

TV/FM & DAB RECEPTION SURVEY REPORT

THIS PRE-CONSTRUCTION TV/FM & DAB RECEPTION SURVEY WAS CONDUCTED BY:

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SUMMARY

This study was undertaken in February 2025, to investigate whether the proposed development at Boulton House, Manchester could cause interference to television and radio broadcast service reception. The report also details the baseline reception conditions for future reference.

The proposed development will be the redevelopment/addition to the existing building at 17 Chorlton Street, Manchester, and the potential Impact to the reception of digital terrestrial television (Freeview) FM, DAB, and digital satellite television services (SKY and Freesat) have all been assessed.

The introduction of the proposed development will change the existing skyline which could result in an impact to television reception.

In the case of the proposed development, we have highlighted a potential impact zone for terrestrial television reception shown on Map 1 (page 32).

The shadow zone created by the proposed development from the Winter Hill transmitter covers an area extending to the Southeast, in this area there will be a slight reduction in television signal, however as the development will be largely similar in height to the existing building, we expect the signal degradation will be of only a minor impact.

For Satellite reception there were no satellite dishes observed during the survey that were close enough to be affected.

FM & DAB signals were recorded, and we anticipate these not to be significantly impacted.

As always, we recommend that funds are available to deal with the investigation of any reported interference and to enable subsequent mitigation requirements. We advise that the situation regarding television reception is monitored closely during the construction and any reports of interference are investigated promptly.

During the developments if scaffolding or tower cranes are used, that would extend to a greater height than the development, temporary minor disruption to the digital terrestrial signal may be affected for the duration it is used.

INTRODUCTION

Theory predicts, and practical evaluation has confirmed, that the introduction of new structures into an area can cause interference to television reception.

This Pre-Construction TV/FM/DAB Reception Survey has been undertaken to record the existing baseline conditions and assess if the introduction of the proposed new development has the potential to impact upon existing viewers' television reception in the surrounding area.

To enable us to make an assessment, an initial desktop study is conducted, followed by a comprehensive field survey.

The desktop study is conducted using plans of the proposed development for example the proposed building's location and elevations, along with maps of the surrounding area and details of local television transmitter broadcast information.

The field survey is then conducted at several test point locations surrounding the proposed development. Television signal test results and relevant information are recorded at each of the test point locations.

This report includes the information collated during the desk top study and field survey along with an assessment of where, or if, the introduction of the proposed development has the potential to cause interference to existing viewers' television reception, and mitigation if required.

SCOPE

To carry out a desktop study and comprehensive field survey to record existing baseline television reception conditions in the surrounding area to the proposed development. To provide details of any potential impact zone and methods of mitigation if required, to conform to Local Planning Authority requirements.

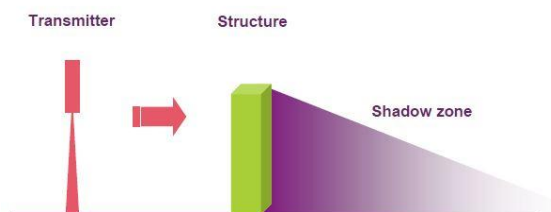
The results and information recorded during this field survey assist in assessing if, or where, the introduction of the proposed development has the potential to impact upon existing viewers' television reception.

DISCUSSIONS

The introduction of a new building or structure into an area has the potential to cause interference to existing viewers' television and listeners radio reception.

SIGNAL BLOCKING

Wireless signals, especially those using relatively high frequencies such as television, behave much like light. Therefore, it is desirable to have a clear line of sight path between the transmitter and a receiving aerial to achieve the most reliable reception. The presence of a tall structure between the transmitter and receiver will cause a 'shadow' to be cast behind the structure on the side opposite the transmitter. This effect is like the way that an obstruction between a lamp and an observer's eye blocks out the light.

