

Chorus Communication Ltd. (FWPMA Broadband)

**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

1. 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 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 12 months of the Designated Commencement Date.

- **Voice Telephony** which shall include the following features:
 - Full PSTN access
 - Facsimile support
 - Directory Enquiries
 - Operator Services and Emergency Services
 - Number Portability
 - Per second billing
 - Hunt groups and account based billing
 - Discounted calls
 - Enhanced Services
 - Three way calling
 - Call forwarding
 - Call waiting
 - Call barring
 - Voicemail
 - Calling Line Identification
 - Freephone and premium rate numbers

- Virtual Private Networks
- Centrex
- Fixed/Mobile Integration
- ISDN Basic Rate
- ISDN Primary Rate
- ISDN Fractional Rate
- Leased Circuits (at transmission speeds of 64kbit/s and multiples of 64kbit/s; 2Mbit/s and multiples of 2Mbit/s up to 8Mbit/s)
- Frame Relay (at transmission speeds of between 64kbit/s and 2Mbit/s)
- Asynchronous Transfer Mode (ATM) (at transmission speeds of between 2Mbit/s and 34Mbit/s)
- Internet Protocol Services(via a 10baseT Port interface)
- Access to On-screen Interactive Services by Internet, and return path for digital TV. These service will include home shopping services, banking services, educational services, weather services, and sports services.
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Part I: Required Services (Continued)

- Intranet (including firewalls and other security services for Internet and Intranet services)
- Wholesale Services – backhaul capacity, interactive cable services
- Operator Services
- Directory Services
- High-Speed Internet Services via ISDN access, leased circuit access or frame relay access, which shall include the following features:
 - Permanent connection to the Internet
 - Access speed up to 9Mbit/s
 - Fixed access fees, independent of usage
 - Free Internet subscription which shall include the following features:
 - email accounts for all customer employees
 - web browsing and file transfer
 - web memory space
 - web site developing and hosting
 - domain name provision
 - managed Internet service
- E-Commerce Integration with Call Centres, which shall include the provision of International freephone numbers and shall also provide a means by which an Internet user can initiate a call from business advertising on the Internet.
- Internet Security services including firewalling and other security features.
- Value Added Services which shall include the following services
 - access to Computer Aided Design tools
 - access to financial processing databases
 - provision of integrated software solutions
 - LAN design, installation, operation and interconnection
 - Network management
 - IT systems hardware and software design, installation and management.
- Wholesale Services to other Licensed Operators

The Licensee shall offer combinations of the above services at reduced tariffs. Where such combinations of services are offered, the offer shall include free Internet subscription, including e-mail, web browser, web space and a listing in the Licensee's e-commerce service.

2. 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.

3. 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 99.96%. The Licensee shall also ensure an interconnection availability of not less than 99.999% for interconnection with *eircom* and 99.99% for interconnection with all other licensed operators.
- 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 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 be less than 1.3bps/Hz.

4. Customer Charter

4.1 Before the commencement of the Required Services, the Licensee shall implement an appropriate Customer Charter. The Customer Charter shall be agreed by the Director before the commencement of the Required Services and the Director may from time to time issue directions to the Licensee specifying any modifications or additions that she considers should be made to the Customer Charter.

4.2 The Customer Charter shall, at minimum, address the following:

- Network Integrity
- Sales Integrity
- Customer Installation
- Fault Servicing
- Billing and payment Processing
- Complaint Processing
- Call handling
- Performance monitoring and measurement;
- Service Level Agreements for each customer;

4.3 The customer Charter shall include the Licensee's Price Promise to match the price of its lowest competitor and will ensure any payments due under this guarantee will be made within 30 days.

4.4 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 Licensee's 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

- 1.1 At minimum, the Licensee shall provide Coverage and service roll-out of the FWPMA network to the listed towns in accordance with the schedule in Table 1.
- 1.2 The Licensee may, at its discretion, deviate from the requirements in Table 1 provided that the total additional area to be covered by the end of each year is achieved.

