Wireless Telegraphy Act 2006

Satellite (Non-Geostationary Earth Station)

Sector/class/product	Satellite Services / Technically Assigned / 308050
Licence number	1293713/1
Licensee	STARLINK INTERNET SERVICES LIMITED
Licensee address	BEAUX LANE HOUSE, 5TH FLOOR MERCER STREET LOWER Dublin D02 DH60 Ireland
Licence first issue date	14/11/2022
Licence version date	14/11/2022
Payment interval	1 year

1. This Licence is issued by the Office of Communications ("Ofcom") on **14 November 2022** and replaces any previous authority granted in respect of the service subject to this Licence by Ofcom or by the Secretary of State.

2. This Licence authorises **STARLINK INTERNET SERVICES LIMITED** ("the Licensee") to establish, install and/or use radio transmitting and/or receiving stations and/or radio apparatus as described in the schedule(s) (hereinafter together called "the radio equipment") subject to the terms set out below and subject to the terms of the General Licence Conditions booklet (Version OfW597).

ISSUED BY OFCOM

Satellite (Non-Geostationary Earth Station)

SCHEDULE 1 TO LICENCE NUMBER 1293713/1
TERMS, PROVISIONS AND LIMITATIONS COVERED BY THIS LICENCE

This schedule forms part of Licence **1293713/1,** issued to **STARLINK INTERNET SERVICES LIMITED**, the Licensee on **14 November 2022,** and describes the terms and equipment specifications covered by this Licence.

1. The Licensee may establish and use:

1.1 A permanent sending and receiving earth station ("the station") at the location specified in the attached schedule for the purpose of providing wireless telegraphy links between the station and non-geostationary satellite(s).

2. Limitations on use

2.1 The stations shall use only :

a) the classes of emission specified in the emission code column of the attached schedule;

b) the frequencies specified in the transmit frequency and receive frequency columns of the schedule;

c) a power not exceeding that specified in the antenna I/P power column of the schedule;

d) the antenna type specified in the antenna type column of the schedule;

e) a power density not exceeding that specified in the spectral power density column of the schedule; and

f) the station shall be operated only from the location specified on the schedule.

3. Apparatus

3.1 The Licensee shall ensure that:

a) the wireless telegraphy apparatus comprised in the station(s) (“the apparatus”) is so designed, constructed, maintained and operated, that it does not cause any undue interference to other users of the spectrum;

b) the apparatus complies with (and is maintained in accordance with) the relevant performance specification(s) published by the operator of the satellite;

c) the earth station antenna shall not be employed for transmission at elevation of less than 3 degrees measured from the horizontal plane to the direction of maximum radiation as specified in Article 21.14 of the ITU Radio Regulations;

d) the earth stations operating with non-geostationary satellites shall ensure compliance with the equivalent power flux-density limitations specified in Article 22 of the ITU Radio Regulations;

e) the component of effective isotropic radiated power directed towards the horizon and the minimum elevation angle above the horizontal must comply with ITU Radio Regulations and not exceed those limits specified in Articles 21.8-21.5 of the ITU Radio Regulations;

f) in the band 13.75-14 GHz, earth stations with an antenna diameter of less than 4.5m operate in compliance with the pfd limits in ITU Radio Regulations 5.502, that the e.i.r.p. of any emission from an earth station in the fixed satellite service does not exceed 85 dBW and that the e.i.r.p. density of emissions in the band 13.77-13.78 GHz complies with ITU Radio Regulations 5.503;

g) use of the band 29.1-29.5 GHz shall be in compliance with ITU Radio Regulations 5.535A;

h) the apparatus used for transmission complies with the Radio Equipment Directive (Directive 2014/53/EU) and all appropriate National Interface Requirements (IR) for satellite earth stations in force within the UK; and

i) the antenna radiation pattern envelope meets the minimum performance specified by the operator of the satellite;

3.2 Where appropriate, Ofcom may require that the Licensee provide additional screening at the installation as a condition of the Licence.

