoms infrastructure.	Sections of national road that have been subject to realignment are likely to offer a better opportunity to accommodate telecoms infrastructure. This may occur at the tie in with the existing road, where generally there will be additional lands provided to allow a safe tie-in with the existing alignment. There may also be other locations along realigned sections of two lane roads that could accommodate a telecoms mast. Occasionally laybys are situated on single carriageway roads, and these may provide opportunities.	
Motorways & Dual Carriageways			
	General	**Opportunities**	**Comment**
	There are generally more opportunities in the vicinity of motorways and dual-carriageways. Appendix E shows a typical drawing showing land to be purchased as part of a motorway scheme. The land coloured blue is designated "motorway". The land coloured grey is necessary for the scheme, but is not designated "motorway". The blue "motorway" land is subject to legal restrictions in terms of access and use. There are likely to be opportunities to accommodate telecommunications equipment within the grey land.	Locations associated with the motorway, but not themselves part of the motorway, such as maintenance depots, service areas, side roads, lands for attenuation ponds and local access roads, are likely to provide the best opportunities.	Different locations in the vicinity of motorways/dual carriageways have been separated out and are individually discussed below.

Motorways & Dual Carriageways			
	General	**Opportunities**	**Comment**
1	At side road overbridge interfaces	Side roads cross above the motorway / dual carriageway network at numerous locations, reflecting the dense nature of the Irish rural road network. Such interfaces offer the possibility of locating a telecoms mast close to the motorway. See example of existing mast in Appendix A.	Most side roads are carried over the motorway on embankments so that the over-road is up to 7m above adjacent lands. The best opportunity for locating telecoms masts is when the mainline is in full or partial cut, and the level difference between the over-road and adjacent lands is minimised. Telecoms infrastructure could be accommodated on non-motorway lands, adjacent to the motorway.
2	At side road underbridges	Side road underbridges (motorway crosses over minor road) are relatively uncommon.	This does not provide a good opportunity for the siting of telecoms masts as the level of the lands adjacent to the underbridge will be well below the level of the motorway.
3	At Junctions / Interchanges	Opportunities are most likely adjacent to side roads that have been realigned to tie in with the motorway interchange.	From time to time, repairs will be required, and the necessary consents would have to be obtained before any works on the repairs can commence. Agreement will be required with the relevant PPP Co/ MMaRC Contractor before anyone can access their area. This may result in delays in restoration of service to customers. Similar requirements re consents apply for replacement/upgrading/decommissioning/removal of infrastructure. Interchanges themselves are "motorway" and subject to restrictions as outlined above. Beyond the immediate motorway interchange, the land associated with the side roads is non-motorway and therefore opportunities are likely to exist to accommodate telecoms infrastructure.

Motorways & Dual Carriageways			
	General	**Opportunities**	**Comment**
4	Adjacent to accommodation roads	Accommodation roads are provided in certain circumstances adjacent to the motorway reservation. These roads can provide access to severed lands, or to drainage / attenuation features. Where an accommodation road is in public ownership, access to the accommodation road could be provided to telecommunications companies in order to allow them to access a suitable mast site either on or adjacent to the publicly owned lands .	The accommodation roads could be used to provide access to private lands adjacent to the motorway, or alternatively to a suitable site if such exists within the publicly owned lands. Providing access from accommodation roads to "motorway" lands may be physically possible. However, as identified above, at present it is not legally possible to provide access from "motorway" land to non-motorway land, so access could not be provided from the motorway to the accommodation roads. From time to time, repairs will be required, and the necessary consents would have to be obtained before any works on the repairs can commence. Where this is located within the area of a PPP Co/ MMaRC Contractor, then agreement will be required with the relevant PPP Co/ MMaRC Contractor before anyone can access their area. This may result in delays in restoration of service to customers. Similar requirements re consents apply for replacement/upgrading/decommissioning/removal of infrastructure. This would be on land that is not designated "motorway". Such sections of land are where opportunities are likely to exist.

Motorways & Dual Carriageways			
	General	**Opportunities**	**Comment**
5	At severed sections of land	In many situations, small sections of lands are severed by a motorway alignment, and such small parcels of land are typically purchased as part of the scheme lands. Sometimes the lands are sold on after completion of the scheme, but if not, there may be an opportunity to use such lands to accommodate telecoms masts. Where a side road is not carried over or under a motorway, cul de sac(s) will be created on the side roads. These may provide opportunities to accommodate telecoms infrastructure.	These sections of land may be accessed through the local road network, or by agreement between the telecommunications companies and the relevant landowner(s). Within the terms of the Roads Act, it is not legally possible to provide access from "motorway" land to non-motorway land, so access could not be provided from the motorway to these sections of land. This would be on land that is not designated "motorway". Such sections of land are where opportunities are likely to exist.
6	At locations where motorway lands provide verge widths in excess of 10m	Generally, there is little spare space in the verges of our motorway/ dual carriageway network. The obligation under CPO law is to only purchase lands that are essential for the construction of the motorway, and accordingly suitable areas of land rarely occur along the mainline of the motorway. Where, exceptionally, such locations occur, they would have to be accessed from the motorway mainline. Such an arrangement is not favoured by the NRA in the light of the concerns already expressed regarding motorway safety, operation and capacity.	Such an arrangement is not favoured by NRA in the light of the concerns already expressed regarding motorway safety and capacity. This section applies to the "motorway" itself, and not to the non-motorway lands. Lands associated with the motorway, but not officially designated "motorway", are described in the other sections. The non-motorway land is where opportunities are likely to exist.

Motorways & Dual Carriageways			
	General	**Opportunities**	**Comment**
7	Adjacent to attenuation ponds	Attenuation ponds are located at various locations along the motorway network. Generally the lands taken for such ponds accommodate the footprint of the pond only, but in certain instances it may be possible to accommodate a mast. Access would generally be from an accommodation road.	This would be on land that is not designated "motorway". Such sections of land are where opportunities are likely to exist.
8	Laybys	Laybys and enforcement areas have been constructed along the motorway network, however, generally there is not enough additional land to accommodate a telecoms mast. Parking would be available for maintenance vehicles.	From time to time, repairs will be required, and the necessary consents would have to be obtained before any works on the repairs can commence. Agreement will be required with the relevant PPP Co/MMaRC Contractor before anyone can access their area. This may result in delays in restoration of service to customers. Similar requirements re consents apply for replacement/upgrading/decommissioning/removal of infrastructure. This would be on "motorway" land.
9	Service Areas	The Authority currently operates three service areas in total – two on the M1 and one on the M4. Arrangements could be put in place to accommodate telecoms infrastructure in these locations.	Three more NRA service areas are currently under construction: M6 Athlone, M9 Kilcullen, M11 Gorey. Again, arrangements could be put in place to accommodate telecoms infrastructure within these service areas.
10	Motorway Maintenance Depots	The Authority has recently constructed seven maintenance depots along the motorway network. In principle, space could be found within the footprint of these depots to accommodate telecoms infrastructure.	

On Road Infrastructure			
	General	**Opportunities**	**Comment**
1a	Lighting columns on urban roads:	Lighting columns typically are frangible and thin walled in order to minimise risk of injury to the passengers of an errant vehicle impacting on the pole. To accommodate a telecoms antenna, the lighting column would have to be replaced with a structurally stronger support. Stand-alone poles are the preferred option in urban areas, as there are ongoing operational and maintenance issues relating to accommodating electronic equipment in lighting columns. Many existing urban lights are mounted on ESB wooden poles. ESB approvals would be required were these poles to be considered as a possibility.	
1b	Lighting columns on rural roads There are few lighting columns on rural roads. Policy generally limits lighting to built-up areas and some conflict areas.	Lighting columns typically are frangible and thin walled in order to minimise risk of injury to the passengers of an errant vehicle. As with most roadside equipment adjacent to motorways, these columns are designed to act in a particular way when struck by a vehicle. They are "forgiving", in that, if a vehicle strikes one, the effects on the occupants of the vehicle are minimised. The columns have undergone EU testing to gain certification that they act in a particular way in an impact. Attaching any equipment to a lighting column would alter the mechanics on impact, thus reducing the levels of safety for occupants of any vehicle that may strike that column. Therefore, it will not be possible for antennae to be attached to these lighting columns.	To accommodate a telecoms antenna, a lighting column would have to be replaced with a structurally stronger support. This could only be considered where the lighting column is already behind a safety barrier. No new barriers could be facilitated as they, in themselves, are hazards. When lighting columns need to be replaced, in the course of normal maintenance, they will generally be replaced with passively safe lighting columns which would not require a safety barrier in front of them. It is a possibility that, at some point, for road safety reasons, there may be a requirement for an item of road infrastructure to be relocated/replaced, resulting in the need for a telecoms antennae to be removed or relocated to a potentially less suitable location.

On Road Infrastructure			
	General	**Opportunities**	**Comment**
2	Cantilever gantries	These are located on motorways and some dual carriageways. In general, the cantilever gantries are fully mounted with directional signs/ traffic monitoring equipment and opportunities are limited. Additionally, the Authority currently has plans to install additional electronic infrastructure of its own (variable message signs and CCTV cameras) on signage gantries.	Based on section 53 of the Roads Act, (as amended), any proposed works in the vicinity of a motorway must have the consent of the NRA, regardless of any other powers/consents that are in place. From time to time, repairs will be required, and the necessary consents would have to be obtained before any works on the repairs can commence. Agreement will be required with the relevant PPP Co/MMaRC Contractor before anyone can access their area. This may result in delays in restoration of service to customers. Similar requirements re consents apply for replacement/upgrading/decommissioning/removal of infrastructure. This would be on land designated as "motorway".
3	Other infrastructure	High mast lighting and CCTV poles are not suitable to accommodate antennae, given the adverse impact on the maintenance and replacement of the lighting and CCTV units.	With high mast lighting, the luminaires are all attached to a circular "carriage" around the mast, which is raised and lowered using a winching system whenever maintenance is required. This means that there is no possibility of attaching other equipment to the masts, as it would impede the lowering and raising of the luminaires.

6 Examples of potential opportunities for facilitating overground telecommunications equipment on the roads network

Specific sections of road for four different road types have been examined to give an indication of the potential for finding suitable locations to accommodate telecommunications infrastructure on those different road types. The results are broadly representative of the types of opportunities that will arise on these road types.

For a summary of the outcome of each such examination in relation to:

- M7 Nenagh to Limerick, motorway scheme - see Appendix G;
- N30 Enniscorthy to New Ross, national road, single carriageway, partly improved - see Appendix H;
- R178 Carrickmacross to Dundalk, regional road, single carriageway, short section improved - see Appendix I; and
- L1002, L2207 and L14011, strategic and non-strategic local roads - see Appendix J.

It is important to note that the locations along the roads network and the types of telecommunications infrastructure being referred to in Appendices E to H, and throughout the report, are indications only, as the feasibility of utilising these parts of the roads network will require detailed consideration for each specific proposal. The type of telecommunications equipment will be an important factor in these considerations. While there may be a physical possibility of locating telecommunications infrastructure at a particular location, it will not necessarily be feasible when all other factors, including planning, are taken into consideration.

7 Shared facilities

The telecommunications industry has listed the following options as being achievable:

- Shared site separate masts
- Adjacent separate sites
- Shared mast
- Shared use of existing infrastructure as an antenna support structure.

A shared mast arrangement or shared use of a new pole as an antenna support system is definitely the preferred option, and likely to be the only feasible options for the vast majority of locations described in the road assessment reports in Appendices E to H, due to limitations in available space and potential environmental impact.

8 Progressing a Possible Opportunity to Accommodate Telecommunications Infrastructure on the Roads Network

Planning procedures will need to be followed, in accordance with requirements for all proposed telecommunications developments.

Environmental issues have not been considered.

This report considers specific locations from a high level viewpoint. More detailed consideration would be needed if a location were to be progressed with the object of installing telecommunication equipment. The type of telecommunications equipment will be an important factor in these considerations. While there may be a physical possibility of locating telecommunications infrastructure at a particular location, it will not necessarily be feasible when all other factors, including planning, are taken into consideration.

Redundant/obsolete equipment must not be on the roads network, and any agreement would include requirements to remove such infrastructure within set timescales and at no cost to the NRA or local authority.

Before any official processes start, engagement and discussion should take place with the relevant local authority, and with NRA in the case of a national road,

In addition, the following points should be taken into account when considering the possibility of placing telecommunications equipment on the roads network:

8.1 Urban Roads-

8.1.1 Regional and Local

- The relevant local authority is the roads authority, and is responsible for the maintenance and upkeep of the road network. A consent may be given by the relevant local authority under Section 13(10) of the Roads Act 1993. However, if a licence has been obtained under section 254 of the Planning and Development Act, 2000, the requirement to obtain a specific consent under Section 13 of the Roads Act 1993 should not apply.
- Road Safety Audits may be required in accordance with Department Circular 16/2008 and NRA Design Manual for Roads and Bridges (DMRB), HD 19. The objective of this standard is to ensure that the road safety implications of all schemes are fully considered for all road users and others affected by the scheme. For example, on a footpath, any proposed telecommunications equipment would need to be located so as not to create a hazard for pedestrians including those with prams, or wheelchair users. Sightlines for drivers must also be kept clear and should be in accordance with the Design Manual for Urban Roads and Streets (DMURS).
- For telecommunications equipment to be accommodated on existing road infrastructure, proposals need the approval and permission of the relevant local authority.
- Any agreement needs to indemnify the local authority for any costs incurred in relation to repair/alteration/removal or any other unforeseen costs associated with the infrastructure. Specific timetables for performance of tasks would be built in, with penalties for non-performance.
- Structural technical acceptance will be required, in accordance with local authority requirements, before submitting a request for a licence under section 254 of the Planning and Development Act, 2000. If a section 254 licence, or full planning permission, is received and the structure is erected, it must be recorded in an asset management database and inspected regularly, in accordance with the requirements of the relevant local authority. Costs arising to be borne by the relevant Telecommunications Network Operator.
- Health and Safety legislation applies. For example, for construction activity, the Safety, Health and Welfare at Work (Construction) Regulations 2006-2013, as amended, and associated guidance must be adhered to at all times.
- Routine maintenance visits, such as bi-monthly visits to masts, as well as non-routine maintenance visits to the equipment are required by each operator. Depending on the location of the equipment, safety/traffic management may be necessary at each visit, and there may be restrictions on the hours during which the work can be carried out. Depending on the nature of the proposed works, local authority consent to carry out works on the road may need to be obtained before a visit, and sufficient time must

be allowed to obtain this consent if it is required.

- Details of all equipment should be logged and recorded on MapRoad Road Management System.

8.1.2 National

- These roads come under the general remit of the NRA. However, the relevant local authority is the road authority, and is responsible for the maintenance and upkeep of the road network. A consent may be given by the relevant local authority (as road authority) under Section 13(10) of the Roads Act 1993. However, if a licence has been obtained under section 254 of the Planning and Development Act, 2000, the requirement to obtain a specific consent under Section 13 of the Roads Act 1993 should not apply.
- Road Safety Audits would be required under NRA Design Manual for Roads and Bridges (DMRB), HD 19. The objective of this standard is to ensure that the road safety implications of all schemes are fully considered for all users of the road and others affected by the scheme. For example, on a footpath, any proposed telecommunications equipment would need to be located so as not to create a hazard for pedestrians including those with prams, or wheelchair users. Sightlines for drivers must also be kept clear.
- For telecommunications equipment to be accommodated on existing road infrastructure, proposals need the approval and permission of the NRA and/or the relevant local authority, depending on who is responsible for the existing infrastructure. For example, signing is maintained by the NRA using a maintenance contract. Lighting is likely to be the responsibility of the local authority.
- Any agreement needs to indemnify the NRA and local authority for any costs incurred in relation to repair/alteration/removal or any other unforeseen costs associated with the infrastructure. Specific timetables for performance of tasks would be built in, with penalties for non-performance
- NRA DMRB BD02 structural technical acceptance will be required before submitting a request for a licence under section 254 of the Planning and Development Act, 2000. If a section 254 licence, or full planning permission, is received and the structure is erected, it must be entered onto the NRA's Eirspan structures database, and periodic inspections will be required in accordance with Eirspan requirements. Costs arising to be borne by the relevant Telecommunications Network Operator.
- Health and Safety legislation applies. For example, for construction activity, the Safety, Health and Welfare at Work (Construction) Regulations 2006-2013, as amended, and associated guidance must be adhered to at all times.
- Routine maintenance visits, such as bi-monthly visits to masts, as well as non-routine maintenance visits to the equipment are required by each operator. Depending on the location of the equipment, safety/traffic management may be necessary at each visit, and there may be restrictions on the hours during which the work can be carried out. Depending on the nature of the proposed works, consent to carry out works on the road may need to be obtained before a visit, and sufficient time must be allowed to obtain this consent if it is required.
- Details of all equipment should be logged and recorded on MapRoad Road Management System.

8.2 Rural Roads:

8.2.1 Regional and Local

- The relevant local authority is the roads authority, and is responsible for the maintenance and upkeep of the road network. A consent may be given by the relevant local authority under Section 13(10) of the Roads Act 1993. However, if a licence has been obtained under section 254 of the Planning and Development Act, 2000, the requirement to obtain a specific consent under Section 13 of the Roads Act 1993 should not apply.
- Road Safety Audits may be required in accordance with Department Circular 16/2008 and NRA Design Manual for Roads and Bridges (DMRB), HD 19. The objective of this standard is to ensure that the road safety implications of all schemes are fully considered for all users of the road and others affected by the scheme.
- For telecommunications equipment to be accommodated on existing infrastructure, the relevant local authority would need to approve any proposals.

- Any agreement needs to indemnify the local authority for any costs incurred in relation to repair/alteration/removal or any other unforeseen costs associated with the infrastructure. Specific timetables for performance of tasks would be built in, with penalties for non-performance
- Structural technical acceptance will be required, in accordance with local authority requirements, before submitting a request for a licence under section 254 of the Planning and Development Act, 2000. If a section 254 licence, or full planning permission, is received and the structure is erected, it must be recorded in an asset management database and inspected regularly, in accordance with the requirements of the relevant local authority. Costs arising to be borne by the relevant Telecommunications Network Operator.
- Health and Safety legislation applies. For example, for construction activity, the Safety, Health and Welfare at Work (Construction) Regulations 2006-2013, as amended, and associated guidance must be adhered to at all times.
- Routine maintenance visits, such as bi-monthly visits to masts, as well as non-routine maintenance visits to the equipment are required by each operator, and, if a mast were to be erected adjacent to a road, safety/traffic management requirements/costs would be incurred at each visit. Consent to carry out works on the road must be obtained before every visit, and sufficient time must be allowed to obtain this consent before each visit.
- Details of all equipment should be logged and recorded on MapRoad Road Management System.

8.2.2 Single Carriageway National Roads

- These roads come under the general remit of the NRA. However, the relevant local authority is the road authority, and is responsible for the maintenance and upkeep of the road network. A consent may be given by the relevant local authority (as road authority) under Section 13(10) of the Roads Act 1993. However, if a licence has been obtained under section 254 of the Planning and Development Act, 2000, the requirement to obtain a specific consent under Section 13 of the Roads Act 1993 should not apply.
- Road Safety Audits would be required under the NRA Design Manual for Roads and Bridges (DMRB), HD 19. The objective of this standard is to ensure that the road safety implications of all schemes are fully considered for all users of the road and others affected by the scheme.
- For telecommunications equipment to be accommodated on existing infrastructure, proposals need the approval and permission of the NRA and/or the relevant local authority, depending on who is responsible for the existing infrastructure. For example, signing is maintained by the NRA using a maintenance contract. Lighting is likely to be the responsibility of the local authority.
- Any agreement needs to indemnify the NRA and local authority for any costs incurred in relation to repair/alteration/removal or any other unforeseen costs associated with the infrastructure. Specific timetables for performance of tasks would be built in, with penalties for non-performance
- NRA DMRB BD02 structural technical acceptance will be required before submitting a request for a licence under section 254 of the Planning and Development Act, 2000. If a section 254 licence, or full planning permission, is received and the structure is erected, it must be entered onto the NRA's Eirspan structures database, and periodic inspections will be required in accordance with Eirspan requirements. Costs arising to be borne by the relevant Telecommunications Network Operator.
- Health and Safety legislation applies. For example, for construction activity, the Safety, Health and Welfare at Work (Construction) Regulations 2006-2013, as amended, and associated guidance must be adhered to at all times.
- Routine maintenance visits, such as bi-monthly visits to masts, as well as non-routine maintenance visits to the equipment are required by each operator, and, if a mast were to be erected adjacent to a national road, safety/traffic management requirements/costs would be quite significant at each visit. Consent to carry out works on the road must be obtained before every visit, and sufficient time must be allowed to obtain this consent before each visit.
- Details of all equipment should be logged and recorded on MapRoad Road Management System.

8.3 Motorways and Dual Carriageways

- These roads come under the general remit of the NRA. Whilst the relevant local authority is the road authority, under Section 53 of the Roads Act (as amended), the consent of the NRA is required for any works in the vicinity of a motorway. Moreover, under Section 43(2) of the Act all access to a motorway from adjoining lands is forbidden.
- The NRA has a basic concern that the deployment and ongoing access needs for overground telecoms infrastructure is incompatible with the safe operation of motorways. This applies to land that is designated "motorway", see Appendix E, and not to the land that is associated with the motorway scheme, but not officially designated "motorway". Maintenance depots, service areas, land adjacent to accommodation roads, attenuation ponds and overbridges are likely to provide opportunities for accommodating telecoms equipment. See Table A for further discussion regarding these locations.
- Any proposals to place a mast on land associated with a motorway scheme, but not part of the motorway itself, would be dependent on the location of the land. The land could either be sold to a telecommunications network operator, or an agreement could be entered into for their use of the land. The agreement would need to be made with the landowner, which could be the NRA, the local authority in whose area the land is situated, or another local authority if the land purchased for the scheme was carried out by one local authority.
- Any agreement needs to indemnify the NRA and local authority for any costs incurred in relation to repair/alteration/removal or any other unforeseen costs associated with the infrastructure. Specific timetables for performance of tasks would be built in, with penalties for non-performance.
- Road Safety Audits would be required under the NRA Design Manual for Roads and Bridges (DMRB), HD 19. The objective of this standard is to ensure that the road safety implications of all schemes are fully considered for all users of the road and others affected by the scheme.
- NRA DMRB BD02 structural technical acceptance will be required before submitting a request for a licence under section 254 of the Planning and Development Act, 2000. If a section 254 licence, or full planning permission, is received and the structure is erected, it must be entered onto the NRA's Eirspan structures database, and periodic inspections will be required in accordance with Eirspan requirements. Costs arising to be borne by the relevant Telecommunications Network Operator.
- The management, operation and maintenance of these roads is carried out by one of the following:
    - » a Public Private Partnership (PPP) concessionaire
    - » a contractor appointed by the NRA under a Motorway Maintenance and Renewals Contract (MMaRC)
    - » a local authority

  See map of PPP and MMaRC sections of motorway/dual carriageway in Appendix F.
- The maintaining organisation needs to be consulted and liaised with in terms of various matters, including allowing access to the motorway/dual carriageway, agreeing health and safety requirements, traffic management requirements, method statements, risk assessments, road safety audits etc for both installation and maintenance of the equipment. A road space booking system is also in place for carrying out works. Road space must be booked through the respective maintaining organisation unless written permission is given by the NRA in relation to the booking of road space by alternative arrangements. There are timescale restrictions in relation to the booking of road space, so advance planning will always be necessary.
- For telecommunications equipment to be accommodated on existing road infrastructure, proposals need the approval and permission of the NRA. On a PPP section of road, the relevant PPP concessionaire would also need to agree to any proposals, as the PPP concessionaire is wholly responsible for the existing motorway/dual carriageway infrastructure for the duration of the concession.
- Health and Safety legislation applies. For example, for construction activity, the Safety, Health and Welfare at Work (Construction) Regulations 2006-2013, as amended, and associated guidance must be adhered to at all times.

- Routine maintenance visits, such as bi-monthly visits to masts, as well as non-routine maintenance visits to the equipment are required by each operator, and, if a mast were to be erected on a motorway, safety/traffic management requirements/costs would be onerous at each visit. Off- motorway sites are far more suitable when maintenance issues are taken into consideration.

9 Summary and Conclusions

The report summarises the aim of assisting the Government in overcoming obstacles to the delivery of high speed broadband around the country. It describes the setting up of the Roadworks and Licensing Working Group, and subsequent discussions that have taken place between the Telecommunications and Internet Federation (TIF) and the Department of Transport Tourism and Sport, NRA and local authorities.

Backgound information about overground telecommunications infrastructure, including requirements and constraints, was provided by TIF and is summarised in the report.

An overview of the relevant legislation has been provided. Particular points to note:

Planning and Development Act, 2000, as amended:

- In order to "erect, construct, place or maintain overground electronic communications infrastructure and any associated physical infrastructure on, under, over or along a public road", there is a requirement for a licence from the local authority under section 254 of the Planning and Development Act, 2000, as amended. These licences are granted by the planning authority for set periods of time, can be withdrawn at any time with removal at the developer's expense, and involve a fee and/or a bond.
- Section 254(1)(ee) of the Planning and Development Act 2000, (as inserted by the Communications Regulation Act 2002, section 54(1)): *"a person shall not erect, construct, place or maintain overground electronic communications infrastructure and any associated physical infrastructure on, under, over or along a public road save in accordance with a licence granted by a planning authority under this section."*
- The Minister for the Environment, Community and Local Government has issued guidelines under section 28 of the Planning and Development Act, 2000. Planning authorities and An Bord Pleanála are required to have regard to the guidelines in the performance of their functions under the Planning Acts. There are two main relevant section 28 Guidances:
    - » Spatial Planning and National Roads Guidelines for Planning Authorities, 2012
    - » Telecommunications Antennae and Support Structures Guidelines, 1996

Roads Act:

- There is a requirement for approval under section 13(10) from the roads authority to place anything on a public road, but this does not apply if a licence has been obtained from the planning authority under section 254 of the Planning and Development Act.
- No direct access is permitted between any land adjoining the motorway and the motorway.
- Approval under Section 53 of the Roads Act is needed from the NRA for any work in the vicinity of a motorway.

