



MuxCo Home Counties Ltd

**An application to Ofcom for the
Hertfordshire, Bedfordshire & Buckinghamshire
Local digital radio multiplex**

March 2007

Executive summary

Please provide a summary of your application, of no more than four pages in length.

The strategy behind a new local business model

1. Ofcom will be aware of the concerns of many smaller operators that to date DAB digital radio has been established under a model that is cost prohibitive to them. As such, many small companies have not had the desire to turn their successful small businesses into loss making ones by contracting for long term, high cost digital carriage. Indeed, many have questioned whether there is a digital future for smaller radio services, and if so, whether it requires alternative technologies to DAB.

MuxCo Ltd was formed by Gregory Watson and Deanna Hallett to help address these issues. Working with their strategic transmission partner, National Grid Wireless, they have developed a different business model for the new local DAB multiplexes – a model that involves the smaller radio groups and like minded organisations who wish to establish a broadcast future. By working with these companies, as shareholders and service providers, MuxCo is able to help them secure a foothold in the digital future and to take a direct ownership position in the development of DAB, which, until now, has been dominated by the larger radio groups. MuxCo also enables shareholder service providers to make the move to digital in a time scale which they choose rather than one which is forced upon them, without concerns that if they do not act now, they may miss the boat.

The overarching principle of MuxCo is to maximise the success of the local multiplex businesses with whom it will partner, by ensuring certain key criteria are met:

- Helping to deliver a strong consortium of partners and a complement of service providers
- Providing the local partners with access to a credible management team with a proven track record
- Preparing well researched and supported licence applications
- Delivering a sound transmission solution that maximises population coverage from an early date

MuxCo Home Counties Ltd

2. The applicant company for the Hertfordshire, Bedfordshire and Buckinghamshire local multiplex is MuxCo Home Counties Ltd (which for ease of reference in the application is referred to as 'MuxCo HBB'). The shareholders in this company are:

• The Local Radio Company plc	20%
• Adventure Radio Ltd	20%
• Absolute Radio International Ltd	20%
• Shadow Radio Holdings Ltd	5%
• MuxCo Ltd	35%

MuxCo HBB represents the smaller local radio companies that operate within the area, working with neighbouring small scale radio broadcasters and companies with considerable knowledge and experience in launching and operating successful local multiplexes. Between the shareholders, they operate four local stations – Hertbeat FM, Herts Mercury 96.6, Mix 96 and Mix 107. In addition, Absolute Radio operates Oxford's FM 107.9 and JACK fm.

The objective of MuxCo HBB is to establish and operate a credible local multiplex that provides flexible, efficient and affordable opportunities for existing local analogue operators and new digital service providers, and to deliver good returns to shareholders.

The Proposed Services

3. The focus of the local multiplex is 'local, local, local'. We are aware that other multiplex operators have tended to offer a range of existing analogue services (mainly their own) and then to provide a number of new digital only services, which form part of quasi-national networks and have little (if any) relevance to the local area. The overlap of the London multiplexes within this licensed area, as well as the three national multiplexes that will be operating by the time that this multiplex will launch, will result in a large number of big branded but nationally focused services to be audible. We believe that local radio has a strong commercial future – there will always be demand for locally focused services providing local news and information, as well as satisfying local advertiser interests. We therefore believe that it is important for multiplexes to provide opportunities for a wide range of local services, and for local radio operators to have the opportunity to provide these in an efficient and economical way.

MuxCo HBB will provide spectrum to accommodate the following five local analogue services from launch:

- Chiltern FM
- Horizon FM
- Classic Gold
- Hertbeat FM
- BBC Three Counties Radio

And will provide spectrum for four new digital services to operate from launch:

- JACK fm
- Easy Radio
- Specialist Music channel
- Local Speech channel (providing local news, information and comment)

With a further service to launch in 2010

- Herts Mercury 96.6

In addition, we have allocated capacity for the provision of DLS and EPG at launch, as well as for the development of innovative data services.

The Winning Criteria

4. We believe that MuxCo HBB is in a unique position to introduce and support DAB digital radio in Herts, Beds & Bucks for the following reasons:

The extent of the coverage area proposed to be achieved by the applicant

5. Our transmission plan will deliver outdoor coverage of 89.5% and indoor coverage of 78.9% from launch. The plan has been designed to serve the maximum population within a realistic and sustainable business plan. We believe that we are proposing the appropriate balance between population coverage and budget constraints at launch.

Our plan has also taken into account the major road arteries that traverse the region, in particular the M1, A1(M), M10 and M25. Our proposed data services recognise the importance of regularly updated and reliable traffic & travel updates.

The timetables proposed by the applicant for achieving the stated coverage (i.e. transmission roll-out) and for the commencement of broadcasting of the services proposed

6. It is our intention to launch with 7 transmitters in April 2008, broadcasting 8 services. One additional service is proposed to launch in 2010 and we would envisage other services launching during the early years of the licence period.

The launch of MuxCo HBB will follow closely that of the second national multiplex. As a result, the launch marketing activity of that multiplex will generate a considerable level of public interest in digital radio within this area. We believe that we will be able to capitalise from some of this promotional activity. By providing solid local coverage, local consumers will experience a significant expansion of digital choice from early 2008.

The ability of the applicant to establish the proposed service and to maintain it throughout the licence period

7. MuxCo HBB is a company with a solid shareholder base representing a mix of local broadcasters, media companies with interests in other areas and companies with substantial digital radio experience. The shareholders are committed to investing significant resource to underpin the business plan. The relationship that the shareholders will have with the multiplex, in relation to the provision of audio and data services, provides further comfort, and helps to demonstrate our ability to establish and maintain the proposed selection of services throughout the licence period.

Through Gregory Watson and Deanna Hallett, and with National Grid Wireless as our chosen transmission providers, we have significant knowledge and experience in the establishment and operation of local multiplexes. Our business planning assumptions, in relation to revenue potential and costs, are robust and we believe that we have adopted a prudent approach to multiplex planning.

The extent to which the digital sound programme services (other than BBC services) proposed to be included in the service would cater for local tastes and interests, general or particular

8. We propose to launch with 9 services; 4 of which will be new to the area. Carriage of existing services is important to help promote digital radio and drive listeners from analogue to digital. New digital only services help broaden choice and provide further incentives for consumers to buy a DAB digital radio. Our proposed new services will significantly broaden choice; in particular our Speech service which for the first time brings a dedicated local news, information and talk service to this area. This service, as well as being a source of information, will provide opportunities for local residents to air their views and comments. Collectively, our proposed digital services appeal to 75% of the adult population.

The extent to which any such digital sound programme services would broaden the range of programmes available in the area by way of local digital sound programme services, and the extent to which they would cater for tastes and interests different from those already catered for by local digital sound programme services provided for that area or locality

9. We note the overlap of the London multiplexes into the southern half of the HBB area and that a percentage of local listening in this sub-sector will always be to the London services. However, as this is the first local multiplex to serve the whole of the area and with the majority of services

that we propose unique to our multiplex, i.e. not carried on a London multiplex, the broadening of choice that we will provide will be significant.

The extent to which there is local demand or support for the proposed service

10. Our consumer research has highlighted strong interest in the services that we propose carrying. Our task will be to promote the brands in order to stimulate both digital uptake and trial of our services.

Whether, in contracting or offering to contract with persons providing digital sound programme services or digital additional services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of such services

11. We have established fair and transparent policies for negotiations with potential programme and additional service providers, and maintain full records of any contacts and discussions which take place, in whatever form, prior to, during and after the application process.

Summary

12. We believe that MuxCo HBB offers the strongest choice for the operation of the Herts, Beds & Bucks multiplex.
 - The consortium is committed to ensuring that local digital radio is a success in this area.
 - Members of the consortium have an impressive track record in applying for and operating multiplexes.
 - Members of the consortium have an impressive track record in operating stations across the area, many of which are market leaders in their localities. This management expertise will be invaluable to the multiplex, as well as assisting the development of new programming streams to encourage the broadening of choice.
 - The multiplex is well resourced, in terms of both management and finances.

In terms of the proposed line up of services, our proposals are:

- Popular – offering a broad range of services comprising complementary and popular formats with wide appeal
- Innovative – developing opportunities for data services
- Commercial – being backed by financially sound, dynamic and professional service providers and shareholders

General information

1. Name of Applicant, Address, Telephone and Fax Nos., E-mail address

This must be a single legal entity: either a body corporate or a named individual person. If the former, a copy of the certificate of incorporation must be included with the application.

MuxCo Home Counties Ltd
Registered Number - 06013948

2. Main Contact (For Public Purposes)

Please nominate at least one individual to deal with any press or public enquiries, stating:

Name: Gregory Watson
Telephone (daytime): 07917 413700
Address: 96a Curtain Road, London EC2A 3AA
E-mail address: gregory.h.watson@googlemail.com

3. Main Contact (For Ofcom Purposes)

Please nominate one individual to whom questions of clarification and/or amplification should be sent.

As above.

Section 51(2)(a) and (b): Extent of proposed coverage area and timetable for coverage roll-out

4. Summary of coverage proposals

Provide a summary, fully consistent with the more detailed information about transmission sites supplied separately (see Q.6 below), of the coverage areas proposed to be achieved by the applicant's technical plan, and an estimate of the adult (aged 15+) population which will be served by this local radio multiplex service. For the avoidance of doubt, Ofcom's assessment of coverage, and the concomitant roll-out obligations applied in the licence, will be based solely on the transmission data supplied in response to Q.6 of the application.

13. The transmission proposal is designed to provide good overall coverage across the licensed area, including all urban areas and motorways. Careful consideration has been given to the design requirement to maximise received field strength within the licensed area in the built up areas, while meeting national and international co-ordination limits.

The total adult population within the PPA is 1,856,685.

MuxCo proposes to launch with seven transmitters, which will provide:

- Outdoor population coverage of 1,662,003 adults (aged 15+), which equates to coverage of 89.5% of the population within the PPA.
- Indoor population coverage of 1,464,850 adults (aged 15+), which equates to coverage of 78.9% of the population within the PPA.

Standalone Coverage

14. The following table shows the coverage of each individual site, demonstrating the considerable overlap between stations which will ensure a reliable signal to a significant proportion of the licensed area even should one station be on reduced power or have failed.

Transmitter Site	Standalone Coverage: Indoor	Percentage Licence Area	Standalone Coverage: Outdoor	Percentage Licence Area
Sandy Heath	474,922	25.6%	775,964	41.8%
Hemel Hempstead	581,390	31.3%	775,120	41.7%
Zouches Farm	351,291	18.9%	657,007	35.4%
Bow Brickhill	411,654	22.2%	642,167	34.6%
Quainton Hill	213,649	11.5%	450,530	24.3%
High Wycombe	41,993	2.3%	80,869	4.4%
Brookmans Park	304,469	16.4%	521,124	28.1%

Cumulative Coverage

15. The table below shows how the overall coverage is achieved up through the use of a network of seven transmitters.

Transmitter Site	Cumulative Coverage: Indoor	Percentage Licence Area	Cumulative Coverage: Outdoor	Percentage Licence Area
Sandy Heath	474,922	25.6%	775,964	41.8%
Hemel Hempstead	1,019,004	54.9%	1,402,956	75.6%
Zouches Farm	1,138,921	61.3%	1,476,282	79.5%
Bow Brickhill	1,296,799	69.8%	1,568,488	84.5%
Quainton Hill	1,376,296	74.1%	1,603,474	86.4%
High Wycombe	1,395,887	75.2%	1,616,310	87.1%
Brookmans Park	1,464,850	78.9%	1,662,003	89.5%

Network Resilience

16. The following table shows the impact of loss of one transmitter at a time, demonstrating its contribution to the overall network.

Transmitter Site	Cumulative Coverage Loss: Indoor	Percentage Licence Area	Cumulative Coverage Loss: Outdoor	Percentage Licence Area
Sandy Heath	292,031	17.6%	74,790	4.5%
Hemel Hempstead	445,781	26.8%	240,990	14.5%
Zouches Farm	163,613	9.8%	4,986	0.3%
Bow Brickhill	219,690	13.2%	13,296	0.8%
Quainton Hill	185,617	11.2%	33,240	2.0%
High Wycombe	119,167	7.2%	13,296	0.8%
Brookmans Park	175,185	10.5%	44,874	2.7%

17. We provide some additional information in a confidential response to this question in Part B and D.

5. Timetable for coverage roll-out

Outline the timetable in accordance with which the coverage proposed at Q.4 would be achieved, and the technical means by which it would be achieved. This should also be fully consistent with the more detailed information provided confidentially in response to Q.6.

18. We believe that the earliest launch of our multiplex service brings the greatest possible advantage to the development of the digital radio audience in the HBB area. We therefore propose to launch service on 1st April 2008 with coverage of 89.5%.

We have made contingent arrangements with transmission provider National Grid Wireless ('NGW') to ensure that this launch date can be achieved. In making this assertion we have assumed that we would receive notification of award of the multiplex licence by 31st July 2007 and be permitted to test transmitters to air from 1st March 2008.

Transmitter Site	Roll Out Date
Sandy Heath	April 2008
Hemel Hempstead	April 2008
Zouches Farm	April 2008
Bow Brickhill	April 2008
Quainton Hill	April 2008
High Wycombe	April 2008
Brookmans Park	April 2008

We have identified additional sites for potential network enhancement in the future, including Bishops Stortford and Stevenage. At present, these transmitters are not planned and no date is proposed when enhancements might prove feasible within the business plan. However, we wish to reserve the right to consult with Ofcom during the licence term to examine these and other opportunities to increase population coverage in an economically viable manner.

Antenna Systems and Combiner

19. NGW is or will be the owner of four of the required antenna systems. NGW have already requested and received indicative offers for the majority of requirements for the three sites where antenna systems are controlled by Arqiva. Discussions on the combiner supply have taken place between NGW and Arqiva Network Access, and we are advised that no obstacles are expected to meeting the timetable for launch.

Transmitter systems

20. NGW have discussed transmitter requirements with their preferred suppliers Rohde & Schwarz ('R&S') with whom they have a Frame Agreement for the supply of both DTT and DAB transmitters. R&S have confirmed their ability to provide the necessary transmitter systems and installation services and has confirmed that it can commit to the installation of the sites within the timescale of the transmission roll-out.

Distribution

21. The distribution between the multiplex centre and the transmitters will be maintained on a Self Provide Network ('SPN') using a Ring topography, ensuring that no one single fault on the distribution will cause a loss of service. The distribution ring will contain both a mixture of existing and new NGW maintained RF SHF links. NGW can confirm that it is able to install the new and upgrade the existing sections of the SPN Ring within the timescale of the transmission roll-out.

Accommodation and Power Requirements

22. NGW Network Access have already confirmed that it can provide suitable accommodation and power supply at five of the sites and of the two remaining sites, NGW Network Access has already negotiated new or extension of existing accommodation and power supply agreements.

6. Detailed coverage proposals

Provide, in an electronic text file, details of the technical plan, which should consist of the following components: assignment details, implementation table, and implementation data.

- a) The first part of the technical plan is an electronic file of assignment details. This gives the relevant technical detail of each transmitting station which the applicant is undertaking to provide as part of its network. It will be used to enable Ofcom to estimate the coverage which will be achieved by the applicant, on a basis consistent with other applicants. It will also enable confirmation of the plan's compliance with Ofcom's various technical requirements. If more than one Technical Plan is proposed, a separate file should be submitted for each one. Each file of assignment details must be submitted in the data format specified at <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>. All files must be supplied in flat text format. This is the data format in which all transmitter co-ordination requests to Ofcom have been supplied to date, and is based upon ASCII97 defined by the European Radiocommunications Office – the Wiesbaden 1995 Plan management body.
23. The assignment details accompany this application are provided in electronic form.

- b) A separate table, the implementation table, should also be provided for the technical plan. This should list, for each proposed transmitter, the date of implementation promised with the parameters promised in the transmission plan, the owner/lessor of aperture space on the mast/tower, and any relevant accompanying notes. If it is proposed to introduce a transmitter with different parameters (typically lesser power or height) for an interim period, then on both lists there should be one entry for the initial assignment, and a second entry for the one which replaces it, with a note stating which transmission assignment is replaced.

Site Name	NGR	Date of Implementation	Owner/lessor of aperture space on mast/tower	Antenna height (metres)	Notes
Sandy Heath	TL 2040 4940	April 2008	Arqiva	150	NGW Network Access has asked Arqiva to provide a new antenna at this site. See note.
Hemel Hempstead	TL 0880 0450	April 2008	BT	79	NGW will use the existing Digital Radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other users.
Zouches Farm	TL 0440 2100	April 2008	BT	62	NGW will use the existing Digital Radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other users.
Bow Brickhill	SP 9140 3420	April 2008	National Grid Wireless	55	NGW will use the existing Digital Radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other users.
Quainton Hill	SP 7500 2130	April 2008	Thames Water	37	NGW Network Access will install a new antenna at this site
High Wycombe (Four Ashes)	SU 8790 9550	April 2008	Arqiva	34	NGW will use the existing Digital Radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other users.
Brookmans Park	TL 2600 0490	April 2008	National Grid Wireless	48	NGW will use the existing Digital Radio antenna and NGW Network Access will provide a combiner at this site. This antenna will be shared by other users.

