



02 March 2017

Mast Emissions Audit – Invitation to Tender (ITT)

As part of its role as the telecoms regulator for the Channel Islands, CICRA periodically commissions surveys to audit the emissions from mobile telecommunications masts across the Channel Islands in accordance with relevant standards . Following the roll out of 4G networks across the islands in 2016, there is a need to update surveys last conducted in 2012-13.

The purpose of this ITT is to seek tenders for contract from interested parties. The successful bidder will be required to conduct a survey commencing in Q2 2017 and provide site by site reports as the work progresses. They will be expected to provide a final report by 1 September 2017 and to update the published information available on individual sites, including the provision of information online in an appropriate format.

CICRA may also require follow up surveys in 2018 and 2019 to cover a small number of sites. These are likely to be sites newly installed or upgraded sites since the previous survey or sites where any concerns were identified during the previous audit/survey work.

In addition, the scope of work may also include, work to monitor emissions from the masts for the TETRA radio communications system used by the emergency services at a small number of sites. This will be subject to agreement with the relevant authorities in Guernsey or Jersey. The scope will be confirmed and, if it is to be included, agreed with shortlisted candidates prior to the award of contract.

Background

There are currently three licensed telecoms operators in the Channel Islands which operate 4G networks (as well as 2G and 3G networks). The three are Airtel, JT and Sure and each of which operates in both Jersey and Guernsey (including Alderney Sark and Herm).

Previous surveys

Previous surveys have been carried out by RED-M consultancy, with results published online through websites and interactive maps in conjunctions with digimap, a local geographic

information provider which works in Guernsey and Jersey. The most recent mast audits for Jersey and Guernsey can be accessed through CICRA's own website, www.cicra.gg (under the heading "Telecoms – Consumer information") or via digimap, at masts.digimap.gg and masts.digimap.ie.

In addition to the sites that can be identified through the previous surveys, there will be a number of new sites installed to extend 4G coverage – with up to 10 more TETRA sites – although some of these are shared with mobile operators.

Invitation to Tender

1. CICRA invites interested companies to tender for a contract to carry out an emissions survey of mobile telecommunication mast/base station sites operated by the three mobile network operators in the Channel Islands.
2. The survey will cover all mobile masts and base stations in the islands of Jersey, Guernsey, Alderney, Sark and Herm. The substantial majority of sites are on Jersey and Guernsey with a small number located on the islands of Alderney, Sark and Herm.
3. The successful tenderer will need to measure the level of non-ionising radiation emissions from each site, including the cumulative effect of shared sites, to assess whether they comply with the limits specified by the guidelines published by the International Commission for Non-Ionising Radiation Protection¹ (ICNIRP).
4. The successful bidder is asked to comment, in the final report, on whether the guidelines continue to be the most appropriate standard to apply and to advise whether there are alternative standards or approaches CICRA should consider for future surveys.
5. This invitation to tender is structured as follows:

Part I introduces the contract on offer and describes the timetable and process for submission of tenders.

Part II provides background information on the telecoms market in Guernsey and Jersey and the regulatory regimes within the Islands which the applicant may wish to take into account in drawing up a tender.

Part III describes the scope of the project.

Part IV states the information required by CICRA in order to consider the tender.

Submission of the application

6. The closing date for responses is Monday **20 March 2017** and tenders should be received by 17:00 on the closing date.

¹ ICNIRP guidelines: <http://www.icnirp.org/en/activities/work-plan/details/work-plan-hf.html>

7. All tenders submitted should be clearly marked "CICRA Mast Audit 2017" and should be valid for a minimum of 30 days from this date.
8. Proposals may be submitted electronically or on paper, must be addressed to CICRA's Guernsey office

email: info@cicra.gg
Suite 4, 1st Floor,
Plaiderie Chambers, La Plaiderie,
St Peter Port,
Guernsey, GY1 1WG;
9. CICRA's preference is for electronic submission in the first instance, with a single paper copy for evaluation (which may follow) to be submitted to CICRA's Guernsey office at the address above.
10. Shortlisted applicants may be invited to meet with CICRA to discuss their proposals. CICRA expects to announce the results of this tender process within four weeks of the closing date.
11. Following the selection of the successful applicant CICRA will expect to agree a formal binding contract with that applicant within one week of the decision being announced. CICRA reserves the right to include material included in this ITT and the material included in the response from the successful tenderer into the terms and conditions of the contract.
12. CICRA will accept no liability for any expenditure incurred by the applicant in preparing a tender, whether or not submitted, and whether or not successful.