Table A sets out a list of considerations related to specific locations on the roads network:

- Urban roads
- Rural regional and local roads
- Rural single carriageway national roads
- Motorways and dual carriageways
- On-Road Infrastructure

The safety of road users, and of those carrying out site visits, is paramount when considering the suitability of individual sites, and great care must be taken when selecting a suitable site.

Issues were considered, such as the requirement for approvals from local authorities/NRA, agreement with the relevant PPP Company, MMaRC Contractor, health and safety requirements, traffic management requirements etc. during erection of the equipment and during maintenance and repairs visits. .

Specific sections of road for four different road types have been examined to give an indication of the likelihood of finding suitable locations to accommodate overground telecommunications masts on those different road types, and the results can be seen in Appendices E to H:

- Motorway
- Single carriageway national road
- Regional road
- Local road

It is important to note that the locations along the roads network, and the types of telecommunications infrastructure being referred to throughout the report, are indications only, as the feasibility of utilising these parts of the roads network will require detailed consideration for each specific proposal. The type of telecommunications equipment will be an important factor in these considerations. While there may be a physical possibility of locating telecommunications infrastructure at a particular location, it will not necessarily be feasible when all other factors, including planning, are taken into consideration.

Finally, issues that need to be considered and procedures that must be followed, if wishing to progress with further assessment, are laid out for different road types:

- Urban roads – regional and local
- Urban roads- national
- Rural regional and local roads
- Rural single carriageway national roads
- Motorways and dual carriageways

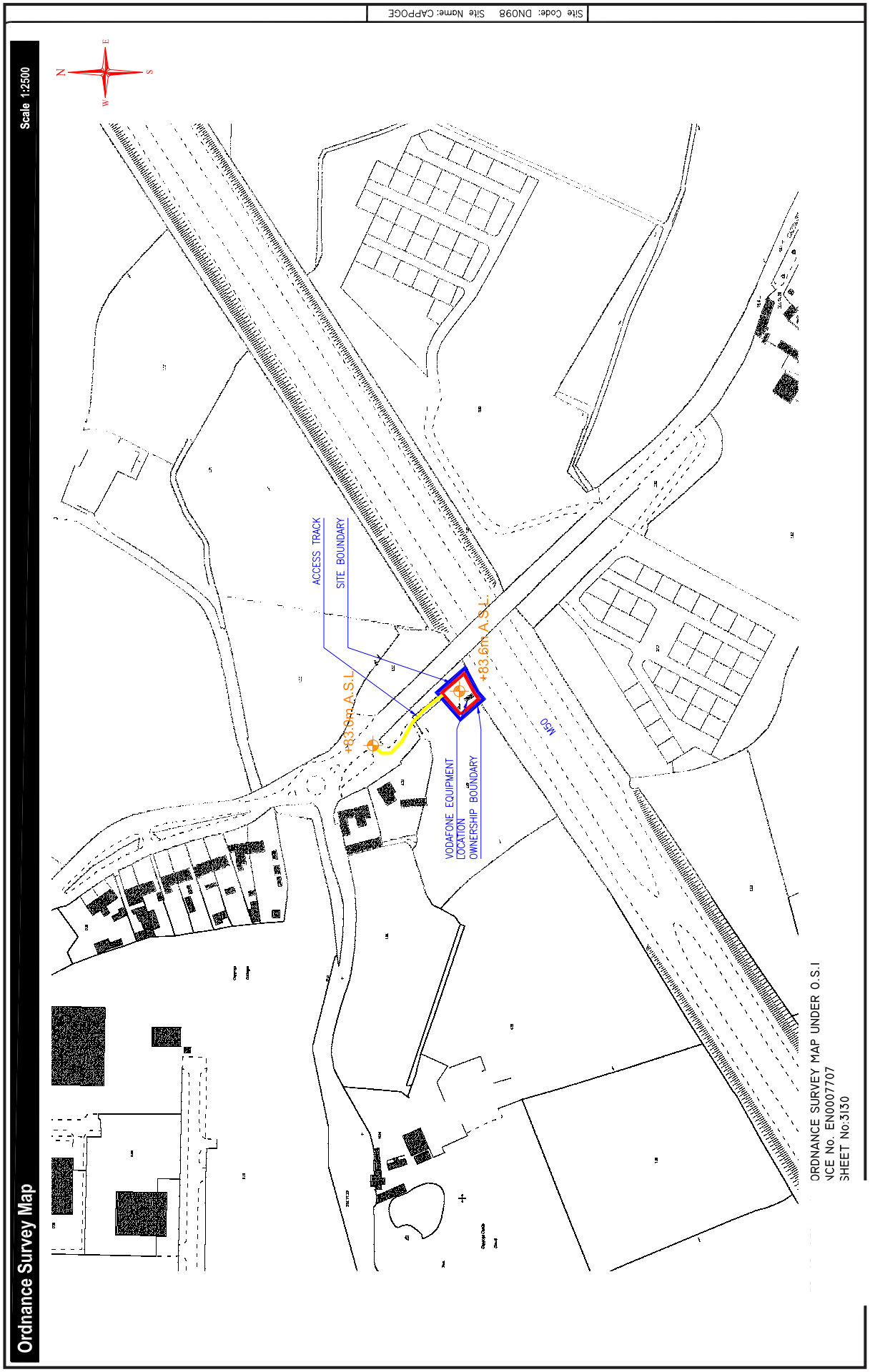
From an engineering point of view, opportunities do exist to accommodate overground telecommunications infrastructure on the roads network, provided suitable care is taken in selecting appropriate sites, and all necessary processes and procedures are followed.

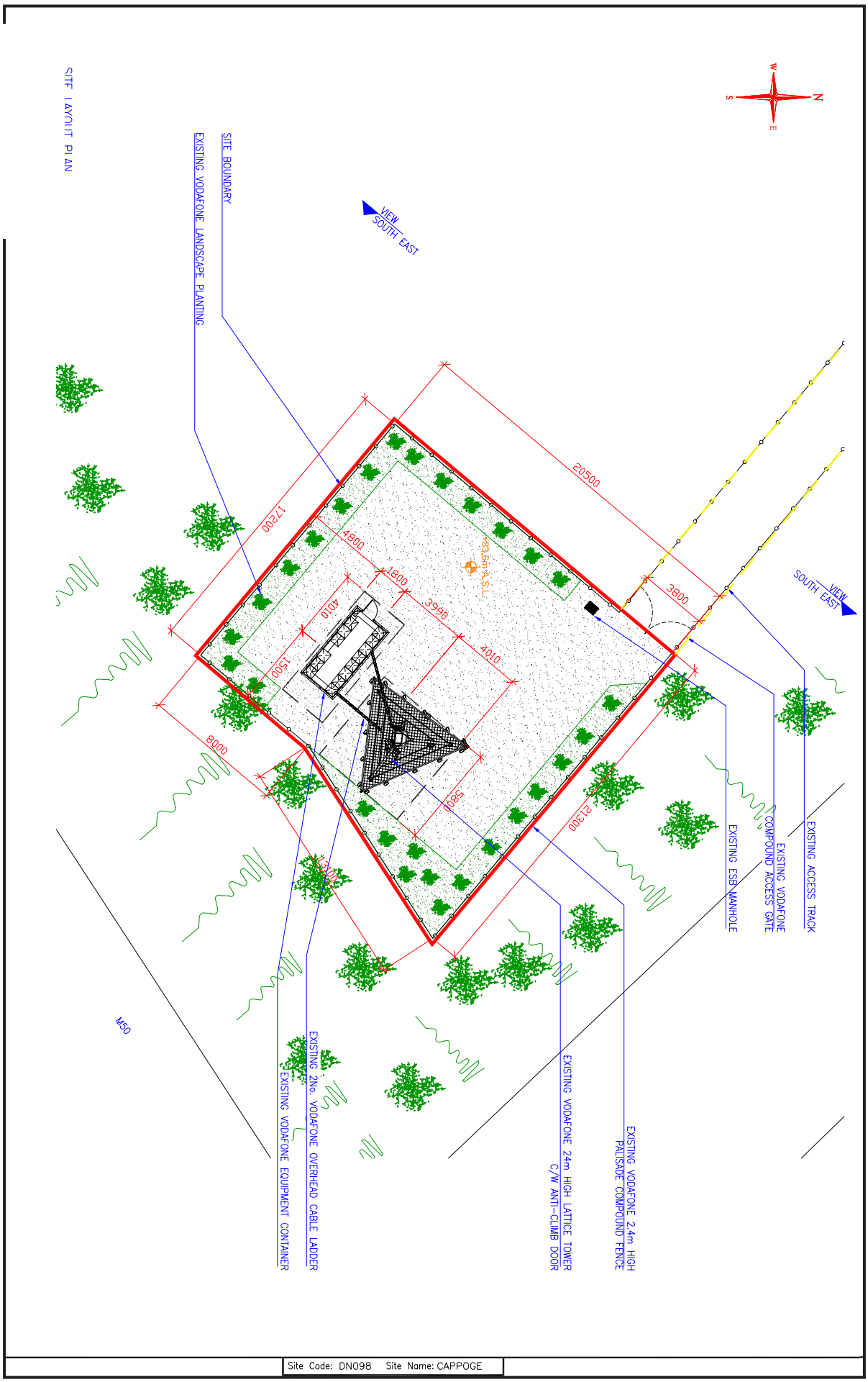
Appendix A

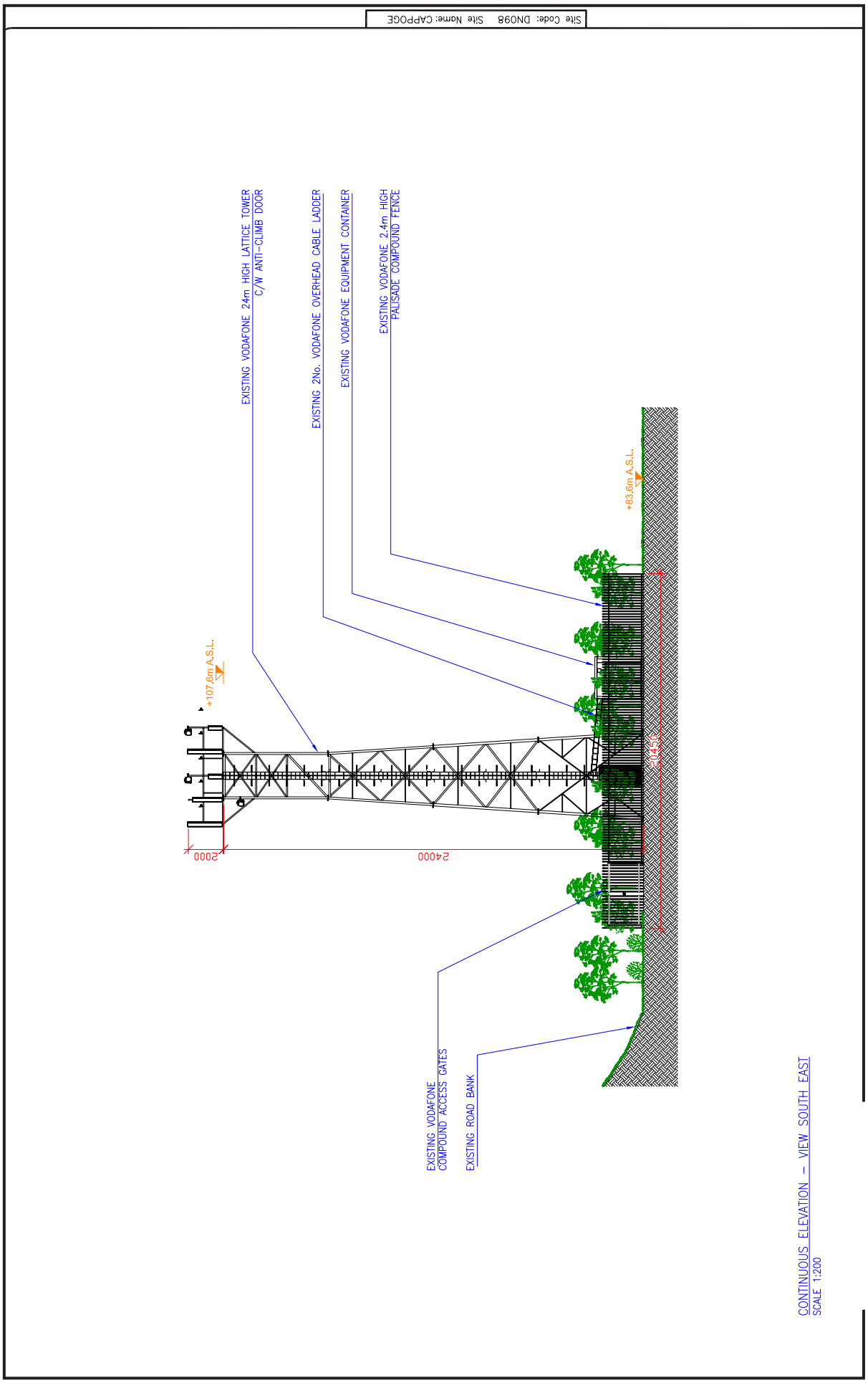
Examples of Existing Masts/Antennae/ Dishes

1. **Large, high capacity tower, located on side road adjacent to a motorway**

Note: Tower is of older type.


Site Code: DN098 Site Name: CAPPOGE
Ordnance Survey Map
Scale 1:2500
N
E
S
W
ACCESS TRACK
SITE BOUNDARY
VODAFONE EQUIPMENT
LOCATION
OWNERSHIP BOUNDARY
+83.6m A.S.L
+83.6m A.S.L
M50
ORDNANCE SURVEY MAP UNDER O.S.I
NCE No. EN0007707
SHEET No:3130


SITE LAYOUT PLAN
SITE BOUNDARY
EXISTING VODAFONE LANDSCAPE PLANTING
VIEW SOUTH EAST
VIEW SOUTH EAST
20500
17200
4800
1800
3990
4010
4010
1500
8000
3800
21300
5800
63.6m A.S.L.
EXISTING ACCESS TRACK
EXISTING VODAFONE COMPOUND ACCESS GATE
EXISTING ESB MANHOLE
EXISTING VODAFONE 2.4m HIGH PALISADE COMPOUND FENCE
EXISTING VODAFONE 24m HIGH LATTICE TOWER C/W ANTI-CLIMB DOOR
EXISTING 2No. VODAFONE OVERHEAD CABLE LADDER
EXISTING VODAFONE EQUIPMENT CONTAINER
M50
Site Code: DN098 Site Name: CAPPOGE


Site Code: DN098 Site Name: CAPPOGE
EXISTING VODAFONE 24m HIGH LATTICE TOWER C/W ANTI-CLIMB DOOR
EXISTING 2No. VODAFONE OVERHEAD CABLE LADDER
EXISTING VODAFONE EQUIPMENT CONTAINER
EXISTING VODAFONE 2.4m HIGH PALISADE COMPOUND FENCE
+107.6m A.S.L.
+83.6m A.S.L.
24000
2000
24m
EXISTING VODAFONE COMPOUND ACCESS GATES
EXISTING ROAD BANK
CONTINUOUS ELEVATION – VIEW SOUTH EAST
SCALE 1:200

2. **Large shared site**

Multi-operator site layout - showing shared tower, and equipment layout

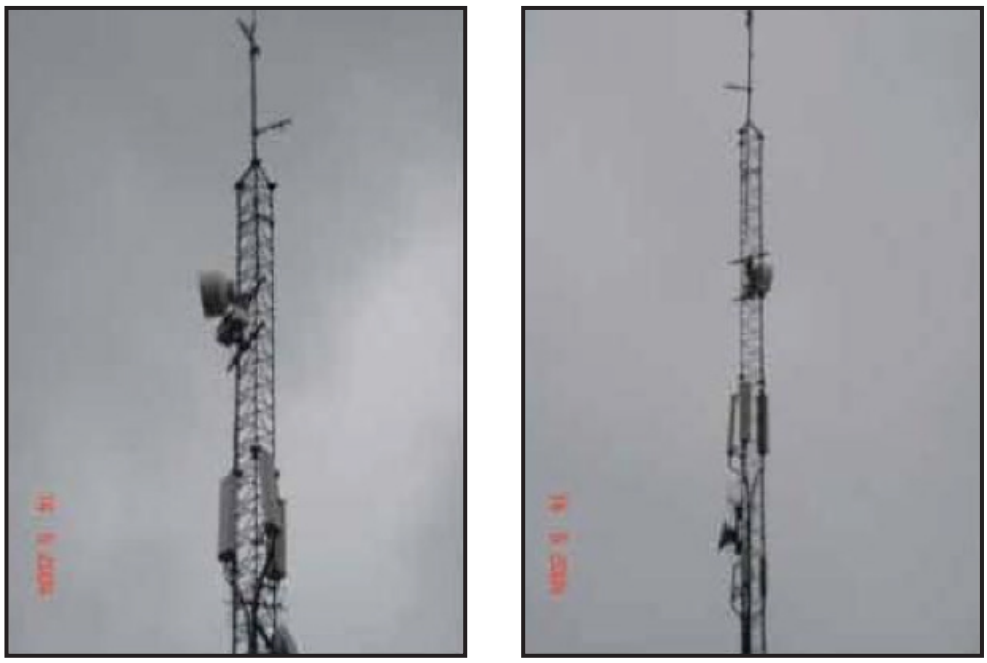
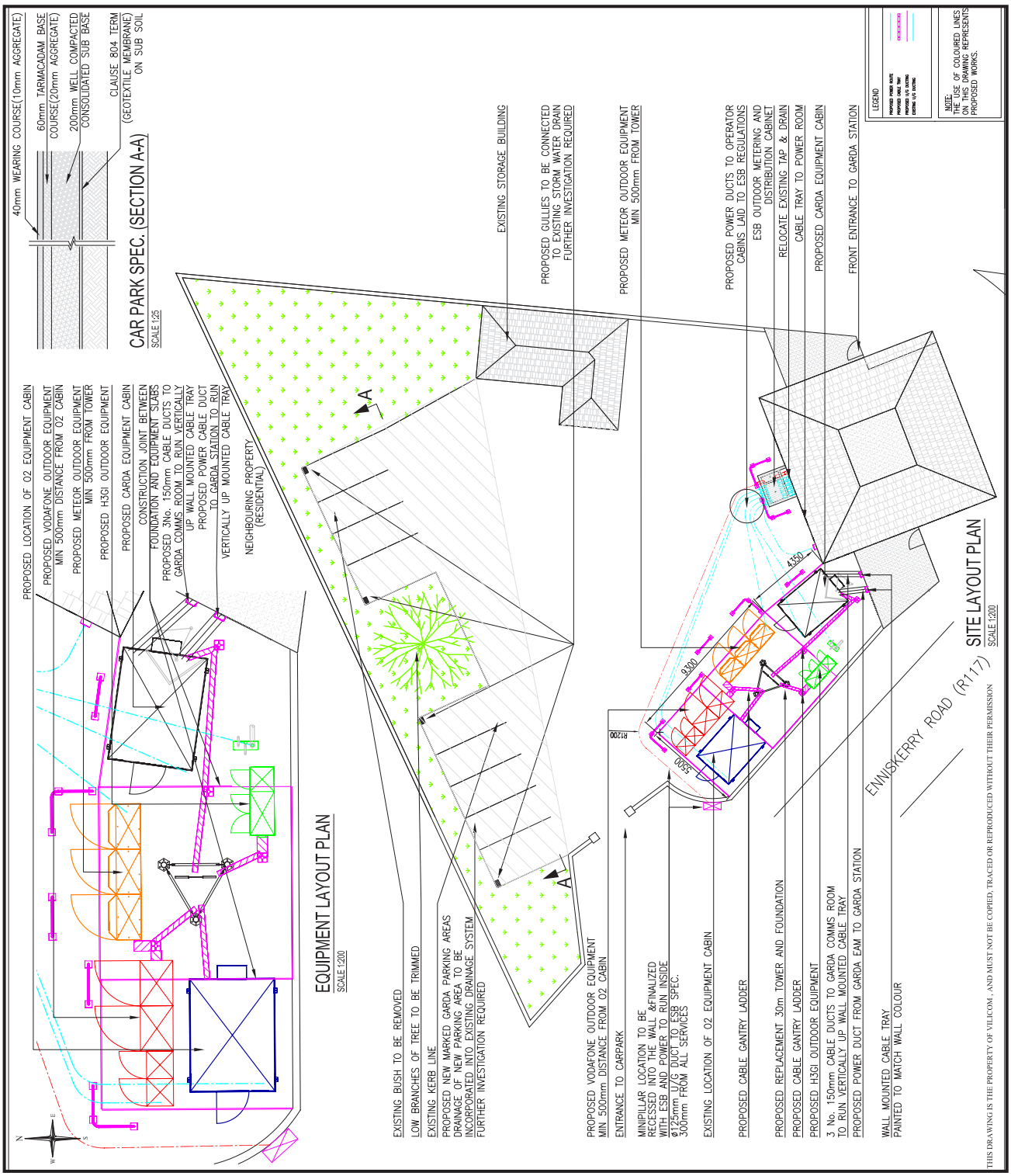
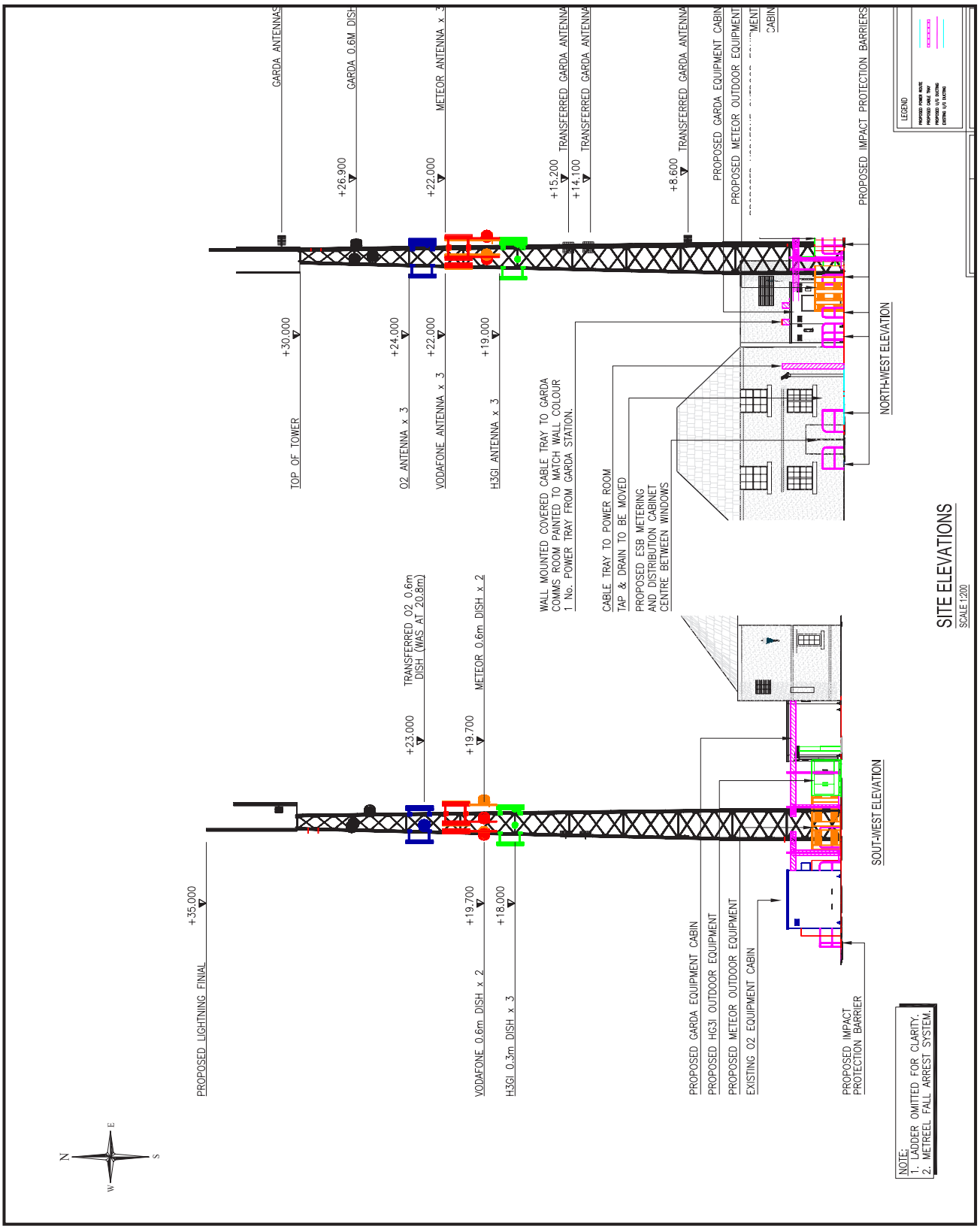