4. National and international obligations

a) the earth station must undergo national coordination and site clearance for operation at the specified location;

b) the relevant satellite data shall have been submitted to ITU in accordance with established ITU procedures;

c) all transmissions in the fixed satellite service must be terminated prior to any change of location; unless operating under a specific exemption authorised by Ofcom;

d) the Licensee shall comply with any notice given by Ofcom under section 9A of the Wireless Telegraphy Act 2006 requiring the Licensee to cease or suspend the uplinking by means of the licensed apparatus of any service specified in such notice by such date as may be specified; and

e) the Licensee shall provide such information as Ofcom may request by notice in writing for the purpose of determining whether section 9A of the Wireless Telegraphy Act 2006 applies in relation to a service for which the Licensee provides uplink facilities using the licensed apparatus or for any purpose connected with the giving of a notice by Ofcom under section 9A of the Act.

5. Additional conditions

5.1 The radio frequencies authorised by this Licence must be used in common with other non-geostationary satellite systems authorised under wireless telegraphy licences granted by Ofcom. The names of these licensees shall be notified by Ofcom to the Licensee from time to time, and together with the Licensee are described as the "NGSO Licensees".

5.2 The radio frequencies authorised by this Licence must only be used to communicate with a satellite system which has transmissions authorised under a Satellite (Earth Station Network) wireless telegraphy licence granted by Ofcom.

5.3 In the event that -

a) one (or more than one) of the NGSO Licensees suffers a material and recurring (or ongoing) degradation of services to its users at a specific region or location in the United Kingdom; and

b) the degradation of services is resulting from radio transmissions from the earth stations operated by the Licensee;

Ofcom may by notice instruct the Licensee to cease or change the use of particular equipment or particular radio frequencies which are authorised under this Licence.

5.4 Any such cessation or change must be for the purposes of ensuring that such interference is avoided and the degradation of services to users at the particular regions or locations is resolved.

5.5 Following receipt of such notice, for such period of time as may be specified in the notice, the Licensee may only operate in accordance with the terms and conditions of the notice.

5.6 The Licensee must establish, install and use the radio equipment to commence regular wireless telegraphy transmissions in accordance with the provisions of this Licence within twelve months of the date that this Licence is issued, and maintain such transmissions thereafter.

6. Interpretation

6.1 In this and subsequent schedule(s):

a) "earth station" means a radio transmitter located on the surface of the earth and intended for communication with one or more satellites;

b) "non-geostationary satellite" means a satellite that does not remain fixed relative to a position on the surface of the earth; and

c) "uplink" and any cognate expression refers to a transmission in the earth-to-space direction.

Notes

1. This Licence does not remove any other obligations that the Licensee may have in relation to satellite filings made under the ITU Radio Regulations.

2. This Licence does not affect the requirement, where necessary, to obtain licences or authorisations under other Acts. Some satellite television or radio broadcasting services also require licences under the Broadcasting Act 1990, and some installations require local authority planning approval.

3. Advice can be sought from Ofcom using the contact details on page 1 of this Licence and the appropriate Local Authority planning department.

4. The Licensee must apply for a variation of the Licence from Ofcom before making any changes which may contravene the Licence.

5. Technical terms used in clause 2 shall have the meanings assigned to them in the ITU Radio Regulations.

SCHEDULE 2

Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105605/1	Morn Hill - SPX antenna 7	SU 51684 29227	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	Associated Authorised Bandwidth (MHz)	Associated Emissions
	17,925.00000 MHz	250.00000	B, A, C, D, E, F
	18,175.00000 MHz	250.00000	B, A, C, D, E, F
	18,925.00000 MHz	250.00000	B, A, C, D, E, F
	19,175.00000 MHz	250.00000	B, A, C, D, E, F

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27,664.25000 MHz		328.50000	G, H, J, I, K, L, N, M
28,640.50000 MHz		392.00000	G, H, J, I, K, L, N, M
29,750.00000 MHz		500.00000	G, H, J, I, K, L, N, M

