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## Telecommunications Impact Assessment Report

**DEVELOPMENT**  
**Sandford Road LRD**

11 December 2025

Prepared by  
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Director

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## DEFINITIONS

<b>Author:</b>	Independent Site Management Limited (hereinafter referred to as "ISM")
<b>Mitigation Measures:</b>	means the allowances made for the retention of important Telecommunication Channels (hereinafter referred to as "Mitigation Measures")
<b>Planning Authority:</b>	means Dublin City Council (hereinafter referred to as the "Planning Authority")
<b>Radio Frequency:</b>	means a frequency or band of frequencies in the range 104 to 1011 or 1012 Hz, of the electromagnetic spectrum suitable for use in telecommunications.
<b>Microwave Links:</b>	means the transmission of information by electromagnetic waves with wavelengths in the microwave range (1 m - 1 mm) of the electromagnetic spectrum suitable for use in telecommunications.
<b>Report Date:</b>	means the date which the assessment was carried out (hereinafter referred to as "Report Date")
<b>Telecommunication Channels:</b>	means Radio Frequency links & Microwave Transmission links (hereinafter referred to as "Telecommunication Channels")
<b>The Applicant:</b>	means Sandford Living Limited (hereinafter referred to as the "Applicant")
<b>The Development:</b>	means the proposed development situated at Milltown Park, Sandford Road, Dublin 6 (hereinafter referred to as the "Development")



## EXECUTIVE SUMMARY

Independent Site Management ('ISM') has been engaged to provide a telecommunication impact assessment, to assess whether the proposal being made by Sandford Living Limited (the "Applicant") within its submission to Dublin City Council (the 'Planning Authority') impacts any Telecommunication Channels ("Telecommunication Channels")

To provide this assessment, ISM reviewed the Applicant's proposed development (the "Development") in the context of the immediate surrounding registered and documented telecommunication sites.

Pursuant to our review, ISM can conclude based on the findings outlined herein that the proposal being made by the Applicant within its submission to the Planning Authority does not impact on any existing Telecommunication Channels at the time of the assessment.



## ABOUT THE AUTHOR

ISM is a consultancy firm and asset management company that provides telecommunication consultancy and services to developers and property owners.

ISM works closely with all providers of wireless and fixed line telecommunication services to bridge their infrastructure requirements with that of private and public development. ISM has successfully been providing this service in Ireland for 20 years.

ISM is a multidiscipline firm proficient in the 6 main areas in the delivery of telecommunication services:

- (1) Telecommunication Asset Management Cellular and Fixed Line Fibre Optic.
- (2) Telecommunication Contract and Licensing.
- (3) Radio Frequency technology.
- (4) Microwave Transmission technology.
- (5) In-building distributed antenna systems.
- (6) Fixed Line fibre optic & copper technologies.

ISM has had an integral part in procuring, designing, building and subsequently managing over 300 mobile base station and/or fixed wireless sites, the vast majority of which originated in densely populated, urban environments.

ISM has designed, built and operates 10 in-building distributed antenna systems, and 2 large managed fibre optic networks.



## DEVELOPMENT DESCRIPTION

Sandford Living Limited intend to apply for permission for a Large-Scale Residential Development at a c. 4.26 hectare site at Milltown Park, Sandford Road, Dublin 6, D06 V9K7. Works are also proposed on Milltown Road and Sandford Road to facilitate access to the development including improvements to pedestrian facilities on an area of c. 0.16 hectares. The development's surface water drainage network shall discharge from the site via a proposed 300mm diameter pipe along Milltown Road through the junction of Milltown Road / Sandford Road prior to outfalling to the existing drainage network on Eglinton Road (approximately 200 metres from the Sandford Road/ Eglinton Road junction), with these works incorporating an area of c. 0.32 hectares. The development site area, road works and drainage works areas will provide a total application site area of c. 4.74 hectares.

The development will principally consist of: the demolition of c. 4,847.5 sq m of existing structures on site including Milltown Park House (880 sq m), Milltown Park House Rear Extension (2,031 sq m), the Finlay Wing (622 sq m), the Archive (1,240 sq m) and the Link Building between Tabor House and Milltown Park House Rear Extension to the front of the Chapel (74.5 sq m); the refurbishment and reuse of Tabor House (1,575 sq m) and the Chapel (768 sq m) and the provision of a single storey glass entrance lobby to the front and side of the Chapel (52 sq m); and the provision of 562 No. residential units comprising 6 No. three-bed courtyard houses and 556 No. apartment units (70 No. studios, 176 No. one-bed units, 267 No. two-bed units and 43 No. three-bed units).