Table 1: Coverage and Roll-out

End Year¹	County	Town	Coverage² (Square km)
1	Dublin	Greater Dublin Area	178
		Malahide	2.5
		Swords	3.5
2	Cork	Cork County Borough	25
	Limerick	Limerick County Borough	15
	Galway	Galway County Borough	13
	Waterford	Waterford County Borough	12
	Louth	Dundalk	9.5
		Drogheda	7
	Kilkenny	Kilkenny City	7
	Clare	Ennis	5.5
		Shannon	5
	Wexford	Wexford Town	6.5
	Carlow	Carlow Town	3.5
	Meath	Navan	3
	Laoise	Portlaoise	5
	3	Wicklow	Bray
Kerry		Tralee	5
		Killarney	2.5
Sligo		Sligo Town	6

¹ End year 1 shall mean 12 months from the Designated Commencement Date, with each end year thereafter increasing in 12 monthly increments.

² Assessment of compliance by the Director with the coverage will 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 may be specified by the Director from time to time. .

	Tipperary	Clonmel	7
	Westmeath	Athlone	3.5
	Kildare	Naas	3
	Donegal	Donegal Town	5
From start year 4 to end year 10	All above counties	All above towns	337.5

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 year ³	1	2	3	4	5	6	7	8	9	10
Antenna sites	9	24	31	32	33	37	40	41	43	45

- 2.2 The Licensee shall only develop new sites for the purposes of installing the antennas specified in Table 2 where no suitable existing sites are in the ownership of the Licensee or are reasonably available to the Licensee from 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.

³ End year 1 shall mean 12 months from the Designated Commencement Date, with each end year thereafter increasing in 12 monthly increments up to 120 months from the Designated Commencement Date by end year 10.

Second Schedule

Part IV: Level of Tariffs

1. Tariffs for the Required Services shall, for the period specified in Condition 27.1, be not higher than the lowest tariffs offered by other Licensed Operators for similar services.
2. *[Commercially confidential information]*
3. Initial tariffs shall not exceed those specified for the services listed in the tables 1 to 8 below.
4. The tariffs specified:
 - are exclusive of vat;
 - include free Internet subscription and discounted usage;
5. Tariffs

Table 1: Subscriber Switched Circuits

Connection and Rental Charges	Connection (£)	Monthly Rental (£)
PSTN	Free	9.50
ISDN 2	150.00	20.00
ISDN Fractional (16 channels)	2,784.00	139.20
ISDN extra channels	64.00	8.00
ISDN 30	2,784.00	232.00

Table 2: Voice Switched Circuits: Call Charges (pence per minute)

Call Charges – Voice	Local	National	UK	Mobiles in Ireland	Mobiles in UK
Daytime	2.56	6.40	12.16	14.90	15.60
Evening	0.51	4.80	10.88	9.70	14.30
Weekends	0.51	0.77	9.60	9.70	14.30

Table 3: Leased Lines – Connection and Rental Charges

Connection and Rental Charges (per end)	Connection (£)	Local Rental* (£ annual)	National Rental* (£ annual)
64kbit/s	744.00	476.67	1,401.40
128kbit/s	744.00	734.61	2,011.74
Additional 64kbit/s	50.00	50.00	250.00
2.048Mbit/s PLC	2,000.00	2,195.20	10,154.76
8.448Mbit/s PLC	6,000.00	6,585.60	30,464.28

*A national rental charge shall only apply where the distance between both ends of the circuit is not less than 30 kilometres. In all other circumstances a local rental charge shall apply.

Table 4: International Leased Lines – Connection and Rental Charges

Connection and Rental Charges (whole circuit)	Connection (£)	Rental - Dublin to London (£ annual)
64kbit/s PLC	1,488	11,000
2.048Mbit/s PLC	4,000	100,000

Table 5(a): Frame Relay – Connection and Rental Charges

Port Connection and Rental charges	Connection (£)	Annual Rental (£)
Access Rate		
64kbit/s	744	1,056.83
128kbit/s	880	1,675.41
256kbit/s	1,120	2,573.09
384kbit/s	1,120	3,153.25
512kbit/s	1,120	3,190.10
1024kbit/s	2,000	5,582.67
2048kbit/s	2,000	6,587.55

Table 5(b)

PVC* Charges	
Bandwidth (kbit/s)	CIR** Rental (£ annual)
8	94.08
16	169.34
32	313.60
48	439.04
64	564.48
96	752.64
128	909.44
192	1,223.04
256	1,473.92
384	2,132.48
512	2,696.96
1024	4,719.68
2048	5,569.22

* Permanent Virtual Circuits

** Committed Information Rate

Notes to Table 5:

- (i) All charges in Table 5(a) and 5(b) represent the standard fee independent of distance. Charges shall consist of connection charges and annual rental charges both for access ports and PVCs.
- (ii) Excess Information Rate charges shall not exceed 50% of CIR charges
- (iii) All frame relay customers will receive a free Internet subscription.

