MuxCo Somerset Limited

**An application to Ofcom for the
Somerset local DAB digital radio multiplex**

Part A – Public Section

April 2008

Executive summary

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

MuxCo Somerset Ltd

1. MuxCo Somerset wishes to establish local DAB digital radio in Somerset in an efficient and cost effective manner, and to help enable local analogue operators to participate fully in DAB digital radio as owners and service providers.

2. The company's shareholders are:

    *   UKRD Group Ltd   33.3%
    *   The Local Radio Company Ltd ('TLRC')   33.3%
    *   MuxCo Ltd   33.3%

3. The company's ethos is to provide DAB in a cost and operationally efficient manner to enable as many organisations as possible to broadcast. Through its various applications, MuxCo has already demonstrated its commitment to offer a wide range of broadcast options, such as variable bit rates and hours of broadcast, to make DAB as economical as possible. We believe this is the best way to encourage more stations to join the platform and provide compelling propositions for digital radio listeners.

4. Analogue stations will be provided an opportunity to broadcast to help ensure a consistent DAB focused message is broadcast to existing radio listeners and will help create cross-promotional opportunities for radio's digital platform. The new multiplex also provides opportunities for established local services to increase revenue and to grow their businesses by broadcasting to a wider area.

The multiplex

5. The multiplex has been advertised to cover Somerset and North Somerset – an area of 480,000 adults.

6. Our proposals are based on a thorough review of the market. Our proactive involvement of shareholders, cost management, bitrate policies and innovative use of data services provides an excellent opportunity for a range of organisations to broadcast and MuxCo has already attracted (and will continue to attract) new operators to local radio.

7. We believe local radio has a strong commercial future – there will always be demand for services that cater for local tastes and interests (geographic, demographic and community of interest focused) from both listeners and advertisers. It is important for the multiplex to provide opportunities for a wide range of local services, both existing and new, and for local radio operators to have the opportunity to provide these in an efficient and economical way.

8. MuxCo Somerset will provide opportunities for existing analogue services to broadcast in stereo and for a range of new services that collectively will broaden listener choice, cater for local tastes and interests and expand the number of providers in the market.

- Star Radio
- Ivel FM
- QuayWest
- Orchard FM
- BBC Somerset

- *Easy Radio* - an easy listening melodic music service
- *UCB UK* – a Christian music and speech service
- *Traffic Radio* - a traffic and travel service

9. In addition, we will carry a local Podcast Service providing opportunities for niche services to cater for a diversity of passions, interests and communities. Downloadable podcasts will include news from ITN, a local guide from Itchy, specialist music downloads, as well as locally produced podcasts.

10. The commercial analogue services listed are listened to by 34.7%% of adults each week, and collectively account for 16.6% of total radio listening. In total, our proposed complement of simulcast and new services result in the multiplex having appealing to 81% of the adult population.

11. The additional and complementary services that DAB can offer, such as EPG, music downloads, traffic and travel services, DABverts and slideshow, are important components in the next stage of DAB's development, and capacity has therefore been allocated for the provision of these services, with all radio services able to utilise DLS and EPG from launch.

Meeting the Award Criteria

Our proposed coverage and timetable to launch

12. Our proposals will deliver solid coverage of the major population centres and travel routes from launch. Our initial 2 transmitters will provide 'outdoor coverage' to 78.2% of the adult population, and 'indoor coverage' to 60.9% (noise limited). It is our intention to launch by September 2009.

Our ability to establish and maintain the service

13. The shareholders have considerable analogue and digital radio experience:

- UKRD operates 10 services, including Star Radio and Ivel FM within the multiplex area and has DAB experience through its involvement in South West Digital Radio, MuxCo Gloucestershire and MuxCo Surrey and Sussex.
- TLRC owns and operates a number of popular local radio services across the UK and is committed to their digital broadcast.
- MuxCo is an ambitious and developing company with substantial digital radio experience and interests in a number of local multiplexes.

14. The shareholders are well-resourced companies that can support the multiplex throughout the licence term.

Catering for local tastes and interests and broadening choice

15. We have undertaken a comprehensive programme of research to underpin our application. This has included population profiling and analysis of existing radio listening habits, as well as an independent and comprehensive survey of local tastes and interests. Together, this helps ensure that the proposed service will reflect and serve the various tastes, interests and demographics of the population.

16. Our research supports the simulcasting of local analogue services (helping promote digital radio and drive listeners from analogue to digital) as well as for our proposed new services. Taken as a whole, our proposed services will significantly broaden choice, complement existing services and cater for a wide range of local tastes and interests, with the complement of services providing something for a variety of age groups, as well as more specialised communities of interest. Our research also underpins our audience projections and has provided information to forecast the potential share of digital listening.

17. Altogether, our proposals will provide further incentives for consumers to buy a DAB digital radio and will, we believe, help commercial radio grow further.

Demonstrating local demand and support

18. RAJAR provides strong evidence of demand and interest in the simulcast services. Our commissioned consumer research supports this RAJAR analysis and enables us to measure local demand for our proposed digital only services.

Being fair and effective

19. 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.

20. We have engaged with potential service providers in an open and non-exclusive manner allowing operators to ensure a digital future.

Summary

21.   We believe that MuxCo Somerset will be the most credible operator for the multiplex.

- We will deliver robust local DAB coverage and technical efficiencies, resulting in more economical multiplex carriage for service providers.

- Our understanding of the market coupled with our comprehensive local research has helped ensure that our plans relate to the needs of local citizens and consumers. This will help ensure that MuxCo Somerset will deliver services that truly appeal to the area and help commercial radio improve its market share. This information will also assist in the future development of the multiplex.

- The multiplex is well resourced, in terms of both management and finance, and will be led by a management team with an unparalleled track record in applying for and successfully operating local multiplexes.

- The shareholders have impressive track records in operating both local and digital-only stations. This expertise will be invaluable to the multiplex, as well as assisting the development of new programming streams. The involvement of UKRD and TLRC as shareholders also enables us to guarantee the carriage of Star Radio and Ivel FM.

- MuxCo Somerset will deliver a cost effective local DAB solution, collectively benefiting all service providers and ensuring a long-term commitment to DAB digital radio.

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 Somerset Ltd

Registered Number	06204618
Address:	96a Curtain Road, London EC2A 3AA
Telephone (daytime):	020 7739 7879
E-mail address:	info@muxco.com

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@muxco.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.

22.   The transmission proposal has been designed in conjunction with NGW to provide optimum population coverage across the licensed area, taking into account urban areas and the main road network. The plan also takes into account the footprints of the existing analogue services and their spheres of influence.

23.   In planning the proposed network, NGW has assumed the following service levels:

- 58dBuV/m outdoor mobile.
- 65dBuV/m indoor portable.
- 76dBu/Vm indoor handheld.
- Where Interference Limited coverage is stated, this has been calculated using the interfering transmitter data and ERPs as stated in the Ofcom advertisement for the multiplex.

24.   At launch, our proposals will provide outdoor coverage to 382,623 adults 15+ (equating to 78.2% of the licensed area) and indoor coverage to 298,134 adults (60.9%). To deliver this noise limited coverage, we propose to use two transmitters:

Mendip
A high power transmitter using a new local DAB antenna providing:

- Robust indoor coverage to most of Somerset east of a line drawn from Watchet to the point where the county boundary crosses the M5 south west of Wellington, but also including the coastal strip from Porlock to Watchet and the coastal town of Minehead.
- Outdoor mobile coverage to most of the transport corridors including the whole of the M5, plus most of A303, A37, A38 and A39.
- Mobile device coverage in a large proportion of key settlements.

Taunton (TV RSL)
A low power transmitter using an omni-directional antenna serving Taunton and the immediate area:

- Robust indoor coverage to most of Taunton, which is otherwise poorly served by Mendip due to the local topography.
- Mobile device coverage in Taunton.

25. We recognise that during the licence term we may wish to improve and extend coverage around Weston-super-Mare and Yeovil. This would only be don after we have assessed actual coverage from Mendip and Taunton, and how we can achieve the launch of additional transmitters in a cost efficient and effective way (i.e. active repeaters):

Hutton
Improve and extend coverage around Weston-super-Mare. Outdoor population coverage would increase by 6.6%.

Yeovil (Coker Hill)
Improve and extend coverage around Yeovil and Crewkerne. Outdoor population coverage would increase by 5.3%.

If both transmitters were introduced, outdoor coverage would rise to 91.2%.

26. Ofcom's advertisement identifies a potential adult population of 481,268. NGW calculates a potential adult population of 489,288 within the PPA, and percentage coverages are based on the NGW figure:

	Outdoor Coverage (58 dB)		Indoor Coverage (65 dB)	
	Adults '000	% Covered	Adults '000	% Covered
Noise Limited	382,623	78.2%	298,134	60.9%
Interference Limited	378,915	77.4%	298,064	60.9%

Standalone Coverage
27. The following table shows the coverage (Interference Limited) within the PPA of each site, demonstrating the considerable overlap between transmitters which will ensure a reliable signal to a significant proportion of the licensed area, even should one transmitter be on reduced power or have failed.

Transmitter Site	Standalone Coverage: Outdoor	Percentage Licence Area	Standalone Coverage: Indoor	Percentage Licence Area
Mendip	346,745	70.9%	238,269	48.7%
Taunton	113,415	23.2%	81,673	16.7%

Cumulative Coverage
28. The table below shows how the overall PPA coverage (Interference Limited) is achieved up through the use of a network of transmitters.

Transmitter Site	Cumulative Coverage: Outdoor	Percentage Licence Area	Cumulative Coverage: Indoor	Percentage Licence Area
Mendip	346,745	70.9%	238,339	48.7%
Taunton	378,915	77.4%	298,064	60.9%

Network Resilience
29. The following table shows the impact (Interference Limited) from the loss of one transmitter at a time, demonstrating its contribution to the overall network.

Transmitter Site	Cumulative Population Loss: Outdoor	Percentage Lost	Cumulative Population Loss: Indoor	Percentage Loss
Loss of Mendip	265,537	54.2%	216,391	44.2%
Loss of Taunton	32,170	6.5%	59,795	12.2%

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.

30.   We propose to launch by September 2009.

31.   We have made contingent arrangements with NGW to ensure that this launch date can be achieved. In making this assertion we have assumed the multiplex licence would be awarded by August 2008.

32.   We have identified additional areas for potential network enhancement during the licence term. At present, no dates are proposed when any enhancement might prove feasible. 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

33.   NGW will be the owner of the required antenna system at Mendip and Arqiva at Taunton. Discussions on all the antenna systems have taken place between with NGW and Arqiva Network Access departments, and we are advised that no obstacles are expected to meeting the timetable for launch.

Transmitter systems

34.   NGW propose to use transmitters from a major European supplier, Rohde & Schwarz (R&S) with whom they have a Frame Agreement. R&S has confirmed their ability to provide the necessary transmitter systems and installation services within the required timescales.

Distribution

35.   The distribution between the multiplex centre and the transmitters will be contained on NGW SHF link circuits. However by launch, On Channel Repeater ('OCR') equipment will be available for deployment and having conducted initial RBL path calculations NGW considers that while it will be not be practical to install equipment at Taunton, Coker Hill offers very strong potential for an OCR. Hutton offers a difficult "off air" path but nevertheless this will be investigated at the time. OCR equipment offers cost savings that are important for the viability of low population areas.

Accommodation and Power Requirements

36.   NGW Network Access department has confirmed that it can provide suitable accommodation and power supply at Mendip. NGW has also negotiated new accommodation and power supply agreements with Arqiva Network Access for Taunton.

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.

37. The assignment details accompanying this application are provided under separate cover as an electronic text file.

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
Mendip	ST 564 488	September 2009	NGW	220 m	NGW Network Access has offered a new cardiod antenna.
Taunton	ST 250 293	September 2009	Arqiva	19m	Arqiva Network Access has offered a share of the proposed National Digital Radio Dipole.

38. It should be noted that the Taunton Site is non-RAL, but a former TV RSL site. As this provides better coverage of the area, both MuxCo and the BBC are proposing to seek transfer to the RAL.