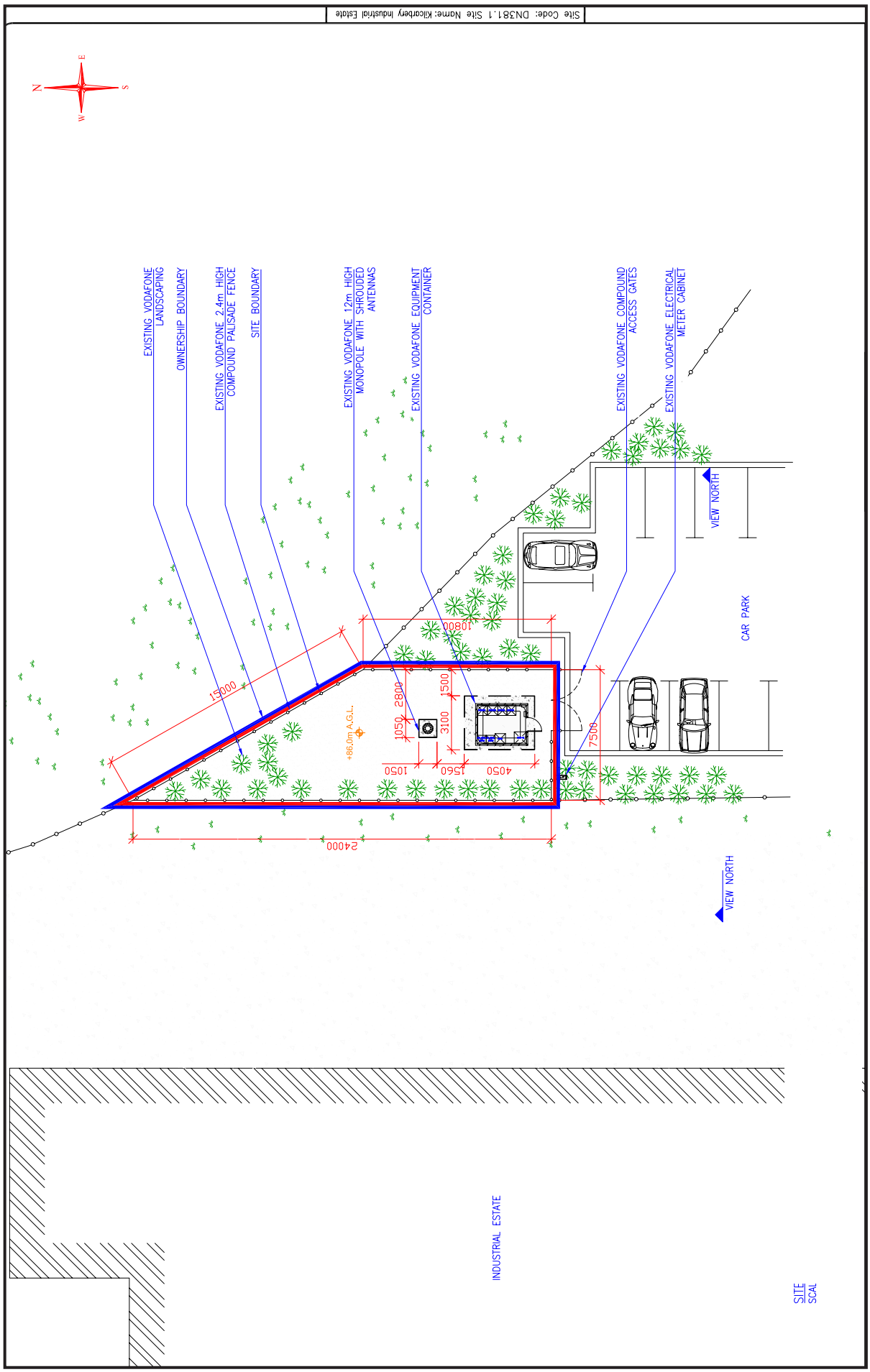
FIG 1. Tower Elevations

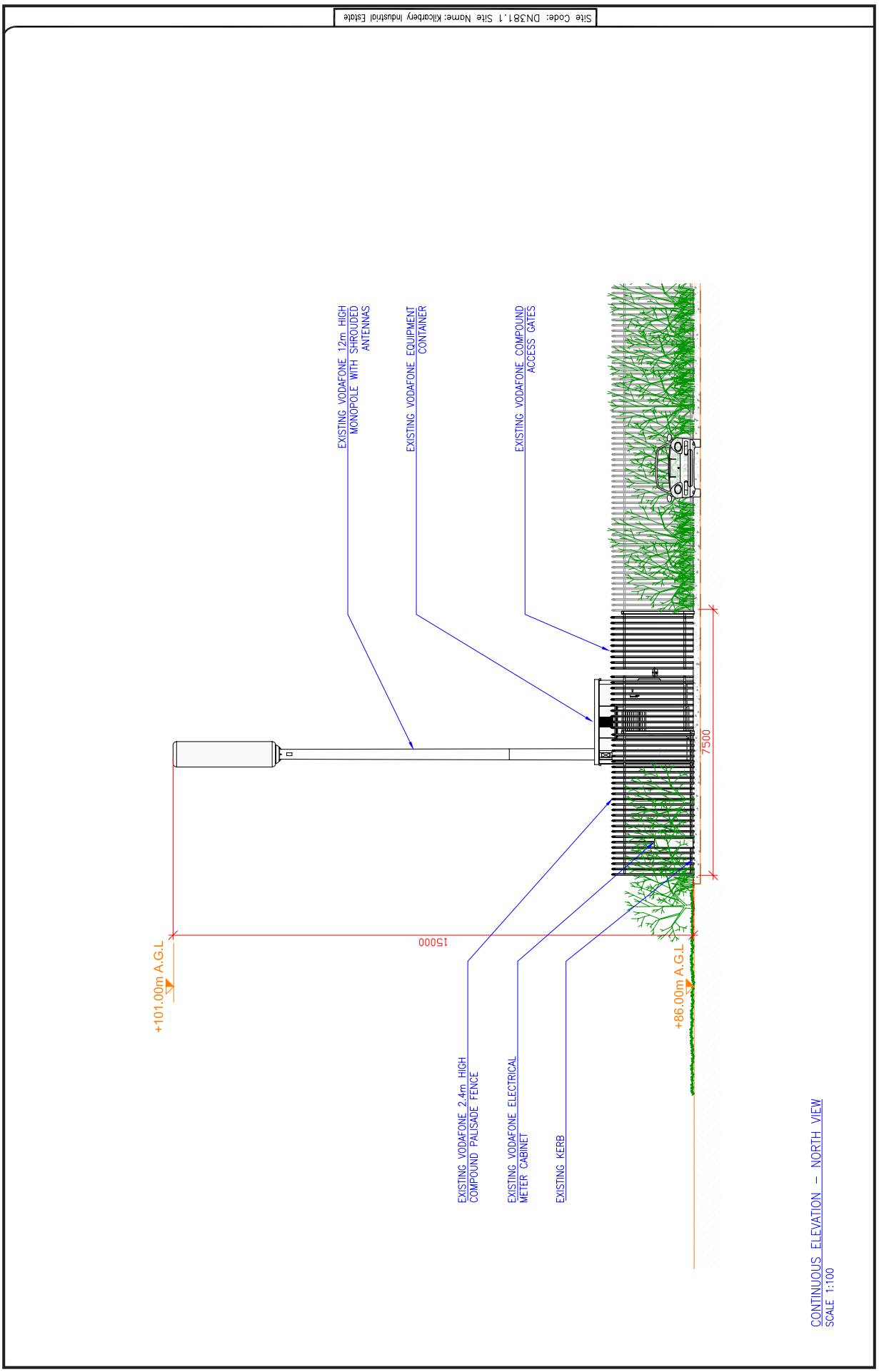
FIG 2. Side View of Tower and Station


CAR PARK SPEC. (SECTION A-A)
SCALE 1:25
40mm WEARING COURSE(10mm AGGREGATE)
60mm TARMACADAM BASE COURSE(20mm AGGREGATE)
200mm WELL COMPACTED CONSOLIDATED SUB BASE
CLAUSE 804 TERM (GEOTEXTILE MEMBRANE) ON SUB SOIL
EQUIPMENT LAYOUT PLAN
SCALE 1:200
SITE LAYOUT PLAN
SCALE 1:200
PROPOSED LOCATION OF O2 EQUIPMENT CABIN
PROPOSED VODAFONE OUTDOOR EQUIPMENT MIN 500mm DISTANCE FROM O2 CABIN
PROPOSED METEOR OUTDOOR EQUIPMENT MIN 500mm FROM TOWER
PROPOSED H3GI OUTDOOR EQUIPMENT
PROPOSED CARDA EQUIPMENT CABIN
CONSTRUCTION JOINT BETWEEN FOUNDATION AND EQUIPMENT SLABS
PROPOSED 3No. 150mm CABLE DUCTS TO GARDA COMMS ROOM TO RUN VERTICALLY UP WALL MOUNTED CABLE TRAY
PROPOSED POWER CABLE DUCT TO GARDA STATION TO RUN VERTICALLY UP MOUNTED CABLE TRAY
NEIGHBOURING PROPERTY (RESIDENTIAL)
EXISTING BUSH TO BE REMOVED
LOW BRANCHES OF TREE TO BE TRIMMED
EXISTING KERB LINE
PROPOSED NEW MARKED GARDA PARKING AREAS
DRAINAGE OF NEW PARKING AREA TO BE INCORPORATED INTO EXISTING DRAINAGE SYSTEM
FURTHER INVESTIGATION REQUIRED
EXISTING STORAGE BUILDING
PROPOSED GULLIES TO BE CONNECTED TO EXISTING STORM WATER DRAIN
FURTHER INVESTIGATION REQUIRED
PROPOSED METEOR OUTDOOR EQUIPMENT MIN 500mm FROM TOWER
PROPOSED VODAFONE OUTDOOR EQUIPMENT MIN 500mm DISTANCE FROM O2 CABIN
ENTRANCE TO CARPARK
MINIPILLAR LOCATION TO BE RECESSED INTO THE WALL &FINALIZED WITH ESB AND POWER TO RUN INSIDE
Ø42.2mm I/D DUCT TO ESB SPEC.
300mm FROM ALL SERVICES
EXISTING LOCATION OF O2 EQUIPMENT CABIN
PROPOSED CABLE GANTRY LADDER
PROPOSED REPLACEMENT 30m TOWER AND FOUNDATION
PROPOSED CABLE GANTRY LADDER
PROPOSED H3GI OUTDOOR EQUIPMENT
3 No. 150mm CABLE DUCTS TO GARDA COMMS ROOM TO RUN VERTICALLY UP WALL MOUNTED CABLE TRAY
PROPOSED POWER DUCT FROM GARDA EAM TO GARDA STATION
WALL MOUNTED CABLE TRAY PAINTED TO MATCH WALL COLOUR
PROPOSED POWER DUCTS TO OPERATOR CABINS LAID TO ESB REGULATIONS
ESB OUTDOOR METERING AND DISTRIBUTION CABINET
RELOCATE EXISTING TAP & DRAIN
CABLE TRAY TO POWER ROOM
PROPOSED CARDA EQUIPMENT CABIN
FRONT ENTRANCE TO GARDA STATION
LEGEND
NOTE
THE USE OF COLOURED LINES ON THIS DRAWING REPRESENTS PROPOSED WORKS.
ENNISKERRY ROAD (R117)
R1200
9300
5500
4350
THIS DRAWING IS THE PROPERTY OF VILICOM , AND MUST NOT BE COPIED, TRACED OR REPRODUCED WITHOUT THEIR PERMISSION

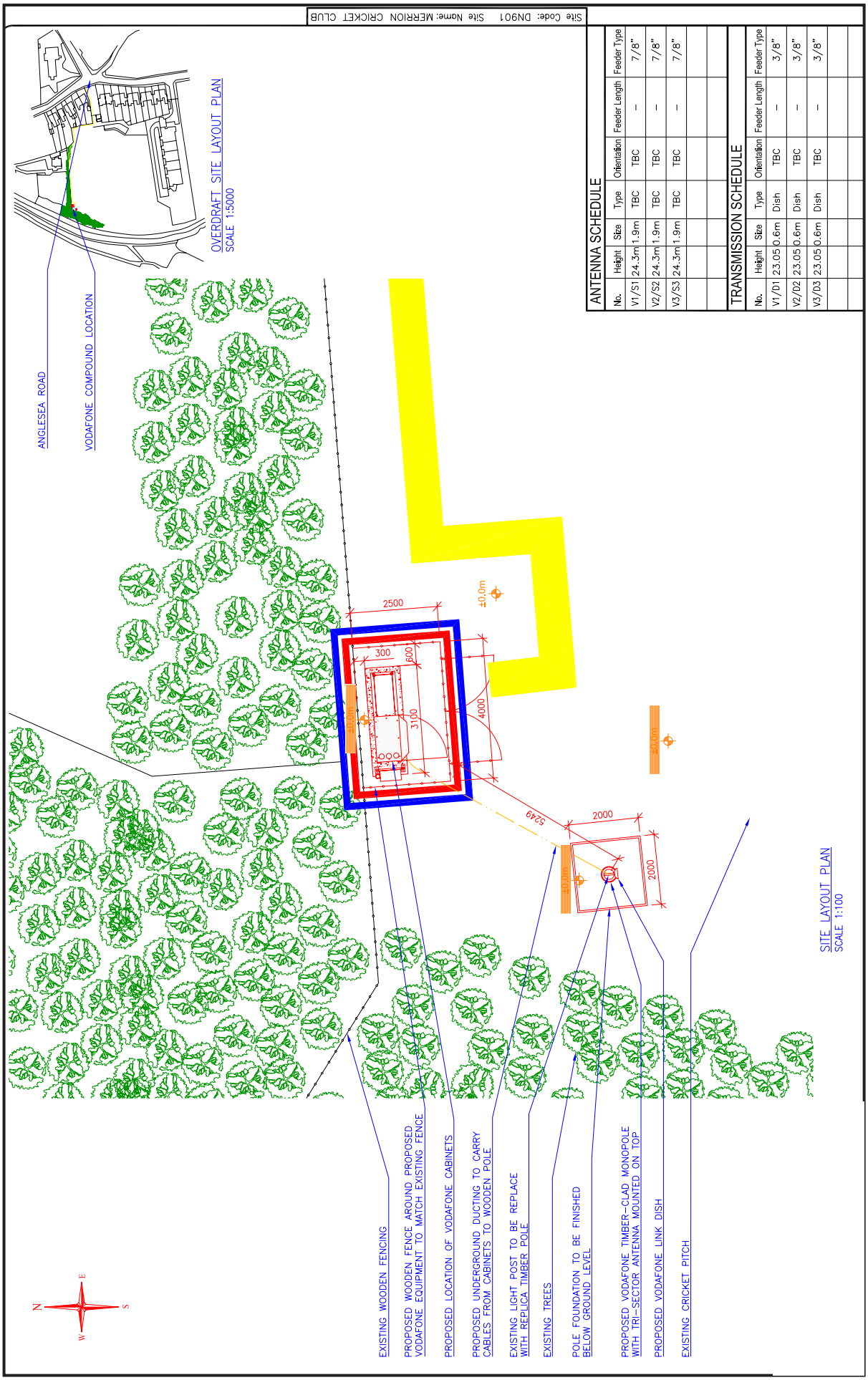

GARDA ANTENNAS
GARDA 0.6M DISH
METEOR ANTENNA x 3
TRANSFERRED GARDA ANTENNA
TRANSFERRED GARDA ANTENNA
TRANSFERRED GARDA ANTENNA
PROPOSED GARDA EQUIPMENT CABIN
PROPOSED METEOR OUTDOOR EQUIPMENT
PROPOSED IMPACT PROTECTION BARRIERS
+26.900
+22.000
+15.200
+14.100
+8.600
+30.000
+24.000
+22.000
+19.000
TOP OF TOWER
O2 ANTENNA x 3
VODAFONE ANTENNA x 3
H3GI ANTENNA x 3
WALL MOUNTED COVERED CABLE TRAY TO GARDA COMMS ROOM PAINTED TO MATCH WALL COLOUR 1 No. POWER TRAY FROM GARDA STATION.
CABLE TRAY TO POWER ROOM
TAP & DRAIN TO BE MOVED
PROPOSED ESB METERING AND DISTRIBUTION CABINET CENTRE BETWEEN WINDOWS
NORTH-WEST ELEVATION
SITE ELEVATIONS
SCALE 1:200
TRANSFERRED O2 0.6m DISH (WAS AT 20.8m)
METEOR 0.6m DISH x 2
+23.000
+19.700
+35.000
+19.700
+18.000
PROPOSED LIGHTNING FINIAL
VODAFONE 0.6m DISH x 2
H3GI 0.3m DISH x 3
PROPOSED GARDA EQUIPMENT CABIN
PROPOSED HG3I OUTDOOR EQUIPMENT
PROPOSED METEOR OUTDOOR EQUIPMENT
EXISTING O2 EQUIPMENT CABIN
PROPOSED IMPACT PROTECTION BARRIER
SOUT-WEST ELEVATION
LEGEND
NOTE:
1. LADDER OMITTED FOR CLARITY.
2. METREEL FALL ARREST SYSTEM.
N
E
S
W

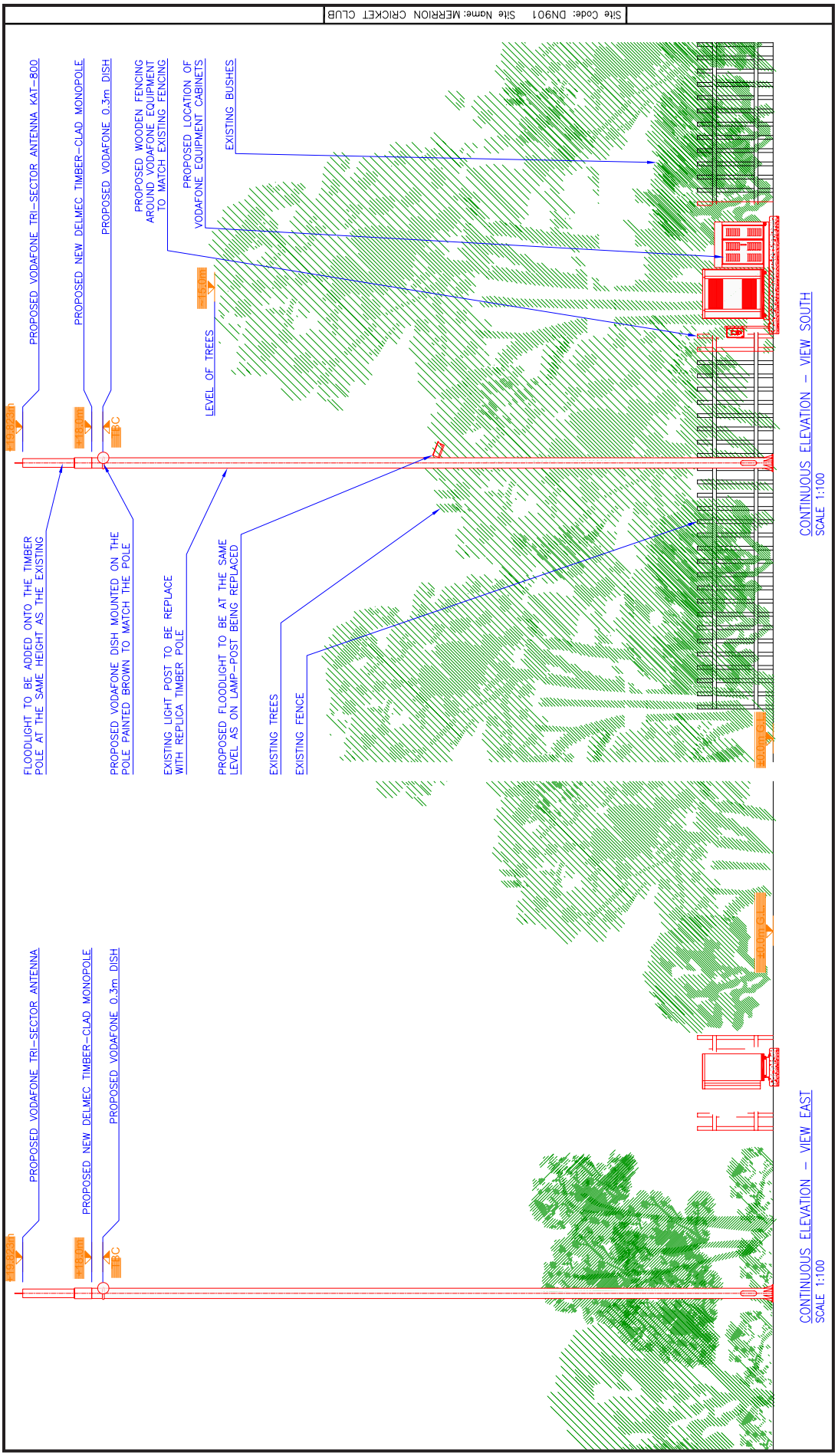
3 Smaller single operator site, showing typical modern tower


Site Code: DN381.1 Site Name: Kilcarbery Industrial Estate
N
E
S
W
EXISTING VODAFONE LANDSCAPING
OWNERSHIP BOUNDARY
EXISTING VODAFONE 2.4m HIGH COMPOUND PALISADE FENCE
SITE BOUNDARY
EXISTING VODAFONE 12m HIGH MONOPOLE WITH SHROUDED ANTENNAS
EXISTING VODAFONE EQUIPMENT CONTAINER
EXISTING VODAFONE COMPOUND ACCESS GATES
EXISTING VODAFONE ELECTRICAL METER CABINET
VIEW NORTH
CAR PARK
15000
10800
2800
1500
1050
3100
7500
+86.0m A.G.L.
1050
1560
4050
24000
VIEW NORTH
INDUSTRIAL ESTATE
SITE
SCAL

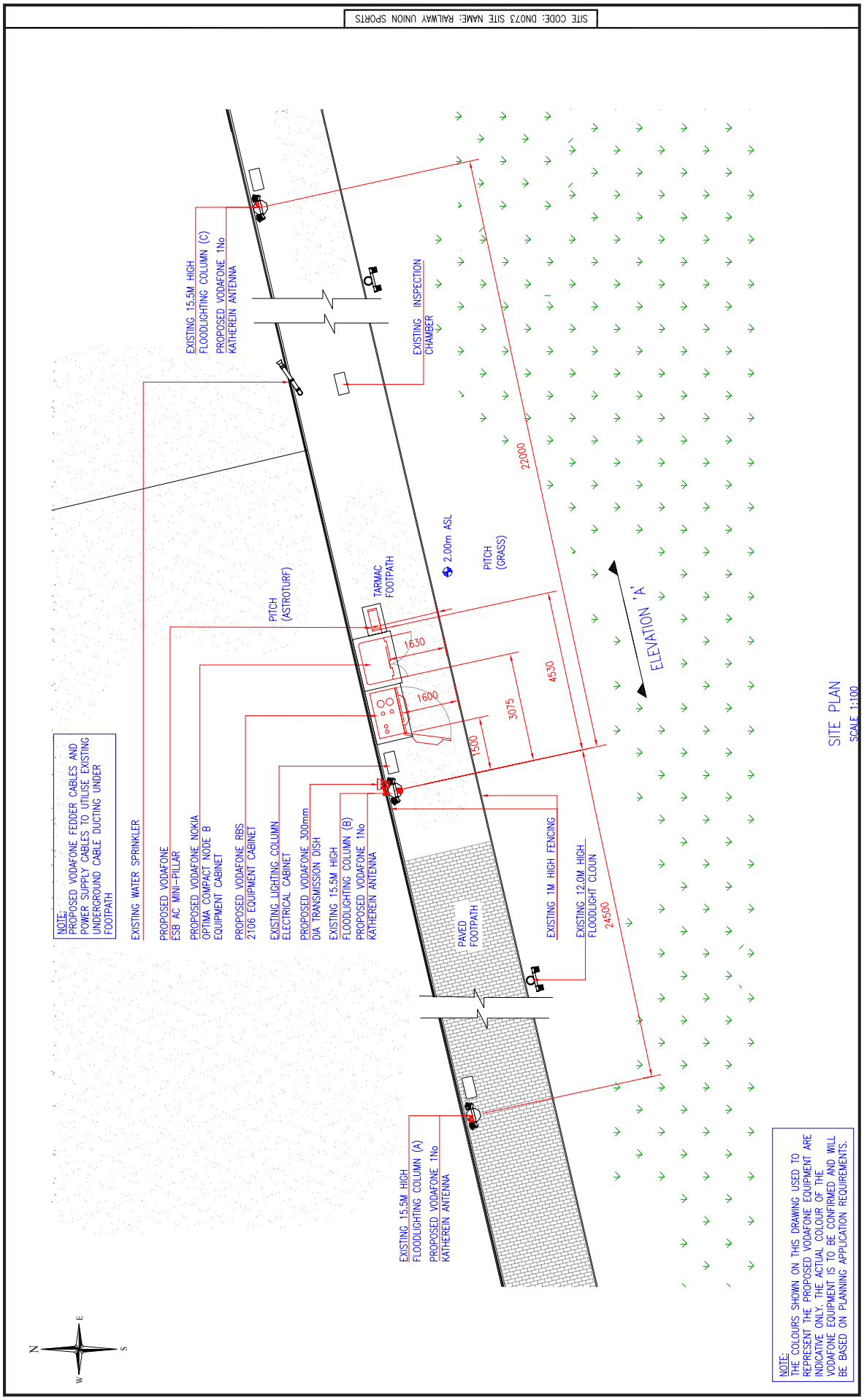

Site Code: DN381.1 Site Name: Kilcarbery Industrial Estate
EXISTING VODAFONE 12m HIGH MONOPOLE WITH SHROUDED ANTENNAS
EXISTING VODAFONE EQUIPMENT CONTAINER
EXISTING VODAFONE COMPOUND ACCESS GATES
7500
15000
+101.00m A.G.L
+86.00m A.G.L
EXISTING VODAFONE 2.4m HIGH COMPOUND PALISADE FENCE
EXISTING VODAFONE ELECTRICAL METER CABINET
EXISTING KERB
CONTINUOUS ELEVATION – NORTH VIEW
SCALE 1:100

