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The Green Quarter

Proposed Strategic Housing Development

TELECOMMUNICATION SIGNAL INTERFERENCE REPORT

Cartrontroy,
Kilnafaddoge
Lissywollen and
Ardnaglug (townlands),
Athlone
Co. Westmeath

Avenir Homes Limited

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 **Contents**

section		Page
1	Introduction	4
2	Findings and Summary	5
3	Geographical location and greater area map	6
Appendix	None	



1 Introduction

1.1 Document purpose

This report gives information on the assessment of interference to existing telecommunications signals as a result of the new proposed development. High rise buildings or tall structures could potentially interfere, disturb or block an existing telecommunication signal. Officially licenced telecommunications signals operating in the correct designated area or path should not be adversely affected by the new development or if assessed to be effecting an existing signal should try to accommodate the signal provider to allow redirection or similar process.

1.2 Instruction

DKPartnership (DKP) have been commissioned by Avenir Homes Limited to carry out the analysis and report for the proposed development at Cartrontroty, Kilnafaddoge, Lissywollen and Ardnaglug (townlands), Athlone, Co. Westmeath.

1.3 Development description

Avenir Homes Limited. intend to apply to An Bord Pleanála for permission for a strategic housing development at Cartrontroty, Kilnafaddoge, Lissywollen and Ardnaglug (townlands), Athlone, Co. Westmeath. The development will consist of:

The construction of a mixed use residential development of 122 no. residential units with ancillary creche, 46 no. student apartments consisting of 283 bed spaces, and all associated site development works. The proposed development makes provision for 60 no. dwelling houses comprising 38 no. 2-storey 3-bed townhouses, 7 no. 2-storey 4-bed townhouses, 7 no. 3-storey 4-bed townhouses, 6 no. 2 storey 4-bed semi-detached and 2 no. 2 storey 4-bed detached. The proposed development includes 62 no. apartments / duplexes to be provided as follows: Block R1 containing 38 no. apartments (16 no. 1 bed units and 22 no. 2 bed units) in a 3-6 storey building, and Block R2 containing 20 no. duplex units (10 no. 2 bed units and 10 no. 3 bed units) over 4 storeys with 4 no. apartments (4 no. 2 bed units) in one 5th storey feature area. The proposed student accommodation makes provision for 283 no. bed spaces in 3 no. blocks to be provided as follows: Block S1 containing 18 apartments with 117 bed spaces over 5-6 storeys, Block S2 containing 16 apartments with 107 bed spaces over 6-7 storeys, and Block S3 containing 12 apartments with 59 bed spaces over 4-5 storeys.

The proposed development will provide for two new vehicular accesses as well as pedestrian entrances onto Lissywollen Avenue east-west access road (as permitted under An Bord Pleanála Reference ABP-309513-21). Minor modifications to ABP-309513-21 are proposed to cater for these access points, alterations to cycle/pedestrian paths, the removal of a central island to facilitate the south-eastern entrance, and provision of bus stop infrastructure. Ancillary site works include public and communal open spaces, hard and soft landscaping, pedestrian / cycleways, car parking, cycle parking, bin storage, public lighting, solar panels, ESB substation and supporting distribution kiosks, and all other ancillary works above and below ground. The proposal includes pedestrian and cycle linkages onto the Old Rail Trail Greenway to the south and Blackberry Lane (L40061) to the west.

In addition to the above specified works within the red-line boundary, Westmeath County Council are facilitating some offsite works to support the project for which the applicant has confirmed written consent. These include:

Resurfacing Blackberry lane along the western extent of the site. A special development contribution has been agreed with the applicant for such purposes.

Facilitating works to complete connections to the Old Rail Trail Greenway, including

Completion of pedestrian/cycle path between Blocks R1 and S1 to the surfaced area of the greenway to the south, and;

Replacement of existing gated access between the greenway and Blackberry Lane (southwest of the site) with a revised arrangement with dedicated cycle/pedestrian access. Final works to be agreed with Westmeath County Council.



2 Findings and Summary

2.1 Finding existing tv/radio/telecommunication

It is not as easy to establish if there are existing licenced television/radio/telecommunication signals present in the area as the Department of Environment, Climate and Communications and/or ComReg do not provide such information in the interest of home security as it is quoted to us. The only reasonable method currently available is scanning the tallest adjoining buildings for existing aerials and identify an buildings occupied by blue light services.

2.2 Typical frequency ranges

TV signal providers use radio wave (30MHz-3000MHz) signals which are generally transmitted using multi directional aerials and by nature are typically long range (100km-200km) with multiple Fresnel zones and as a result are unlikely to be effected. Blue light services (Gardy, Ambulance, Fire Services and Coast Guard) use micro wave (30MHz-300MHz) signals which are generally transmitted using multi directional aerials and by nature are typically shorter range (10km-20km) with multiple Fresnel zones and also less likely to be effected . Telecommunication providers micro wave links, radar systems, satellite telemetry (300MHz-30GHz) signals generally require line of sight are could therefore be affected by taller structures. These signals also have multiple Fresnel zones but rely of the first Fresnel zone to be at least 60% clear. Long range signals have a very large first Fresnel zone and are unlikely to be affected, short range (1km-2km) point-to-point signals have a small (50m-100m) first Fresnel zone and could be more then 60% effected by a structure resulting in interference, disturbing or loss of signal.

2.3 Our search range

To identify possible interference to point-to-point signals we use a 1.5km diameter or a 3km search range from the location of the proposed development in all directions identifying exiting taller buildings / structures which are most likely used for transmitting/receiving telecommunication signals. See page 6 for search range area.

2.4 Findings

The search for roof / tall structures in the 3km zone around the new proposed development has not revealed any particular telecommunication company mast location with any dish or aerials nor is there any gardai station or other blue light services in this area. The adjacent ESB regional distribution centre does have a mast with a telecommunication dish but this appears to be pointing away from the new proposed development site.

2.5 Assessment and conclusion

Based on the search findings we conclude that there appears to be no telecommunication signals directly crossing the new development site and that it is very unlikely that the new development will interfere, disturb or block any existing licenced telecommunication signal. Any telecommunication signals crossing the site from greater distances beyond the 3km range will not be adversely affected as the signals would outside the first Fresnel zones.

2.6 Possible site benefit

Telecommunication companies often look to improve their networks by applying distribution aerials on taller structures to get a wider / further range. The fact that the student apartment blocks rise to 7 storeys may indeed benefit a telecommunications company in so far it may provide them with a possible aerial location and thus provide a better service for the entire area.



Geographical overview

Site location (yellow centre) and 3 km search range (yellow circle)

