

# Kent Resilience Forum



PREPARING FOR EMERGENCIES IN KENT AND MEDWAY

## Off-site Reservoir Inundation Emergency Plan

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## Issue & Review Register

Summary of Changes	Issue Number & Date	Approved By

All changes are tracked using a different colour and / or marked with a vertical line at the side of the page.

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**Date:** 29<sup>th</sup> September 2011

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## **Distribution**

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The full version is marked as PROTECT and is available from the National Resilience Extranet.

NB – within this plan some links to other documents are to internet sites that are not publicly accessible.

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## Glossary

<b>Cascade (reservoirs in cascade)</b>	A cascade is a series of two or more reservoirs on one watercourse, where the escape of water from one reservoir may trigger the failure of other reservoir(s) in its downstream path.
<b>Drawdown</b>	The controlled release of water from a reservoir.
<b>EA</b>	Environment Agency
<b>Impounding reservoir</b>	A reservoir formed by construction of a dam across a river valley.
<b>KCC</b>	Kent County Council
<b>KFRS</b>	Kent Fire and Rescue Service
<b>KRF</b>	Kent Resilience Forum
<b>LA</b>	Local Authority
<b>Non-impounding Reservoir</b>	Non-impounding reservoirs do not block the natural flow of water and are generally filled by pumping water, or by piped inflow into the reservoir.
<b>OCC</b>	Operational Co-ordination Centre
<b>OCG</b>	Operational Co-ordination Group
<b>Off- Site plan</b>	A plan prepared by local area emergency responders detailing how they will respond to a potential or real reservoir failure.
<b>On-Site plan</b>	A plan prepared by reservoir owners detailing how emergency responders will respond to a potential or real reservoir failure.
<b>Panel Engineer (Qualified Civil Engineer)</b>	A chartered civil engineer appointed to one of the reservoir panels by the Secretary of State. Responsible for the design and supervision of construction, the supervision of measures in the interests of safety, inspection of reservoirs and the on-going supervision of reservoirs. There are currently four panels of engineers: <ul style="list-style-type: none"> <li>• All Reservoirs Panel</li> <li>• Non-impounding Reservoirs Panel</li> <li>• Service Reservoirs Panel</li> <li>• Supervising Engineers Panel</li> </ul>
<b>Reservoir emergency</b>	Any incident, such as a reservoir failure or expected failure, requiring the activation of a reservoir flood plan.
<b>Reservoir Inundation Map (RIM)</b>	A map showing any actual or predicted characteristic(s) of a reservoir inundation, such as extent of flooding, depth of flood water, velocity of flood water etc.
<b>SCC</b>	Strategic Co-ordination Centre
<b>SCG</b>	Strategic Co-ordination Group
<b>SECAmb</b>	South East Coast Ambulance Service
<b>Service Reservoir</b>	A service reservoir is any water containing structure which is intended to store water (for drinking, washing and cooking) that has been treated with a view to complying with applicable regulations, unless that structure is at a treatment works.
<b>TCC</b>	Tactical Co-ordination Centre
<b>TCG</b>	Tactical Co-ordination Group
<b>Undertaker</b>	Definition under the Reservoirs Act, broadly meaning the reservoir owner or user (person or organisation carrying out an undertaking) of the reservoir. The undertaker is the party responsible for the safe operation of the reservoir and for compliance with the Reservoirs Act.

## Terms & Definitions

<b>Properties</b>	All residential dwellings and commercial premises, including occupied mobile homes and caravans sites in low-lying coastal zones (including summer tourists).
<b>Property Flooded</b>	A residential or commercial building where flood water has entered to a level that has resulted in damage or limitation of use, including basements that are habitable or of commercial use.
<b>Property Impacted</b>	A residential or commercial building where flood water that has entered the boundary of land but not resulted in the property itself being flooded.
<b>Properties Affected</b>	A residential or commercial building where flood water has affected the utilities (energy and water) that supply that property.
<b>STRATEGIC COORDINATION GROUP.</b> Also referred to as Gold.  <i>Gold or Strategic management and coordination.</i>	Gold, or Strategic, management deals with policy issues around the response. It will normally be located away from the incident, and will make decisions about such topics as future resourcing, finances, priorities, future implications and the return to normality. Each organisation will have its own Gold Commander, responsible for the activities of their own organisation.  For multi-agency working, the function will be known as the Strategic Coordination Group who will work from a pre-nominated Strategic Coordination Centre
<b>TACTICAL COORDINATION GROUP.</b> Also referred to as Silver.  <i>Silver or Tactical management and coordination.</i>	Silver, or Tactical, management deals with the overall management of the front line response to the incident itself. Silver Commanders will plan and coordinate the tasks which their staff must carry out in order to respond within the strategy which their Gold Command level has set or is predetermined within specific Emergency Plans. Each organisation will have its own Silver Commander who will take charge of work closely together – usually coordinated by the Police – to ensure that the organisations work effectively together. There may be more than one Silver Commander in some organisations where the response is at more than one location.  Silver Controls will be located according to the nature of the incident. This may be in pre-designated accommodation, in accommodation identified at the time or in dedicated command vehicles.
<b>OPERATIONAL COORDINATION GROUP.</b> Also referred to as Bronze.  <i>Bronze – Operational management and coordination.</i>	Bronze, or Operational, Commanders will take on responsibility for specific areas or roles according to the needs determined by their organisation's Silver Commander.

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## 1. Generic Triggers Actions and Information

### 1.1 Introduction

The purpose of this generic Emergency Plan is to assist planning for, response and recovery to reservoir inundation emergencies occurring within or impacting upon the administrative boundaries of Kent and Medway (as covered by the Kent Resilience Forum (KRF) partners).

This plan is the overarching document, which will be used to inform pre-planning, response and recovery to reservoir inundation emergencies. This plan should be read in conjunction with Specific Reservoir Off- Site Emergency Plans, which are to be produced for all designated Category A Reservoirs (as defined under the Reservoirs Act 1975), and On-Site Reservoir Plans, which are held by Reservoir Owners / Managers.

### 1.2 Legislation & Guidance

#### Civil Contingencies Act 2004

The authority for generic Off- Site plans for reservoir inundation is the Civil Contingencies Act 2004. This Plan is written in accordance with the requirements of the Act.

#### The Reservoirs Act 1975 (as amended by the Water Act 2003)

The Reservoirs Act provides for Ministers to direct undertakers of large raised reservoirs (i.e. retained waters with volumes exceeding 25,000 cubic metres) to draw up On-Site flood plans setting out what actions the undertaker should take in the event of a potential or actual uncontrolled release of water; this includes maintaining contacts with Category 1 responders as defined within the Civil Contingencies Act 2004. Under the provisions of this Act reservoirs are categorised using the alphabetical notation outlined at Table 1.1.

*Table 1.1 Reservoirs Act Categories*

Dam Category	Potential Effect of Dam Breach
A	Where a breach could endanger lives in a community (10 persons or more)
B	Where a breach could endanger lives, not in a community, but cause extensive property damage
C	Negligible risk to life and limited property damage
D	No loss of life, very limited property damage

#### The Flood and Water Management Act 2010

This Act incorporates references to planning for reservoir inundation emergencies and was informed in part by recommendation contained within the Pitt Review. Key provisions contained within the Act include:

- The capacity at which a reservoir will be regulated will change from 25,000m<sup>3</sup> to 10,000m<sup>3</sup>;
- All undertakers with reservoirs over 10,000m<sup>3</sup> will have to register their reservoirs with the Environment Agency;
- Inspecting engineers will have to provide a report on their inspection within 6 months;
- Where directed, undertakers will need to prepare a reservoir flood plan (the 'On-Site' plan); and
- All incidents at reservoirs will have to be reported to the Environment Agency.

## **Framework for Reservoir Inundation Preparedness Planning (Cabinet Office: October 2009)**

This guidance confirms upper tier / single tier local authority responsibility for co-ordination of Off- Site reservoir inundation Emergency Planning within their administrative boundaries.

In summary, the KRF has a legal requirement to have a Generic Off- Site plan and *Category A* reservoirs must have a specific Off- Site Plan.

### **1.3 Scope**

The plan covers pre-planning, activation, alerting, management, co-ordination and recovery aspects of reservoir planning and response. It also provides a brief description of the mechanics and process involved within the multi-agency response (alerting, evacuation, rescue, welfare etc.).

The plan is sufficiently flexible to cover a range of eventualities and details any statutory duties or response obligations. The plan details the procedures to facilitate a co-ordinated multi-agency response to the off- site consequences of a potential or actual dam breach at a reservoir either:

- Within the Kent Resilience Forum area; or
- Whose water course may inundate areas within the Kent Resilience Forum area

A list of reservoirs alongside Reservoir Owner/Reservoir Manager contact details is included within this plan at **Appendix I**.

