# **EME DESIGN GUIDE – PART 10**

1. Process

Use this form to request an escalation review for any RF design that has been rejected by Telstra at the F02 EME design review stage. This design escalation review must then be referred to:

* the Telstra National EME Manager via **“! Telstra EME Management**” inbox for Telstra internal referrals; or
* [ememanagement@team.telstra.com](mailto:ememanagement@team.telstra.com) for contractors without access to Telstra internal email; or
* Telstra Site Share Access Seekers are advised to refer as follows**:**

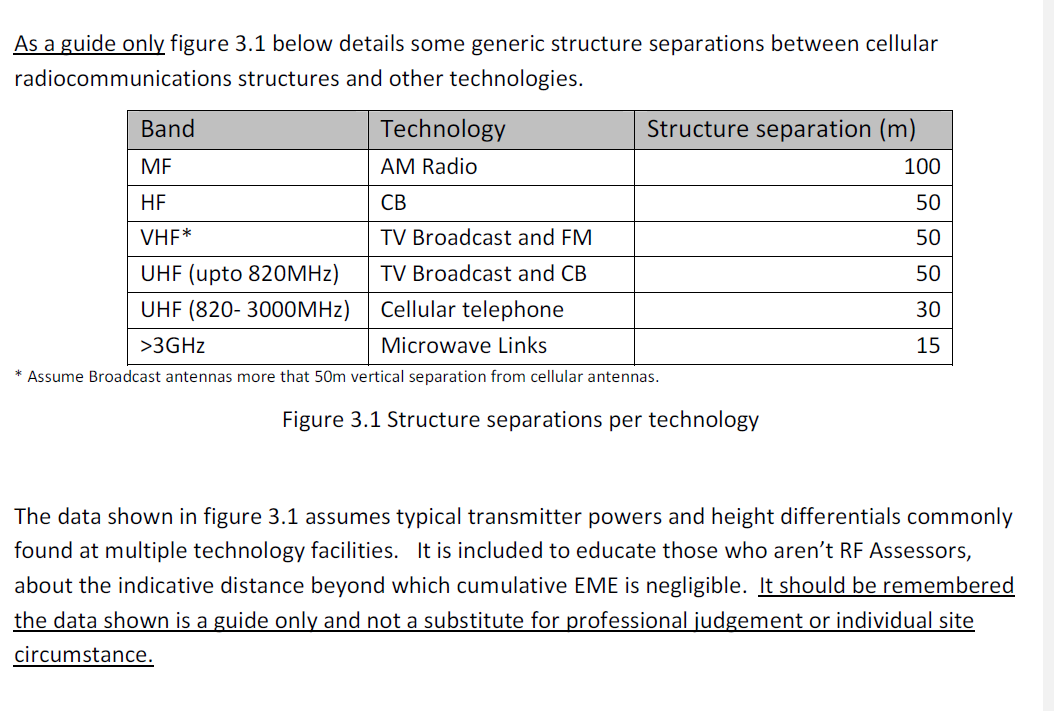
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| **Access Seeker classification** | **respond via e-mail address** |
| **Carrier** | *! TW Site Share* |
| **Non Carrier** | *! Facilities Access Management* |

**To proceed with the escalation review, the designer must:**

* consider physical access restrictions as an alternative form of access restriction to the separation distances;
* complete the F02 and F01 EME Design and escalation review forms with respect to the proposed RF design;
* submit all design drawings, a preliminary RADHAZ assessment and current site photos together with the completed F02 design and F01 escalation review forms in accordance with this section.   
    
  See [http://www.telstrawholesale.com.au/products/facilities/tower-site-sharing/index.htm#tab-3](http://www.telstrawholesale.com.au/products/facilities/tower-site-sharing/index.htm%23tab-3) for 005486 Chapter 2 EME Design Guide parts 10 and 11.

**Where there are unidentified antenna services at either a Telstra Site or Shared Site**, attach evidence of attempts made to identify third party emitters that are present on the site or who are in close enough proximity to the site to have an influence on the RF assessment of the design. See attached “Third Party Infrastructure Record of Contact” form.

For further details regarding “close proximity” refer toFigure 3.1 below (as extracted from Radio Frequency Site Compliance Program (RFSCP) Manual 2, p169).