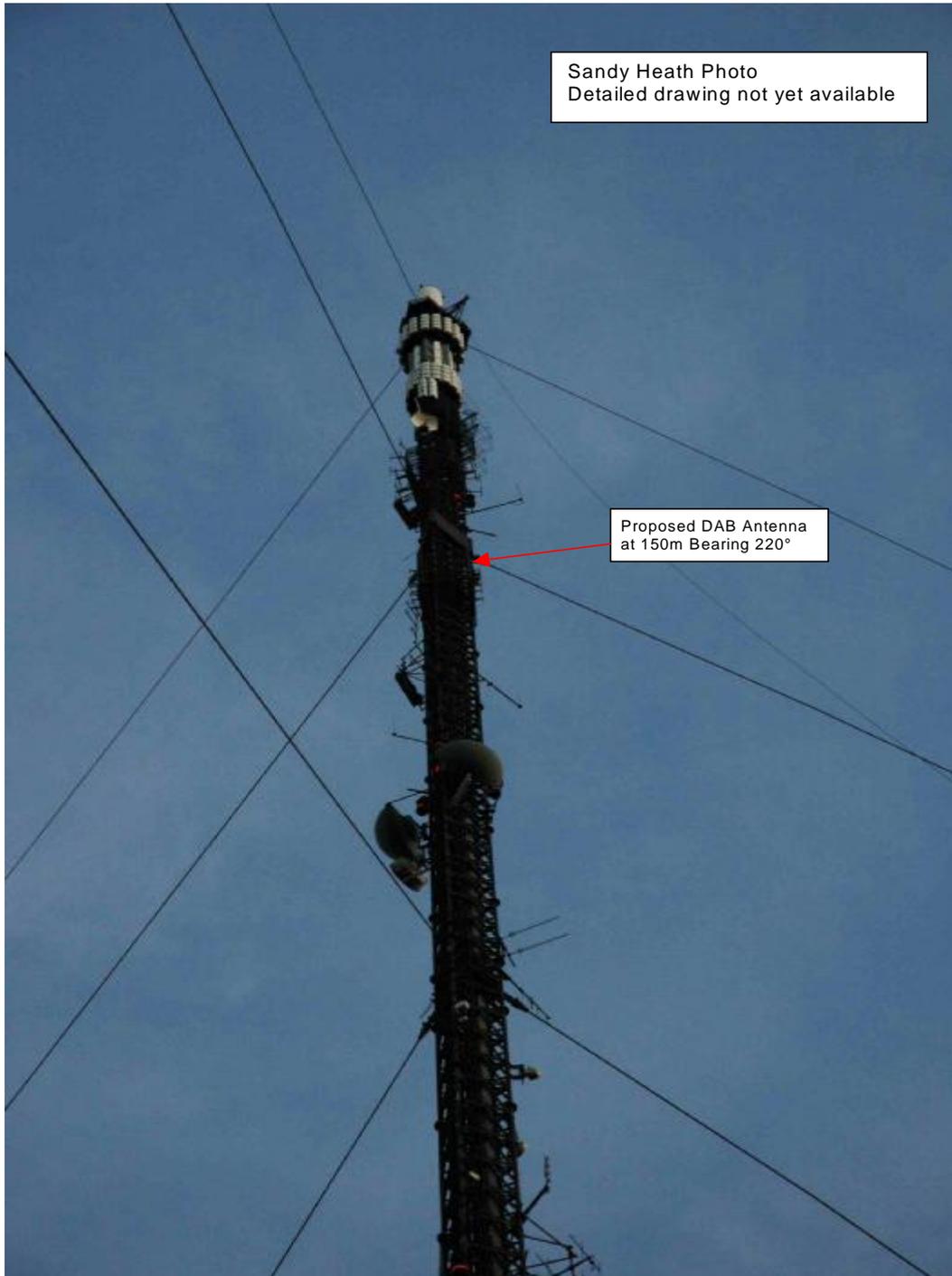
Note - To maximise coverage within the licensed area, while minimising outgoing interference, it is proposed to install a new antenna at the Arqiva Sandy Heath site. However, if due to planning or installation delays this antenna should not be ready for April 2008, a temporary arrangement using the National Antenna at 167metre at an ERP of 1kW will be used. This will require a temporary combiner at the site.

- c) Each transmission assignment should also be represented by site implementation data, specific to each transmission site (only one set of data for each site should be submitted). This detail is intended to elicit the practicability of the technical plan. For each site name (corresponding to assignment details and implementation table):
- i) If existing aerials are to be used, this needs to be stated and an explicit reference made. If not, then applicants should provide a sketch diagram (or set of diagrams), approximately to scale, of the portion of the supporting structure on which the radiating aerials are to be mounted. Show the radiating aerials, and the aerials of other services mounted immediately above, below, and at the same level as, the radiating aerials of the applicant's service.
 - ii) Provide details of the building at the site in which the transmission equipment is to be housed.
 - iii) Provide confirmation from each of the relevant parties that they have seen and agreed the applicant's proposals (to the extent that this includes new works) in respect of:
 - aerial mounting on the supporting structure, as proposed in the sketch diagram;
 - running of feeder cable from transmission system to aerial(s);
 - sharing of aerials and insertion/use of combiners, where relevant;
 - siting of transmission equipment;
 - supply of power;
 - building works (if any).
- The relevant party in each case, namely whoever controls the infrastructure (mast, cableways, building, power), should be named explicitly.
- iv) State whether and if so how the transmission arrangements are expected to change due to the TV digital switchover programme.

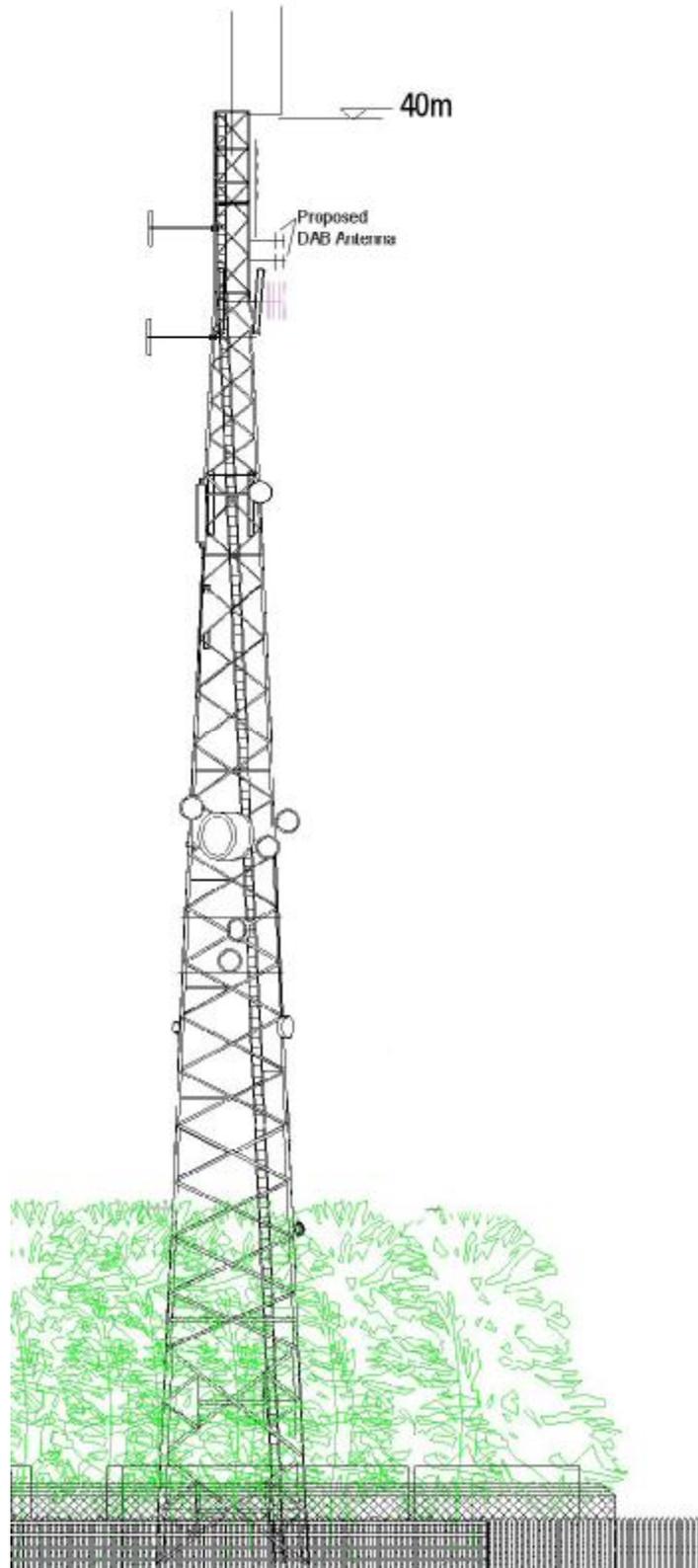
Note: submission of this information does not imply that Ofcom will validate the design of the aerial system. The licensee will be required to adhere as far as is reasonably practicable to the antenna pattern proposed in the assignment details, and in all cases to limit the maximum radiated power in any given direction as may be required by Ofcom.

Site Implementation Data - Diagrams

24. Drawings of each of the new proposed antenna at the transmitter sites are shown below in this document. All existing antennas are not shown as details are already known.



Quinton Hill



ii, iii & iv) Transmitter Accommodation Antenna Systems, Power, and Building Works

25. NGW has confirmed that the designs of the existing antennas and feeder systems are suitable for use at the powers indicated in the Assignment Details, and that the sites can be made available for the proposed transmitter systems. Electrical power is available. Minor building works are required in a small number of cases and NGW has confirmed that it will undertake these.

Site Name	Antenna System	Antenna Height (m)	Antenna Owner Permission	Accommodation Permission	Power Supply	Impacted By DSO
Sandy Heath	New Antenna, Cardioid on 220° Existing Feeder Management	150	Arqiva Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	See Note 1
Hemel Hempstead	Existing National Antenna, VHF/ DAB shared Band II/III 4 tiers of 4 panels	79	NGW Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	See Note 1
Zouches Farm	Existing National Antenna, VHF/ DAB Band III 1 dipole on pole	62	NGW Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	None (No UHF)
Bow Brickhill	Existing National Antenna, VHF/ DAB shared Band II/III 4 tiers of 4 panels	55	NGW Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	None (No UHF)
Quainton Hill	New Antenna, Cardioid on 110° Existing Feeder Management	37	NGW Network Access	Existing Thames Water (Other Users) accommodation. NGW is an existing broadcaster of FM services on this site. NGW has negotiated an extension of facilities at this site to allow for full implementation	To be provided by NGW Network Access	None (No UHF)
High Wycombe (Four Ashes)	Existing London 3 Antenna, Cardioid on 170° Existing Feeder Management	34	Arqiva Network Access	NGW Network Access have arranged with the landlord the arrangement for a New Cabin	To be provided by NGW Network Access	None (No UHF)
Brookmans Park	Existing London 3 Antenna, VHF 6 element yagi on 0° Existing Feeder Management	48	Arqiva Network Access	NGW Network Access are providing accommodation in the existing NGW Area	To be provided by NGW Network Access	None (No UHF)

Note

The DSO (Digital Switch Over) planning programme is ongoing with Antenna Design Proposals being formally agreed by all television broadcasters and Managed Transmission Suppliers. These are being systematically defined and issued in accordance with the DSO planning programme. Whilst the precise impact of DSO cannot be determined at present at these sites, NGW have assured us that they will endeavour to minimise the impact on both the rollout and operation of the new DAB service for HBB.

d) Provide the following details regarding transmission arrangements:

- i) Any transmission contracts that have been agreed
- ii) The status of these agreements

26. Transmission Contracts - In the event of winning the licence our partners NGW will undertake the provisions for transmission and multiplexing.

Status - Initial agreements exist within NGW to put the proposed contracts in place.

7. Other technical proposals

- a) Supply a network diagram, with associated tables and labels as necessary, showing in terms of functionality and (in principle) location: the source of each proposed digital sound programme service, digital additional service or television licensable content service, the point(s) of multiplexing, the point(s) of control of the elements of the multiplex (both FIC and MSC) and the distribution circuits to the transmitters. State the nature of the bearer circuit in each case, and its possible provider.
- b) For each of the data services proposed in Q.11(d) and Q.12, show: the transport mechanism within the multiplex on which it would be carried; whether stream or packet mode; the average net data rate (including any protection or encryption bits additional to those provided for in the ETS 300 401 specification); the range of data rates which might apply in any one transmission frame in support of the service, both net and (specifically attributable to the service concerned) gross; the protection mechanisms applying to their effective transmission (with reference to the options available in the ETS 300 401 specification, quantified where the specification provides for different numerical values to afford protection); whether it should be regarded as an additional service, a television licensable content service or an ancillary service; whether encrypted or not, and the encryption system envisaged; the use to which the data service would be put, including a justification for the multiplex capacity required. Outline how compliance will be achieved with the requirement that no more than the statutory proportion of the total multiplex capacity will be devoted to non-programme related data services; the figure excludes Synchronisation, MCI and SI). See also Q.20, about audio services.
- c) With reference to the response to Q.20, supply a diagram showing the relationship between the following elements of the multiplex: services; service components; transport elements (MSC sub-channels: dedicated, and X-PAD; FIDC).
- d) List any of the services in the multiplex which it is proposed be susceptible to interruption by announcements common to more than one service. If announcements are to be made on a geographically-selective basis, describe how this is to be achieved within the provisions of the ETS 300 401 specification.
- e) Describe how it is anticipated that the features of the ETS 300 401 will be used, if at all, in consideration of continuity of a programme service, or the offering of an alternative service, to listeners who lose reception of the multiplex signal, particularly in vehicles.

The response to this question should be submitted in confidence.

27. Our response to this question is submitted in confidence in Part B.

Section 51(2)(b): Timetable for commencement of services

8. Commencement of services

If it is envisaged that any of the digital sound programme services or their related ancillary services will not begin broadcasting from the start of the radio multiplex licence period, provide details of which service(s) will not commence from the launch of the radio multiplex service, the reason(s) for this, and an indication of the expected timescale for the commencement of the service(s).

28. It is envisaged that 4 analogue services and 4 digital only services will begin broadcasting from the start of the radio multiplex licence period. A further commercial service is proposed to launch in 2010. In addition, we will provide capacity to the BBC.

Section 51(2)(c): Ability to establish and maintain proposed service

9. Ownership and control of company which will operate the licence (a) Board of Directors

- i) Provide the name, occupation, other directorships, other media interests, background and relevant media experience of each director (executive and non executive), including the proposed chairperson.
29. Please see the following pages. It is proposed that the chair will rotate between the directors.
- ii) If there are firm plans to appoint any further directors, provide information (with details of any specific individuals in mind). This information may be submitted in confidence.
30. There are no plans to appoint any further directors.

Gregory Watson

Occupation:
Managing Director

Other directorships:
Reception Media Ltd, Folder Media Ltd, MuxCo Ltd, Radio Academy, Radio Academy Trading Ltd, Children's Radio UK Ltd, Children's Radio UK (London) Ltd, Digital Radio Group (London) Ltd, Classic Gold Digital Ltd, The Digizone Ltd, EG Digital Ltd,

Other Media Interests:
None

Gregory graduated from the University of Exeter in 1986 with a degree in Accountancy studies, and commenced his career with KPMG Peat Marwick as a trainee accountant, where he qualified as a Chartered Accountant in 1990.

In 1991, he moved to the Radio Authority as Deputy Head of Finance. In this role his responsibilities were split between the management of the day-to-day financial operations of the Authority, the licensing and regulation of commercial radio and analysis of the radio and related media industries.

In 1998, Gregory joined GWR Group plc as Head of Special Projects, with responsibility for looking at all new analogue and digital opportunities. In this capacity, Gregory was involved in the submission by the group, along with key partners, for the application to run the national digital radio multiplex Digital One, and played a significant role in the pre-operational period of that multiplex prior to its launch in November 1999.

In 2001, Gregory was promoted to Group Corporate Development Director; a role under which he oversaw GWR's strategic development in new media alongside the development of local and regional analogue and digital radio licences. Gregory played a central role in the merger of Capital Radio plc and GWR Group plc which led to the formation of GCap Media plc in May 2005.

Gregory has always been passionate about commercial radio broadening its horizons and developing new commercial opportunities. In 2005, Gregory orchestrated the establishment of Children's Radio UK Ltd as a joint venture between GWR Group, HIT Entertainment and Susan Stranks. The company launched FUN radio as the UK's first (and still only) radio station dedicated for pre and primary school children and their parents and carers.

In 2007, recognising that a significant proportion of the radio industry was being left behind by digital advancements, not because they were unable to take an active role but often were not encouraged to do so, Gregory left GCap Media to provide digital media advice to smaller radio and media companies.

Gregory is a Trustee of the Radio Academy, and is Chairman of Radio Academy Trading Ltd.

Clive Dickens

Occupation:

Programming and Operations Director, Absolute Radio International Ltd

Directorships:

JACK fm Manchester (Manchester Radio 1061 Ltd), Absolute Radio International Ltd, JACK fm Oxfordshire (Passion Radio (Oxford) Ltd), Oxford's FM107.9 (Passion Radio (Oxford) Ltd)

Other Media Interests:

None

Clive is a founding member of Absolute Radio International and oversees all operational aspects of the company's activities. His recognised radio expertise is in demand worldwide and he consults to a select number of stations in Europe, Asia and the USA.

Clive lives in Buckinghamshire and knows the area extremely well, having started his radio career in Chiltern Radio where he worked for eleven years ultimately becoming Network Controller of 11 local stations. In 1993 he joined Capital Radio as Head of Programmes, at a time when it was expanding by acquisition.

In 2001 Clive joined forces with Donnach O'Driscoll and together they established Absolute Radio International. ARI and Clive advise various market leading stations across the US, the UK, Europe and Asia. Clients include the world famous radio stations 95.5 KLOS Los Angeles, WPLJ New York, WTMX - Chicago and WROR in Boston.

Most recently, Clive has overseen the successful and high profile re-launch of ARI owned Passion 107.9 as Oxford's FM107.9. He will be the first to launch a JACK fm format in the UK when the recently awarded JACK fm Oxfordshire station comes on air in late 2007.

Alastair MacKenzie

Occupation:

Finance Director, The Local Radio Company plc

Directorships:

Alpha Radio Ltd, Anton FM Ltd, Barrow Broadcasting Company Ltd, Bath Radio Ltd, Bridlington Radio Ltd, Bromley Mencap, Brunel FM Ltd, Bucks Broadcasting Ltd, Central FM Ltd, Commercial Radio Pension Trustees Ltd, Conqueror Broadcasting Ltd, Dune FM Ltd, Durham FM Ltd, East Kent Radio Ltd, Fire Media Ltd, First Radio Sales Ltd, Huddersfield FM Ltd, Isle of Wight Radio Ltd, Ivel FM Ltd, Katz Television Sales Ltd, Katz UK Ltd, Minster Sound Radio (York) Ltd, Minster Sound Radio Ltd, Mix 107 FM Ltd, Mowbray Radio Ltd, Pennine FM Ltd, Radio Investments Ltd, Radio Services Ltd, Renaissance Radio Ltd, Silk FM Ltd, South West Sussex Radio Ltd, Sovereign Radio Ltd, Spire FM Ltd, Spirit of Oxfordshire Radio Ltd, Stray FM Ltd, Sun FM Ltd, The Local Radio Company plc, The Quay Radio Ltd, Three Towns Radio Ltd, TLRC Enterprises Ltd, Trinity FM Ltd, Two Boroughs Radio Ltd, Vale FM Ltd, Wessex Broadcasting Ltd, West Country Radio Holdings Ltd, Yorkshire Coast Radio Ltd

Other Media Interests:

None

Alistair is Finance Director of The Local Radio Company plc which operates 28 local stations from Arrow FM in Hastings and Ivel FM in Yeovil to Central FM in Scotland. He is proud that the stations in the group are both commercially successful and play a full part in their local communities.

As Finance Director of Jazz FM, from 1992 until its sale in 2002, Alistair was responsible for the financial, administrative, human resources, legal and regulatory affairs of the business. He was Jazz FM's representative on industry committees and a board member of MXR, a company established to operate regional digital multiplexes consisting of Jazz FM, Chrysalis, Capital, Ford, Unique and GMG.