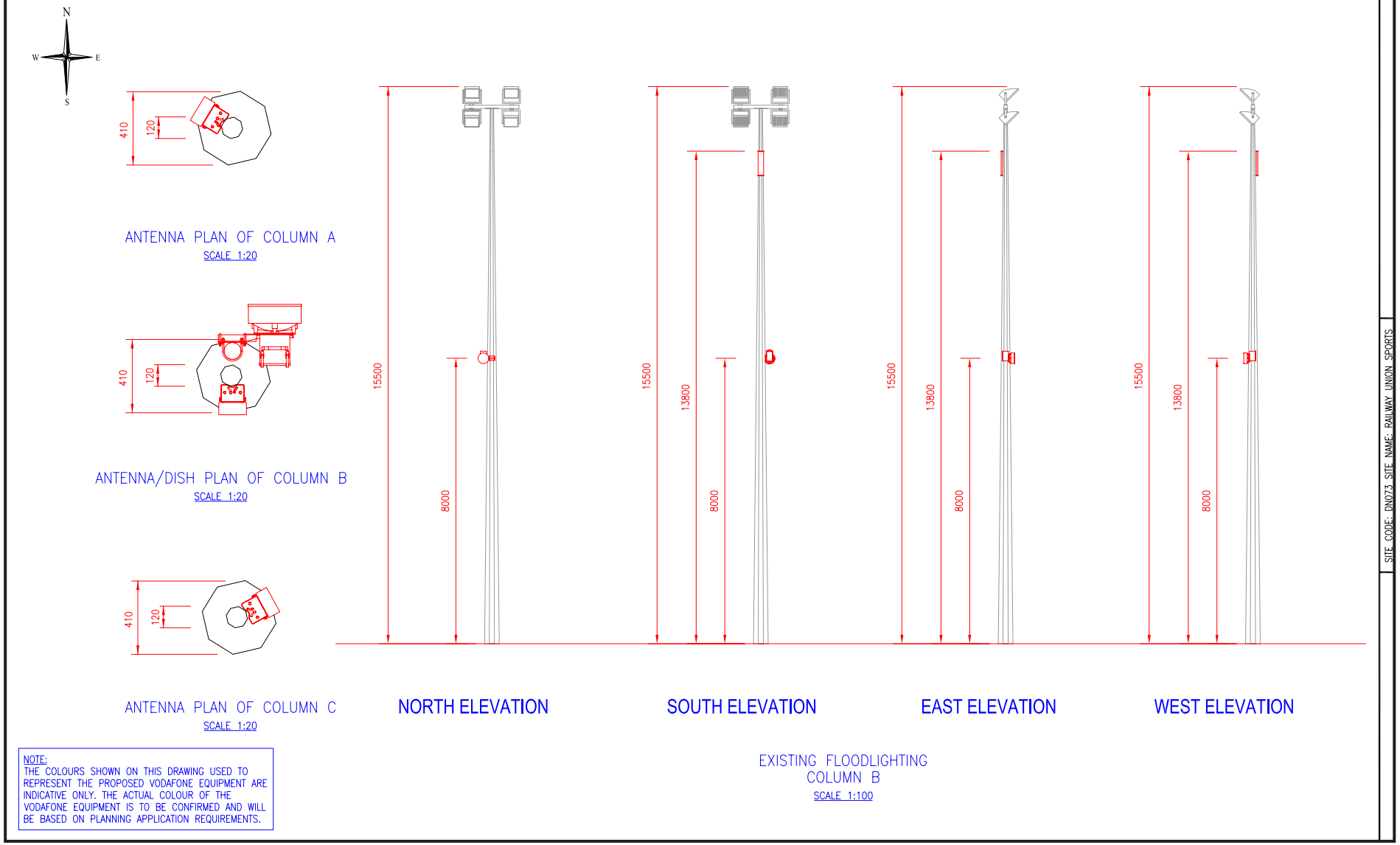
4 Minimum size mast installation -not suitable for sharing


Site Code: DN901 Site Name: MERRION CRICKET CLUB
OVERDRAFT SITE LAYOUT PLAN
SCALE 1:5000
ANGLESEA ROAD
VODAFONE COMPOUND LOCATION
ANTENNA SCHEDULE
No. Height Size Type Orientation Feeder Length Feeder Type
V1/S1 24.3m 1.9m TBC TBC – 7/8"
V2/S2 24.3m 1.9m TBC TBC – 7/8"
V3/S3 24.3m 1.9m TBC TBC – 7/8"
TRANSMISSION SCHEDULE
No. Height Size Type Orientation Feeder Length Feeder Type
V1/D1 23.05 0.6m Dish TBC – 3/8"
V2/D2 23.05 0.6m Dish TBC – 3/8"
V3/D3 23.05 0.6m Dish TBC – 3/8"
2500
300
600
3100
4000
±0.0m
S249
2000
2000
±0.0m
±0.0m
SITE LAYOUT PLAN
SCALE 1:100
EXISTING WOODEN FENCING
PROPOSED WOODEN FENCE AROUND PROPOSED VODAFONE EQUIPMENT TO MATCH EXISTING FENCE
PROPOSED LOCATION OF VODAFONE CABINETS
PROPOSED UNDERGROUND DUCTING TO CARRY CABLES FROM CABINETS TO WOODEN POLE
EXISTING LIGHT POST TO BE REPLACE WITH REPLICA TIMBER POLE
EXISTING TREES
POLE FOUNDATION TO BE FINISHED BELOW GROUND LEVEL
PROPOSED VODAFONE TIMBER-CLAD MONOPOLE WITH TRI-SECTOR ANTENNA MOUNTED ON TOP
PROPOSED VODAFONE LINK DISH
EXISTING CRICKET PITCH
N
E
S
W

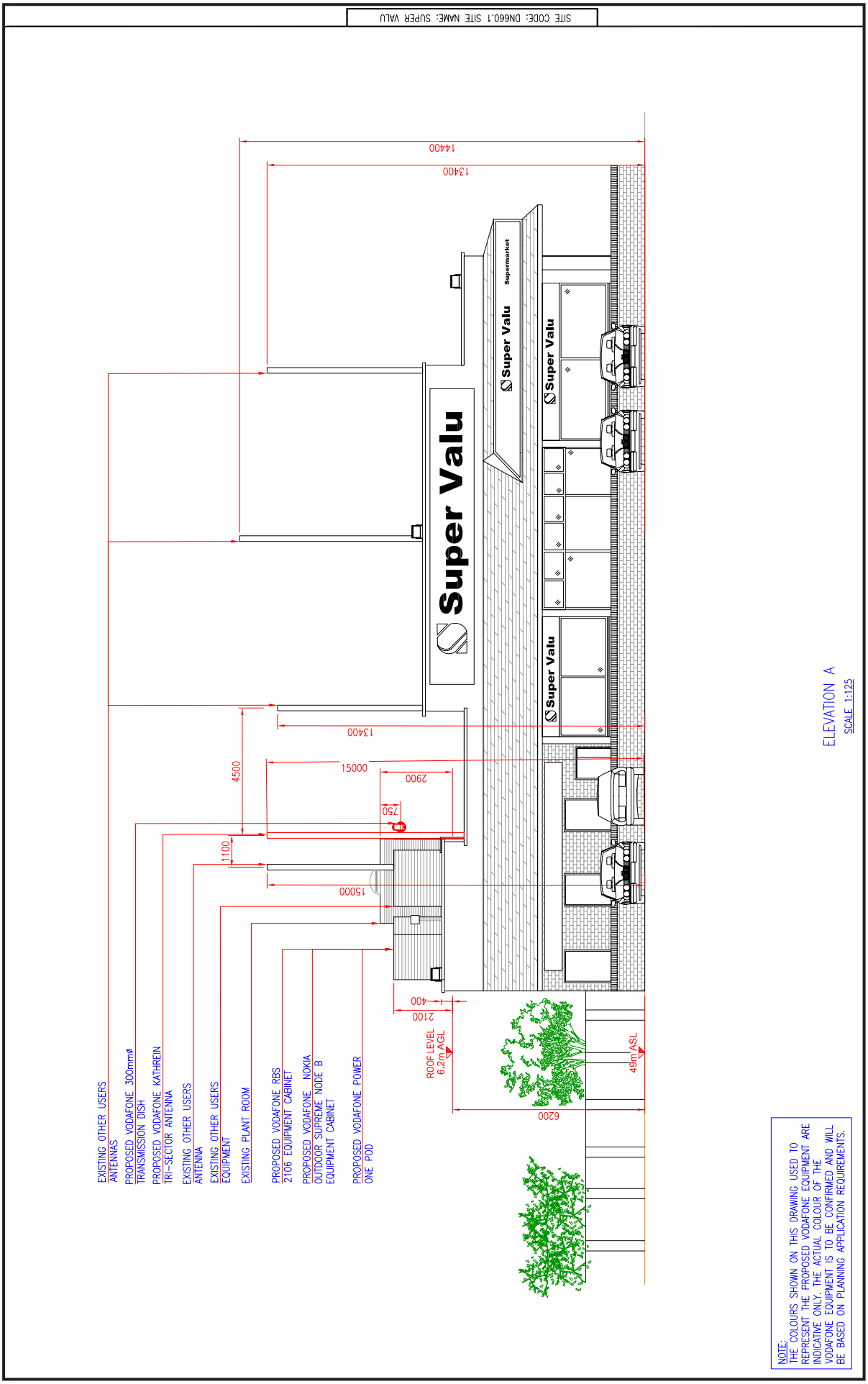

Site Code: DN901 Site Name: MERRION CRICKET CLUB
PROPOSED VODAFONE TRI-SECTOR ANTENNA KAT-800
PROPOSED NEW DELMEC TIMBER-CLAD MONOPOLE
PROPOSED VODAFONE 0.3m DISH
PROPOSED WOODEN FENCING AROUND VODAFONE EQUIPMENT TO MATCH EXISTING FENCING
PROPOSED LOCATION OF VODAFONE EQUIPMENT CABINETS
EXISTING BUSHES
LEVEL OF TREES
FLOODLIGHT TO BE ADDED ONTO THE TIMBER POLE AT THE SAME HEIGHT AS THE EXISTING
PROPOSED VODAFONE DISH MOUNTED ON THE POLE PAINTED BROWN TO MATCH THE POLE
EXISTING LIGHT POST TO BE REPLACE WITH REPLICA TIMBER POLE
PROPOSED FLOODLIGHT TO BE AT THE SAME LEVEL AS ON LAMP-POST BEING REPLACED
EXISTING TREES
EXISTING FENCE
CONTINUOUS ELEVATION - VIEW SOUTH
SCALE 1:100
PROPOSED VODAFONE TRI-SECTOR ANTENNA
PROPOSED NEW DELMEC TIMBER-CLAD MONOPOLE
PROPOSED VODAFONE 0.3m DISH
CONTINUOUS ELEVATION - VIEW EAST
SCALE 1:100

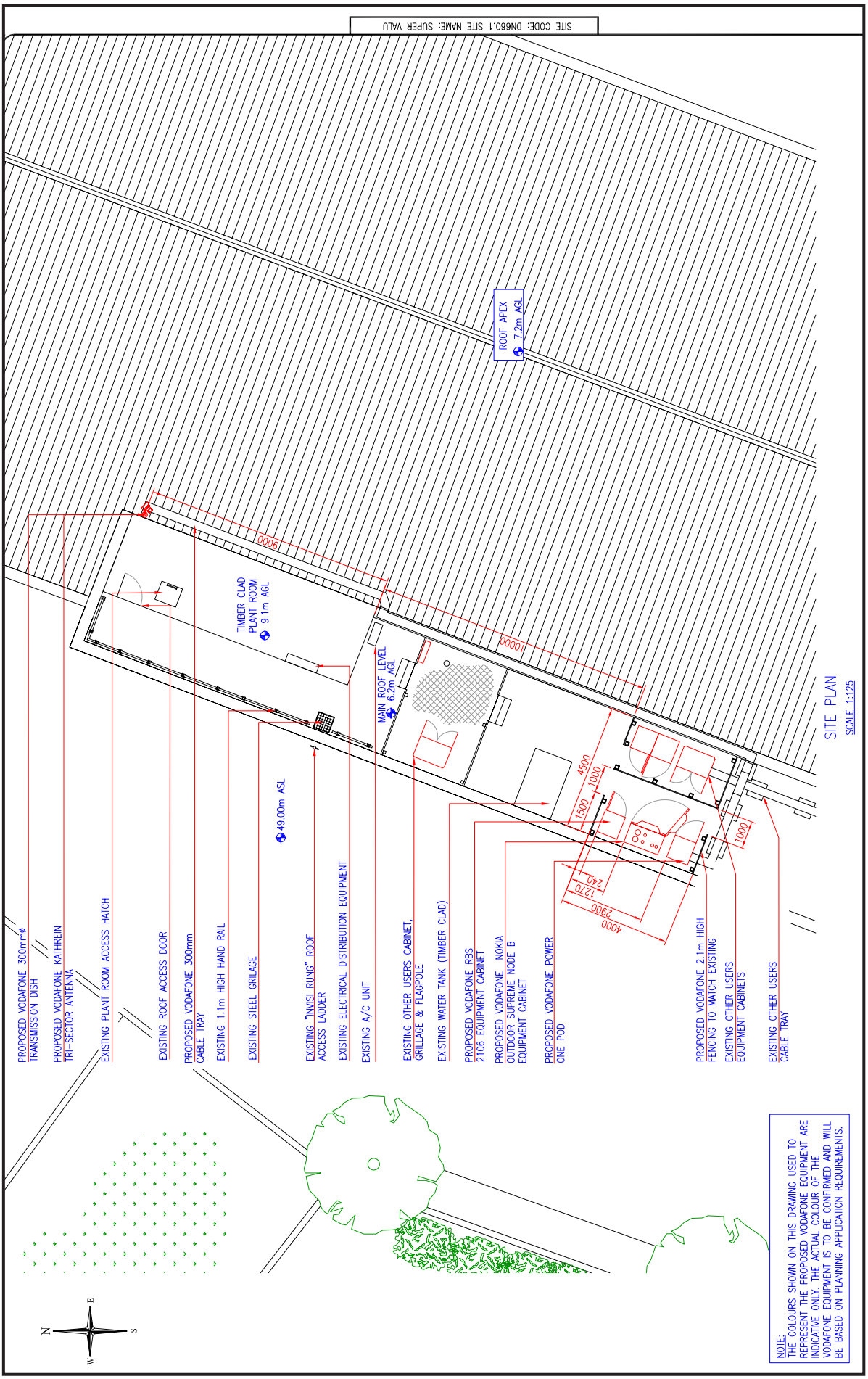
5 Use of lighting poles as mast site – floodlights at sports ground


SITE CODE: DN073 SITE NAME: RAILWAY UNION SPORTS
NOTE:
PROPOSED VODAFONE FEDDER CABLES AND POWER SUPPLY CABLES TO UTILISE EXISTING UNDERGROUND CABLE DUCTING UNDER FOOTPATH
EXISTING WATER SPRINKLER
PROPOSED VODAFONE ESB AC MINI-PILLAR
PROPOSED VODAFONE NOKIA OPTIMA COMPACT NODE B EQUIPMENT CABINET
PROPOSED VODAFONE RBS 2106 EQUIPMENT CABINET
EXISTING LIGHTING COLUMN ELECTRICAL CABINET
PROPOSED VODAFONE 300mm DIA TRANSMISSION DISH
EXISTING 15.5M HIGH FLOODLIGHTING COLUMN (B)
PROPOSED VODAFONE 1No KATHEREIN ANTENNA
EXISTING 15.5M HIGH FLOODLIGHTING COLUMN (A)
PROPOSED VODAFONE 1No KATHEREIN ANTENNA
EXISTING 15.5M HIGH FLOODLIGHTING COLUMN (C)
PROPOSED VODAFONE 1No KATHEREIN ANTENNA
EXISTING INSPECTION CHAMBER
PITCH (ASTROTURF)
TARMAC FOOTPATH
2.00m ASL
PITCH (GRASS)
PAVED FOOTPATH
EXISTING 1M HIGH FENCING
EXISTING 12.0M HIGH FLOODLIGHT CLOUN
ELEVATION 'A'
22000
24500
4530
3075
1630
1600
1500
SITE PLAN
SCALE 1:100
NOTE:
THE COLOURS SHOWN ON THIS DRAWING USED TO REPRESENT THE PROPOSED VODAFONE EQUIPMENT ARE INDICATIVE ONLY. THE ACTUAL COLOUR OF THE VODAFONE EQUIPMENT IS TO BE CONFIRMED AND WILL BE BASED ON PLANNING APPLICATION REQUIREMENTS.
N
E
S
W


N
W
E
S
410
120
ANTENNA PLAN OF COLUMN A
SCALE 1:20
410
120
ANTENNA/DISH PLAN OF COLUMN B
SCALE 1:20
410
120
ANTENNA PLAN OF COLUMN C
SCALE 1:20
15500
8000
NORTH ELEVATION
15500
13800
8000
SOUTH ELEVATION
15500
13800
8000
EAST ELEVATION
15500
13800
8000
WEST ELEVATION
SITE CODE: DN073 SITE NAME: RAILWAY UNION SPORTS
NOTE:
THE COLOURS SHOWN ON THIS DRAWING USED TO REPRESENT THE PROPOSED VODAFONE EQUIPMENT ARE INDICATIVE ONLY. THE ACTUAL COLOUR OF THE VODAFONE EQUIPMENT IS TO BE CONFIRMED AND WILL BE BASED ON PLANNING APPLICATION REQUIREMENTS.
EXISTING FLOODLIGHTING
COLUMN B
SCALE 1:100

6 Use of existing building to support antennae


SITE CODE: DN660.1 SITE NAME: SUPER VALU
14400
13400
Super Valu
Supermarket
Super Valu
Super Valu
Super Valu
13400
4500
15000
2900
750
1100
15000
400
2100
ROOF LEVEL
6.2m AGL
49m ASL
6200
EXISTING OTHER USERS
ANTENNAS
PROPOSED VODAFONE 300mmø
TRANSMISSION DISH
PROPOSED VODAFONE KATHREIN
TRI-SECTOR ANTENNA
EXISTING OTHER USERS
ANTENNA
EXISTING OTHER USERS
EQUIPMENT
EXISTING PLANT ROOM
PROPOSED VODAFONE RBS
2106 EQUIPMENT CABINET
PROPOSED VODAFONE NOKIA
OUTDOOR SUPREME NODE B
EQUIPMENT CABINET
PROPOSED VODAFONE POWER
ONE POD
ELEVATION A
SCALE 1:125
NOTE:
THE COLOURS SHOWN ON THIS DRAWING USED TO REPRESENT THE PROPOSED VODAFONE EQUIPMENT ARE INDICATIVE ONLY. THE ACTUAL COLOUR OF THE VODAFONE EQUIPMENT IS TO BE CONFIRMED AND WILL BE BASED ON PLANNING APPLICATION REQUIREMENTS.


SITE CODE: DN660.1 SITE NAME: SUPER VALU
ROOF APEX
7.2m AGL
TIMBER CLAD
PLANT ROOM
9.1m AGL
MAIN ROOF LEVEL
6.2m AGL
49.00m ASL
9000
10000
4500
1000
1500
1000
2400
2900
1370
240
PROPOSED VODAFONE 300mmø
TRANSMISSION DISH
PROPOSED VODAFONE KATHREIN
TRI-SECTOR ANTENNA
EXISTING PLANT ROOM ACCESS HATCH
EXISTING ROOF ACCESS DOOR
PROPOSED VODAFONE 300mm
CABLE TRAY
EXISTING 1.1m HIGH HAND RAIL
EXISTING STEEL GRILAGE
EXISTING "INVISI RUNG" ROOF
ACCESS LADDER
EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT
EXISTING A/C UNIT
EXISTING OTHER USERS CABINET,
GRILLAGE & FLAGPOLE
EXISTING WATER TANK (TIMBER CLAD)
PROPOSED VODAFONE RBS
2106 EQUIPMENT CABINET
PROPOSED VODAFONE NOKIA
OUTDOOR SUPREME NODE B
EQUIPMENT CABINET
PROPOSED VODAFONE POWER
ONE POD
PROPOSED VODAFONE 2.1m HIGH
FENCING TO MATCH EXISTING
EXISTING OTHER USERS
EQUIPMENT CABINETS
EXISTING OTHER USERS
CABLE TRAY
NOTE:
THE COLOURS SHOWN ON THIS DRAWING USED TO REPRESENT THE PROPOSED VODAFONE EQUIPMENT ARE INDICATIVE ONLY. THE ACTUAL COLOUR OF THE VODAFONE EQUIPMENT IS TO BE CONFIRMED AND WILL BE BASED ON PLANNING APPLICATION REQUIREMENTS.
N
E
S
W
SITE PLAN
SCALE 1:125

Appendix B

Department of Environment, Community and Local Government Circular Letter PL 07/12: Telecommunications Antennae and Support Structures Guidelines

Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Circular Letter: PL 07/12

19 October 2012

To: Directors of Planning
Borough and Town Clerks
An Bord Pleanála

CC: City and County Managers

Telecommunications Antennae and Support Structures Guidelines

This circular is issued by the Minister under section 28 of the Planning and Development Acts 2000-2012 to update certain sections of the Telecommunications Antennae and Support Structures Guidelines (1996).

1. Policy Background

In May 2010, the EU Commission published its **Digital Agenda for Europe** (DAE), the main objective of which is *"to deliver sustainable economic and social benefits from a digital single market based on fast and ultrafast internet and interoperable applications*".

The Programme for Government commits to *"an ambitious rollout of next generation or high speed broadband to every business and home in the country"*. The Next Generation Broadband Taskforce (NGBT) was established by the Minister for Communications, Energy and Natural Resources to *"create a forum at which key industry stakeholders could highlight the legislative, policy and regulatory levers that will facilitate greater investment in high speed broadband services across Ireland"*. It was also designed to identify where gaps in commercial service provision are likely to occur between now and 2020. The Taskforce had five working groups reporting to it, including *"The Identification and Removal of Barriers Working Group"*.

The NGBT published its report in May 2012 for public consultation in June. The report and consultation then served as the basis for preparation of the National Broadband Plan which was published in August.

The National Broadband Plan identifies a number of potential barriers to efficient Next Generation Broadband (NGB) rollout and the necessary actions required to address these barriers. A number of potential barriers in the planning area have been identified. These are now to be addressed by way of this update of elements of Telecommunications Antennae and Support Structures Guidelines published in 1996.

2. Revision of Telecommunications Antennae and Support Structures Guidelines (1996)

2.1 Background

These guidelines were published in 1996 to support Government policy on the roll out of a high quality telecommunications service. The Guidelines established a policy framework for planning authorities in dealing with the telecoms sector in their forward planning and development management functions, as well as general guidance on relevant planning issues for both telecoms companies and the general public.

An overarching aim of the guidelines was and continues to be to ensure a consistent approach by the various planning authorities in the preparation of their development plans and in determining applications for planning permission. In the intervening years the planning system has facilitated significant development in telecommunications networks in a manner consistent with proper planning and sustainable development to such an extent that by 2012 approximately 78% of households in Ireland had access to the internet. It is anticipated that the updates to the Guidelines now being introduced will support the planning system in facilitating the objectives set out under the National Broadband Plan.

2.2 to 2.7 set out the elements of the 1996 Guidelines that are now being revised.

2.2 Temporary Permissions

The 1996 guidelines anticipated rapid changes in technology and therefore early obsolescence of antennae and their support structures. Accordingly, the Guidelines advised that permissions for mobile telecommunications infrastructure should normally be granted for only five years.

However the experience has been that masts and antennae tend to remain in place for many years, while repeat planning applications have been required to renew the relevant temporary permissions.

Mobile telephony, with associated ground based antennae and support structures, will remain a key feature of telecommunications infrastructure for the foreseeable future. Moreover, the roll-out of NGB will tend to increase the importance of the infrastructure.

Planning authorities are therefore advised that from the date of this Circular Letter, attaching a condition to a permission for telecommunication masts and antennae which limit their life to a set temporary period should cease. Where a renewal of a previously temporary permission

is being considered, the planning authority should determine the application on its merits with no time limit being attached to the permission.

Only in exceptional circumstances where particular site or environmental conditions apply, should a permission issue with conditions limiting their life.

2.3 The Development Plan and Separation Distances

The 1996 Guidelines advised that planning authorities should indicate in their development plans any locations where, for various reasons, telecommunications installations would not be favoured or where special conditions would apply, and suggested that such locations might include lands whose high amenity value is already recognised in a development plan, protected structures, or sites beside schools.

While the policies above are reasonable, there has, however, been a growing trend for the insertion of development plan policies and objectives specifying minimum distances between telecommunications structures from houses and schools, e.g. up to 1km.

Such distance requirements, without allowing for flexibility on a case-by-case basis, can make the identification of a site for new infrastructure very difficult. Planning authorities should therefore not include such separation distances as they can inadvertently have a major impact on the roll out of a viable and effective telecommunications network.

2.4 Bonds for Removal of Redundant Structures

The 1996 Guidelines also advised that when antennae and their support structures are no longer being used by the original operator, and no new user has been identified, they should be removed and the site re-instated at the operators' expense. The Guidelines furthermore recommended that in order to facilitate the above, a condition should be attached to the planning permission providing for removal in the case of obsolescence, with provision for the lodging of an appropriate security (e.g. bond or cash deposit), with the relevant local authority: such security could be applied by the planning authority to effect removal where the site owner/operator has not complied with the relevant condition.

Having reviewed experience since 1996 and the limited number of sites that have become obsolescent in that time, it is considered that the lodgement of a bond or cash deposit is no longer appropriate. It is therefore advised that, in general, future permissions should simply include a condition stating that when the structure is no longer required it should be demolished, removed and the site re-instated at the operators' expense.

2.5 Register or Database

It is recommended that a register of approved telecommunications structures supported by relevant databases be created and maintained by each planning authority in cooperation with operators. Such a register would provide a useful input to the assessment of future telecommunications developments and would also be useful from the point of view of maximising the potential for future mast sharing and co-location. It is suggested that the

register should at least contain coordinates indicting the location, structure(s) height and the planning file reference number.

2.6 Health and Safety Aspects

The 1996 Guidelines advise that planning authorities should not include monitoring arrangements as part of planning permission conditions nor determine planning applications on health grounds.

This Circular Letter reiterates that advice to local planning authorities. Planning authorities should be primarily concerned with the appropriate location and design of telecommunications structures and do not have competence for health and safety matters in respect of telecommunications infrastructure. These are regulated by other codes and such matters should not be additionally regulated by the planning process.

3. Draft Guidelines on Contribution Conditions

The 1996 Guidelines pre-dated the introduction of Development Contribution Schemes under sections 48 and 49 of the 2000–2012 Planning and Development Acts. Since that time most planning authorities have prepared Development Contribution Schemes which often include a levy of varying amounts for telecommunications infrastructure depending on the authority concerned.

The Department published Draft Guidelines on Development Contributions under section 28 of the Planning Act in June 2012 with a view to introducing final Guidelines by the end of this year. The principal aim of the Guidelines is to provide updated guidance on the preparation of development contributions to reflect changed economic circumstances since guidance was last issued in 2007, and also to reflect the Government's focus on job creation and investment in infrastructure for the future.

The Draft Guidelines recognise that the adoption of Development Contribution Schemes is a reserved function of the elected members of each planning authority, but indicate that there is a requirement for greater consistency in Development Contribution Schemes on a national basis.

Moreover, the Draft Guidelines require that **all** future Development Contribution Schemes must include waivers for broadband infrastructure provision and these waivers are intended to be applied consistently across all local authority areas.

Any queries in relation to this Circular Letter should be addressed to Mr. Conor O' Sullivan, Planning Section, tel: (01) 888 2810, email: conor.o'sullivan@environ.ie.