Examples of evidence include:

* + - ACMA radcoms search results;
    - records of any site inspections or audits and steps taken during any site inspection or audit to identify unidentified antenna services;
    - a statement as to whether the designer considers that a further or higher level site inspection or audit would assist in identifying unidentified antenna services;
    - a statement as to whether the designer considers that an on-site EME measurement would assist in identifying relevant information about unidentified antenna services, or whether there are limitations as to what information could be obtained about unidentified antenna services during an on-site EME measurement; and
    - an explanation of why it has not been possible to identify the unidentified antenna services at the site.

**For Telstra projects on Shared Sites only (Not applicable to Access Seeker projects):**

Examples of evidence include:

* letters, emails or telephone notes to and from site owners/managers and infrastructure owners/operators seeking information about unknown antenna services and any subsequent replies received
* confirmation that the site owner/manager has received an EME information pack, and has access to the RFNSA (or evidence of steps taken to provide the site owner/manager with an EME information pack and RFNSA access); and
* a statement as to whether Telstra’s lease with the site owner/manager requires the site owner/manager to notify Telstra of new emitters at the site, and if so, any letters, emails or telephone notes of communications with the site owner/manager in relation to non-compliance with this lease condition.

1. RF Design Escalation review

|  |  |
| --- | --- |
| **Company and Infrastructure Owner Requesting Escalation Review** |  |
| **RF Engineer** |  |
| **Civil Designer** |  |
| **Telstra Site Name** |  |
| **Site Address** |  |
| **RFNSA Site No.** |  |
| **Review Date** |  |

|  | **Assessment Criteria** | **Details** |
| --- | --- | --- |
|  | **NON-COMPLIANCE WITH SEPARATION DISTANCES** |  |
|  | Explain the reason for the escalation of this design. |  |
|  | With which aspect/s of the EME Design Guide is the design non-complaint |  |
|  | **BASE STATION SITE INFORMATION** |  |
|  | Description of site |  |
|  | Existing or new? |  |
|  | For Telstra projects only (this question is not applicable to Access Seekers)  If existing, what other carriers/radio equipment is on site? |  |
|  | Do unidentified antenna services exist on site or in close proximity to the site?  If so, please provide evidence to support attempts made to identify these services (use Third Party Record of Contact form attached). |  |
|  | Who owns the site? |  |
|  | What access restrictions are already in place with respect to the site and EME exclusion zones? |  |
|  | Comment on land use of surrounding areas |  |
|  | proposal for Escalation review |  |
|  | What infrastructure is being proposed? |  |
|  | Will the proposed new antennas be installed nearby to any existing equipment, buildings or other site infrastructure? Specify distances involved. |  |
|  | Is a planning permit required or is the project the installation of a low impact facility? |  |
|  | What physical access restrictions are proposed? |  |
|  | **DETAILED DRAWINGS: EME EXCLUSION ZONE - ENCROACHMENT ASSESSMENT** |  |
|  | Show how the EME exclusion zone extends over the adjacent areas beyond Telstra’s leasehold. Please provide:   * Plan and elevation view of site showing EME exclusion zone (occupational and general public). Any plan or drawing showing predicted EME exclusion zones must be produced by a NATA accredited radio frequency assessor. * Plans showing:   + Where the EME exclusion zone extends over adjacent private property - the proposed site and neighbouring properties over which the EME Exclusion Zone extends, identifying: - houses and other buildings;  - trees; - cubby houses; - outdoor sheds; - access roads and driveways; and - any other relevant structures.   + Where the EME exclusion zone extends over adjacent public areas, the proposed site and the public areas over which the EME exclusion zone extends, identifying buildings, playgrounds, pathways, roads and trees.   + Property boundaries relative to each other. * Up to date photos. * Google Earth view if available and up to date. |  |
|  | **ENCROACHMENT ANALYSIS** |  |
|  | If the EME exclusion zone goes over adjacent land:   * list the address and land use of private property over which the EME exclusion zones extend; and * identify any public areas over which the EME exclusion zones extend. |  |
|  | What is the current land use immediately below areas over which the EME exclusion zones extends? |  |
|  | On the adjacent private property what is the horizontal and vertical separation of the EME exclusion zone from the nearest:   * building; * other structure; and * trees. | metres |
|  | On the adjacent public access area, what is the horizontal and vertical separation of the EME exclusion zone from nearest:   * building; * other structure; and * trees. | metres |
|  | Estimate the maximum EME level for each adjacent private property block and public area over which the EME exclusion zone extends (but do not confine measurements to area beneath EME exclusion zone)  - at the minimum distance above any buildings; - at the top of the highest accessible structure; - within the shortest tree; - at the top of the highest structure within a children's play area; and  - at the minimum distance above any roads or drive ways. | Percentage of general public exposure limit.  Show **existing** and **proposed and existing**. |
|  | What is the zoning of private property over which the EME exclusion zones extend, if known. |  |
|  | Include any other comments relevant to the review of this design. |  |

**3. DEFINITIONS**

**Accessible**

A place accessible to the general public is a place where a person who is not an RF worker might reasonably be expected to be in the ordinary course of his or her private life or work.