Block A1 will range in height from 5 No. storeys to 8 No. storeys and will comprise 81 No. apartment units; Block A2 will range in height from 6 No. storeys to 8 No. storeys and will comprise 139 No. apartment units; Block B will range in height from 3 No. to 7 No. storeys and will comprise 74 No. apartment units; Block C will range in height from 4 No. storeys to 7 No. storeys and will comprise 151 No. apartment units; Block D will range in height from 3 No. storeys to 5 No. storeys and will comprise 30 No. apartment units; Block E will be 2 No. storeys in height and will comprise 6 No. courtyard type houses; and Block F will range in height from 5 No. storeys to 7 No. storeys and will comprise 81 No. apartment units.



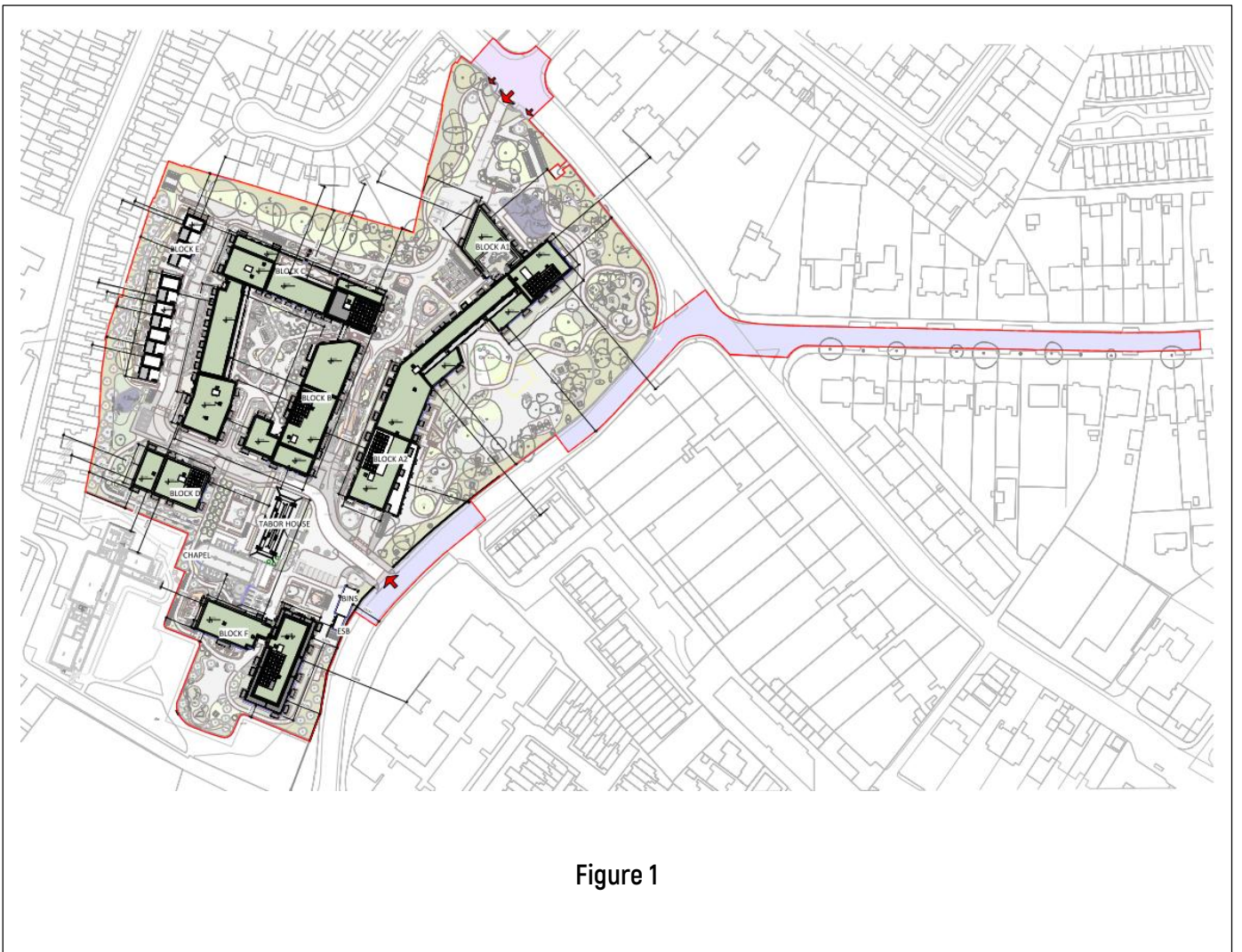
The development also includes the provision of: cultural/community space within Tabor House (4 No. storeys including lower ground floor level) and the Chapel (2 No. storeys including lower ground floor level and mezzanine level) (1,698 sq m) with associated outdoor space (248 sq m); a café/restaurant (179 sq m) and a creche (375 sq m) within Block F with associated outdoor creche play area; ancillary residents' amenities and facilities (324 sq m) within Blocks B & C; and a single storey bin store and substation adjacent to Block F (101 sq m).