Before joining Jazz FM Alistair spent five years at Binder Hamlyn Chartered Accountants, where he gained broad experience of working with a wide range of clients. In his final two years with the firm he worked in corporate finance specialising in mergers and acquisitions, venture capital fundraising, working capital reports and flotations.

Kevin Snowdon

Occupation:

Managing Director, Watford and St Albans Broadcasting Ltd (Herts Mercury 96.6)

Directorships:

Watford and St Albans Broadcasting Ltd, Southend Radio Ltd

Other Media Interests:

None

Kevin has substantial knowledge of the radio business, having worked for over 20 years in the industry. 15 of these years have been in sales and general station management, where Kevin achieved notable success's, often in turnaround situations.

Kevin's career started on the South Coast working for Ocean FM in Hampshire and 2CR FM in Dorset. Following GWR's acquisition of the Chiltern Radio Group in 1994, Kevin moved to take up the post of Sales Director at Chiltern FM, ultimately becoming Managing Director for Horizon FM, Chiltern FM (Bedford & Luton) and Mercury FM (St Albans & Watford).

Following a brief spell outside of radio, Kevin took responsibility for Herts Mercury 96.6 in April 2005 following the sale of the station by GCAP Media to Adventure Radio. In the latter years of its ownership by GCap, the station consistently underperformed and was recognised as a failing business. Two years on, the station has seen dramatic improvements in its performance.

Having worked and lived across Herts, Beds & Bucks for the last 11 years, Kevin has extensive local market knowledge and is an active member of the local business community building strong local relationships.

Brett Harley

Occupation:

Managing Director of Hertbeat FM (Hertfordshire)

Directorships:

Murf Media and Coast FM (Spain)

Other Media Interests:

None

Brett is one of the founding members of Shadow Radio Holdings Ltd - the company that bought Hertbeat FM in 2005. Now living in Hertfordshire - and acting as the station's Managing Director - Brett knows the area well. Hertbeat FM's main drive over the last two years has been to increase local revenue - which he believes goes hand-in-hand with compelling local news and local programming.

Brett also owns the Sony Radio Academy Award-winning show prep company 'Murf Media' - who produce programme content for stations in the UK and around the world. In this capacity he's worked closely with some of the biggest names in radio - including Chris Tarrant at Capital FM.

In 2003 Brett also set up an English-language radio station in Spain - delivering content to an ex-pat community. Coast FM quickly established itself as the highest-billing station on the Costa Blanca, and, despite numerous competitors surfacing, that still holds.

Deanna Hallett

Occupation:

Managing Director, Hallett Arendt

Directorships:

Hallett Arendt Ltd, Folder Media Ltd, Muxco Ltd

Other Media Interests:

Fellow of the Radio Academy, Full member of the Market Research Society, Radio Centre RAJAR Research Committee

Deanna Hallett has more than 35 years experience in marketing and research. Her career began in 1972 at NOP working on audience and programming research with the first wave of radio licence applicants.

She developed her radio research skills at Independent Radio Sales where she ran a mini RAB working with advertisers, agencies and client radio stations to improve the position of radio within the media and specifically with agencies to heighten their knowledge and understanding of planning, buying and researching radio. With IRS client radio stations she advised in all areas of programming research, sales product knowledge training and station marketing.

She was appointed to the board as Marketing and Research Director in 1982.

Deanna set up Hallett Arendt in 1986 to work with radio stations in sales training, programming research and all aspects of station marketing having launched Essex FM as the first format driven station in the UK. Deanna was also involved in the first stage of cable franchise applications.

At NOP, she was instrumental in developing the now established radio diary research methodology and has sat on the industry research committee since its inauguration.

Today, Deanna is acknowledged as one of the top licence consultants in the country, with Hallett Arendt holding a record of unparalleled success, both in the UK and Ireland. They have worked as part of the winning teams for Classic FM - the first Independent National radio station - and Digital One - the first national digital radio multiplex operator. They also have successfully worked on a host of local and regional analogue licences as well as the new generation of digital services, again, both local and regional.

In 2003 Deanna set up a training programme, specifically with programmers in mind, The Programmers Development plan has been implemented across the EMAP group.

Moving forward Deanna aims to bring all her expertise to MuxCo by offering training, research and marketing advice to all its service providers in order to maximise the audiences and revenue to the HBB multiplex.

(b) Proposed Investors and Shareholding Structure

Full details of the proposed shareholding structure should be provided, including:

- iii) Names and addresses (the latter may be submitted in confidence) of all existing or proposed shareholders.

Shareholder	Shares	% Shareholding	% Loanstock
The Local Radio Company Plc 11 Duke Street High Wycombe Buckinghamshire HP13 6EE	10,000	20%	20%
Adventure Radio Ltd Adventure Island Sunken Gardens Western Esplanade Southend-on-Sea SS1 1EE	10,000	20%	20%
Absolute Radio International Ltd Suite 12, Pegaxis House 61 Victoria Road Surbiton KT6 4JX	10,000	20%	20%
Shadow Radio Holdings Ltd The Pump House Knebworth Park SG3 6HQ	2,500	5%	5%
MuxCo Ltd 96a Curtain Road London EC2A 3AA	17,500	35%	35%

- iv) Total number, class/classes of shares and issue price of shares (specify voting, non-voting, preference, other etc.).

31. 50,000 £1 ordinary shares issued at par.

- v) All voting shareholders and holders of 5% or more of non-voting shares and loan stock should be named. State the number, class/classes and price of shares to be issued to each investor.

32. See above.

- vi) Outline any shareholders agreements or arrangements which exist.

33. A standard shareholders agreement will be established, with standard pre-emption and voting rights to all shareholders.

34. The shareholders have agreed heads of terms which cover key issues of governance relating to the company including shareholdings, board composition, funding, pre-emption, exclusivity and confidentiality. This will be incorporated into a shareholders agreement in the event of a licence award.

vii) Where a corporate body other than a current Ofcom licensee will be providing 30% or more of the required funding, details should be given of its directors and main shareholders, and of its activities.

35. Further information on MuxCo Ltd is provided in Part B.

viii) Ofcom may request additional information (e.g. a banker's letter, statutory / management accounts) regarding the shareholders, or any other providers of finance, listed in the application.

36. We would be happy to provide any information as requested by Ofcom.

(c) Involvement of the Applicant in Specified Activities

Details are required of the involvement by the applicant and its participants (including shareholders or other subscribers of more than 5% of the applicant's total funding requirements) in any of the activities listed below, and the extent of the interest. For these purposes, the applicant includes associates of the applicant (i.e. directors and their associates and other group companies).

i) Advertising agencies

None

ii) Newspapers

None

iii) Other broadcasting interests

Absolute Radio owns Passion Radio (Oxford) Limited which operates Oxford's FM107.9 and JACK fm Oxfordshire, which is due to be launched in late 2007.

TLRC owns 2BR (Burnley and Pendle), 3TR FM (From & West Wilts), Alpha FM (Darlington), Arrow FM (Hastings), Bath FM, Central 103.1 FM (Stirling & Falkirk), Dune FM (Southport), Durham FM, Fire 107.6 FM (Bournemouth), Home 107.9 (Huddersfield), Isle of Wight Radio, Ivel FM (Yeovil), Minster FM (York), Mix 107 (High Wycombe), Mix 96 (Aylesbury), Quay (Portsmouth), Silk FM (Cheshire), Sovereign Radio (Eastbourne), Spirit FM (Chichester), Stray FM (Harrogate), Sun FM (Sunderland), Vale FM (South Somerset), Wessex FM (Weymouth & Dorchester), Yorkshire Coast Radio (Bridlington) and Yorkshire Coast Radio (Scarborough)

Adventure Radio's wholly owned subsidiary, The St. Albans & Watford Broadcasting Co., owns the licence to Herts Mercury 96.6FM and also owns 80% of Southend Radio 105.1, which is due to begin broadcasting in the near future.

Shadow Radio own Hertbeat FM.

iv) Bodies whose objects are wholly or mainly of a religious nature

None

v) Bodies whose objects are wholly or mainly of a political nature

None

vi) Local authorities

None

vii) Other publicly-funded bodies

None

* Applicants should note that this information is required for the purposes of checking compliance with the ownership rules, and is not relevant to an applicant's ability to establish and maintain its proposed service. If none of the categories above apply to the application this should be clearly stated.

10. Financial and business plan

(a) Overall Financial Strategy

Explain how the applicant considers it is able to establish and maintain, throughout the licence period, its proposed service. This explanation should include an assessment of each of the following, but is not restricted to these factors:

- i) The network construction phase
- ii) The operational start-up phase
- iii) Marketing
- iv) Ongoing operation of the service

The Strategy Behind MuxCo HBB

37. The strategy for MuxCo HBB can be summarised as:

- To create an opportunity for smaller local operators, who currently operate or propose to operate within the licence area, to participate in multiplex ownership, and by so doing provide them with a means to have greater control over their digital futures
- To establish an economical and efficient multiplex business which poses little additional burden, financial or managerial on these shareholders. This is achieved through working with well respected experts in digital radio management and transmission
- To provide opportunities for all existing analogue broadcasters to switch to digital, either by providing simulcast or near simulcast services or creating new digital services
- To provide a good return to shareholders
- To re-emphasise local radio as an important part of radio's future

The Shareholders and their Digital Strategies

38. The Local Radio Company plc ('TLRC') owns and operates 28 local radio licences across the UK, from Falkirk in Scotland to the Isle of Wight and from Hastings to Yeovil. Based in High Wycombe, TLRC was formed in 2004 to purchase the entire share capital of Radio Investments Ltd (one of the first investors in commercial radio, investing in London's Capital Radio back in 1973). TLRC jointly owns and operates the national sales house First Radio Sales in London and Manchester with UTV, creating radio advertising and marketing campaigns on 113 local radio stations across the UK. Within Herts, Beds & Bucks, TLRC operates two analogue services; High Wycombe based Mix 107 and Aylesbury's Mix 96.

In relation to local DAB, in a previous business, the senior management of The Local Radio Company ('TLRC') were founder shareholders in the regional multiplex company MXR, demonstrating their commitment to going digital in a cost effective and profit generating way. It is the intention of this same management to do the same at TLRC. TLRC recognises that the future of broadcasting will be digital and is committed to ensuring the group itself has a digital future. However, TLRC believes

that a number of the existing DAB business models that have been adopted do not reflect the concerns and financial status of the smaller radio companies, such as TLRC. In addition, the management have kept a watching brief on the development of new digital technologies. The group's strategy is to play an active role in the development of digital radio, and to ensure that it goes digital at the optimum time. MuxCo is pleased to be working with TLRC in a number of proposed licence areas, as we have every confidence that this is currently one of the most farsighted digital companies. By working together, we can help ensure that future technology changes that benefit the industry can be adopted. In relation to Herts, Beds & Bucks, with their head office in High Wycombe and with 2 analogue services broadcasting within the area, TLRC are pleased to be a shareholder in MuxCo Home Counties. Given the relative geographical relevance of the two Mix analogue services within the much larger multiplex area, TLRC do not believe that it is prudent or commercially viable to simulcast either service, certainly at this stage of digital development. However, through its shareholding, it has the ability to review the options to develop its services and to launch them within a commercially sensible timeframe.

39. **Adventure Radio Ltd** was established in February 2005 and acquired St Albans & Watford Broadcasting Company, broadcasting as Mercury 96.6, from GCap in March 2005. Stockvale Ltd is the major shareholder of Adventure Radio. Stockvale successfully bid for the commercial radio licence in Southend, which was awarded in April 2006. Adventure Radio's ambition is to build a small group of local radio stations in order for it to be a robust and viable business for the future. Adventure Radio's strategy is to strengthen their business position moving forward through the development of digital and analogue radio services in the Herts, Beds & Bucks and Essex area. Given the limited growth potential of Herts Mercury 96 due to size and competition within the market, they recognise that it is important to establish growth opportunities to secure the financial future and business viability. Whilst the benefits will take time to come through, they believe that participation in the digital multiplex will broaden their transmission area and therefore customer base, will enable the development of new media and non traditional revenue streams which become more viable within a larger broadcast area and will help extend the appeal to the existing audience base and protect against loss of listening through digital migration. Like other smaller radio groups, Adventure Radio do not believe that it is a realistic business proposition to simply simulcast Herts Mercury 96.6, a service focused on St Albans, Hemel Hempstead & Watford, across the substantially larger digital footprint. Their proposal is to deliver a new service which is built on Herts Mercury 96.6 but extends it to focus on the lifestyle of parents with young children within the region. Further information is contained in Part B.

40. **Shadow Radio Holdings Ltd ('SRH')** was established in 2005, primarily to acquire Hertbeat FM, the Hertfordshire radio station that had not managed to make a profit since its launch in 2001. SRH's directors, however, saw considerable potential in Hertbeat FM, despite it operating in a highly competitive market being so close to London. The directors also identified that the future of radio was digital radio, with their own research suggesting 35% of people in the Hertbeat FM TSA owning a DAB sets, a figure almost identical to that derived from our own consumer study. As such, SRH is keen to have an involvement in the future, and to be able to have a greater degree of control over its destiny. They commit to simulcasting Hertbeat FM on the multiplex. As Hertfordshire has a high percentage of people who commute to their workplace (and not just to-and-from London), SRH see value in allowing listeners to hear the station once they drive outside of the existing, smaller FM footprint. As with MuxCo HBB itself, SRH recognise the need to encourage car manufacturers to include DAB in-car receivers as a standard fit. MuxCo's proposals to develop traffic & travel services will help provide such an incentive.
41. **Absolute Radio International Ltd ('ARI')** is an established radio operator and international radio consultancy company. The company has in-depth experience of successfully operating radio services, and is at the forefront of radio developments across the world with a client base that extends across the USA, Europe, South Africa and India. An example of ARI's operating credentials is that in 2003 it acquired struggling 15-29 targeted station 107.6 Juice FM in Liverpool. Within two years, Juice was transformed from obscurity to under 30s market leader, winning numerous industry awards and accolades for its programming, promotions and content. ARI currently owns Oxford's FM107.9 where it has successfully re-launched the city's 15-29 targeted radio station. In October 2006, ARI was awarded a new FM licence to serve Oxfordshire, JACK fm, which is expected to launch in late 2007.

ARI is committed to being an active participant in UK local and regional DAB. It will participate in a number of applications over the coming years, either as a multiplex owner, a service provider or both. The new local multiplexes and the establishment of MuxCo will allow the next tier of local operators in UK radio to take a direct ownership position in the development of DAB. ARI's involvement in MuxCo HBB is with a view to introducing its unique 'JACK' brand & programming to this area. It will, alongside MuxCo, be involved in the Oxfordshire multiplex application, with a view to broadcasting its two Oxford stations via DAB across the entire county. ARI will consider applying for other local multiplexes as and when they are advertised. ARI's vision is to operate a content hub from its existing facility in Oxford which serves ARI's existing FM stations. Their newly appointed Commercial Director, Rachel Faulkner, has extensive experience in the HBB area, having spent 8 years managing and selling airtime at Mix 96 in Aylesbury. In addition, the General Manager in Oxford, Ian Walker, is a former programmer at the GCap Media's Chiltern Radio cluster. In addition to Rachel and Ian, ARI's Group Programming Director, Clive Dickens, was formerly the Group PD at Chiltern Radio and currently lives in Buckinghamshire. ARI plans to operate a local and regional sales

team specialising in selling its DAB stations in the Herts, Beds & Bucks region, as well as the Oxfordshire area, from its current operations centre in Oxford. ARI also sees innovative new uses of data streams via DAB being developed in the near future. This may include local news and traffic on demand, EPG information and premium Podcast material allowing commercial radio to monetise further its DAB spectrum and quality content.

42. MuxCo Ltd is a new company established by Deanna Hallett and Gregory Watson to provide digital radio solutions to local radio companies. Its principle objectives are to help deliver efficient solutions to service providers on local multiplexes and economical benefits to their shareholders. MuxCo will work with local partners to help encourage them to take a more active role in digital radio, from both a business point of view, as well as to the provision of services. After all, more choice of the right type locally will ultimately help drive the take-up of DAB. MuxCo believes that there is a strong business model to be developed for truly local multiplexes; ones that provide a range of interesting services demanded by local residents. All too often, new digital radio choice has simply meant the re-broadcast of a quasi-national service into a local area, with no local marketing support or activity to build awareness or encourage trial. Bringing on local broadcasters as shareholder provides greater incentives for these companies to invest in digital radio programming. An added benefit to both the multiplex and the listener of from the participation of such broadcasters is that, partly because of the limited resources they operate with, they are often at the more creative end of the radio spectrum. Further information on MuxCo and its shareholders is provided in Part B.

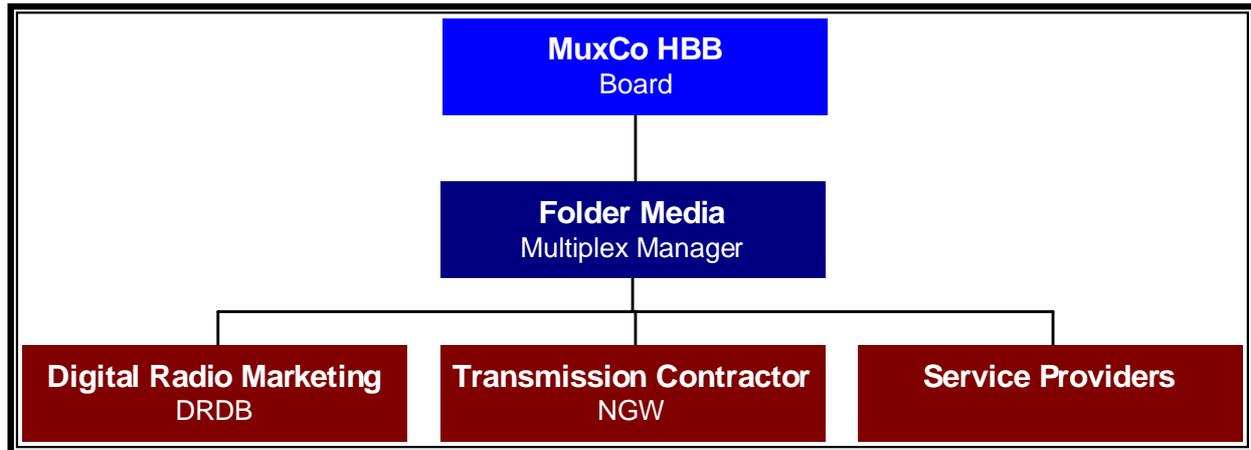
The Business and the Objectives

43. We have established a business model that will drive the company to provide a premium digital radio service. Four key objectives have been identified that will ensure that this goal is achieved:
- To operate a multiplex that offers a wide choice of programme services which addresses local tastes and interests, broadens choice and increases plurality of ownership
 - To promote and maximise take-up of digital radio receivers, by working with our analogue and digital service providers and through membership of the DRDB
 - To operate in a manner ensuring fair and effective competition
 - To operate a sound financial business which intrinsically is linked to providing popular formats

MuxCo HBB is committed to ensuring that digital radio is successfully established. We are well resourced technically as well as financially to support the needs of the service providers.