### **1.4 Aim & Objectives**

The aim of this plan is to provide clear definitions of the roles, responsibilities and actions of each responding agency at the pre-planning, response and recovery stages of a reservoir inundation emergency. To achieve this it will:

- outline key principles of pre-planning for a reservoir inundation emergency;
- describe the actions of the first officers on the scene and/or to receive the incident notification;
- provide a response escalation procedure to cover actions from the initial alert through to stand-down and post-incident recovery;
- set-out the multi-agency co-ordination and control arrangements at each level of response;
- specify the manner in which warnings may be communicated to the public and partner agencies in an accessible and consistent fashion;
- provide contact details to facilitate an efficient call-out of resources; and
- outline key principles of recovery for a reservoir inundation emergency.

### **1.5 Audience**

This document is intended for those Kent Resilience Forum partners that would participate in and support pre-planning, response and recovery to a reservoir inundation emergency.

## 1.6 Risk Assessment

Assessed risk details, including critical infrastructure, are contained in the Risk Registers at RRF (Regional Resilience Forum), LRF (Local Resilience Forum) and at local responder level.

Residual risk is that remaining after mitigation measures (in this case fluvial defences) have been taken, recognising that flood risk cannot be eliminated entirely.

### 1.6.1 Community Risk Register (CRR)

An assessment of the risk of flooding in Kent can be found in the Community Risk Register Version 7, 2009 (at Local Resilience Forum level).

<http://www.kentprepared.org>

The Kent Community Risk Register has rated the risk of a reservoir dam failing or collapsing as medium, with significant impact on people, property and the environment. An extract from the Register dealing with reservoir inundation is reproduced at Table 1.2

It is assumed the following:

- No time to evacuate.
- Flooding lasts less than 24 hours.
- Emergency services not pre-warned
- Extent of downstream effect could reach 50-60km.
- Significant damage to gas, electricity supplies, telecommunications, road and rail links.

Table 1.2 Kent Community Risk Register extract

Overall Assessment:

Category	Sub Category		
<b>STRUCTURAL</b>	<b>Major reservoir dam failure/collapse.</b>		
Outcome description	Impact	Likelihood	Risk
Collapse without warning resulting in almost instantaneous flooding. Significant movement of debris (including vehicles) and sediment. Complete destruction of some residential and commercial properties and serious damage of up to 500 properties. Several thousand other properties could be flooded. Up to 200 fatalities. Up to 1000 casualties. Up to 50 missing persons and people stranded. Hazardous recovery amongst collapsed infrastructure and debris. Water supply to homes and business is lost. Up to 200 people need temporary accommodation for 2-18 months.	Significant (4)	Low (1)	Medium

**Primary impacts associated with:**

Drowning of people, pets and livestock

Major damage to property and surrounding land

Closure, or washing away, of roads, bridges, railway lines

Loss of (and possible damage to) telephone, electricity, gas and water supplies

Pollution/health risks from sewerage systems, chemical stores, fuel storage tanks

Evacuation and temporary/long-term accommodation needs

Potential damage to EU environmental designations.

**Secondary impacts associated with:**

Need for recovery strategy in aftermath of major flood

Disruption of economic life and major costs of rebuilding infrastructure

Public need for information, advice, benefits/emergency payments

Insurance implications, including help for the uninsured

Safety assessments/possible demolition of damaged buildings and structures

Shortage/overstretch of key resources (equipment and personnel) and agencies

Overstretch of normal communication links, including mobile phones

## 1.7 Scenarios

### 1.7.1 Types of Dam Breach

The type of dam breach will be determined and forecast by the reservoir supervisor.

- **A complete collapse of a dam wall and a sudden inundation of water:** If a complete collapse is forecast, the velocity details and maps at **Appendix I** combined with the predicted period of time until collapse will indicate how much time is available to evacuate downstream properties.
- **A slow onset reservoir emergency:** In a slow onset emergency, i.e. where water is escaping as the result of an emergency draw-down, the response may mirror the actions outlined in the KRF Multi-Agency Pan Kent Flood Plan, but the dam will be monitored to assess the risk of a major failure.

### 1.7.2 Dam Break Analysis

The maps at **Appendix I** have been informed by the findings of a formal dam break analysis undertaken on behalf of the Environment Agency and informed by the following planning principles:

- An assessment of the effects of two dam breach scenarios
  - **'Sunny day' breach** – This would occur in dry weather conditions, suggesting the breach is not a result of increased flows into the reservoir. Downstream conditions are normal.
  - **'Rainy day' breach** – This describes a dam failure during a flood event, suggesting the breach may be the result of the increased flows entering the reservoir. Downstream conditions could already be experiencing high flows and flooding.
- Routes of the likely water flow, through inundation maps, identifying potential hazard areas, assets at risk and total (and partial) structural destruction;
- Estimates the size of the population potentially affected, thus enabling assessment of risk to life for the 'worst case' scenario;
- Features likely to affect mobility and evacuation during and after the event.

### 1.7.3 Multiple Dam Breach Locations

In some cases, reservoirs may have multiple possible breach locations. This will be indicated on the maps, which should model a number of potential breach sites. In the event of a breach, the panel engineer will interpret the maps to assess water flow in the immediate vicinity of the reservoir. Beyond the immediate locality the inundation will follow the course indicated on the maps.



## 1.8 Consequences of Reservoir Inundation Emergency

### 1.8.1 Specific Downstream Impacts

All of the listed reservoirs, in **section 1.11 on page 10**, retain a volume of water greater than 25,000m<sup>3</sup> and are classified as 'large raised' reservoirs under the Reservoirs Act 1975. Reservoir inundation may impact on downstream areas in a range of ways:

- Deaths and/or injuries amongst population caught in flood wave;
- Flooding, structural damage or total destruction of a number of properties;
- The severing and/or inundation of key parts of the local transport infrastructure, including arterial roads, bridges and railway lines. Closures of key parts of the transport network, such as major arterial roads and bridges linking different areas could compromise the ability of key agencies to respond and deploy their resources where these are needed; and
- The severing and/or inundation of key parts of the local utility infrastructure (electricity, gas, water and telecommunications). Even where no infrastructure assets are identified above ground within the inundated area, underground assets may still be susceptible. A dam breach may result in the severing of power cables or inundation of electricity sub-stations supplying large numbers of the population. This has the potential to cause discomfort to a wider population and complicate the response. A loss of telecommunications would complicate this further.

### 1.8.2 Different Characteristics of Reservoir Inundation from Fluvial and Coastal Flooding

The impact of flooding caused by a dam breach is likely to differ from conventional fluvial and coastal floods and is comparable to rapid response catchment flooding events. Key differences include:

- The difference in the speed of development of the emergency, the potentially sudden rise of water and the time available for evacuation;
- The increased force of the water being likely to lead to the total destruction of buildings near the dam, reducing to partial structural damage and inundation damage with distance downstream; and
- The increased impact on infrastructure, such as roads, railways, electricity, gas, (waste) water, sewerage, telecommunications and other essential services.

## **1.9 Planning Assumptions**

### *1.9.1 Flood Warnings*

There could be a collapse without warning. Although there are some scenarios where there may be some warning, see 1.7. Currently reservoirs are not on the Environment Agency Flood Warnings Direct services. So the public would not currently receive warnings for reservoir inundation. Therefore alternative means for warning and informing the public will have to be considered in the event of a breach.

### *1.9.2 Flood Rescue*

Assumes the use of only flood rescue teams (whether from the Fire & Rescue Service or voluntary sector) that are on the forthcoming Flood Rescue National Asset Register and meet the relevant team typing standard\* (not self-presenting operators whose standard of training and equipment will be unknown).

The National Asset Register will contain the details of all flood rescue responder teams that have met the required national standards for the relevant team type. The team types include a water rescue boat team (Type B) and a water rescue technician team (Type C).

In the event of major or wide area flooding, where flood rescue mutual aid is needed to support local resources, the relevant **incident commander should contact the Fire & Rescue Service National Coordination Centre (FRSNCC) in line with the Guidance for Accessing Specialist Flood Rescue Mutual Aid**. The FRSNCC will evaluate the request and consider assembling typed teams listed in the National Asset Register.

The number of typed teams available to respond to a particular flood incident will depend on the number of other impacted authorities and the number of types teams available on the Register at any one time (teams which are not available for a period exceeding four hours are removed from the 'live' Register).

### *1.9.3 Infrastructure*

This plan does not take into account damage or failure at sites of telecommunications, power stations, and road or rail links. It is expected that this will be dealt with by the relevant utility/agency or responding organisation. Information, as far as it is available, for key infrastructure is included in this plan, including reference to its vulnerability. Further information is held at the Strategic Coordinating Centre by the Police.