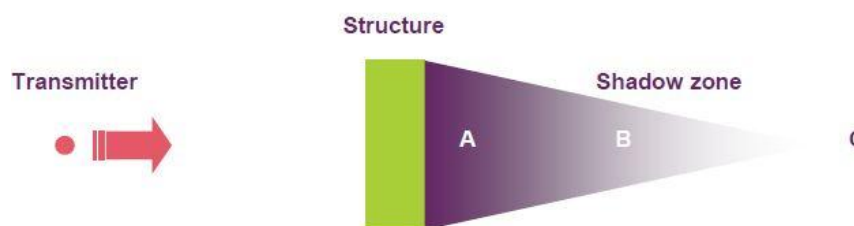


The shadow cast by a structure does not have hard edges though and does not usually extend indefinitely. While there would be a large reduction in signal levels immediately behind the structure, the blocking effect of the structure diminishes with distance because of diffraction. Diffraction is a process where signals appear to bend behind the structure and partially fill in the shadow.

Zone A - close behind the structure (typically a few tens of metres) there may be a large reduction in signal level with a possible complete loss of reception.

Zone B - further away (typically a few hundred metres) the signal reduction is less severe, and the shadow will be smaller as diffraction effects partially fill in the shadow. Depending on the size of the structure, some locations could still lose reception completely.

Zone C - some distance away (1-5km) the shadow will effectively have disappeared. The resulting shadow is therefore a triangular shape as shown in Figure 2.



It should be noted that the severity of the reduction and the actual size of the shadow will depend upon many factors including the construction of the structure and its height – the distances given above are for guidance only.

FIELD SURVEY METHOD

Tests are conducted at a selection of locations in the area surrounding the proposed development.

Test results are recorded regarding television signal strength and quality: -

Strength is recorded in: dBμv.

Quality is recorded in: VBER (Standard definition SD)

LBER (High-definition HD)

Due to the rollout of the 4G Networks all results are recorded with a CAI approved benchmarked aerial with a balun and LTE filter.

An alternative transmitter is assessed for and where receivable, results are recorded.

All tests are conducted at a 10m height above ground level.

The direction and type of existing viewers' television aerials is noted.

A bearing and distance to the proposed development is recorded at each test point location, for comparison with the bearing and distance to the television transmitter serving the area.

Existing obstructions to television reception are noted.

FIELD SURVEY EQUIPMENT

The field survey is conducted using the following equipment: -

- Specialist vehicle complete with telescopic mast.
- 360° Antenna rotator
- 14 Element CAI approved wideband UHF antenna with balun and LTE filter, one vertical and one horizontal polarisation.
- FM Omni aerial
- DAB Omni aerial
- 20m x WF100 twin screened CAI approved coaxial cable.
- Televes spectrum analyser/field strength meter
- Ordnance survey maps
- Garmin GPS receiver
- Compass
- Digital camera

SERVICES LIKELY TO BE AFFECTED

TERRESTRIAL TELEVISION RECEPTION

There are two potential ways that the introduction of a new building or extension can cause interference to terrestrial television reception; these are obstruction and reflection.

Obstruction occurs when existing viewers are in an area where their television aerial beam path (direction) to the television transmitter is either through, or within very close proximity to, the new building or structure. This can result in a reduction of television signal strength and quality and in some cases (if existing viewers are located within proximity to the new building or structure); receiving terrestrial television signals can become problematic and may not be achievable.

Reflection occurs when the new building or extension reflects terrestrial television signals. These unwanted reflected signals are received on the existing viewer's television aerial along with the direct signals from the television transmitter, resulting in irregularities of television signal strength and quality. However, digital terrestrial television broadcasts are less prone to reflections than the previous analogue television broadcasts, but this must still be taken into account when assessing any potential impact.

SATELLITE TELEVISION RECEPTION

Satellite television reception requires a clear line of sight between the satellite antenna and the satellite it is aligned to. In most cases the angle of the satellite antenna to the satellite orbiting the earth is between 20- and 30-degrees elevation.

This elevation must be taken into account when assessing if the introduction of the new building or structure has the potential to obstruct existing viewers' satellite antenna beam path to the satellite.

Satellite reception is very rarely affected on a large scale and is mostly only relevant to existing viewers within proximity to the new building or structure.