39. The following map highlights proposed noise limited coverage at launch.
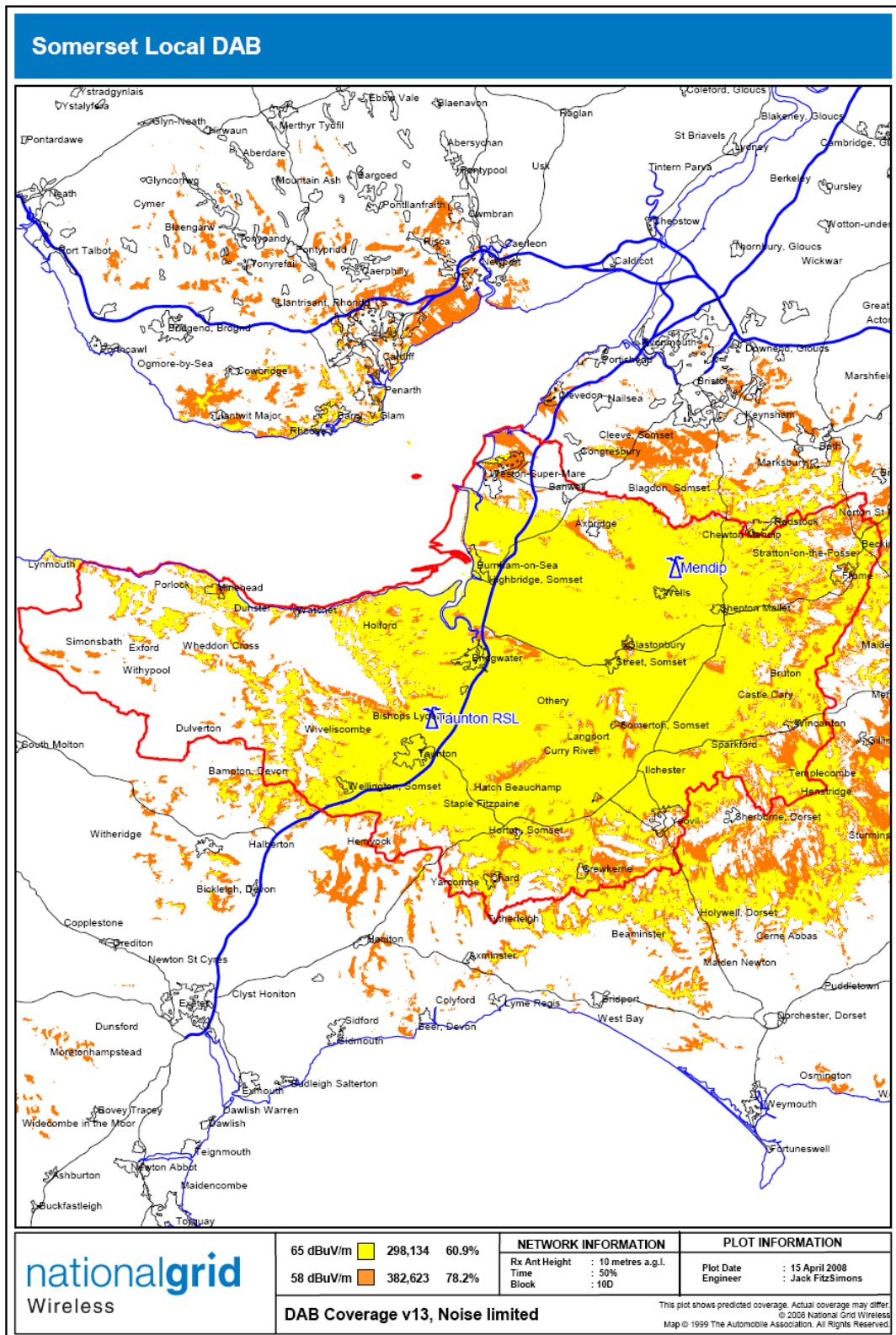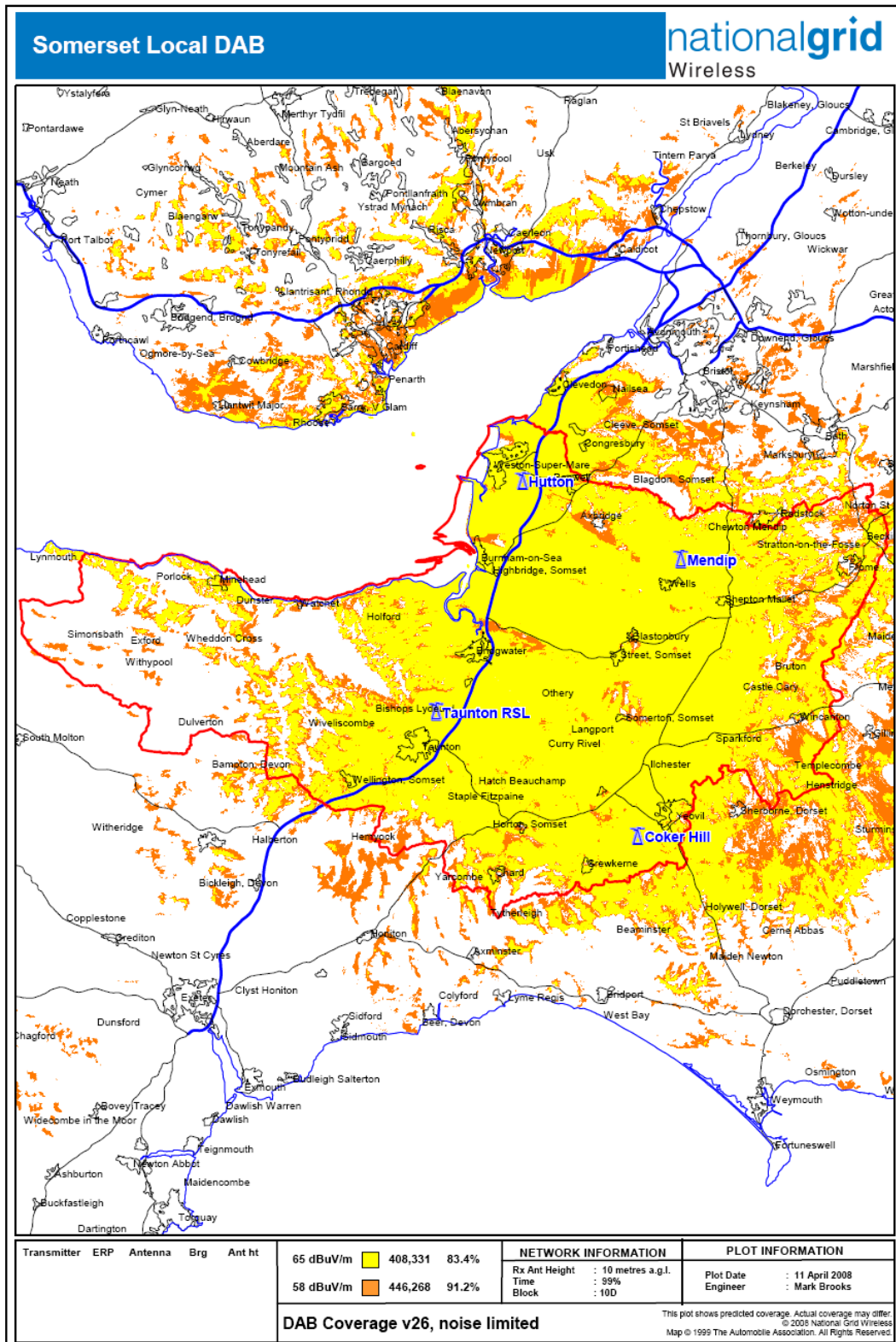
40.   The following map highlights proposed interference limited coverage at launch.
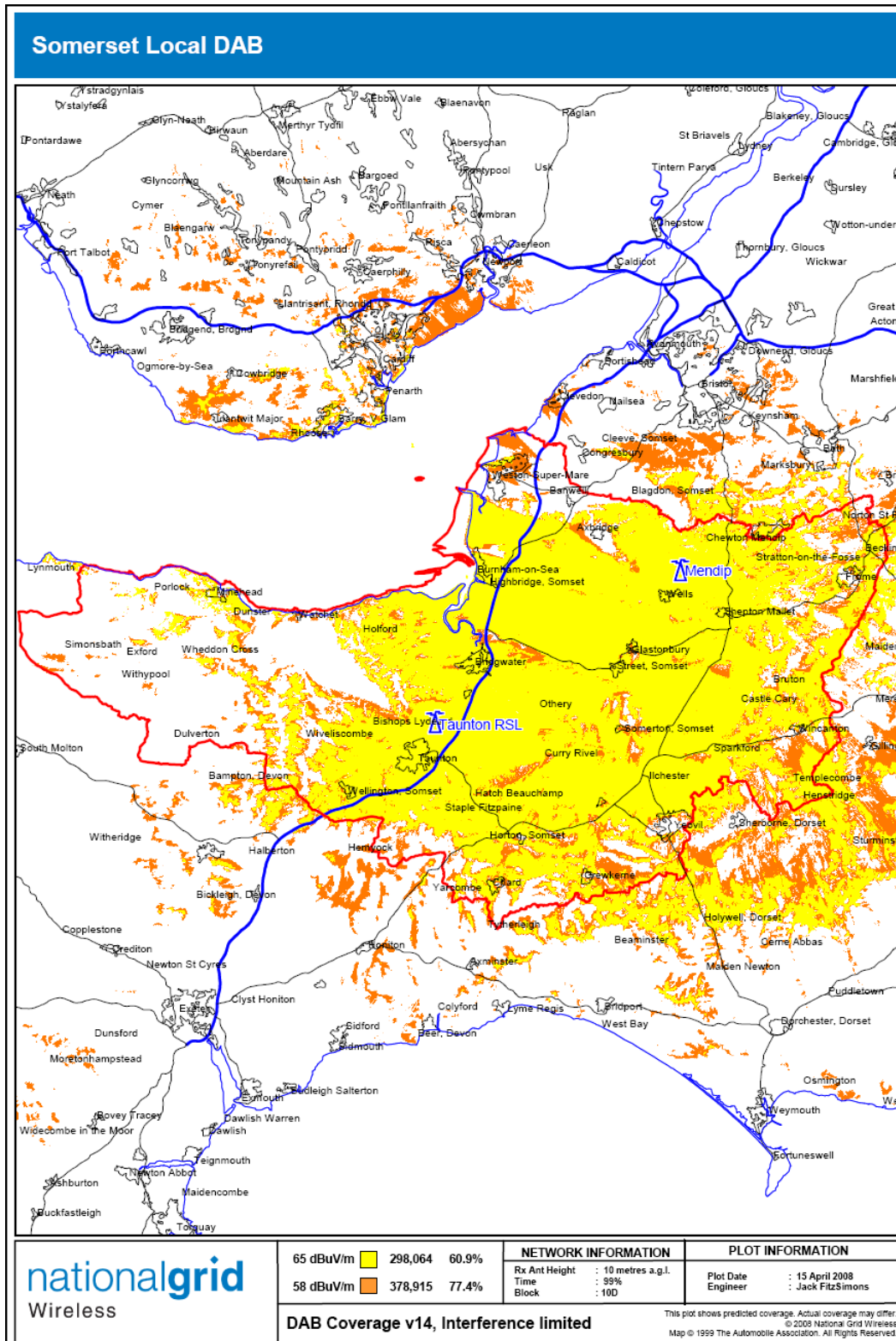
41.   The following map highlights noise limited coverage if all four transmitters are launched.

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.

i) Diagrams

42. 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.

Mendip

Proposed position of new DAB antenna on Mendip tubular mast (220m agl)
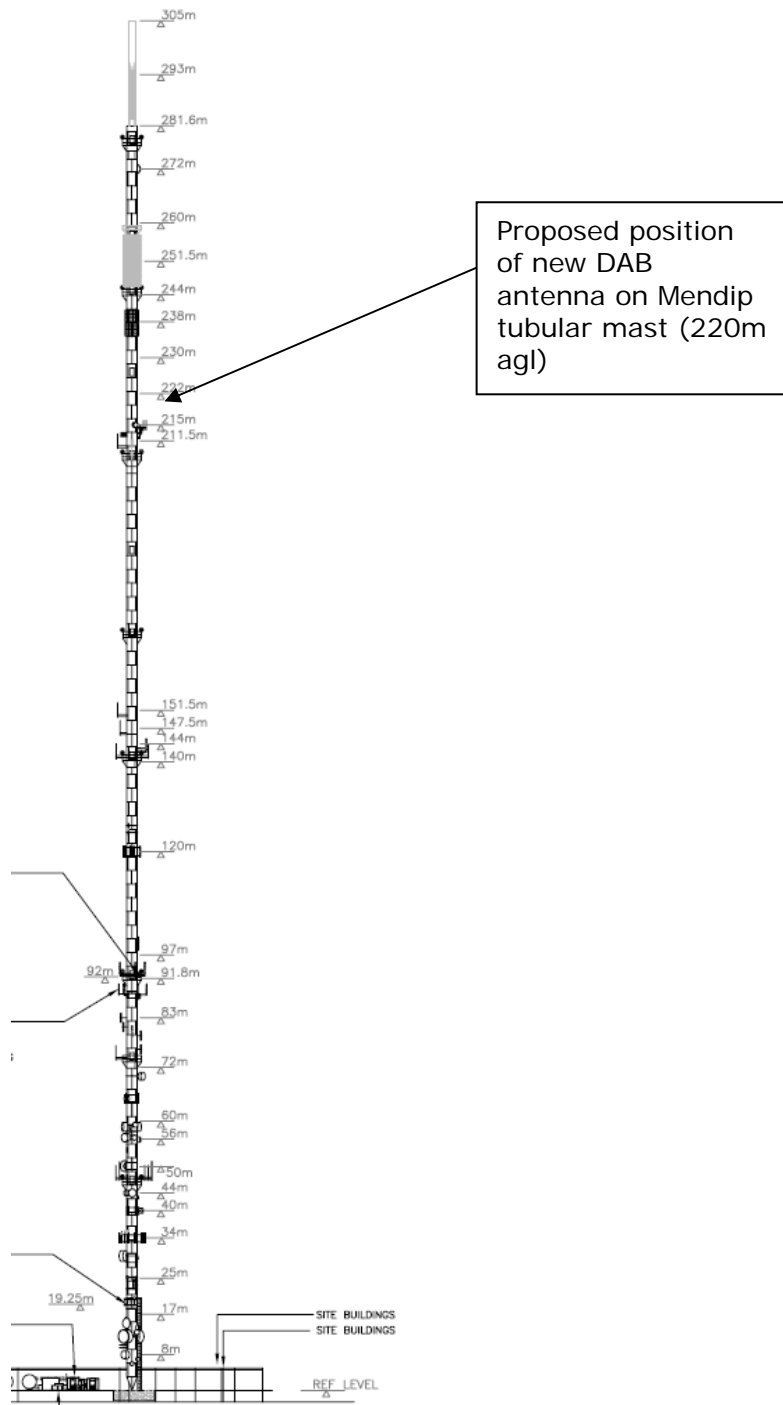
Taunton (TV RSL Site)

New DAB antenna @ 19m agl by Arqiva. Existing redundant units to be removed.

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

43. The Network Access supplier has confirmed that the designs of the existing and new 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 the Network Access supplier has confirmed that it will undertake these.

Site Name	Antenna System	Antenna Height (m)	Antenna Owner Permission	Accommodation Permission	Power Supply	Impacted By DSO
Mendip	New Digital Radio Antenna	220m	NGW Network Access.	NGW Network Access is providing accommodation in the existing NGW Area.	To be provided by NGW Network Access	See Note 1
Taunton (former TV RSL site)	Proposed Arqiva Digital Radio Antenna	19m	Arqiva Network Access.	Arqiva Network Access are providing new accommodation.	To be provided by Arqiva Network Access	Not affected by DSO

Note 1
The DSO (Digital Switch Over) programme for Mendip is due for completion by Spring 2009. It is not therefore expected to impact on MuxCo Somerset's launch date.

d) Provide the following details regarding transmission arrangements:

i) Any transmission contracts that have been agreed

44. In the event of winning the licence, NGW will undertake the provisions for transmission and multiplexing.

ii) The status of these agreements

45. Initial agreements exist with 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.

46.   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).