Is mise le meas,

Philip Nugent
Principal Officer
Planning Section

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Appendix C

Exempted Development under Schedule 2, Class 31 Planning and Development Regulations 2001, as amended

Planning and Development Regulations, 2001

Schedule 2
Part 1
Exempted Development — General

Class 31:

Incorporating (in bold text) amendment in Planning and Development (Amendment) Regulations 2013

The carrying out by a statutory undertaker authorised to provide a telecommunications service of development consisting of the provision of—	
(a) underground telecommunications structures or other underground telecommunications works (including the laying of mains and cables and the installation underground of any apparatus or equipment),	
(b) overhead telecommunications **including the erection of poles or other support structures or the use of existing poles or other support structures,**	1. Poles **or other support structures** carrying overhead lines shall not exceed 10 metres in height. 2. Poles **or other support structures** carrying other equipment shall not exceed 10 metres in height and 0.6 metres in diameter measured at the widest point, where "other equipment" means one transmitting or receiving dish (the diameter of which shall not exceed 0.3 metres), or one panel antenna (the dimensions of which shall not exceed 0.5 metres in length x 0.3 metres in width x 0.2 metres in depth) used for the provision of a specific telecommunications service and the provision of which would otherwise require an additional pole **or other support structures** route carrying overhead wires. 3. Where a pole or poles **or other support structures** carry radio transmitting or receiving apparatus, the field strength of the nonionising radiation emissions from that installation shall not exceed the limits specified by the Director of Telecommunications Regulation.
(bb) The attachment to a pole or other support structure referred to in paragraph (b) above of any bracket, clamp or other fixture required for the carrying or support of any cable (including fibre optic cable), wire, tube, pipe, duct or similar thing, or required for the carrying or support of any device containing any such cable, wire, tube, pipe, duct or similar thing, and the attachment to such fixture of— **(i) any cable (including fibre optic cable), wire, tube, pipe, duct or similar thing (including its casing or coating) or any device containing any of the foregoing,** **(ii) any other equipment or apparatus used for telecommunications purposes, which is exempted development for the purposes of Article 6 and this Class,**	**The dimensions of any such device should not exceed 0.50 cubic metres measured externally.**

(bbb) the attachment to any cable (including fibre optic cable), wire, tube, pipe, duct or similar thing of any device containing any such cable, wire, tube, pipe, duct or similar thing,	**The dimensions of any such device should not exceed 0.25 cubic metres measured externally.**
(c) telephone kiosks or other telephone facilities in a public place not being on, over or along a public road,	No such kiosk or facility shall be situated within 10 metres of the curtilage of any house, save with the consent in writing of the owner or occupier thereof.
(d) equipment for transmitting or receiving signals from satellites in space,	1. No such equipment shall exceed 10 metres in height 2. The diameter of any antenna shall not exceed 2 metres. 3. No such equipment shall be situated within 10 metres of the curtilage of any house save with the consent in writing of the owner or occupier thereof, or within 10 metres of the window of a workroom of any other structure.
(e) permanent telecommunications exchange and radio station containers**, including containers for electronic equipment required for transmitting, receiving and processing telecoms data for both wireless or wired networks,**	1. The equipment housed in the container shall be used exclusively for the purposes of concentrating and re-routing calls **or for transmitting, receiving and processing telecoms data for both wireless or wired networks** and the container shall not have attached to it or within it, whether visible or not, any antennae for the direct transmission or reception of mobile telephony or other telecommunications signals in such a way that the container would act as an antennae support structure. 2. No such container shall exceed 10 metres in length, 3 metres in width or 3 metres in height. 3. No such container shall be situated within 10 metres of the curtilage of a house save with the consent in writing of the owner or occupier thereof, or within 10 metres of the window of a workroom of any other structure. 4. The field strength of the non-ionising radiation emissions from the radio station container shall not exceed the limits specified by the Director of Telecommunications Regulation.
(f) cabinets forming part of a telecommunications system,	The volume above the ground-level of any such cabinet shall not exceed 2 cubic metres measured externally.

(g) transportable radio installation,	1. The height of the structure for such an installation shall not exceed 15 metres in height and 2 metres in width at its widest point. 2. The installation may only be used— (a) to provide anticipated additional coverage at a sporting, social or other event, provided that the structure is not in place for more than 2 weeks before the event or for a period exceeding 8 weeks which shall include assembly and dismantling, (b) for demonstration or simulation purposes, whether to demonstrate the visual effects of such structure in a particular location or to measure the output, and such structure shall be in place for a period of not more than 12 weeks, or (c) as a temporary replacement for a structure, which has been accidentally or otherwise incapacitated, and such structure shall be in place for a period of not more than 12 weeks. 3. The planning authority in whose functional area the installation is placed shall be notified by the statutory undertaker in writing of the provision and purpose of such installation before it is made operational.
(h) the attachment of additional antennae to an existing antenna support structure,	1. The total number of such antennae shall not exceed 12, of which not more than 8 shall be dish type (whether shielded or not). 2. (a) The dimensions of any such antenna provided shall not exceed the greatest length, width or depth of any antenna for mobile telephony of corresponding type already attached to the structure. (b) In any other case, the dimensions of any such antenna provided shall not exceed— (i) in the case of any panel type antenna, 1.5 metres in length × 0.4 metres in width × 0.15 metres in depth, (ii) in the case of any co-linear type antenna, 5 metres in length × 0.1 metres in diameter, and (iii) in the case of any dish type antenna (whether shielded or not), 1.8 metres in diameter. 3. The attachment of such antennae shall not result in the field strength of the non-ionising radiation emissions from the site exceeding limits specified by the Director of Telecommunications Regulation. 4. The attachment of such antennae may be carried out by way of a platform only where the antenna support structure already incorporates a platform. 5. The height of the existing structure (including any antenna thereon) shall not be exceeded.

(i) antennae for high capacity transmission links by way of attachment to existing high capacity antennae support structures,	1. The addition shall be of the dish type antennae used for the sole purpose of point to point communication. 2. The additional antennae shall not exceed the number provided for in the existing design capacity of the support structure. 3. No new member shall be added to the structure save by way of brackets or other fixing systems used for the attachment of the additional antennae. 4. The maximum diameter of any added antenna shall not exceed the width of the support structure at the point at which the additional antenna is attached. 5. The planning authority in whose functional area the support structure exists shall be notified by the statutory undertaker in writing of the attachment of any such additional antennae at least 4 weeks before the antenna or antennae are attached. 6. The attachment of such antenna shall not result in the field strength of the non-ionising radiation emissions from the radio installations on the site exceeding the limits specified by the Director of Telecommunications Regulation.

(j) an antenna support structure in place of an existing antenna support structure,	1. The replaced structure shall be removed no later than 4 weeks following its decommissioning. 2. Where, for reasons of the integrity of the network or other operational reasons, the structure to be replaced remains in use during the construction of the replacement structure, the replacement structure shall be located as near as possible to the existing structure having regard to construction activity and safety requirements and, in any case, no replacement structure shall be located more than 20 metres from the replaced structure (measured from the base). 3. (a) The height of the replacement structure shall not exceed the height of the replaced structure. (b)(i) Subject to sub-paragraph (ii), the width of the replacement structure shall not exceed the width of the replaced structure. (ii) Where the replaced structure was 2 metres or less in width, the width of the replacement structure may not be more than twice the width of the replaced structure, all measurements to be taken at the widest point. (c) Where the replaced structure did not incorporate an antenna platform, the replacement shall not incorporate such a platform. 4.(a) Subject to sub-paragraph (b), the antennae to be attached to the replacement structure shall not exceed the number of antennae on the replaced structure. (b) An additional 12 antennae for mobile telephony may be attached to the replacement structure, of which not more than 8 of the additional 12 shall be of the dish type (whether shielded or not). 5. (a) The dimensions of any additional antenna for mobile telephony shall not exceed the greatest length width or depth of any antenna for mobile telephony of corresponding type on the replaced structure. (b) In any other case, the dimensions of any antenna provided shall not exceed: (i) in the case of any panel type antenna, 1.5 metres in length × 0.4 metres in width × 0.15 metres in depth, (ii) in the case of any co-linear type antenna, 5 metres in length × 0.1 metres in diameter, and (iii) in the case of any dish type antenna (whether shielded or not), 1.8 metres in diameter. 6. The replacement of an antenna support structure together with any replaced or additional antenna shall not result in the field strength of the non-ionising radiation emissions from the radio installations on the site exceeding the limits specified by the Director of Telecommunications Regulation.

(k) antennae attached to the following existing structures- (i) public or commercial buildings (other than education facilities, childcare facilities or hospitals) by way of attachment to roofs, facades, chimneys, chimney pots or vent pipes; (ii) telegraph poles, lamp posts, flag poles, CCTV poles; (iii) electricity pylons.	1. The antenna shall be attached directly to the structure (other than a structure with a flat roof) and not by way of a supporting fixture. 2. In the case of a structure with a flat roof, a supporting fixture may be used provided that- (a) the fixture does not exceed the height of any existing parapet or railing on the roof by more than 2 metres, and (b) access to the roof is not available to any person other than a person authorised by the statutory undertaker. 3. Where an antenna is attached to the façade of a building or the exterior of a chimney or vent, the colour of the antenna shall match and blend with the colour of such façade, chimney or vent pipe. 4. Where the antenna is hidden inside a chimney pot the existing chimney pot may be replaced by a chimney pot in a suitable material which shall be the same colour, size and shape as the replaced pot, and the antenna shall not protrude beyond the top of the chimney pot. 5. The planning authority in whose functional area the structure on which the antennae will be attached is situated shall be notified by the statutory undertaker in writing of the proposed location of any such structure at least 4 weeks before such attachment. 6. The field strength of any such antenna shall not result in the field strength of the non-ionising radiation emission from the radio installations on the site exceeding the limits specified by the Director of Telecommunications Regulation.

Appendix D

Some Relevant Legal Definitions

D1 From the Planning and Development Act, as amended

''Board'' means An Bord Pleanala;

''development'' means, except where the context otherwise requires, the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land

''development plan'' means a development plan under *section 9(1)*;

9.—(1) Every planning authority shall every 6 years make a development plan

''local area plan'' means a local area plan under *section 18*;

18.—(1) A planning authority may at any time, and for any particular area within its functional area, prepare a local area plan in respect of that area.

''local authority'' means a local authority for the purposes of the

Local Government Act, 1941;

''planning application'' means an application to a planning authority in accordance with permission regulations for permission for the development of land required by those regulations;

''planning authority'' means—

(*a*) in the case of a county, exclusive of any borough or urban district therein, the council of the county,

(*b*) in the case of a county or other borough, the corporation of the borough, and

(*c*) in the case of an urban district, the council of the urban district,

and references to the area of the planning authority shall be construed accordingly and shall include the functional area of the authority;

''road'' has the same meaning as in the Roads Act, 1993;

''statutory undertaker'' means a person, for the time being, authorised by or under any enactment or instrument under an enactment to—

(*a*) construct or operate a railway, canal, inland navigation, dock, harbour or airport,

(*b*) provide, or carry out works for the provision of, gas, electricity or telecommunications services, or

(*c*) provide services connected with, or carry out works for the purposes of the carrying on of the activities of, any public undertaking;

D2 From the Roads Act, as amended

"road" includes—

(a) any street, lane, footpath, square, court, alley or passage,

(b) any bridge, viaduct, underpass, subway, tunnel, overpass, overbridge, flyover, carriageway (whether single or multiple), pavement or footway,

(c) any weighbridge or other facility for the weighing or inspection of vehicles, toll plaza or other facility for the collection of tolls, service area, emergency telephone, first aid post, culvert, arch, gulley, railing, fence, wall, barrier, guardrail, margin, kerb, lay-by, hard shoulder, island, pedestrian refuge, median, central reserve, channelliser, roundabout, gantry, pole, ramp, bollard, pipe, wire, cable, sign, signal or lighting forming part of the road, and

(d) any other structure or thing forming part of the road and

(i) necessary for the safety, convenience or amenity of road users or for the construction, maintenance, operation or management of the road or for the protection of the environment, or

(ii) prescribed by the Minister;

"motorway" has the meaning assigned to it by section 43;

43.—(1) In this Act 'motorway' means—

(a) a public road or proposed public road specified to be a motorway in a motorway scheme approved under section 49, or

(b) a national road or a proposed road development for the construction of a national road declared to be a motorway under section 8 of the Roads Act 2007.

"national road" means a public road or a proposed public road which is classified as a national road under section 10;

Note: Section 10: Classification of national, regional and local roads.

"regional road" means a public road or a proposed public road which is classified as a regional road under section 10;

Note: Section 10: Classification of national, regional and local roads.

"local road" means a public road other than a national road or a regional road;

"the Authority" means the National Roads Authority established under section 16;

"local authority" except in section 73, means—

(a) a county council, referred to in Part 1 of Schedule 5,

(b) a city council, referred to in Part 2 of Schedule 5,

(c) a borough council, referred to in Chapter 1 of Part 1 of Schedule 6, or

(d) a town council referred to in Chapter 2 of Part 1 of Schedule 6,

to the Local Government Act 2001;

"road authority", except in Part V, means a local authority;.

Note: Part V : Toll Roads

D3 From the Communications Regulation Act, as amended

"authority" means NRA or a road authority, as the case may be;

"network operator" means any person who provides or operates an electronic communications network

"consent" means a consent granted by an authority under section 53(3) or, in the case of emergency roadworks, deemed to be granted under section 53(4)

"roadworks" means the opening of a public road or any act or work that requires or causes the closing of a public road or part of a public road, including the opening or closing of a public road or part of a public road for the purposes of opening ducts, for the purpose of the establishment, extension, replacement, repair, removal or maintenance of works on electronic communications infrastructure

"emergency roadworks" means roadworks necessary to eliminate or reduce danger or risk to persons or property;

"electronic communications infrastructure" means any part of an electronic communications network

"duct" means a pipe or tube for the carriage of electronic communications infrastructure

"physical infrastructure" means infrastructure which is capable of supporting electronic communications infrastructure including ducts, poles, antennae support structures and rights of way over land, but does not include electronic communications infrastructure;

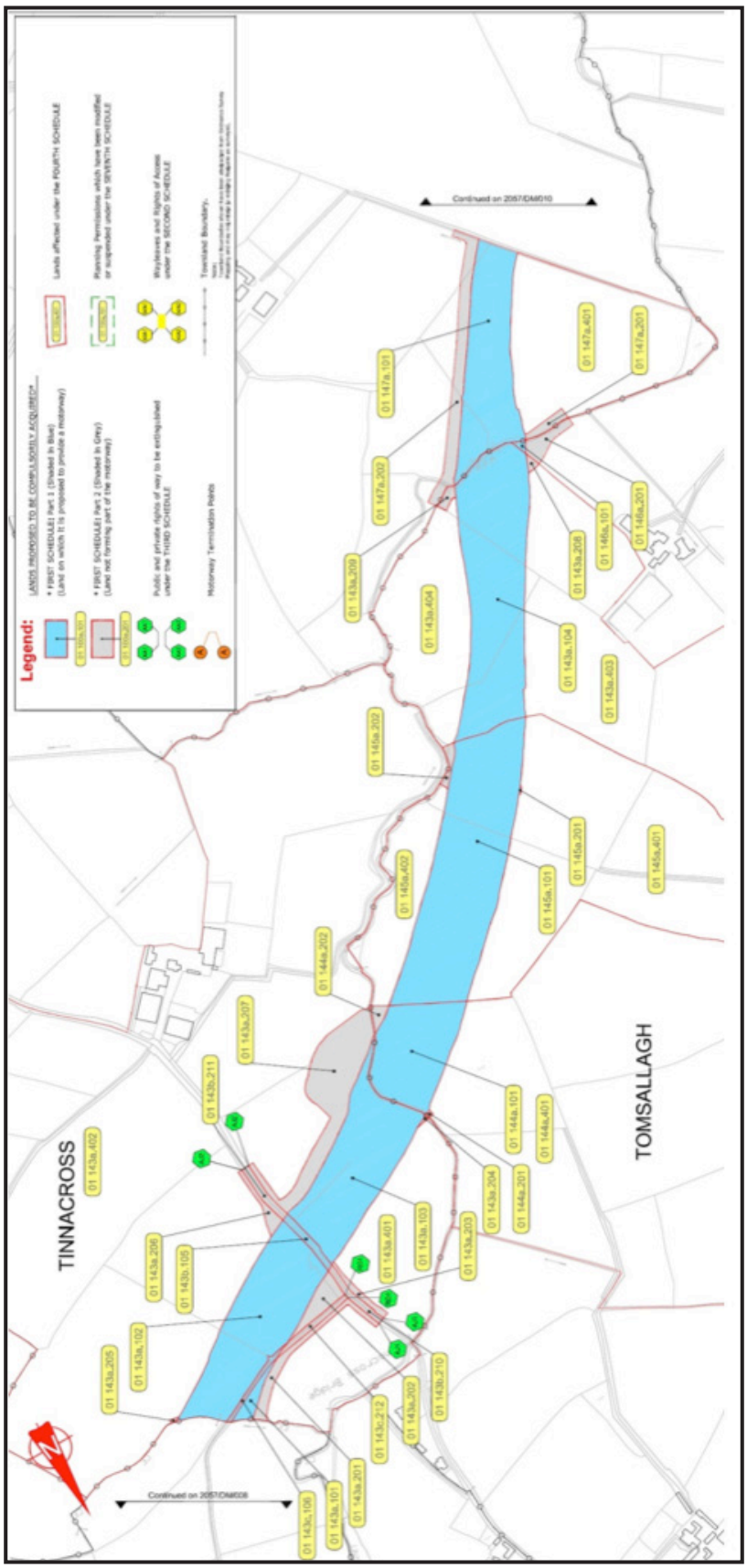
"public road" means a national road, regional road or local road;

'road', 'national road', 'regional road' and 'local road' have the meanings assigned to them, respectively, by the Roads Act 1993;

"road authority" has the meaning assigned to it by section 2 (inserted by section 11 of the Roads Act 2007) of the Roads Act 1993;

Appendix E

Motorway and Non-Motorway Land



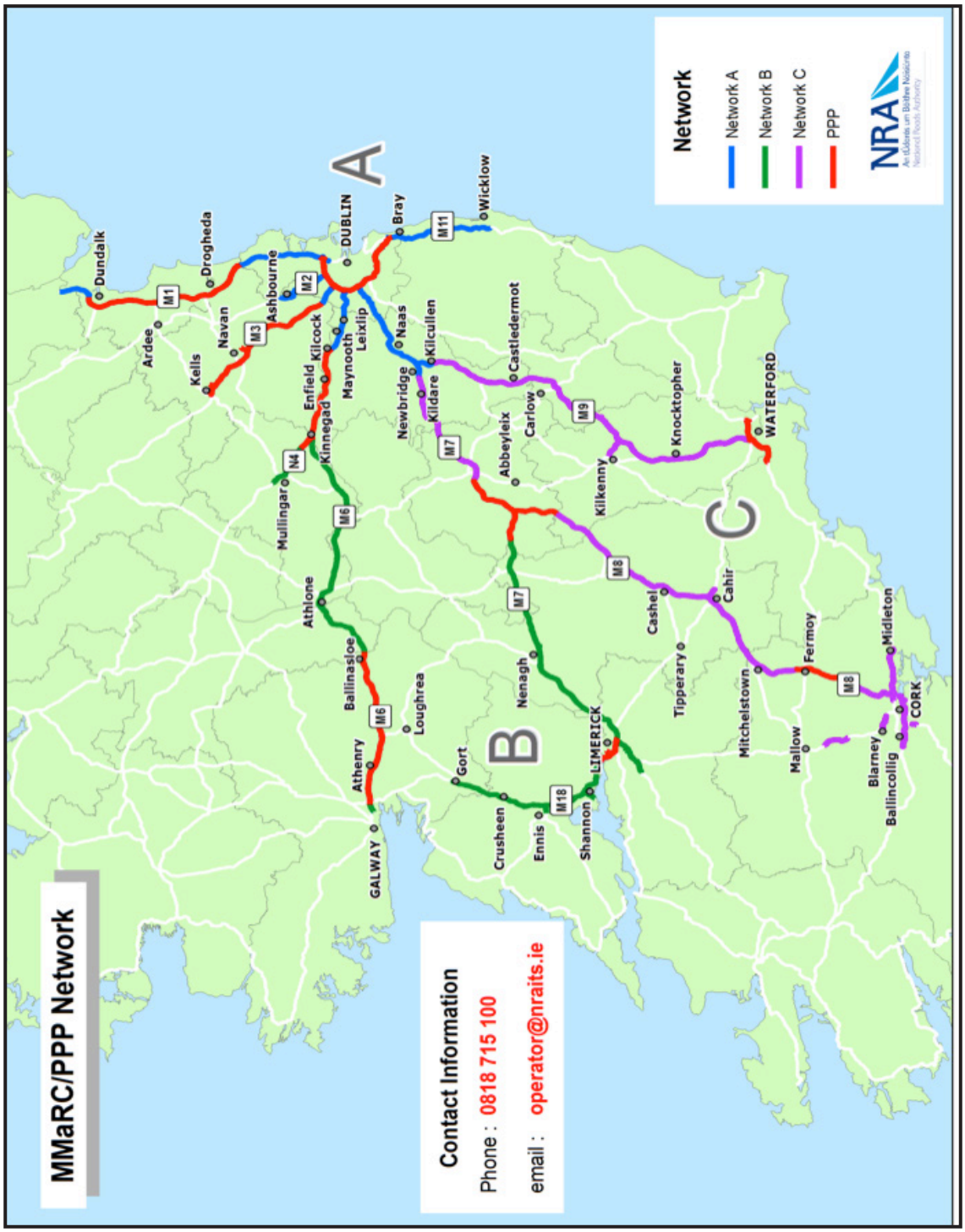
Extract from mapping for a motorway scheme.

Blue land is classed as "motorway",

Grey land is necessary for the scheme, but is not classed as "motorway"

Appendix F

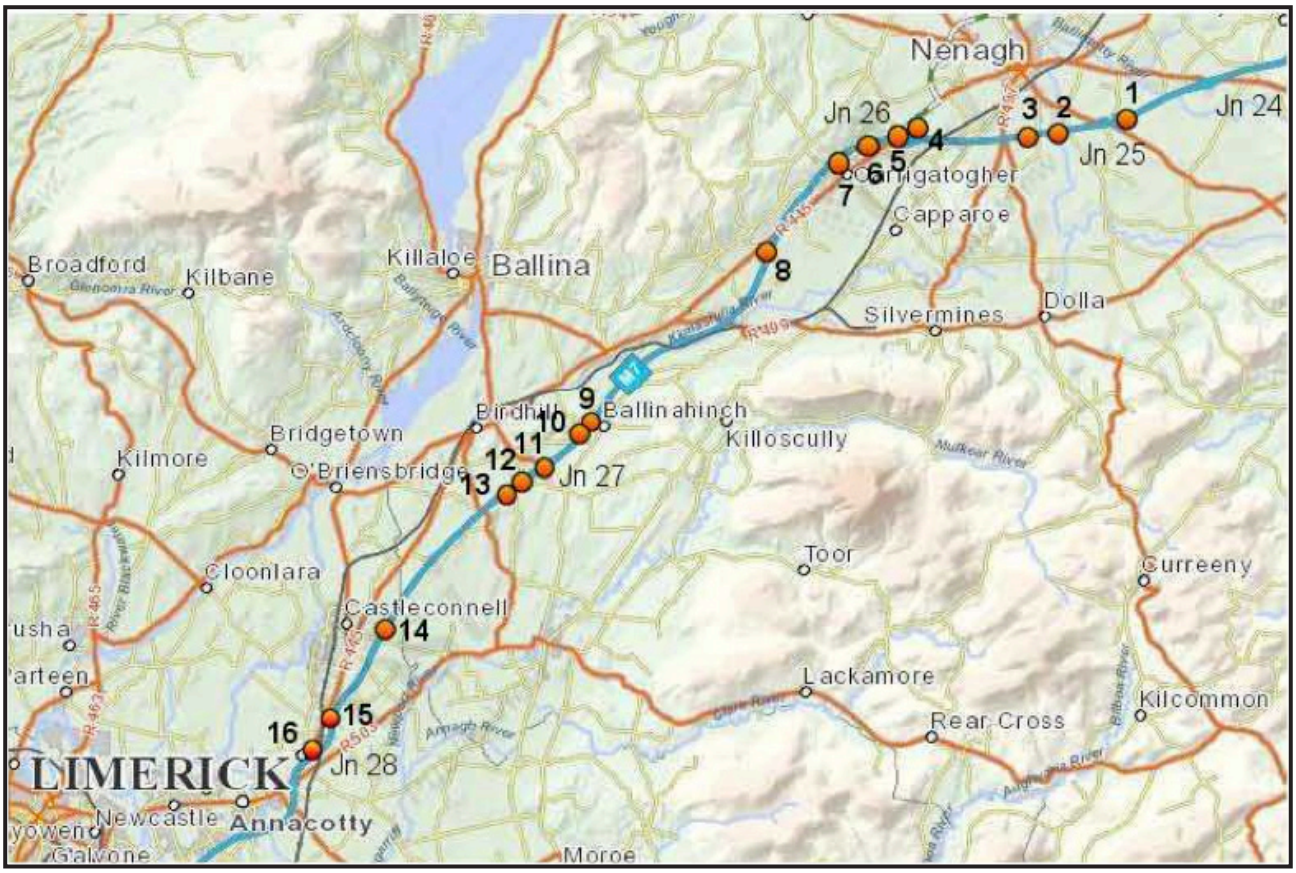
Sections of Motorways & Dual Carriageways Maintained by PPP Companies and MMaRC Contractors


MMaRC/PPP Network
Contact Information
Phone : 0818 715 100
email : operator@nraits.ie
Network
Network A
Network B
Network C
PPP
NRA
A
B
C
Dundalk
Drogheda
DUBLIN
Bray
Wicklow
Ardee
Kells
Navan
Ashbourne
Kilcock
Enfield
Maynooth
Leixlip
Naas
Newbridge
Kilcullen
Castledermot
Kildare
Carlow
Abbeyleix
Knocktopher
WATERFORD
Kilkenny
Mullingar
Kinnegad
Athlone
Ballinasloe
Loughrea
Athenry
GALWAY
Nenagh
Gort
Crusheen
Ennis
Shannon
LIMERICK
Tipperary
Cashel
Cahir
Mitchelstown
Fermoy
Mallow
Midleton
Blarney
Ballincollig
CORK
M1
M2
M3
M4
M6
M7
M8
M9
M11
M18

Appendix G

M7 Nenagh to Limerick, motorway scheme

Assessment of Potential Opportunities to Accommodate Overground Telecommunications Equipment on the M7 Nenagh Limerick Scheme



M7 Nenagh Limerick scheme starts between junction 24 and junction 25 at the eastern end of the Nenagh Bypass and ends on the Limerick side of junction 28, Annacotty Junction. The length of the scheme is approximately 38km. An assessment has been carried out to ascertain what potential opportunities exist to accommodate telecommunications equipment along the scheme. Sixteen possible locations are described below.