FM & DAB RECEPTION

There are two potential ways that the introduction of a new building or extension can cause interference to radio reception; these are obstruction and reflection.

Obstruction occurs when existing listeners are in an area where their radio reception to the radio transmitter is either through, or within very close proximity to, the new building or structure. This can result in a reduction of radio signal strength and quality and in some cases (if existing listeners are located within proximity to the new building or structure); receiving radio signals can become problematic and may not be achievable.

Reflection occurs when the new building or extension reflects radio signals.

FM & DAB reception is very rarely affected on a large scale and is mostly only relevant to existing listeners within proximity to the new building or structure.

THE PROPOSED DEVELOPMENT:

Joyce,
17 Chorlton Street,
Manchester

CONDUCTED ON BEHALF OF:

The James (M1 Living) Ltd
133 Hammersmith Road
London
W14 0QL

OVERVIEW OF PROPOSED DEVELOPMENT

The proposed development is to consist of a re-development and extension to an existing building.

DETAILS OF PROPOSED DEVELOPMENT

Development Type: Re-development

Proposed Building Height: The development is to have a maximum elevation of approximately 28m.

Please refer to.
Plan A which highlights the proposed development's location
Plan B the proposed site elevation

EXISTING BUILDINGS

A series of photographs has been taken to highlight the existing building/structure/area at the proposed development's location, and any existing buildings in the surrounding area.

Photograph A: -	The proposed development's location
Photograph B: -	View directly to the north of the proposed development.
Photograph C: -	View directly to the east of the proposed development.
Photograph D: -	View directly to the south of the proposed development.
Photograph E: -	View directly to the west of the proposed development.

COORDINATES

Prior to commencement of the survey, coordinates at the proposed development's location are entered into a GPS receiver, along with the coordinates for the television transmitter serving the area.

This enables us to record a bearing and distance from each test point location to the proposed development, for comparison with the bearing and distance to the television transmitter. The coordinates used throughout the survey are listed below and shown on Plan A.

<u>LOCATION</u>	<u>NATIONAL GRID REFERENCE</u>
Proposed Development Position	SJ 84385 97964
Winter Hill Transmitter	SD 66000 14400
Holme Moss FM Transmitter	SE 09497 04077
Sunley Building (city tower) DAB Transmitter	SJ 84268 98194

PLAN A: THE PROPOSED DEVELOPMENT'S LOCATION

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PLAN B: THE PROPOSED ELEVATIONS



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PHOTO A: proposed development location



PHOTO B: View directly to the north of the proposed development



PHOTO C: View directly to the east of the proposed development



PHOTO D: View directly to the south of the proposed development



PHOTO E: View directly to the west of the proposed development



TERRESTRIAL TELEVISION SERVICES

Viewers in the surrounding area to the proposed development are receiving their terrestrial television services from the Winter Hill transmitter, located to the northwest of the building/structure, approx. 24 km away.

The Winter Hill transmitter broadcasts 6 digital multiplexers providing the full range of standard definition and high-definition digital terrestrial television services available on Freeview, with regional programming. Please refer to the transmitter details for further information

The test results recorded during the survey show that terrestrial television reception from the Winter Hill transmitter has good signal strengths and at the majority of test points the quality is good. Please note that the results are recorded at a 10mt aerial height, in accordance with TV reception survey specifications and that for existing television aerials sited at multi-storey height reception could be much improved.

During the survey, tests were conducted to receive an alternative transmitter to the Winter Hill transmitter. The result of these tests was that no alternative transmitter could be received at an acceptable quality or strength.

SATELLITE TELEVISION SERVICES

Both Sky TV and Freesat are broadcast from the same fleet of satellites located at an orbital position of 28.2° east of south, with a required satellite dish elevation of approximately 23°.

Sky TV is primarily a subscription-based service offering several packages of various television services at monthly subscription costs.

Freesat is a non-subscription-based service and offers a similar television service line up to Freeview and selectable regional programming.