47.   It is envisaged that all services will broadcast from the start of the multiplex licence period.

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.*

48.   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.*

49.   There are no plans to appoint any further directors.

William Rogers

Occupation:
Chief Executive, UKRD Group Ltd

Other directorships:
5 Valleys Radio (Stroud) Ltd, Bristol Community Radio Ltd, Cambridge Radio Ltd, Community Ads on Line, Ivel FM Ltd, Ivel FM Radio Ltd, Eagle Radio Ltd, Extreme Radio Ltd, KLFM Ltd, Net-Additions Ltd, Net-Leads Ltd, Netrank Ltd, Norwich Broadcasting Ltd, North Gloucestershire Radio Ltd, Pirate FM Ltd, Pirate Radio Group Ltd, Pirate Radio Ltd, Pirate Television Ltd, Save Buckets Ltd, Star Media Group Ltd, Star Radio Group Ltd, Star Radio Network Ltd, South West Digital Radio Ltd, Surrey & North East Hampshire Radio Ltd, Swansea Radio Ltd, Today FM Ltd, UKRD Radio Services Ltd, UKRD Group (EBT) Ltd, UKRD Group Ltd, UKRD Support and Development Ltd, Web Gifts Online Ltd, Westcom Media Ltd, X-Cel F.M. Ltd, Oldham FM Ltd, The Small Business Bureau, William Rogers Insurance Brokers, MuxCo Gloucestershire Ltd, MuxCo Surrey & North Sussex Ltd.

Other Media Interests:
None

William, a Cornishman by birth, became involved in radio in 1990 as part of the founding group of directors applying for the Cornwall licence; successfully now on air as Pirate FM102.

Leaving school at the age of 17, he embarked upon a career in the insurance broking world, eventually becoming a Registered Insurance Broker and setting up his own firm in 1984.

In 1982, William became an elected member of Penwith District Council at the age of 22 and Leader of the Council in 1988. In 1990 at the age of 30, he was awarded the MBE for political and public service.

He has played an active part in charitable and political work in the South West for twenty years having been a school and college governor, Chairman of a Housing Association, one of twelve regional treasurers for the Conservative Party and fighting a seat in the 1997 General Election.

With the merger of Pirate FM and UK Radio Holdings to form UKRD Group Limited in 1994, William joined the new board. Following a spell as Chief Operating Officer in 2000, he became Group Managing Director in October 2001 and Chief Executive four years later.

UKRD Group owns and operates ten radio stations across the UK in such diverse markets as Surrey, Bristol, Cornwall and East Anglia. Its first DAB involvement was as a shareholder and service provider on the Plymouth & Cornwall multiplex.

Gregory Watson

Occupation:
Managing Director, MuxCo Ltd

Other directorships:
Reception Media Ltd, Folder Media Ltd, MuxCo Ltd, MuxCo North Yorkshire Ltd, MuxCo Northeast Wales & West Cheshire Ltd, MuxCo Hereford & Worcester Ltd, MuxCo Gloucestershire Ltd, MuxCo Wales Ltd, MuxCo Lincolnshire Ltd, MuxCo Surrey & North Sussex Ltd, Radio Academy, Radio Academy Trading Ltd, Children's Radio UK Ltd, Children's Radio UK (London) 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 Digital One for the application to run the national digital radio multiplex, and played a significant role in the pre-operational period of that multiplex prior to its launch in November 1999. Gregory also oversaw the development of GWR's local multiplex network, NOWdigital, and of the consortia multiplex businesses of DRG London, South West Digital Radio and NOWdigital East Midlands.

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 lead 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 a number of independent radio and media companies, and to create MuxCo.

Gregory is a Trustee of the Radio Academy, and is Chairman of Radio Academy Trading Ltd. Gregory takes an active role in the development of the radio sector, sitting on the RadioCentre's Public Affairs and other ad-hoc committees. In 2007 Gregory was appointed a Public Member of Network Rail.

Deanna Hallett

Occupation:
Managing Director, Hallett Arendt

Directorships:
Hallett Arendt Ltd, Octagon Ltd, Currie Hallett Radio Skills Ltd; Folder Media Ltd, MuxCo Ltd, MuxCo North Yorkshire Ltd, MuxCo Northeast Wales & West Cheshire Ltd, MuxCo Hereford & Worcester Ltd, MuxCo Gloucestershire Ltd, MuxCo Lincolnshire Ltd, MuxCo Surrey & North Sussex Ltd

Other Media Interests:
Fellow of the Radio Academy, Full member of the Market Research Society, Radio Centre RAJAR Research Committee

Deanna 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 RAJAR research committee since its inauguration.

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', which has already been implemented across the EMAP group. This interest in training has been consolidated through the launch of a joint venture with Francis Currie to form Currie Hallett Radio Skills Development Ltd.

Moving forward, Deanna aims to bring all her expertise to the MuxCo network by offering training, research and marketing advice to service providers to help them maximise audiences and revenue.

Alistair 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, MuxCo North Yorkshire Ltd

Other Media Interests:
None

Alistair is Finance Director of The Local Radio Company plc ('TLRC') which operates 28 local stations from Arrow FM in Hastings and Ivel FM in Yeovil to Central FM in Scotland.

Alistair, along with Richard Wheatley, formed TLRC 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). Along with local stations, TLRC jointly owns and operates the national sales house First Radio Sales in London and Manchester with UTV.

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.

(b) Proposed Investors and Shareholding Structure

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

iii) Names and addresses of all existing or proposed shareholders.

Shareholder	Shares	% Shareholding	% Loan stock
UKRD Group Ltd Carn Brae Studios Wilson Way Redruth Cornwall TR15 3XX	10,000	33.3%	33.3%
MuxCo Ltd 96a Curtain Road London EC2A 3AA	10,000	33.3%	33.3%
The Local Radio Company Plc 11 Duke Street High Wycombe Buckinghamshire HP13 6EE	10,000	33.3%	33.3%

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

50.   40,000 £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.

51.   See above.

vi) Outline any shareholders agreements or arrangements which exist.

52.   A shareholders agreement will be entered into after the award of the licence. The shareholders have agreed terms which cover key issues of governance relating to the company including shareholdings, board composition, funding, pre-emption and confidentiality.

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.

53.   Not applicable.

viii) Ofcom may request additional information regarding the shareholders, or any other providers of finance, listed in the application.

54.   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

UKRD
UKRD has interests in the following companies:

- Bristol Community Radio Ltd (86.95%)
- Cambridge Radio Ltd (100%)
- KLFM Ltd (100%)
- Oldham FM Ltd (50%)
- Pirate FM Ltd (100%)
- North Gloucestershire Radio Ltd (100%)
- Westcom Media Ltd (100%)
- X-Cel F.M. Ltd (100%)
- South Hams Ltd (23%)
- Eagle Radio Ltd (98.193%)
- South West Digital Radio Ltd (33.3%)
- MuxCo Gloucestershire Ltd (25%)
- MuxCo Surrey and Sussex Ltd (50%)

TLRC owns or has interests in the following licences:

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

MuxCo
MuxCo has interests in the following multiplex companies:

- MuxCo Hereford & Worcester Ltd (33.3%)
- MuxCo North Yorkshire Ltd (40%)
- MuxCo Lincolnshire Ltd (49%)
- MuxCo Northeast Wales and West Cheshire Ltd (25%)
- MuxCo Northeast Wales and West Cheshire Ltd (25%)
- MuxCo Gloucestershire Ltd (25%)
- MuxCo Wales (30%)
- MuxCo Surrey and Sussex Ltd (50%)

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

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 Somerset

55.   The strategy is:

- To establish an efficient and progressive business that reduces the financial burden on service providers to broadcast on DAB
- To provide opportunities for existing analogue services to simulcast on DAB
- To create an environment that encourages businesses, both new and existing, local and national, to provide services that broaden choice and provide new commercial opportunities
- To re-emphasise local radio as an important part of radio's digital future
- To be part of the MuxCo Network and share best practice and future opportunities
- To provide a return on investment to shareholders

The Shareholders and their Digital Strategies

56.   **UKRD Group Ltd ('UKRD')** owns and operates a number of analogue radio stations across the UK. It was formed in 1994 when Pirate FM Ltd merged with UK Radio Holdings Ltd to form UKRD, cementing a relationship between individuals who had been working together directly or indirectly for several years. Following the merger UKRD acquired controlling shareholdings in Star FM and Wey Valley Radio, and a minority share in Kiss 102. In 1995 UKRD was awarded the AM and FM licences for Surrey. In November 2000, a new management team was put in place, with a strategy of enhancing existing assets' output and developing regional clusters of stations. As part of the strategy, a number of stations were re-branded as 'Star'. UKRD has been involved in DAB since 2003, when as a founding shareholder in the Plymouth & Cornwall multiplex it launched its Pirate FM on DAB. UKRD are keen to ensure that its stations have a future in the digital landscape, but recognise that with additional costs incurred through duplication of transmission, this needs to be achieved in a cost efficient manner. It believes the MuxCo concept, of shared ownership and efficient planning, is such a model.

57.   **The Local Radio Company plc** ('TLRC') owns and operates 28 local radio licences across the UK. 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). It 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.

58. Its senior management 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 on behalf of its stations in TLRC through MuxCo. 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. By working together, we can help ensure that beneficial changes in future technology can be adopted.

59. **MuxCo Ltd** was established to provide viable digital radio solutions to local radio companies and other parties interested in developing on DAB. The MuxCo management team has extensive experience as a multiplex operator at local, regional and national level. The team established and operated the NOWdigital network for GCap Media, and has managed local multiplexes owned by consortia in which GCap Media was a partner (CE Digital, DRG London, South West Digital Radio and Now Digital East Midlands). The Folder Media management team are currently managing UTV's multiplex network, as well as overseeing the launch of MuxCo's new multiplexes. MuxCo's strategy is to build a network of local multiplexes in association with local partners in each area, to ensure opportunities exist for all analogue operators to broadcast on DAB. Working with local partners helps encourage and make them more confident to take a more active role in digital radio, as part of the multiplex as well as being a service provider. Under this model, partners receive financial benefits of ownership which helps reduce their net cost of investment in DAB. MuxCo believes that there is a strong business model to be developed for local multiplexes - one that provides a range of interesting services demanded by local residents.

The Business Plan and its Objectives

60. The objectives of the business model, that will drive the company to provide a premium digital radio service, are:

- To operate a multiplex that offers a wide choice of live and on-demand programme services which address local tastes and interests, broaden choice and increase plurality.
- To promote and maximise take-up of digital radio receivers, by working with analogue and digital service providers and through membership of industry bodies, such as the DRDB.
- To operate in a manner ensuring fair and effective competition.
- To operate a sound financial business, with confirmed service providers helping to demonstrate viability.
- To ensure that digital radio is successfully established.

61. The shareholders are satisfied that MuxCo Somerset is well resourced technically as well as financially to support the needs of the service providers.

62. The Board, which will meet at least quarterly, has the following responsibilities:

- 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
- Regulatory compliance

63. Folder Media will provide multiplex management services. Folder Media has unparalleled experience in the day-to-day management of successful local multiplexes. It is currently managing UTV's local multiplex network, as well as the launch of other MuxCo multiplexes. It will ensure that changes and any requirements from the service providers can be enacted in a timely and cost-effective manner, and will ensure that the multiplex is responsive to the changing radio marketplace.

(i)   The network construction phase

64. There are three stages to the network construction phase – planning, building and testing.   MuxCo Somerset will contract with NGW to provide a transmission solution, who on the basis of this commitment will fund the capital expenditure and installation of the infrastructure.

65. **Planning** – the design of our transmission plan has taken into account the requirements of service providers, including the BBC, to ensure that key population centres and major roads are well covered, and local geographical issues are taken into account. A number of iterations have been produced before settling on a commercially prudent plan that maximises coverage and meets our planning criteria. NGW has provided strategic support during this stage and will liaise with Ofcom for transmission matters on behalf of MuxCo Somerset.

66. **Building & testing –** Following award, we will work with NGW to finalise our plan and prepare milestones to the launch of the multiplex. This will include international clearance, the build timetable and service provider installation. As an established and respected transmission service provider, NGW has considerable existing resource and the infrastructure to build the proposed transmission network.

(ii)   The operational start-up phase

67. The operational start-up phase includes contracting with service providers, monitoring the installation of multiplex equipment at service providers' studios (for both audio and data services) and ensuring that the necessary testing is undertaken prior to launch; liaising with Ofcom over the build process; ensuring regulatory issues are followed, including the issuing of DSP licences; and liaising with the DRDB and service providers on marketing activity, including ensuring the postcode checker is up to date with the new coverage and service information.

(iii)   Ongoing operation of the service

68.   As multiplex manager, Folder Media will be responsible to the MuxCo Somerset 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, such as EPG provision, temporary services and data developments.
- 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
- Helping to develop new revenue streams.

69.   NGW has considerable resource and infrastructure to support the multiplex and as such will provide 24 hour monitoring of the network. By using a secure remote control system, NGW will control multiplex re-configurations, something MuxCo Somerset will have remote access to should the need arise to take direct control. Multiplex reconfiguration will be undertaken in line with our policies and contractual agreements with service providers.

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

71.   Through the MuxCo website, we will promote digital radio generically and the services specifically. The main aim of the site, as well as providing a conduit of information between MuxCo Somerset and service providers, will be to help educate and inform listeners, advertisers and equipment retailers.

(iv)   Marketing

72.   There is still a significant DAB marketing campaign that needs to be undertaken on both a national and local level. We recognise that as a sole body, our voice will be too small and inefficient. We will therefore seek to join the DRDB (or any successor) and will actively support industry-wide generic promotion of digital radio. We also propose to co-ordinate our local marketing activity with 4 Digital Group.   We also believe that the planned analogue TV switch off will assist the case for DAB digital radio.

