

Esat Telecommunications Ltd. (FWPMA Broadband Licence)

**General Telecommunications Licence
Part 5**

Part 5: Additional Provisions applying where the Licensee is designated as a person to whom Part 5 shall apply.

25. Definitions and interpretations

25.1 In this Part 5, the expressions set out below have the meanings given to them below (and other grammatical forms of the expressions have corresponding meanings):

“Designated Commencement Date” means the date upon which the Licensee is designated by the Director as a person to whom Part 5 of this Licence shall apply;

“Fixed Wireless Point to Multi-Point Access” or **“FWPMA”** means point to multi-point radio systems operating between terminal equipment at fixed locations and base station(s) at fixed locations and where such base stations may be connected to a telecommunications network;

“FWPMA Network” means a network for the provision of Fixed Wireless Point to Multi-point Access (FWPMA);

“FWPMA Regulations” means the Wireless Telegraphy (Fixed Wireless Point to Multi-Point Access Licence) Regulations, 1999;

“Required Services” means those Licensed Services provided by the Licensee via FWPMA, as set out in Part I of the Second Schedule.

26. Application of Part 5 of Licence

26.1 The provisions of this Part 5, and the rights and obligations contained therein, apply solely to a Licensee who is designated by the Director as a person to whom the said Part 5 shall apply, and to no other Licensee. A Licensee to whom this Part 5 applies has the right to use FWPMA for the provision of Licensed Services.

27. Term

27.1 The provisions of this Part 5 will commence on the Designated Commencement Date and unless revoked or amended shall, subject to the conditions and provisions of the 1983 Act, as amended, and to the 1996 Act, and such other legislation as has been or may be adopted from time to time, continue for a period not exceeding 10 years from the Designated Commencement Date.

28. Rights and Obligations

- 28.1 The Licensee shall provide the Required Services in accordance with the Second Schedule.
- 28.2 The Licensee may refuse to extend or continue the provision of the Licensed Services to or from particular Network Termination Points and/or terminal equipment if such extension or continuation would, or would be likely to, cause damage or interference to the FWPMA Network, or the Required Services or any other FWPMA Network, Telecommunications Network, or telecommunications services.
- 28.3 Condition 2.2 shall not apply to:
- (a) a mortgage or other transaction entered into with a financial institution for the purpose of securing borrowings of the Licensee or a subsidiary, being borrowings for the purposes of the FWPMA Network and the Required Services or provision thereof or anything incidental thereto; or
 - (b) a transfer, assignment or other disposal of assets that are intended to be, and are, immediately after their transfer, assignment or other disposal, assigned by way of lease to the Licensee.
- 28.4 The Licensee shall comply with any lawful direction issued by the Director including directions for the purposes of protecting the interests of Users. Such directions may include, but not be limited to, directions regarding conditions and obligations contained in the Second Schedule.

29. Ownership

- 29.1 The Licensee shall not issue or transfer or redeem shares such as would give rise to a change in control of the Licensee or a material change in the ability of the Licensee to perform the Licensed Services without the prior consent of the Director (which shall not be unreasonably withheld).
- 29.2 A consent under subparagraph (a) shall be subject to such conditions (if any) as the Director may determine and shall specify in writing to the Licensee, and any such condition shall be deemed to be a condition of this Licence.
- 29.3 The Licensee by itself or through its Board of Directors shall not act to give effect to any change in the beneficial or legal ownership of shares such as would give rise to a change in control of the Licensee or a material change in the ability of the Licensee to perform the Licensed Services without the prior consent of the Director (which shall not be unreasonably withheld).

29.4 In this Condition 29 "shares" means shares of any class in the Licensee.

30. Suspension, Revocation or Expiration

30.1 Upon the revocation of this Licence, or the revocation or expiration of the licence issued to the Licensee under the FWPMA Regulations, or where the rights and obligations accorded to the Licensee under this Part 5 have been revoked or have expired, the Licensee shall not be entitled as of right, or be deemed to enjoy any equity entitling it to the right to use FWPMA for the provision of Licensed Services.

31. Enforcement and Amendment

31.1 Where the Director has served a Warning Notice in accordance with Condition 4.2, and where the specified condition or direction by which the Licensee is failing to comply is solely a condition of or a direction in relation to this Part 5, then the sanctions that may be imposed by the Director under Condition 4.3. shall, in such circumstances, relate solely to the revocation, suspension, or amendment by way of reduction of the term, or imposition of specific measures, as may be decided by the Director, of the rights and obligations of the Licensee under the provisions of this Part 5.

