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TELECOMMUNICATIONS IMPACT ASSESSMENT

655nr DWELLING DEVELOPMENT At BOHERBOY SAGGART Co. Dublin

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On Behalf of

Kelland Homes Ltd. Durkin Estates Ltd

Revision	Date of Issue	Reason For Issue	Ву	Chk'd
P.01.04	15 MAR 2022	PLANNING	BON	BON

PROPOSED DEVELOPMENT

Kelland Homes Ltd and Durkan Estates Ireland Ltd are applying to An Bord Pleanála for permission for a strategic housing development at a site at Boherboy, Saggart, County Dublin. To the immediate north of the site is the Carrigmore residential estate, to the west are agricultural lands and a single dwelling, to the east is the Corbally residential estate while to the south is the Boherboy Road. The proposed application represents the development of the entire Boherboy Neighbourhood as identified in the Fortunestown Local Area Plan (2012).

The development will consist of 655 no. dwellings, comprised of 257 no. 2, 3 & 4 bed, 2 & 3 storey detached, semi-detached & terraced houses, 152 no. 1, 2 & 3 bed duplex units in 17 no. 2-3, 3-4 & 4 storey blocks, and 246 no. 1, 2 & 3 bed apartments in 9 no. buildings ranging in height from 2, 2-5, 4-5 & 5 storeys, and a 2 storey crèche (693m²).

Access to the development will by via one no. vehicular access point from the Boherboy Road, along with proposed upgrade works to Boherboy Road to include the provision of a roadside footpath along the front of the site at the Boherboy Road, continuing eastwards to the junction with the N81 Blessington Road (for an overall distance of c.370m). The proposed development also provides for pedestrian and cyclist connectivity to the adjoining Carrigmore Park to the north-east, and vehicular, pedestrian and cyclist connections to adjoining developments at Corbally Heath to the east and Carrigmore Green to the north.

The proposed development provides for (i) all associated site development works above and below ground, including surface water attenuation & an underground foul sewerage pumping station at the northern end of the site, (ii) public open spaces (c. 3Ha), including alongside the Corbally Stream, which will accommodate the provision of pedestrian / cyclist links to Carrigmore Park to the north-east, (iii) communal open spaces (c. 6062m²), (iv) hard and soft landscaping and boundary treatments, (v) undercroft, basement & surface car parking (919 no. spaces including EV parking), (vi) bicycle parking (914 no. bicycle parking spaces), (vii) bin & bicycle storage, (viii) public lighting, and (ix), plant (M&E), utility services & 5 no. ESB sub-stations, all on an overall application site area of 18.3ha. In accordance with the Fortunestown Local Area Plan (2012) an area of approx. 1.42ha within the site is reserved as a future school site.

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1 PURPOSE OF REPORT

Kelland Homes Ltd and Durkan Estates Ireland Ltd. appointed BBSC, January 2020 to study the impact on telecommunications to the development as set out under SI 600/2001.

The development will be over multiple phases.

It shall comprise Apartments, landlord areas, civic amenity, creche as outlined in Proposed Development.

2 TELECOMS

Telecoms cables shall be routed in underground ducting to suit Utility providers. These ducts shall connect to the existing street Underground and or over ground services as required. These shall then run in underground ducts from to each Unit (being a Dwelling, Apartment, Landlord requirement, Commercial unit) as required.

It is expected to provide Fibre/ CAT 6 or CAT 7 to each dwelling from several on street cabinets to each dwelling or unit.

No shared lines to be provided.

Other Phone or Data Lines for Fire Alarms, Lifts etc. shall be provided from the building specific rack to service the Landlords' obligations in regards to same for health, safety and other legal requirements.

The design is vendor neutral and is based on the following drawings;

- EIR drawing attached at end of report
- Virgin Media Drawing attached at end of report

There shall be one system of common ducts installed for all Utility Providers to utilise.

3 PRINCIPLE STANDARDS

Building Regulations

- Technical Guidance Documents as A through M as published and set out in Law, Department of the Environment, relevant edition relates to date of publication and date of building.
- S.I. No. 600/2001 Planning and Development Regulations, 2001
- PAS 2016:2010 Next Generation Access for new build homes- Guide

General Electrical Standards

- IS10101 National Rules for Electrical Installation
- ESB Publication, Housing Schemes: Guidebook for ESB Networks Standards for Electrical Services
- EIR Network Standards
- Siro Network Standards
- Virgin Network Standards

SITE SERVICES CO-ORDINATION DRAWINGS (TYPICAL) 4



Sample of Service Co-ordination in ground

5 MOBILE PHONE TRANSMITTERS COVERAGE

Currently there are at least 66nr. Mobile Phone Transmitters within 5km of development for a population of approx. 17,520 persons as of 2016 Census, this is a coverage of 1 Transmitter per 265 persons.

These are typically located in or on commercial buildings or standalone Masts and require planning permission to mount.



The estimated population of approx. 2.5 to 4.5persons per household, 655 houses will result in approx. range of 1,638 to 2,948persons, this will require up to 12 to 17nr additional mobile phone transmitters to provide 4G or better service, to be located in or at the creche site, block A, Block B or Block C as it is central or at highest points in the proposed development.

