



# **MAJOR EMERGENCY PLAN Version 10.0**

## **Part 5.7 Resilient Telecommunications Plan**

SEVENOAKS DISTRICT COUNCIL  
ARGYLE ROAD, SEVENOAKS, KENT. TN13 1HG

Emergency Planning Officer - Jeff Seear  
Phone 01732 227000 Ext. 7303  
DDI 01732 227303  
Fax 01732 227176 or 0870 1914826  
e-mail [jeff.seear@sevenoaks.gov.uk](mailto:jeff.seear@sevenoaks.gov.uk)  
[emergency.planning@sevenoaks.gov.uk](mailto:emergency.planning@sevenoaks.gov.uk)  
Web [www.sevenoaks.gov.uk/emergencyplanning](http://www.sevenoaks.gov.uk/emergencyplanning)

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## **Part 5.7 - Resilient Telecommunications Plan**

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## **1.0 - GENERAL**

Communications are often difficult in emergencies. The telephone system can easily become overloaded. The mobile phone networks are even more prone to overloading than the landline network.

This plan principally details the technical solutions and not all of the process or protocol solutions as described in *Emergency Response and Recovery*, Section 6.3

Extract from: Emergency Response and Recovery V3: Section 6.3: Resilient Telecommunications (Last updated 05/04/2010).

### **3) Ensure diversity of your technical solutions**

*It is good practice to aim for a diverse range of technological solutions. It can be difficult to assess how truly diverse technical solutions are because of the inherent dependency of one technical solution on another, for example mobile cellular telecommunications can be highly dependent on our fixed-line infrastructures and a failure in the fixed infrastructure may cause severe degradation or failure of mobile telecommunications.*

### **4) Adopt layered fall-back arrangements**

*No technical solution is going to be available at all times. The availability of any solution is a consequence of the reliability of the system (associated with faults and their repair) and its ability to cope with congestion (resulting from excessive demand). Adopting a layered fall-back approach (i.e. having a list of fall-back solutions) helps mitigate these shortfalls. An example of a layer fallback approach might be adopting mobile telephones as the preferred method for communicating on the move but because of their known lack of resilience selecting a fall-back such as Private Mobile Radio (PMR) or pagers for these scenarios. A fall-back solution may not necessarily provide the same 'richness' of communication as the preferred solution but will help mitigate risk of being unable to communicate. In addition to selecting fall-back solutions it is also important to become familiar with this equipment and the procedures associated with using it. It is unwise to only have technical fall-back solutions solely for contingency use as unanticipated consequences (for instance discovering the fall-back option has flat batteries or unfamiliar operating procedures) can reduce their effectiveness. For further advice see:*

[http://www.cabinetoffice.gov.uk/media/131462/resilient\\_telecomms\\_survey.pdf](http://www.cabinetoffice.gov.uk/media/131462/resilient_telecomms_survey.pdf)

See also

[http://www.cabinetoffice.gov.uk/media/132919/resilient\\_comms\\_guidance.pdf](http://www.cabinetoffice.gov.uk/media/132919/resilient_comms_guidance.pdf)

## **1.1 – FALL-BACK ARRANGEMENTS**

Normally, communication will be by telephone using the normal Council telephone system and fax facilities, direct phone lines, mobile phones and normal e-mail

<b>System</b>	<b>Protection</b>	<b>Fall-back</b>	<b>Section</b>
Fixed line phone system overload	FTPAS	Mobile phone	1.2.1 2.5
Fixed line phone system network failure	None	Radio Satellite phone	2.7 2.8
Mobile phone system overload	MTPAS	Fixed line phone	1.2.2 2.1 2.2
Mobile phone system network failure	None	Fixed line phone Radio Satellite phone	2.7 2.8
Fax facilities	FTPAS (possibly, if line is protected)	E-mail Alternative e-mail Packet radio	2.3 2.4 2.7.3
Normal e-mail	None	Fax Alternative e-mail Packet radio	2.4 2.7.3
Amateur band radio	None	This is the fall-back	2.7
Packet radio	None	This is the fall-back	2.7.3
Satellite phones	None	This is the fall-back	2.8
<i>Airwave radios</i>	<i>Resilience of network</i>	<i>Phones</i>	<i>2.9</i>
All systems	As above	Messengers	4.2.3

## **1.2 - PROTECTION SCHEMES**

### **1.2.1 - Fixed Telephone Privileged Access Scheme (FTPAS)**

The current system for protecting land-line telephones, the 'Government Telephone Preference Scheme' (GTPS) and will soon be superseded by the 'Fixed Telephone Privileged Access Scheme' (FTPAS).