FM RADIO SERVICES

Listeners in the surrounding area to the proposed development are receiving their radio services from the Holme Moss transmitter, located to the northwest of the building/structure, approx. 26 km away at a compass bearing of 73 degrees.

DAB RADIO SERVICES

Listeners in the surrounding area to the proposed development are receiving their radio services from the Sunley Building, (now city tower) Piccadilly transmitter, located to the east of the building/structure, approx. 0.3km away at a compass bearing of 324 degrees.

FIELD SURVEY TEST RESULTS AND INFORMATION

TEST POINT 1

Location: Bloom Street
NGR: SJ 84396 97948
Alt: 52 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.6 km
Proposed Development	322°	0.04 km

Visible Existing Aerial Arrays: High gain aerials on 2m mast, mounted at rooftop height on 6 storey properties, directed towards the Winter Hill Transmitter

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dB μ V)	CN dB	MER	VBER	LBER	Quality
37	602.0	COM6	SD	32	20	18	-4		Fail
31	554.0	ARQA	SD	45	28	25	-6		Marginal
32	562.0	BBCA	SD	46	26	24	-5		Marginal
35	585.8	BBCB	HD	41	20	18		-3	Fail
29	538.0	SDN	SD	39	18	16	-4		Fail
34	578.0	D3+4	SD	36	20	18	-5		Fail

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dB μ V) FM	CN Db FM	Frequency DAB	Level (dB μ V) DAB	CN Db DAB
BBC 1	98.9	72	42	225.64(12B)	82	45
BBC 2	89.3	70	39	225.64(12B)	82	45
BBC 3	91.5	71	40	225.64(12B)	82	45
BBC 4	95.1	70	39	225.64(12B)	82	45

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 1



TEST POINT 2

Location: Minshull Street
NGR: SJ 84465 98019
Alt: 53 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.7 km
Proposed Development	250°	0.1 km

Visible Existing Aerial Arrays: none

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dBμV)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	38	24	20	-4		Marginal
31	554.0	ARQA	SD	51	29	28	-7		Pass
32	562.0	BBCA	SD	49	30	29	-8		Pass
35	585.8	BBCB	HD	40	20	18		-3	Fail
29	538.0	SDN	SD	37	22	20	-5		Fail
34	578.0	D3+4	SD	36	20	18	-4		Fail

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dBμV) FM	CN Db FM	Frequency DAB	Level (dBμV) DAB	CN Db DAB
BBC 1	98.9	70	35	225.64(12B)	80	45
BBC 2	89.3	69	35	225.64(12B)	80	45
BBC 3	91.5	66	33	225.64(12B)	80	45
BBC 4	95.1	65	28	225.64(12B)	80	45

Television signal strengths are low, and corruption is being received.

TEST POINT 3

Location: Richmond Street
NGR: SJ 84420 97920
Alt: 53 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.7 km
Proposed Development	323°	0.01 km

Visible Existing Aerial Arrays: High gain aerial on 2m mast, mounted at rooftop height on 2 storey properties, directed towards the Winter Hill Transmitter