1 **Junction 25, Knockalton.**

There are two areas of land that may appear suitable at Junction 25;

- The triangle of land between the slip roads on the south side of the M7. This is a substantial area of high ground, but it would be necessary to access the site from a slip road, and it is unlikely to be possible to do this safely at this location. This location should therefore be discounted.
- The back of the verge on the Limerick side of the west-bound on-slip. There is a large area of land here, but much of it could not be used as the telecommunication infrastructure would block forward visibility for drivers accessing the motorway here. The level of the site is not as high as the triangle between the two slip roads and the motorway, but access to the site would be safer. It should be possible to locate infrastructure outside the clear zone. Traffic management would be required whenever the site were to be accessed for maintenance etc.

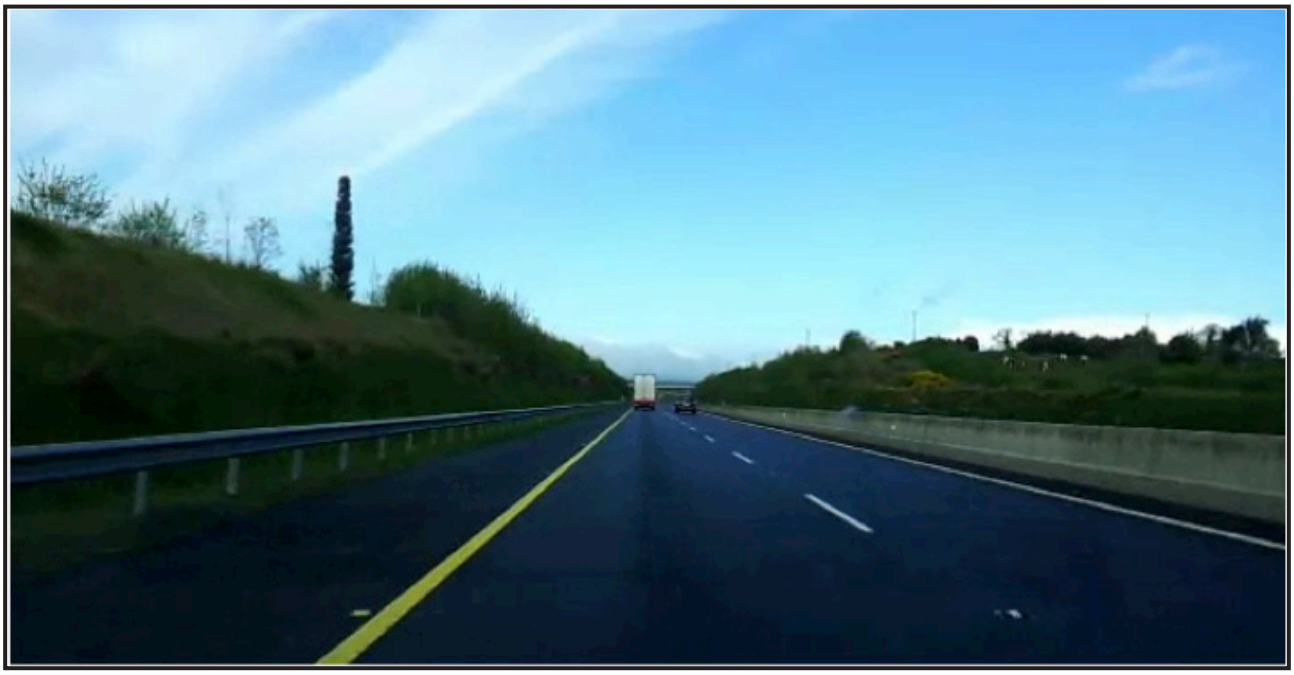
Area between M7 and slip roads - from M7 heading west

Both sites - from start of on-slip

2 **Attenuation pond adjacent to westbound carriageway.**

This attenuation pond is accessed using an access road from the local road network, and the site is therefore one of the safer locations. It also avoids the need for traffic management when carrying out maintenance visits etc. There is an area of land adjacent to the fenced off area that may be suitable for telecommunications equipment. The ground levels are similar to those of the motorway.

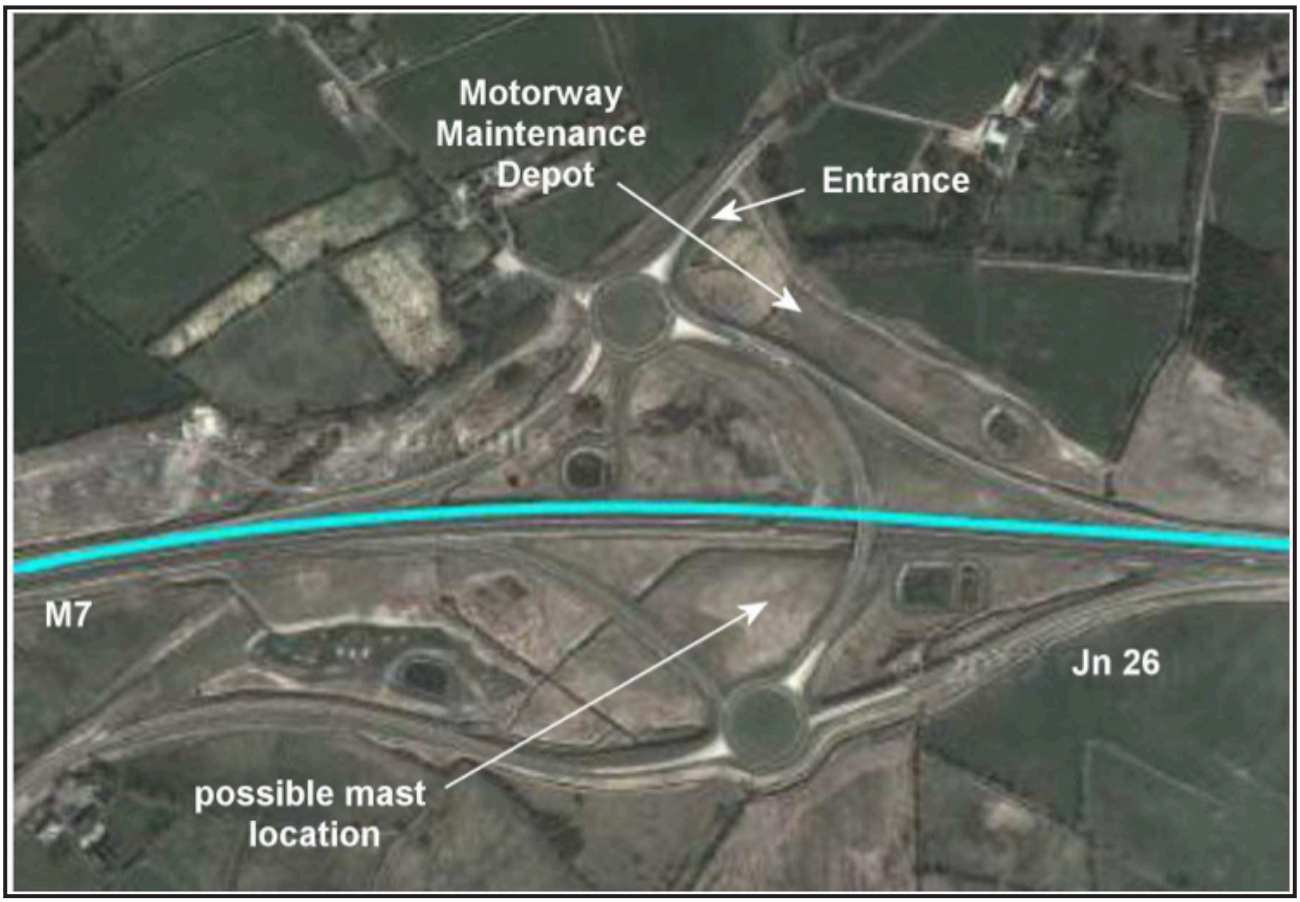
3 **Existing telecommunicaions mast, disguised as a tree, on private land adjacent to the westbound carriageway of M7**



4 **Junction 26**

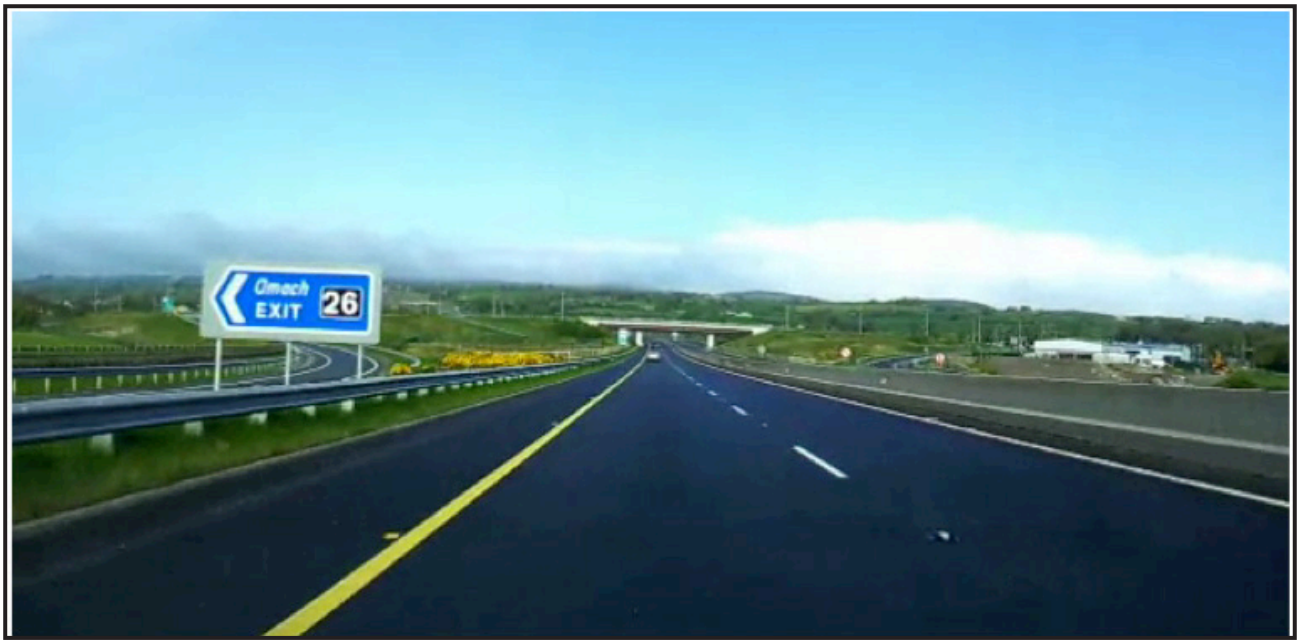
and

5 **Motorway Maintenance Depot**



There are two possibilities at Junction 26:

- Area between eastbound off-slip and M7: this is a large, high, area of land. However safe access would be a difficult. Additionally, traffic management etc would be required for each maintenance visit.
- The motorway maintenance depot: Construction of this maintenance depot has just been completed. There are two possible locations within the maintenance depot. The ground levels not as high as those at the site between the off-slip and the M7, but access would be straightforward, using the access to the maintenance depot which is off the local road. This would be far safer. An additional benefit is that traffic management etc would not be required during maintenance visits.



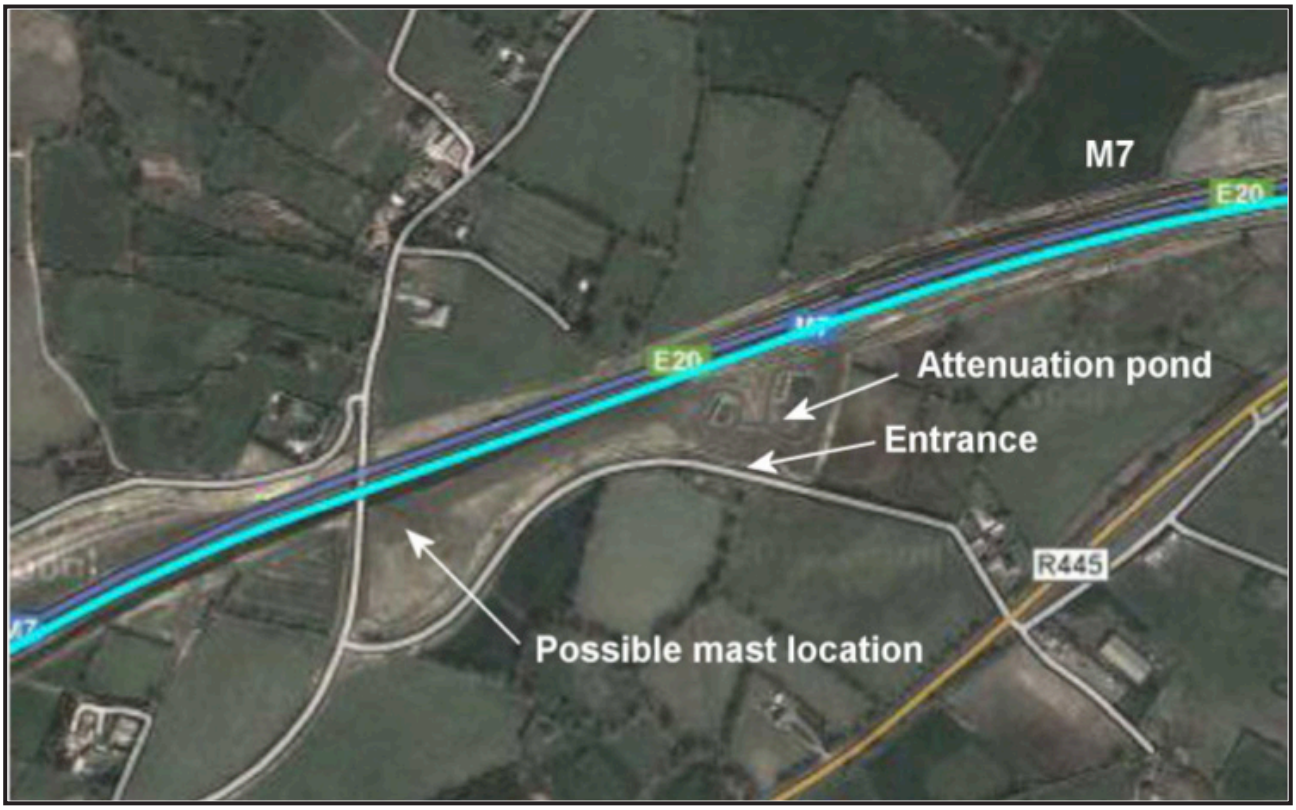
Junction 26 from M7 westbound. Motorway Maintenance Depot is visible on right hand side.

From roundabout adjacent to the motorway maintenance depot;

Possible site adjacent to maintenance depot offices and car parking area.

Possible site on right side of entrance to maintenance depot.

6 Adjacent to attenuation pond and overbridge at Carrigatogher



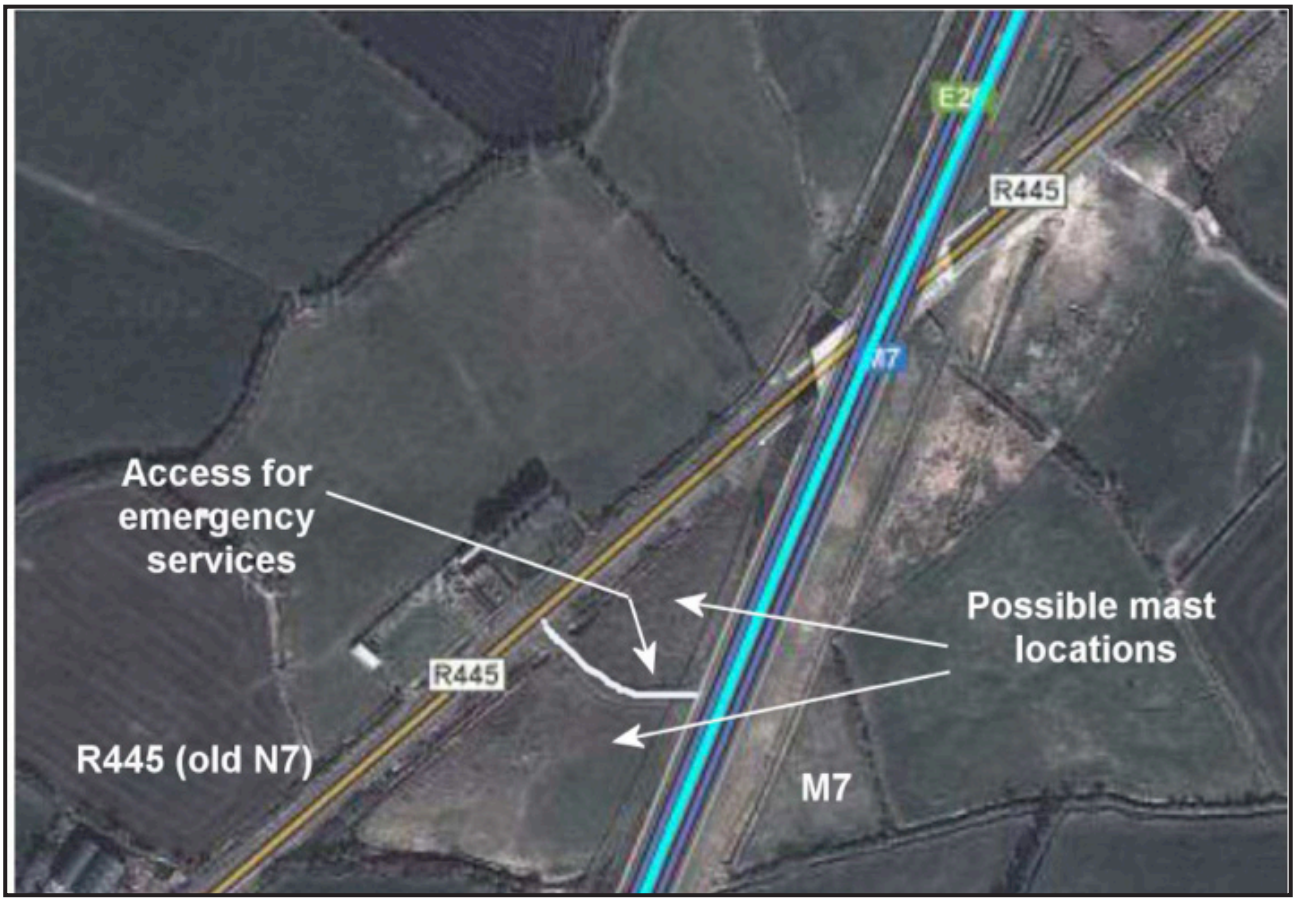
This attenuation pond is accessed from the local road network, and the site is therefore one of the safer locations. It also avoids the need for traffic management when carrying out maintenance visits etc. A new access track would be required from the existing entrance to the attenuation pond to the higher land adjacent to the overbridge.

Looking from entrance to attenuation pond up slope towards potential mast site

7 Layby on eastbound carriageway

There is no additional land adjacent to the layby on the eastbound carriageway. In any case, the location would be unsuitable for a mast, as it is in a cutting.

8 Adjacent to Emergency Access



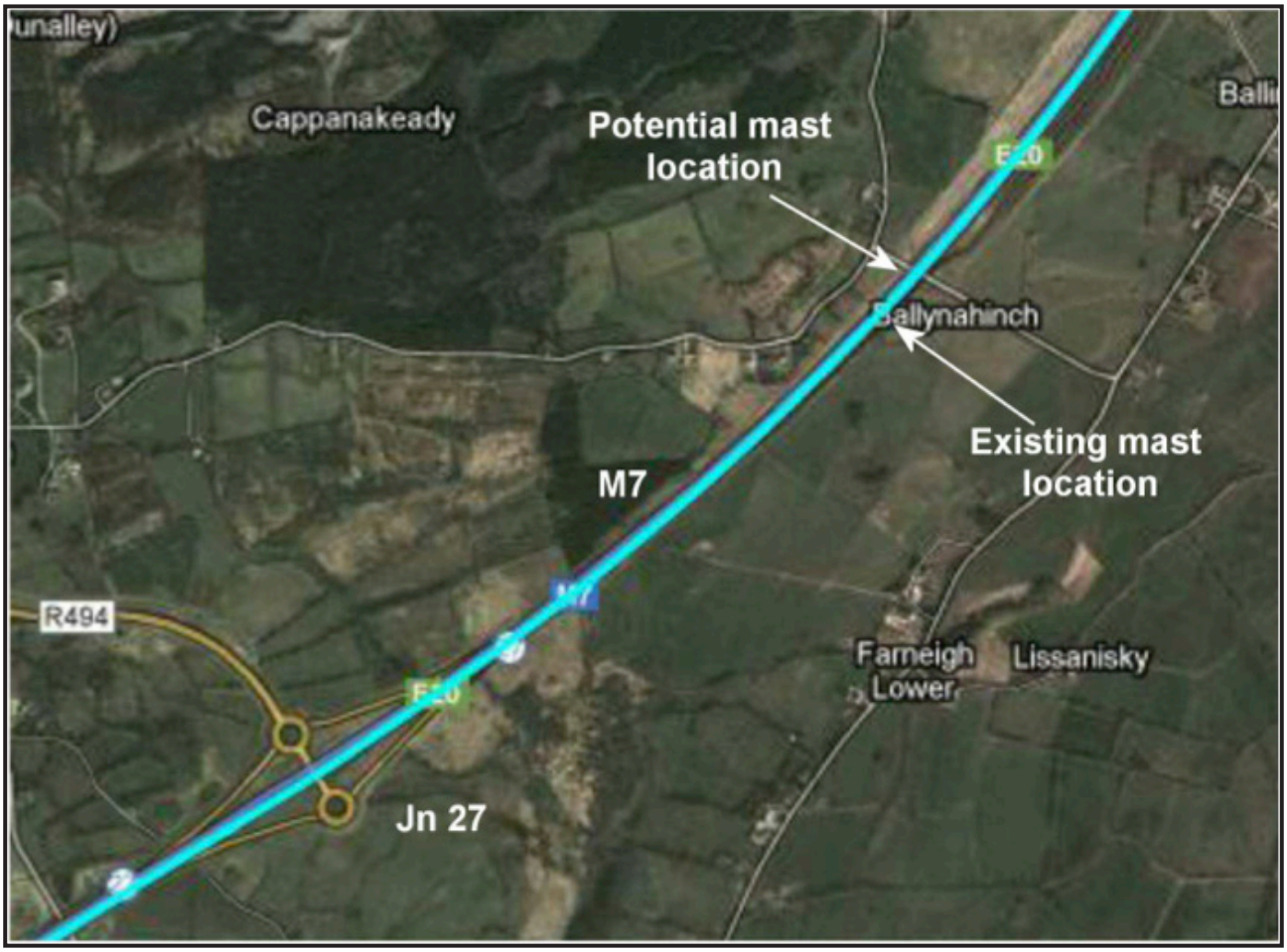
There is land available on both sides of the emergency access track between the R445 (old N7) and the M7. The sites can be accessed from the R445. This is safer than trying to access a site at a motorway junction. Traffic management would not be required for maintenance visits. Trees have been planted on both potential sites, but there is still enough land to locate a mast and associated infrastructure.

Looking along the R445 towards the M7 overbridge

9 Layby on westbound carriageway

There is no additional land adjacent to the layby on the westbound carriageway. In any case, the location would be unsuitable for a mast, as it is in a cutting.

10 **Adjacent to Ballynahinch overbridge.**



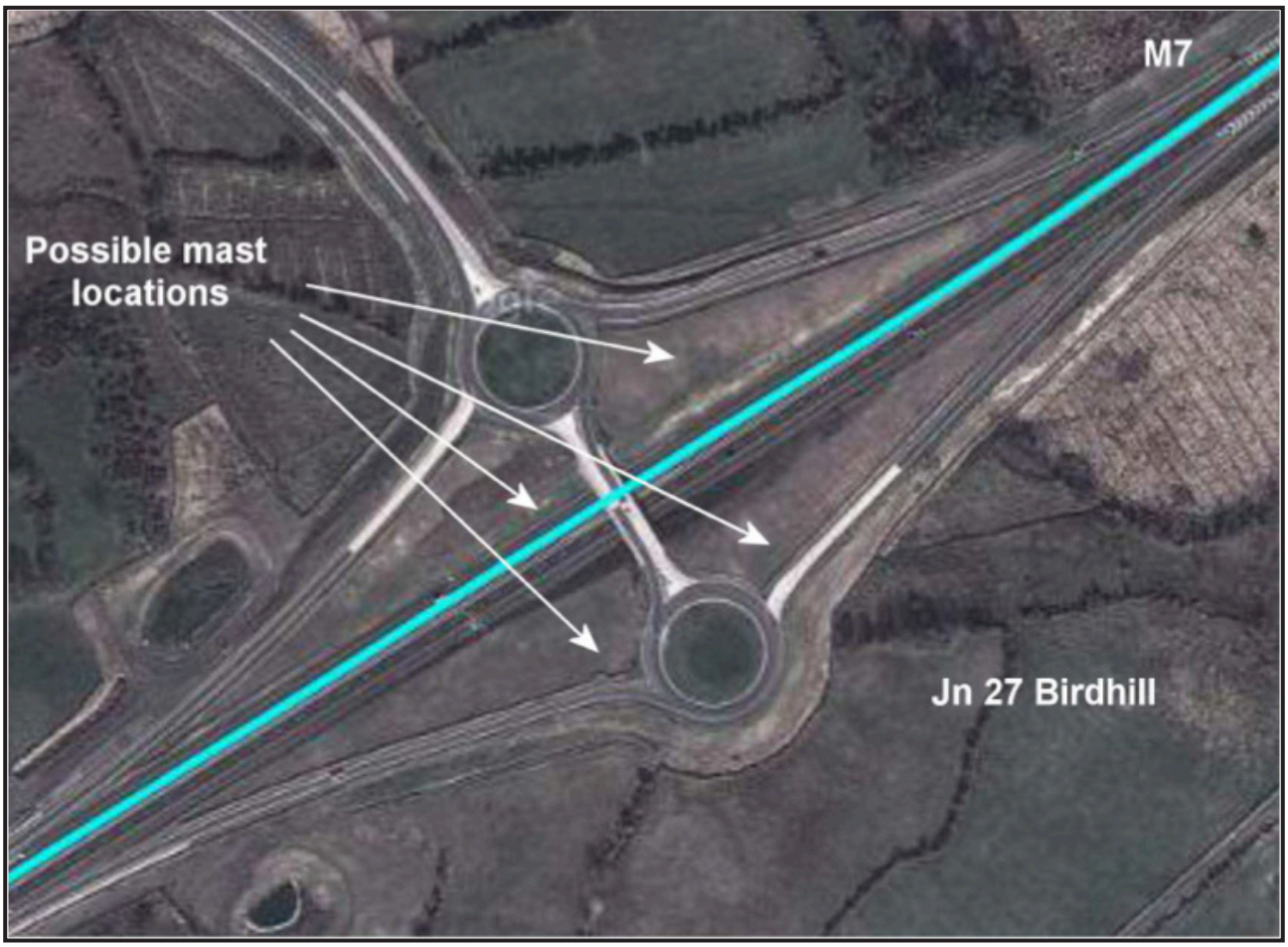
This potential site is accessed from the local road over the M7, and the site is therefore one of the safer locations. It is in a good high location. It may be possible for vehicles to pull into the site, behind the existing safety barrier, for maintenance purposes. This would reduce or negate the need for traffic management during maintenance visits. There is an existing mast on private land on the opposite side of the motorway.