In anticipation of the change from GTPS to FTPAS, the GTPS has been impossible to maintain and as a result the Sevenoaks District Council allocations are now severely out of date. When the FTPAS is deployed, the SDC listing will be audited and amend it to suit the new scheme.

### **1.2.2 - Mobile Telephone Privileged Access Scheme' (MTPAS)**

The previous system for protecting mobile telephones, 'Access Overload Control' (ACCOLC) has been superseded by the 'Mobile Telephone Privileged Access Scheme' (MTPAS).

During the summer of 2009, the SDC allocation was re-audited and additional applications made to expanded our coverage, and all key staff including the 'pool' of Incident Liaison Officers, now have MTPAS protected SIM cards.

## **2.0 - AVAILABLE SYSTEMS**

### **2.1 - TELEPHONES**

Meridian System - The extension numbers and locations are listed in *The Emergency Directory*.

### **2.2 - DIRECT BT LINES**

There are direct BT lines to the Conference Room (one of these may be used for a fax). See *The Emergency Directory* for phone numbers. The sockets are labelled with the phone number (the sockets are also marked with a red disc).

### **2.3 - E-MAIL**

E-mail on the Council's normal network will also be used using either the [firstname.lastname@sevenoaks.gov.uk](mailto:firstname.lastname@sevenoaks.gov.uk) format to individuals, or to the generic [emergency.planning@sevenoaks.gov.uk](mailto:emergency.planning@sevenoaks.gov.uk) address.

### **2.4 – FALL-BACK E-MAIL**

In the Emergency Control Room there is a computer with a modem connection to a separate e-mail account (**[sdc.epo@btconnect.com](mailto:sdc.epo@btconnect.com)**). Instructions for the use of this account are kept in the Emergency Control Room.

## **2.5 - MOBILE TELEPHONES**

### **2.5.1 - MTPAS**

Coverage:

<b>Function</b>	<b>Role</b>	<b>No.</b>
Operational Support	SCG Representatives District Emergency Coordinator and deputies	3
Operational Support	Emergency Planning Officer	1
Incident Liaison Officers		11
Pool phones (Orange)	Pooled use	3
Pool phones (Manx Telecom)	Pooled use	3
	<b>Total</b>	<b>21</b>

See below for MTPAS SIM card holders and the *Emergency Directory* for the phone numbers.

Sevenoaks District Council Major Emergency Plan  
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<b>Current holder</b>	<b>Job title</b>	<b>Network</b>	<b>Role</b>
Robin Hales	Chief Executive	O2	Op Support - SCG-DEC
Pav Ramewal	Corporate Resources Director	O2	Op Support - SCG-DEC
Kristen Paterson	Community & Planning Services Director	O2	Op Support - SCG-DEC
Colin Alden	Senior Environmental Health Officer	O2	ILO-EHO
Julia Boxall	Environmental Health Officer	O2	ILO-EHO
Andy Bracey	Senior Engineer Traffic & Parking	O2	ILO-P&A
Joe Brooks	Building Control Surveyor	O2	ILO-BCO
Alex Dawson	Assistant Environmental Health Manager	O2	ILO-EHO
Ian Finch	Operations Manager SDS	O2	ILO-RVP
Anthony Garnett	Licensing Manager	O2	ILO
Les Jones	Arboricultural & Landscape Officer	O2	ILO-ARB
Jim Latheron	Professional Services Manager	O2	ILO-PSM
Jeff Seear	Emergency Planning Officer	O2	Op Support - EPO
Kevin Tomsett	Building Control Manager	O2	ILO-BCO
Ian West	Building & Health & Safety Adviser	O2	ILO-H&S
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Orange</i>	<i>Pool</i>
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Orange</i>	<i>Pool</i>
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Orange</i>	<i>Pool</i>
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Manx</i>	<i>Pool</i>
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Manx</i>	<i>Pool</i>
<i>Jeff Seear</i>	<i>Emergency Planning Officer (Pool)</i>	<i>Manx</i>	<i>Pool</i>

## **2.6 - EMERGENCY MOBILE TELEPHONES**

Three UK based (Orange network) MTPAS protected mobile phones are available for emergency use and are kept in the Emergency Control Room.