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

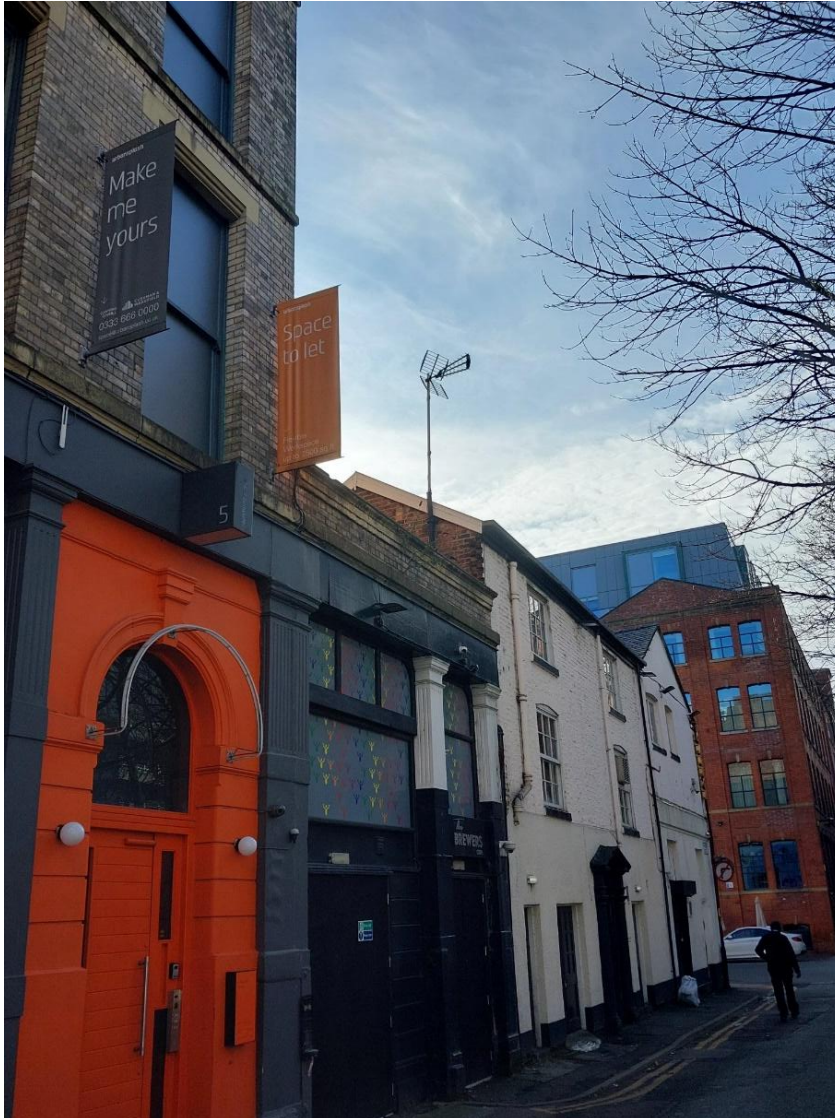
Channel	Frequency	MUX	Format	Level (dBμV)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	41	26	22	-5		Fail
31	554.0	ARQA	SD	49	28	28	-7		Pass
32	562.0	BBCA	SD	48	30	29	-7		Pass
35	585.8	BBCB	HD	40	22	22		-3	Fail
29	538.0	SDN	SD	39	20	20	-6		Marginal
34	578.0	D3+4	SD	38	18	17	-3		Fail

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dBμV) FM	CN Db FM	Frequency DAB	Level (dBμV) DAB	CN Db DAB
BBC 1	98.9	64	38	225.65(12B)	78	44
BBC 2	89.3	60	40	225.64(12B)	78	44
BBC 3	91.5	62	42	225.64(12B)	78	44
BBC 4	95.1	59	35	225.64(12B)	78	44

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 3



TEST POINT 4

Location: Auburn Street
NGR: SJ 84521 97970
Alt: 49 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.6 km
Proposed Development	277°	0.14 km

Visible Existing Aerial Arrays: none

Visible Existing Obstructions: Various Trees/sports fields in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dB μ V)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	34	24	20	-6		Fail
31	554.0	ARQA	SD	48	28	28	-7		Pass
32	562.0	BBCA	SD	49	30	30	-8		Pass
35	585.8	BBCB	HD	39	16	15		-2	Fail
29	538.0	SDN	SD	38	20	20	-5		Fail
34	578.0	D3+4	SD	39	27	22	-6		Marginal

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dB μ V) FM	CN Db FM	Frequency DAB	Level (dB μ V) DAB	CN Db DAB
BBC 1	98.9	70	42	225.64(12B)	81	42
BBC 2	89.3	70	40	225.64(12B)	81	42
BBC 3	91.5	69	41	225.64(12B)	81	42
BBC 4	95.1	73	42	225.64(12B)	81	42

Television reception is of a good quality and strength.