**Table 6(a): Asynchronous Transfer Mode (ATM)
- Site Connection and Rental Charges**

Site Connection and Rental Charges	Connection (£)	Annual Rental (£)
Access Rate		
2.048Mbit/s	7,644.00	6,272.00
Additional 2.048Mbit/s	6,762.00	5,487.02

Table 6(b): ATM – Bandwidth Charges

Constant Bit Rate bandwidth (annual)	Charges*	Fixed Fee (£)	Per km up to 150km (£)	Per km over 150km (£)
Bandwidth (Mbit/s)				
0.1		103.68	7.63	2.54
0.5		443.59	32.70	10.90
1		780.79	59.23	19.75
5		3,208.79	212.13	69.88

*The bandwidth charges are listed against Peak Cell rate

Note to Table 6(b): Prices for bandwidth values not listed in this table shall be calculated on a pro-rata basis (using linear interpolation between the published values).

Table 7: Internet Protocol (IP) – IP Circuit Charges

IP Connection* and Rental Charges	Connection (£)	Annual Rental (£)
Circuit Rate		
64kbit/s	744	1071
512kbit/s	1120	3630
2.048Mbit/s	2000	7500

* Unless otherwise agreed by the Director, IP connection shall be facilitated through a 10baseT port in the customer premises.

Table 8: Internet Subscription Charges

Internet Usage Access Type	Charge			
	Daytime (pence per minute)	Evening (pence per minute)	Weekend (pence per minute)	Fixed Monthly Charge (£)
PSTN Dial-Up	1.20	0.79	0.79	n/a
ISDN Dial-Up	2.20	1.20	1.20	n/a
Leased Circuit (64kbit/s)	n/a	n/a	n/a	250
Leased Circuit (2Mbit/s)	n/a	n/a	n/a	5,000
Frame Relay & IP (64kbit/s)	n/a	n/a	n/a	250
Frame Relay & IP	n/a	n/a	n/a	600

(512kbit/s)							
Frame Relay & IP (2Mbit/s)	n/a	n/a	n/a	n/a	n/a	n/a	5,000

Note to Table 8: Internet subscriptions will be offered free to all customers who have a voice, ISDN, leased circuit or packet switched circuit. The subscription shall include all e-mail, web browsing and e-commerce services. The standard usage charges are set out in the Table.

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, as shown in the Table, will become and be payable on demand to the Director.

Table 1: Performance Targets and Financial Guarantees

Performance Target	Financial Guarantees	Details
Launch date: The Required Services ⁴ shall be available within 12 months of the Designated Commencement Date.	£200,000	Where the performance target is not achieved, a single payment of £200,000 shall be payable to the Director.
Roll-out: The Required Services will be available* in 15 counties within 3 years of the Designated Commencement Date.	£20,000 per county	Where the performance target is not achieved, a payment of £20,000 for each county in which no services have been provided shall be payable to the Director.
Maximum tariffs: <i>[Tariffs for a specified basket of services are related to competitor's charges - commercially confidential information]</i>		

* In this context, availability within a county is defined as the commercial operation of not less than one base station situated within that county.

** Tariff comparison shall be based on the Licensee's quoted tariffs for the relevant services *[commercially confidential information]*. The basket of services shall comprise:

- line installation;
- line rental;
- Internet subscription;
- Internet usage charges.

⁴ Excluding Required Services which fall under Second Schedule, Part I, Paragraph 2 of this Licence.

2. The Licensee shall, before commencement of the Required Services, put in place a programme to measure and monitor compliance with the performance targets set out in Table 1 above. The programme shall include the reporting procedures to the Director and shall be in such form as may be agreed by the Director, or as may be specified by the Director from time to time.
3. The Licensee shall not be deemed to be in breach of a performance target, where in the opinion of the Director, 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;
 - to seek regulatory approval for use of FWPMA equipment for the purpose of backhaul concentration of traffic but has not received such approval;
 - to retain the rights and obligations contained in this Part 5 to use FWPMA for the provision of Licensed 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.