PART II: BACKGROUND INFORMATION FOR THE TENDER

Regulatory Regime

13. The Telecoms Laws in Guernsey and Jersey, the *Telecommunications (Bailiwick of Guernsey) Law 2001* and *Telecommunications (Jersey) Law 2002* respectively, provide for CICRA to include such conditions in a licence as are appropriate, necessary or desirable. Telecommunications licences in Jersey and mobile telecommunications licences in Guernsey include the following condition:

"The Licensee shall ensure that non-ionising radiation emissions from its Licensed Telecommunications Network are within the limits specified by the guidelines published by the International Commission for Non-Ionising Radiation Protection (ICNIRP) and that it complies with any radiation emission standards adopted and published from time to time by ETSI, the European Committee for Electrotechnical Standardisation and any other standards specified by the Director General."

14. These licences also include a condition that permits CICRA to undertake any

examination, investigation or audit of any aspect of the Licensee's business relating to the Licensed Telecommunications Network or the Licensed Telecommunications Services or its compliance with the Conditions and the Laws, and the Licensee shall provide any assistance requested in relation to any such examination, investigation or audit. CICRA may issue directions with regard to the manner in which such examination, investigation or audit is carried out.

15. To provide further guidance, the States of Jersey in 2007 issued a Direction and Guidance to the JCRA (Jersey Competition Regulatory Authority), found here: www.statesassembly.gov.je/AssemblyReports/2007/31268-32452-26102007.pdf. It sets out a requirement for the JCRA to ensure that independent testing and monitoring of emissions from mobile masts and base stations is undertaken by the authority, paid for by licensees.
16. The last full audit in Guernsey & Jersey was carried out in 2012 and 2013. The results were announced in CICRA's media release of 28 March 2013 (www.cicra.gg/files/Mobile%20mast%20audit%20media%20release.pdf).
17. These documents and a summary map representing site locations within Guernsey and Jersey are published on CICRA website (www.cicra.gg) and at Digimap via the following links for Guernsey (www.digimap.gg) – including Alderney Sark and Herm and for Jersey (www.digimap.je).
18. Given developments in the telecoms market and, in particular, the roll out of 4G services CICRA believes it is now appropriate to undertake a further audit of the radio transmission sites used by the operators for the provision of services in the Jersey and the Bailiwick of Guernsey.
19. Services currently provided are a combination of 2G, 3G and 4G mobile telecommunication services using a range of spectrum allocations to the various mobile operators. There will be site locations on the four main inhabited islands of Jersey, Guernsey, Alderney and Sark, with the majority on Jersey and Guernsey. The information available on the Digimap surveys (links noted above) will provide a list of the majority of the sites. It should be noted that in order to reduce the overall number of masts required, operators share facilities at a number of sites and that a number of additional sites may have been commissioned as part of the roll out of 4G networks which were not operational at the time of the previous surveys.

PART III: SCOPE AND OBJECTIVES OF THE PROJECT

Objectives

20. The successful tenderer will be required to undertake an emissions survey commencing in Q2 2017 of all mobile mast and base station sites operated by the three Channel Islands mobile telecommunications network operators licensed by CICRA. The survey may additionally cover a small number of TETRA radio masts, some of which are collocated with mobile sites. The total number of sites will be likely to be 250-300, across the islands with the majority in Jersey and Guernsey and a small number in Herm, Sark and Alderney. Precise information on sites and will be

made available to interested parties on application, and subject to appropriate confidentiality commitments.