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
A	Receive	120MD7W--	CR		
B	Receive	120MD7W--	CL		
C	Receive	240MD7W--	CL		
D	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
G	Transmit	120MD7W--	CL	1.94000	-78.85
H	Transmit	120MD7W--	CR	1.94000	-78.85
I	Transmit	240MD7W--	CR	4.95000	-78.85
J	Transmit	240MD7W--	CL	4.95000	-78.85
K	Transmit	480MD7W--	CL	7.96000	-78.85
L	Transmit	480MD7W--	CR	7.96000	-78.85
M	Transmit	60M0D7W--	CR	-1.07000	-78.85
N	Transmit	60M0D7W--	CL	-1.07000	-78.85

SCHEDULE 2

Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105599/1	Morn Hill - SPX antenna 1	SU 51684 29239	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink	0.00	360.00	25.00	90.00
Starlink				

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	B, A, C, D, F, E
	18,175.00000 MHz	250.00000	B, A, C, D, F, E
	18,925.00000 MHz	250.00000	B, A, C, D, F, E
	19,175.00000 MHz	250.00000	B, A, C, D, F, E
27,664.25000 MHz		328.50000	G, H, I, J, K, L, M, N

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28,640.50000 MHz		392.00000	G, H, I, J, K, L, M, N
29,750.00000 MHz		500.00000	G, H, I, J, K, L, M, N

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
A	Receive	120MD7W--	CR		
B	Receive	120MD7W--	CL		
C	Receive	240MD7W--	CL		
D	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CL		
E	Receive	60M0D7W--	CR		
H	Transmit	120MD7W--	CR	1.94000	-78.85
G	Transmit	120MD7W--	CL	1.94000	-78.85
I	Transmit	240MD7W--	CL	4.95000	-78.85
J	Transmit	240MD7W--	CR	4.95000	-78.85
K	Transmit	480MD7W--	CL	7.96000	-78.85
L	Transmit	480MD7W--	CR	7.96000	-78.85
M	Transmit	60M0D7W--	CL	-1.07000	-78.85
N	Transmit	60M0D7W--	CR	-1.07000	-78.85

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Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105601/1	Morn Hill - SPX antenna 3	SU 51694 29239	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	A, B, D, C, E, F
	18,175.00000 MHz	250.00000	A, B, D, C, E, F
	18,925.00000 MHz	250.00000	A, B, D, C, E, F
	19,175.00000 MHz	250.00000	A, B, D, C, E, F
27,664.25000 MHz		328.50000	H, G, I, J, K, L, N, M

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28,640.50000 MHz		392.00000	H, G, I, J, K, L, N, M
29,750.00000 MHz		500.00000	H, G, I, J, K, L, N, M

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
B	Receive	120MD7W--	CR		
A	Receive	120MD7W--	CL		
C	Receive	240MD7W--	CR		
D	Receive	240MD7W--	CL		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
H	Transmit	120MD7W--	CL	1.94000	-78.85
G	Transmit	120MD7W--	CR	1.94000	-78.85
J	Transmit	240MD7W--	CR	4.95000	-78.85
I	Transmit	240MD7W--	CL	4.95000	-78.85
L	Transmit	480MD7W--	CR	7.96000	-78.85
K	Transmit	480MD7W--	CL	7.96000	-78.85
M	Transmit	60M0D7W--	CR	-1.07000	-78.85
N	Transmit	60M0D7W--	CL	-1.07000	-78.85

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Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105604/1	Morn Hill - SPX antenna 6	SU 51694 29233	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	B, A, C, D, F, E
	18,175.00000 MHz	250.00000	B, A, C, D, F, E
	18,925.00000 MHz	250.00000	B, A, C, D, F, E
	19,175.00000 MHz	250.00000	B, A, C, D, F, E
27,664.25000 MHz		328.50000	G, H, I, J, K, L, M, N

SCHEDULE 2

28,640.50000 MHz		392.00000	G, H, I, J, K, L, M, N
29,750.00000 MHz		500.00000	G, H, I, J, K, L, M, N

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
A	Receive	120MD7W--	CR		
B	Receive	120MD7W--	CL		
C	Receive	240MD7W--	CL		
D	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CL		
E	Receive	60M0D7W--	CR		
G	Transmit	120MD7W--	CL	1.94000	-78.85
H	Transmit	120MD7W--	CR	1.94000	-78.85
J	Transmit	240MD7W--	CR	4.95000	-78.85
I	Transmit	240MD7W--	CL	4.95000	-78.85
L	Transmit	480MD7W--	CR	7.96000	-78.85
K	Transmit	480MD7W--	CL	7.96000	-78.85
N	Transmit	60M0D7W--	CR	-1.07000	-78.85
M	Transmit	60M0D7W--	CL	-1.07000	-78.85