These are subject to network load analysis once the development is built by the Mobile Phone Network providers.

Any future sites will be subject to standalone planning permissions.

6 ASSESSMENT

Assessment is based on Class 31, S.I. No. 600/2001 - Planning and Development Regulations, 2001, The following table reviews and assesses the development accordingly.

The following mobile phone and data coverage is noted as, see appendix 2 for details

- 2G, Comreg has noted as Fair
- 3G, Comreg has noted as Ver Good
- 4G, Comreg has noted as Very Good to Good
- 5G, Roll out of the technology is continuing Comreg has not published coverage grades.

HEADING	REQUIREMENT	ASSESSMENT
The carrying out by a s consisting of the provi	statutory undertaker authorised to j ision of—	provide a telecommunications service of development
(a) underground telecommunications		Development to provided by in ground ducts to the existing street infrastructure.
structures or other		Refer to EIR and Virgin Media drawings attached.
telecommunications works (including the laying of mains and cables and the installation underground of any apparatus or equipment),		Existing Overhead and in ground Ducted services exist in close proximity to the proposed development but do not enter or affect the proposed development
(b) overhead telecommunications,	1. Poles carrying overhead lines shall not exceed 10 metres in	No Pole is to be provided within the scope of the developments site boundary.
	height.	Existing Overhead and in ground Ducted services exist in close proximity to the proposed development but do not enter or affect the proposed development
	2. Poles carrying other equipment shall not exceed 10	No Pole is to be provided within the scope of the developments site boundary.
	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 route carrying overhead wires.	Existing Overhead and in ground Ducted services exist in close proximity to the proposed development but do not enter or affect the proposed development
	3. Where a pole or poles carry radio transmitting or receiving apparatus, the field strength of the non-ionising radiation emissions from that installation shall not exceed the limits specified by the Director of Telecommunications Regulation.	No Pole is to be provided within the scope of the developments site boundary. Existing Overhead and in ground Ducted services exist in close proximity to the proposed development but do not enter or affect the proposed development

HEADING	REQUIREMENT	ASSESSMENT
(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.	No Kiosk or Facility is to be provided within the scope of the developments site boundary.
(d) equipment for transmitting or receiving signals	1. No such equipment shall exceed 10 metres in height	No such commercial (non domestic) equipment is to be provided within the scope of the developments site boundary.
space,	2. The diameter of any antenna shall not exceed 2 metres	No such commercial (non domestic) equipment is to be provided within the scope of the developments site boundary
	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	No such commercial (non domestic) equipment is to be provided within the scope of the developments site boundary
(e) permanent telecommunications exchange and radio station containers,	1. The equipment housed in the container shall be used exclusively for the purposes of concentrating and re-routing calls 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.	No such equipment is proposed within the scope of the developments site boundary unless requested by Utility Provider based on estimated needs of the community they service, i.e. support local Mobile Telecommunications
	2. No such container shall exceed 10 metres in length, 3 metres in width or 3 metres in height.	No such equipment is to be provided within the scope of the developments site boundary
	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.	No such equipment is to be provided within the scope of the developments site boundary

HEADING	REQUIREMENT	ASSESSMENT
	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.	No such equipment is to be provided within the scope of the developments site boundary
(f) cabinets forming part of a	The volume above the ground- level of any such cabinet shall	Such equipment is to be provided within the scope of the developments site boundary.
telecommunications system,	not exceed 2 cubic metres measured externally	These are typically used as distribution and centres of wiring terminations, are street side, are approx. 1200x500x1400high.
		These have become sources of Art installations as directed by Local County Councils Arts Programmes.
		These are to be located in agreement of the Utility providers
(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.	No such equipment is to be provided within the scope of the developments site boundary
	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,	No such equipment is to be provided within the scope of the developments site boundary
	(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	No such equipment is to be provided within the scope of the developments site boundary
	(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.	No such equipment is to be provided within the scope of the developments site boundary

REQUIREMENT	ASSESSMENT
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	No such equipment is to be provided within the scope of the developments site boundary
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).	Such antennae are to be provided within the scope of the developments site boundary, these are subject to finalised design of Utility Network Requirements, typically on commercial buildings to support local Mobile Telecommunications based on the needs of the local community, are subject to future planning permissions by the Utility Network providers
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.	No such antennae is to be provided within the scope of the developments site boundary
(b) In any other case, the dimensions of any such antenna provided shall not exceed—	No such antennae is to be provided within the scope of the developments site boundary
 (i) in the case of any panel type antenna, 1.5 metres in length × 0.4 metres in width × 0.15 metres in depth, 	Such antennae is to be provided within the scope of the developments site boundary subject to finalised design of Utility Network Requirements, typically on commercial and or apartment buildings to support local Mobile Telecommunications
	Subject to final load analysis, please note, proposed locations for the mounting of Mobile phone stations are
	• Creche, not exceeding 3nr.
	• Roof of Block A, Apartments, not exceeding 12 nr.
	• Roof of Block B, Apartments, not exceeding 12 nr.
	Roof of Block C, Apartments, not exceeding 8 nr
(ii) in the case of any co-lineartype antenna, 5 metres in length× 0.1 metres in diameter, and	No such antennae is to be provided within the scope of the developments site boundary
(iii) in the case of any dish type antenna (whether shielded or not), 1.8 metres in diameter.	Such antennae is to be provided within the scope of the developments site boundary subject to finalised design of Utility Network Requirements, typically on commercial/ apartment buildings to support local Mobile Telecommunications
	REQUIREMENT 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 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.