Overbridge at Ballynahinch from M7 westbound. The potential site is on the right hand side of the motorway and the existing mast is visible on the left hand side.

Existing mast from overbridge at Ballynahinch.

Potential site from overbridge at Ballynahinch.

11 Jn 27, Birdhill



All four areas between the slip roads and the M7 are potential locations for telecommunications equipment. There are high areas at the top of the slopes. Access may be possible from the roundabouts. It would be necessary to ensure that this could be achieved safely. It may not be possible. Traffic management etc would be required during maintenance visits.

Junction 27, Birdhill from M7 westbound

12 **Overbridge at Cooleen.**

There is a potential site adjacent to the overbridge at Cooleen. Access would be from the local road, and the site is therefore one of the safer locations. Traffic management etc may not be required during maintenance visits.

13 Adjacent to Attenuation Pond west of Overbridge at Cooleen

There is land available adjacent to the attenuation pond beside the eastbound carriageway, west of the overbridge at Cooleen. Access is by an access road from the local road network, and the site is therefore one of the safer locations. A drainage ditch would need to be crossed, and the access track extended, to reach the available land. Traffic management would not be required for maintenance visits.

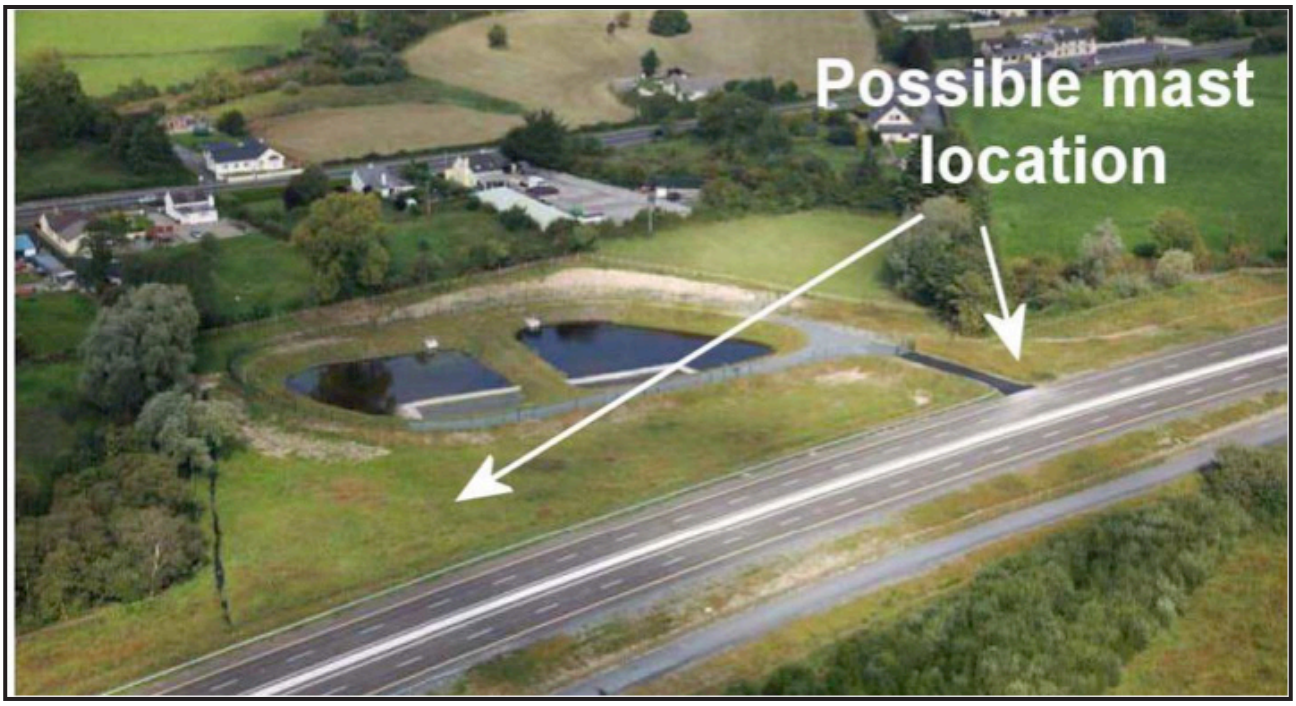
Existing access road and attenuation pond from M7 eastbound.

Potential site adjacent to attenuation pond.

14 **Bog land adjacent to M7 at Annaholty**

There are large areas of land adjacent to the M7 eastbound carriageway. There is an existing access road from the local road network, and the site is therefore one of the safer locations. The levels are similar to those of the motorway. It should be possible to locate infrastructure outside the clear zone. Traffic management would not be required for maintenance visits, but the bog would make construction difficult and is likely to be environmentally sensitive.

15 Adjacent to Attenuation Pond at Ballynacourty

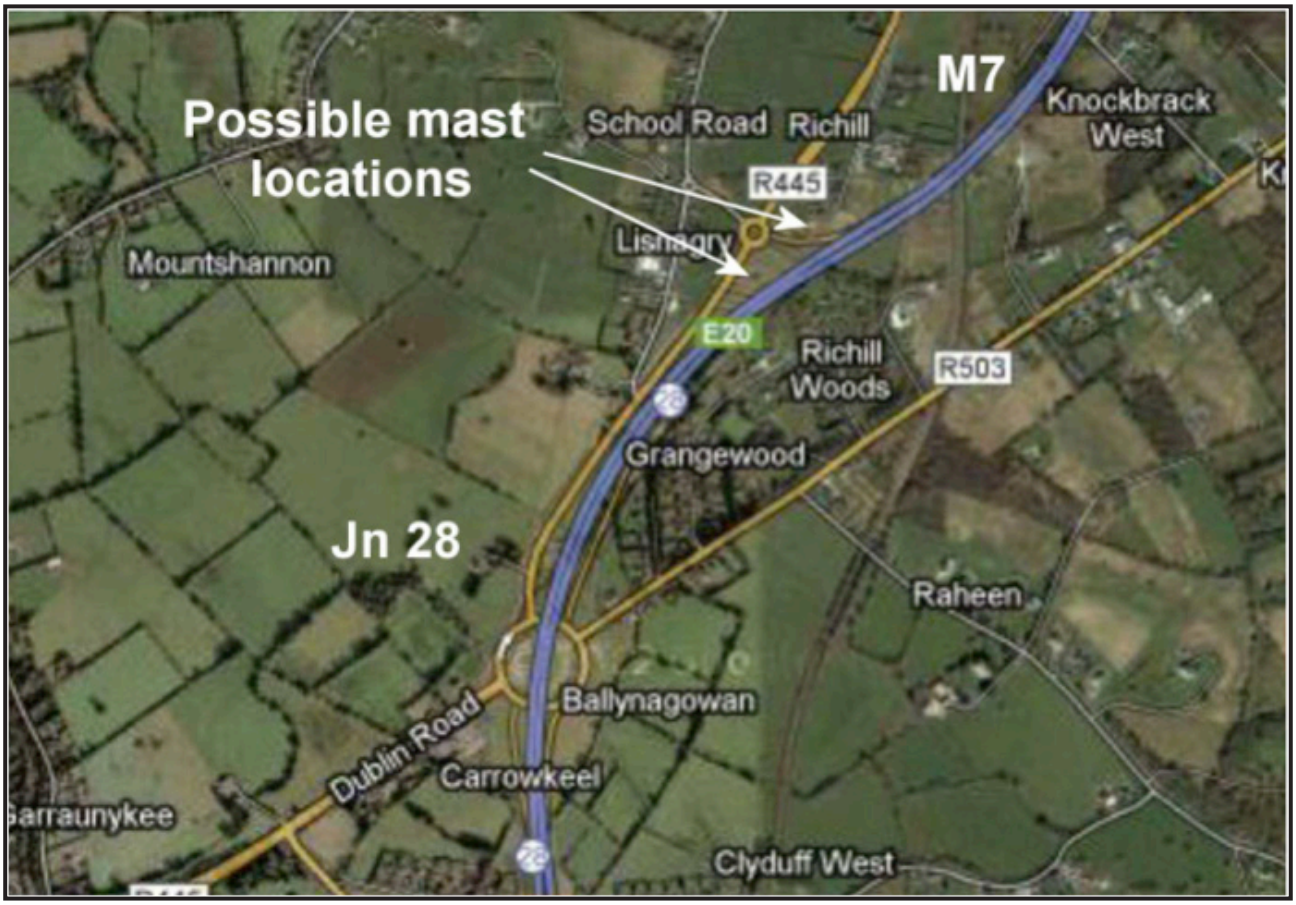


The attenuation pond adjacent to the eastbound carriageway of M7 at Ballynacourty is accessed directly from the M7. There is land available on both sides of the track to the pond. The potential sites are at a similar level to the motorway. It should be possible to locate infrastructure outside the clear zone.

It is probable that traffic management etc would be required during maintenance visits.

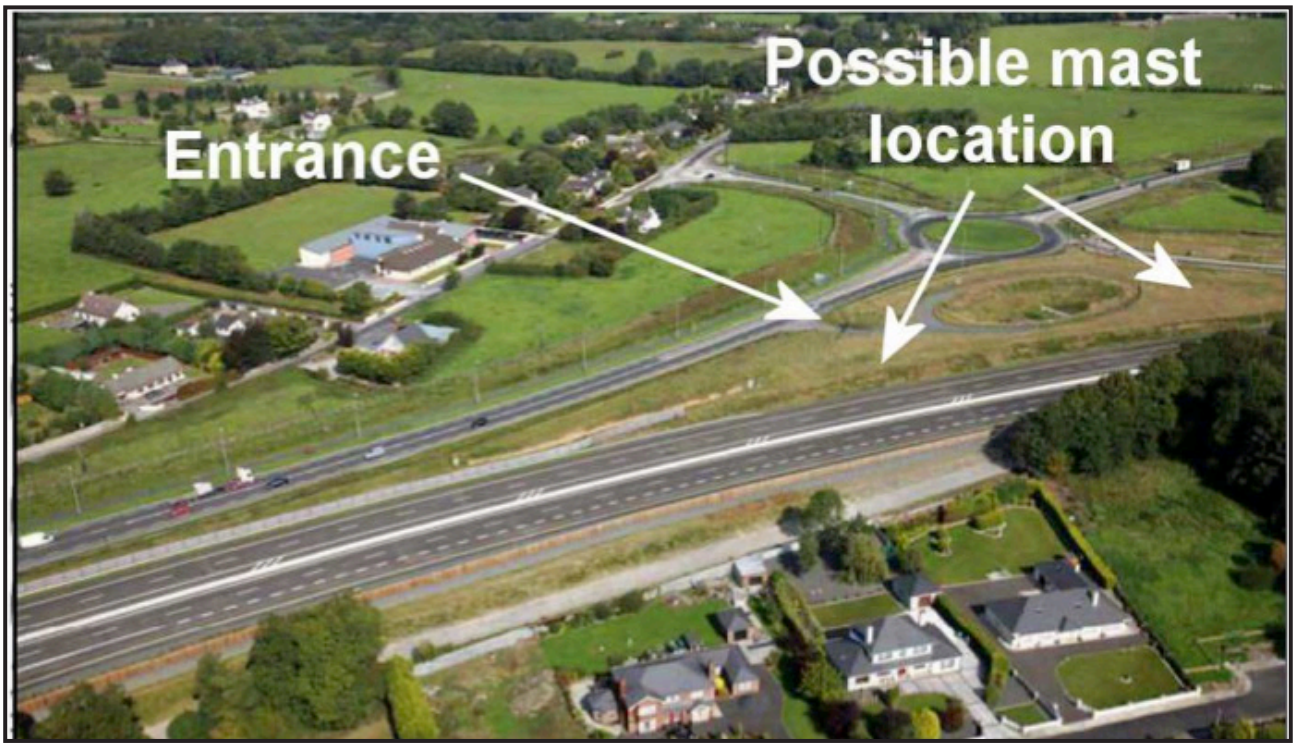
Entrance to attenuation pond from M7 eastbound carriageway.

16 **Junction 28, Annacotty**



There are two potential sites at the Castleconnell Roundabout at Jn 28, Annacotty:

- Adjacent to the attenuation pond between the Castleconnell Link Road and the M7: The entrance to the attenuation pond is off the Castleconnell Link, which is safer than access from a motorway junction. Trees have been planted in the land surrounding the pond, but there is still space for a mast and associated infrastructure. Traffic management would not be required for maintenance purposes.



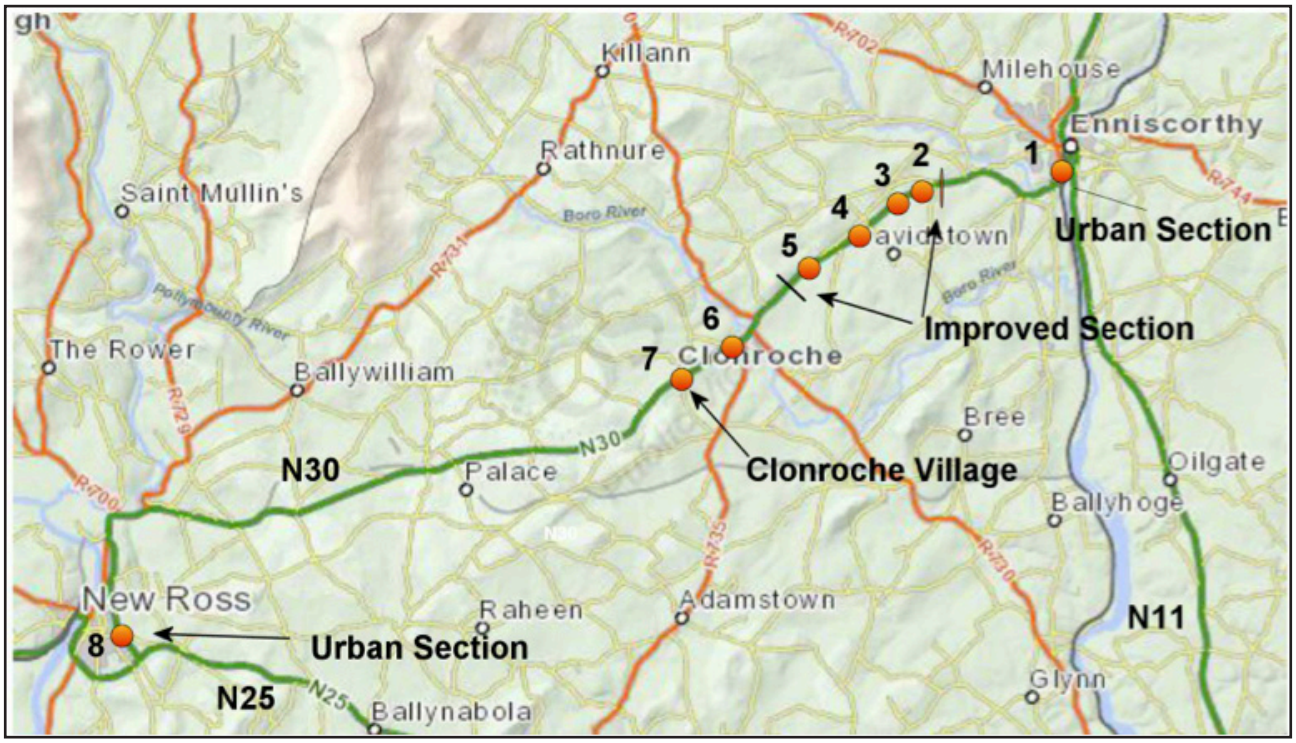
- At the back of the verge adjacent to the eastbound on-slip: There is a large area of land here, but much of it could not be used, as telecommunications infrastructure would block forward visibility for drivers accessing the motorway here. Also, access would need to be from the slip road, and it would be necessary to ensure that this could be achieved safely. It should be possible to locate infrastructure outside the clear zone. Traffic management etc. would be required during maintenance visits.

Verge adjacent to eastbound on-slip at Jn 28, Annacotty.

Appendix H

N30 Enniscorthy to New Ross, national road, single carriageway

Assessment of Potential Opportunities to Accommodate Overground Telecommunications Equipment on the N30 Enniscorthy to New Ross



The N30 runs between Enniscorthy and New Ross, in County Wexford, and is approximately 33km long. The majority of the route is non-improved, rural, single carriageway. There are no locations suitable for the installation of a telecommunications mast, and associated infrastructure, along the unimproved, rural, sections of N30.

Typical non-improved rural section of N30

Between Jamestown and Moneytucker, a distance of approximately 4km, an improvement scheme was carried out during 2005 and 2006. This section is now standard single carriageway with hard shoulders, and four of the five possible rural locations for accommodating telecommunications masts are along this improved section (Nos 2 to 5 in the map above). Note: all comments relating to suitable sites are based on a site visit only.

A bend improvement was carried out east of Clonroche many years ago. No 6 in the map above is at this location.

Improved rural section of N30 between Jamestown and Moneytucker.

Urban Sections:

There are urban sections of N30 in Enniscorthy (No 1 on the map above) and in New Ross (No 8). The village of Clonroche (No 7) is approximately half way along the route.

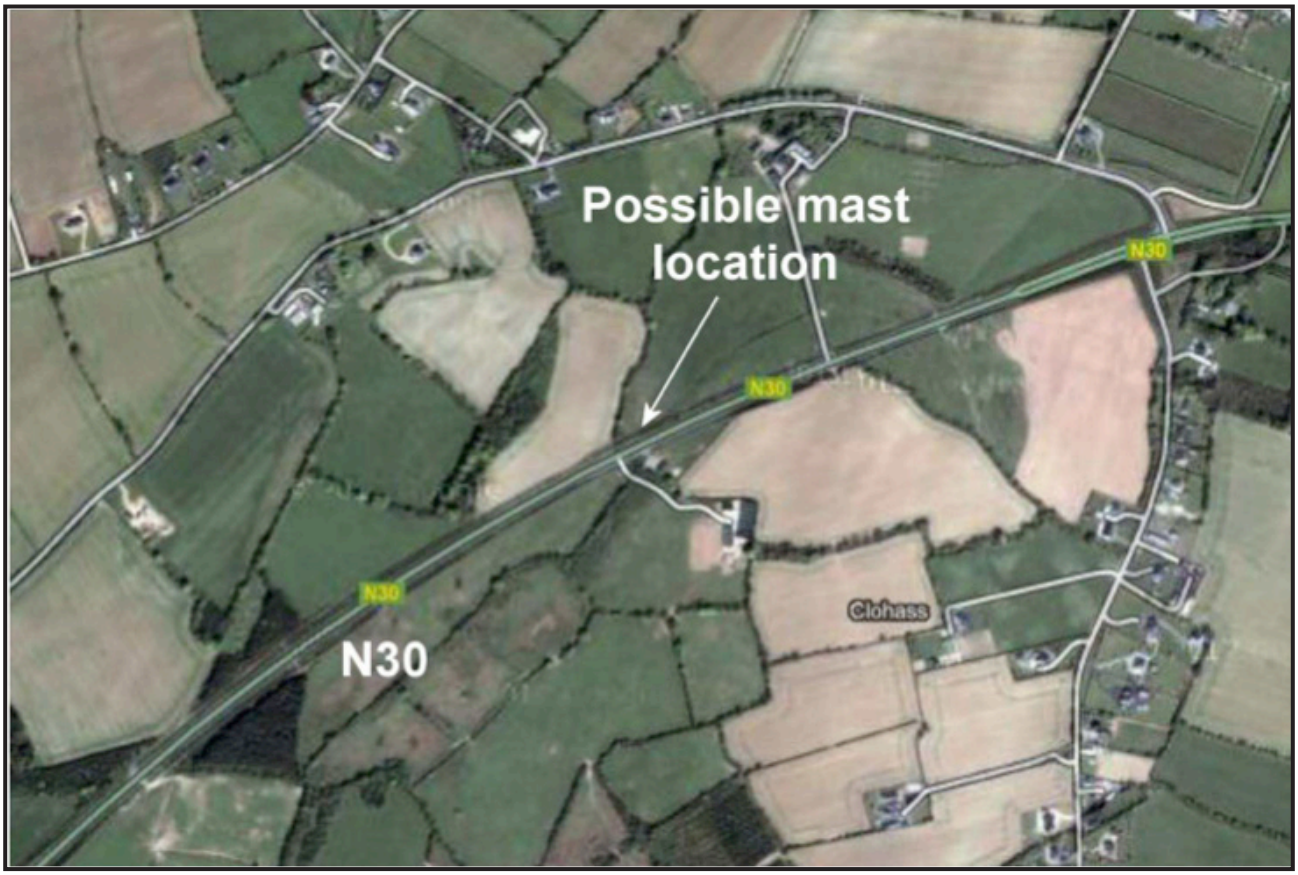
There are very limited opportunities in urban sections to cater for large, stand-alone masts. However, smaller individual poles may be accommodated for the mounting of telecommunications equipment. Stand-alone poles are the preferred option in urban areas, as there are ongoing operational and maintenance issues relating to accommodating electronic equipment in lighting columns. There is space available in some locations to accommodate the associated infrastructure, cabinets etc.

1 **Urban Section in Enniscorthy:**

The built-up urban section in Enniscorthy is approximately 0.5km long. See typical cross section in Enniscorthy above. There is no room for telecommunications infrastructure along this section, except possibly on lighting columns. Suitable locations for placing cabinets, without obstructing footpaths, are difficult to find. When selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment.

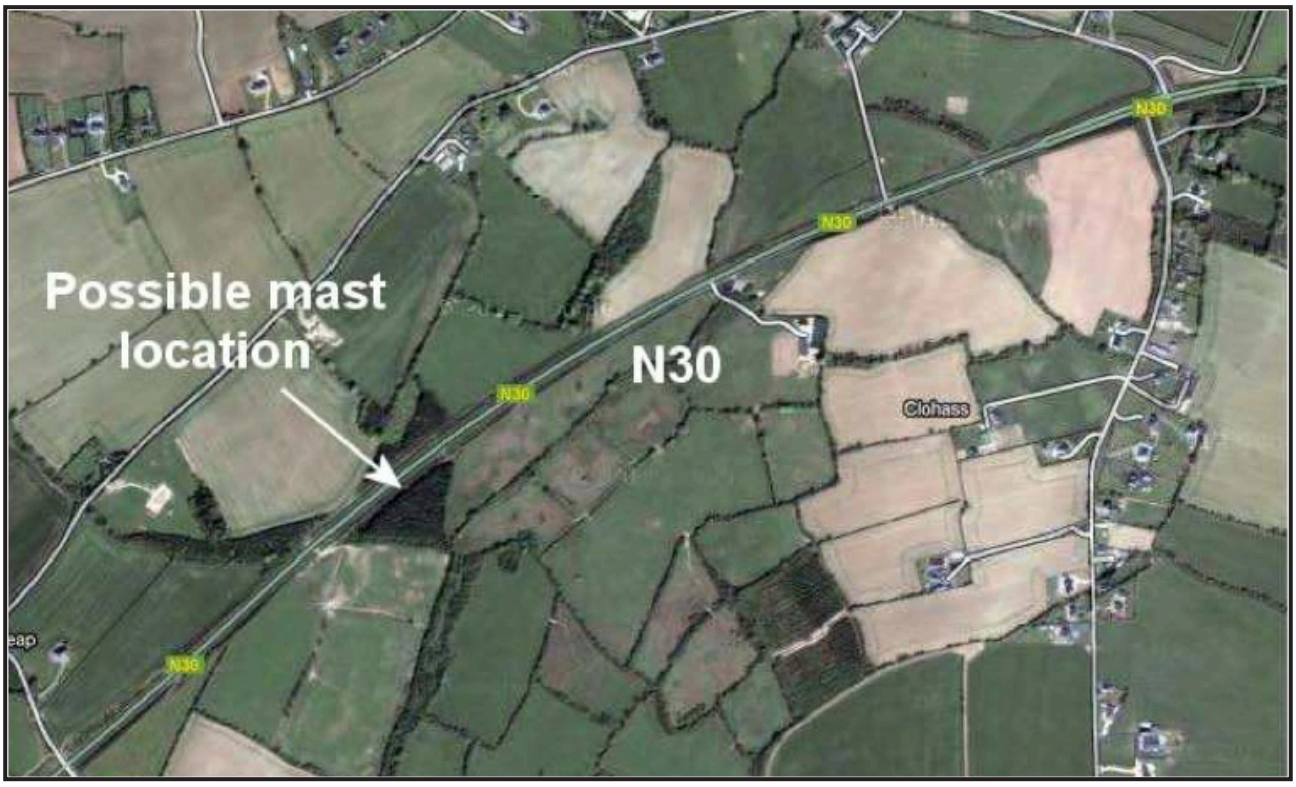
The N30 becomes less built up on leaving the centre of Enniscorthy. The footpaths are slightly wider, allowing for the positioning of a cabinet, against the wall, adjacent to the pedestrian traffic lights. The lighting is on ESB supply poles, and therefore the local authority cannot give permission for them to be used to accommodate telecommunications equipment without ESB approval. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

2 **Wide verge on north side of N30 approximately 0.6km west of the junction at the Jamestown (east) end of the improvement scheme.**



An elevated site would be the preference. At this location, the levels are similar to the level of the carriageway. There is a drainage ditch at the back of the verge, so the available space is less than initially appears. It would be necessary to ensure that infrastructure could be located outside the clear zone. Access would be directly from N30. Traffic management etc. would be required whenever maintenance visits were carried out.