The development also provides a new access from Milltown Road (which will be the principal vehicular entrance to the site) in addition to utilising and upgrading the existing access from Sandford Road as a secondary access principally for deliveries, emergencies and taxis; new pedestrian access points; pedestrian/bicycle connections through the site; 319 No. car parking spaces (288 No. at basement level and 31 No. at surface level); set down area for deliveries; bicycle parking; 22 No. motorcycle spaces; bin storage; boundary treatments; private balconies and terraces facing all directions; hard and soft landscaping including public open space and communal open space; green/blue roofs; PV panels; substations; lighting; plant; lift cores and overruns; and all other associated site works above and below ground.

The proposed development has a gross floor space of c.50,196 sq m above ground level over a partial basement (under part of Blocks A1 and A2 and under Blocks B and C) measuring c. 10,550 sq m, which includes parking spaces, bin storage, bike storage and plant.



# SITE LOCATION/LAYOUT MAP



## TELECOMMUNICATION CHANNELS

This report assessed the two wireless Telecommunication Channels or networks of Telecommunication Channels that may be affected by the height and scale of a new development, Radio Frequency links & Microwave Transmission links.

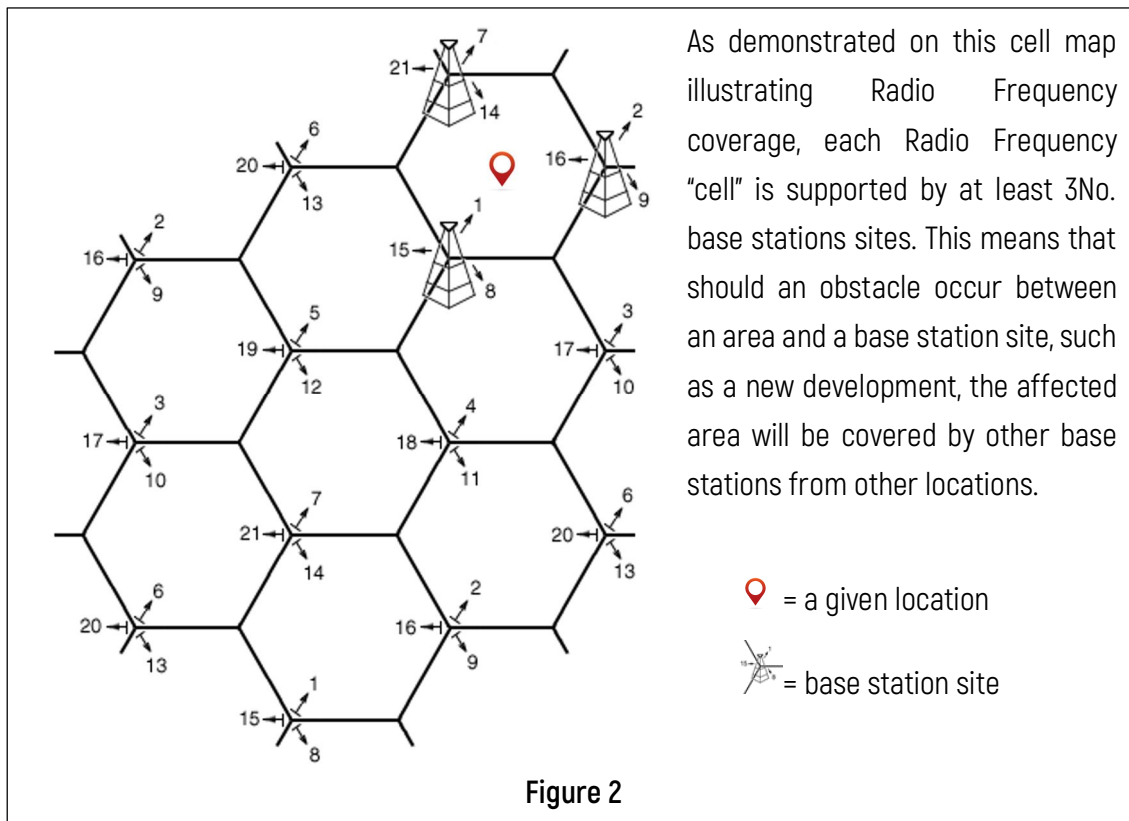
Radio Frequency links & Microwave Transmission Links are used in Ireland's mobile phone and fixed wireless networks and disseminate at an average above ground level height of 20m, making them the most relevant Telecommunication Channels to be assessed in relation to the height and scale of a new development and to that end what allowance the Applicant needs to make for their retention.