Three mobile phones fitted with ProntoSIM cards from Manx Telecom are available for emergency use and are kept in the Emergency Control Room. These phones 'roam' onto the strongest available mobile phone network. They are MTPAS protected.

See Appendix 2 to the *Major Emergency Plan – The Emergency Directory* for phone numbers.

## **2.7 - RADIO SYSTEMS - AMATEUR RADIO**

Antennas and feeders are installed for use by licensed radio amateurs. These may be employees, Councillors, members of the Radio Amateur Emergency Network (RAYNET) or a licensed volunteer. The contact telephone numbers for these people and organisations are in Appendix 2 to the Major Emergency Plan – The Emergency Directory.

A 10m/6m/2m/70cm transceiver (NOTE: There is no 10m aerial fitted) and a 4m transceiver with power supplies are located in the Emergency Control Room and the instruction books for the radios are on the shelf beside the set. There are also two 6m/2m/70cm handheld radios, with manuals, spare batteries, battery chargers and other accessories and one 2m/70cm handheld radio with manual and battery charger.

Please note that Council has simplex FM telephony (voice) and packet radio (data) capability, and currently cannot use CW, SSB AM or other digital modes.

Only licensed radio amateurs may operate these radios. Unlicensed people may use the radio under the direct supervision of a full licence-holder. Foundation and Intermediate Licence holders are advised to check their licences for the permitted power limits and conditions applicable to their class of licence.

For frequencies used, please see the tables below.

### **Table 2.7.1**

#### **SEVENOAKS DISTRICT COUNCIL – COMMUNITY RESPONSE TEAMS PREFERRED FREQUENCIES AND CHANNELS**

All Narrow FM

Band	Preferred Working Frequency MHz (channel)	Bandplan Calling Frequency MHz (channel)		Power Limit Fndn	Power Limit Inter	Power Limit Full	Notes
10 m	DO NOT USE						
6 m	51.5500	51.5100	S	10W	50W	400W	Not channelised
4 m	70.375 (10)	70.4500 (16)	S	10W	50W	160W	Transceiver channels
2 m	145.3625 (V29)	145.5000 (V36)	P	10W	50W	400W	Bandplan channels
70 cm	433.4750	433.5000 (U280)	S	10W	50W	400W	Bandplan channels

P – Primary user

S – Secondary user

**Table 2.7.2**

**AMATEUR RADIO – RAYNET FREQUENCIES TABLE**

The Radio Society of Great Britain publishes the UK bandplan for use of the amateur radio bands. Within this bandplan, certain frequencies are allocated to RAYNET for emergency use. RAYNET groups do not have a ‘right’ to use any frequency but most other amateurs will, when asked, move frequency (QSY).