31.2 Where the circumstances under which the Director may suspend or revoke the Licence under Condition 4.8 relate solely to this Part 5, the said revocation or suspension may, at the discretion of the Director, refer solely to the rights and obligations accorded to the Licensee under the provisions of this Part 5. In such circumstances, the reference in Condition 4.8 (i) to the Declaration shall be construed to include the Licensee's application for a licence to provide FWPMA.

32. Review of Spectrum

32.1 Notwithstanding the rights of the Director under Condition 4.1, the Director may, after the elapse of three years from the Designated Commencement Date, and in accordance with her responsibilities, in particular with regard to the efficient and effective use of the frequency spectrum, conduct a review from time to time of the Licence having regard to such matters as, inter alia, international developments, new technologies and market requirements. Any review may include an examination of the allocation of spectrum and the terms and conditions of the Licence. Following such a review, the Director may supplement, amend or revoke the rights and obligations of the Licensee under this Part 5.

Second Schedule

Definitions

In this Second Schedule, the expressions set out below have the meanings given to them below (and other grammatical forms of the expressions have corresponding meanings):

“Coverage” means:

- (i) when the service availability is 99.9% or better (including the customer equipment) and with a BER of 10^{-6} or better, and
- (ii) when the service is available within 80% of the claimed coverage area;

“CPE” means the radio part of the customer premises equipment;

“System Availability” means the availability of the FWPMA Network from the customer premises to the FWPMA base station, excluding the radio CPE but including the FWPMA base station. For the avoidance of doubt, planned outages and outages caused by storm damage and/or accidental equipment damage shall not be deemed to create system unavailability.

Second Schedule

Part I: Required Services

1. The following services are deemed to be Required Services for the purposes of Condition 28.1 and shall be provided by the Licensee within three months of the Designated Commencement Date:
 - Managed Bandwidth (private circuits for customers from 64kbits/s to 2mbits/s)
 - Fast Internet
 - leased line, frame relay and ISDN access for fast web and e-mail access
 - Business Voice (including capability to provide VPN)
 - IP VPN
 - Frame Relay
 - Business continuity
 - Broadband LAN Interconnect (up to 2Mbps): Provides connectivity for Ethernet, Fast Ethernet, Token Ring and FDDI – based LANs.
 - ATM (up to 2Mbps)
 - Leased Line Circuits (up to 2 Mbps)
 - ISDN access
 - Video-conferencing
2. The Licensee shall offer the Required Services individually or, where requested, as bundled services.
3. Notwithstanding the above, where the Licensee can demonstrate, to the satisfaction of the Director, that it is not technologically feasible to provide a particular Required Service within the permitted timescale, the Licensee may, at the discretion of the Director and for a time period specified by the Director, delay the provision of that service.
4. Where in the opinion of the Licensee, a Required Service becomes obsolete due, in particular, to technical and market changes, the Director, following a request from the Licensee and where the Director considers it appropriate to do so, may modify the list of the Required Services.

Second Schedule

Part II: Service Quality, Performance Standards and Obligations

1. Availability

- 1.1. The Licensee shall ensure a System Availability of not less than 99.983% at service launch and 99.995% within ten years of service launch.
- 1.2. The Licensee shall establish and maintain a network log (the 'log') for the purposes of recording and tracking all periods of system unavailability. The Licensee shall maintain this log in a manner that will demonstrate, to the satisfaction of the Director, that such a log is an adequate means of assessing whether the Licensee is complying with its system availability obligations under this licence.
- 1.3. The log, or as may be appropriate part thereof, shall be made available on request to the Director.
- 1.4. The Licensee shall calculate the System Availability for the Required Services for any period specified by the Director from the information recorded in the log, and shall upon request and within such time as may be specified by the Director, provide the Director with the results of the calculation.

2. Maps and Data

The Licensee shall provide, on request, to the Director, and within such time as may be specified by the Director, the following:

- (a) maps showing coverage for the areas in which Required Services are offered.
- (b) an up to date list of the locations of the base transceiver stations.
- (c) an up to date list of the addresses of the customer terminals.
- (d) an adequate number of test numbers.
- (e) such other information as the Director may request from time to time.

3. Frequency Efficiency

The frequency efficiency of the FWPMA network shall not less than those specified in Table 1 below for the types of modulation listed:

Table 1: Frequency Efficiency

Modulation	Data Rate
64 QAM	3.9 bits/s/Hz
16 QAM	2.6 bits/s/Hz
4 QAM	1.3 bits/s/Hz

4. Customer Service

- 4.1 The Licensee shall provide standard service level agreements in respect of the Required Services and such service level agreements shall be on the same terms and conditions as service level agreement for similar services provided by the Licensee over its wired access network.
- 4.2 The Licensee shall establish at least one centre (a “customer service centre”) to which access by telephone is provided to customers and members of the public at all times. The customer service centre shall, at minimum, make available at all times a facility to receive reports in relation to the Required Services.