21. The tenderer may also be asked conduct a follow up survey/audits of a sample of up to 25 sites each in 2018 and 2019. These are likely to comprise new and/or upgraded sites together with sites (if any) where potential concerns may have been identified in previous surveys.
22. Following the survey the tenderer will be required to submit reports for each site on compliance with the ICNIRP guidelines, and as part of an overall report to CICRA, a report on each operator's compliance with the appropriate emissions guidelines, in accordance with the relevant licence requirements. Each operator will be provided with a copy of the report that relates to its own compliance. Individual reports for each site will also be required and will be made available online or on request to interested parties.
23. Following the survey, the tenderer will be required to develop a publically accessible website that will contain information on the location of individual masts and the individual site survey results. This may take the form of a new website or an update to the existing Digimap Jersey and Digimap Guernsey based websites.
24. CICRA will publish such information arising from the audit as is considered appropriate and may present compliance information on its website or in other forums. This may include a summary of the reports and CICRA reserves the right to use any of the material from the findings of the audit and the reports provided by the consultant, as are considered appropriate.

Scope of the Project

25. In realising the project objectives, the successful tenderer will need to:
 - a. Confirm the standards and guidelines against which emissions are being assessed, whether it remains appropriate for CICRA to use the ICNIRP guidelines as the standard against which to assess compliance (or if there is an alternative approach that should be considered for this or future surveys);
 - b. Carry out detailed measurements at each site at which the operator utilises radio equipment for the provision of its services. This will include measurement of individual operators equipment emissions and an assessment of the cumulative emissions from each site;
 - c. Present the appropriate international standards against which these measurements should be compared;
 - d. Prepare a report of compliance against the standards addressing each individual operator's compliance at each site; and
 - e. Prepare a summary report for CICRA based on the overall level of compliance as well as the individual reports on each operator's level of compliance that

are set out above.

- f. Carry out annual spot checks of up to 25 sites in 2018 and 2019 to assess whether these meet the standards outlined above.
- g. Subject to agreement with the relevant authorities in Guernsey and/or Jersey, conduct emissions surveys of TETRA masts located in Guernsey and/or Jersey and provide individual site reports on compliance with ICNIRP guidelines. Such reports to be confidential or to be published only by agreement with the relevant authorities.

It should be borne in mind that certain sites in the Jersey and the Bailiwick of Guernsey are shared by licensed operators and by the emergency services' TETRA network. The licensing and regulation of this network does not fall within CICRA's remit, however there are a small number of sites which CICRA has been asked to include in the emissions survey at the request of Guernsey Airport.

Tenders should separate out the costs into 3 parts:

- Site survey and individual site emissions/compliance reports
- Summary report for CICRA on overall compliance, including operator by operator compliance; and
- Development of appropriate website and upload of individual (mobile) site information for publication.

Each tender should indicate a cost per site for the survey work and/or identify the additional costs that would be incurred to survey selected TETRA sites during the course of this audit.

Timetable

26. CICRA wishes to commence work on this project in Q2 2017 with a view to publishing the findings in by 1 September 2017, with new or revised and updated websites to be available by 30 September. The follow up audits in 2018 and 2019 will be undertaken during an agreed period (likely May or June) with reports to follow within 60 days.

Deliverables

27. The successful tenderer is required to produce the following reports (these may be prepared in a modular way that prevents repetition and tenderers are invited to propose an appropriate structure);
 - a. An overarching summary report for CICRA on compliance by each operator with the relevant international standards and on the adequacy or otherwise of internal processes and procedures of each operator;
 - b. Individual reports (or modules) for each licensed operators setting out the findings in relation to that operator in a format that is appropriate to be provided to the operator;
 - c. Individual site reports.

28. A draft of the report(s) referred to above will be submitted to CICRA three weeks after the conclusion of the audit. CICRA will provide comments on the document(s) within two weeks of receipt of the draft report(s) and the consultant will be able to finalise the report(s) subject to CICRA approval. Prior to the submission of the final report(s), the consultants may be required to meet with CICRA to discuss any points of clarification necessary.
29. The consultant will be required to provide electronic copies of the draft and final reports (including each site report).
30. The work will be conducted in English and all deliverables will be submitted in English.

Qualifications

31. The consultants should have:
 - a. Substantial experience in undertaking similar work in the radio frequency sector;
 - b. A proven track record in undertaking audits of this nature; and
 - c. Team members who have specific relevant experience of this type of project.