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Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105603/1	Morn Hill - SPX antenna 5	SU 51689 29233	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink	0.00	360.00	25.00	90.00
Starlink				

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	A, B, D, C, E, F
	18,175.00000 MHz	250.00000	A, B, D, C, E, F
	18,925.00000 MHz	250.00000	A, B, D, C, E, F
	19,175.00000 MHz	250.00000	A, B, D, C, E, F
27,664.25000 MHz		328.50000	H, G, J, I, L, K, M, N

SCHEDULE 2

28,640.50000 MHz		392.00000	H, G, J, I, L, K, M, N
29,750.00000 MHz		500.00000	H, G, J, I, L, K, M, N

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
B	Receive	120MD7W--	CR		
A	Receive	120MD7W--	CL		
D	Receive	240MD7W--	CL		
C	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
H	Transmit	120MD7W--	CL	1.94000	-78.85
G	Transmit	120MD7W--	CR	1.94000	-78.85
J	Transmit	240MD7W--	CL	4.95000	-78.85
I	Transmit	240MD7W--	CR	4.95000	-78.85
L	Transmit	480MD7W--	CL	7.96000	-78.85
K	Transmit	480MD7W--	CR	7.96000	-78.85
N	Transmit	60M0D7W--	CR	-1.07000	-78.85
M	Transmit	60M0D7W--	CL	-1.07000	-78.85

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Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105606/1	Morn Hill - SPX antenna 8	SU 51689 29227	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	B, A, D, C, E, F
	18,175.00000 MHz	250.00000	B, A, D, C, E, F
	18,925.00000 MHz	250.00000	B, A, D, C, E, F
	19,175.00000 MHz	250.00000	B, A, D, C, E, F
27,664.25000 MHz		328.50000	H, G, I, J, L, K, N, M

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28,640.50000 MHz		392.00000	H, G, I, J, L, K, N, M
29,750.00000 MHz		500.00000	H, G, I, J, L, K, N, M

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
B	Receive	120MD7W--	CL		
A	Receive	120MD7W--	CR		
D	Receive	240MD7W--	CL		
C	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
G	Transmit	120MD7W--	CR	1.94000	-78.85
H	Transmit	120MD7W--	CL	1.94000	-78.85
I	Transmit	240MD7W--	CL	4.95000	-78.85
J	Transmit	240MD7W--	CR	4.95000	-78.85
L	Transmit	480MD7W--	CL	7.96000	-78.85
K	Transmit	480MD7W--	CR	7.96000	-78.85
M	Transmit	60M0D7W--	CR	-1.07000	-78.85
N	Transmit	60M0D7W--	CL	-1.07000	-78.85

SCHEDULE 2

Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105607/1	Morn Hill - SPX antenna 9	SU 51694 29227	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	A, B, C, D, E, F
	18,175.00000 MHz	250.00000	A, B, C, D, E, F
	18,925.00000 MHz	250.00000	A, B, C, D, E, F
	19,175.00000 MHz	250.00000	A, B, C, D, E, F
27,664.25000 MHz		328.50000	H, G, J, I, L, K, N, M

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28,640.50000 MHz		392.00000	H, G, J, I, L, K, N, M
29,750.00000 MHz		500.00000	H, G, J, I, L, K, N, M

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
B	Receive	120MD7W--	CR		
A	Receive	120MD7W--	CL		
C	Receive	240MD7W--	CL		
D	Receive	240MD7W--	CR		
E	Receive	60M0D7W--	CL		
F	Receive	60M0D7W--	CR		
G	Transmit	120MD7W--	CR	1.94000	-78.85
H	Transmit	120MD7W--	CL	1.94000	-78.85
J	Transmit	240MD7W--	CL	4.95000	-78.85
I	Transmit	240MD7W--	CR	4.95000	-78.85
L	Transmit	480MD7W--	CL	7.96000	-78.85
K	Transmit	480MD7W--	CR	7.96000	-78.85
M	Transmit	60M0D7W--	CR	-1.07000	-78.85
N	Transmit	60M0D7W--	CL	-1.07000	-78.85