3 **Wide verge on south side of N30 approximately 1.2km west of the junction at the Jamestown (east) end of the improvement scheme.**

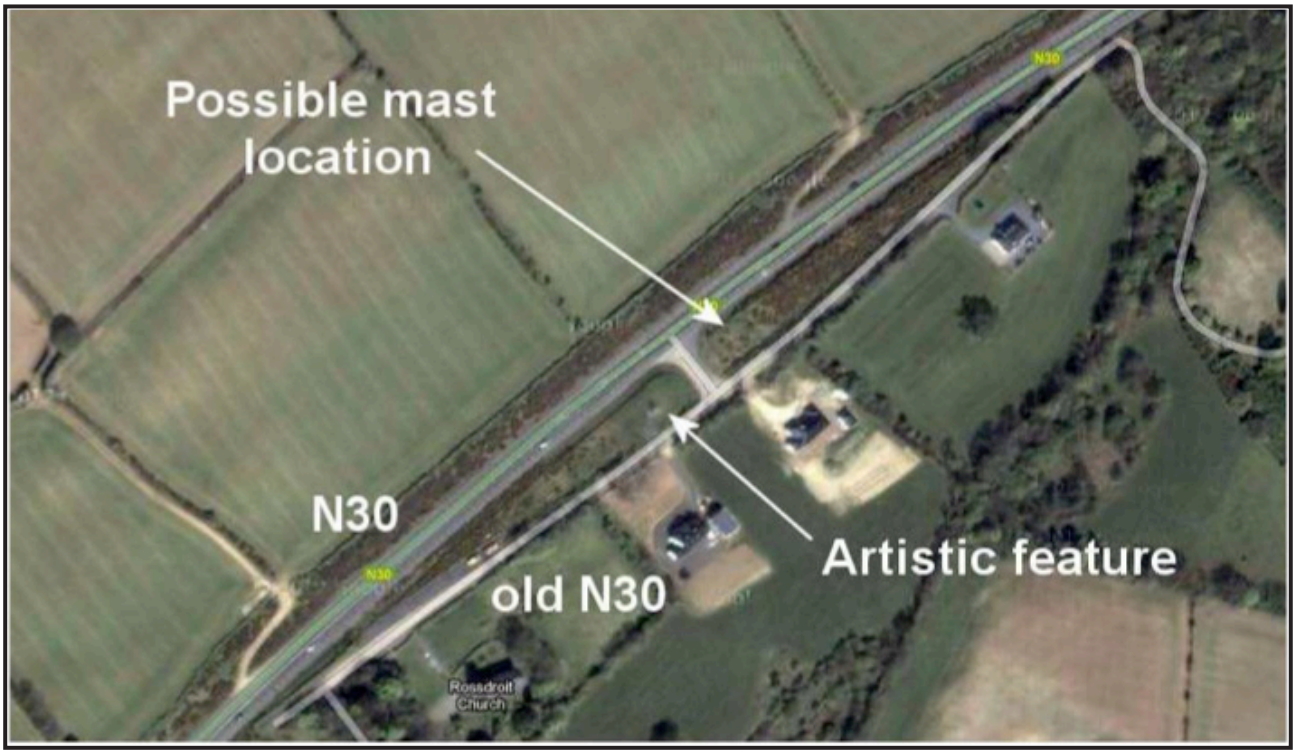


An elevated site would be the preference. At this location, the levels are slightly above those of the carriageway. There is a drainage ditch at the back of the verge, so the available space is less than initially appears. It would be necessary to ensure that infrastructure could be located outside the clear zone. Access would be directly from N30. Traffic management etc. would be required whenever maintenance visits were carried out.

4 **Raised area between old N30 and new N30 at Junction with Davidstown Road**

This area is slightly raised. It could be accessed from the old N30, which is now a cul-de-sac with very little traffic. This would be much safer for those accessing the potential site, and additionally, the level of traffic management required would be less that that required if the site were to be accessed directly from N30. It would be necessary to ensure that infrastructure could be located outside the clear zone.

5 **Raised area between old N30 and new N30 at entrance to Rossdroit church, near the western end of the improvement scheme.**

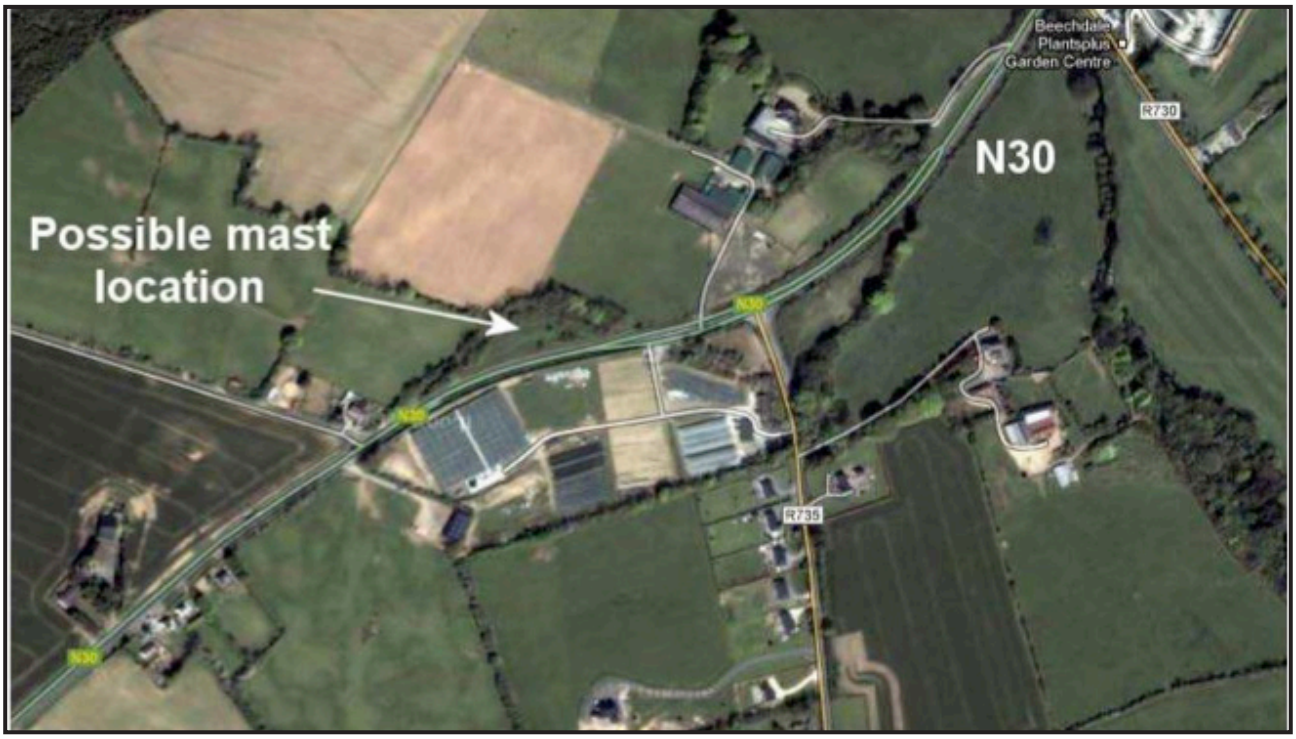


There is an area of raised land between the new N30 and the old N30 at the turn for Rossdroit church, which may have sufficient space to accommodate a telecommunications mast and associated infrastructure. The location could be accessed from the old N30, which is now a cul-de-sac. This would be safer for those accessing the potential site, and additionally, the level of traffic management required would be less that that required if the site were to be accessed directly from N30. The artistic feature for the improvement scheme is on the raised area on the opposite side of the junction.

Artistic feature for the N30 Jamestown to Moneytucker Improvement Scheme

Raised area between new N30 and old N30, taken from beside the artistic feature.

6 Area between old N30 and new N30 opposite fruit farm east of Clonroche



There is land available between the current N30 and the original line of the road, which was improved many years ago. This is not part of the Jamestown to Moneytucker Scheme. It is an older bend improvement. There is a large area of land, at a reasonably elevated level relative to the surrounding countryside, which may be suitable for the installation of a mast. It should be possible to locate infrastructure outside the clear zone. There are mature trees along the line of the old road, so any mast would need to be higher than these. The site would need to be accessed directly from N30, but there is likely to be enough space to locate a mast far enough away from N30 so that full traffic management would not be required during every maintenance visit.

Area of land between N30 and old line of road.

7 **Clonroche Village:**

The existing lighting is on ESB supply poles at this location, and therefore the local authority cannot give permission for them to be used to accommodate telecommunications equipment without ESB approval. If the installation of any equipment were to be considered, it would be necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected, and that footpaths would not be obstructed. Traffic management would be required whenever the site were to be accessed for maintenance etc

There are existing cabinets for pedestrian crossing traffic lights against buildings at back of footpaths on both sides of the road. If the installation of any additional equipment were to be considered, it would be necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

8 **Urban Section in New Ross:**

The green area adjacent to wall would provide opportunities to accommodate telecommunications infrastructure. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

The green area appears to be suitable for location of equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

Similarly, these green areas look suitable for the installation of equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

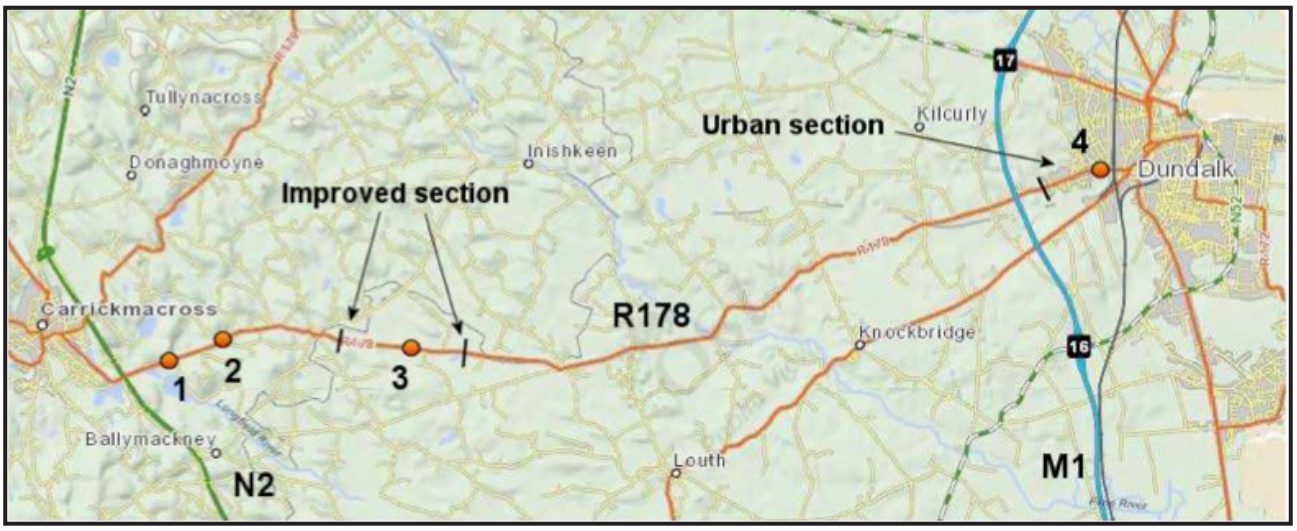
Part of the green area here should be a possible location for the installation of equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

The wide footpath here should provide opportunity to accommodate telecommunications equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

Appendix I

R178 Carrickmacross to Dundalk, regional road, single carriageway

Assessment of Potential Opportunities to Accommodate Overground Telecommunications Equipment on the R178 Carrickmacross to Dundalk



The R178 runs between Carrickmacross, in Co Monaghan, and Dundalk, in County Louth, and is approximately 20km long. The majority of the route is non-improved, rural, single carriageway. Between Essexford and Rosslough, a distance of approximately 2km, an improvement scheme was carried out over the last few years. This section is now standard single carriageway with hard shoulders.

Note: all comments relating to suitable sites are based on a site visit only.

Typical non-improved rural section of R178

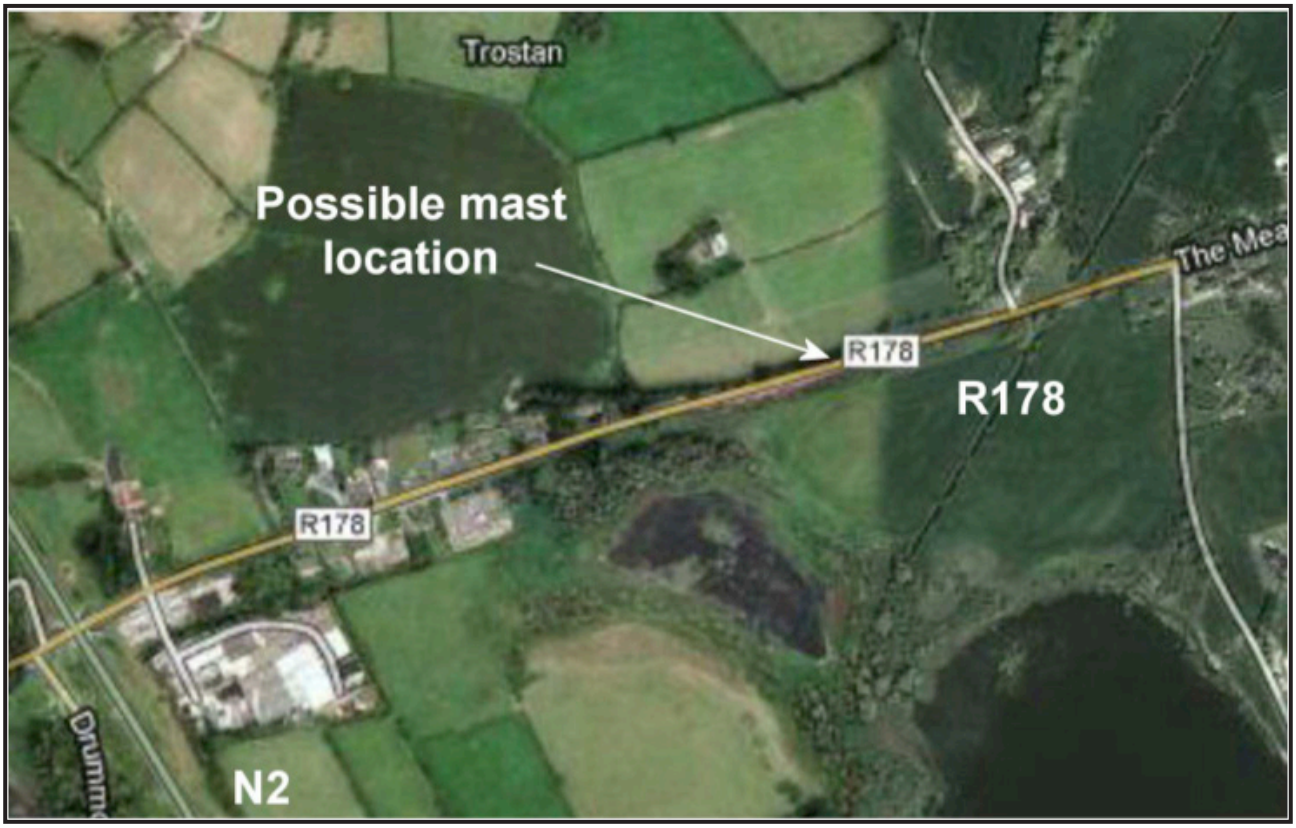
Improved rural section of R178 between Essexford and Rosslough.

Urban Sections:

There is an urban section of R178 in Dundalk.

There are very limited opportunities in urban sections to cater for large, stand-alone masts. However, smaller individual poles may be accommodated for the mounting of telecommunications equipment. Stand-alone poles are the preferred option in urban areas, as there are ongoing operational and maintenance issues relating to accommodating electronic equipment in lighting columns. There is space available in some locations to accommodate the associated infrastructure, cabinets etc.

1 **Wide verge approximately 0.7km east of N2:**



There is a wide verge on the north side of the R178, approximately 0.7km east of the N2, that looks as though it may be suitable to locate telecommunications equipment. However, it is unlikely to be possible to locate infrastructure outside the clear zone.

Wide verge, which appears to be used informally as a layby. Traffic management etc. would be required whenever the site were to be accessed for maintenance etc

2 **At junction with L4640 approximately 2km east of N2:**

There is an area of land on the Dundalk side of the L4640, where it joins the R178, which appears to be available for parking for small vehicles. Some of the land could not be used as it is required for sightlines for drivers exiting the L4640. The remainder of the land may be available for use, if it is possible to locate infrastructure outside the clear zone.

Area currently used as an informal layby. Traffic management would be required whenever the site were to be accessed for maintenance etc

3 **Wide verge along improved section, approximately 5.7km east of the N2.**

The majority of the improved section provides no opportunities for stand alone masts. However, at this location, there is a reasonably level, wide verge on the north side of the R178, which may provide a suitable area of land.

There is an existing safety barrier in front of the site. Access to the verge would need to be from beyond the end of the barrier, a few metres further east. Traffic management etc. would be required whenever the site were to be accessed for maintenance etc

4 Urban area at Dundalk:

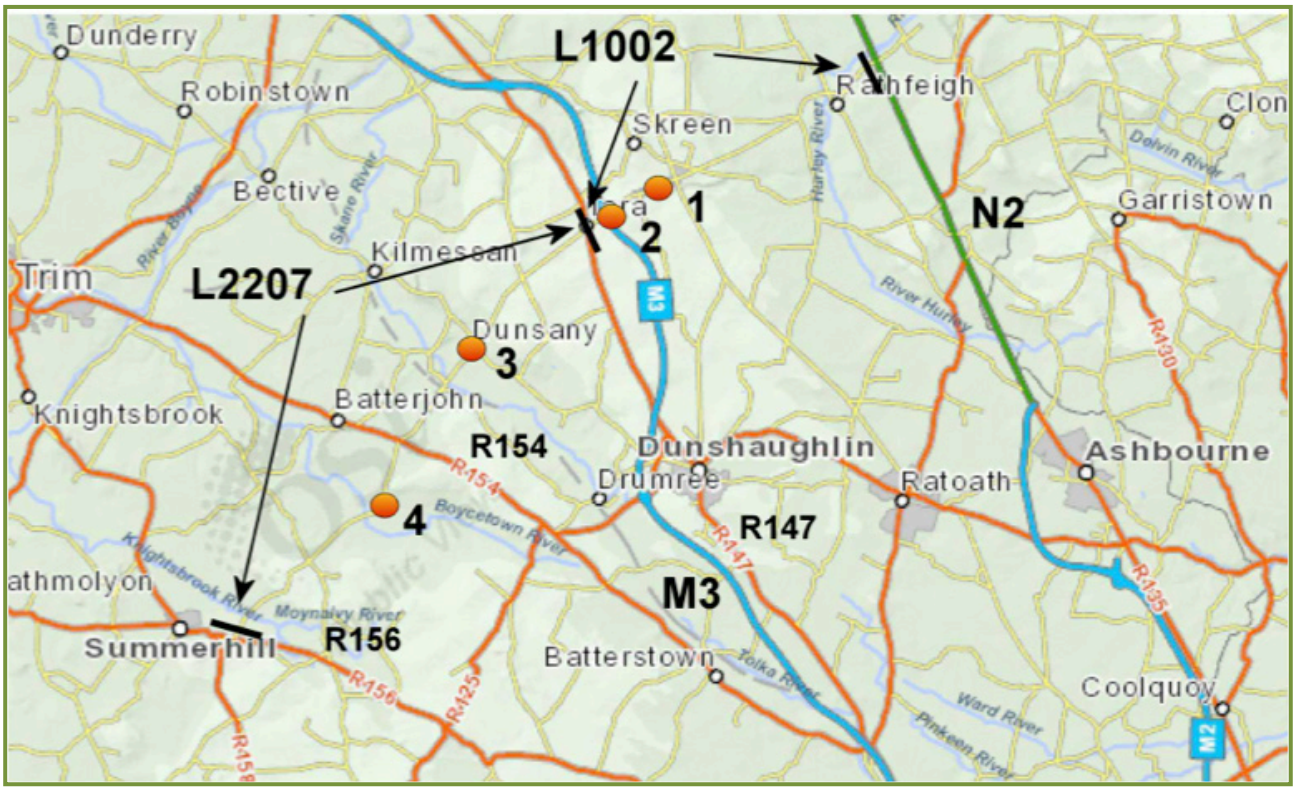
There is an area at the back of the footpath at this location that may be available for use for the installation of telecommunications equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

The lighting is on ESB supply poles, and therefore the local authority cannot give permission for them to be used to accommodate telecommunications equipment without ESB approval. Stand-alone smaller poles are preferred for mounting telecommunications equipment in urban areas. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc.

Appendix J

L1002, L2207 and L14011, strategic and non-strategic local roads

Assessment of Potential Opportunities to Accommodate Overground Telecommunications Equipment on the L1002/L2207 Rathfeigh to Summerhill



The distance between the N2 near Rathfeigh and the R 456 near Summerhill is approximately 22km. The section between the N2 and the R147 (old N3) is the L1002, which is approximately 8km long. The remainder, between the R147 (old N3) and the R156, is the L2207, which is approximately 14km long. They are strategic local roads since they provide a link between the N2 and three regional roads.

The majority of the route is narrow rural single carriageway. There is a short realigned section where the L1002 crosses the M3. There are also rural sections with a reasonably high number of houses adjacent to the road.

There is a school and some housing between the N2 and the M3. The village of Dunsany is on the L2207 between the R147 and the R154.

Note: all comments relating to suitable sites are based on a site visit only.

L1002:

Typical rural section of the L1002

Typical section of the L1002 with houses adjacent to the road

1 **School and houses east of M3:**

Approach to the school from the east side. There are existing lighting columns at the back of the footpath. Potentially, space could be found for a stand-alone pole for telecommunications equipment. Stand-alone poles are the preferred option in built-up areas, as there are ongoing operational and maintenance issues relating to accommodating electronic equipment on lighting columns. If the installation of any equipment were to be considered, it would be necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected, and that footpaths would not be obstructed. Traffic management would be required whenever the site were to be accessed for maintenance etc

Outside the school. The lighting is on ESB supply poles, and therefore the local authority cannot give permission for them to be used to accommodate telecommunications equipment without ESB approval. Stand-alone smaller poles are preferred for mounting telecommunications equipment in built-up areas. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

West of the school. There may be space in the verge to accommodate a small stand-alone pole. It would only be a possibility if it would not adversely affect the sightlines for those exiting the gateways along the L1002.

West of the school. There may be space in the verge to accommodate a small stand-alone pole to accommodate telecommunications equipment. If the installation of any equipment were to be considered, when selecting a suitable location, it is necessary to ensure that sightlines for those exiting side roads and entrances would not be adversely affected by any equipment, and that footpaths would not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc.

2 **Crossing the M3 motorway:**

The L1002 has been realigned for a short distance either side of its crossing over the M3.

Area of land south west of the M3 crossing. On site, this land would appear to be suitable for erection of a telecommunications mast. There is a commitment in the Environmental Impact Statement (EIS) for M3 motorway to provide planting at this location, and the terms of the EIS would need to be reviewed..

Area of land north east of the M3 crossing. Again, on site this land would appear to be suitable for erection of a telecommunications mast. However, again, there is a commitment in the Environmental Impact Statement to provide planting here, so the terms of the EIS would need to be reviewed.

Similar commitments to provide specific environmental mitigation measures occur frequently when considering lands associated with a motorway scheme.

L2207:

Typical rural section of the L2007

3 **Dunsany Village:**

Outside the school in Dunsany Village. There is no space available for accommodating telecommunications equipment at this location. The lighting is on ESB supply poles, and therefore the local authority cannot give permission for them to be used to accommodate telecommunications equipment without ESB approval. There is a very narrow footpath on the left, and the addition of any poles would obstruction pedestrians. There is no footpath on the right, except for an extremely narrow strip directly in front of the school.

East side of the school, outside the post office and GAA grounds. There is a small space at the back of the footpath, but this could only be used if the sightlines are not adversely affected for traffic exiting the post office, the GAA grounds, and other adjacent entrances onto the L2207. The footpath must not be obstructed. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

4 **Small green area approximately 1.7km west of the R154:**

This is on a rural section of the L2207 at the entrance to a farm. It is the only wide area along the L2207. It is possible that the green area is on private land, and would therefore not be available for consideration. If it were found to be public land, and if the installation of any equipment were to be considered, it would be necessary to ensure that the sightlines of those using the road and of those entering and leaving the farm were not adversely affected. Also, it may not be possible to locate infrastructure outside the clear zone. Depending on the location and nature of the equipment, traffic management may be required whenever the site were to be accessed for maintenance etc

Assessment of Potential Opportunities to Accommodate Overground Telecommunications Equipment on the L14011

For completeness, a minor local road, the L14011 in Co Monaghan, was also considered. This is a narrow, rural, single carriageway local road, approximately 2km long. No possibilities for locating telecommunications equipment were found along the road.

Typical section of the L14011

Notes

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Department of Communications Energy and Natural Resources,

29-31 Adelaide Road,
Dublin 2

www.dcenr.gov.ie

Department of Transport Tourism and Sport,

44 Kildare Street,
Dublin 2

www.dttas.ie

County and City Management Association,
Office for Local Authority Management,
Local Government House,

35-39 Ushers Quay,
Dublin 8

www.lgcsb.ie

National Roads Authority,

St Martin's House,
Waterloo Road,
Dublin 4

www.nra.ie