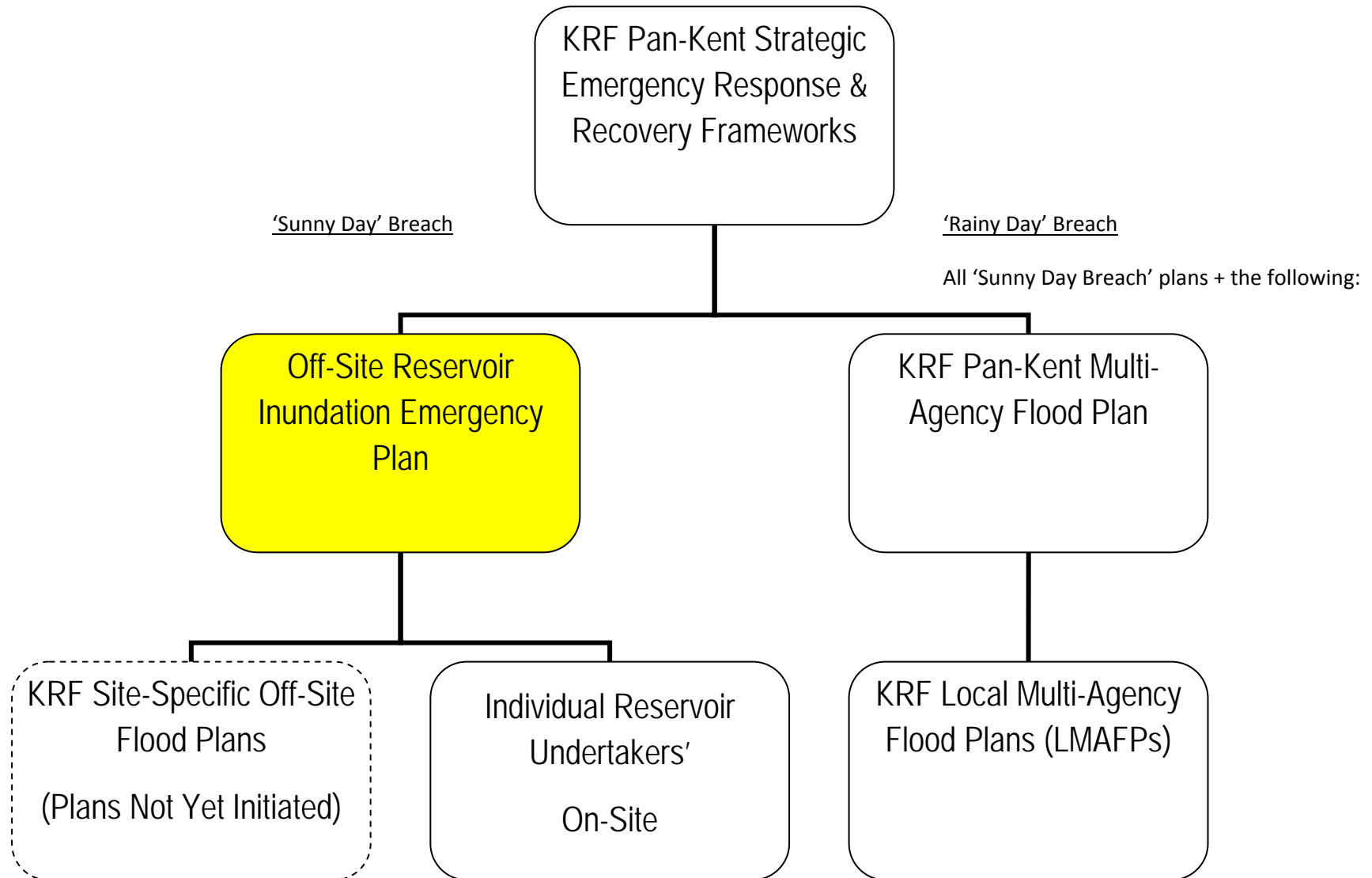
## **1.10 Inter-relationship between single agency Emergency Plans**

The plan acknowledges that each responding organisation has its own systems and procedures for responding to an emergency. The procedures outlined in this plan describe how these arrangements are co-ordinated and seeks to ensure that respective agency roles and their inter-dependencies are widely understood.

This plan can be used as stand-alone or linked to other plans as shown in figure 1.1.

Figure 1.1: Related and Interdependent Plans

The relationships between response plans are indicated in the diagram below.



## 1.11 Reservoir Locations

Please see **Appendix I** for a table of reservoirs and Reservoir Owner/Manager details and the map at Figure 1.2 for their geographical locations within a South East England context.

### *1.11.1 Reservoirs within Kent County Council administrative area*

There are currently 34 reservoirs within the administrative county of Kent, (please see **Appendix I** for maps of these reservoirs). These are:

- Aldington - Ashford
- Bayham Lake – Bayham Abbey, Tunbridge Wells
- Bedgebury Park Great Lake – Bedgebury, Tunbridge Wells
- Bough Beach – Nr. Edenbridge
- Brook Farm - St Nicolas-at-Wade
- Coombe Bank Lake – Nr. Sevenoaks
- Coult Stream Dam – East Peckham, Tonbridge and Malling
- Culnell's Fishing Lake – Nr. Iwade
- Dreamfields (ID370) – Linton, Maidstone
- Dunorlan Park Lake – Tunbridge Wells
- Eastwell Lake – Nr. Ashford
- Hart Reservoir – Nr. Folkestone
- Hever Castle Lake – Hever Castle nr. Edenbridge
- Hothfield - Ashford
- Kemsley Mill Lagoon 1 – Kemsley, Sittingbourne
- Knockholt No.2 – near Westerham, Sevenoaks
- Leeds Castle Moat –Leeds, Maidstone
- Leigh Barrier (Medway) FSR – Nr. Tonbridge
- Little Cheyne Court – Nr. Camber, Shepway
- Mill Leese Flood Storage Reservoir - Saltwood
- Monk Lake 2 (aka Riverfield) – Nr. Marden
- Morghew Farm Reservoirs – Nr. Rolvenden, Ashford
- Mote Park Lake (ID398) - Maidstone
- Northwood Lagoon (aka Plenty Brook Lagoon) – Herne Bay, Canterbury
- Oakleigh (ID289) – Nr. Gravesend
- Pembury 1 and 2 – Pembury
- Plenty Brook – Herne Bay
- Redwalls Lower – Linton, Maidstone
- Redwalls Upper – Linton, Maidstone
- Sheerland Farm Dam – Pluckley, Ashford
- Style Place Farm - Tonbridge
- Surrenden Lower Lakes – Bethersden, Ashford
- The Ringles – Nr. Headcorn, Maidstone
- Updown Farm – Deal, Dover
- Weirton Hill - Boughton Monchelsea, Maidstone

### *1.11.2 Reservoirs located within the Medway Council administrative area*

The following two reservoirs are located within the Medway Council area (please see **Appendix I** for maps of these reservoirs):

- Bromhey Farm Reservoir – Nr. High Halstow
- Wall End – Isle of Grain

### *1.11.3 Reservoirs in Neighbouring Local Authority Areas Potentially Impacting Upon Kent*

The following reservoirs are located within neighbouring counties but could potentially inundate areas covered by the KRF (please see **Appendix I** for maps of these reservoirs and out of county Local Authority contact numbers):

- Bewl Bridge – Nr. Tunbridge Wells, East Sussex
- Buckhurst Park Lake – Nr. Hartfield, East Sussex
- Danson Park Lake – Bexleyheath, London Borough of Bexley
- Hall Place Flood Storage Reservoir – Crayford, London Borough of Bexley
- Main Lake Eridge Park – Nr. Tunbridge Wells, East Sussex
- Wilderness Lake – Tandridge, Surrey
- Wire Mill Lake – Nr. Lingfield, Tandridge, Surrey