MuxCo Home Counties Ltd

44. The chart summarises the reporting structure of the company.



45. The Board has responsibility for the company's business strategy; monitoring and reviewing trading performance; appointing and contracting with service providers; developing multiplex bandwidth policies; developing pricing structures; appointment and supervision of the Multiplex Manager and compliance. The Board will meet at least six times a year.

Folder Media Ltd

46. MuxCo HBB has appointed Folder Media to provide multiplex management services. Folder Media is a company that has considerable experience in the day to day management of successful local multiplexes. Further information on Folder Media is provided in Part B.

(i) The network construction phase

47. The network construction phase includes three stages – planning, building and testing of the contribution, multiplexing, distribution and transmission elements of the overall transmission contract that MuxCo HBB will enter into with NGW. On the basis of this long-term commitment, NGW will fund the capital expenditure and installation of the infrastructure.

NGW have provided strategic support during the planning stage of the application and will liaise with Ofcom on behalf of MuxCo HBB.

As an established and respected transmission service provider, NGW have considerable existing resource and infrastructure to support the multiplex. NGW will provide 24 hour monitoring of the network Using a secure remote control system, NGW will control multiplex re-configurations. Additionally, MuxCo HBB will have remote access to the multiplexer should the need arise to take direct control. Multiplex reconfiguration will be undertaken in line with our policies and contractual agreements with service providers.

(ii) The operational start-up phase

48. The operational start-up phase includes contracting with NGW and service providers, liaising with Ofcom over the build process, ensuring regulatory issues, including the issuing of DSPS licences, are followed, and liaising with the DRDB on generic marketing activity, as well as with service providers directly.

As the multiplex managers, Folder Media will be responsible to the Board for the launch of the multiplex and its subsequent day to day operation; in particular, overseeing bit rate variations, enhancements or projects required by service providers; overseeing the testing of audio and data services; working with service providers and the transmission subcontractor to maximise multiplex functionality and efficiency; monitoring and fault reporting ensuring that the output of all service providers is correctly logged and compliant with legislation and codes; and helping develop new revenue streams.

(iii) Marketing

49. We believe that despite DAB digital radio having been 'live' for 8 years by the time the multiplex launches, there is still a considerable lack of public awareness of DAB that needs to be addressed. We recognise that as a sole body, MuxCo HBB's voice will be too small and inefficient. We will therefore seek to join the Digital Radio Development Bureau ('DRDB') or any successor, and will actively support industry-wide generic promotion of digital radio.

We will also work closely with our service providers to help co-ordinate more locally focused marketing of generic digital radio and of the services carried on the multiplex, with advice provided where relevant by Folder Media. In addition, service providers are likely to undertake their own brand marketing. We also wish to work with our service providers, particularly those that currently broadcast on analogue locally, to use airtime to promote DAB digital radio.

In order to fund membership of the DRDB, a contribution proportional to contracted capacity, will be levied at cost on service providers from the month following the launch of the multiplex. It has been assumed that a contribution of £10,000 will be required for this multiplex.

We believe that for listeners, multiplex owner identity is of little or no importance (and is potentially confusing). We will work with the DRDB to use a national through-the-line identity and graphic style that makes both digital radio and station brands the "heroes". While multiplex operators may be credited in some communication, it should be strictly secondary.

(iv) Ongoing operation of the service

50. Folder Media will provide ongoing management cover for the multiplex, including purchase and sales ledgers, IT, secretarial, legal, marketing co-ordination and technical support.

We will establish a web site to promote digital radio generically and the services specifically. The main aim of the web site, as well as providing a conduit of information between MuxCo HBB and service providers, will be to help educate and inform listeners and advertisers, as well as retailers.

(b) Funding

Detail the sources of finance that will be used to fund the licence, under the following headings:

Source of finance	£
Share capital	50,000
Loan stock	50,000
Leasing/HP facilities (capital value)	0
Bank overdraft	0
Grants and donations	0
Other	0
Total	£100,000

Applicants should provide evidence that sufficient funds are available to each investing shareholder to cover their proposed investments.

51. Letters on investment are provided in Part B.

Applicants should also provide a copy of the most recent unabbreviated accounts for each investing shareholder.

52. Recent accounts for the shareholders have been provided under separate cover. MuxCo Ltd is a new company and details of its shareholders and funding commitment is provided in Part B.

Where relevant, provide information on:

- i) Loan terms (e.g. interest rate, repayment terms, redemption/conversion terms);
- ii) Assets leased.

All of the funding identified above should be confirmed to the applicant. Explanation should be provided if this is not the case.

53. Loan stock will be issued interest free. Loan stock will be repaid in a timely manner as permitted by the cash position of the company.

(c) Financial Projections

The purpose of this question is to allow the applicant to demonstrate its understanding of the market. The forecasts should be based on reasonable assumptions, which are logically applied and justifiable.

The applicant should confirm in writing to Ofcom that:

- a) The projections contained in the financial model have been properly and accurately compiled on the basis of the assumptions listed and explanatory notes accompanying the projections
- b) That the policies adopted follow generally accepted UK accounting standards
- c) Such accounting policies have been properly and consistently applied.

Ofcom may request independent confirmation of the above, in the form of a letter from a firm of authorised UK accountants, addressed to the board of directors of the applicant.

The applicant should provide financial projections for the pre-operational period and on an annual basis for the subsequent 12-year licence period . The projections must include:

- i) Profit and loss accounts
- ii) Balance sheets
- iii) Cash-flow forecasts
- iv) Appropriate supporting schedules

The forecasts should be supplied on an Excel spreadsheet or similar and guidance notes should be provided. The applicant must also complete and submit the spreadsheet entitled "Financial Template for DAB Local Radio Multiplex Licence Applications" located at: <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/> using information from its business model. Guidance notes for completion of the Template can be found in Annex 3 to this Notice. This section must include a full listing of the underlying assumptions on which the financial projections are based.

The application should detail how revenue figures were derived, distinguishing between:

- i) access fees
- ii) fees based on audience or revenue shares
- iii) other fees (please specify)

Revenue forecasts should also distinguish between digital sound programme services, digital additional services and television licensable content services.

The application should clearly set out the fee structure for each service provider, and explain the reasons for any differences in fees paid between providers.

The response to this question may be submitted in confidence.

54. Our response to this question is submitted in confidence in Part B.

(d) Audience Projections

Provide the following information:

- i) The projected adult (aged 15+) population of the Total Survey Area (TSA) within which it is intended to measure the audience of the digital sound programme services to be broadcast on this local radio multiplex service

55. Our projected adult population for the multiplex area is 1,870,000.

- ii) Projections for audience ratings (e.g. weekly reach, average weekly hours of listening) of the digital sound programme services to be broadcast on this local radio multiplex over at least the first four years of the service, with detailed demographic breakdowns as appropriate

56. The following table summarises our projections for audience ratings for the simulcast analogue services, and secondly for the digital only services. In relation to the analogue services, we have forecast their total hours across both analogue and digital platforms, and then highlight their digital hours generated through the multiplex.

	Year 1	Year 2	Year 3	Year 4
Chiltern				
• Weekly Reach %	13.6%	13.4%	13.2%	13.0%
• Ave Hours	8.7	8.7	8.7	8.7
• Total Hours ('000)	2,213	2,180	2,148	2,115
• Digital Hours	258	245	384	420
Horizon				
• Weekly Reach %	3.6%	3.5%	3.4%	3.3%
• Ave Hours	9.7	9.7	9.7	9.7
• Total Hours ('000)	653	635	617	599
• Digital Hours	76	101	110	119
Classic Gold				
• Weekly Reach %	2.4%	2.8%	3.2%	3.5%
• Ave Hours	8.7	8.7	8.7	8.7
• Total Hours ('000)	390	456	521	569
• Digital Hours	55	87	112	136
Hertbeat				
• Weekly Reach %	1.3%	1.8%	2.2%	2.6%
• Ave Hours	5.9	5.9	5.9	5.9
• Total Hours ('000)	143	199	243	287
• Digital Hours	33	63	87	114
Mercury Plus				
• Weekly Reach %	1.75%	1.7%	2.3%	2.7%
• Ave Hours	6.1	6.1	6.1	6.1
• Total Hours ('000)	194	194	262	308
• Digital Hours	0	0	94	122
Jack FM				
• Weekly Reach %	2.4%	3.0%	3.2%	3.5%
• Ave Hours	5.0	5.5	5.5	5.6
• Total Hours ('000)	224	312	326	367
Easy				
• Weekly Reach %	1.6%	2.2%	2.4%	2.6%
• Ave Hours	4.0	4.5	4.5	4.6
• Total Hours ('000)	118	188	199	224
Specialist Music				
• Weekly Reach %	1.1%	1.5%	1.6%	2.2%
• Ave Hours	4.0	4.5	4.5	4.6
• Total Hours ('000)	80	126	135	189
Speech				
• Weekly Reach %	0.6%	0.8%	0.9%	1.0%
• Ave Hours	5.0	5.5	5.8	5.8
• Total Hours ('000)	56	77	98	108

- iii) Projections for the total weekly number of listening hours anticipated for all digital sound programme services (national and local) both in absolute numbers, and as a proportion of all radio listening hours per week as recorded by RAJAR or equivalent audience measurement research, over at least the first four years of the service

	Year 1	Year 2	Year 3	Year 4
Population 15+ ('000)	1,870	1,870	1,870	1,870
• All Radio Weekly Reach	91.4%	91.3%	91.2%	91.1%
• Weekly Reach ('000)	1,709	1,707	1,705	1,704
• All Radio Ave Hrs	22.6	22.6	22.5	22.4
All radio hours ('000)	38,627	38,585	38,372	38,160
All digital radio hours ('000) (national and local)	9,013	12,219	13,737	15,144
All digital hours as % of all radio hours	23.3%	31.7%	35.8%	39.7%
HBB Multiplex hours ('000)	901	1298	1545	1798
HBB Multiplex hours as % of all radio hours	2.3	3.4	4.0	4.7

- iv) The basis on which the estimates above have been calculated, and any assumptions taken into account.

Audience Projections for programme services

57. In estimating audiences for the multiplex, we have based our assumptions on the consumer research findings with regard to the digital only services, and on RAJAR for the analogue services, looking at the performance of individual services across the wider HBB TSA.
58. Our consumer research indicates that if the HBB planned services were to be available, they would spend around 37% of their listening hours listening to digital radio. Those who already have access to DAB would spend around 41% of their listening time, listening to their digital radio.

Projections for the total weekly number of listening hours

59. In order to calculate projections for the total weekly listening hours for all digital programme services (national and local) both in absolute numbers, and percentages, we have to look at the following factors:
- Population
 - Total radio listening
 - Digital share of listening
 - The relative market shares of:
 - BBC Network
 - BBC Local
 - INR
 - ILR listening to stations originating in the area
 - Out of area ILR
 - Other radio listening

Population

60. We have calculated a multiplex TSA of 1.87m from combining the existing TSAs of Chiltern 97.6 and 96.9, Herts Mercury 96.6, FM 103 Horizon, Hertbeat FM, Mix 96 and Mix 107 (per RAJAR Q4 2006).
61. This compares with Ofcom's estimate of coverage of 1,829,329 and NGW's coverage prediction of 1,856,685.

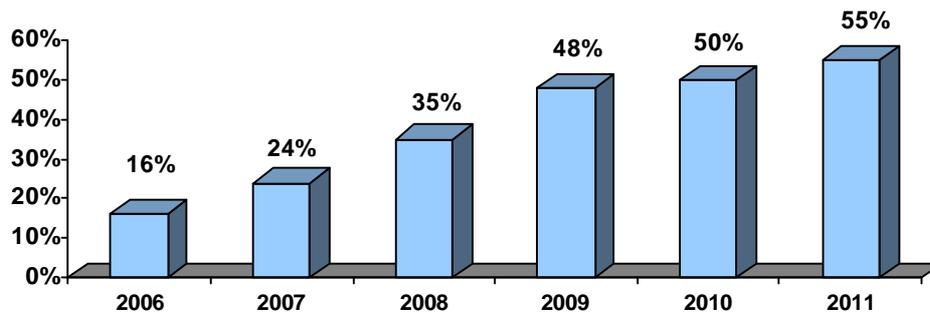
Total Radio Listening

62. We analysed existing radio listening within the multiplex TSA as a whole, as well as within the northern half of the area, and the southern. Our 'splits' analysis highlighted a distinct difference, principally a result of the southern half being significantly overlapped by London. See question 14.
63. This rolled RAJAR data analysis shows that over the past three years the total number of radio listeners in the market has been stable. However, this is very much a result of the stronger performance in the southern half of the TSA, where there is considerably more choice which has resulted in the total number of listeners actually increasing, whilst the North has shown a decline since 2004. Additionally, the average time spent listening to radio has declined in total and whilst higher in the southern TSA, this too has declined since 2004, with the North more stable.
64. As a result, whilst we believe that increased choice will help stimulate the market, we believe it prudent to forecast some decline both in the penetration of all radio because of the extensive competition from other platforms which will almost certainly impact on the average time spent listening.

Digital Share of Listening

65. To establish the potential share of listening attributable to digital, we have reviewed the digital radio penetration forecasts as published by the DRDB, as well as reviewing other data as to the take up to date and likely future take up.

66. We have based our forecasts of penetration growth on the DRDB's 5 year forecasts (published September 2005), which we up-weighted using the known 2006 penetration level, and then carried forward the growth on the basis of this new base. This is summarised in the following chart.



67. By 2010 the DRDB forecasts predicts that DAB household penetration will have increased to 50%. Latest data for Q4 2006 from RAJAR which shows ownership at 16% suggests that this is on target and possibly likely to be exceeded. Our consumer research conducted in February suggest that penetration of DAB digital radio in this area is higher than the UK average. However, for prudent planning purposes we have used the UK figures.

68. Other pertinent data used to evaluate the starting position for our forecasts includes facts such as
- 72% of the population being aware of DAB digital radio (source IPSO MORI Tracker Jan 07)
 - 4.5 million sets now sold (source GFK)
 - RAJAR Q4 2006 showing that 16% own a digital radio

Numbers of adults (15+) in homes with DAB radio's (thousands '000's)

Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
1,869	2,153	2,197	2,575	3,965	4,497	5,188	5,486	6,733	7,630	7,615	7,954

Percentage % of adults (15+) in homes with DAB radio's

Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
%	%	%	%	%	%	%	%	%	%	%	%
3.9	4.4	4.5	5.3	8.1	9.1	10.5	11.1	13.6	15.3	15.3	16.0

Source RAJAR

69. We have had access to the long term digital listening modelling undertaken by National Grid Wireless as part of their national multiplex application. In particular, we have used their forecasts for digital share of listening as the starting point for calculating digital listening within the HBB area.

The relative market shares of the radio sectors.

70. We looked at the individual radio sectors of BBC Network, BBC Local, INR (i.e. services broadcast on national commercial multiplexes), ILR listening to stations originating in the area, out of area ILR and other radio listening. We made an assessment as to how we believe each of these

sectors will grow in terms of the numbers of services provided under each. We then evaluated on the basis of RAJAR data the relative shares between these sectors today in analogue radio, today in digital radio, 2008 in digital radio and 2012 in digital radio. This analysis enabled us to establish a view on the overall radio marketing within HBB and the changes that each sector would experience. The detailed workings behind these numbers are provided in Part B.

	Analogue Stations 2006	Relative share	Digital Stations 2006	Relative share	Digital Stations 2008	Relative share 2008	Relative share 2012
BBC Network	5	53.9	6	44.3	6	40	36.3
BBC Local	1	7.1	0	0	1	4	3.3
INRs	3	10.2	5	27.6	17	30	35.3
ILR HBB	7	10.7	0	0	4	7	9.3
Out of area ILR	15	16.7	25	28.1	25	19	16.0
Other		1.4		0		0	0
Total		100%		100%		100%	100%

Section 51(2)(d): Cater for local tastes and interests

11. Proposed digital sound programme services

71. MuxCo will launch with 8 commercial audio channels (plus BBC Three Counties Radio), comprising existing commercial and BBC analogue local services, as well as complementary new digital only services. All channels will operate on a 24 / 7 basis. An 9th commercial service will launch during 2010.
72. MuxCo HBB considers that technical improvements in the area of audio compression and the development of next generation DAB receivers, may provide further opportunities to add new services in the longer term, and we may wish to take advantage of such developments to further enhance listener choice.

- a) Provide, for each digital sound programme service for which capacity is to be allocated, a description of the service. This should include a short-form (no more than four or five words) description of the type of service (i.e. its 'format'), and should also include a summary of the type(s) of music and speech to be provided, together with a quantification of the proportions of these within the programme mix. The number of hours each day that the service will be broadcast, and details of any content unique to this local area (with trigger-points for when such content will be included if not from the commencement of broadcasting, as appropriate), must also be included. These format descriptions will form part of the licence. Therefore, questions of clarification may be asked prior to licence award and the wording amended to reflect this, if necessary. Examples of format descriptions included within existing radio multiplex licences can be viewed at: <http://www.ofcom.org.uk/radio/ifi/rbl/dcr/>.