TEST POINT 5

Location: Chorlton Street
NGR: SJ 84462 97862
Alt: 49 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.7 km
Proposed Development	228°	0.14 km

Visible Existing Aerial Arrays: High gain aerials on 2m and 3m masts, mounted at rooftop height on 3 storey properties, directed towards the Winter Hill Transmitter

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dBμV)	CN dB	MER	VBER	LBER	Quality
37	602.0	COM6	SD	35	22	19	-3		Fail
31	554.0	ARQA	SD	50	30	26	-8		Pass
32	562.0	BBCA	SD	50	32	28	-8		Pass
35	585.8	BBCB	HD	42	24	20		-2	Fail
29	538.0	SDN	SD	40	20	18	-5		Fail
34	578.0	D3+4	SD	38	20	17	-3		Fail

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dBμV) FM	CN Db FM	Frequency DAB	Level (dBμV) DAB	CN Db DAB
BBC 1	98.9	74	42	225.64(12B)	83	44
BBC 2	89.3	71	42	225.64(12B)	83	44
BBC 3	91.5	70	42	225.64(12B)	83	44
BBC 4	95.1	74	45	225.64(12B)	83	44

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 5



TEST POINT 6

Location: Whitworth Street
NGR: SJ 84596 97827
Alt: 50 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.9 km
Proposed Development	307°	0.26 km

Visible Existing Aerial Arrays: Various high gain antennas on multistorey buildings

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter.

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dB μ V)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	39	26	24	-6		Marginal
31	554.0	ARQA	SD	51	32	30	-8		Pass
32	562.0	BBCA	SD	48	30	28	-7		Pass
35	585.8	BBCB	HD	44	26	25		-3	Fail
29	538.0	SDN	SD	46	26	26	-6		Marginal
34	578.0	D3+4	SD	42	24	22	-6		Marginal

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dB μ V) FM	CN Db FM	Frequency DAB	Level (dB μ V) DAB	CN Db DAB
BBC 1	98.9	75	44	225.64(12B)	78	43
BBC 2	89.3	74	42	225.64(12B)	78	43
BBC 3	91.5	71	42	225.64(12B)	78	43
BBC 4	95.1	72	44	225.64(12B)	78	43

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 6



TEST POINT 7

Location Chorlton Street (south)
 NGR: SJ 84522 97818
 Alt: 51 m
 Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.8 km
Proposed Development	319°	0.2 km

Visible Existing Aerial Arrays: High gain antenna on 4 storey building.

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dBμV)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	40	22	19	-3		Fail
31	554.0	ARQA	SD	36	20	20	-7		Marginal
32	562.0	BBCA	SD	38	20	16	-4		Fail
35	585.8	BBCB	HD	33	18	16		-2	Fail
29	538.0	SDN	SD	36	20	18	-4		Fail
34	578.0	D3+4	SD	33	20	17	-3		Fail

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dBμV) FM	CN Db FM	Frequency DAB	Level (dBμV) DAB	CN Db DAB
BBC 1	98.9	73	42	225.64(12B)	78	42
BBC 2	89.3	72	42	225.64(12B)	78	42
BBC 3	91.5	42	44	225.64(12B)	78	42
BBC 4	95.1	75	44	225.64(12B)	78	42

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 7



TEST POINT 8

Location: Coburg Street
NGR: SJ 84593 97782
Alt: 52 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	311°	24.9 km
Proposed Development	313°	0.28 km

Visible Existing Aerial Arrays: High gain antenna on 1m mast, mounted at rooftop height on 2 storey properties, directed towards the Winter Hill Transmitter

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

Channel	Frequency	MUX	Format	Level (dB μ V)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	47	30	26	-7		Pass
31	554.0	ARQA	SD	56	32	30	-8		Pass
32	562.0	BBCA	SD	54	30	28	-8		Pass
35	585.8	BBCB	HD	52	30	28		-5	Pass
29	538.0	SDN	SD	50	30	28	-8		Pass
34	578.0	D3+4	SD	47	28	26	-8		Pass

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dB μ V) FM	CN Db FM	Frequency DAB	Level (dB μ V) DAB	CN Db DAB
BBC 1	98.9	77	42	225.64(12B)	80	44
BBC 2	89.3	72	43	225.64(12B)	80	44
BBC 3	91.5	72	42	225.64(12B)	80	44
BBC 4	95.1	72	42	225.64(12B)	80	44

Television signal strengths are low, and corruption is being received.