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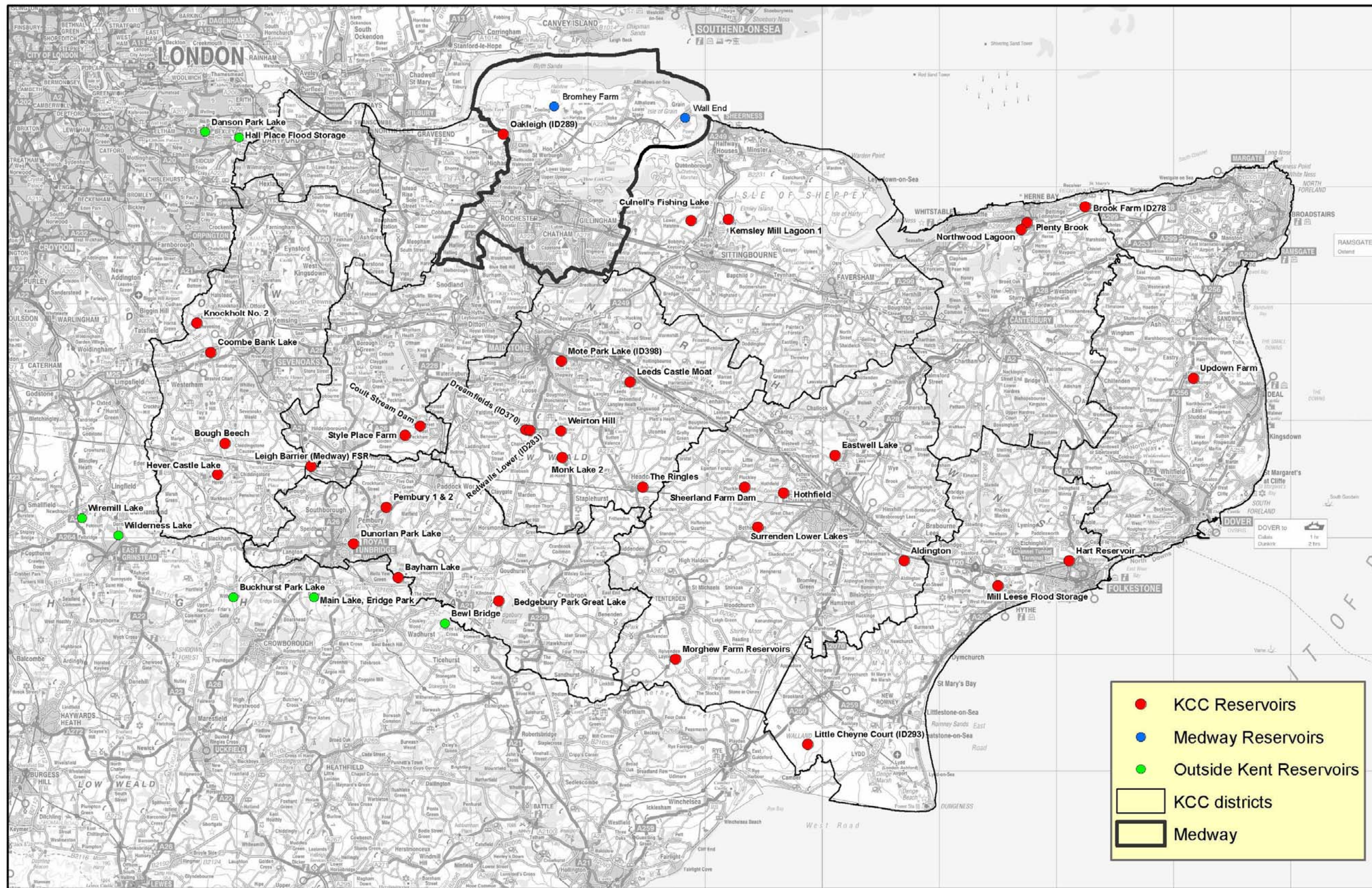


Figure 1.2:  
Map of  
Reservoirs  
in Kent and  
Medway  
and  
Neighbouring  
Areas  
(Please see  
Appendix I  
for Reservoir  
Details and  
Flood  
Inundation  
Maps)

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Ref. Kent and Medway Reservoirs



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## **2. Warnings, Alerts & Activation**

### **2.1 Warnings**

A severe weather event will increase the risk of a 'Rainy day' breach (see **Section 1.7.2 on page 5**) during this potential emergency phase the following severe weather monitoring methods will likely be used:

- flood guidance statements by the Flood Forecasting Centre (FFC)
- heavy and extreme, rainfall alerts, flash and early severe weather warnings issued by the Met Office
- EA flood warnings
- reports of flooding from the public

For more detailed information on warnings and alerts please refer to the **KRF Pan-Kent Multi-Agency Flood Plan** available from the KRF BMSU [krf@kent.pnn.police.uk](mailto:krf@kent.pnn.police.uk).

#### *2.1.1 Severe Weather Advisory Group (SWAG)*

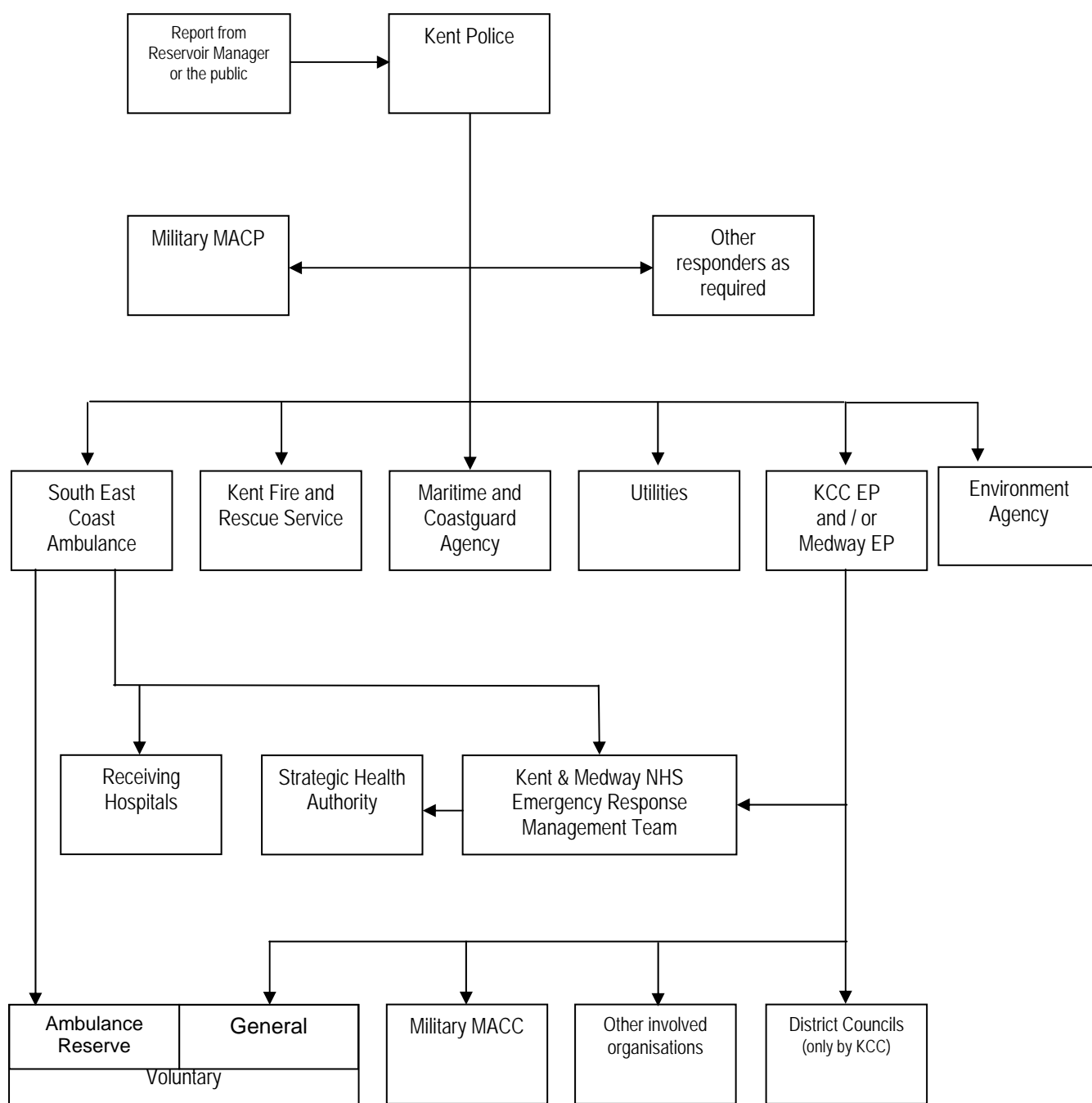
The SWAG may have formed if severe weather has increased the risk of flooding in Kent. **Figure 2.1 Alert Cascade on page 16** identifies **Kent Police** as the first point of contact from Reservoir Managers or Site operators.

Kent Police should therefore inform the SWAG of any alerts they have received to aid in the decision making for escalation to full SCG. For more information on SWAG please refer to the **SWAG Protocol**. Available from: <http://www.kentconnects.gov.uk/krf/krf-library/krf-document/Severe%20Weather%20Advisory%20Group%20%20V1.1.pdf>

## 2.2 Alerts

The following diagram outlines how an alert should be disseminated to all responders (Referenced from the KRF Pan-Kent Strategic Emergency Response Framework)

Figure 2.1: Alerting Cascade



### 2.3 Activation

Reservoir Managers or Site Operators are responsible for invoking On-Site Reservoir Emergency Plans. Any member of the KRF can request Kent Police invoke an Off- Site Emergency Plan using the following triggers:

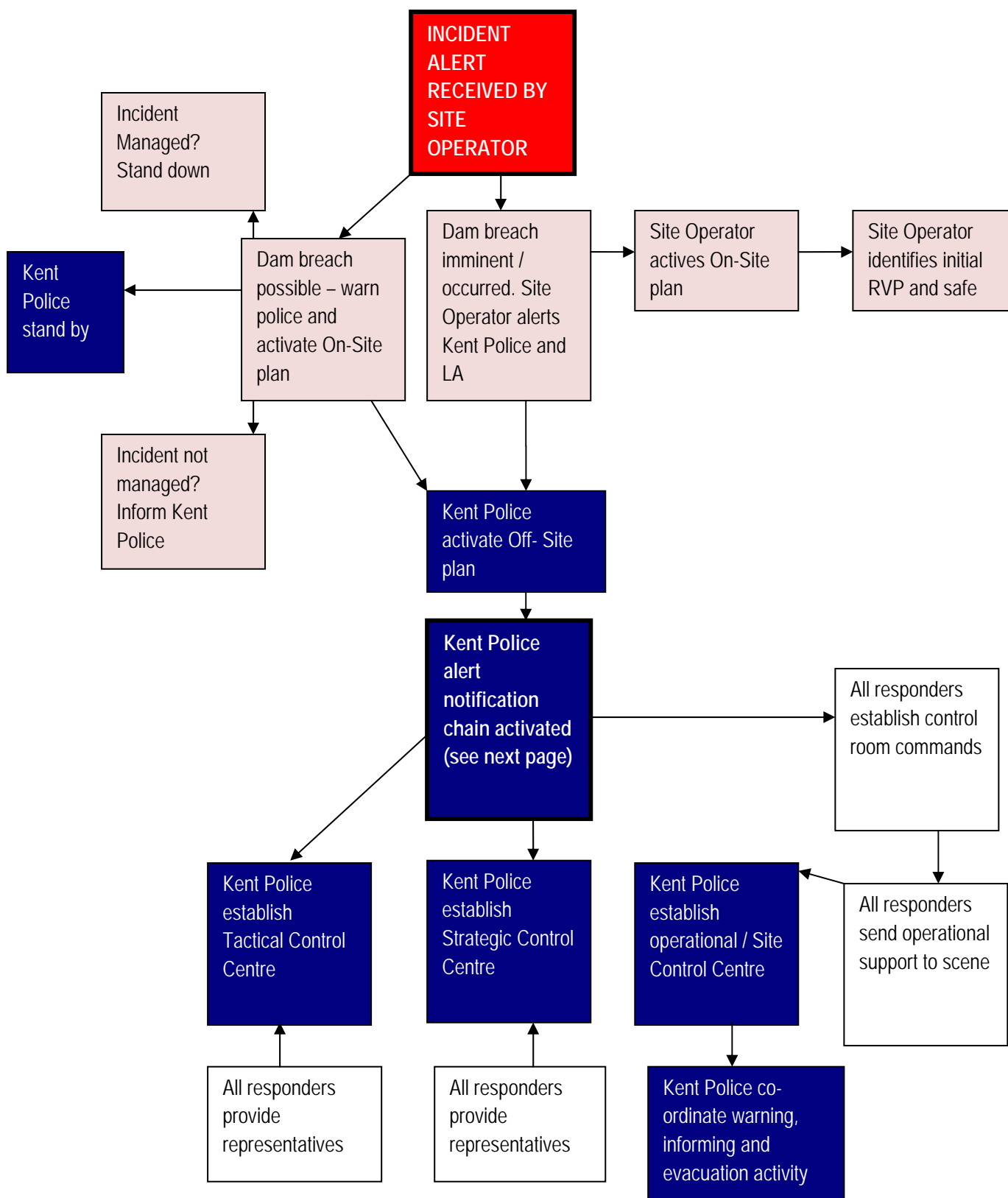
Table 2.1: Trigger Levels for Activation of Plan

Trigger Level		Activation of plan
Potential Emergency	Alert Advisory Trigger	Standby for possible dam breach
	Alarm Trigger	Implement <b>Specific On-Site plan</b> An emergency draw down is required
Emergency Phase	Imminent failure trigger	Implement <b>Specific On-Site plan/Off- Site plan and <u>Generic-Off-Site plan</u></b> Control has been lost
	Failure Trigger	Implement <b>Specific On-Site plan/Off- Site plan and <u>Generic-Off-Site plan</u></b> Control has been lost
Recovery Phase	Stand Down	Implement <b>KRF Pan-Kent Strategic Recovery Framework</b> if necessary All clear received, identify lessons learned

Full details of the trigger levels and actions associated with them can be found in the specific On and Off- site Emergency Plans for each reservoir.

The following diagram details the activities of responding agencies upon issue of an alert for a possible or actual reservoir inundation emergency.

Figure 2.2: Responder actions upon issue of an alert



### **3. Command & Control**

#### **3.1 Management Structure**

##### *3.1.1 Strategic Management & Co-ordination*

Strategic (or Gold Group) management deals with policy issues arising from the response. It will usually be located away from the incident, and will make decisions about such topics as future resourcing, finances, priorities, future implications and the return to normality. Each organisation will have its own Gold Commander, responsible for the activities of their own organisation. For multi-agency working, the function will be known as the Strategic Co-ordination Group who will work from a pre-nominated Strategic Co-ordination Centre. This will most likely be chaired by the police in the Response Phase and the local authority in the Recovery Phase (Kent County Council, Medway Council or the affected District).

##### *3.1.2 Tactical Management & Co-ordination*

Tactical management deals with the overall management of the front-line response to the incident itself. Tactical / Silver Commanders will plan and co-ordinate the tasks which their staff must carry out in order to respond within the strategy which their Gold Command level has set or is predetermined within specific Emergency Plans. Each organisation will have its own Silver Commander who will take charge of work closely together – usually co-ordinated by the Police – to ensure that the organisations work effectively together. There may be more than one Silver Commander in some organisations where the response is at more than one location.

##### *3.1.3 Operational Management & Co-ordination*

Bronze, or Operational, Commanders will take on responsibility for specific areas or roles according to the needs determined by their organisation's Silver Commander.

For more information, refer to the **KRF Pan-Kent Strategic Emergency Response Framework**.

<http://www.kentconnects.gov.uk/krf/krf-library/krf-document/Pan%20Kent%20Strategic%20Emergency%20Framework.pdf>

##### *3.1.4 Scientific & Technical Advice*

The Scientific & Technical Advice Cell (STAC) may be convened to provide technical expertise and advice to the SCG / RCG and other key groups / organisation involved in the response (particularly public safety advice) to a reservoir breach. The membership of the STAC will essentially mirror that of the SWAG (see 2.1.1), which will stand down in favour of the STAC once the incident into the emergency / response phase.

##### *3.1.5 Media & Communications*

The multi-agency Media & Communications Group (M&CG) will be set-up to support the multi-agency SCG / RCG etc. by developing and implementing a co-ordinated and joined-up media & communications strategy for the incident, including arrangements for warning & informing the public and media management. See **Section 7** for more information.

### 3.2 Summary Emergency Response Stages

Command and Control Centre locations and information can be found in **Appendix D**.

*Table 3.1: Summary Emergency Response Stage Actions*

(Please note, these are suggested actions, therefore not all will be applicable to every response)

TASK	RESPONDER
<b>OFF- SITE EMERGENCY NOTIFICATION</b>	
<ul style="list-style-type: none"> <li>Initial alert (STANDBY or TRIGGER)</li> <li>Initiate cascade notification</li> </ul>	<ul style="list-style-type: none"> <li>Site Operator</li> <li>Kent Police</li> </ul>
<b>EMERGENCY SERVICE RESPONSE TO SITE / ZONE</b>	
<ul style="list-style-type: none"> <li>Co-ordinate response of emergency services and ensure liaison with other Category 1 and 2 Responders</li> <li>Despatch responders</li> <li>Treat casualties, evacuate to hospital</li> </ul>	<ul style="list-style-type: none"> <li>Kent Police, KFRS and SECAMB</li> </ul>
<b>INITIAL CO-ORDINATION OF THE MULTI-AGENCY RESPONSE</b>	
<ul style="list-style-type: none"> <li>Maintain co-ordination of the response until Strategic Co-ordinating Group formed.</li> <li>Set up &amp; support the Strategic Co-ordinating Centre</li> </ul>	<ul style="list-style-type: none"> <li>Kent Police</li> </ul>
<b>COMMAND, CONTROL AND CO-ORDINATION</b>	
<ul style="list-style-type: none"> <li>Convene the Strategic Co-ordinating Group</li> <li>Convene Tactical Co-ordination Group</li> </ul>	<ul style="list-style-type: none"> <li>Kent Police</li> <li>Kent Police</li> </ul>
<b>MEDIA &amp; COMMUNICATIONS</b>	
<b>WARNING &amp; INFORMING THE PUBLIC</b>	
<p><b>Warn Public Information Zone residents by:</b></p> <ul style="list-style-type: none"> <li>Door-to-door knocking with Evacuation Cards (<b>Appendix C</b>)</li> <li>Use of Environment Agency loudhailer vehicles</li> <li>Use of the Kent Police helicopter's 'Skyshout' system.</li> </ul>	<ul style="list-style-type: none"> <li>Kent County Council / Kent Police</li> <li>Environment Agency</li> <li>Kent Police</li> </ul>
<p><b>Further information to the public may also be provided through:</b></p> <ul style="list-style-type: none"> <li>Local alert systems</li> <li>Specific internet sites used for emergencies e.g. Council or BBC emergency page</li> <li>Public information lines invoked for the event</li> </ul>	

<b>MEDIA MANAGEMENT</b>	
<ul style="list-style-type: none"> <li>• Issue initial Media Statement</li> <li>• Co-ordinate the multi-agency media response</li> <li>• Set up media briefing arrangements</li> </ul>	<ul style="list-style-type: none"> <li>• SCG / M&amp;CG</li> </ul>
<b>TRAFFIC CONTROL AND PUBLIC ACCESS</b>	
<ul style="list-style-type: none"> <li>• Establish checkpoints / roadblocks</li> <li>• Provide signage</li> </ul>	<ul style="list-style-type: none"> <li>• Kent Police and Kent County Council / Medway Highways / Highways Agency</li> </ul>
<b>EVACUATION, SURVIVOR RECEPTION CENTRE AND REST CENTRES</b>	
<ul style="list-style-type: none"> <li>• Evacuation (Section 10)</li> <li>• Assembly Points</li> <li>• Transport</li> <li>• Medical Support</li> <li>• Survivor Reception Centre / Rest Centre</li> </ul>	<ul style="list-style-type: none"> <li>• Kent Police</li> <li>• Kent Police</li> <li>• Kent County Council / Medway Council</li> <li>• SECAMB / NHS</li> <li>• District Council / Kent Police / KCC / Medway Council</li> </ul>



## 5. Actions, Roles and Responsibilities

The following table outlines Actions, Roles and Responsibilities for responders in a reservoir incident. Note – for more information refer to the Pan Kent Strategic Emergency Response and Recovery Frameworks.