73.   The key objectives of our press and communications activity will be to:

- Build interest and knowledge of DAB and specifically the radio services available
- Build audience awareness and raise the profile of DAB and content offerings to the consumer
- Build awareness amongst the trade audiences including advertisers and retailers

74.   We will work closely with our service providers to help co-ordinate locally focused marketing of digital radio generically, as well as of the services on the multiplex, with advice provided where relevant by Folder Media.

75. Service providers are likely to undertake their own brand marketing highlighting their appearance on DAB. We will work with service providers, particularly local analogue operators, to use their airtime to promote DAB digital radio in a consistent manner across all MuxCo partner stations.

76. To fund membership of the DRDB, a contribution proportional to contracted capacity will be levied at cost from the month following the launch of the multiplex.

77. We believe that for listeners, the identity of the multiplex owner 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'.

(b) Funding

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

Source of finance	£
Share capital	30,000
Loan stock	30,000
Leasing/HP facilities (capital value)	0
Bank overdraft	0
Grants and donations	0
Other	0
Total	£60,000

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

78. Letters of investment are provided in Part B.

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

79. The accounts for the shareholders will be provided to Ofcom under separate cover.

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.

80. Loan stock will be issued interest free, as and when required. 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 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.

81.   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**

82. The projected adult population of the multiplex TSA for the purpose of the application has been assumed at 461,000. We are aware that service providers may elect alternative TSAs for their own RAJAR research purposes.

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**

83. The following table summarises our audience projections for simulcast and digital only services.

	Year 1	Year 2	Year 3	Year 4
Orchard FM				
• Weekly Reach %	26.9%	26.8%	26.4%	26.0%
• Ave Hours	10.9	10.9	10.9	10.8
• Total Hours '000s	1352	1347	1327	1294
• Digital Hours '000s	125	192	271	366
Star Radio				
• Weekly Reach %	4.2%	4.4%	4.5%	4.6%
• Ave Hours	9.4	9.4	9.4	9.4
• Total Hours '000s	181	190	194	198
• Digital Hours '000s	17	27	40	56
Ivel FM				
• Weekly Reach %	6.5%	6.7%	6.8%	6.9%
• Ave Hours	9.9	9.9	9.9	9.9
• Total Hours '000s	297	306	310	315
• Digital Hours '000s	27	44	63	89
QuayWest				
• Weekly Reach %	2.5%	3.1%	3.2%	3.3%
• Ave Hours	6.0	6.5	7.0	7.0
• Total Hours '000s	69	93	103	106
• Digital Hours '000s	16	26	35	40
Easy Radio				
• Weekly Reach %	2.0%	2.5%	2.9%	3.0%
• Ave Hours	4.0	4.3	4.7	4.8
• Total (& Digital) Hours '000s	37	49	64	65
UCB UK				
• Weekly Reach %	1.5%	1.7%	1.9%	2.0%
• Ave Hours	4.0	4.5	4.8	4.8
• Total (& Digital) Hours '000s	28	36	43	44
Traffic Radio				
• Weekly Reach %	1.0%	1.5%	1.8%	2.0%
• Ave Hours	1.5	1.8	1.9	1.9
• Total (& Digital) Hours '000s	7	13	16	18

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+ '000s	461	461	461	461
All radio hours '000s	11,120	11,077	11,008	10,922
All digital radio hours '000s	**2,564**	**3,157**	**3,744**	**4,118**
All digital hours as % of all radio hours	23.1%	28.5%	34.0%	37.7%
MuxCo Somerset digital hours '000s	256	387	543	690
MuxCo Somerset digital hours as % of all radio hours	**2.3%**	**3.5%**	**4.9%**	**6.3%**

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

Audience projections for programme services

84.   In estimating audiences, we have based our assumptions on RAJAR (RAJAR Q4 2007) within combined Orchard FM, Star Radio and Ivel FM area. This is an area covering 461,000 adults.

Projections for the total weekly number of listening hours

85.   Projections for existing services are based on their current RAJAR performance, and for the proposed new services on our consumer research.

86.   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 looked at the following factors to create a robust audience model:

- The market
- Total radio listening
- Digital share of listening
- The relative market shares of:
  o BBC Network
  o BBC Local
  o INR
  o ILR listening to stations originating in the area
  o Out of area ILR
  o Other radio listening

The Market

87. Over the decade to 2001, Somerset experienced population growth of 7.1%, and further growth has been seen in the last few years, as recognised by RAJAR in the adult population with the TSA.

     - As well as increasing in number, the county's population is also getting older.
     - For prudence, the population has been held as a constant for the first four years of the licence period.

88. Somerset has a stable and successful economy, and over the last decade has maintained a steady level of economic growth, low unemployment and continuous job growth. It has a higher proportion of people working in the agriculture, manufacturing, distribution and leisure, and a smaller percentage working in the financial and business services than nationally.

Total Radio Listening

89. 93.6% of Somerset's adults currently listen to at least one radio service each week, on average for 25.9 hours, delivering total radio listening hours of 11,171,000.

     - Over the last 3 years, the absolute number of radio listeners has increased by 2.1%, and reflects a stable market
     - Average hours have decreased from 27.9 hour per week to 25.9.
     - This has resulted in a small decline in total hours of listening of 5.2%

90. Somerset's 'all radio' performance is currently stronger than the UK in relation to both weekly radio listening penetration and average time spent listening.

91. We believe that increased radio choice will help stimulate the total market, particularly time spent listening, a view confirmed by our consumer research. However, we believe it prudent to forecast some decline both in the penetration of all radio and total hours delivered, to counter the growth of any new non-radio mobile devices that may be released. Competition from new media, i.e. TV choice, mobile phone and the internet will impact, especially on younger listeners.

92. The following table summarises our projections of total radio listening during the first 4 years of the licence.

	Year 1	Year 2	Year 3	Year 4
Population '000s	**461**	**461**	**461**	**461**
Reach %	93.5	93.4	93.3	93.2
Reach '000s	431	431	430	430
Ave Hours	25.8	25.7	25.6	25.4
Total Hours '000s	11,120	11,077	11,008	10,922

Digital Share of Listening

93. To establish the potential share of listening attributable to digital, we have reviewed the DRDB's penetration forecasts, as well as other data as to the current and future take up.

94. Our forecasts are based on the DRDB's 5 year forecast, which we have up-weighted using the 2007 penetration data, and then carried forward the forecast growth on the basis of this new base.

95. We are comfortable with the DRDB forecasts:

     - 6.5m DAB sets had been sold by the end of December 2007 (source DRDB).
     - 29.9% of adults have listened to radio on of the available digital platforms (source RAJAR Q4 2007), with DAB listened to by 16.8%
     - 16.6% of all listening hours are on digital, with 9.9% on DAB

96. Our consumer research highlighted that 32% of the local population already owns a DAB digital radio, and that a further 4% can access a DAB radio.

97. Our long-term digital listening forecasts uses industry data, as well as work undertaken by NGW, whose forecasts for digital share of listening have been used as the starting point for calculating digital listening.

The relative market shares of the radio sectors

98. We have analysed the radio sectors of BBC Network, BBC Local, INR (i.e. services broadcast on national platforms), ILR listening to stations broadcasting from within the area, out of area ILR and other radio listening.

99. The following table summarises our views as to how each of these sectors will change in terms of the numbers of services provided under each and their relative markets shares between today, 2010 (the first full year of MuxCo Somerset and the new national multiplex) and 2013. This analysis enabled us to establish a view on the overall radio market within Somerset and the changes that each sector would experience. The detailed workings behind these numbers are provided in Part B.

	Analogue Stations 2008	Digital Stations 2008	Total Stations 2010	Relative share 2008	Relative share 2010	Relative share 2013
BBC Network	5	6	11	58.1%	55.0%	51.0%
BBC Local	1	0	1	8.3%	7.9%	7.3%
INRs	3	7	20	10.1%	11.9%	14.7%
MuxCo services	3	0	7	15.7%	16.3%	17.7%
Other multiplexes	-	-	-	5.8%	7.1%	7.8%
Other	-	-	-	2.0%	1.8%	1.4%
Total				100.0%	100.0%	100.0%

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

11. Proposed digital sound programme services

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: ttp://www.ofcom.org.uk/radio/ifi/rbl/dcr/.

100.   The multiplex will carry the local commercial analogue services of Star Radio, Ivel FM, QuayWest and Orchard FM. Together, these services are listened to by more than 35% of all adults, and represent over 17% of total radio listening.

101.   The BBC has reserved capacity for BBC Radio Somerset.

102.   Capacity has been allocated for a number of digital only services.

- An easy listening melodic music service - *Easy Radio*
- A Christian music and speech service – *UCB UK*
- A traffic and travel service - *Traffic Radio*

103.   Capacity has also been allocated for a Podcast Channel, which will provide opportunities for niche services to provide downloadable content offering a range of programming which will be targeted at specific interest groups.

Star Radio

Format	Full Local Service
Licence Description	A simulcast of Star Radio (Ofcom Licence number AL249), a music based and local information service for Weston-super-Mare.
Local Content	Star Radio is locally produced 24 hours a day. Local news and information relevant to its audience is provided during daytime.
Music to Speech	Minimum 75% music and 15% speech
Hours of Broadcast	24

Ivel FM

Format	Full Local Service
Licence Description	A simulcast of Ivel FM (Ofcom Licence number AL281), a music and information for Yeovil.
Local Content	Ivel FM is locally produced 24 hours a day. Local news and information relevant to its audience is provided during daytime.
Music to Speech	Minimum 75% music and 15% speech
Hours of Broadcast	24

Orchard FM

Format	Contemporary Hit Radio
Licence Description	A simulcast of Orchard FM (licence AL128); a contemporary chart music station for Taunton & Yeovil, broadcasting predominantly current chart hits, new releases and hits up to 10 years old.
Local Content	Orchard FM broadcasts local programming from 3am to 7pm weekdays (5am to 10am and Midday to 7pm Saturdays and 6am to 2pm Sundays). Local news bulletins are broadcast during daytime.
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

QuayWest

Format	Full Local Service
Licence Description	A simulcast of QuayWest 107.4 (Ofcom Licence number AL260), a music and information for Bridwater.
Local Content	QuayWest FM is locally produced for at least 10 hours per weekday (4 per day at weekends). Local news and information relevant to its audience is provided during peaktime weekdays.
Music to Speech	Minimum 75% music and 15% speech
Hours of Broadcast	24

Easy Radio

Format	Easy Listening
Licence Description	A broad range of easy listening music, including soft rock, country, folk and blues.
Local Content	A network service offering a broadening of music choice. There are currently no plans to introduce local content on this service.
Music to Speech	Minimum 85% music and 10% speech
Hours of Broadcast	24

UCB UK

Format	Religious
Licence Description	A service providing contemporary Christian music and classic favourites, together with spoken features including news, Christian teaching and short features offering a Christian perspective on today's lifestyle.
Local Content	A network service broadening music and speech choice. There are currently no plans to introduce local content on this service.
Music to Speech	Minimum 60% music and 25% speech
Hours of Broadcast	24

Traffic Radio

Format	Traffic and Travel
Licence Description	Continuous traffic and travel information.
Local Content	The service forms part of the South West region. As such, it will cover all motorway and key trunk roads within the area.
Music to Speech	100% speech
Hours of Broadcast	24

Podcast Service

Format	Varied
Licence Description	A wide selection of speech and music podcasts provided by a range of companies.
Local Content	Podcasts will include material of a local nature.
Music to Speech	Minimum 5% music and 5% speech
Hours of Broadcast	24

Further information on the Podcast Service

104.   The Podcast Service will provide opportunities for those who have an interest to broadcast but who are not yet in a position to finance a full service or who are currently unable to demonstrate a substantial listener base, to take an active role. In addition, it will enable established brands to test their content on a new platform, as well as providers of niche content targeting distinct communities.

105.   In our research, 14% of all respondents (23% of those aged under 25) were interested in being able to download new specialist music and / or speech programmes. Our research also highlights that the public are keen to experience downloadable material on a variety of different subjects. The Service will therefore carry content that reflects many of these interests.

106.   We are in discussion with 4 Digital Group and others to align our podcast delivery system to ensure compatibility for listeners. We have also spoken with set manufacturers to ensure that receivers are able to decode and store the material.

107.   Initial podcast providers will include:

News and Information
- 'ITN On' will provide a news and information service. The service will initially be audio, but ITN wish to review opportunities for video.
- 'Itchy Media' will provide a dedicated Itchy Guide guide for Somerset.

Music
- 'Channelfly' will provide 'The Fly Podcast' bringing a unique new and live music service to the area.
- 'Totallyradio' is a specialist music service, and their content will cover genres from hip hop to nu jazz.

Charity and Learning
- 'Headliners' (formerly Children's Express) is a charity that encourages learning through journalism. They act as a news agency with young people writing and recording their own stories for broadcast.

Specialist
- Passion for the Planet's will include best of material from their existing service, with local features of interest to Somerset residents.
- 'Sabras Radio' are keen to develop an Asian podcast.
- 'Sunrise is keen to develop their youth Asian focused service.