VISIBLE TV AERIAL LOCATED IN THE AREA OF TEST POINT 8



TEST POINT 9

Location: Minshull Street South
NGR: SJ 84623 97783
Alt: 53 m
Mast Height: 10 m

LOCATION	BEARING	DISTANCE
Winter Hill Transmitter	307°	27.6 km
Proposed Development	311°	1.6 km

Visible Existing Aerial Arrays: none

Visible Existing Obstructions: Various multi-storey buildings/Trees in the general direction of the Winter Hill Transmitter

WINTER HILL UHF TRANSMITTER - REPORT

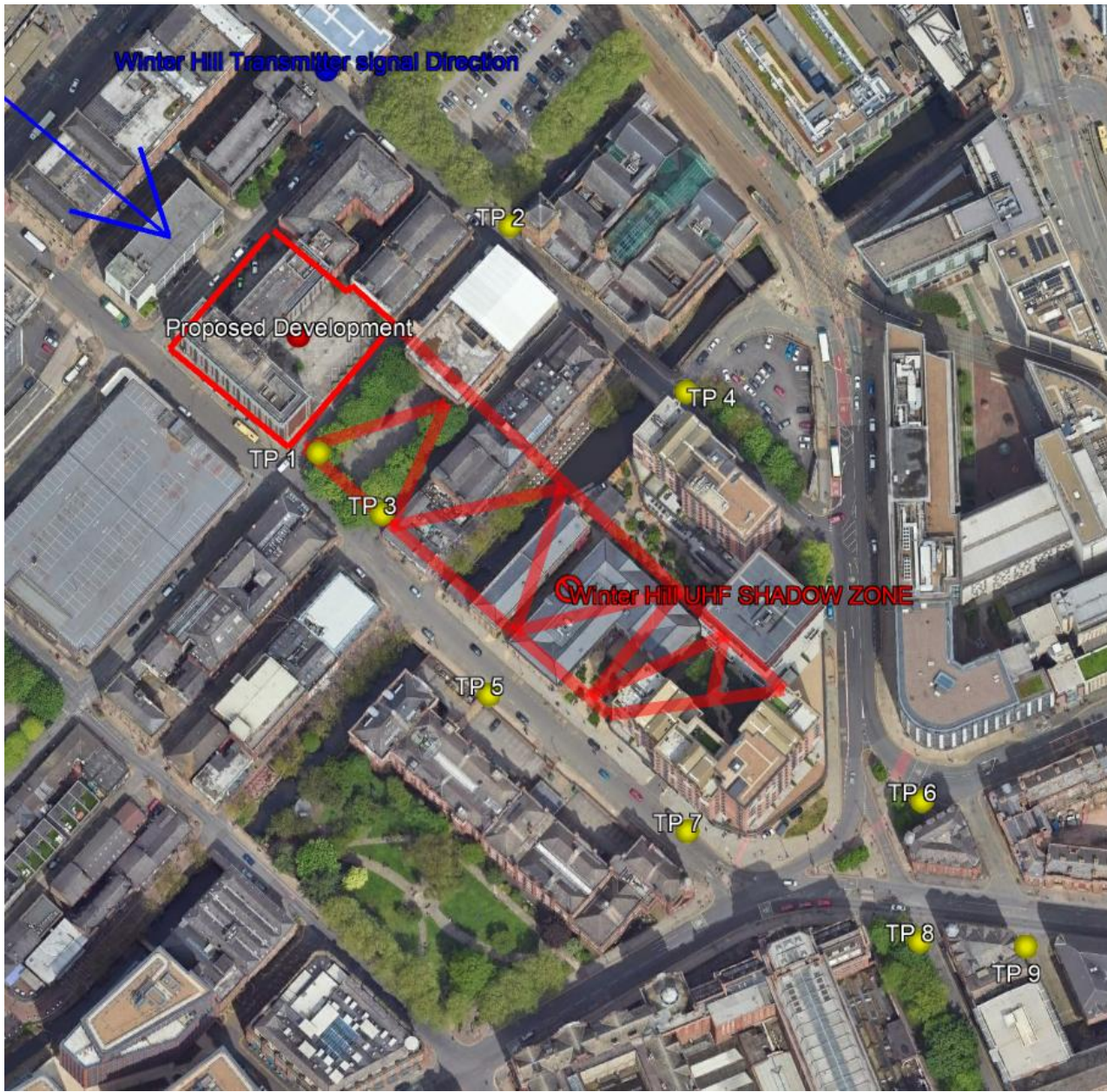
Channel	Frequency	MUX	Format	Level (dBμV)	CN dB	MER	VBER	LBER	Quality
37	602.0	ARQB	SD	42	26	24	-6		Marginal
31	554.0	ARQA	SD	53	28	26	-8		Pass
32	562.0	BBCA	SD	54	30	28	-8		Pass
35	585.8	BBCB	HD	48	26	26		-4	Marginal
29	538.0	SDN	SD	49	26	25	-7		Pass
34	578.0	D3+4	SD	40	20	20	-5		Marginal