Table 5.1 Actions, Roles and Responsibilities

Organisation	Preplanning	Response	Recovery
<b>Reservoir Undertaker</b>	<p>Write and hold an On-Site Plan</p> <p>Provide on-going surveillance and situation assessments</p> <p>Implement a range of measures to avert failure</p> <p>Draw up contingency arrangements to ensure that a suitably qualified local engineer can be contacted at all times</p>	<p>Notify the Police urgently of a heightened risk or actual occurrence of a dam breach together with any relevant details (e.g. status of warning, anticipated failure mode, actions being taken to avert failure, estimated probability of failure and timing) in line with arrangements set out in the On-Site Plan</p> <p>Send liaison officer to bronze, silver and gold command, where resources allow</p> <p>Record keeping</p>	<p>Assist in the Recovery, where resources allow. Please see <b>Appendix E</b></p>
<b>Kent Police</b>	<p>Statutory responsibility under the Civil Contingencies Act 2004 to:</p> <ul style="list-style-type: none"> <li>• Prepare and maintain emergency plans;</li> <li>• Maintain business continuity plans and arrangements;</li> <li>• Engage with KRF Severe Weather Group Partners particularly around risk assessment, planning and public warning and informing and training and awareness;</li> </ul>	<p>Save and prevent loss, or further loss, of life in conjunction with the other emergency services and any other relevant organisation</p> <p>Consideration of health and safety and ensure the safety of personnel deployed at the incident</p> <p>Co-ordinate the overall response</p>	<p>Recovery is inbuilt to the response phase of the incident as part of the Strategic Co-ordination Group</p> <p>The appropriate 'handover' to the responsible LA will be supported as appropriate</p> <p>Liaise and promote/ provide</p>

Organisation	Preplanning	Response	Recovery
	<ul style="list-style-type: none"> <li>Validate emergency plans through training and exercising</li> </ul> <p>Identifying, with Cat 1 and 2 partners, areas of critical infrastructure at risk</p> <p>Mobilisation planning within the Police National Mobilisation Plan (internal and external resources)</p> <p>Engagement with Kent Resilience Forum (KRF) Public Warning and Informing Group on the forming of a communication strategy to warn and inform the public</p> <p>Maintain Business Continuity arrangements</p>	<p>In so far as saving of life permits, secure, preserve and protect the scene</p> <p>Investigate the incident, obtaining and securing all available evidence in conjunction with other investigative bodies where applicable</p> <p>Recover the deceased in a dignified manner, which ensures the integrity of their identification</p> <p>Without undue delay, assist the Coroner to identify victims and inform the next of kin as soon as possible</p> <p>Reassure survivors and their families, assist in establishing appropriate support systems</p> <p>Establish an effective and appropriate family liaison strategy</p> <p>Ensure an appropriate response to the media, which is open, factual, accurate, and seeks to reassure those directly involved and the public in general</p> <p>Provision of warnings, advice and information to the public</p> <p>Strive to minimise the impact on the whole community, working with all relevant agencies to return to normality as soon as</p>	<p>community support.</p>

Organisation	Preplanning	Response	Recovery
		<p>possible</p> <p>Maintain Business Continuity arrangements</p> <p>Record keeping</p>	
<p><b>Environment Agency</b></p>	<p>Advise on development proposals impacting upon or associated with reservoirs or reservoir inundation zones; Update reservoir inundation maps; Support Kent Resilience Forum (KRF)</p> <p>CRR flood risk assessments; Maintain watercourse capacity; Maintain flood management structures</p> <p>Maintain Business Continuity arrangements</p>	<p>Issue warnings</p> <p>Monitor catchment</p> <p>Support LAs and emergency services</p> <p>Reporting the incident on the National Incident Reporting System (NIRS) through Incident Communication Service (ICS)</p> <p>Supporting the operational response roles of other agencies by providing materials, equipment and staff, where resources allow. See <b>Appendix E</b></p> <p>Operating and maintaining flood defences on main rivers lying both upstream and downstream of the dam.</p> <p>Providing updated information to the public using the Floodline service (in areas where the service has been established)</p> <p>Investigate the cause of the incident and the emergency response and take appropriate follow-up action</p> <p>Maintain Business Continuity arrangements</p>	<p>Assist as necessary through the arrangements set out in the KRF Pan Kent Strategic Emergency Response Framework</p>

Organisation	Preplanning	Response	Recovery
Kent Fire and Rescue Services	<p>KFRS Premises at risk to flooding identified</p> <p>National Mutual aid protocol and mutual aid agreements between bordering F&amp;RS in place</p> <p>Hold copies of EA Flood Maps</p> <p>Arrangements for pre-mobilising resources in place. See <b>Appendix E</b></p> <p>Consider recall to duty for officers in place</p> <p>Maintain Business Continuity arrangements</p>	<p>Record Keeping</p> <p>Follow major incident response procedures</p> <p>Liaise with other agencies and prioritise response and resources. See <b>Appendix E</b></p> <p>Provide assistance with pumping water</p> <p>Assist with evacuation</p> <p>Attend SCG and any TCG provide liaison officers to other Control rooms as appropriate i.e. Environmental Agency</p> <p>Activate National Mutual Aid Agreement for additional resources</p> <p>Maintain Business Continuity arrangements.</p> <p>Record keeping</p>	<p>Assist with other agencies to minimise impact on community</p>
South East Coast Ambulance Service	<p>Emergency Preparedness Status Board (includes flooding) in place across SECamb.</p> <p>SECamb premises at risk of flooding identified</p> <p>Health On Call system in place</p> <p>Maintain Business Continuity arrangements</p>	<p>Attendance as required upon assessment</p> <p>Activate Major Incident Plan</p> <p>Maintain Business Continuity arrangements</p> <p>Record Keeping</p>	

Organisation	Preplanning	Response	Recovery
NHS	<p>Ensure Emergency Plans are up to date and exercise tested</p> <p>Maintain Business Continuity arrangements.</p>	<p>Provide support for vulnerable people known to the NHS in their own homes</p> <p>Maintain Business Continuity arrangements</p> <p>Provide Support to Rest Centres and Evacuation Points</p> <p>Provide Support in the event of evacuation of vulnerable persons</p> <p>Ensure representation at Multi-agency Command &amp; Control.</p> <p>Issue Public Health Advice in conjunction with the Health Protection Agency</p> <p>Record keeping</p>	
Kent County Council / Medway Council	<p>Maintain vulnerable persons list of lists and list of vulnerable KCC/Medway sites.</p> <p>Multi-agency pre-planning re. Rendezvous Points (RVPs) and transport routes.</p> <p>Ensure that planning decisions relating to applications affecting reservoirs or reservoir inundation zones are informed by reservoir planning principles.</p> <p>Pre-arranged communication strategy – what should</p>	<p>Activate CEC/Emergency Centre and KCC/ Medway Emergency Plans including liaison with elected Members.</p> <p>Co-operate with emergency services and EA to co-ordinate the response.</p> <p>Liaise with police on traffic management interventions.</p> <p>Arrange for KCC /Medway representation at TCG and SCG as necessary.</p> <p>Liaise with partners to ensure that care is provided to</p>	<p>Site clearance of public areas</p> <p>Structural and condition surveying of council properties damaged by the inundation; remedial action to repair such properties</p> <p>Consultation with health authorities and district councils on hygiene and environmental health issues in</p>