Local content
- There are already many local podcasters in Somerset and DAB offers them a new outlet for their locally specific material. We have spoken with a number of local groups and organisations who want to take part in the project.

a) **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?**

Star Radio	
Target Audience & Demographic Profile	• 20,000 adults listen to Star Radio each week. • Broad age appeal, and particularly popular with 35 to 54 year olds. • It has a stronger appeal among women. • A stronger ABC1 profile than the population in total.
Local Tastes & Interests	Many tune into Star Radio for its local news, travel and information features, as well as its broad music repertoire. Its strength as a local service is evident through RAJAR. Local programming is broadcast at all times, except for a weekly chart programme and the occasional syndicated special. Local news bulletins are broadcast between 6am and 6pm (8am and 1pm weekends). Bulletins contain local and national stories, sport, weather and entertainment news.
Summary	Research highlights that existing ILR listeners have above interest in DAB functionality than BBC radio listeners. Given its position, Star Radio will play an important role in the promotion of digital radio. In addition, as an existing service, it is also able to enhance its digital proposition with specific DAB only content. • Existing heritage service • Strong 35 to 54 age profile • Strong ABC1 • Promoter of DAB and encourages trial

Ivel FM	
Target Audience & Demographic Profile	• 30,000 adults listen to Ivel FM each week. • Particular appeal with under 55s, who account for 87% of listeners. • Markedly C2DE (64.1%)
Local Tastes & Interests	As the local ILR service for Yeovil, Ivel FM is a vital source of local news and general information (such as weather, what's on and travel), as well as providing a music repertoire targeting a 40 plus audience. Its strength as a local service is evident through RAJAR. Local programming is broadcast at all times. Local news bulletins are broadcast between 6am and 7pm (7am and 1pm at weekends). Bulletins contain local and national stories, sport, weather and entertainment news.
Summary	Ivel FM will benefit from the transition to DAB, being able to maintain listenership amongst its audience. As previously stated, ILR listeners have a high interest in DAB functionality. MuxCo's commitment to provide functionality to enable slideshow, music downloads and red button functionality will help both DAB and services such as Ivel FM. • Existing heritage service • Strong with under 54 and particularly 25 to 54 year olds • Strong C2DE bias • Promoter of DAB and encourages trial

QuayWest	
Target Audience & Demographic Profile	• Target audience is aged 25 to 54 • QuayWest is not currently in RAJAR
Local Tastes & Interests	As the local ILR service for Bridgwater, QuayWest is a key source of local news and information. Local programming is required for a minimum of 10 hours per weekday daytime weekdays, including local breakfast, and at least 4 hours daytime on Saturdays and Sundays. Local news bulletins are required hourly during peaktimes weekdays and weekends. At other times national news is provided. Some programmes are shared with QuayWest Somerset
Summary	QuayWest will benefit from the transition to DAB, being able to maintain listenership amongst its audience as they travel across the county. MuxCo's commitment to provide functionality to enable slideshow, music downloads and red button functionality will help both DAB and services such as QuayWest. • Existing heritage service • Strong with 25 to 54 year olds • Promoter of DAB and encourages trial

Orchard FM	
Target Audience & Demographic Profile	• 125,000 adults listen to Orchard FM each week. • Principal listening amongst those aged under 44. • Strong female profile (54.6%, against a TSA profile of 51.9%). • Strong C2DE profile.
Local Tastes & Interests	Somerset's heritage local commercial service. Many therefore tune in for its local news, travel and information features, as well as its broad music repertoire. Its strength as a local service is evident through RAJAR. Half hourly news bulletins between 6am and 9am, with hourly bulletins between 9am and 7pm. At weekends, local bulletins are broadcast between 7am and 1pm. Bulletins contain local and national stories, sport, weather and entertainment news.
Summary	Appeals to those with an interest in contemporary hit radio. Despite recent declines in reach and average hours, it remains a popular local service. Our research highlights that existing ILR listeners have high interest in DAB functionality. Given its current strong market position and a predisposition of its listeners to utilise the ancillary advantages of DAB, Orchard FM will play an important role in the promotion of digital radio. • Existing heritage service • 25 to 44 age profile • Female bias • Promoter of DAB and encourages trial

	Easy Radio
Target Audience & Demographic Profile	• This service will appeal to a 35 plus listener, who will account for more than 80% of the audience. • There was a strong female bias and a significant ABC1 profile. • The service should be a strong motivator to stimulate DAB take up, with 61% of those choosing the service not currently owning a digital radio. • This service also has the potential to draw listeners away from the BBC – 26% of all BBC listeners and 29% of those who only listen to BBC stations said they would like to be able to listen this service.
Local Tastes & Interests	Easy Radio is essentially a music experience, with a broad range of easy listening music from the 60s to today, and some music specialisation, such as country, creating a relaxing environment for the listener. Speech will include news, relevant information for the audience and an element of interactive programming.
Summary	A popular format that would appeal to an older audience, bring new listeners to DAB digital radio and attract an audience from the BBC. • New service • 45 plus profile • Strong female appeal • Attractive to solus BBC listeners

	UCB UK
Target Audience & Demographic Profile	• UCB UK targets all adults, although the research highlights main interest to be with those aged 35 plus and where in this market we found a significant interest with 55 plus who would account for 71% of the audience. • It is likely to have a slight female bias and deliver a strong ABC1 profile. • More than half of those choosing this service do not currently own a DAB radio, indicating another service that should help drive take up. • A high 94% of those wanting to listen to this type of service are currently listeners to BBC stations.
Local Tastes & Interests	UCB UK is a networked Christian radio station for the whole family. It will bring a unique service to the area, offering a rich alternative to existing provision. It will also provide a wide range of programming to inspire and transform the listening experience. The station is non-commercial, carrying no advertising other than for in-house services.
Summary	UCB UK will appeal to listeners who want to hear programmes with religious themes or would like a station with a heavier speech to music ratio. It will also provide good commercial radio competition to the BBC and attract new listeners to DAB digital radio. • New service • Broad audience appeal, but delivering an older 55 plus profile • Attract audience from the BBC • Female bias • ABC1 • Encourage DAB

Traffic Radio	
Target Audience & Demographic Profile	• The target for the service is broad, appealing not just to business commuters, but also housewives and parents with children. • Our research highlights very strong interest for a station broadcasting traffic and travel news and information.
Local Tastes & Interests	An innovative service from the Highways Agency providing 24/7 regionalised traffic and travel information and focusing on all major road networks. On traditional radio services, traffic bulletins are provided sporadically, at a time when the station wishes to provide them rather than when an issue arises. Their frequency also varies across the week, with significantly lower non-peak and weekend updates. Traffic Radio is a service to which drivers are able to 'dip-in' prior to or during a journey.
Summary	By making information about the road network more accessible, the proposed service will help reduce congestion by informing motorists about major congestion problems, thereby enabling them to divert, delay or cancel their journey. The benefit of the service is not just to individuals, but also to business. Reducing road journey times will help deliver environmental benefits through reduced emissions and improved driver safety. With broad appeal, the service should have a significant benefit on the take up of DAB receivers. • New service • Broad interest • Encourage DAB in-car listening

Podcast Service	
Target Audience & Demographic Profile	• The Podcast Service will include content of interest to all age groups, males and females. • Interest in the service is particularly strong amongst younger audiences; 63% would be under 45, with 42% aged under 35. • The service will help promote DAB uptake, and therefore a move to DAB+, with 56% of those interested in the service not owning a DAB radio. • 86% of those interested are listeners to BBC services, 27% only listen to BBC stations.
Local Tastes & Interests	The service will carry a wide range of material, ranging from music to speech, and from content that will have national interest to content with a particular focus on Somerset.
Summary	The Podcast Service will enable the multiplex to cater for niche tastes and interests and small communities of interest, which would not otherwise be sustainable on a 24/7 basis. • An innovative new service • Strong youth appeal • Encourage DAB uptake

b) **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	Service Provider	Confirmed	DSPS Held
Eagle	UKRD Group Ltd	Yes	Yes
Ivel FM	The Local Radio Company plc	Yes	No
Orchard FM	GCap Media plc	No	Yes
Easy Radio	Easy Radio Ltd	Yes	Yes
UCB UK	United Christian Broadcasters Ltd	Yes	Yes
Traffic Radio	Highways Agency	Yes	Yes
Podcast Service	Folder Media Ltd	Yes	No

c) **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.**

108. The multiplex will support Dynamic Label Services ('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. From launch, all service providers will have access to **Scrolling text functionality** and an **Electronic Programme Guide**. As data technologies and standards mature, we will work with service providers to launch other data services (such as Broadcast SlideShow etc).

Scrolling text functionality

109. Scrolling text functionality (Dynamic Labelling – 'DLS') provides an immediate point of difference between a digital radio and a traditional FM receiver. Consumers value the information provided unexpectedly highly and the industry has recently begun to develop DLS into a commercial opportunity, with advertisers recognising the value of DLS as an additional communications tool. 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 software packages that integrate into their existing systems. DLS is transmitted in the XPAD.

Electronic Programme Guide

110. 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, and also allow 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.

111.   Our research showed a comparatively strong interest 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.

112.   We have had detailed discussions with All In Media Ltd ('AIM') relating to the launch of an EPG channel on the multiplex and it is our intention to work with AIM to launch an EPG from the start of the licence term. The EPG will be transmitted in a dedicated packet data channel. We also believe an enhanced EPG will allow listeners to navigate the podcasts that are available from the multiplex.

Use of variable-XPAD

113.   From launch, service providers will be able to run programme-related data services within their short XPAD data capacity. Our data service provider, Folder Media, has substantial experience in launching data services. Examples of programme-related data services are:

Tagging
- Tagging a song on a mobile phone/device in order to download it later.

Broadcast Slideshow
- The ability to add visual content to make programmes and adverts more engaging.

"Red button" functionality
- *Competitions and Voting* - a listener could use the red button to vote on the next tune to be played or select the correct answer to win a prize.
- *Enhanced Advertising* - an advert for a new car could be visually demonstrated through a screen, with red button functionality sending information via a URL link to the external car dealer's web site.
- *Rewards* – creating opportunities for listeners to get free content (perhaps music downloads) in return for responding to an advertiser's call to action, or clicking through to the web page could generate redeemable loyalty points.

Podcast Channel

114.   The multiplex will broadcast a Podcast Channel, managed by Folder Media Ltd. The channel will be a carrier for a variety of different podcasts (outlined in the answer to question 11) from a range of different service providers.

Other services

115.   Folder Media, our data service provider, intends to provide a music download capability such as the new Instant Music Buying Service 'Cliq' from UBC, which will provide a value enhancing service for radio services, providing opportunities for listeners to access and acquire music on the go. Our general view is that we should encourage all types of data services to help organisations experiment with new DAB broadcast technologies.

d) **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.**

116.   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.

117.   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.

118. The Somerset licence area is the first local multiplex for the area. Neighbouring local multiplexes are audible along the border of the area – Bristol & Bath and MXR to the north, Bournemouth to the south, and Exeter & Torbay to the west. Many listeners around the border of the area therefore already have access to increased choice. However, for most residents the only increase in local choice will be from the new multiplex. Breadth of programming has therefore been measured by the range of local digital services to be provided on the multiplex.

Star Radio	Weston-super-Mare's local music and information station playing a mix of adult contemporary and classic pop hits. Whilst music led, local news and information features are provided across daytime. As a broad appeal format, there will be some overlap with the music played on other services. However, none of the new services covers the range of music played by Star Radio. In addition, Star Radio's heritage position and editorial focus will ensure that it will maintain its differential against other simulcast services. Star Radio's inclusion on the multiplex will ensure all current listeners can hear the station in digital, as well as expanding its coverage across a wider area.
Ivel FM	Yeovil's local service playing popular songs from the last four decades. Ivel FM provides a comprehensive local news and information service for its local community. The ability to increase its broadcast area through DAB will enable additional listeners to hear this popular service. There will be some musical overlap with other services, but Ivel FM is differentiated by its editorial focus.
QuayWest	Bridgwater's local service playing popular adult contemporary hits. QuayWest provides a comprehensive local news and information service. The ability to increase its broadcast area through DAB will enable additional listeners to hear this popular service. There will be some musical overlap with other services, but QuayWest is differentiated by its editorial focus.
Orchard FM	A contemporary and chart hit music and information station for 15 to 44 year olds across the county. Music is predominantly current chart hits, new releases and hits up to one year old. Orchard FM is a music led station, providing information of local relevance throughout its programming. By the nature of its format, some of the new services will overlap in relation to music played. None, however, will cover the range of music played by Orchard FM. Orchard FM's heritage position and editorial focus will ensure differentiation.
Easy Radio	A music based service playing a range of easy listening genres featuring familiar music from 60s to today and drawn from a broad library. Whilst there will be some music overlap with heritage services, Easy's broad music mix provides a point of difference and a broadening of choice over other proposed services. Speech, with news and relevant information for the audience and an element of interactive programming, will also act as another point of differentiation, as will extension of plurality of ownership.

UCB UK	A unique service targeting the Christian community with contemporary and classic Christian music, news, current affairs, teaching and a positive perspective on today's lifestyle. UCB UK will cater for the many listeners who would like a Christian perspective on the radio and enjoy a more speech-led radio experience. There will be minimal music overlap between UCB UK and other services on the multiplex.
Traffic Radio	A service providing regular and up to date traffic and travel information across the South West. While existing services provide traffic and travel bulletins, these are often limited in scope and only broadcast during peak programming.
Podcast Service	A mixture of music and speech content, serving a broad range of tastes and interests that will complement the full time services carried by the multiplex. The inclusion of a Podcast Service will bring additional listening choice to all, and especially younger demographics.

119.   As a whole, our proposed complement of services caters for:

- People interested in hearing local news and information, with at least 5 services providing such content and with the Podcast services providing further localness, and catering for different tastes and interests.
- A wide age range, albeit with more choice for the 35 pluses because of their dominant position within the population and because of a willingness to switch from the BBC with the right choices available. Additional choice for younger listeners will be provided through Shuffle and the Podcast Service.
- A significant proportion of the population, as well as for a broad range of listeners' tastes and interests.

120.   The chart summarises the profiles of each service to be carried on the multiplex in relation to their age and male to female interest. It highlights how the proposed new services will complement existing choice. Information for existing services is taken from RAJAR and for the new services from our commissioned research.

