

UCB IRELAND
AM/FM LICENCE APPLICATION 2006

SECTION 07

TRANSMISSION PROPOSALS



7.1 Introduction

UCB Ireland proposes to use the RTE Transmitter site at Tullamore, Co Offaly which becomes available at the end of 2008 when RTE Radio 1 ceases transmitting on AM. This site is already coordinated for 567 kHz and could, with agreement from the RTE Authority, provide Quasi-National coverage of Ireland. In the event of this not being possible, **UCB Ireland** has been advised by RTE NL that the site could be re-coordinated for 612 kHz and provide similar coverage.

7.2 Primary MF-AM transmission proposal

i) Rational for the MF-AM transmission plan

General description of the proposed coverage

Good coverage should be available in the Midlands, reaching Dublin in the east, Galway in the west, Louth, Monaghan and South Donegal in the North and Limerick, Tipperary and Kilkenny in the South.

Areas that may receive marginal or unsatisfactory reception

Areas of marginal or unsatisfactory will include: Co. Donegal, Co. Sligo, West Galway, West Limerick, Co. Kerry, Co. Cork, Co. Waterford, Co. Wexford. Some of these areas will be covered by the proposed low-power FM transmitters.

ii) Name, national grid co-ordinates and site height of the proposed transmitter station.

- **Name:** Cappyroe, Tullamore
- **National grid co-ordinates:** NGR IN 420 254
- **Site height:** 80m

iii) Brief description of the proposed location.

RTE NL was not in a position to provide the relevant geological characteristics. They point out that this is an approved site that has been operating as a high-powered AM station since 1975 so geographical characteristics are not an issue. There are no outstanding interference issues affecting existing tele-communications and other broadcast/wireless telegraphy services in the area.

iv) If the proposed transmitter site or technical characteristics vary from those listed, state why this change is required.

The proposed site at Tullamore does not appear among those listed because it is currently being used by RTE to broadcast RTE Radio 1 on medium wave and RTE had not announced its intention to cease broadcasting from that site at the time that the list was drawn up.

v) Details of the antenna/mast-sharing arrangements proposed.

Details of the antenna arrangements proposed:

Single stayed tower.

Owner of the antenna support structure:

RTE Networks.

Type of radio equipment and transmitting/receiving frequencies in use at the proposed site:

None except 567kHz.

vi) Anticipated/calculated coverage from the proposed MF-AM transmitter

A coverage map with relevant calculations is on enclosed coverage map CD and in separate Maps document.

vii) Proposed antenna height, earthing system, antenna system including feed point, antenna efficiency, ERP and anticipated radiation pattern.

Proposed antenna height: 296m

Earthing system

The mast with a radial earthing system with radials at 30 intervals from the base of the mast. There are also radials from each of the stay blocks.

The mast sits on top of a 1m insulator with the antenna feed point at the top of the insulator.

Antenna System including feed point

Information not available from RTE Networks.

Antenna Efficiency

Information not provided by RTE Networks.

ERP

100kWatts

Anticipated Radiation Pattern

Omni-directional: see coverage map on enclosed CD and in separate Maps document.

RTE Networks have told **UCB Ireland** that the antenna at Tullamore is an operational site which fully complies with current International Standards.

viii) Itemised capital costs for the proposed MF-AM transmission equipment.

Tullamore is currently a fully operational site and **UCB Ireland** will be renting the site from RTE NL.

ix) Provide details of the technical expertise available to the applicant group.

As RTE Networks are the owners of the proposed site, all technical and maintenance will be provided by them.

x) Please indicate if a planning application has been made and/or approved for the transmission facility.

As Tullamore is a fully operational site, it is not anticipated that any planning permission will be required.

7.3 Supplemental low-power VHF-FM transmission proposal

i) The rationale for the supplemental low power VHF-FM transmission plan.

While a 100kWatt AM transmitter situated at Tullamore will provide reasonable daytime coverage to up to 80% of the country, higher quality reception in the following urban areas will be provided by 300 watt FM transmitters at the following sites.

ii) A table of the main technical characteristics of each of the proposed transmitter stations should be provided in the following format:

SITE NAME	SITE COORDINATES	SITE HEIGHT ASL	ANTENNA HEIGHT AGL	ERP PER POL
Sliabh Mor	123456E 123456N	450m	60	37dBw per pol
Cnoc Beag	456789E 456789N	80m	24m	24dBw vert only

The following transmitters serve the cities of Dublin, Limerick, Cork and Waterford.

SITE NAME	NRG	HEIGHT	ANTENNA HEIGHT	ERP
Three Rock, Dublin	IO 177233	448m	30m	500W
Woodcock Hill, Limerick	IR 534634	244m	30m	500W
Spur Hill, Cork	IW 644672	137m	30m	500W
Gallows Hill, Co. Waterford	IS 593126	74m	30m	500W

The following transmitters serve large towns in the Sligo, Donegal, Carlow/ Kilkenny and Kerry areas.

SITE NAME	NRG	HEIGHT	ANTENNA HEIGHT	ERP
Truskmore, Co. Sligo	IG 759473	640m	30m	500W
Holywell Hill, Co. Donegal	IC 383170	360m	30m	500W
Mount Leinster, Co. Carlow	IS 827526	796m	30m	500W
Knockmoyle, Co. Kerry	IQ 830079	650m	30m	500W

- **Details of Antenna radiation pattern proposed for each transmitter station.**

The antenna radiation proposed for each transmitter is directional.

- **Details of the band pass filter/combiner system and directional coupler proposed to ensure compliance with the licence terms.**

RTE NL has informed us that a suitable band-pass filter will be purchased from Sira, RFS or other reputable manufacturer. No combiner is needed as the antenna is stand-alone.

- **Confirm if an emergency back up generator or other standby power supply will be provided for use by the applicant at the transmission facility.**

The sites are owned by RTE NL and provision of emergency back-up power is part of the contract.

- **In cases where the applicant group proposes to locate on or in close proximity to an existing mast, information regarding the owner and principal users of said mast is required.**

The transmission antenna for **UCB Ireland** will be located on an existing mast belonging to RTE NL.

- **Please indicate if a planning application has been made and/or approved for the transmission facility.**

The sites are owned by RTE NL who has full planning permission.

iii) Computer predicted coverage plots for the supplemental low power FM-VHF transmission network.

A coverage map for FM transmissions is on enclosed CD and in separate Maps document.

iv) Itemised capital costs for the proposed transmission equipment.

UCB Ireland is using an existing transmission company to provide transmission, facilities are as contained in the quote received from RTE NL, based on current rates.

v) Details of the technical expertise available to the applicant group.

As RTE Networks are the owners of the proposed sites, all technical and maintenance will be provided by them.

7.4 Audio distribution network

Audio distribution will be by satellite. Our signal will be routed through a wireless LAN, provided by Airspeed to either the RTE satellite uplink at Donnybrook or to the UK via Kingston Communications. The advantages of using satellite are two-fold: firstly it is a cost effective and reliable and secondly it provides a high quality service to the 400,000+ homes who already have satellite dishes. See Appendix 7.1.