Band	Frequency MHz	Mode	Notes
80 metres	3.663		National co-ordination during emergencies
40 metres	7.090		National co-ordination during emergencies
6 metres	51.2100	Narrow band FM	
	51.9500	Narrow band FM	A large number of Internet Gateways use 51.950, effectively making it unusable for RAYNET in many areas
	51.9700	Narrow band FM	
	51.9900	Narrow band FM	
4 metres	70.3500	Narrow band FM	Listed for digital mode use as well as emergency communications
	70.3750	Narrow band FM	
	70.4000	Narrow band FM	
2 metres	144.2600	USB	
	144.6250	Narrow band FM	
	<b>144.6500</b>	<b>Narrow band FM</b>	<b>West Kent RAYNET preferred</b> There is still some residual packet operation on 144.650 and the French band plan still uses the 144.6xx part of the band for packet. Frequencies should be chosen with care, particularly when using talk-through units
	144.6750	Narrow band FM	
	144.7750	Narrow band FM	
	144.8000	Narrow band FM	Data communication (shared with APRS)
	145.2000	Narrow band FM	Take steps to avoid interference to ISS operations in non-emergency situations
	<b>145.2250</b>	<b>Narrow band FM</b>	<b>West Kent RAYNET preferred</b>
70 centimetres	433.7000	Narrow band FM	Listed as IARU Region 1 packet as well as emergency communications
	433.7250	Narrow band FM	
	433.7500	Narrow band FM	
	433.7750	Narrow band FM	
	438.4000	Narrow band FM	Base TX on 438.4000, mobiles TX on 430.8000 (-7.6MHz repeater shift)
	430.8000	Voice repeater	
	432.7750	Narrow band FM	Base TX on 432.7750, mobiles TX on 434.3750 (+1.6MHz repeater shift)
	434.3750	Voice repeater	

Source: RAYNET website - <http://www.raynet-uk.net/main/raynetfreqs.asp>

**2.7.3 – PACKET RADIO**

To add

## **2.8 – SATELLITE PHONES**

The Council has two 'Inmarsat BGAN' satellite phones for emergency use. A directory of the numbers of the other holders of satellite phones is held by the Emergency Planning Officer. The numbers are listed in Appendix 2 to the Major Emergency Plan – The Emergency Directory.

Please note that the call charges for these phones are very high and non-essential use will be charged to the Council.

Please also note that there is a noticeable delay on the line when using these telephones, so allow time once you have finished speaking for a reply, otherwise, you may well end up 'talking over' each other. The length of this delay varies with the routing of the call and may be significant.

See next page for brief instructions on using the satellite phones.

## **2.9 – AIRWAVE RADIOS/PHONES**

The CCTV Control Room has Airwave radio base stations.

### Note

The Council elected not to apply for Airwave licences in 2009 and we will re-evaluate its position before the next application 'window' in September/October 2010.

## USING THE SATELLITE PHONE

The satellite terminal is a Thrane & Thrane 'Explorer 300'

- 1 If the terminal is set up ('Ready' shown on the display) go to (3)
- 2 Set Up the Satellite Phone Terminal:
  - Switch on the terminal by pushing the power button next to the display and hold for 1-2 seconds until green power indicator lights up.
  - Use the built in compass to rotate the antenna so that it points in the direction of the BGAN satellite. (This is currently a South East direction and for the Argyle Road offices is best located on a window sill on the street side of the Argyle Road wing of the building)
  - Move the terminal slightly from side-to-side and adjust the tilt to obtain the strongest signal. The terminal will beep faster as the signal strength increases. A signal strength over 45dBHz should be achieved.
  - Once achieved and correctly located, press OK and the display will show the following stages on the screen:
    - SEARCHING: Searching for network operator.
    - REGISTERING – Once network operator is found, it will register itself on the network.
    - READY – The satellite phone is now ready to make calls.
- 3 Making calls on the satellite phone:
  - If you are using the 'office' terminal (with conventional phone attached), pick up the receiver check for dial tone and dial.
  - If you are using the mobile terminal with the small Thrane & Thrane Explorer handset, press the solid telephone handset button to get a dial tone before dialling.
  - If the dial tone is a broken tone then turn the unit off and back on again.
- 4 To call another satellite terminal, dial the other terminal number as provided, (it will start with 008..... For example, the Sevenoaks District Council terminal numbers are 00 8707 7221 7534 and 00 8707 7221 7535), then press the hash (#) key to connect. There will be a short delay before the call is connected  
To call a UK landline or mobile number, dial 00 44 then the telephone number including the area code but omitting the first "0". So the SDC Contact Centre would be 00 44 1732 227000, then press the hash (#) key to connect. There will be a short delay before the call is connected
- 5 Ending calls on the satellite phone:
  - If you are using the 'office' terminal (with conventional phone attached), replace receiver.
  - If you are using the mobile terminal with the small Thrane & Thrane Explorer handset, press the solid telephone handset button until no tones are heard and display goes blank.