Chiltern FM

Format	Contemporary
Licence Description	A simulcast of Chiltern FM; a contemporary chart music station for the Luton and Dunstable area, broadcasting predominantly current chart hits, new releases or hits up to 10 years old. Speech will feature news and information relevant to its target audience.
Fuller Description	Chiltern FM is a popular contemporary and chart music station, providing relevant local news and information. The majority of the music output is current chart hits and new releases or hits up to ten years old. Chiltern FM is music led, with news, information and features of particular local relevance broadcast throughout programming.
Unique to Area Content	A local service to the area
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

Horizon FM

Format	Contemporary
Licence Description	A simulcast of Horizon FM; a contemporary chart music station for Milton Keynes, broadcasting predominantly current chart hits, new releases or hits up to 10 years old. Speech will feature news and information relevant to its target audience.
Fuller Description	Horizon FM is a popular contemporary and chart music station, providing relevant local news and information. The majority of the music output is current chart hits and new releases or hits up to ten years old. Horizon FM is music led, with news, information and features of particular local relevance broadcast throughout programming.
Unique to Area Content	A local service to the area
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

Classic Gold

Format	Gold
Licence Description	A simulcast of Classic Gold, a classic pop hit-led service targeted primarily at over 40s in the Luton & Bedford area, broadcasting classic pop hits from predominantly 15 to 40 years before broadcast. Speech features national and local news and information relevant to its target audience.
Fuller Description	Classic Gold is a classic pop hit radio station targeted principally at the 35 to 54 age group. The music output consists predominately of hits from 10 to 40 years prior to broadcast. Local and national news is featured alongside clearly defined themed music days that focuses on the hits of the 60s, 70s, 80s and 90s.
Unique to Area Content	A local service to the area
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

Hertbeat

Format	Adult-contemporary
Licence Description	A simulcast of Hertbeat FM, an adult contemporary aimed at 25 to 54 year olds playing tracks from the 80s, 90s and today.
Fuller Description	Hertbeat FM is a popular Hertfordshire station, providing local news and information of particular local relevance. The music is adult contemporary from the last 25 years.
Unique to Area Content	A local service to the area
Music to Speech	85% music and 10% speech
Hours of Broadcast	24

JACK fm

Format	Variety Pop & Rock
Licence Description	A service similar to Oxford's JACK fm; the first JACK fm service in the UK. A music-intensive station of particular appeal to 35 to 54 year old adults, with local news and local football information relevant to the target audience. Music will be broad based and mainstream spanning more than four decades.
Fuller Description	JACK fm is a music radio station which complements existing local commercial radio by appealing mainly to older adults through a distinctive "no format" blend of quality popular pop / rock and classic rock music and specifically avoiding dance and current pop hits, supported by concise local news and information. The style of the radio station is built around a free sounding theme which, for most of the time, replaces traditional highly formatted radio presentation with listener vox-pops and well produced short voice-links which are distinctive, entertaining and different. No more than 10% of daytime output will comprise tracks less than 5 years old and never more than 25% of any output will be younger than 10 years. Speech will include a focus on local sport, in particular local football.
Unique to Area Content	A network service with local news and local football content
Music to Speech	Minimum 90% music and 5% speech
Hours of Broadcast	24

Easy Radio

Format	Easy
Licence Description	A broad range of easy Listening music with a significant element of tracks with a country crossover influence, including rock and folk.
Fuller Description	Easy Radio is a music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library. A significant element of the music will be from artists with a country crossover influence including rock, folk and blues. Around 25% of the music will be current music. Speech will be national and international news, relevant information for the audience and an element of interactive programme.
Unique to Area Content	A network service offering a broadening of local choice
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

Specialist Music

Format	Dance / Chill
Licence Description	A service providing a mix of dance, rhythmic and chill music, with relevant information for the target audience.
Fuller Description	A music intensive service providing a mix of dance, rhythmic and chill music together with local information and entertainment targeting adults aged 20 and 39 years. The music mix will be based on dance and rhythmic music, and will be driven by melody and chosen for its ability to reflect and create a mood with musical influences including ambient, house, trance, funky, r&b and soul.
Unique to Area Content	See confidential Part B
Music to Speech	Minimum 95% music and 2% speech
Hours of Broadcast	24

Local Speech

Format	News, Views & Information
Licence Description	A news and speech service, with local news, information and local comment, with at least 30% of content generated within the area and unique to the area.
Fuller Description	The speech channel will provide a unique service to the area, providing local and national news, information pertinent to everyday lives, including traffic & travel and weather, and opportunities for local listeners and organisations to air their points of views. Other speech will include content addressing the needs for all communities in the area, sport and general entertainment and what's on.
Unique to Area Content	A local service to the area, with at least 30% of content generated within the area.
Music to Speech	100% speech
Hours of Broadcast	24

Mercury Plus (from 2010)

Format	Hit music family focused service
Licence Description	A service based on the St Albans and Watford FM service – Herts Mercury 96.6
Fuller Description	Herts Mercury 96.6 is a popular hit station, providing regular news, views and information. A music led service, playing a wide spread of hits from the 70s to today, including Hot AC, 80s & 90s, 70s and classic album track genres. Mercury Plus will be based on the existing analogue services, but with additional digital only programming that will provide a broad family listen that will make the service more relevant to the larger multiplex TSA. Speech will focus on local news and information relevant to the audience.
Unique to Area Content	A local service to the area
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

Temporary Services

73. We are keen to maximise the opportunities for the general public to be involved in radio. We support the notion of temporary services being able to access capacity, which may be achievable through bit rate trading. Such services could include one off event led services or a series of events (such as football coverage). Being able to widen events coverage clearly broadens choice, as well as enhancing the attractiveness of digital radio in general. All such proposals are of course subject to obtaining the necessary rights. In reaching agreement with service providers, we will seek to contract flexible capacity allocations that will reflect the expected listening patterns of their individual audiences. As audiences vary in size and their daily activity changes, we will seek to provide service providers with the opportunity to vary their capacity up and down to meet their particular audiences requirements, by varying bandwidth to suit listening patterns. As the requirements of service providers develop, and enhanced data services are implemented, there may be increasing demand for regular multiplex re-configurations.

b) Outline the expected target audience of each digital sound programme service to be accommodated on the multiplex, in terms of demographic profile (i.e. age range, gender, socio-economic background), ethnic composition, and/or any other relevant characteristics. To what extent will each of these services cater for local tastes and interests, general or particular?

74. Our research has indicated that the likely audience profiles for each of our services would be as follows based on those personally choosing to have the service on the multiplex.

	Chiltern *	Horizon *	Classic Gold *	Hertbeat *	Jack FM	Easy	Specialist Music	Speech	Mercury Plus
Male	43	52	43	51	51	49	44	61	38
Female	57	48	57	49	49	51	56	39	62
15-24	21	28	7	15	23	8	17	-	21
25-34	19	23	8	18	19	8	18	11	28
35-44	27	27	17	26	23	20	26	29	31
45-54	18	11	31	21	19	22	15	30	11
55-64	9	6	23	10	9	15	13	15	5
65+	6	5	15	10	8	27	11	15	4

* source RAJAR 2006 rolled in HBB TSA

- The profiles for Chiltern, Horizon, Classic Gold and Hertbeat are derived from RAJAR and are based on the planned HBB TSA using 2006 rolled data.
- We have combined Chiltern 97.6 & Chiltern 96.9 to derive a HBB TSA Chiltern performance. This was similarly undertaken for Classic Gold 828 & 972.
- The Mercury Plus profile is an average of the current Herts Mercury 96.6 profile with that of the lifestage format of parents with children from our consumer research.

75. The following table provides further information on the target audiences of each service and other relevant information as to their characteristics.

Service	Target Audience
Chiltern FM	Chiltern FM appeals to those with an interest in contemporary hit radio (which covers a broad range of popular current music from a wide selection of music genres). The station has a strong female bias in terms of reach and has broad appeal across the age bands up to 54. Chiltern FM enjoys a strong market position and we believe the station will play a pivotal role in the promotion of digital radio. Detailed RAJAR analysis is provided.
Horizon FM	Horizon FM appeals to those with an interest in contemporary hit radio (which covers a broad range of popular current music from a wide selection of music genres). The station has a slight male bias , but overall broad appeal across the age bands up to 54. Horizon FM enjoys a strong market position and we believe the station will play a pivotal role in the promotion of digital radio. Detailed RAJAR analysis is provided.
Classic Gold	Classic Gold appeals to an older, 35 year old plus audience. In the north of the area, the station has a slight male bias, whilst in the south it has a significant female bias (61.9%). As a format that suffers from operating on AM, we believe that the format has great potential as a digital service. RAJAR analysis is provided for this service.

Service	Target Audience
Hertbeat FM	Heartbeat achieves a slight male bias in its audience, with broad appeal across all male ages but with female appeal amongst those aged 25 to 54. It achieves a ABC1 profile, which reflects its current market. Detailed RAJAR analysis is provided for this service.
Jack	JACK fm will particularly appeal to 35 to 54 adults, with a male 40 something as its core target listener - traditionally a demographic that have grown up with commercial radio but have increasingly found themselves switching to music services provided by the BBC, especially BBC Radio 2. Broad and varied rock music mix with less repetition will allow JACK fm to achieve an upmarket audience. The addition of local soccer content currently not heavily featured on existing FM services will also help the service cater for local tastes and interests and further extend choice. 30% of respondents in our consumer rated this service as one they would personally choose, with interest almost evenly divided between men and women and most strongly expressed by under 55s, in particular those under 25 (23%) and aged 35 to 44s (23%). There was also a bias toward ABC1 listening (56%). Just over a third (34%) of potential listeners to this service already own a DAB set, while 56% have yet to purchase one.
Easy Radio	Easy Radio focuses on a broad range of easy listening music with a significant element of tracks with a country crossover influence, including rock and folk. It has broad appeal, with 20% in our consumer research highlighting the service, with interest evenly split between men and women, though heavily biased toward those aged over 35 (85%). This format also had a high, upmarket appeal with almost two thirds of those interested in this type of music station coming from the ABC1 sub group. More than a third (36%) of those who would make up the audience for this type of station already claim to own a DAB digital radio set.
Specialist Music	Our specialist music proposal scored strongly, with just under a third (31%) highlighting this service. Women were more likely than men to feature in the potential audience for this format (56% v 44%) and more than a third were likely to be under 35 (35%), while more than a quarter were likely to be aged 35 to 44 (26%). More were also likely to be from the ABC1 sub group (56%) as opposed to C2DE (44%). More than half those interested in this service currently own or have access to a DAB radio set (57%).
Local Speech	14% of respondents, more than half of whom were aged 35 to 54 (57%), with 31% were over 55, would like to hear a news, talk and information service. Listeners were also likely to be ABC1s. 61% of those expressing interest in this type of news, speech and information service lived outside a London overlap area. Almost half (48%) the people who said they would like to hear this type of station in digital quality already own a DAB, while a similar proportion (49%) do not.

Service	Target Audience
Mercury Plus	Through the provision of Hot AC, 80s & 90s, 70s and classic album track, Herts Mercury 96.6 attracts a large 15 to 24 year olds audience and a high ABC1 profile (70.8%). Detailed RAJAR analysis is provided for this service. The proposed service, Mercury Plus, will be based on the existing FM service but with additional digital only content. Broad family programming, whilst highlighted by only 7% of the total population, was more importantly selected by 71% of those with children aged under 10. Appeal of the larger service would appeal to women. 45% of future listeners were likely to be under 35 and 52% were likely to be aged 35 to 54. Mercury Plus is would maintain its ABC1 profile.

- c) If agreement has been reached (either firmly or provisionally; state which) with particular providers of some or all of the digital sound programme services to be accommodated on the multiplex, identify these programme providers. For each one, state whether it has already been issued by Ofcom with a licence to provide a local digital sound programme service.

Service	Agreement	DSPS Held
Chiltern FM	Due to the competitive position of the application, no discussions were held with GCap Media ahead of the submission of applications. Terms of carriage have been sent to GCap Media.	Yes
Horizon FM	Due to the competitive position of the application, no discussions were held with GCap Media ahead of the submission of applications. Terms of carriage have been sent to GCap Media.	Yes
Classic Gold	Due to the competitive position of the application, no discussions were held with UBC Media ahead of the submission of applications. Terms of carriage have been sent to UBC Media.	Yes
Hertbeat FM	Confirmed – Shadow Radio Holdings Ltd	-
Jack	Confirmed – Absolute Radio International Ltd	-
Easy Radio	Confirmed – Easy Radio Ltd	Yes
Specialist Music	See confidential response in Part B	-
Local Speech	Confirmed – MuxCo Home Counties Ltd	-
Mercury Plus	Confirmed – Adventure Radio Ltd	-

76. Whilst Absolute Radio International, Shadow Radio Holdings Ltd, MuxCo Home Counties and Adventure Radio do not currently hold digital sound programme service licences, we do not envisage any issues over the granting of these licences.

d) Give details of any programme-related 'data' or other services to be provided to enhance the audio elements of the digital sound programme services proposed to be provided. List separately those provided by the relevant digital sound programme licensees themselves (as 'ancillary' services) and those, if any, provided by other parties under a digital additional services licence.

77. MuxCo HBB believes that innovative data services play a key role in providing value-added services to consumers. Their role in both supplementing the audio stream and navigating towards content is hugely important. Additionally on a local multiplex, data services can provide access to valuable local content.

78. As part of our consumer research, we researched attitudes to ancillary data services. In response to the question "Which, if any of the following types of information would you like to receive in visual form?" four main types of information were highlighted - weather (46%), traffic and travel news (43%), local news (39%) and national news (34%); all of which were mentioned by at least a third of the sample. 26% highlight an interest to be able to view sports news.

Existing DAB owners - and those with access to DAB - demonstrated slightly higher than average interest in receiving most of these four items in visual form. These two sub groups also expressed above average interest in several other information types. DAB owners, for example, showed more interest in viewing comedy (21%), what's on information (23%) and national sport (30%).

79. In response to the question "Which, if any of the following types of information would you like to receive in audio form?" weather (46%), local and national news (both 44%) and travel and traffic news (42%) were again the four main types of information adults would like to receive in audio form. National sport was mentioned by just over a quarter of respondents (26%), while 21% told us they would like to receive comedy.

Those who already have access to DAB demonstrated above average interest in receiving almost all these information types in audio form, in particular the top four: national news (52%), weather (52%), local news (49%) and to a lesser degree traffic and travel news (43%). There was significantly increased interest among this sub group too, in national sport (31%) and comedy (29%).

In all cases, those with a high interest in digital scored all types higher than the sample average. Early adopters scored all types highly, but we were interested to note the slightly lower scores, especially for local news and information and weather, this finding perhaps reflecting the access to other information sources available to this group. These findings present an opportunity for digital radio to move successfully from its launch to growth stage.

80. Consequently, we feel that it is important to create an environment with our service providers that encourages them to create new and innovative content streams. Our chosen multiplex platform will support DLS and MOT carousel using simple, industry standard interfaces allowing service providers to use the “off-the-shelf” and well-supported software packages for generating content. Therefore, from launch, all Service Providers will have access to:

- Dynamic Label services
- Electronic Programme Guide

81. As data technologies and standards mature, we will work with the Service Providers to launch other data services (such as *Broadcast SlideShow*).

Dynamic Label

82. DLS is a very simple technology – but its simplicity gives it enormous strengths. It demonstrates immediately a difference between a digital radio and a traditional FM receiver. Consumers value the information provided unexpectedly highly – informal feedback from listeners is very positive about features such as displaying information on the currently playing song. We are supportive of recent extensions to the DLS spec, such as Pure Digital’s IntelliText® technology, which stores the scrolling text to allow the user to navigate, by topic, straight to the news they want. Service providers can generate DLS very simply, using a range of ‘off-the-shelf’ software packages that integrate into their existing systems.

Electronic Programme Guide

83. Electronic Programme Guides (‘EPG’) are important in a multi-channelled environment – they allow listeners to find stations and programmes quickly, and enable functionality like “time-shifting” of stations. They enable service providers to promote their new services and programmes. The EPG allows the user to take advantage of features such as programme summaries, search by subject or channel, immediate access to the selected programme and also to set reminders for their favourite shows. Our research showed a high level of interest (33%) in an EPG. We will make an EPG channel available to all service providers. This channel will conform to the ETSI TS 102 371 DAB EPG standard, currently broadcast by the two existing national multiplexes. We will encourage our service providers to use some of the more advanced features of the EPG, such as “series linking” and incorporating telephone, SMS, website and email addresses into the schedule data.

We have had detailed discussions with All In Media Ltd (‘AIM’) relating to the launch of an EPG channel on the multiplex. The Managing Director, Chris Gould, led the WorldDMB TaskForce that created the DAB EPG standard. In the event of award of the licence, it is our intention to work with AIM to launch the EPG channel on this multiplex.

Use of variable-XPAD

84. From launch, each service provider will be able to run programme-related data services within their short XPAD data capacity.
85. We will work with the service providers, NGW and colleagues across the industry to assess the opportunities to improve the performance of the audio encoders for stereo at rates under 128 kbits. If satisfactory and following any required approval from Ofcom, we may wish to use some of any additional XPAD capacity that was freed up to allow them to use that capacity for enhanced programme related data services.
86. We have a strong team who have substantial experience in the field of launching data services, from the work that was undertaken on the world's first commercial data services in 2000 (The DigiZone) through to the development of standards such as the EPG and the launch of highly dynamic text services.
87. We intend to use our experience to help service providers to launch new programme-related data services. For example:

Tagging (Book marking)

- The ability to log a song on your mobile phone / device in order to download it later.

Broadcast Slideshow

- Opportunities for radios / devices to add visual content to make the programmes more engaging, for example show the covers of albums that are currently playing on the radio.

"Red button" functionality

Competitions and Voting:

- For example, when listening to the Breakfast show by using the red button the user could vote on the next tune to be played or select the correct answer to win a prize.

Enhanced Advertising:

- For example, the user is listening to a radio station and hears an advert for a new car which could be audio but also visually demonstrated on their device and using the red button functionality send information via a URL link to the external a car dealers web site.

Rewards:

- For example, the user could get free content (music downloads for example) in return for responding to an advertiser's call to action. For example clicking through to the web page could generate redeemable loyalty points.

e) If it is intended to use an encryption system, state that this is so, and make clear to which digital sound programme services it will apply, and how listeners will subscribe to the service.

88. It is not proposed that any services will be encrypted and none of the proposed service providers has indicated an interest in encryption.

12. Digital additional services and television licensable content services

Provide details of any digital additional services and/or television licensable content services planned, other than programme-related data services (see Q.11(d) above), and the proportion of the total multiplex capacity which will be allocated to each of these.

The response to this question may be submitted in confidence.

** Applicants should note that this information is not relevant to section 51(2)(d), which relates only to digital sound programme services, but this question is positioned here for convenience.*

89. Our response to this question is submitted in confidence in Part B.

Section 51(2)(e): Broadening of local commercial DAB choice

13. Broadening of choice

Outline how the programming provided by the local digital sound programme services (other than BBC services) proposed will broaden the range of local digital sound programme services available in the area, and describe the extent to which the proposed local digital sound programme services will cater for tastes and interests different from those already catered for by local digital sound programme services already available in the area.

If the licence applied for is the first local radio multiplex licence to be advertised in an area, detail the breadth of programming delivered by the range of local digital sound programme services to be provided on that local radio multiplex alone.

90. The licence is the first local radio multiplex licence to be advertised in this area. We have therefore analysed the breadth of programming delivered by the range of local digital sound programme services to be provided on the local multiplex.

Chiltern FM and Horizon FM are contemporary hit radio services broadcasting popular chart songs from a wide range of genres. As a broad appeal service, there will undoubtedly be some duplication with other services on the multiplex. However, whilst the other services will focus on particular genres, Chiltern FM and Horizon FM will be differentiated by their breadth of genres and their focus on their relevant localities (Luton & Bedford and Milton Keynes respectively).

Classic Gold is a broad mix service of hits from the last four decades. Appealing to a predominately female audience and older 35 plus listeners, it complements Chiltern FM and Horizon FM. Some duplication of tracks may occur with these services. However, these are not likely to be significant as the focus of each station (both musically and speech) is to different audiences. The different styles of these stations in terms of their overall speech content and presentation style will add further breadth in the market.

