

Mansion House
Signal Reception Impact Survey

Version *1.0*
Date *1/2/2021*

Survey Details

This Survey has been carried out to reflect the post construction Impact on the local Signal Reception.

The First survey was carried out on 07/12/2016 by Astbury.

The information within this survey can be compared to show any significant changes.

Version #	Implemented By	Revision Date	Approved By	Survey Date	Planning Application Number	
1.0	<i>Ian Killick</i>	<i>n/a</i>	<i>Astbury</i>	<i>07 /12/ 2016</i>	<i>111587/FO/2016/N1</i>	

Purpose

The Purpose of this Survey to be able to compare signal reading to highlight any significant Impact on the local area TV reception.

Audience

Local Planning Office, Planning Reference 111587/FO/2016/N1

Inventory

Test Equipment

Promax HD Ranger Lite Spectrum Analyser SN:010156108/ 27.2 build 01/04/19

AE0712

S.A.C 12 element 9-13 dBi Gain 470-790 MHz. TV Antenna.

Single Element FM Antenna

DAB Antenna

Telescopic Extension Pole.

Execution of Survey.

Once obtaining a clear transmission maintenance report to show that all transmitted signal from local Transmission point (Winter Hill) were at normal Transmission power and no maintenance is forecast to be carried out on the survey date.

WINTER HILL TRANSMITTER

TRANSMITTER No: 103.00

NGR: SD 660144

AERIAL HEIGHT: 718m AOD

Approximate bearing from the Proposed Development: 129 Degrees

Approximate distance from the Proposed Development: 25 Kilometres

With reference to the original survey documentation, each of the 10-test location was revisited and retested.

Each test location indicates full GPS coordinates as reference.

Each Multiplexer will be tested for the following measurements: -

1. Signal Power measured in dB
2. MER measurements in dB
3. Carrier to noise measurements in dB

The reading will give a good indication of signal strength and quality.

Due to continuous upgrades, the movement of channels due to 5G and restructure of the bandwidth channel numbers and frequencies will be different to the original survey.

DEVELOPMENT SITE PLAN
New Islington 2



Test Locations



The table below indicates an engineer target reading for UHF to ensure a good reception.

The test location varies within the lay of the land and in some cases only High gain Antenna's will achieve a good enough reading.

Especially Locations 4 and 5 where the reading with the standard test aerial and standard test pole would fall short of the minimum Levels, this is due to the low nature of the terrain next to the riverbank. Most home in this area have been fitted the high gain aerials and extension poles.

FREQUENCY BAND MAXIMUM LEVEL MINIMUM LEVEL

Band II FM Radio	74 dbμV	54 dbμV
Band III DAB	70 dbμV	30 dbμV
Band IV/V Digital Terrestrial	70 dbμV	45 dbμV

The terrestrial Digital signals will require a minimum Carrier to Noise of 26 db

Listed Below are the test results taken from locations 1 to 10.

Survey Date 01/02/2021

Survey Engineer G Light

Promax HD Ranger Lite SN:010156108/27.2									
Location 1	Old Mill St								
Lon	-2,13,19,8								
Lat	53,28,54,5,								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	52.4	51.4	54.1	52.1	53.7	52.8	47.1	59.8	60.1
MER dB	21.8	29.2	26.9	27.1	31.3	32.5	30.6		
C/N dB	12.3	21.4	23.1	16.9	17.7	13.4	12.4		

Promax HD Ranger Lite SN:010156108/27.2									
Location 2	Harrison St								
Lon	-2,13,4,6								
Lat	53,28,49,9,								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	52.6	52.7	52.4	52	53.6	52.2	42.1	41.9	50.6
MER dB	23.9	23.9	23.4	23.7	24.8	23.9	15.9		
C/N dB	21.8	21.2	21.88	21.4	22.9	22.1	11.6		

Promax HD Ranger Lite SN:010156108/27.2									
Location 3	Harding St								
Lon	-2,12,52,6								
Lat	53,28,48,9,								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	52.3	50.8	49.8	54.7	52.8	46.6	N/L	55.1	45.8
MER dB	27.5	25.7	24.3	28.1	27.4	21.4	N/L		
C/N dB	21.6	20	18.9	23.9	22.1	16.2	N/L		

Promax HD Ranger Lite SN:010156108/27.2									
Location 4	Palmerston St								
Lon	-2,12,50,7								
Lat	53,28,44,8,								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	48.7	47.6	48.2	49.9	49.1	48.6	N/L	44.2	35.6
MER dB	26.4	25.5	26.2	27.8	27.2	26.1	N/L		
C/N dB	18	16.6	17.8	19.3	18.7	18.4	N/L		