FM/DAB TRANSMITTER – REPORT

Channel	Frequency FM	Level (dBμV) FM	CN Db FM	Frequency DAB	Level (dBμV) DAB	CN Db DAB
BBC 1	98.9	74	42	225.64(12B)	79	42
BBC 2	89.3	74	40	225.64(12B)	79	42
BBC 3	91.5	72	40	225.64(12B)	79	42
BBC 4	95.1	71	42	225.64(12B)	79	42

Television signal strengths are low, and corruption is being received.

POTENTIAL IMPACT ZONE – MAP 1



MITIGATION

Terrestrial Television Reception

Remedial Aerial Work

One or all the following may assist in rectifying interference being received to terrestrial television reception.

Change of aerial type to one most suited to the type of interference being received.

Redirecting existing television aerial to an alternative transmitter that is not affected, in some cases the existing television aerial may not be suitable for redirecting and the installation of a suitable television aerial may be required.

Re-siting of the television aerial to a position on the property where interference is reduced or not present.

Increase or decrease of aerial height.

Installation of masthead amplification to improve television signal strengths being received.

Remote Television Aerial

When a remote television aerial is positioned at a location with good quality television reception, (which can be a considerable distance from the affected area), and the signals are brought back via a cable network to the affected properties.

Utilising Satellite Reception

Should rectifying terrestrial television reception prove problematic, the installation of satellite systems utilising the Freesat/Sky platform can assist in rectifying reception issues.

To provide satellite television reception for individual affected dwellings or commercial units requires the installation of a satellite dish and set top box.

Satellite Television Reception

Remedial Satellite Work

One or all the following may assist in rectifying satellite television reception issues.

Re-siting of the satellite antenna to a position on the property where a clear line of sight can be achieved.

Increase in height of the satellite antenna to achieve a clear line of sight to the satellite.

Remote Satellite Dish

When the receiving satellite dish is sited in a position where a clear line of sight can be achieved; this can sometimes be a considerable distance from the affected property. In some instances, the satellite dish may require siting on the offending property to achieve a clear line of sight, or on an adjoining property where permission will have to be sought. The signals are brought back to the affected property via a cable and amplifier network.

The need for such mitigation would need to be determined on a case-by-case basis.

REFERENCE OF TERMS

c.	Circa
CH	The UHF Channel allocation from the transmitter.
MUX	The digital multiplexer allocation/operator.
Tx	Transmitter.
dBµv	Carrier strength reading (decibel microvolt).
C/N	Carrier /Noise Ratio
VBER	Measurement for digital signal after error correction (BER after VITERBi)
LBER	BER after been applied the LDPC (low density parity check) error correction.
SD	SD Standard Definition
HD	HD High Definition
NGR	National Grid Reference
ALT	Altitude above sea level at the location.
BRG	Bearing from North.
GPS	Global Positioning System.