5 Equipment Standards

The FWPMA radio equipment used by the Licensee shall, at minimum, comply with the following ETSI equipment standards:

- 5.1 EN 301 213-1/2: Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Point to Multipoint DRRS in frequency bands in the range 24.25 to 29.5 GHz using different access Parameters (parts 1 and 2).
- 5.2 EN 301 215 -1/2: Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Antennas for use in Point to Multipoint DRRS in the 11 GHz to 60 GHz band; Parts 1 and 2.
- 5.3 The standards in this section shall apply unless and until alternative standards are notified to the Director by the Licensee and agreed by the Director.

6. Non-Ionising Radiation:

The Licensee shall ensure that non-ionising radiation emissions from each radio installation associated with the Licensees FWPMA network are within the limits specified by the guidelines published by the International Commission for Non-Ionising Radiation Protection (“ICNIRP”) or its successors, as specified from time to time by the Director. For the purposes of this provision, successors may include any standards of the European Committee for Electrotechnical Standards or any standards specified by the European Union.

Second Schedule

Part III: Coverage and Roll-Out Targets

1. Coverage and Roll-out

At minimum, the Licensee shall, within twelve months of the Designated Commencement Date, provide Coverage and service roll-out of the FWPMA Network to the listed towns in accordance with the Schedule in Table 1.

Table 1: Coverage and Roll-out

<i>Roll-out Schedule¹</i>	<i>County</i>	<i>Town</i>	<i>Coverage² (Square km)</i>	<i>Base Stations per town</i>
End Year 1	Dublin	Greater Dublin Area	178	4
End Year 1	Cork	Cork County Borough	25	2
End Year 1	Limerick	Limerick County Borough	15	1
End Year 1	Galway	Galway County Borough	13	1
End Year 1	Waterford	Waterford County Borough	12	1
End Year 1	Louth	Dundalk	9.5	1
End Year 1	Wicklow	Bray	4.5	1
End Year 1	Louth	Drogheda	7	1
End Year 1	Kerry	Tralee	5	1
End Year 1	Kilkenny	Kilkenny	7	1
End Year 1	Sligo	Sligo	6	1
End Year 1	Tipperary	Clonmel	7	1
End Year 1	Wexford	Wexford	6.5	1
End Year 1	Westmeath	Athlone	3.5	1
End Year 1	Carlow	Carlow	3.5	1
June 2003	Any County ³		16	1
June 2003	Any County ³			1
June 2003	Any County ³			1
June 2003	Any County ³			1

¹ End Year 1 means 12 months from the Designated Commencement Date.

² Assessment of compliance by the Director with the Coverage specified in Table 1 shall be made using a typical customer antenna and a typical customer receiver (as included in a standard subscription) at 7 metres above ground level or by other means as specified by the Director from time to time.

³ For the avoidance of doubt, county shall have both its ordinary meaning and shall mean administrative county.

2. Antenna Sites

2.1 The Licensee shall ensure that the number of operational antenna sites shall, on or before each date specified in Table 2, be not less than the number specified in that Table in respect of that date.

Table 2: Antenna Sites

End year⁴	1	2	3	4	5	6	7	8	9	10
Antenna sites	23	23	23	23	23	23	23	23	23	23

2.2 The Licensee shall ensure that the 23 sites in Table 2 will utilise existing infrastructure and sites in the ownership of the Licensee or the existing infrastructure and sites of other organisations.

3. Modifications

The Director, following a request from the Licensee and where the Director considers it appropriate to do so, may modify the obligations contained in this Part III.

⁴ End year 1 shall mean 12 months from the Designated Commencement Date, with each end year thereafter increasing in 12 monthly increments up to end year 10 which shall mean 120 months from the Designated Commencement Date.

Second Schedule

Part IV: Level of Tariffs

1. The tariffs for managed bandwidth services shall not exceed the tariffs set out in Table 1 and shall be subject to two types of discount: term discounts and volume discounts.
 - Term discounts shall apply to the annual rental for circuits from 64Kbits/s to 34 Mbits/s contracts of 2, 3 and 5 years and shall provide for at least a 6% discount for 2 years, 15% discount for 3 years and 22% discount for 5 years.
 - Volume discounts shall apply to the annual rental charge on the total managed bandwidth order taken at a single point in time for circuits from 64Kbit/s to 34Mbit/s contracts. Where the customer’ committed spend amount per annum is between £100,000 - £300,000, the discount shall be at least 3%; where the committed spend amount is between £300,001 - £500,000, the discount shall be at least 7%; and where the committed spend amount is greater than £500,001 the discount shall be at least 10%.