HEADING	REQUIREMENT	ASSESSMENT
	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.	No such antennae is to be provided within the scope of the developments site boundary
	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.	No such antennae is to be provided within the scope of the developments site boundary
	5. The height of the existing structure (including any antenna thereon) shall not be exceeded.	No such antennae is to be provided within the scope of the developments site boundary Refer to (b)(i) above
 (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.	Such antennae is to be provided within the scope of the developments site boundary subject to finalised design of Utility Network Requirements, typically on commercial buildings to support local Mobile Telecommunications based on the needs of the local community, are subject to future planning permissions by the Utility Network providers
	2. The additional antennae shall not exceed the number provided for in the existing design capacity of the support structure.	No such antennae is to be provided within the scope of the developments site boundary.
	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	No such antennae is to be provided within the scope of the developments site boundary.
	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	No such antennae is to be provided within the scope of the developments site boundary.
	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.	No such antennae is to be provided within the scope of the developments site boundary.

HEADING	REQUIREMENT	ASSESSMENT
	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.	No such antennae is to be provided within the scope of the developments site boundary.
(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.	There are no existing structures to be replaced, not applicable.
	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).	There are no existing structures to be replaced, not applicable.
	3. (a) The height of the replacement structure shall not exceed the height of the replaced structure.	There are no existing structures to be replaced, not applicable.
	(b)(i) Subject to sub-paragraph (ii), the width of the replacement structure shall not exceed the width of the replaced structure.	There are no existing structures to be replaced, not applicable.
	(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.	There are no existing structures to be replaced, not applicable.
	(c) Where the replaced structure did not incorporate an antenna platform, the replacement shall not incorporate such a platform.	There are no existing structures to be replaced, not applicable.

HEADING	REQUIREMENT	ASSESSMENT
	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.	There are no existing structures to be replaced, not applicable.
	(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).	There are no existing structures to be replaced, not applicable.
	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.	There are no existing structures to be replaced, not applicable.
	(b) In any other case, the dimensions of any antenna provided shall not exceed:	There are no existing structures to be replaced, not applicable.
	 (i) in the case of any panel type antenna, 1.5 metres in length × 0.4 metres in width × 0.15 metres in depth, 	There are no existing structures to be replaced, not applicable.
	(ii) in the case of any co-linear type antenna, 5 metres in length × 0.1 metres in diameter, and	There are no existing structures to be replaced, not applicable.
	(iii) in the case of any dish type antenna (whether shielded or not), 1.8 metres in diameter.	There are no existing structures to be replaced, not applicable.
	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.	There are no existing structures to be replaced, not applicable.

I	HEADING	REQUIREMENT	ASSESSMENT
(;; ;	(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; 	New Build, as such not applicable.
		(ii) telegraph poles, lamp posts, flag poles, CCTV poles;	New Build, as such not applicable
		(iii) electricity pylons.	New Build, as such not applicable
		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.	New Build, as such not applicable.
		2. In the case of a structure with a flat roof, a supporting fixture may be used provided that-	New Build, as such not applicable
		(a) the fixture does not exceed the height of any existing parapet or railing on the roof by more than 2 metres, and	New Build, as such not applicable.
		(b) access to the roof is not available to any person other than a person authorised by the statutory undertaker.	New Build, as such not applicable.
		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.	New Build, as such not applicable.
		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.	New Build, as such not applicable.

HEADING	REQUIREMENT	ASSESSMENT
	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	New Build, as such not applicable.
	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.	New Build, as such not applicable.

APPENDIX 1

Eir and Virgin Drawings







APPENDIX 2

Cell Tower Locations and Mobile Coverage

Please note

- Cell Tower Data Obtained from <u>https://siteviewer.comreg.ie/#explore</u> 25th June 2021
- 2G, 3G, 4G coverage for all providers Data Obtained from <u>https://coveragemap.comreg.ie/map</u> 25th June 2021

Example of Coverage map



Note that Comreg has deemed that the coverage in Boherboy area is Good to Very Good by Comreg standards. The proposed Development will, in the main, fall into this same category.

There are 66nr Cell Tower Masts or Locations listed on Comregs site covering the Boherboy area and the proposed Development.

Based on the coverage as measured by ComReg, additional Cell Antennas will be required, these to be mounted on commercial and or apartments property only.



The 2G coverage is rated as Good by ComReg.



The 3G coverage is rated as Very Good by ComReg.



The 4G coverage is rated as Very Good/ Good by ComReg.



Three network coverage map, for 5G indicates coverage only