Hertbeat FM is an adult contemporary aimed at 25 to 54 year olds playing tracks from the 80s, 90s and today. Its speech focuses is on Hertfordshire, and it provides a wide variety of local news and information of particular local relevance. As a service with broad appeal, there will be some musical cross over with Chiltern and Horizon. However, the main differentiating factor is the station's editorial focus and its presentation style. Part of Shadow Radio's strategy for moving Hertbeat to digital is to enable existing listeners to be able to listen for longer to the station as they travel across the region, as well as to and from London.

JACK fm is a music radio station which complements existing local commercial radio by appealing mainly to older adults through a distinctive “no format” blend of quality popular pop / rock and classic rock music and specifically avoiding dance and current pop hits, supported by concise local news and information. The style of the radio station is built around a free sounding theme which, for most of the time, replaces traditional highly formatted radio presentation with listener vox-pops and well produced short voice-links which are distinctive, entertaining and different. Some music cross-over will arise. However, the focus of the station is with 35 to 54 adults, with a male 40 something as its core target listener - traditionally a demographic that have grown up with commercial radio but have increasingly found themselves switching to music services provided by the BBC, especially BBC Radio 2. JACK fm’s speech proposals will also act as a significant point of difference to existing services.

Easy Radio is a music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library. A significant element of the music will be from artists with a country crossover influence including rock, folk and blues. Its unique play list embraces the country classics of The Dixie Chicks to Shania Twain, alongside a broad selection of strong lyrical songs from The Eagles to the Beautiful South, Texas and many more. The music mix of the station will be quite distinct to that of the existing analogue services in the market, as well as the other new digital services. Easy’s speech, with news, relevant information for the audience and an element of interactive programme, will also act as a point of differentiation.

Specialist Music will achieve considerable broadening of choice over existing services. Whilst there will be some overlap of music, especially when relevant in the charts, it is the tone and emphasis that this station will deliver that will differentiate from the broad music repertoires of Chiltern and Horizon. The service would be music intensive, which again would act as a point of difference.

Local Speech is the only news and speech service in the region. As such it will cater for the untapped demand for news and information. With a minimum of 30% of content generated from within the area and unique to the area, the channel will broaden local radio choice significantly.

Mercury Plus is based on the popular St Albans and Watford FM service – Herts Mercury 96.6; a music led service, playing a wide spread of hits from the 70s to today, including Hot AC, 80s & 90s, 70s and classic album track genres. Given the nature of its Ofcom Format, there will be some musical cross over with Chiltern, Horizon and Hertbeat, and to a lesser extent some of the other music services. However, it will be the stations speech output and it the change to parts of programming to emphasis a family listen that will provide additional differentiation.

Section 51(2)(f): Local demand or support

14. Audience requirements

Summarise the main findings of any original market research undertaken, or any analysis of existing audience research information, or any other form of evidence which demonstrates demand for the types of programme service and/or programme-related data or other data services proposed, or has otherwise influenced the applicant's proposals.

If original market research has been undertaken, please provide the following information for each piece of research:

- a) A statement of the key objectives of the research;
- b) The specific questions that the research sought to answer;
- c) How the research was conducted;
- d) The size and composition of the sample(s);
- e) When and where the research was conducted;
- f) A summary of the main findings from the research, showing how these demonstrate evidence of demand for the service proposed – this summary should represent a fair and accurate summary of the full results;
- g) A copy of any detailed audience research report or analysis, from which the summary provided in the main application document has been derived, full data tables for any quantitative research undertaken, and any questionnaire used (these may be submitted in confidence).

Please provide your responses to (a) – (e) in tabular format.

	Key Objectives	Specific Questions	How Conducted	Size and Composition	When
Desk Research	<ul style="list-style-type: none"> To gauge consumer awareness, understanding and usership of DAB digital Radio 	<ul style="list-style-type: none"> To better understand the trend and development of the audience to DAB digital radio 	<ul style="list-style-type: none"> Analysis of DRDB data 	<ul style="list-style-type: none"> Not relevant 	<ul style="list-style-type: none"> January 2007
RAJAR	<ul style="list-style-type: none"> To provide the basis upon which to make forecasts of market share for DAB digital radio 	<ul style="list-style-type: none"> To better understand the trend and development of the audience to DAB digital radio 	<ul style="list-style-type: none"> Analysis of RAJAR data using Octagon 	<ul style="list-style-type: none"> 2004 to 2006 rolled data across the combined TSA of Chiltern 97.6/96.9, Classic Gold, 828/792, Herts Mercury, Hertbeat, Mix 96, Mix 107 and FM103 Horizon 	<ul style="list-style-type: none"> January 2007
Consumer Study	<ul style="list-style-type: none"> To gauge consumer awareness, understanding and usership of DAB digital Radio To discover ideas for new radio formats and data usage applications To quantify interest in likely formats and data usage applications To estimate audience levels, individually and collectively for the proposed multiplex 	<ul style="list-style-type: none"> To identify the likely audience profiles for each planned service and to see how these services worked collectively to enhance the total audience potential for DAB digital radio. To look at propensity to listen and the impact that the new services collectively would have on the existing market 	<ul style="list-style-type: none"> 500 sample survey conducted by TNS. All interviews conducted using Computer Aided Personal Interviewing equipment 	<ul style="list-style-type: none"> 500 adults 16+ Sampling PPS Quota controls to known demographic profile 	<ul style="list-style-type: none"> Fieldwork conducted between the 6th and 28th February 2006

91. In addition, through our association with NGW, we have been able to access the very considerable research dossier undertaken as part of their national commercial multiplex application. In particular, we have reviewed the qualitative research to gauge consumer attitudes towards DAB digital radio. Whilst not strictly pertinent to HBB area, we believe that the views found in the research are applicable across the UK as a whole. A summary of the qualitative research is provided in Part E.

A. Desk Research on Uptake of DAB

92. We undertook a review of all data published by the DRDB in order that we were fully up to date with latest penetration levels as well as their forecasts for digital take up. Our findings are summarised in answer to 10(d).

B. RAJAR – Analysis of Market and DAB digital radio

93. The main purpose of our RAJAR analysis was to determine existing radio listening behaviour in order that we could identify formats that would complement existing services and create the best chance for the multiplex to maximise listeners and listening hours, especially with regard to the BBC.

We have also reviewed national radio data in order to better understand the relationship of digital radio within the total radio mix and how this might grow over time.

The local market

94. The planned coverage area for the HBB multiplex is 1.87m adults. The area, however, is divided between those already exposed to significant radio choice in the southern half of the TSA, which accounts for almost 60% of the population covered. Consumers in this area are already exposed to the choice of new services available on the three London multiplexes in addition to the national digital only services.

The table below shows the comparative strengths of the market as a whole and for the Northern and Southern parts of the TSA separately

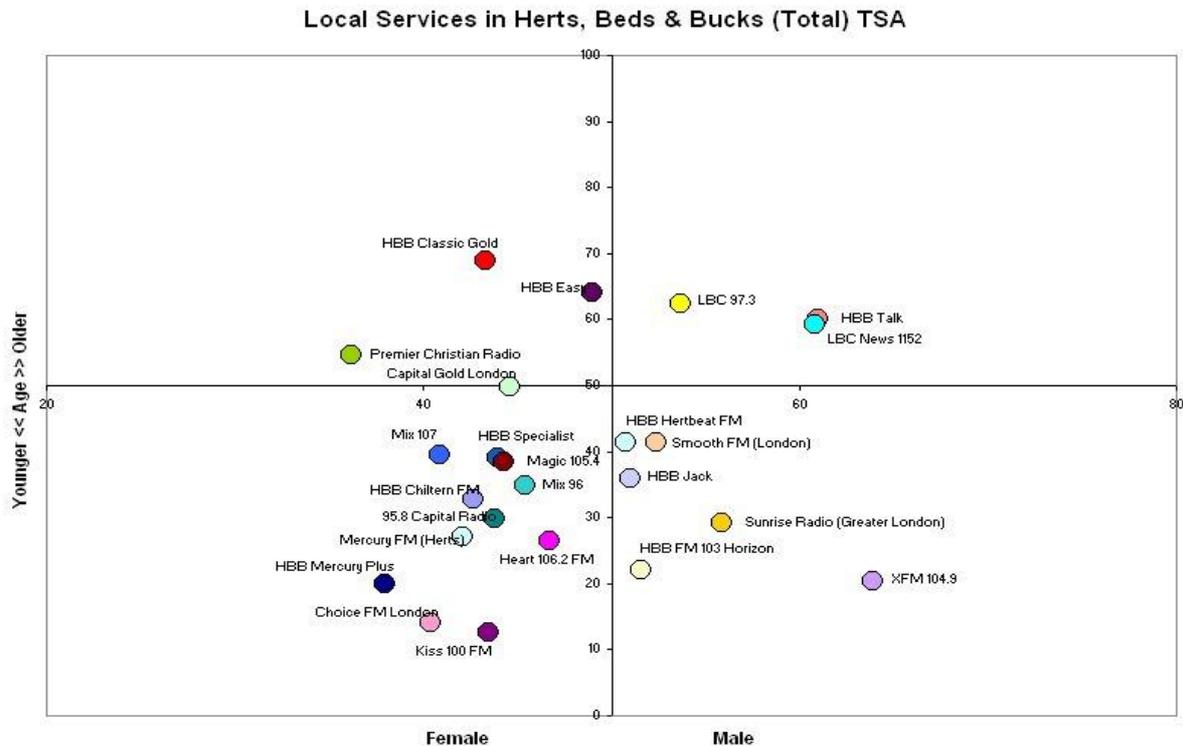
Total Multiplex Area	2004	2005	2006
Population	1,870,000	1,870,000	1,870,000
Reach %	91.7%	91.4%	91.5%
Reach 000s	1,657	1,696	1,712
Total Hours	39,829	39,764	38,785
Ave. Hours	24.0	23.4	22.7
North TSA			
Population	800,000	800,000	800,000
Reach %	93.6%	90.4%	90.8%
Reach 000s	721	712	726
Total Hours	17,260	15,943	16,250
Ave. Hours	23.9	22.4	22.4
London Overlap South TSA			
Population	1,360,000	1,360,000	1,360,000
Reach %	91.3%	91.9%	91.8%
Reach 000s	1,203	1,246	1,249
Total Hours	29,224	29,749	28,410
Ave. Hours	24.3	23.9	22.7

Source RAJAR rolled years

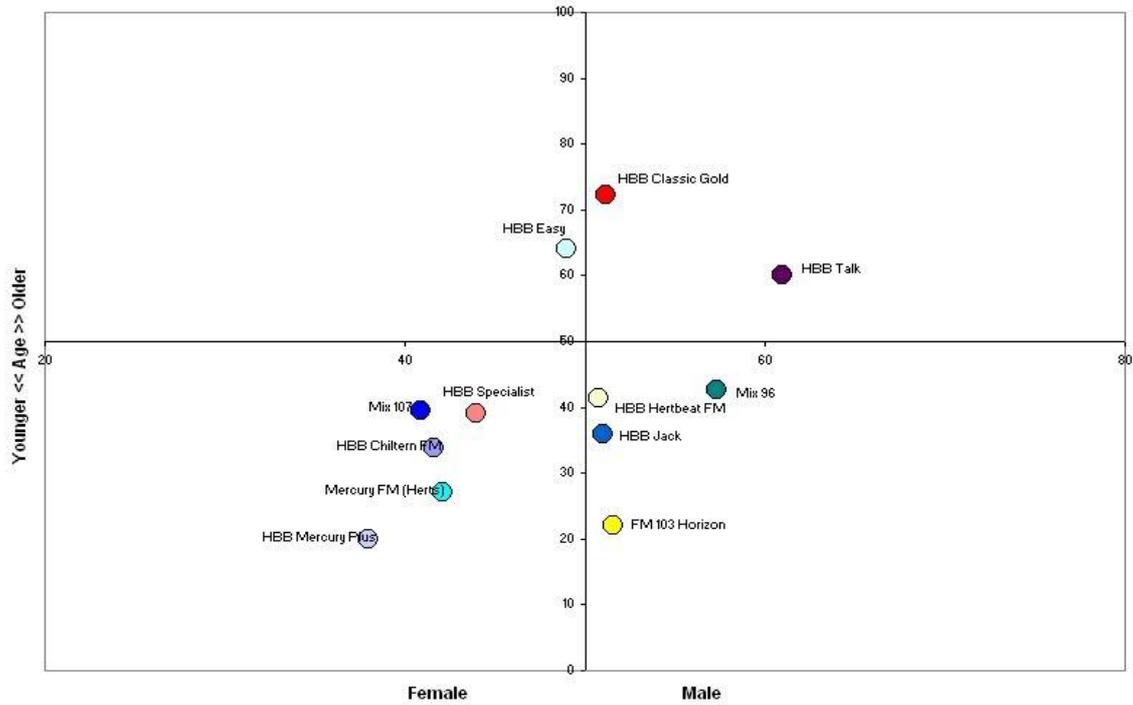
95. The table below summarises the historical performance of these services. The data highlights that the larger stations in the market are losing market share, whilst the smaller services have been able to maintain their 2004 shares, and in some cases grow. This underpins the value of locally focused services, with greater individuality that connects with the listener.

	2004	2005	2006
96.9 Chiltern FM			
Weekly Reach %	5.2	5.7	5.1
Total Hours	765	962	868
Market Share	1.9	2.4	2.2
97.6 Chiltern FM			
Weekly Reach %	10.3	9.7	9.8
Total Hours	1682	1819	1588
Market Share	4.2	4.6	4.1
Classic Gold 792			
Weekly Reach %	1.3	1.4	1.0
Total Hours	173	217	207
Market Share	0.4	0.5	0.5
Classic Gold 828			
Weekly Reach %	2.5	1.8	1.6
Total Hours	367	374	214
Market Share	0.9	0.9	0.6
FM103 Horizon			
Weekly Reach %	4.3	3.5	3.6
Total Hours	884	549	654
Market Share	2.2	1.4	1.7
Herts Mercury			
Weekly Reach %	2.1	2.3	1.7
Total Hours	213	294	198
Market Share	0.4	0.3	0.4
Mix 107			
Weekly Reach %	1.1	1.0	0.9
Total Hours	162	132	147
Market Share	0.4	0.3	0.4
Mix 96			
Weekly Reach %	2.7	1.9	2.0
Total Hours	429	326	357
Market Share	1.1	0.8	0.9
Hertbeat			
Weekly Reach %	n/a	1.3	1.3
Total Hours	n/a	163	147
Market Share	n/a	0.4	0.4

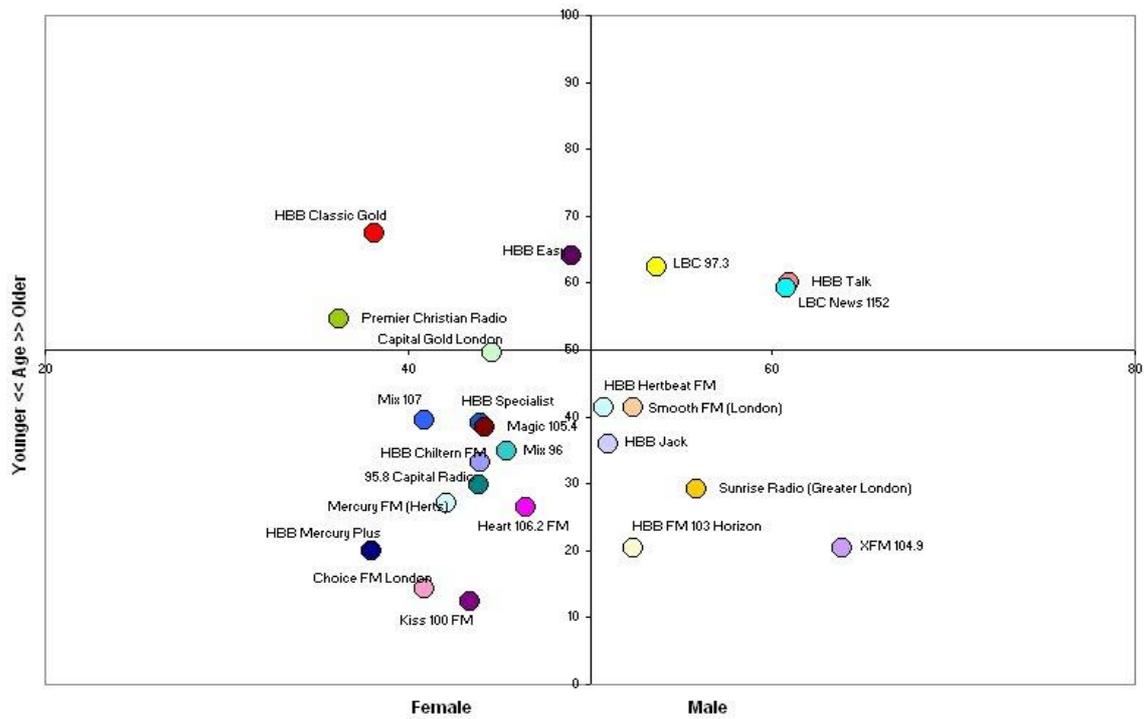
96. The following Christy diagram demonstrates the strengths of the existing local commercial services, and the new digital services proposed. RAJAR data (rolled 2006) has been used for existing analogue services, with profiles of the digital services derived from our consumer research. The exception being Mercury Plus, where we have averaged Herts Mercury 96.6 and the Parents Lifestyle profile.
97. They show the demographic strengths of the services in the total HBB TSA, and separately for the South and North regions in order to highlight the comparative differences in choice that will be available. As noted above, we have combined the performance of the two Chiltern and Classic Gold services to establish HBB TSA profiles.
98. The charts highlight that our proposed services will help improve choice with 45 pluses and younger males. In addition, we will increase consumer choice significantly.



Local Services in Herts, Beds & Bucks (North) TSA



Local Services in Herts, Beds & Bucks (South) TSA



Numbers of adults in homes with DAB radios

99. The number of adults living in homes with access to DAB digital radio is currently 16% (Q4 06). This figure is significantly lower than our consumer survey which highlights that across the HBB TSA, ownership levels were 32%. In our forecasts, we have worked on the national average, since this was viewed as a prudent approach.

The profile of DAB owning respondents against UK population

100. This table shows that HBB adults in DAB homes are more likely to be in the 35 to 64 age groups, compared with the UK population profile. In HBB TSA, the profile is even more male biased and particularly strong with 45 to 64 year olds compared with the UK.

