

Fees for Spectrum Access 28 GHz Licences: Notice of Proposed Regulations (Consultation): *Update*

Following a request for more details on the method used to calculate the proportion of fixed links per region we are publishing the set of Tables that provide the number of fixed link transmitters and the bandwidth of the links in each of the Regions in the 26 GHz reference fixed link band. This also includes the weighting factor used to take account of the various bandwidths of the links to normalise these to 28 MHz the typical bandwidth of a link in this band.

This data was extracted from our assignment tool and was correct as of 7th July 2015.

In calculating the proportion of links in a Region we counted the location of each transmitter and as such the number of transmitters indicated in the Tables below is approximately double the number of fixed links¹. If one end of the link was in a different Region to the other, each end would be counted in its' respective region.

In revisiting this data we have identified a minor rounding up error in two of the fee rates quoted in our earlier consultation. These are:

Region	Fee per 2x1 MHz Consultation value	Fee per 2x1 MHz Corrected value
B - Greater Manchester, Merseyside and Cheshire	£484.30	£484.29
C - West Midlands, Warwickshire, Staffordshire, Worcestershire, Shropshire and Herefordshire	£350.28	£350.26

¹ In a small number of cases a link is uni-directional and, therefore, comprises only a single transmitter.

Base Data and Assumptions

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	814	101.75
7	0.25	1368	342
14	0.5	716	358
28	1	2314	2314
56	2	459	918
112	4	4	16
Total		5675	4050

National Rate Fee:	$\text{£88 (Reference Rate)} \times 0.26 \text{ (Band Factor)} \times 28 \text{ MHz (Typical BW)} \times 4 \text{ (to normalise to 112 MHz)} \times 400 \text{ (re-use)} \times 1 \text{ (availability factor)} \times 1 \text{ (path length factor)} \times 0.5 \text{ (50\% downward modification)}$ = £512,512
---------------------------	---

Region A – Greater London

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	30	3.75
7	0.25	44	11
14	0.5	22	11
28	1	355	355
56	2	121	242
112	4	0	0
Total		572	622.750

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region A) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.153765
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	78806.63
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£703.63

Region B – Greater Manchester, Merseyside and Cheshire

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	29	3.625
7	0.25	96	24
14	0.5	68	34
28	1	277	277
56	2	45	90
112	4	0	0
Total		515	428.625

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region B) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.105833
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	54240.85
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£484.29

Region C – West Midlands, Warwickshire, Staffordshire, Worcestershire, Shropshire and Herefordshire

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	32	4
7	0.25	128	32
14	0.5	72	36
28	1	190	190
56	2	24	48
112	4	0	0
Total		446	310.000

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region C) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.076543
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	39229.31
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£350.26

Region I – East Riding of Yorkshire, North Yorkshire, South Yorkshire, West Yorkshire and the areas of North Lincolnshire and North-east Lincolnshire District Councils

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	89	11.125
7	0.25	117	29.25
14	0.5	51	25.5
28	1	104	104
56	2	32	64
112	4	0	0
Total		393	233.875

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region I) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.057747
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	29595.99
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£264.25

Region J – Tyne and Wear, Durham, Northumberland, Cumbria and Lancashire

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	64	8
7	0.25	83	20.75
14	0.5	35	17.5
28	1	101	101
56	2	30	60
112	4	0	0
Total		313	207.250

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region J) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.051173
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	26226.69
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£234.17

Region L – Scotland

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	183	22.875
7	0.25	144	36
14	0.5	52	26
28	1	208	208
56	2	18	36
112	4	0	0
Total		605	328.875

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region L) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.081204
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	41617.87
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£371.59

Region N – Northern Ireland

UK Fixed Link Transmitters			
Bandwidth (MHz)	Weighting Factor	Number of Fixed Link Transmitters in UK	Weighted Number of Fixed Link Transmitters by Bandwidth
3.5	0.125	0	0
7	0.25	36	9
14	0.5	12	6
28	1	34	34
56	2	4	8
112	4	0	0
Total		86	57.000

Proportion of total weighted fixed link Transmitters	Weighted Number of Fixed Link Transmitters by Bandwidth (Region N) / Weighted Number of Fixed Link Transmitters by Bandwidth (Total)	0.014074
Fee for Region	National Rate Fee x Proportion of total weighted fixed link transmitters	7213.13
Convert fee to 2 x 1 MHz	Fee for Region / 112 MHz	£64.40