

Water House Gardens
Signal Reception Impact Survey

Version *1.0*

Date *19/3/2025*

Survey Details

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

Version #	Implemented By	Revision Date	Approved By	Survey Date	Planning Application Number	
1.0	Ian Light	n/a	Gary light	18/3/ 2025	138031/JO/2023	

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

Inventory

Test Equipment

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

Calibration Date 06/04/24 Promax ref 40058.

AE0712

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

Extension Pole.

20 Meters of CT 100 75ohm Coax Cable

The test equipment used is based on standard domestic antenna installation without the use of any form of high gain antennas or amplification. In turn this will give a true representation of the expected signal levels.

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: 310.2 Degrees

Approximate distance from the Proposed Development: 23.5 Kilometers

Reading will be taken from the roof area of Block A which is in clear line of sight of the transmitter and in turn will give the best possible signal readings.



Block A (Irwell House) is the tallest block and will be more prone to give shadowing of signal as seen in the images IMG1 and IMG2.

Water House Gardens

IMG 1

Block A Roof

Winter Hill



IMG 2



The satellite image of the site prior to construction showing the building location, the location of the test points A and B and the possible effected area marked by a yellow hash.

The main area affected is made up of some light industrial units, car parking, railway sidings and the WHG development.

The WHG development has no IRS system installed and is serviced via high-speed Fiber optic internet as per (Building Regulations Part R). All the addresses will be able to utilize streaming services and therefore will not be affected.

DEVELOPMENT SITE PLAN

Waterhouse Gardens



TEST LOCATIONS

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

FREQUENCY BAND MAXIMUM LEVEL MINIMUM LEVEL

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 A and B

At test points A and B we have recorded 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.

Survey Date 18/03/2025

Survey Engineer Ian Light

The conditions are clear and dry with light wind from the north.

Test Location A Lat 53d29'29.91" N 2d14'41.67" W

Test Location B Lat 53d29'21.03" N 2d14'38.05" W



Promax HD Ranger Lite SN:010156108/27.2									
Location 1	Block A Roof								
Lon	02,14,14,67								
Lat	53,29,29,91								
	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	77.6	77.6	79.3	76.1	75.7	77.1	72.0		
MER dB	35.2	33.9	34.2	33.1	31.3	33.6	32.2		
C/N dB	45.3	45.4	42.1	44.9	42.7	42.5	41.8		



Promax HD Ranger Lite SN:010156108/27.2									
Location 2	Block E Roof								
Lon	02,14,38,05								
Lat	53,29,21,03								
	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	78.6	78.1	79.3	77.2	77.6	76.7	75.3		
MER dB	35.4	34.8	33.1	33.7	34.8	33.9	32.9		
C/N dB	43.0	41.2	41.8	41.4	42.9	42.1	41.6		

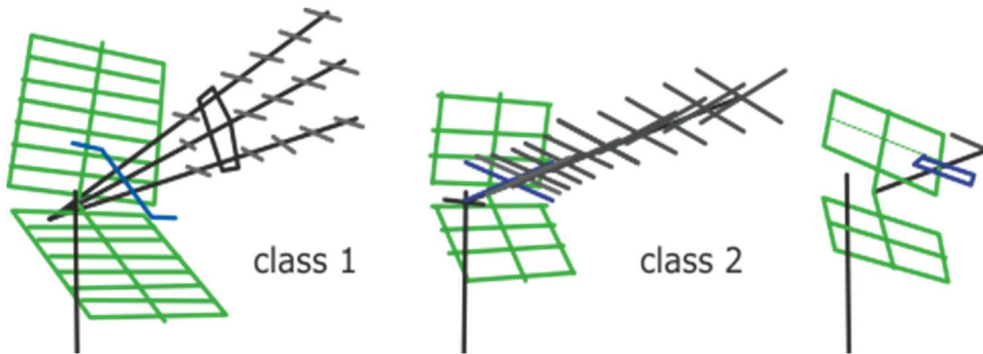
Summary

On completing the survey and in our opinion the new build development at Water House Garden will have little to no impact on TV reception in the local surroundings.

This is due to the surrounding area usage is made up of light industrial premises, carparking and rail station and sidings. There is a public house on the corner of Park St that appears to be in a state of disuse which in our opinion is the only property that maybe affected if at all occupied.

The signal levels within this area are already only medium quality and strength when testing with a class 3 antenna, this is due to other light industrial premises within the area that are in line of site to the transmitter. In test location A and B the signal levels were excellent and if anything a little strong. This is due to the high level of the antenna.

Class 1 antenna or mild signal amplification will improve signal strength if required thus remedy any problems of antennas installed at a lower height.



Areas beyond the test location shown on IMG 2 will not be affected as the line of site to the transmitter is already blocked by larger buildings in the city center area that have already been constructed.

This concludes our summary.

Please feel free to discuss any further comments as we are more than happy to help.

G Light

G Light s Installations LTD

Notes