	Profiles of :			HBB Index On UK Population
	UK *Adults in DAB Homes	HBB Adults in DAB Homes	UK Population Profile	
	%	%	%	
Men	52.5	56	48.5	148
Women	47.5	44	51.5	85
15 – 24	15.8	13	15.9	82
25 – 34	14.3	17	15.5	110
35 – 44	20.7	20	18.7	107
45 – 54	17.8	20	15.7	127
55 – 64	16.3	18	14.5	124
65+	15.2	12	19.7	61

Source RAJAR 12mths ending Qtr4 2006

Awareness of Digital Only Stations v Performance

101. RAJAR asks respondents about their awareness of all radio stations that are potentially available to them. MuxCo HBB has had access to analysis undertaken on a national basis, which looked at awareness and reach conversion. It highlighted that reach is not keeping pace with the rise in DAB digital radio penetration and underscores our belief that individual programme service providers will need to undertake extensive consumer marketing, over and above the work undertaken by the DRBD to ensure that services attract listeners on the HBB multiplex. This will be particularly relevant to the digital only services without access to an analogue service to assist in cross platform promotion.

Time spent listening in DAB homes

102. The following tables look at the overall time spent listening to the radio by 'All Adults' and 'All Adults in DAB Homes'. These have been indexed against each other. Across the last 3 years, adults in homes with DAB sets listen to the radio for an average 16% longer across a week. During 2004, that average was 21% higher. As the sales of DAB sets started to take off in 2005, the average has dropped back as DAB sets may be a more general set replacement than a purchase to gain access to DAB and its unique service offerings.

Average hours per week listening to the radio by all adults

Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
24.7	24.4	24.4	24.0	24.0	23.9	24.1	23.9	23.8	23.5	23.9	23.5

Average hours per week listening to the radio by adults in DAB homes

Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
29.4	29.2	29.7	29.1	28.0	27.2	26.6	27.8	27.6	27.0	27.0	26.5

Index comparing listening to the radio by adults in DAB homes v. all adults

Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
119.0	120.7	121.7	121.3	116.7	113.8	110.4	116.3	116.0	114.9	113.0	112.8

103. These findings are very encouraging since they strongly indicate that that access to DAB digital radio is having a positive impact on time spent listening to radio in total and underpins our consumer research findings which has indicated that listeners would increase the amount of time spent listening to radio in total in order to incorporate our new services into their repertoires.
104. Furthermore, when looking at respondents with access to DAB in home, we found that average time spent listening to digital only services was higher than amongst all adults to these services. Interestingly, when we looked at the simulcast stations, we found that this was not the case. Ease of access, which DAB digital radio offers, may be a governing factor.
105. The interesting aspect about this analysis is that listening to other digital services - quasi national, regional and local, the majority of which are known brands - is demonstrating the preference to listen via DAB digital radio when available.

Digital within the UK landscape – market share %

	2004				2005				2006			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
All Radio	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
All Commercial	45.0	45.0	43.7	44.2	43.8	44.0	43.5	42.8	42.6	42.9	43.6	43.2
All National Commercial	9.9	10.1	9.6	10	10.2	10.2	10.5	10.1	10.5	10.7	10.9	10.5
All BBC	52.6	53.1	54.4	54.0	54.2	54.0	54.6	55.1	55.4	54.7	54.3	54.4
All Commercial Digital Only	2.6	2.8	2.8	3.1	3.3	3.1	3.5	3.1	3.5	3.8	4.0	3.6
All Digital One Digital Only	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.3
All BBC Digital Only	0.4	0.4	0.6	0.5	0.6	0.6	0.8	0.7	0.8	0.9	0.9	0.9
National digital exc Digital One services	0.5	0.5	0.5	0.7	0.9	0.9	1.0	0.9	1.0	1.2	1.3	1.1
Out of area Digital Stations Kiss Heart etc	1.9	2.1	2.0	2.1	2.0	1.8	2.1	1.8	2.0	2.1	2.3	2.2

106. The platform survey data undertaken with respondents with digital access shows that DAB accounts for a little over 12% (12.3%) of all radio listening, with DTV at 6.1% and the Internet at 3.6%. So that overall analogue remains dominant with a 77.4% share.

All Digital	22.7%
All DAB	12.3%
All DTV	6.1%
All Internet	3.6%
All unspecified digital	0.6%
All Analogue	77.4%

107. The overall share of digital radio listening divided between the BBC and commercial radio highlights that the commercial sector commands the majority share (Q4 2006).

All commercial digital	56%
All BBC digital	44%

C. Main consumer survey – Main Findings

DAB Ownership/Access

108. Recent analysis of RAJAR showed digital penetration at 16% nationally. Ownership of DAB in Herts, Bed & Bucks was twice the national average at almost a third (32%), with a further 6% claiming access to the technology without having ownership.

Ownership generally increased with age and was particularly strong among those aged 45 to 54 (39%) and 55 plus (42%). Under 25s, and those over 65, were less likely to have ownership of DAB, as were those from the (much smaller) Asian and Afro/Caribbean subgroups.

There was a significantly high proportion of people who listen to digital radio services (whether they be local or national digital, commercial or BBC) who do not own or have access to a DAB digital radio set. This finding would strongly indicate that their digital listening is associated with digital TV or with listening to services over the Internet.

Conclusion

Whilst we are extremely encouraged by the disproportionately high levels of claimed DAB digital radio ownership in the HBB TSA, which is to be expected in the affluent south and tallies with DRDB regional sales data, we believe there may be some over claiming and as a result we have used industry wide figures.

Propensity to purchase DAB digital radio

109. Interest in purchasing a DAB digital radio at this stage was quite low, with only 10% telling us they were at least very interested in buying one. Overall, just under a third (31%) expressed some degree of interest in buying a digital radio set, compared to 28% who definitely *would not* buy and just under a quarter who were very unlikely to purchase.

Those respondents living outside of areas that overlapped with London services were, however, more likely to express some degree of interest in buying a DAB set than their neighbours who were able to receive London based stations (35% v 27%).

Conclusion

We are encouraged that interest in DAB is higher in areas where greater radio choice exists.

Ownership of DAB by type

110. The majority of people owning a DAB digital have a portable radio set (61%). Just over a quarter (26%) have a DAB tuner as part of a hi-fi unit and 7% own a personal handheld set, with a small proportion of people owning more than one digital radio device.

Motivation for buying a DAB digital radio

111. The potential to hear existing analogue services with improved sound quality was the main motivation for the purchase of digital radio (36%). The prospect of interference free reception (32%) came second and was mentioned by almost a third of DAB owners. In third place was the opportunity to hear a wider range of new stations 'that better meet my tastes and interests' (31%).

This last attribute, the chance to hear a wider range of new stations that better met their tastes and interests, was the main motivator for men (40%) and those under 25. It was also the joint main reason for all under 35s buying a digital radio.

Ease of tuning was an important factor in the decision to buy digital radio for 21% of owners and was of above average importance to those aged 25 to 34 (34%) and, to a lesser degree, under 35s generally (24%).

Conclusion

Improved sound quality remains important to encourage uptake, however a good choice of relevant services will also stimulate the market.

Received Value of DAB Digital Radio

112. Improved sound quality of existing services was perceived as DAB's biggest asset according to just under a third of all those who own or have access to digital radio (32%). A wider range of new stations meeting the needs and interests of digital listeners was mentioned by just under a quarter of DAB owners as the biggest asset to them (24%), with the benefits of interference free reception and ease of tuning (15% and 14% respectively) coming a close third and fourth.

There were some subtle differences of opinion by demographic, with under 25s, for example, rating the wider range of new stations as the biggest asset in their opinion (42%). Ease of tuning was the biggest asset for 25 to 34s, who placed this just ahead of improved sound quality for existing analogue stations (25%). As the sample increased in age, then the appeal

of a wider range of new services moved into second place as the biggest asset, behind improved sound quality of existing stations.

Owners of DAB (as opposed to those who have *access*) cited improved sound quality of existing services as the biggest asset (34%), followed by a wider range of new stations (23%). Those with access to (but not ownership of) DAB placed a wider range of new stations highest.

Conclusions

Increased choice gains increased importance post purchase of a DAB digital radio

Catalyst to purchase DAB digital radio

113. The attraction of clear or improved reception or sound quality was the main reason non owners of DAB radio would be tempted to buy digital radio. 28%, for example, would be tempted by the prospect of interference free reception, followed by 26% who would be tempted by improved sound quality of existing analogue services and 23% who would be attracted by the ease of tuning digital radio would present. The prospect of being able to hear a wider range of new services appealed to almost a quarter of non-DAB owners (24%). A high, 28%, however said they did not know what would tempt them to purchase a DAB set.

Again, there were some subtle differences by age, with almost half (47%) of all under 25s saying that being able to hear a wider range of new stations would attract them to buy a digital radio. Indeed, this was would be the main motivator for buying a digital set for all under 35s (39%).

Conclusion

However, it is improved sound quality for existing analogue services and the prospect of interference free reception that would be the main attraction for non DAB owners, indicating that levels of awareness of the extent and variety of new and niche services was something that needed to be developed.

Affect of access to DAB on overall radio listening

114. A third of those with access to DAB digital radio said that it had increased their overall radio listening. For the most part though, almost two thirds claimed to listen to about the same amount of radio.

There were differences, however, by age. An above average 40% of under 25s, for example, claimed they listened to more radio now that they have DAB. Similarly, those in the 35 to 44 age group had a higher than average increase in their radio listening as DAB listeners. Those living in London overlap areas, where more choice already exists, have a greater propensity to listen to more radio.

Conclusion

DAB has the potential to improve time spent listening to radio, even with younger listeners

Listening by platform – weekday total

115. 89% of respondents listen to the radio on a typical weekday. More than two thirds (67%) told us they listen to the radio in the home, with a similar proportion of people claiming to listen to the radio in their cars (66%). There were a much smaller proportion of people who listen to the radio on a weekday via the television/Freeview/Satellite/Cable (17%), via the Internet (13%) or at work/school or college (11%).

We also noted that listeners to commercial radio were a little more likely than listeners to any BBC radio to listen to the radio in the car (77% v 74%), while the reverse was true when it came to listening to the radio in home (BBC 75% v commercial 71%). Almost half, 46.6% of all listening takes place in the home compared with 36.7% in car.

Listening by platform – weekend total

116. 82% of respondents listen to the radio on a typical weekend day. Almost two thirds (64%) listen to the radio at home, while a little over half (55%) listen to the radio of a weekend in their cars. 15% told us they listen to the radio via the television/Freeview/Satellite or Cable and 10% listen over the Internet. Whilst the majority of listening at the weekend takes place in the home, 53.6%, we found that in car listening at the weekends was a little lower.

Base All Adults	Adults	Hours out of 10 by Source
Unweighted	499	
Weighted	500	
	%	%
Via radio in the home	64	53.6
Via radio in the car	55	31.4
Via the television/Freeview/Satellite/Cable	15	6.9
Via the internet	10	5.0
Via radio at work/college/school	5	2.6
Via mobile phone	2	0.5
Via another source	*	*
Net: Any source	82	
Do Not Listen On A Weekend	18	
Don't know	*	

Conclusion

Listening to the radio in the home remains the most important place of listening although in car radio is now extremely highly rated. Attracting the driving audience would be a benefit

Existing services would want to listen to in digital quality

117. In total, 56% claimed to want to hear one or more of the local commercial services. The existing services to score highest were those covering the largest sectors of the HBB multiplex area including both Chiltern services and Classic Gold. In fact the scores for all the smaller services, considering that they are expressed as a percentage of a population of some 1.87 million people were fairly robust. Hertbeat FM, Horizon FM, Herts Mercury 96.6 and the Mix services scored in a range of 5% to 7%. Ten 17, on the periphery of the TSA, scored lowest at 4%.

Conclusion

The inclusion of local analogue services is considered key but will need to be weighed against the desire for more choice

Reactions to the chosen new digital formats

Base All Adults	Adults	Own DAB	Non DAB
Unweighted	499	165	304
Weighted	500	161	306
	%	%	%
A station with news information and talk programming	14	23	10
A station playing melodic, easy listening music from the last 4 decades and today	20	22	19
A station playing broad mix of hits and album track music	30	32	28
A station playing relaxing music to chill out to	31	37	29
A station focussing on the lifestyles of parents with young children	6	9	4

A station playing melodic, easy listening music from the last 4 decades

118. One in five of respondents told us they want to listen to a new, melodic and easy listening music station in digital quality. Interest to this service was evenly distributed between men and women, though heavily biased toward those aged over 35 (85%). This format also had a high, upmarket appeal with almost two thirds of those interested in this type of music station coming from the ABC1 sub group. Whilst those who want to hear this type of radio station in digital quality were evenly divided between those who lived in a London overlap area and those who do not, almost a quarter of those in the overlap area would like this type of station (24%), compared to only 17% of those who do not live in the overlap area. More than a third (36%) of those who would make up the audience for this type of station already claim to own a DAB digital radio set, while 60% have yet to buy one.

A station playing a broad mix of hits and album track music.

119. 30% of respondents said they would personally choose to listen to a new digital station playing a mix of hits and album tracks. Interest was almost evenly divided between men and women and was most strongly expressed amongst under 55s, and in particular those under 25 (23%) and 35 to 44s (23%). There was also a bias toward ABC1 listening (56%). 62% of those with an interest in an album track service live in an area that does not overlap with London services. Just over a third (34%) of potential listeners to this service already own a DAB set, while 56% have yet to purchase one.

A station with a range of news and talk programming, including phone-ins, guests and information

120. 14% of respondents would like to be able to hear a news, talk and information service. More than half were aged 35 to 54 (57%), while a little under a third were over 55 (31%). Future listeners were also likely to be ABC1s, with more than two thirds of those selecting this station coming from this sub group. Those people not living in a London overlap area were also much more likely to want to hear this type of service than those who do. 61% of those expressing interest in this type of news, speech and information service lived outside a London overlap area. Almost half (48%) the people who said they would like to hear this type of station in digital quality already own a DAB, while a similar proportion (49%) do not.

A station focusing on the lifestyles of parents with young children

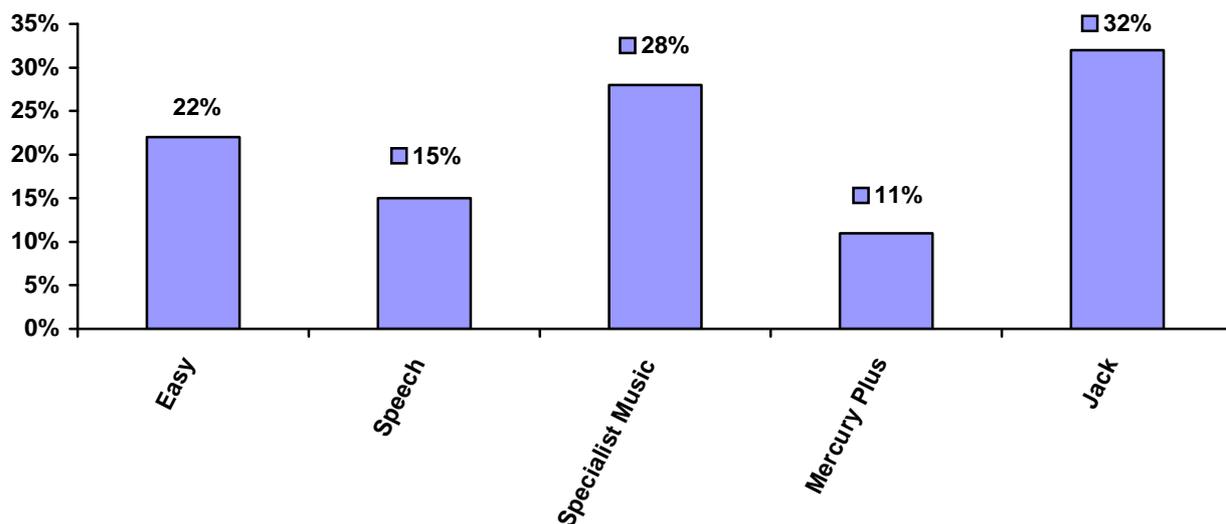
121. This new format aimed at providing broad family programming was wanted by 6% of the total population but, unsurprisingly perhaps, by 71% of those with children aged 10 and under. This format was also of more interest to women; they would make up around three quarters of any potential audience. 45% of future listeners were likely to be under 35 and 52% were likely to be aged 35 to 54. The station was also likely to appeal to a slightly more upmarket audience with 55% likely to be from the ABC1 sub group. Future listeners to this new service were only a little more likely to live in a non-overlap area (52% v 48%). More than half those who would like to listen to this new service currently own or have access to DAB (58%).

A station playing music to chill out to

122. Just under a third of the people we spoke to (31%) told us they would like to listen to a new radio station playing the kind of music you could chill out to. Women were more likely than men to feature in the potential audience (56% v 44%) and more than a third were likely to be under 35 (35%), while more than a quarter were likely to be aged 35 to 44 (26%). More were also likely to be from the ABC1 sub group (56%). Those people interested in listening to this type of station were a little more likely to come from an area that does not overlap with London services (53%). More than half those who were interested in listening to a chill out service do not currently own or have access to a DAB radio set (57%).

Weekly Reach Potential

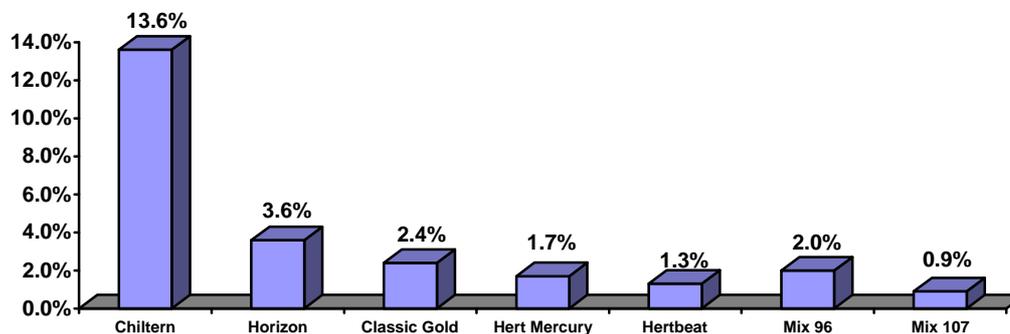
123. The chart below shows the proportion of all adults that claimed they would listen at least weekly to each of the planned formats for the HBB Multiplex, excluding the planned simulcast services. We have shown the data for the A Lifestyle service for parents with children to better represent the direction in which Herts Mercury plan to take their service.