Services on MuxCo Somerset
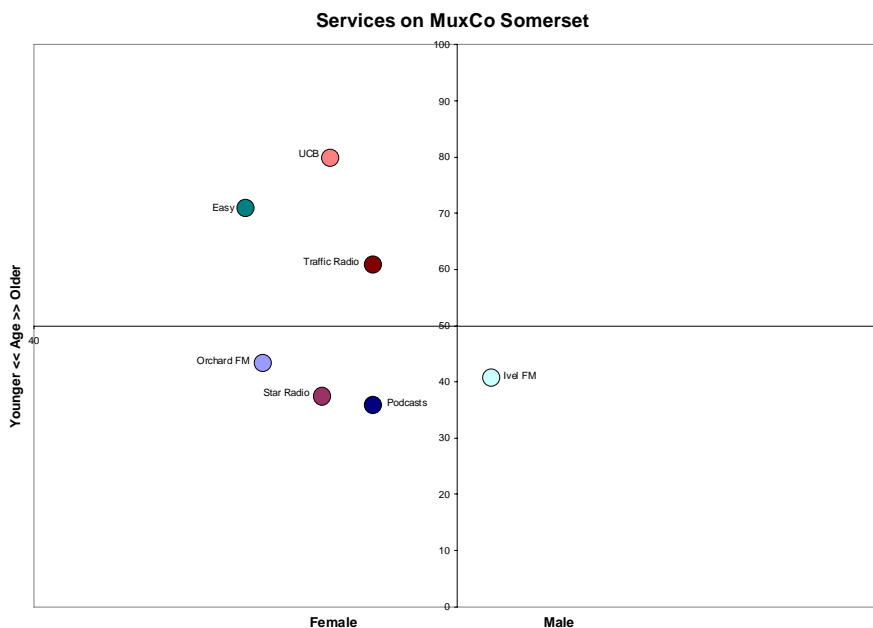
Section 51(2)(f): Local demand or support

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	To analyse the local market To get an up to date picture of the digital landscape.	To review population growth and change. To track digital penetration.	Analysis of Census 2001 data. Review of DRDB and relevant RAJAR data on digital audiences.	Not relevant	January to March 2008
Consultation with local councillors	To gain further insight into local needs and issues.	The issues which the area faces	Email and Internet based questionnaire	321 local councillors of which 43 responded	January to March 2008
RAJAR	To understand the local radio market.	To track the performance, strengths and weaknesses of existing services.	Using the Octagon analysis system and RAJAR data.	Not relevant	March 2008
Consumer Study	To further understand the local radio market. To gauge consumer awareness, understanding and usage of DAB digital radio. To quantify interest in potential formats and data usage applications. To estimate audience levels, individually and collectively, for the proposed complement of services.	To investigate the performance, strengths and weaknesses of existing services. To identify the likely audience profiles for each planned service and to see how these services work collectively to enhance the total audience potential for DAB digital radio. To look at the propensity to listen and the impact that the new services collectively would have on the existing market.	Consumer survey conducted by Fieldvision. All interviews conducted face to face.	500 adults 15+ from across the PPA. Sampling PPS Quota controls to known demographic profile.	15th to 27th February

121.   We have provided an analysis of our research under the following headings:

A. The Somerset market
B. Consultation with locally elected representatives
C. Radio choice
D. Current radio listening habits
E. Uptake of DAB digital radio
F. What people would like from digital radio
G. What does the future hold for digital radio?

A – The Somerset market

122. The Somerset multiplex covers the county of Somerset and significant parts of the Unitary Authority of North Somerset – an area of 461,000 adults.

123. Through our research we sought to find out what issues local consumers felt were important; these being issues that could be reflected in the speech content of services.

	Somerset
Road traffic issues	51%
Environmental issues	42%
Employment	40%
Health services	39%
Immigration	31%
Education for young children	31%
The ageing population	28%
Rail travel issues	22%
Further education	22%
Don't know	2%

- As found in other new multiplex areas, road traffic issues are of significant concern. There are a number of key road arteries that run through Somerset, in particular during the busy holiday months – M5, A38, A30 and A303. The proposed Traffic Radio service will be an important addition to the market.

124. The following table analyses the adult population within the TSA (Q4 2007 data), highlighting the relative demographic splits of the population, with comparison to the UK as a whole.

	Somerset	UK	Index on UK
15 to 24	13.6%	16.1%	84
25 to 34	13.1%	15.5%	85
35 to 44	17.4%	18.4%	95
45 to 54	15.9%	16.0%	99
55 to 64	16.0%	14.5%	110
65 plus	24.0%	19.5%	123
ABC1	51.5%	53.6%	96
C2DE	48.5%	46.4%	104
Male	48.1%	48.6%	99
Female	51.9%	51.4%	101

- The multiplex area has an older and C2DE profiled population than the UK as a whole, which the proposed complement of services will need to reflect.

B - Consultation with locally elected representatives

125. In association with the local stations, all county and local councillors within the TSA were written to explaining DAB digital radio and the local opportunity, and asking them to complete an online survey about radio. 46 councillors responded.

- Radio 4 (72%) is the most frequently listened to service, followed by Radio 2 and BBC Somerset (both 44%). Of the commercial services, Orchard FM was mentioned by 35%, Star Radio by 9% and Ivel FM by 7%.

- Councillors were most likely to listen to radio using a traditional FM/AM radio, although a high 35% use a DAB radio and a quarter listen via the Internet.

- Choice of station was prompted primarily by a need to keep in touch with local news and information – a reason given by 44% of councillors. We were interested to see this finding given that the emphasis was for local news and information given their favourite station, Radio 4, cannot deliver this. Choice of presenters and companionship were also strong reasons to choose a service.

- Few councillors claimed to be very satisfied with the range of local services available in Somerset - 63% were quite satisfied but only 16% were very satisfied.

- The choice of new services favoured by councillors highlighted a strong interest in Classic Hits and Speech (56%).

- Councillors considered that the elderly were the single most important groups that were currently poorly served by commercial radio (50%). Three issues were of key concern to councillors - road traffic issues, the ageing population and environmental issues. All of these issues were mentioned by more than 72% of councillors.

C - Radio choice

126. Five local commercial and one local BBC services currently serve the area – Star Radio, Ivel FM, Orchard FM, QuayWest 107.4, QuayWest West Somerset and BBC Radio Somerset. The commercial services are listened to by 160,000 (34.7%) of adults each week, and account for 16.6% of all radio listening:

127. Our RAJAR analysis indicates that there is a small level of listening to other services (2.2%), which is on a par with the UK average.

128. With regard to national radio, the national services of the BBC and commercial services carried by Digital One are audible across the county, as will be the services proposed by 4 Digital Group.

D - Current radio listening habits

129. RAJAR data has been analysed within the combined Star Radio and Orchard FM TSA, using rolled 12 months ending Q4 in each of the last 3 years. The following table details total audience and hours over this period.

Population '000s	2005 449	2006 454	2007 461
Reach %	94.0%	93.0%	93.6%
Reach '000s	422	422	431
Total Hours '000s	11,782	11,805	11,171
Ave. Hours	27.9	27.9	25.9

- Radio listening in Somerset is strong. Weekly reach has been very consistent over the past 3 years, with reach significantly ahead of the UK average (89%).
- Absolute reach has increased, although more a function of the small increase in total population coverage
- Whilst average hours of listening are much higher than the UK average (22.6 hours), 2007 saw a large drop on previous years and this is reflected in the decrease in total hours of 5.2%

130. We have reviewed radio listening in Somerset against data for the UK as a whole to gauge how listening in the county compares. The following table summarises RAJAR performance for the 12 months ended Q4 2007 within Somerset and compares this with the UK as a whole.

Market Share	Somerset	UK	Index
All BBC	**64.8%**	**55.1%**	**118**
• BBC Network	55.8%	44.9%	124
• BBC Local	9.1%	10.2%	89
All Commercial	**33.0%**	**42.7%**	**77**
• INR	12.8%	11.1%	115
• ILR	20.2%	31.6%	64
Other	**2.2%**	**2.2%**	**100**

- Overall the BBC is the dominant service provider in this market, performing 18 points higher than its UK average, a result of strong performance of its network services.
- BBC local services under-perform, a function that until recently BBC Somerset has been an opt-out of Bristol.
- It would appear that there are significant opportunities for local radio, both commercial and BBC, to improve reach and hours of listening choice and listening.

131. The following table details the relative historical market shares between the BBC and commercial radio within Somerset for three key age groupings, and compares the 2007 data with results for the UK as a whole *(Source RAJAR 12 mths ending Q4)*.

Market Share by Age	2005	2006	2007	UK 2007
15 to 34				
All Commercial	53.2	46.4	43.0	55.3%
All BBC	43.1	51.3	54.7	42.0%
35 to 64				
All Commercial	36.5	32.6	35.4	43.3%
All BBC	61.4	64.7	62.2	54.5%
65 pluses				
All Commercial	20.3	22.5	19.1	24.9%
All BBC	77.9	75.7	79.2	73.5%

- The BBC has gained considerable market share amongst 15 to 34s over the period, to the detriment of commercial radio, and the BBC's performance is significantly ahead of its UK average. This is an age group where commercial radio is normally strong.
- The BBC is also dominant with both 35 to 64 and 65 pluses.

132. The table below details reach and hours profiles for BBC, all commercial radio and all ILR, and their indexation against the population.

Reach	All BBC Radio	Index on Population	All Commercial	Index on Population	All ILR	Index on Population	Population Profile
	%		%		%		%
15-24	11.8	87	15.7	115	18.9	139	13.6
25-34	13.3	102	15.1	115	16.3	124	13.1
35-44	16.5	95	20.0	115	23.9	137	17.4
45-54	15.5	97	18.0	113	19.4	122	15.9
55-64	17.2	108	14.7	92	13.4	84	16.0
65+	25.7	107	16.5	69	8.1	34	24.0

Hours	All BBC Radio	Index on Population	All Commercial	Index on Population	All ILR	Index on Population	Population Profile
	%		%		%		%
15-24	7.4	54	14.0	103	17.5	129	13.6
25-34	11.4	87	15.0	115	15.8	121	13.1
35-44	14.8	85	21.5	124	23.4	135	17.4
45-54	16.6	104	21.1	133	22.8	143	15.9
55-64	19.0	119	13.7	86	12.5	78	16.0
65+	30.9	128	14.7	61	8.0	33	24.0

- In relation to the BBC:
  Reach - the BBC's profile is strong with the 55 plus age groups, but also in this area 25 to 34s.
  Hours - the BBC's profile shows strong performance with 45 pluses, the age groups where their real strength lies.

- In relation to all commercial radio:
  Reach - all commercial radio's profile is strong amongst all groups under 55.
  Hours – all commercial radio over delivers amongst all age groups under 55, but especially 25 to 54s.

- In relation to ILR radio:
  Reach - ILR delivers above average listeners in all age groups under 55.
  Hours – ILR delivers more hours amongst all age groups under 55 than their contribution to the population as a whole.

133. The following table summarises the historical performance of each local service over the last three years.

	2005	2006	2007
Star Radio			
Weekly Reach %	5.1%	4.6%	4.3%
Total Hours '000	238	233	187
Market Share	2.0%	2.0%	1.7%
Ivel FM			
Weekly Reach %	6.4%	6.0%	6.6%
Total Hours '000	393	215	298
Market Share	3.3%	1.8%	2.7%
Orchard FM			
Weekly Reach %	28.6%	27.3%	27.2%
Total Hours '000	1,555	1,411	1,368
Market Share	13.2%	12.0%	12.2%
QuayWest	Does not currently RAJAR		
BBC Somerset	Not available as the service is an opt out of BBC Radio Bristol		

Source RAJAR rolled years ending Q4

- Star Radio has the smallest analogue coverage in the multiplex area. Its reach has declined over the past three years, as has market share.
- Ivel FM has experienced steady reach over the period, although share has fluctuated due to movements in average hours.
- Orchard FM has the largest penetration across the area and therefore is the principal commercial station. It has experienced a small decline in reach over the period, resulting in lower market share.

134. Our consumer research delivers slightly lower reach figures for Orchard FM, but higher figures for Star Radio.

E - Uptake of DAB digital radio

135. Adoption of DAB is strong, with over 6.5m DAB sets now sold in the UK. RAJAR Q4 2007 highlights that 29% can access one or more digital radio platforms, with 15% stating that they listen to radio on a DAB set. This is slightly lower than claimed DAB ownership in our research, where:

- 32% of Somerset's adult said they owned a DAB set, with a further 4% claiming access.
- Access to DAB was highest among men (41%), ABC1s and, at its highest, among 25 to 44 year olds.
- Access to DAB was 43% of listeners to both BBC and commercial stations.
- 37% of ILR listeners claimed access to DAB, compared to 32% of those who only listen to BBC services.
- 57% of INR listeners either own or have access to DAB digital radio.

136. The following table details the profiles of adults in DAB homes (per RAJAR) in Somerset against the UK profile.

	Profiles of		Somerset Index on UK DAB Population
	UK Population DAB Profile %	Somerset Adults in DAB Homes %	
Men	51.9	49	94
Women	48.1	51	106
16 to 24	17.0	10.5	62
25 to 34	15.4	13.6	88
35 to 44	20.3	16.7	82
45 to 54	18.1	21.5	119
55 to 64	15.6	18.3	117
65 plus	13.6	19.4	143

Source RAJAR 12 mths ending Q4 2007

- DAB ownership in Somerset is more likely to be older compared to the UK.

137. In our survey, we asked DAB owners what led them to purchase a set in the first place and having acquired a set, whether DAB had met their expectations:

Adults	Original motivator to buy	Has DAB met expectations?
Improved sound quality of existing analogue (FM/AM) radio stations	50%	36%
To hear new stations that are not currently available on your FM/AM radio	35%	19%
To have interference free reception	29%	13%
Ease of tuning, finding stations by name not by frequency	26%	9%
Because I like to keep up with new technology	25%	11%
To see information on the screen of the digital radio	11%	4%

- Whilst percentage levels change, the same three motivators are key in both buying and using a DAB radio, highlighting that the experience of DAB has lived up to its expectations
- Enabling existing analogue services to simulcast on DAB is an important consideration, particularly for those aged over 35.
- Robust coverage across the area is also important, and our proposed network will deliver DAB reception to 78%.
- Adding new services that broaden choice is also an important consideration.

138. Non DAB owners were asked what would tempt them to acquire a DAB set:

	Adults
Improved sound quality of existing analogue (FM/AM) radio stations	36%
Ease of tuning, findings stations by name not by frequency	22%
To hear new stations that are not currently available on your FM/AM radio	20%
To have interference free reception	21%
Because I like to keep up with new technology	14%
To see information on the screen of the digital radio	8%

- Whilst improved sound quality of existing services and access to new choice remained important, ease of tuning was a factor that was deemed to have higher value than to existing DAB owners.