SCHEDULE 2

Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105602/1	Morn Hill - SPX antenna 4	SU 51684 29233	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink				
Starlink	0.00	360.00	25.00	90.00

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	B, A, C, D, E, F
	18,175.00000 MHz	250.00000	B, A, C, D, E, F
	18,925.00000 MHz	250.00000	B, A, C, D, E, F
	19,175.00000 MHz	250.00000	B, A, C, D, E, F
27,664.25000 MHz		328.50000	H, G, J, I, L, K, M, N

SCHEDULE 2

28,640.50000 MHz		392.00000	H, G, J, I, L, K, M, N
29,750.00000 MHz		500.00000	H, G, J, I, L, K, M, N

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
A	Receive	120MD7W--	CR		
B	Receive	120MD7W--	CL		
D	Receive	240MD7W--	CR		
C	Receive	240MD7W--	CL		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
H	Transmit	120MD7W--	CL	1.94000	-78.85
G	Transmit	120MD7W--	CR	1.94000	-78.85
I	Transmit	240MD7W--	CR	4.95000	-78.85
J	Transmit	240MD7W--	CL	4.95000	-78.85
K	Transmit	480MD7W--	CR	7.96000	-78.85
L	Transmit	480MD7W--	CL	7.96000	-78.85
M	Transmit	60M0D7W--	CL	-1.07000	-78.85
N	Transmit	60M0D7W--	CR	-1.07000	-78.85

SCHEDULE 2

Licence No	1293713/1	Licence version date	14/11/2022	Payment Interval	1 year

Licensing Centre Point	SU 51688 29233

Earth Station Deployment	Earth Station Name	Earth Station NGR	
ES0105600/1	Morn Hill - SPX antenna 2	SU 51689 29239	

			Transmit		Receive		
Antenna Centre Height AGL (m)	Antenna Type	Dish Size	Tx Gain (dBi)	Tx Beamwidth (deg)	Rx Gain (dBi)	Rx Beamwidth (deg)	System Noise Temperature (K)
1.7	Rec 580	1.47 m	49.50	0.5°			-999.00
1.7	Rec 580	1.47 m			46.90	0.8°	275.00

Satellite Name	ES Azimuth from (deg)	ES Azimuth to (deg)	ES minimum Elevation (deg)	ES maximum Elevation (deg)
Starlink	0.00	360.00	25.00	90.00
Starlink				

Transmit Frequency	Receive Frequency	A ociated Authori ed Bandwidth (MHz)	A ociated Emi ion
	17,925.00000 MHz	250.00000	A, B, C, D, E, F
	18,175.00000 MHz	250.00000	A, B, C, D, E, F
	18,925.00000 MHz	250.00000	A, B, C, D, E, F
	19,175.00000 MHz	250.00000	A, B, C, D, E, F
27,664.25000 MHz		328.50000	G, H, J, I, L, K, N, M

SCHEDULE 2

28,640.50000 MHz		392.00000	G, H, J, I, L, K, N, M
29,750.00000 MHz		500.00000	G, H, J, I, L, K, N, M

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Dens (dBW/Hz)
A	Receive	120MD7W--	CL		
B	Receive	120MD7W--	CR		
C	Receive	240MD7W--	CL		
D	Receive	240MD7W--	CR		
F	Receive	60M0D7W--	CR		
E	Receive	60M0D7W--	CL		
G	Transmit	120MD7W--	CL	1.94000	-78.85
H	Transmit	120MD7W--	CR	1.94000	-78.85
J	Transmit	240MD7W--	CL	4.95000	-78.85
I	Transmit	240MD7W--	CR	4.95000	-78.85
K	Transmit	480MD7W--	CR	7.96000	-78.85
L	Transmit	480MD7W--	CL	7.96000	-78.85
N	Transmit	60M0D7W--	CL	-1.07000	-78.85
M	Transmit	60M0D7W--	CR	-1.07000	-78.85