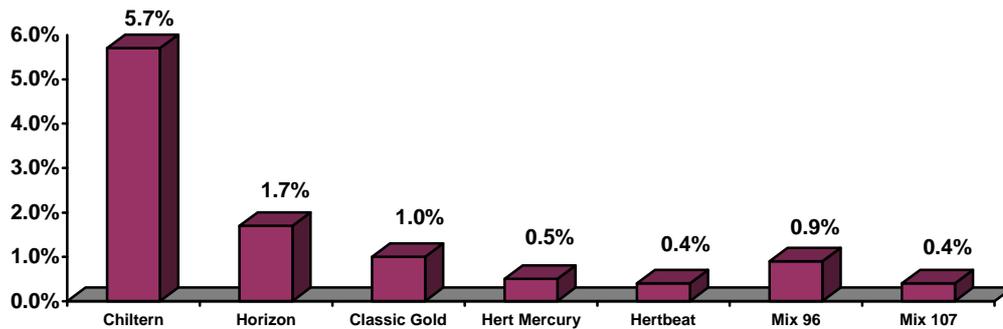
124. The likely audience profiles to each of the proposed service are shown in response to Q11b

125. In addition we have reviewed the RAJAR data for all proposed simulcast services and measured their reach and market share across the whole of the HBB TSA, in all cases this area is significantly greater than the individual stations current areas of editorial influence. It is expected that the potential for all of these services will grow as they may seek to serve wider geography.

Existing Services Performance Across HBB TSA- Weekly Reach



Existing Services Performance Across HBB TSA- Market Share



Broadening Listener Choice

126. When it comes to choosing new station formats that cater for the tastes and interests of all the people who live in the area, we found that, for the most part, all the proposed services attracted even stronger support when considering the tastes and needs of the wider community than they received as 'personal choice' services. In particular, 20% of adults told us they wanted to hear a melodic, easy listening service. However, when considering the tastes and needs of the wider community, this rose to 27%. The service focussing on the lifestyles of parents with young children saw the highest increase, up from 6% of respondents as a personal choice to 24% in those selecting as meeting the needs of the wider community.

Visual Data Requirements

127. There were four main types of information that people would like to receive in visual form - weather (46%), traffic and travel news (43%), local news (39%) and national news (34%) were all mentioned by at least a third of the sample, while around a quarter (26%) would like to be able to view sports news.

128. Existing DAB owners - and those with access to DAB - demonstrated slightly higher than average interest in receiving most of these four items in visual form. These two sub groups also expressed above average interest in several other information types, for example, comedy (21%), what's on information (23%) and national sport (30%).

Audio Data Requirements

129. Weather (46%), local and national news (both 44%) and travel and traffic news (42%) were the four main types of information adults would like to receive in audio form (say as download services). National sport was mentioned by just over a quarter of respondents (26%), while 21% told us they would like to receive comedy.

130. Those who already have access to DAB demonstrated above average interest in receiving almost all these information types in audio form, in particular the top four: national news (52%), weather (52%), local news (49%) and to a lesser degree traffic and travel news (43%). There was

significantly increased interest among this sub group too, in national sport (31%) and comedy (29%).

Conclusion

Key areas for data information are news (national and local), traffic and travel and weather. Almost all these information types were of above average interest to future listeners of the proposed multiplex.

Desire for More Functionality

131. More than a quarter of respondents (76%) told us they were interested in increased functionality. The ability to pause, record and rewind programmes attracted the greatest interest, with more than half (55%) telling us they would like access to this facility. A third would like to be able to purchase songs they were listening to and a third would like an electronic programming guide. Current DAB radio owners showed higher than average interest in almost all facilities

Conclusion

Functionality could be important, especially with existing DAB owners.

Importance of all local stations providing regular local news and information

132. Respondents were somewhat divided in their opinion as to whether all local radio stations should provide regular news and information if it was always possible to access bulletins on a local radio station. Overall, 45% of adults felt that it was important for all local stations to provide local news and information with a quarter saying it was very important. Women were a little more likely than men to say it is important to hear local news on all local stations (46% v 43%). Under 35s were even more likely to say this (54%).

Importance of local station listened to producing programmes or feature relevant to the area

133. Almost two thirds of respondents felt it was important that the local radio station they listen to produces programmes or features relevant to their area (64%). More than a third told us it was very important they should do this. Men and women were equally of this opinion, while only under 25s showed below average (57%) agreement with this view.

Conclusion

It would appear that local news is a topic where there is some division about whether it is expected on local services. In addition to the simulcast based services, we anticipate that the majority of the digital only services will provide news and information for the area. Future listeners to the proposed multiplex were more likely overall, to consider as important the production of programmes or features relevant to their area (70% v 64%).

Incorporation of Station Into Repertoire

134. Almost two thirds of respondents were able to say how the new digital radio stations would impact on their current radio listening patterns. 30% would increase their overall amount of time spent listening to the radio to accommodate the new services, while a quarter would choose to spend less time listening to some of the stations currently in their listening repertoire. Only 10% felt they would have to consider stopping listening to one or other station in their repertoire.

Stations listen to less/stop listening to

135. Of those claiming they would listen less to one or more service, more people claimed they would stop listening to BBC stations, 50% than commercial 45%. When it came to which they would stop listening to it was again the BBC that would be most negatively impacted with 45% claiming BBC v 38% commercial

Affect of new stations on non-radio listeners

136. We also asked those people who currently do not listen to the radio (4.8%), what impact these new digital stations would have on their radio listening. Half were unable to say how the new services would affect them and more than a third (37%) felt it would not have any affect on their radio listening, they still wouldn't listen. However, 12% told us they at least might be interested in getting a digital radio in order to start listening to the radio.

Conclusion

The increased choice that digital radio will bring will help to stimulate the radio market in Herts, Beds and Bucks.

Estimated share of listening to new multiplex

137. If these new services became available, respondents estimated they would spend around 37% of their listening hours listening to digital radio. Those who already have access to DAB would spend around 41% of their listening time, listening to their digital radio.

Propensity to Buy Digital Radio

138. After being exposed to some of the new ideas for radio stations that would be available on digital radio, a little under half the people who do not have a digital radio at the moment expressed some degree of interest in buying a DAB digital radio in order to listen to one or other of the new services that appealed to them.

139. Interest was slightly higher among men (49%), though 45% of women in this sub group also expressed interest in buying a DAB radio too. By age, we noted that those under 35 (64%) and in particular those under 25 (72%) showed significantly higher interest.

Conclusion

People who do not currently own a DAB radio set and who would choose to listen to the combination of stations on the proposed HBB multiplex, expressed a higher interest in buying one. More than half, 56% were at least quite interested and almost a quarter (24%) said they were now at least very interested in purchasing.

Conclusion on Research Undertaken

140. Our programme of research has successfully met our objectives. It has provided the basis upon which we have built our audience model. It has helped us gain a deeper understanding of consumer awareness of and attitudes toward DAB digital radio. We were able to quantify interest in our proposed formats and the impact that these services would have collectively as a multiplex offering. We have been able to demonstrate that our services are demanded, increase choice and would stimulate the purchase of digital radios

15. Local support

Provide any evidence which has been gathered of local support for the provision of the proposed local radio multiplex service.

141. We are aware that applicants have historically advertised their intention to apply for a licence in local newspapers and the trade press. Whilst we are aware that such advertisements could identify potential formats and service providers from within the region, our experience has shown this not never to be the case, especially where public awareness of the concept of digital radio is low. As and when opportunities arise in the future for replacement service providers or to fill new opportunities, these will be advertised in the trade press and local newspapers.

Consumer Research

142. We believe that interest in the complement of services is best measured by the level of support for the services to be broadcast on the multiplex. The breadth of our research has been detailed in question 14. Through this research demand for each format has been evaluated, both individually and collectively on the basis of the chosen complement of services. The research studies have also evaluated interest in digital radio and the key drivers for the new technology, over and above pure choice of formats. The research also evaluated key issues which listeners wished to see on digital radio. A budget has been set for ongoing general research activity to measure interest in existing and new services, and to assist in the promotion of the medium.
143. Although a local multiplex is a virtual company, that does not stop us needing to develop a relationship with the listeners about the services carried on the multiplex. We will want to ensure that we understand the local population, their likes and dislikes, the market gaps and what other services it can provide. Therefore, although there is no wish to have a dialogue with the audience, there is a need to provide a means of access and communication.

Research

144. We will undertake on-going consumer research. This, in the main, will be undertaken in association with service providers through bodies like RAJAR. Such 'RAJAR' style research will assist service providers to measure audiences and the level of up-take, with obvious benefits to the subscribers. However, there may be times when there is a need to undertake original research, such as to evaluate demand for further potential services or to assess the style and level of content in programmes for contractual reasons. This research may be undertaken through focus groups or desk research.

Marketing

145. We will also have a marketing role in generating awareness of digital radio as a concept and, alongside the service providers, of the complement of services carried on the multiplex. As before, although such marketing would identify MuxCo, the main emphasis would be on the concept and on the services.

Internet

146. A multiplex network website will be established at www.muxco.com, and the Herts, Beds & Bucks multiplex will feature and be provided for through this site. The site will promote DAB Digital Radio, the services offered on each local multiplex, as well as links to other multiplex operators elsewhere in the country. In addition, the website will provide a means of communication between the multiplex and service provider, in particular providing information on transmission issues and fault notices.

Section 51(2)(g): Fair and effective competition

16. Measures taken to ensure fair and effective competition

Detail the measures that have already been taken, and will be taken before and during the licence period, to demonstrate that "in contracting or offering to contract with persons providing digital sound programme services or digital additional services or television licensable content services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of those services".

147. Following the advertisement of the new multiplex licence, we contacted the identified analogue licensees (who would qualify for licence renewal in return for providing a digital programme service on the multiplex) to discuss their digital aspirations and invite expressions of interest in providing programme services. For strategic reasons reflecting the competitive nature of the application we did not make any approach to GCap Media ahead of the submission of applications. However, we are aware of their digital radio credentials and support for the technology.
148. We also contacted companies and organisations who have known digital aspirations or operate digital service elsewhere.
149. All companies who registered expressions of interest were sent a Service Provider Questionnaire. They were advised that information received would be used alongside research to decide which formats would be included and therefore which service providers would be accommodated in the multiplex application. A summary of all contacts is included in Part B.
150. Headline terms including approximate carriage costs have been supplied to the proposed service providers.
151. During the licence period a similar process will be adopted, with a standard questionnaire being used to assess applicants

Fair and Effective Competition during the Licence Period

152. Each service provider will be protected by a service provider agreement; the key terms of which will be identical for all service providers. All fees charged will be based solely on a 'cost plus' basis, pro-rata to capacity contracted by each service provider. No fees will be related to revenue fees.
153. We will establish a Service Level Agreement with service providers. This will set out our communications and work policies, especially those relating to planned work and emergency outage notification.

17. Contacts with prospective service providers

Provide a comprehensive list of all prospective providers of digital sound programme services and/or digital additional services and/or television licensable content services with whom the applicant has had contact prior to and during the preparation of this application, at the initiative of either party, and in whatever form. Summarise the nature of the proposals discussed and, for each proposal which is not among those planned for inclusion on the multiplex (as per Q.11 and Q.12 above), state the reason(s) why the prospective provider and/or the service(s) proposed by that provider has not been included.

The response to this question may be submitted in confidence.

154. Our response to this question is submitted in confidence in Part B.

18. Contractual and other arrangements with service providers

For each digital sound programme service provider and/or digital additional service provider and/or television licensable content service provider named in this application:

- a) Supply details of the terms of access, including financial agreements;
- b) To what extent are any or all of these terms of access conditional? Clarify and conditions that exist.
- c) In respect of each named service provider for which details of terms of access are provided, supply a letter from the service provider confirming its agreement with the account of the terms of access provided above, and in particular with the fees it expects to pay.

The response to this question may be submitted in confidence.

155. Our response to this question is submitted in confidence in Part B.

Technical quality

19. Division of multiplex capacity

Show, by means of a pair of clearly-labelled tables, the proposed division of the available multiplex capacity into digital sound programme services and other services during all time periods. The tables should depict the proportion of the total available capacity (in kbits/sec) which it is proposed to allocate individually to each of the digital sound programme services listed in response to Q.11, plus any capacity reserved for expansion, inclusive of any which it is proposed to allocate to digital additional services and television licensable content services.

Please also indicate what proportion of these services will be programme-related (see paragraph 4.35). One of the tables should refer to the capacity units taken by each service (i.e. inclusive of capacity used for error protection), and the other table should refer to the bitrate net of error protection capacity, together with the associated protection level (1 to 5) which it is proposed to use, in accordance with ETS 300 401.

156. The following table details the proposed division of multiplex capacity between the proposed nine audio channels, the 'capacity pool' and EPG, during the three identified time periods.

			Day	Evening	Night
			6am to 7pm	7pm to 12pm	12pm to 6am
			k/bits	k/bits	k/bits
Kbits Allocation	Service Type	UEP			
Chiltern FM	MPEG1L2	UEP3	128	128	128
Horizon FM	MPEG1L2	UEP3	128	128	128
Classic Gold	MPEG1L2	UEP3	128	128	128
Hertbeat FM	MPEG1L2	UEP3	80	80	80
BBC Three Counties	MPEG1L2	UEP3	128	128	128
JACK fm	MPEG1L2	UEP3	96	96	96
Easy Radio	MPEG1L2	UEP3	96	96	96
Specialist Music	MPEG1L2	UEP3	128	128	128
Speech	MPEG1L2	UEP3	64	64	64
Mercury Plus	MPEG1L2	UEP3	96	96	96
Data Allocation	DATA	EEP3A	72	72	72
EPG	EPG	EEP3A	8	8	8
Total			1,152	1,152	1,152
<i>Data as % Total</i>			<i>6%</i>	<i>6%</i>	<i>6%</i>

CUs Allocation	Service Type	UEP	Day	Evening	Night
			6am to 7pm	7pm to 12pm	12pm to 6am
			CUs	CUs	CUs
Chiltern FM	MPEG1L2	UEP3	96	96	96
Horizon FM	MPEG1L2	UEP3	96	96	96
Classic Gold	MPEG1L2	UEP3	96	96	96
Hertbeat FM	MPEG1L2	UEP3	58	58	58
BBC Three Counties	MPEG1L2	UEP3	96	96	96
JACK fm	MPEG1L2	UEP3	70	70	70
Easy Radio	MPEG1L2	UEP3	70	70	70
Specialist Music	MPEG1L2	UEP3	96	96	96
Speech	MPEG1L2	UEP3	48	48	48
Mercury Plus	MPEG1L2	UEP3	70	70	70
Data Allocation	DATA	EEP3A	54	54	54
EPG	EPG	EEP3A	6	6	6
Total			856	856	856

20. Basis of allocation of multiplex capacity

On what basis have technical decisions on the allocation of multiplex capacity to each of the proposed digital sound programme services been made?

How has the balance been determined between the number of services to be accommodated and the audio quality and robustness of reception which each will enjoy?

157. In allocating capacity between services, the following factors have been taken into account:

- A desire to increase listener choice and to provide a range of value enhancing data services
- A need to provide a reasonable level of sound quality
- To ensure robustness of reception
- The wishes of individual service providers
- The reserved capacity of the BBC

158. Our aim is to provide each service provider with the ability to broadcast in stereo. For smaller companies, a decision they have to weigh up is the benefit of broadcasting in stereo, especially during the initial years of digital, versus the financial saving of broadcasting in quality mono. We will work with Ofcom and the service providers in evaluating opportunities for services to broadcast in stereo using lower bit rates.

159. NGW have evaluated two different audio codecs at various different bitrates. They have found subjective differences that may lead to preferences for use of one codec over another, but dependent on the content and bitrate chosen. Muxco HBB therefore intends to offer a choice of codecs to our service providers. At low bit rates of 64Kb or below, we will consider the use of half rate coding at the request of our service providers.

160. We have chosen an error protection level of UEP 3 as it has been shown through widespread experience to give a good balance between CU allocation on the multiplex and robust reception.

161. We note that the WorldDMB Forum has now released the DAB⁺ specification. This specification brings with it a significant improvement in spectrum efficiency over the existing standard, but raises a number of migration challenges. We believe that this technology offers an opportunity in the longer term to increase the choice of audio services and enhanced data services on our multiplex. We would like to work with Ofcom to manage the introduction of DAB⁺ services on the HBB multiplex.

21. Audio characteristics

For each local digital sound programme service proposed to be provided, state whether it will be broadcast in 'stereo' or 'mono', and whether it will operate at 'full-rate coding' or 'half-rate coding'. The response to this question should be consistent with the proposed division of multiplex capacity set out in response to Q.20.

162. At the commencement of broadcasting, all audio services will be transmitted using ETS 300 401 Mode 1 and will have level 3 UEP applied.

	Capacity Units/ Bit Rates						AUDIO SAMPLING AND PROTECTION
	DAY 6am – 7pm		EVENING 7pm – 12am		NIGHT 12am – 6am		
	CUs	k/bits	CUs	k/bits	CUs	k/bits	
Chiltern FM	96	128	96	128	96	128	48kHz UEP3 Stereo
Horizon Radio	96	128	96	128	96	128	48kHz UEP3 Stereo
Classic Gold	96	128	96	128	96	128	48kHz UEP3 Stereo
Hertbeat FM	58	80	58	80	58	80	48kHz UEP3 Mono
BBC Three Counties	96	128	96	128	96	128	48kHz UEP3 Stereo
JACK fm	70	96	70	96	70	96	48kHz UEP3 Mono
Easy Radio	70	96	70	96	70	96	48kHz UEP3 Mono
Specialist Music	96	128	96	128	96	128	48kHz UEP3 Stereo
Speech	48	64	48	64	48	64	24kHz UEP3 Mono
Mercury Plus (2010)	70	96	70	96	70	96	48kHz UEP3 Mono
Folder Data	54	72	54	72	54	72	EEP3-A
EPG	6	8	6	8	6	8	EEP3-A
Total	856	1,152	856	1,152	856	1,152	

Declaration

Applicants are required to conclude their submission by responding to the following question:

Do you confirm that, to the best of your knowledge and belief:

- a) the applicant is not a disqualified person in relation to the licence by virtue of the provisions of section 143(5) of the Broadcasting Act 1996 (relating to political objects);
- b) no director or person concerned directly or indirectly in the management of the company or the applicant group is the subject of a disqualification order as defined by section 145(1) of the Broadcasting Act 1996;
- c) no person involved in the application has been convicted within the past five years of an unlicensed broadcasting offence and that the applicant will do all it can to ensure that no person so convicted will be concerned in the provision of the service, the making of programmes included in it, or the operation of a radio station if the applicant is granted a licence; and
- d) any matters which might influence Ofcom's judgement as to whether the directors and substantial shareholders involved in the application are fit and proper persons to participate in a radio licence have been made known to Ofcom?

Applicants should note that Ofcom reserves the right to revoke a licence if at any time any material statement made is found to be false and to have been made by the applicant or any member or officer thereof knowing it to be false, and that in the circumstances of section 144 of the Broadcasting Act 1996, the provision of false information or the withholding of relevant information with the intention of misleading Ofcom could incur a criminal conviction and a disqualification from the holding of a licence.

163. MuxCo Home Counties is not aware of any issues which would prevent the award of a licence to the company.