Mobile phones send and receive signals via links from nearby antenna sites or cellular towers, technically known as base stations, using Radio Frequency waves. Microwave Transmission links use microwave dishes to "transmit" from these base stations to other base stations forming a network. Radio Frequency waves operate at a lower power within lower frequencies of the radio spectrum, whereas Microwave Transmission operates at higher power within higher frequencies of the radio spectrum.

Radio Frequency waves are distributed over land areas in "cells", each served by at least one fixed-location transceiver (base station), but more normally by three cell sites or base stations. These base stations provide the cell with the network coverage, which can then be used for voice, data, and other types of content. A cell typically uses a different set of frequencies from neighbouring cells to avoid interference and provide guaranteed service quality within each cell.

When joined together, these cells provide Radio Frequency coverage over a wide geographic area (Cellular network). This enables numerous portable transceivers (e.g., mobile phones, tablets and laptops equipped with mobile broadband modems, pagers, etc.) to communicate with each other and with fixed transceivers and telephones anywhere in the network, via base stations, even if some of the transceivers are moving through more than one cell during transmission.

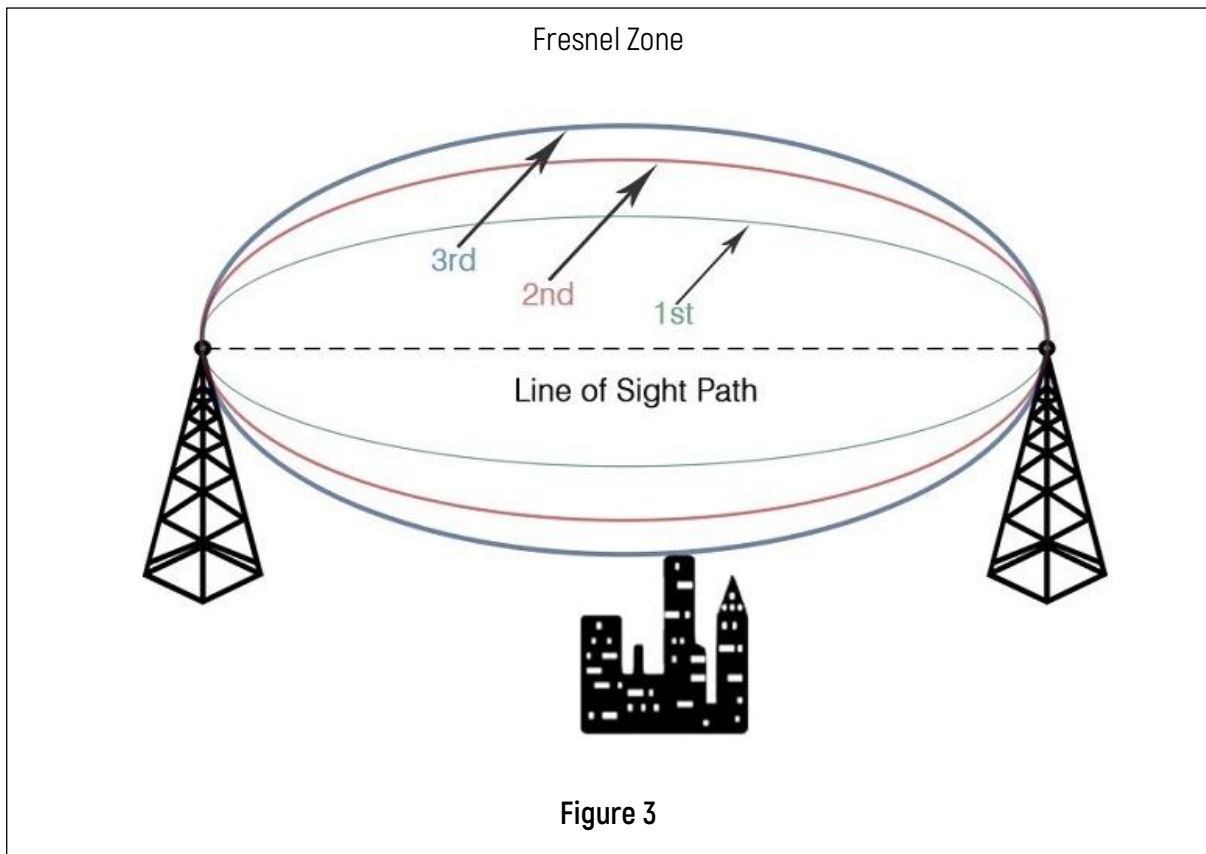




Cellular networks offer a number of desirable features, but most notably, additional cell towers can be added indefinitely and are not limited by the horizon, therefore it can be considered **indeterminable** as to whether a new development affects the Radio Frequency coverage of a geographical area which is being served by multiple base stations, not necessarily the closest.