Promax HD Ranger Lite SN:010156108/27.2									
Location 5	Aden St								
Lon	-2,12,42,3								
Lat	53,28,42,6,								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	59.6	56.7	58.6	60.6	59.9	57.7	48.4	54.3	62.4
MER dB	32.3	29.2	29.8	31.6	32.2	30.1	28.1		
C/N dB	28.9	26.1	28.6	30.1	28.8	27.2	17.9		

Promax HD Ranger Lite SN:010156108/27.2									
Location 6	Ashlar Drive								
Lon	-2,12,39,8								
Lat	53,28,38,4								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	61.6	60.2	60.2	62.1	60.3	62	52.4	44.1	57.6
MER dB	30.5	32.9	31.7	32.4	32.1	30.8	30.3		
C/N dB	30.3	29.8	29.7	31.3	29.5	31.3	22.2		

Promax HD Ranger Lite SN:010156108/27.2									
Location 7	Holly St								
Lon	-2,12,35,8								
Lat	53,28,37,8								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	62.1	60.8	60.9	63.3	61.4	60.5	50.4	39.6	52.9
MER dB	31.1	33.8	31.7	33.6	32.1	30.8	29.2		
C/N dB	29.5	29.1	29.8	32.5	29.1	29.2	19.5		

Promax HD Ranger Lite SN:010156108/27.2									
Location 8	Paxton Place								
Lon	-2,12,26,2								
Lat	53,28,34,6								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	53.6	51.1	51.9	52.9	54.2	54	44.1	35	45.7
MER dB	26.2	25.5	20.6	28.2	21.9	28.6	23.6		
C/N dB	23	19.9	21.8	22.4	23.7	23.4	13.7		

Promax HD Ranger Lite SN:010156108/27.2									
Location 9	Rylance St								
Lon	-2,12,20,9								
Lat	53,28,31,1								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	57	56.8	57.7	51.2	56.1	56.2	45.2	35.3	47.8
MER dB	30.6	21.2	25.1	23.7	26.7	24.4	14.7		
C/N dB	26.1	25.3	26.7	20.4	25.6	25.7	14.2		

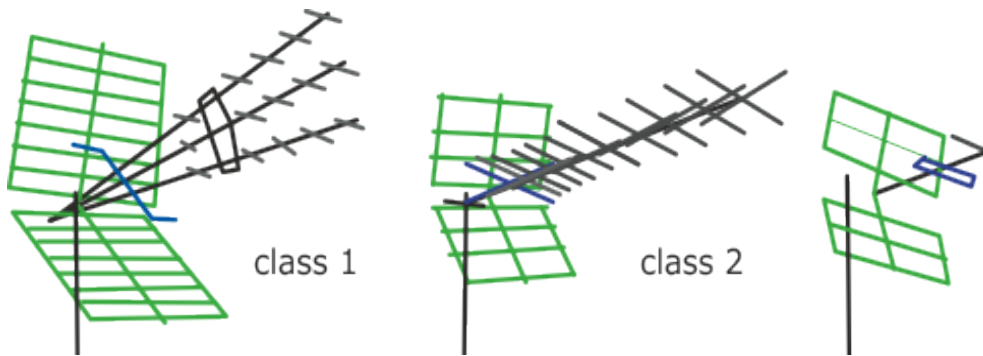
Promax HD Ranger Lite SN:010156108/27.2									
Location 10	Gorton Rd								
Lon	-2,12,19,1								
Lat	53,28,28,6								
	Channel 32	Channel 34	Channel 35	Channel 29	Channel 31	Channel 37	Channel 55	BBC Radio 1	BBC National
	562.0 MHz	578.0 MHz	585.8 MHz	583.0 MHz	554.0 MHz	602.0 MHz	746.0 MHz	98.9 MHz	225.6 MHz
	PSB1	PSB2	PSB3	COM4	COM5	COM6	COM7	FM	DAB
	BBCA	D3+4	BBCB						12 B
Power Level dB	61.9	62.2	60.9	62.3	62.5	64	55.1	32.6	47.9
MER dB	31.8	31.9	23.4	31.9	32	30.7	30.6		
C/N dB	25.1	25.3	25.7	26.3	26.3	27.6	19.8		

Summary

On completing the survey and in our opinion the new build development at New Islington will have little to no impact on the areas tested.

The signal levels within this area are already medium to low when testing with a class 3 antenna due to other developments within the area that are in line of site to the transmitter.

Class 1 antenna will improve signal strength and if required, remedy any problems.



Areas beyond location 1 will not be affected as the line of site is already block by larger buildings already constructed.

Gary Light

G Light s Installations LTD

Notes