Table 1: Management Bandwidth Annual Connection/Rental Charge

Connection Charge (£)	64Kbit/s	128Kbit/s	256Kbit/s	512Kbit/s	768Kbit/s	1024Kbit/s	1536Kbit/s	2Mbit/s	34Mbit/s
1 st Circuit per end	750	900	1200	1200	1200	2000	2000	2000	6000
Subsequent circuit per end	375	450	600	600	600	1000	1000	1000	3000
Annual Rental Charge (£)									
Average 1-5km	1,307	2,085	2,942	4,016	6,285	8,554	8,844	9,134	51,803
Average 5-10km	1,577	2,407	3,365	4,646	7,119	9,592	10,038	10,483	69,053
Average 10-15km	1,834	2,715	3,771	5,249	7,918	10,586	11,179	11,773	85,553
Average 15-20km	1,983	2,893	4,004	5,597	8,377	11,157	11,837	12,516	95,053
Average 20-25km	2,217	3,173	4,372	6,145	9,103	12,060	12,875	13,689	110,053
Average 25-30km	2,467	3,473	4,765	6,730	9,877	13,023	13,982	14,941	126,053
Over 30km price per km (£)	4	7	15	25	38	50	63	75	1025

Dublin to:										
Waterford		2,947	4,313	6,565	9,730	14,377	19,023	21,482	23,941	249,053
Limerick		3,067	4,523	7,015	10,480	15,502	20,523	23,357	26,191	279,803
Galway		3,107	4,593	7,165	10,730	15,877	21,023	23,982	26,941	290,053
Cork		3,267	4,873	7,765	11,730	17,377	23,023	26,482	29,941	331,053
N x 64k	1	1.47	2.04	2.84	4.28	5.71	6.04	6.37	47.21	
Dublin										
N x 64k	1	1.48	2.3	3.44	5.1	6.75	7.69	8.64	92.82	
National										

2. The Tariffs for the services set out in Table 1 shall be based on the following elements:
 - Connection charges to be dependent on the bit rate and whether the connection is the first or subsequent circuit at a particular site;
 - Rental charges shall be for the whole circuit, end to end, and shall depend on the bit rate and the point to point distance between both ends;
 - Billing for the services shall be available on, at least, a monthly basis, with the connection charge included in the first bill;
 - Unless otherwise agreed by the Director, circuits interfaces offered shall include X.21 and V35 for Nx64k circuits and G703/4 for 2Mbits and 34 Mbits circuits.

3. The maximum tariffs for the Required Services shall not exceed the tariffs for similar services provided by the Licensee over the Licensee's wired access network.

Second Schedule

Part V: Performance Guarantees

1. In the event that the Licensee fails to meet the performance targets specified in Table 1 below, the amounts guaranteed to the total amount of £1,500,000 will become and be payable on demand to the Director.

Table 1: Performance Targets and Financial Guarantees

<i>Performance Target</i>	<i>Financial Guarantees</i>	<i>Details</i>
Launch date: One base station shall be operational ⁵ in one county within 3 months of the Designated Commencement Date.	£1,000,000	Where the performance target is not achieved, a single payment of £1,000,000 shall be payable to the Director.
Roll-out: A total of 23 base stations shall be operational in 18 counties and in each of the locations as stated in Part III of Schedule 2, within 12 months of the Designated Commencement Date.	£500,000	Where the performance target is not achieved, a single payment of £500,000 shall be payable to the Director.

2. The Licensee shall provide a Certificate for each operational site to the Director on or before the relevant performance target date. Failure by the Licensee to provide a Certificate shall be considered by the Director to indicate non-compliance with the relevant performance target.
3. Notwithstanding the foregoing, the Licensee shall not be deemed to be in breach of its performance targets if, in the Director’s opinion, the Licensee has taken all reasonable and timely steps to obtain all necessary approvals from all applicable State Bodies but has not obtained such approvals by the relevant performance target date.

⁵ For the purpose of the commitments above the term “operational” shall mean: Fully installed, commissioned and certified by the equipment vendor (a “Certificate”) and available to support the commercial provision of at least 4 of the Required Services.

4. Where the Licensee has not obtained the necessary approvals, the Licensee shall, on request, provide the Director with all relevant information that the Director may require to enable the Director to form a reasonable opinion. The Licensee shall also give its consent to the Director to enable the Director to seek any information from the relevant State Bodies, where, in the opinion of the Director, such information is required to allow the Director to reach a reasonable opinion.