See Chapter 2 Attachment A01 EME Design Guide Part 4 Restricting Public Access – General Principles, p11.

**ACMA**

Australian Communications and Media Authority (<http://www.acma.gov.au>).

**ARPANSA**

Australian Radiation Protection and Nuclear Safety Agency. The Federal Government agency charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of ionising and non ionising radiation ([http://www.arpansa.gov.au](http://www.arpansa.gov.au/)).

**Access Seekers**

A Customer (or a contractor of a Customer) under a Non-Carrier Facilities Access Agreement and an Applicant (or a contractor of an Applicant) under the Telstra Wholesale Co-location Agreement and means a person who physically accesses Telstra’s antenna support structures or proceeds beyond the point of access restriction.

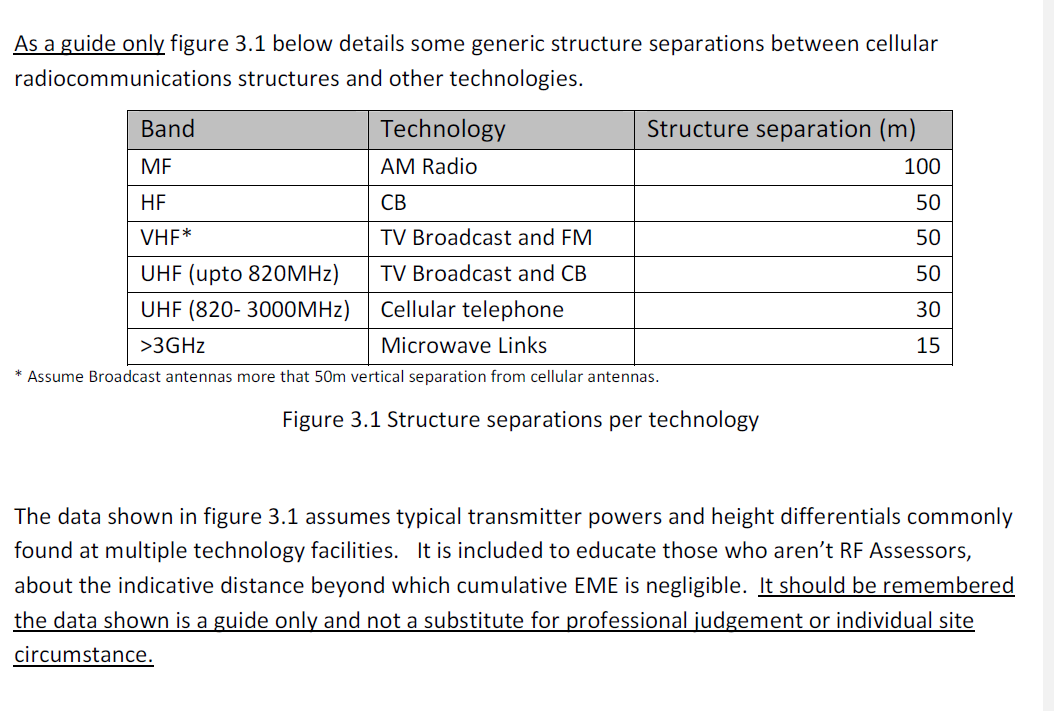
See 005486 Chapter 3 “Working Safely on or Around RF Transmitting Infrastructure” for more detail regarding access seekers on Telstra sites and structures.

**Antenna Support Structure**

Means towers, masts, poles, antenna mountings and other similar structures which bear or are capable of bearing radiocommunications equipment and which are owned, maintained or operated by a party.

**Close Proximity**

For further details regarding “close proximity” refer toFigure 3.1 below (as extracted from Radio Frequency Site Compliance Program (RFSCP) Manual 2; p169).

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**EME**

Electromagnetic energy.