Confidentiality

32. The successful applicant must agree to a confidentiality agreement covering the firm and the individuals assigned to the project.

PART IV: INFORMATION REQUIRED FROM THE TENDER

33. The following information is required from the applicant for the tender:
 - a. Demonstration of a clear understanding of the work to be performed. This should include a brief discussion of the approach to be adopted.
 - b. A detailed description of methodology that the tenderer intends to adopt. This should include the envisaged project timetable containing any additional milestones for deliverables that the tenderer specified in response to paragraph 26 as appropriate.
 - c. Information regarding the expertise and experience of the specific people who will carry out the work including full CVs of the staff proposed for the project. This will also identify the role undertaken by members of the proposed project team.
 - d. Description of previous relevant project experience of the organisation.
 - e. Management arrangements for ensuring the successful completion of the project.

- f. A clear statement that the firm has no existing conflict of interest in relation to the proposed assignment and will not place itself in such a position while retained by CICRA. Tenderers are required to disclose any matter which may give rise to a potential conflict of interest.
 - g. Daily rates of each team member in pounds Sterling (daily rates to be based on 8 hours per day) together with the anticipated number of man days for each team member.
 - h. The total cost of the services tendered for including a breakdown of the person days or effort required (note: VAT is not applicable in Guernsey).
34. The applicant is free to supplement the required information, and to provide illustrations or add background details where they are necessary to provide a clear understanding of the proposals or are likely to add materially to CICRA's understanding of the applicant's intentions in providing the service. However, the submission from applicants should be no longer than 20 A4 pages, with supplementary information contained in relevant annexes.
35. The applicant may be invited to clarify submitted information.
36. CICRA requires a fixed cost quotation for the work and rates must be fixed for the duration of the project. Travel and related expenses must be included in the quotation along with any other charges. It is expected that staff working on the project will be based for part of the contract in Guernsey.
37. The tenderer must define payment terms.
38. Any exchange rate risk will be borne by the applicant.
39. CICRA is not bound to accept any tender received or the lowest tender. Selection will be based on compliance with this request for proposal documentation and, inter alia, the following matters:
- a) Understanding of the issues;
 - b) Approach and methodology proposed;
 - c) Understanding of the telecommunications markets in Jersey and Guernsey and/or similar locations elsewhere and appropriateness of the proposed approach for the Channel Islands;
 - d) The calibre of the team;
 - e) Previous experience and calibre of the team;
 - f) Value for money.

/end

**TELECOMMUNICATIONS (JERSEY) LAW 2002:
DIRECTION AND GUIDANCE TO THE JCRA
UNDER ARTICLE 8**

**Presented to the States on 26th October 2007
by the Minister for Economic Development**

STATES GREFFE

REPORT

Telecommunications (Jersey) Law 2002, Part 3, Article 8 –

Mobile Telecommunications Masts

The Minister for Economic Development issues the following Direction to the Jersey Competition Regulatory Authority (JCRA) under the terms of its operator's licences to ensure that –

- Independent random testing and monitoring of radiation emissions from mobile masts / base stations is undertaken and that this testing is paid for by the Authority's licensees, but managed by the Authority;
- Testing take place annually for the first two years and thereafter every second year;
- Reports from testing should be made available to the Minister for Economic Development and a copy provided to the Health Protection Unit at the Health and Social Services Department;
- Members of the public should be able to make a complaint regarding levels of emissions of masts near their homes, but the actual testing regime shall be determined by the JCRA;
- Licensees should be required to pay for the development and operation of a publicly accessible website that will as a minimum deliver –
 - Information on the location of mobile masts;
 - Independently verified information on individual masts in accordance with the testing regime adopted by the Authority;
 - Information regarding the current international standards in respect of safe levels of emissions;
 - the website should be regularly updated in accordance with available information in order to best deliver these objectives.

This Direction has been discussed with the JCRA in accordance with Article 8(4) of the Telecommunications (Jersey) Law 2002 and acknowledged by the Chairman of the Authority in his letter of 15th October 2007.