Conversely, Microwave Transmission links are point-to-point links, which are easily determined to be affected, or not, by the height and scale of a new development. In point-to-point wireless communications, it is important for the line of sight between two base stations to be free from any obstruction (terrain, vegetation, buildings, wind farms and a host of other obstructions). As any interference or obstruction in the line of sight can result in a loss of signal.

While installing Microwave links, it is important to keep an elliptical region between the transmitting Microwave link and the receiving Microwave link free from any obstruction for the proper functioning of the system. This 3D elliptical region between the transmit antenna and the receive antenna is called the **Fresnel Zone**. The size of the ellipse is determined by the frequency of operation and the distance between the two sites.



Essentially, if there is an obstacle in the Fresnel zone, part of the radio signal will be diffracted or bent away from the straight-line path. The practical effect is that on a point-to-point Microwave link, referred to herein, the refraction will reduce the amount of energy reaching the receiving microwave dish. The thickness or radius of the Fresnel zone depends on the frequency of the signal – the higher the frequency, the smaller the Fresnel zone. Microwave links are high frequency radio links used for point-to-point transmission.

## FINDINGS

ISM's assessment did not identify any Microwave links that will be blocked which would require the Applicant to make specific allowances for their retention ("Mitigation Measures").

Our assessment has not identified any Radio Frequency links that will be blocked which would require the Applicant to make specific allowances for their retention.

ISM carried out a full assessment of neighbouring registered and documented telecommunication sites to assess what Microwave links would be impacted by the height and scale of the Development. Refer to Figure 4 & 5 of the appendices for full analysis.

ISM carried out a full assessment of neighbouring registered and documented telecommunication sites to assess what Radio Frequency links might be blocked by the height and scale of the Development. To assess this, we carried out a drive test throughout the surrounding areas to ascertain what cells were serving the street areas to the north, south, east & west of the Development site. Refer to Figure 6 of the appendices for full analysis.

Our assessment identified Radio Frequency coverage, for the local geographic area is served by several cells at strategic distances away from the development site on a 360° basis, which is typical cell pattern for urban Radio Frequency coverage. The drive test data determined that the business, residential and public road areas to the north, south, east & west of the Development are covered by the cell sites identified in figure 6 and are not reliant on Radio Frequency coverage from any one cell that would be obstructed by the Development.

Notwithstanding, the Applicant should reserve the right to revisit the requirement to make allowances for Radio Frequency coverage at a future date if the mobile telecommunication companies do not make provision for the increase in population density in the area. The Planning Authority should note that population density is a significant factor in the integrity of an urban Radio Frequency cell.

Please note that telecommunication networks are always evolving, and as such, these findings remain subject to change.



## DISCLAIMER

Due to the confidential nature of planning applications/submissions, ISM does not, as standard practice, contact or involve Ireland's licenced Mobile Network Operators, namely: Vodafone Ireland; Three Ireland; or Eircom Limited t/a Eir Mobile, when preparing this report. If contact is made with a Mobile Network Operator, we duly note the source information.

ISM has wholly relied upon the publicly available information provided by Commission for Communications Regulation, "ComReg", its own extensive record of wireless infrastructure, and the results of a comprehensive visual survey carried out on the Report Date notated herein. Therefore, the specific Mobile Network Operator transmitting the identified telecommunication channel is carried out on a best endeavour basis.

Lastly, please note that telecommunication networks are always evolving, and as such, these findings remain subject to change.