139. RAJAR highlights that 16.6% (Q4 2007) of all radio listening is via digital platforms; this is up 10.7% quarter on quarter. The table below breaks down digital listening between platform, and highlights the slight variations between commercial and BBC listeners. BBC listeners deliver a higher proportion of their digital hours via DAB radio. Whilst DAB is the dominant source for commercial listeners, there is higher level of listening via DTV.

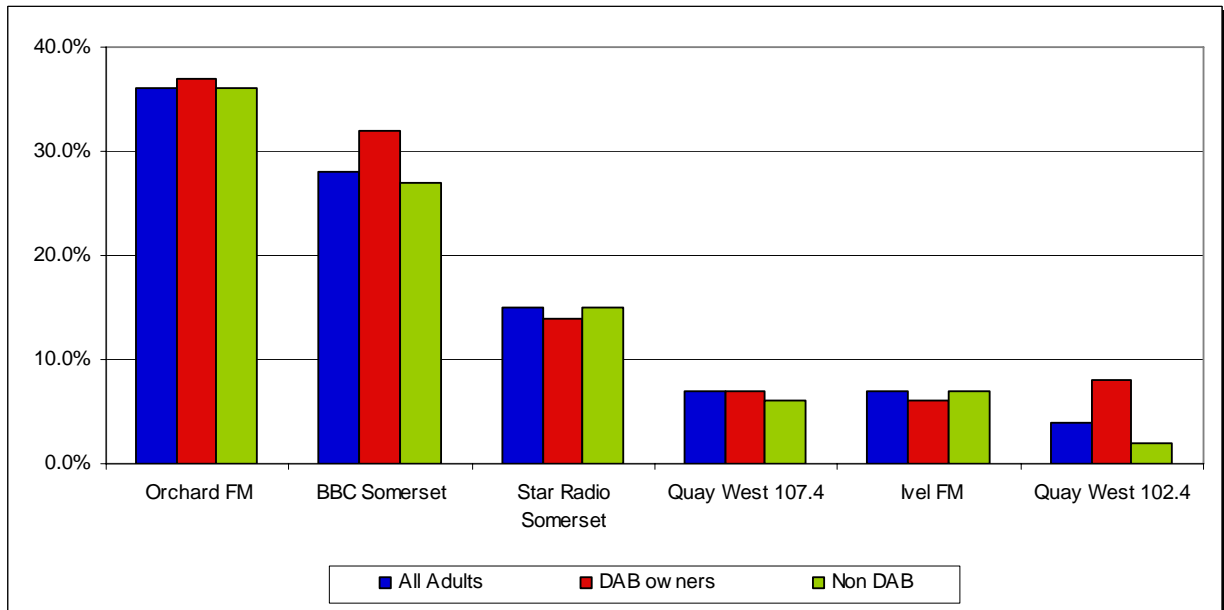|	UK % of All Digital Hours	UK % of All BBC Digital Hours	UK % of All Commercial Digital Hours
DAB	59.9	71.0	49.6
DTV	18.7	13.6	23.9
Internet	11.3	11.1	9.4
Other digital	10.1	4.3	17.1
	100.0%	**100.0%**	**100.0%**

Q4 2007 Published for Somerset 102.2 TSA

140. In our research, we asked those who had access to DAB what impact their DAB radio had had on their radio listening:

- Almost a quarter of DAB owners claimed to listen to more radio having acquired a set.
- 9% said they now listened to a lot more.
- Increased listening generally corresponded with increases in age, with those aged 35 to 44 and those over 65 (24% and 28% respectively) most likely to say they now listened to more radio because of digital.
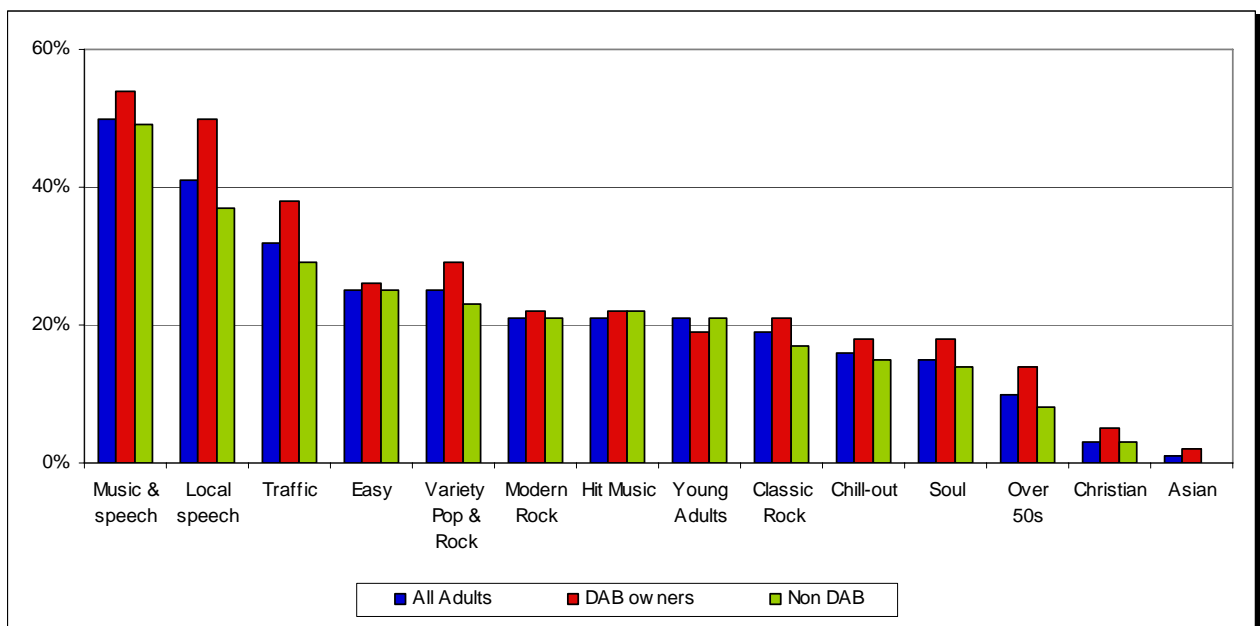
F – What people would like from digital radio

141. Having reviewed existing radio listening habits through RAJAR and our local consumer research, the next stage of our research was to evaluate interest in existing radio services, new formats and data services. The following chart summarises the results for the existing local commercial services.

Chart legend: All Adults, DAB owners, Non DAB

Categories: Orchard FM, BBC Somerset, Star Radio Somerset, Quay West 107.4, Ivel FM, Quay West 102.4

- More than two thirds of adults would like to be able to hear one or other of the existing local radio stations in digital quality, with the principal stations of interest being Orchard FM, BBC Somerset and Star Radio.
- In each case, it was noted that a higher proportion of people would like to be able to listen to these services in digital than currently listen to them on a regular basis.

142. We also sought to gauge interest in a range of music and lifestyle genres. The majority of formats tested were ones for which we were confident that a service provider would be forthcoming. In addition, consumer reaction to format will be relevant when expanding the choice of services in the future.

Chart legend: All Adults, DAB owners, Non DAB

Categories: Music & speech, Local speech, Traffic, Easy, Variety Pop & Rock, Modern Rock, Hit Music, Young Adults, Classic Rock, Chill-out, Soul, Over 50s, Christian, Asian

143. In selecting formats for the multiplex, the following factors were considered:

The profile of the population
144. Compared to the UK, Somerset's profile is older and more downmarket.

Existing commercial services
145. There are a number of existing local services, although only one (Orchard FM) currently serves the whole area.

Research findings for new services
146. In evaluating formats, we analysed scores in overall terms, as well as by ten year age groups (detailed in Part B). Whilst our research assisted in our selection of formats, it is not the primary driver. Having an identified and confirmed service provider for a format was deemed of higher importance than purely the score of a particular format. We are aware that we could have included certain formats in our line up which would have further increased overall interest in the multiplex.

147. However, from our extensive multiplex experience, we know the implications of including unsupported formats in an application. Whilst they make the overall complement of services look better during the application process, such services have tended never to appear in reality, with the multiplex having to seek changes in the services carried. We have therefore elected only to include services were there is a confirmed service provider. When we are able to provide new services, our research will help support any request to Ofcom to amend our licence to include such additional services.

Interest from programme and podcast service providers
148. We have actively sought interest from a variety of service providers and have explored opportunities for the provision of podcast service. It is our belief that this will increase choice of content significantly in the market whilst allowing new entrants to explore the medium in an affordable way. We have in particular sought the involvement of local groups and organisations to provide content.

Maximising Appeal

149. The following table summarises the anticipated audience profiles for the new services based on those who would listen at least weekly to that service.

	Easy	Christian	Traffic	Podcasts*
Male	45%	47%	48%	48%
Female	55%	53%	52%	52%
15-24	5%	13%	7%	25%
25-34	8%	0%	12%	18%
35-44	16%	7%	20%	21%
45-54	20%	20%	19%	23%
55-64	20%	27%	20%	8%
65+	31%	33%	22%	5%
ABC1	51%	73%	59%	59%
C2DE	49%	27%	41%	41%

- *In the case of Podcasts*, the profile is based on those who would like to have access to these as an additional audio service.*

Frequency of Listening

150. For each programme service chosen, respondents were asked to say how frequently they would listen. The table below shows the likely weekly reaches based on those choosing the formats.

| Format	Percentage of those selecting the format who would listen on a weekly basis
Easy, melodic	91%
Traffic and travel	94%
Christian	86%

Data Functionality and Services

151. The opportunities for DAB to provide a range of data services that will complement radio services, or provide additional services, is an important aspect. The following chart summarises views on a range of functionality that DAB sets could provide.
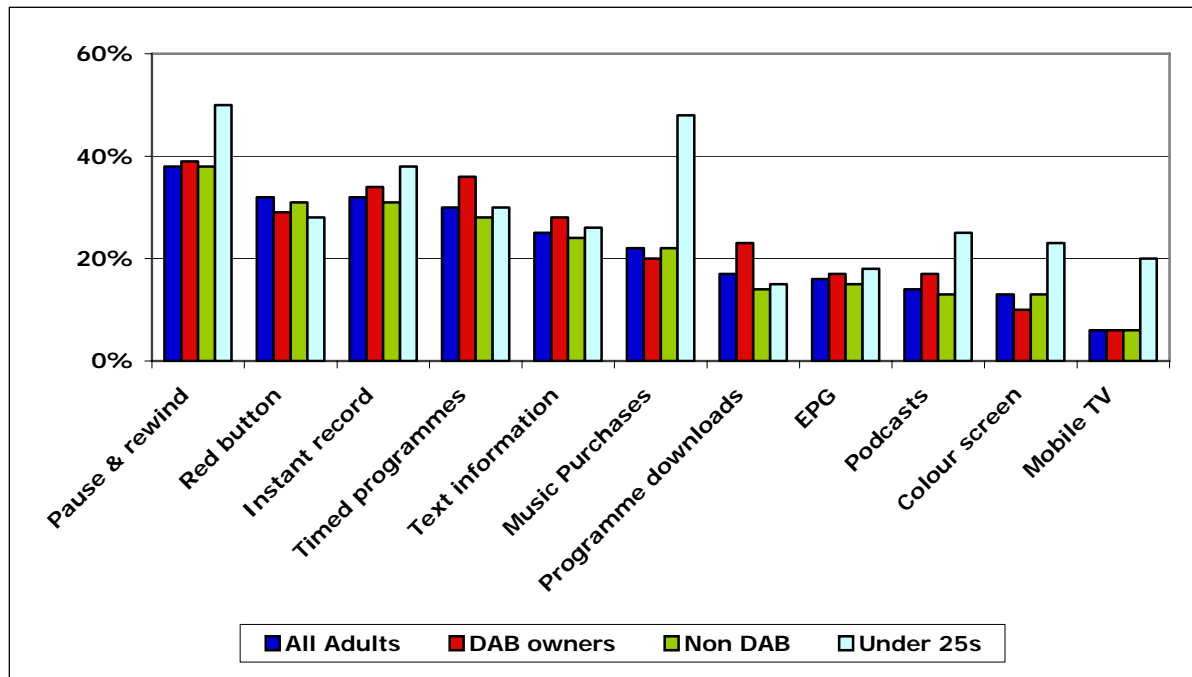

- The ability to record programmes is of interest, featuring in one way or another in three out of the top four selections.

152. The following chart summarises reaction to a range of possible services that could be accessed through a screen on the radio.
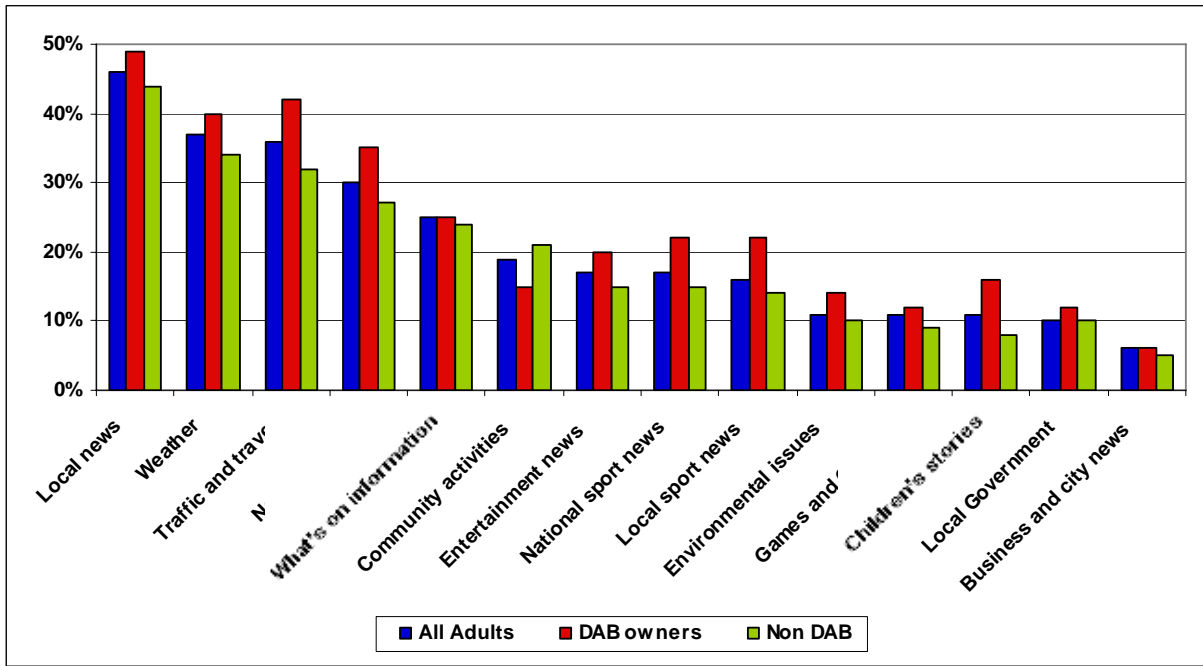
- Under 35s showed higher interest in games and quizzes (19%), national and local sports news (22% and 20% respectively) and children's stories for under 5s (22%), whilst the older audience tended to show above average interest in local and national news, traffic and travel information and the weather.