Organisation	Preplanning	Response	Recovery
	<p>members of the public do/where should they go?</p> <p>Updated information on council web site</p> <p>Pre-arranged information help line and trained staff.</p> <p>Pre-arranged help line for staff – (should they come in to work or not – is it safe?)</p> <p>Review of council properties at risk</p> <p>Incorporate this risk into the Business Continuity planning process</p> <p>Provide intelligence on condition and viability of transport infra-structure – including Flood Depth Indication System data (Kent Highway Services)</p>	<p>vulnerable people and communities affected by reservoir inundation</p> <p>Transport of public/evacuees to rest centres. Provision and staffing of rest centres and associated services In conjunction with district councils. See <b>Appendix E</b></p> <p>Flood mitigation measures (e.g. sandbags). Mobilise personnel and resources to enable clearance of blocked highway drainage, pumping and other mitigation measures. See <b>Appendix E</b></p> <p>KCC Community Wardens can deliver: a uniformed presence at scene, assistance to police with cordon control, assist the police with evacuation, provide local knowledge, supply public information to communities, provide on-the-ground intelligence, and provide assistance in operation and security at survivor reception / rest centres</p> <p>Co-ordinate deployment of 4x4 and other specialist transport assets to response. See <b>Appendix E</b></p> <p>Liaise with partners to ensure protection and mitigation of reservoir inundation impacts upon critical infra-structure and the wider environment</p>	<p>affected areas</p> <p>Assisting residents in removal of damaged furniture and household goods</p> <p>Education of pupils affected by school closures</p> <p>Invoking council's business recovery plan if council premises are affected</p> <p>Repairs to public highways and highway infrastructure</p> <p>Provision of counselling and other advice to affected/upset residents</p>

Organisation	Preplanning	Response	Recovery
		<p>Use of SWIFT emergency report (Area Performance Monitoring Teams during office hours and Contact Centre out of hours) and public care services data on KentView (all staff, <a href="http://extranet7.kent.gov.uk/kentview/">http://extranet7.kent.gov.uk/kentview/</a>) to inform emergency response</p> <p>Liaise with DEFRA, RSPCA and district councils on welfare of livestock, domestic and wild animals affected by reservoir inundation</p> <p>Maintain Business Continuity arrangements</p> <p>Record keeping</p>	
<p><b>District / Borough / City Council</b></p>	<p>Ensure that development control decisions on applications impacting upon or within reservoir inundation zones are informed by reservoir planning principles.</p> <p>Ensure up to date vulnerable persons and sites shared database arrangements.</p> <p>Pre-determine Survivor Reception, Rest Centres and media centres.</p> <p>Undertake multi-agency pre-planning re RVPs, transport routes etc.</p> <p>EA, riparian district councils and flood gate owners to ensure</p>	<p>Activation of Emergency Centre and internal Strategic Group and advise leader and ward members. Ensure liaison with Parish Councils/Community Emergency Groups.</p> <p>Representation at Tactical Co-ordinating Group and Strategic Co-ordinating Group as necessary.</p> <p>Co-operation with emergency services and EA to co-ordinate the response.</p> <p>Liaison with utility and transport companies especially water company to ensure provision of clean drinking water to</p>	<p>Provision of temporary or longer-term accommodation or rehousing for residents made homeless by the flooding</p> <p>Structural and condition surveying of council properties damaged by the flooding; remedial action to repair such properties</p> <p>Invoking council's business recovery plan if council premises are affected</p> <p>Consultation with health authorities on</p>

Organisation	Preplanning	Response	Recovery
	<p>closure mechanisms function properly.</p> <p>Pre-arranged communication strategy – what should members of the public do/where should they go?</p> <p>Ensure updated information on council web site</p> <p>Pre-arranged information help line and trained staff</p> <p>Pre-arranged help line for staff – (should they come in to work or not – is it safe?)</p> <p>Review of council properties at risk</p> <p>Incorporate this risk into the Business Continuity planning process.</p> <p>Advise on development proposals, flood risk assessments, and maintain flood management structures.</p> <p>Prepare and maintain the Local Multi-agency Plan</p> <p>Maintain Business Continuity arrangements</p>	<p>residents</p> <p>Provision and staffing of rest/survivor reception centres and associated services</p> <p>Flood mitigation measures (e.g. sandbags, where appropriate). Advice on clearance of blocked water courses and mitigating measures</p> <p>Establish various LA forward controls as necessary.</p> <p>Representation at Tactical Co-ordinating Group and Strategic Co-ordinating Group as necessary</p> <p>Maintain Business Continuity arrangements</p> <p>Record keeping</p>	<p>hygiene and environmental health issues in affected areas</p> <p>Assisting residents in removal of damaged furniture and household goods</p> <p>Removal of mud/debris from council owned land.</p>
<p><b>Highways Agency (HA)</b></p>	<p>Operating the Strategic Road Network (SRN)</p> <p>Monitoring and maintaining traffic flows on the SRN</p> <p>Clearing debris from the SRN and the road drainage system</p>	<p>Implement HA emergency procedures</p> <p>Attend Tactical Co – ordination group (TCG) and Strategic Co-ordination group (SCG).</p> <p>With partners, identify appropriate road closures and diversion</p>	<p>Assessing flood damage to the SRN and HA Structures.</p> <p>Clearing flood debris from the SRN</p> <p>Reopening the SRN in conjunction</p>



Organisation	Preplanning	Response	Recovery
	Identifying an implementing the closure of the HA roads and diversion routes in conjunction with partners and supplying signage as appropriate.	routes required Support SCG functional groups as required Support the multi-agency response Provide warnings to road users using VMS Contact SERCC on 01883 745 300 Record keeping	with partners. Attend TCG and SCG. Support SCG and Multi – Agency media as response
<b>National Grid - Gas &amp; electricity distribution / transmission.</b>	Identify plant and assets in predicted flood zone e.g. sub-stations, cable tunnels, joint bays, regulators – medium to low pressure High pressure gas installations COMAH sites – storage Vulnerable persons database – use system to pull off all addresses in a predicted area by post code Contact local authorities use agreements for mutual aid	Set up bronze command at site. Work with blue lights to isolate supplies. Make safe. Set up additional silver and gold level command within company Wait for water to recede Re-establish supplies Possible reconfiguration of supplies where possible Possible lock-out of regulators to maintain pressures in gas mains. Invoke mutual aid and resource plans. Prepare for recovery Record keeping	
	Receive detailed flood assessment information for all at-risk MAJOR sites (supplying >50,000 consumers) from EA /	Instigate E/3 procedures for incident response	

Organisation	Preplanning	Response	Recovery
<p><b>Scotia Gas / Southern Gas (SGN) Networks</b></p>	<p>SEPA. Review annually</p> <p>Receive 48 hours warning from EA / SEPA for MAJOR sites</p> <p>Identify other plant and assets in predicted flood zone using EA flood data and Flood Outlook Statements. Consider all offtakes from the national transmission system (including odourisation and gas quality equipment), pressure reduction stations, other gas governing equipment, high and low pressure storage installations (including top and lower tier COMAH sites)</p> <p>Review sectorisation plans for isolation of specific areas</p> <p>Locate sectorisation valves and confirm operation</p> <p>Identify consumers at risk from 'Vulnerable Persons Database' – extract all relevant addresses in the predicted flood risk area</p> <p>Contact local authorities, use agreements for mutual aid</p>	<p>Set up bronze Command / Site Main Controller at site. Work with Category 1 Responders to isolate supplies if required. Make safe. Set up additional silver and gold level command within company</p> <p>Identify location of siphon tankers, water pumps and other equipment. Prepare resource plans and mobilise as necessary</p> <p>Extract and copy asset records and plans for on-site use identifying siphons, low points etc</p> <p>Wait for water to recede</p> <p>Re-establish supplies</p> <p>Possible reconfiguration of supplies where possible</p> <p>Possible lock-out of regulators to maintain pressures in gas mains. Invoke mutual aid and resource plans. Prepare for recovery</p> <p>Record keeping</p>	
<p><b>UK Power Networks</b></p>	<p>UK Power Networks Flood Plan</p> <p>Environment Agency indicative flood plains mapped into Company GIS system</p>	<p>Monitor UK Power Networks substations and plant and equipment</p> <p>Protect substations by temporary works if practicable</p> <p>Disconnect electricity supplies if the public are at risk or if</p>	<p>Restore electricity supplies</p>

Organisation	Preplanning	Response	Recovery
		substations or plant and equipment cannot be protected from inundation	

## **6. Operational Response Issues**

### **6.1 Health and Safety**

Guidance for working near flood water

The following is offered as a supplement to normal practice, it is not necessarily exhaustive and individuals must make their own risk assessments on the situation facing them.

#### Dangers:

- Shallow ponded water can cover ditches, manholes, access to hatches to basements etc. Covers to manholes and access hatches are frequently lifted off by the power of the water, leaving a deep hole into which the unsuspecting can fall or drive into, may cause walls and bridges to be unstable;
- Flowing water can exert strong, lateral forces and will typically build up on the upper stream side to a height half as high again as the flowing depth;
- Flood water may be contaminated. There may be overflows from Sewage Treatment Plants, or the water may have been contaminated with chemicals from industrial or agricultural premises; and
- Water will conduct electricity. If the power has not been turned off there is a possibility of electric shock. One indication of the presence of live electricity in flood water is the sense of vibration. If you experience this you should withdraw.

#### Considerations:

Pre-existing organisations rules and qualifications needed;

Having the necessary equipment to enter water;

Other alternatives to entering water and what purpose would be served;

Whether the visit could wait till the flood water recedes;

Depth of the water, whether the tide is rising, speed of flow and pull of the water;

Whether you should inform someone of your actions or be accompanied;

Proceeding with caution, to avoid ditches, manholes and access hatches as well as electricity; and

Avoiding driving into flood water without a suitable vehicle (and proceed with caution, ensuring the vehicle is not submerged and minimise bow waves flooding properties or submerging other vehicles).

