Government of Western Australia
Department of Fire & Emergency Services

DFES
Department of Fire & Emergency Services

DEPARTMENT OF FIRE AND EMERGENCY SERVICES

DIRECT BRIGADE ALARM (DBA) TECHNICAL BULLETIN

January 2017 (ADVICE 14)

DBA Equipment Communications Connection Update

PSTN – BACKUP CONNECTION

DFES advises that the use of fire rated cable is no longer mandatory for the PSTN redundant path connection between the MDF/IDF and the FIP. Reference to use of fire rated cable in **DFES DBA STANDARDS** in Clause **3.1 WIRING TO TELSTRA LINES** and **4.1 TELSTRA MDF** is superseded.

A Fire Service Agent (FSA) shall use Red Sheath flat 2C 0.75mm^2 TPS cable for this connection. Please also ensure that the metal junction box, with screwed 20mm double entry straight through, is used at MDF/IDF. Use of FLAT 4C, CAT3, CAT5 and CAT6 Communicational cable is not permitted to be used between FIP and MDF/IDF.

Note – this cable must comply with the cabling requirements of AS1670.1 (2015) Clause 3.24.3

GPRS – PRIMARY CONNECTION

DFES advises that a new mobile wireless communications technology has been approved for use by the CSIRO Activfire Approvals Division. This new system is known as **"QuickPoll"**.

Where the site reliability required by AS1670.3 is being achieved using QuickPoll, DFES will no longer require a redundant terrestrial based solution, i.e. PSTN or NBN connection.

Where a site has poor wireless (3G) signal strength that a signal booster cannot address, then DFES will be required to connect to the NBN to ensure compliance to AS1670.3. Prior to making that decision, DFES will require that all solutions have been utilised prior to connecting to the NBN.

With this in mind, DFES is mandating that the FSA will install a coaxial antenna cable in cases where the required signal strength is not sufficient at the FIP, to assist DFES to achieve network reliability as required by AS1670.3.

DFES requires the antenna cable to be installed adjacent to the external bell and strobe, or some other location external to the building which shall be easily accessible, and does not require use of Elevated Working Platforms (EWP).

The FSA is to install an IP55 rated junction box above the external bell & strobe, where antenna and cable will be joined on external walls. For roof installations, the junction box is not required.

For tower locations please use following link, to determine where antenna cable shall be run for best performance. **https://oztowers.com/Home/Query**

Other locations are also permitted, however they are not to be considered as standard installations, and therefore additional installation cost will be recovered from the requestor. Such locations are to be reviewed by the DFES contractors, and a quote shall be provided to the requestor before commencing the work.

During the initial ASE installation, Fire Alarm Monitoring Services (FAMS) will always attempt to install the ASE Antenna on the FIP. However, if the signal strength is poor, FAMS may use the coaxial antenna cable provided by the FSA.

DFES requires the use of the following coaxial antenna cables based on cable distance:

Cable length	RFI Cable Type	Nominal Loss
10m	Cellfoil 9006	2.95db
20m	CNT-400	2.95db
30m	LDF4-50	2.2db
40m	LDF4-50	2.88db

Please note: For cable distances over 10m, High Gain Mobile Antenna will be required. As length of that antenna is over 1m, and additional antenna mount is required, normally also over 1m, FSA is to consider antenna height when choosing location for cable runs over 10m.

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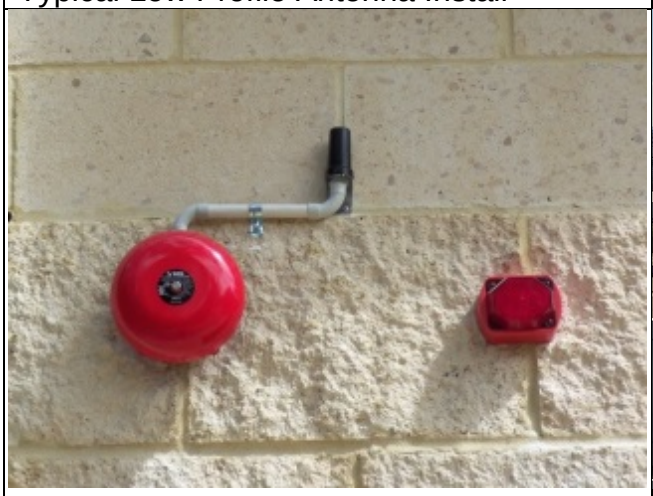
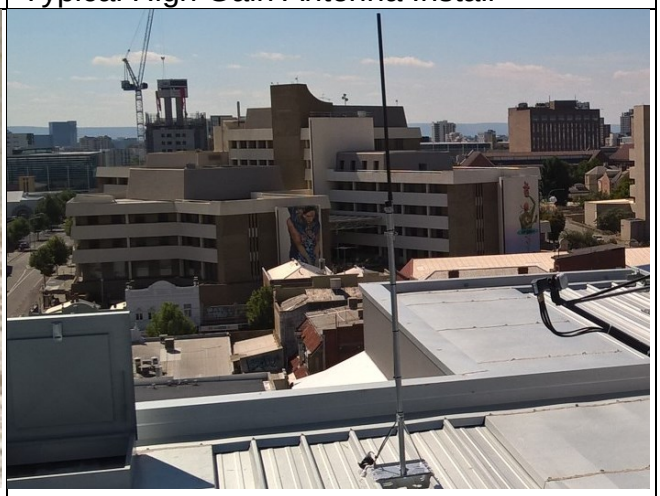
EXAMPLE OF TYPICAL MOBILE ANTENNA INSTALLATION

Typical Low Profile Antenna Install	Typical High Gain Antenna Install
	

For further advice or clarification re this matter, contact the DBA Contracts Manager at DFES on 08 9395 9865 or 0408 958 483, or email jeff.morton@dfes.wa.gov.au

For advice on Antenna locations and ***signal strength requirements***, please contact the FAMS Technical Officer, Denis Orozovic on 1300 793 722, or email denis.orozovic@chubb.com.au