### **3.0 - COMMUNICATION**

Clear messages are essential. Beware of ambiguous meanings.

Use the NATO phonetic alphabet when necessary on the phone or radio. It is the standard used by the 'blue light' services, radio operators etc.

<b>A</b> - Alpha	<b>K</b> - Kilo	<b>U</b> - Uniform	<b>0</b> - Zero
<b>B</b> - Bravo	<b>L</b> - Lima	<b>V</b> - Victor	<b>1</b> - Wun (One)
<b>C</b> - Charlie	<b>M</b> - Mike	<b>W</b> - Whiskey	<b>2</b> - Two
<b>D</b> - Delta	<b>N</b> - November	<b>X</b> - X-ray	<b>3</b> - Tree (Three)
<b>E</b> - Echo	<b>O</b> - Oscar	<b>Y</b> - Yankee	<b>4</b> - Fower (Four)
<b>F</b> - Foxtrot	<b>P</b> - Papa	<b>Z</b> - Zulu	<b>5</b> - Fife (Five)
<b>G</b> - Golf	<b>Q</b> - Quebec		<b>6</b> - Six
<b>H</b> - Hotel	<b>R</b> - Romeo		<b>7</b> - Seven
<b>I</b> - India	<b>S</b> - Sierra	<b>.</b> - decimal (point)	<b>8</b> - Ait (Eight)
<b>J</b> - Juliet	<b>T</b> - Tango	<b>.</b> - (full) stop	<b>9</b> - Niner (Nine)

## **4.0 – TELECOMMUNICATIONS ROLES AND RESPONSIBILITIES**

Reduced extract from the Service Roles and Responsibilities listed elsewhere

### **4.1 – BY HEAD OF SERVICE AND FUNCTION**

#### **Head of Finance & Human Resources – Emergency Planning Function**

- On receipt of a warning, to alert District Council Departments and other organisations
- Deploy volunteers from the Voluntary Sector and the Community Volunteer Teams (CVTs)
- Liaison with Kent County Council Emergency Planning Unit

#### **Head of IT & FM – IT and Telecommunications Functions**

- Normally, act as the Communications Officer (see below)
- Provide IT support to the District Emergency Centre
- Provide GIS and mapping services to support the response
- Provide and manage all necessary IT circuits and equipment
- Provide and manage all necessary telecommunication circuits and equipment
- Provide advice to the District Emergency Coordinator on IT & telecoms issues

#### **Head of Finance & Human Resources - Customer Services Function**

- Manage the activities of the contact centre

### **4.2 – BY EMERGENCY ROLE**

#### **4.2.1 - Emergency Planning Officer**

He will carry out the following tasks related to telecommunications:

- Alert RAYNET via the Kent County Council Emergency Planning Group if necessary for emergency communications
- Advise the District Emergency Coordinator on the role of other organisations and on how to utilise their expertise, including voluntary sector organisations.

#### **4.2.2 – IT & Telecoms Officer**

This will normally be the Head of IT & FM. The IT & Telecoms Officer will be responsible for all incoming and outgoing communications systems in the Emergency Centre. He will perform the following functions:

- Set up the telephone system in the District Emergency Centre.
- Ensure that all phone and other communications systems are manned and operational
- Ensure that radios, satellite phones, etc, are operational.
- Co-ordinate the issue of communications equipment and give instructions on use.
- On closure of the Emergency Centre, ensure that all equipment is returned.

#### **4.2.3 - Messengers**

These will normally be coordinated by the Head of IT & FM (Facilities Management function) to act as carriers of hard-copy messages etc within and between Council buildings and elsewhere, as required.

### **4.3 – COMMUNITY RESPONSE TEAMS (CRTs)**

The Community Response Teams within the District generally have radio amateurs among their number.

The District Council keeps a list of radio operators that are willing to help. These can be people that are members of the Radio Amateurs Emergency Network (RAYNET) or individuals. The Council maintains contact with RAYNET.

See also *Part 6.4 – Community Plans*.

Contact details, including radio call-signs, are listed in *The Emergency Directory*

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