**EME Information pack**

See document 018422f17 “Landowner Information Pack” as referenced in section 3.5 of the Site Acquisition Manual (018422).

Contract management can access the landowner information pack (018422f17) via the TCSS interface and Telstra staff can access the pack via the intranet site at <http://www.in.telstra.com.au/ism/deploymentandcommunityconsultation/processdocuments.asp>.

**EME Design Guide**

See document 005486 Chapter 2 - Attachment A01 EME Design Guide.

Access Seekers can access the EME Design Guide at <http://www.telstrawholesale.com.au/products/facilities/tower-site-sharing/index.htm#tab-3>.

Telstra contractors can access the EME Design Guide through their contract manager via TCSS.

Telstra Staff can access the EME Design Guide at: <http://www.in.telstra.com.au/ism/eme/sitemanagement.asp>

**EME Exclusion Zone**

The area within which the EME is predicted to be above both the RPS3 occupational exposure limit and general public exposure limit. The EME exclusion zone is the area depicted as either yellow or red shaded areas within RCSMB RADHAZ Drawings.

See 005486 Chapter 2 Attachment A01 EME Design Guide parts 4 and 5 for Telstra EME exclusion zone separation distances and design review trigger points. Physical access restrictions and EME signage requirements are detailed in parts 6 and 7.

**EMI**

Electromagnetic interference. See 005486 Chapter 2 Attachment A01 EME Design Guide part 8, p39.

**General Public Exposure Limit**

The EME reference level for general public exposure specified in RPS 3.

**Low Impact Facility**

Low impact means a facility defined in the Telecommunications (low-impact facilities) determination 1997 (Cth).

**MERCS**

Mobile Carriers Forum EME Regulatory Compliance Strategy. It is now known as the RF Safety Compliance Project (see RFSCP).

**NATA**

National Association of Testing Authorities. The authority responsible for the accreditation of laboratories, inspection bodies, and more throughout Australia. They provide independent assurance of technical competence using industry experts for customers who require confidence in the delivery of their products and services.

<http://www.nata.asn.au/>

**Occupational Exposure Limit**

The EME reference level for occupational exposure specified in RPS 3.

**Point of Access Restriction**

The point at which the physical access restriction is placed to prevent public access to the EME exclusion zone.

The point of access restriction will be clearly identified by EME signage.

This is referred to as the "controlled area" in RPS3. See also 005486 Chapter 2 attachment A01 EME Design Guide parts 6 and 7.

**RF**

Radio Frequency.

**RFNSA**

Radio Frequency National Site Archive. An online industry system which includes a repository of radio EME site compliance data. It contains site antenna and transmitter data, compliance reports, photos, site drawings, industry documents and more. It is part of the RFSCP.

**RFSCP**

Radio frequency safety compliance program (formally MERCS)

**Radio Frequency (RF) Assessor**

A NATA accredited organisation with current certification for EME assessment by both computation (modelling) and measurement.

A list of accredited assessors is available from Radio Frequency National Site Archive (RFNSA) <http://www.rfnsa.com.au/nsa>.

**RADHAZ Drawings**

Site drawings clearly illustrating and detailing areas cumulatively assessed as being above the occupational exposure limit or general public exposure limit.

**RCSMB**

Radio Communications Site Management Book (formally Site Radiation Folder) available via RFNSA. Also released in updated format known as the “EME Guide” from October 2014.

**RPS3**

ARPANSA Radio Protection Standard No 3 “*Maximum Exposure Levels to Radio Frequency Fields 3 KHZ to 300 GHz*”.

<http://www.arpansa.gov.au/publications/codes/rps3.cfm>

**Shared Sites**

A place on which Telstra RF transmitting infrastructure is installed where Telstra does not have sole control of access so it is not a Telstra Site. See document 005486 - Chapter 2.

**Telstra Site**

A place on which Telstra RF transmitting infrastructure is installed in respect of which Telstra has sole control of access, including the access of other emitters. See document 005486 - Chapter 2.

Third Party Infrastructure Record of Contact

|  |  |  |  |
| --- | --- | --- | --- |
| Site Name |  | NSA Number |  |
| Project ID |  |  |  |

This record must be kept as evidence of enquires made at Shared Sites where unidentified third party antenna services are present.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date | Time | Contact made By  Role \ Position\ Company | Contact Person  Role \ Position\ Company | Contact Details  i.e. Phone number\email | Subject | Notes\ Response\ Outcomes |
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