## APPENDICES

Figure 4: Identification of neighbouring registered and document telecommunication sites  
(Area Telecommunication Analysis)

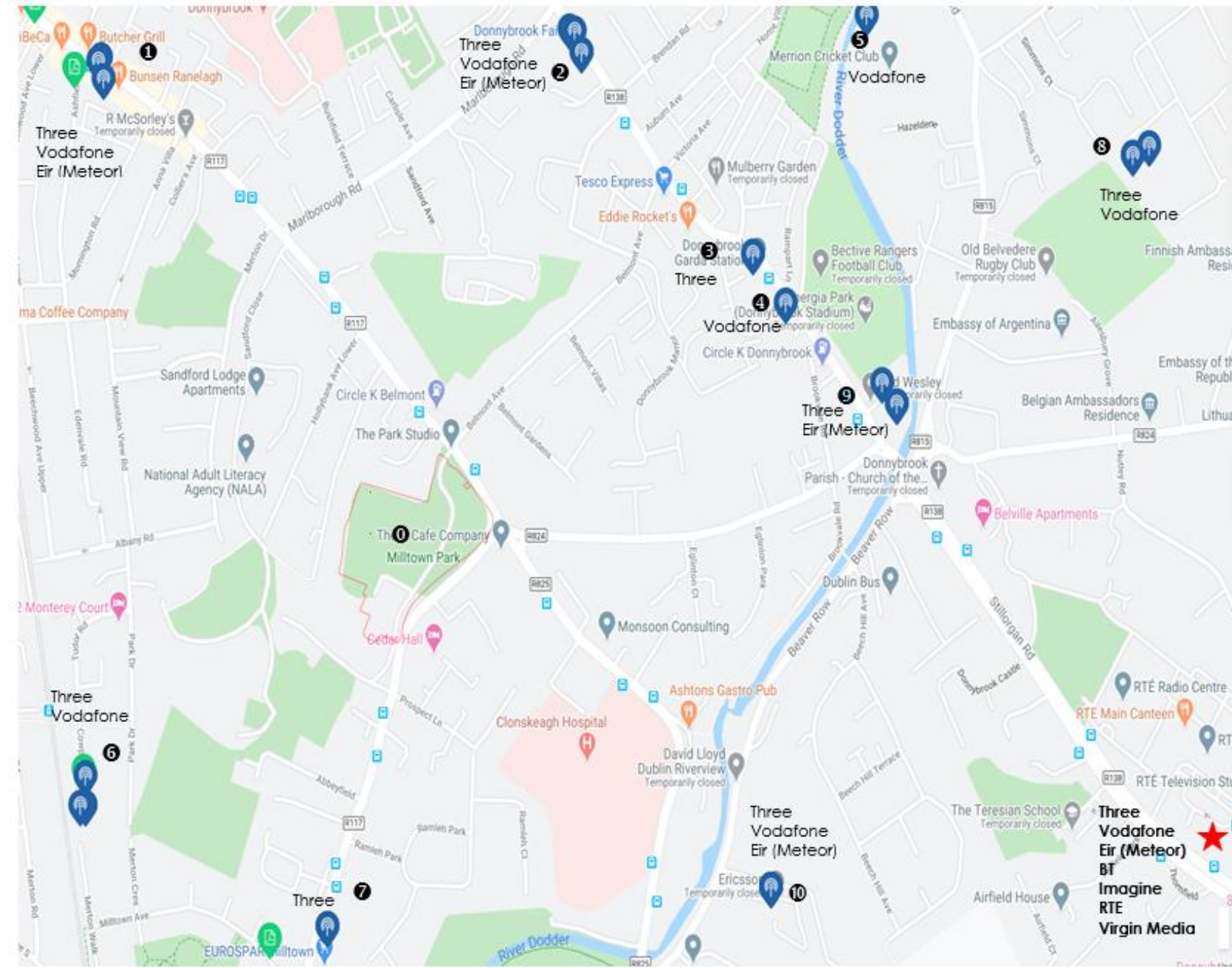
Figure 5: Identification of Microwave links disseminating from neighbouring registered and  
document telecommunication sites (Microwave Link Analysis)

Figure 6: Identification of local area Cells by Cell ID (Cell Identification Analysis)

Figure 4

Area Telecommunication Analysis

Source: Comreg



Note  
 All Dimensions to be checked on site  
 No Dimensions to be scaled from this Drawing  
 This drawing to be read with relevant  
 Consultant Drawings

- ① Proposed Development
- ❶ Cinnamon Ranelagh (ISM)
- ❷ Donnybrook Fair
- ❸ Donnybrook Garda Mast
- ❹ Donnybrook exchange
- ❺ Cricket Club (flood Light)
- ❻ Milltown ESB
- ❼ Milltown EuroSpar
- ❽ RDS
- ❾ Birdcage (Stadium)
- ❿ Ericsson
- ★ RTE

\* ISM Site

FINAL

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Client  
 Sanford Living Limited