153. And as audio downloads.
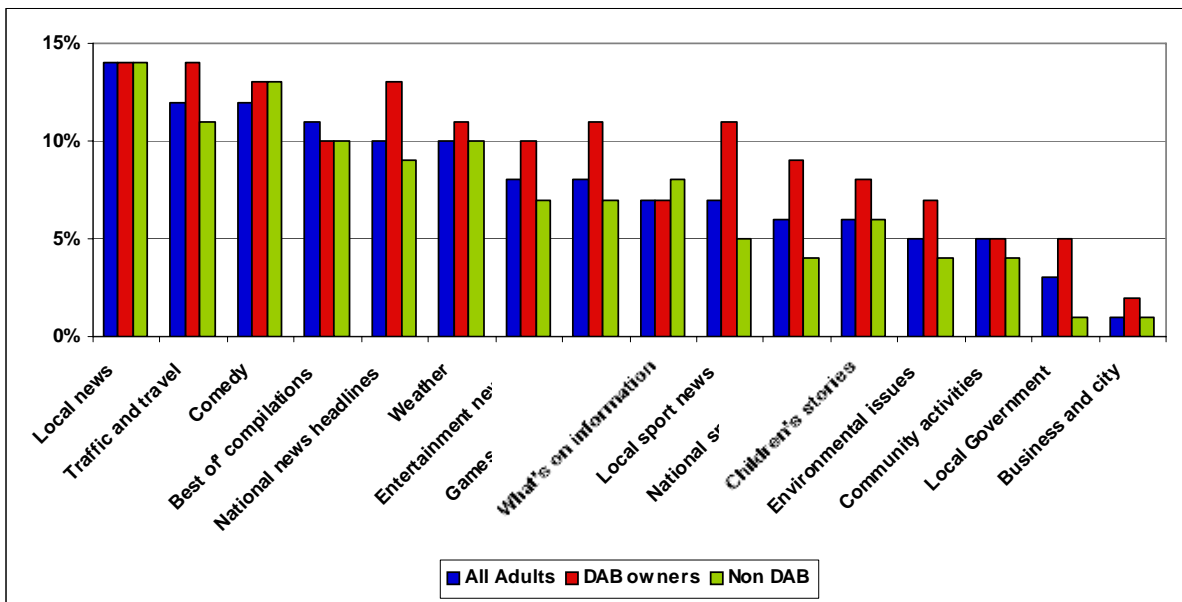
- Under 25s were more enthusiastic about receiving information as audio downloads, and were three times more likely to want to download comedy (34% v 12%) and twice as likely to want to hear local or national sports headlines (both 14%), children's stories (16%), games and quizzes (17%) and entertainment news (18%).

G - What does the future hold for digital radio?

154.   The new multiplex will help increase the amount of time spent listening to the radio.

	Adults	Own DAB	Non DAB	Solus BBC
I would spent more time listening to the radio in order to include some or all of these new digital stations in my weekly listening	47 (57)	50	46	40
I would spend less time listening to some of my current choices of stations in order to include some or all of these new digital stations in my weekly listening	14 (17)	16	13	16
I would stop listening to one or more of my existing choices of station in order to include some or all of these new digital stations in my weekly listening	6 (7)	7	6	6

() re-percentaged on those who would listen.

- 57% would listen to one or other of the new digital stations by spending more time listening to the radio.
- 17% said they would listen to some services less often.
- Only 7% would stop listening to an existing service.

155.   In relation to the 17% of the population who would listen less often to existing services (in order to accommodate the new ones):

- 68% would accommodate new stations by listening less often to BBC stations.
- 54% would only listen less often to BBC stations.
- Only 13% would cut down their listening to existing ILR stations.
- 20% would listen less often to Radio 1 and/or Radio 2, whilst 23% would listen less often to Radio 4.
- Of the other stations affected, 10% would listen less often to Orchard FM, with the same percentage mentioning Radio 5 Live.

156.   In relation to the just 7% of the population who would stop listening to an existing service:

- 29% would only stop listening to a BBC station.
- Less than one in five would stop listening to an indigenous ILR station and only 7% would stop listening to an INR service.
- The 19% who would stop listening to Orchard FM equates to a loss of 1% in weekly reach for the station. Similarly, Radio 1 and Radio 2 would see their reach diminished by between half and one percent.
- Existing DAB owners were much less likely to stop listening to commercial stations than any BBC service (13% v 35%), an indication perhaps of the positive impression digital commercial stations have had on listeners to date.

157.   Among those who claimed not to listen to any radio at the moment (7% of respondents), after gaining some insight into what DAB might bring, 30% now expressed interest to some degree in getting a digital radio in order to listen to the possible new formats they had become aware of and interested in.

158.   If the multiplex was available today and DAB take-up was 100%, the proposed services are likely to command around 43% of time spent listening locally. This figure would rise to 45% among existing DAB owners.

Propensity to Buy Digital Radio

159. We asked all those who currently do not own a DAB radio how interested they were now in buying one.

- 55% were at least quite interested in the prospect of owning a digital radio, with 30% at least very likely to buy one.
- If everyone who expressed some degree of interest in owning a digital radio went ahead and bought one, this would increase overall DAB penetration from 37% of the population to 73%. If only those who said they would definitely be interested in buying one were included, penetration would rise to around 43%.
- The inclination to buy a digital radio was higher among existing ILR listeners in Somerset than among BBC listeners generally, and solus BBC listeners in particular.

Overall conclusions from our research

160. We believe that our research findings have given the citizens of Somerset an opportunity to shape their radio choice for the future. The area already commands an above average level of DAB ownership and the proposed new radio choices will help erode the BBC dominance in this market.

161. Information on likely levels of listening to each service has helped underpin our audience projections, helping to demonstrate the viability of each service and therefore the multiplexes ability to establish and maintain the service.

162. Overall, we are confident that our research demonstrates that our services are demanded, will increase choice and will 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.

163.   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. We have assessed interest in existing services through RAJAR, and both existing and new through our commissioned research. Through this research (detailed in Q.14), demand for each format was evaluated, both individually and collectively on the basis of the chosen complement of services. Our research also evaluated interest in digital radio and the key drivers for the new technology, over and above pure choice of formats.

Local Consultation
164.   We have consulted with MPs and local councillors as to their views of the issues that the county is likely to face over the next 10 years and how radio can assist. We have also discussed the DAB opportunity with a number of local organisations and individuals to make sure that the opportunities to broadcast as full services or as part of the Podcast Service are recognised, and to build local relationships.

Research
165.   We will undertake on-going consumer research during the licence term. 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 take-up, 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 quantitative, focus groups or desk research.

Marketing
166.   We will also have a marketing role in generating awareness of digital radio both as a concept and, alongside the service providers, of the complement of services carried on the multiplex.

Internet
167.   MuxCo Somerset will be served by a website at www.muxco.com. Through the site, MuxCo outlines its proposals and plans to apply for local multiplexes and seeks interest from prospective service providers. A copy of this application and further information about MuxCo are provided on the site.

168.   In addition, the site promotes DAB digital radio and links to other multiplex operators elsewhere in the country. The website will also provide a means of communication between the multiplex and service provider, in particular providing information on transmission issues and fault notices.

169.   Whilst a local multiplex is a virtual company, there is still a need to develop a relationship with the listeners about the services it carries. 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.

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".

170. Our intention to apply for the licence has been documented on our website (www.muxco.com), which has provided an opportunity for prospective applicants to register their interests.

171. We have not advertised our proposals in local newspapers or the trade press, as our experience has identified that during the licence application process, such activity generates little response. Once operational, however, and with greater awareness of the multiplex in the locality, any new opportunities will be advertised in the trade press and local newspapers, as well as through the MuxCo website.

172. Following the advertisement of the licence opportunity, we contacted the identified local analogue licensees to discuss their digital aspirations and invite expressions of interest in providing programme services, as well as local community groups and organisations. We also contacted other radio groups who have known digital aspirations or operate digital service elsewhere.

173. 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.

174. Headline terms including approximate carriage costs have been supplied to the proposed service providers.

175. During the licence period a similar process will be adopted, with a standard questionnaire being used to assess applicants.

176. During the application process, we have engaged with all potential service providers in an open and non-exclusive manner.

Fair and Effective Competition during the Licence Period

177. Each service provider will enter 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 audience or revenue.

178. 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.

179.   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.

180.   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-labeled 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.

181. Increased choice of popular quasi-national and more local brands is a strong driver for the purchase of DAB receivers. When allocating capacity, we have sought to achieve an optimum balance between existing and new services, quasi-national and local, ensuring that there is sufficient capacity to develop ancillary and additional data applications which will help place radio at the centre of a multi-media, multi-platform UK.

182. We are aware of a number of recent listening tests undertaken to evaluate the latest 'state of the art' MPEG 1 Layer II audio codec. These tests demonstrated that there was only slight degradation (1.7 points on the ITU scale).

183. The following table details the division of multiplex capacity by kbits between the proposed audio channels, data capacity and EPG.

Kbits Allocation	Service Type	UEP	6am to Midnight	Midnight to 6am
BBC Somerset	MPEG1L2	UEP3	128	128
Orchard FM	MPEG1L2	UEP3	112	112
Star Radio	MPEG1L2	UEP3	112	112
Ivel FM	MPEG1L2	UEP3	112	112
QuayWest	MPEG1L2	UEP3	96	96
Easy Radio	MPEG1L2	UEP3	96	96
UCB	MPEG1L2	UEP3	64	64
Traffic Radio	MPEG1L2	UEP3	48	48
Podcast Service	MPEG1L2	UEP3	16	64
Data	AAC	EEP3A	56	8
EPG	DATA	EEP3A	8	8
Total			**848**	**848**
Allocated as % Total			*74%*	*74%*
Data as % Total			*7%*	*7%*

184. The following table details the division of multiplex capacity by Capacity Units (CUs) between the proposed audio channels, data capacity and EPG, during two time periods.

CUs Allocation	Service Type	UEP	6am to Midnight	Midnight to 6am
BBC Somerset	MPEG1L2	UEP3	96	96
Orchard FM	MPEG1L2	UEP3	84	84
Star Radio	MPEG1L2	UEP3	84	84
Ivel FM	MPEG1L2	UEP3	84	84
QuayWest	MPEG1L2	UEP3	72	72
Easy Radio	MPEG1L2	UEP3	72	72
UCB	MPEG1L2	UEP3	48	48
Traffic Radio	MPEG1L2	UEP3	36	36
Podcast Service	AAC	EEP3A	12	48
Data	DATA	EEP3A	42	6
EPG	EPG	EEP3A	6	6
Total			**630**	**630**

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?

185. Each service provider has the option to broadcast in stereo. However, for cost reasons, service providers may elect to broadcast using a lower stereo capacity level or in mono. Bit rate allocations are chosen by each service provider.

186. NGW has 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 Somerset therefore intends to offer a choice of codecs to our service providers. At low bit rates of 64 kbits or below, we will consider the use of half rate coding at the request of our service providers.

187. We will broadcast at UEP 3.

188. The DAB[+] specification that has been released by the WorldDMB Forum enables 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.

189. In reaching agreement with service providers, we will seek to contract flexible capacity allocations. Service providers will have the opportunity to vary their capacity to meet their particular requirements. As the requirements of service providers develop, and enhanced data services are implemented, there may be increasing demand for regular multiplex re-configurations.

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 'halfrate coding'. The response to this question should be consistent with the proposed division of multiplex capacity set out in response to Q.20.

	Service Type	Stereo / Mono	Coding	Protection Level	Audio Sampling
BBC Somerset	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Orchard FM	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Star Radio	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
Ivel FM	MPEG1L2	Stereo	Full Rate	UEP3	48kHz UEP3 Stereo
QuayWest	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
Easy Radio	MPEG1L2	Mono	Full Rate	UEP3	48kHz UEP3 Mono
UCB	MPEG1L2	Mono	Full Rate	UEP3	24kHz UEP3 Mono
Traffic	MPEG1L2	Mono	Half Rate	UEP3	24kHz UEP3 Mono
Podcast Service	AAC	Mono or Stereo	Full Rate	EEP3A	48kHz EEP3A Mono / Stereo

190.   The Podcast Service will be licensed under a DSP licence. The nature of the downloaded content will define the format of the coded audio; files with a majority of music content will be in stereo but those with predominately speech content may be encoded as mono to conserve data capacity. The use of AAC audio encoders will, however, allow us to maximise the audio quality at lower bit rates by employing the Parametric Stereo and Spectral Band Replication options.

191.   The inclusion of an AAC based podcast service will also ensure that the new receivers that support it will be able to decode this codec, something that will likely make them capable of decoding DAB+ services when they come to the UK.

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.

192.   MuxCo Somerset Ltd is not aware of any issues which would prevent the award of a licence to the company.