Project  
 Sanford Road LRD

Option	1
Report Date	17/11/25
File Name	Sanford Road LRD

Drawing:  
 Area Site Analysis

Building	Drawing No.	Zone	Rev
SPN	K 1725		1

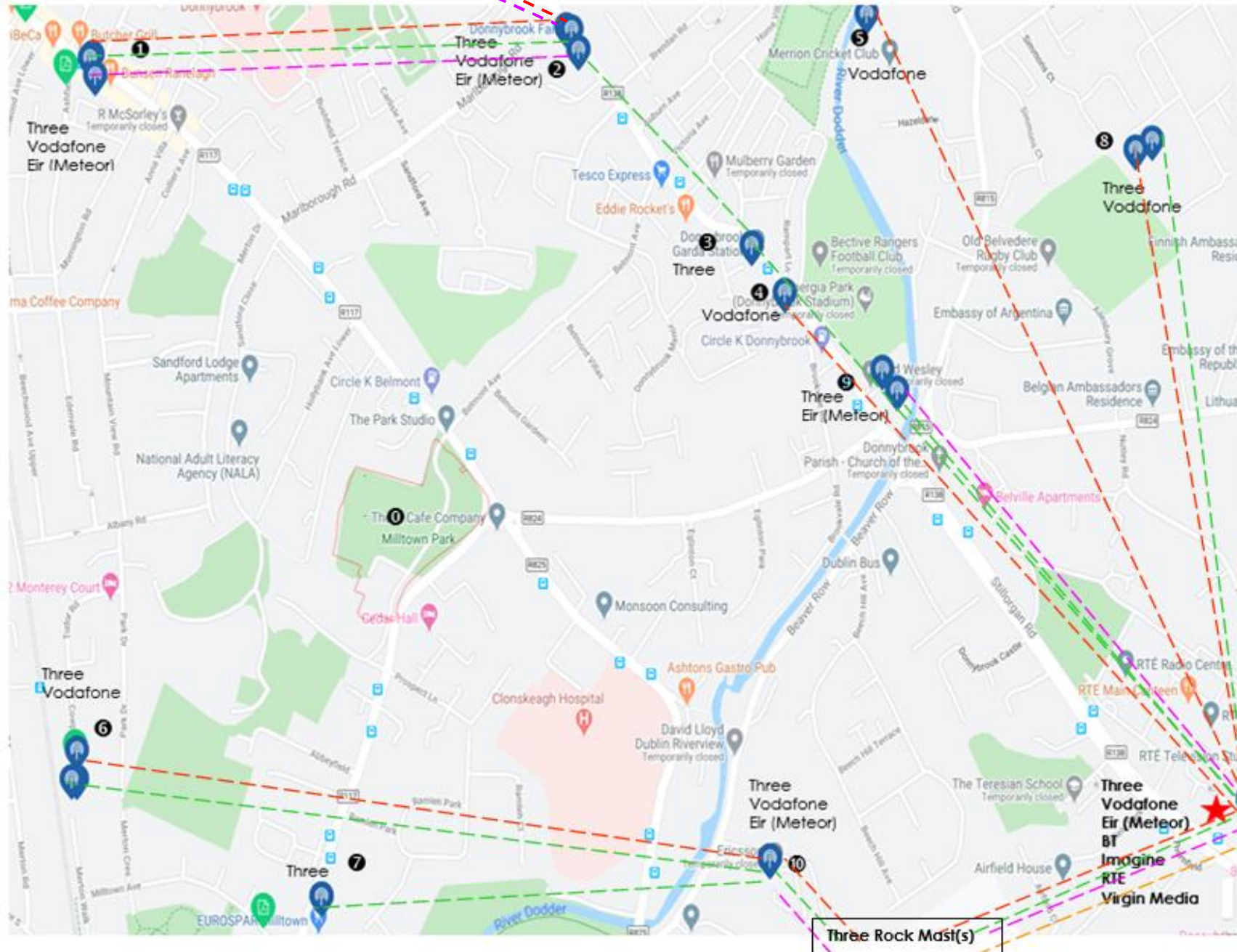
© Independent Site Management Limited

Figure 5

Burlington Hotel

Microwave Link Analysis

Source: Comreg ISM Vodafone Three & Eir Mobile



Note  
 All Dimensions to be checked on site  
 No Dimensions to be scaled from this Drawing  
 This drawing to be read with relevant  
 Consultant Drawings

- Three Transmission Link
- Vodafone Transmission Link
- Eir Transmission Link
- BT Transmission Link


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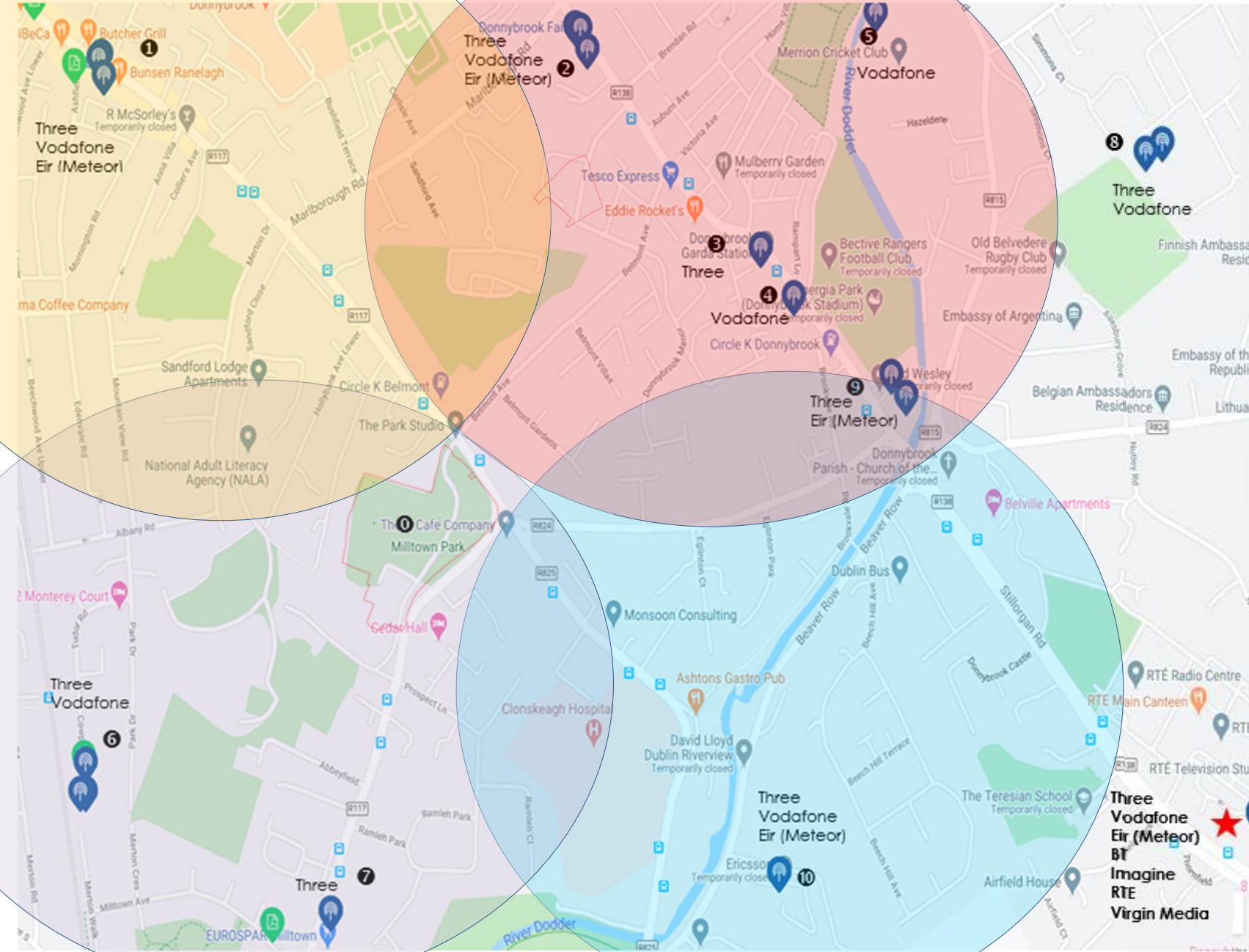
Drawing:  
 Link Analysis

Building	Drawing No.	Zone	Rev
SPN	K 1725		1

Figure 6

Drive Test Data

Source: Comreg, ISM



Note  
 All Dimensions to be checked on site  
 No Dimensions to be scaled from this Drawing  
 This drawing to be read with relevant  
 Consultant Drawings

- Ericsson Cell ID
- Cinnamon Cell ID
- Multiple Cell IDs
  1. Donnybrook Fair
  2. Donnybrook Guard
  3. Stadium
- Milltown ESB Cell ID

**NOTE**  
 The Anite Driveer Air test kit was used to test and record the radio environment. This kit controls and logs the radio environment and the Cell ID the signal is coming from. Measurements were then mapped against the public roadway to provide the results

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Drawing:  
 Cell Identification Analysis

Building	Drawing No.	Zone	Rev
SPN	K 1725		1

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