Please see Kent Fire and Rescue Flood Water Safety Aide Memoir in **Appendix F**.

#### Floodwater Public Health Risks

The following section deals with the following public health risks arising from floodwater inundation:

- Chemical Contamination

- Sewage/ Waste Water Contamination
- Electrical/ Fire Hazards

#### Chemical Contamination

Flooding can lead to disruption of water purification and sewage disposal systems, inundation of waste disposal sites, and contamination from chemicals stored in commercial, industrial, agricultural and domestic settings. This can be hazardous to human health and the wider environment. Contact with flood water should therefore be avoided and where unavoidable protective clothing should be worn. While different chemicals cause different health effects, the signs and symptoms most frequently associated with chemical poisoning are headaches, skin rashes, dizziness, nausea, excitability, weakness, and fatigue.

#### Sewage/ Waste Water Contamination

Flooding can cause the disruption of water purification and sewage and other waste water disposal systems. A key risk arising from contamination of floodwater with sewage is risk to human and animal health from harmful microbes. Infectious water-borne organisms include intestinal bacteria such as E.Coli, Salmonella, Hepatitis, and Tetanus.

It may be assumed that any floodwater affecting property and land could contain sewage. Contact with flood water should therefore be avoided and where unavoidable protective clothing should be worn.

Contamination of the aquatic environment with sewage and other organic pollutants, including milk and other foodstuffs, may lead to de-oxygenation through microbial blooms and requisite adverse impacts upon aquatic wildlife.

#### Electrical / Fire Hazards

Areas affected by floodwater inundation may contain electrical or fire hazards connected with power lines, sub-stations and other electrical infra-structure. The following precautions should be taken where electricity infra-structure is affected by floodwater:

- Never enter flooded areas containing electrical equipment unless you are certain that the power supply is off.
- If water has been present anywhere near electrical circuits and electrical equipment, turn off the power at the mains.
- Don't assume that any part of a flooded electrical installation or appliance is safe, do not turn on their power supply.

More guidance can be found in the KRF Public Warning and Informing Strategy Document and from the following Environment Agency link:

[www.environment-agency.gov.uk/homeandleisure/floods](http://www.environment-agency.gov.uk/homeandleisure/floods)

### Welfare of livestock and other animals

Kent Fire and Rescue Service have a dedicated animal rescue unit based at Faversham Fire Station. The unit has specially trained personnel and dedicated equipment such as a crane and cradle with lifting capacity to move trapped livestock.

KCC Emergency Planning Group will liaise with the RSPCA and DEFRA on the welfare of livestock that may require rescue or feeding on site.

Section 7 of the KCC Rest Centre Guidelines, entitled Care of Animals at Centres, states that Animal owners bringing pets or livestock to a centre should be met by an RSPCA Officer / local authority Dog / Civic Warden. The plan also covers holding of the animals, vaccination and feeding in situ as well as owner counseling.

The RSPCA also offer advice on preparedness and looking after pets in an emergency; this can be found from the following RSPCA link:

<http://www.rspca.org.uk/in-action/issuesindepth/floods>

## **6.2 Environmental Considerations**

Following a flood event there are wide spreading environmental consequences to consider. These include.

### Silt

Silt can be considered to be a contaminated material and a health and safety risk to the public and responders.

### Used/Contaminated Sandbags

These should be considered to be contaminated material and will be a health and safety risk to the public and responders.

### Animal Carcasses

These are potentially a water pollution and health and safety risk to the public and responders.

### Contaminated Flood Waters

Contamination of flood water could be as a result of foul water, saline water, chemicals, and large quantities of food stuffs or fuels. A further potential contamination of potable water supplies in Kent could result sometime after the flood waters have receded due to the amount of water supply sourced from groundwater sources.

### Contaminated Premises

This could occur as a result of any of the above and presents a number of potential health and safety risks.

#### Disposal of Damaged Personal Property

The health and safety implications of damaged personal property depend on the type of damage and any contamination.

### **6.3 Utilities**

#### Contaminated or Loss of Water Supply

The contamination of the drinking water supply has implications for the wider population and this is the responsibility of the relevant Water Company in Kent. They are required to ensure that an alternative water supply is made available for customers.

#### Loss of Gas and Electricity Supply

Restoration of utilities is the responsibility of the utility company; see **Appendix G** for how to contact UK Power and Gas networks.

### **6.4 Voluntary Sector**

*Emergency Preparedness*, the Civil Contingencies Act guidance, refers to the generic support that the voluntary sector can provide. The nature, range and scale of services offered by the voluntary sector may alter depending upon the context of the emergency situation but would be provided in both emergency response and recovery related activities. They will be activated under normal existing activation protocols with either the Emergency Services or the Local Authority and will be directed by the relevant activating organisation but work to their own organisational structure. Organisations have access to mutual aid on a cross-border basis.

In a flooding incident the voluntary sector can provide support to both responders and those affected by the incident.

The Voluntary Sector in Kent is drawn together in the form of The Kent Voluntary Sector Emergency Group (KVSEG). The different member organisations can offer a wide variety of services, such as first aid, emergency feeding and bereavement counselling. These organisations offer a great deal of expertise with which to help the local authorities mitigate the effects of an emergency, but have no statutory duties. Those services that the organisations provide are listed on the next page.

The following organisations are members of The Kent Voluntary Sector Emergency Group:

- Age Concern
- British Red Cross
- Churches in Society (may not be a group any more)
- The Citizens Advice Bureau
- The Compassionate Friends
- Council for Voluntary Services
- Cruse Bereavement Care

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Kent Search & Rescue  
Radio Amateurs Emergency Network (RAYNET)  
Royal National Lifeboat Institute  
Royal Society for the Prevention of Cruelty to Animals  
St John Ambulance  
The Salvation Army  
The Samaritans  
Victim Support  
Women's Institute  
WRVS

Service provision includes the following:

- Rest Centre Management
- Practical and emotional support to those affected by the emergency
- Medical support to the statutory services and first-aid at specific sites
- Transport & escort
- Communications
- Documentation / administration
- Premises
- Equipment & resources available
- Telephone Helpline Support

For more detailed information refer to the Pan-Kent Strategic Emergency Framework. To contact a member of the voluntary sector, please go through the Kent County Council Emergency Planning (as per figure 2.1).

## **6.5 Mutual Aid**

Mutual aid is governed by specific Local Authority agreements. Please refer to the Pan-Kent Strategic Emergency Framework.

## **6.6 Military Aid**

In circumstances where additional resources, including specialist skills, are urgently needed, it is possible for Military Aid to the Civil Authorities (MACA) to be requested via the Joint Regional Liaison Officer (JRLO). Military Aid may be mobilised through Kent County Council Emergency Planning Group. Please refer to the Pan-Kent Strategic Emergency Framework.

The resource available will be determined by on-going military operational demands, and cannot therefore be guaranteed.



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During any emergency response, the Military is prepared to provide certain niche and specialist capabilities to support the Police. In addition, as an option of last resort, Ministers may approve MACA to fill specific capability gaps in any response or early recovery phase. To enable this, Military Liaison Officers will normally deploy to any GOLD Group which is activated.

Any military resources deployed will always remain under military command, and the costs of the resources deployed may be recoverable, according to the circumstances.

## **6.7 Community Groups or Community Plans**

Parish and Town Councils may possess their own Community Plans to support both planning and response to major emergencies.

## **6.8 Other Useful Documents**

The Kent Resilience Forum also publishes a number of documents which have been produced, or are being developed, by its various Sub-groups. Copies of them can be obtained via the KRF Business Management Support Unit, or on the KRF Extranet site.

The documents are:

- Pan Kent Strategic Emergency Response and Recovery Frameworks
- Pan Kent Multi-agency Flood Plan and associated Local Multi-Agency Flood Plans
- Mass Evacuation arrangements
- Rest Centre and Humanitarian Assistance Centre arrangements
- Mass Fatality arrangements
- Media and Communications arrangements
- Specific On-Site and Off-Site Reservoir Inundation plans

## **7. Media & Communications Strategy**

### **7.1. Purpose & Scope**

This aim of this *Strategy* is to:

*'Detail the specific arrangements for managing multi-agency media & communications in the event of a reservoir emergency, in support of the generic arrangements in the KRF Media & Communications Plan.'*

This *Strategy* should therefore be implemented in conjunction with the KRF *Media & Communications Plan*.

### **7.2 Key Objectives, Consequences & Challenges**

In addition to the generic communications 'Aim, Objectives & Principles' outlined in the KRF *Media & Communications Plan*, the specific objectives, consequences challenges that will need to be achieved / overcome in a reservoir emergency are:

- Despite reservoir flood maps being made publicly-available (see 7.5), public awareness of the risk of reservoir flooding and what to do in the event of an incident is generally low;
- Unlike river / fluvial and coastal / tidal flooding, the EA's *Floodline Warnings Direct Service* (see 7.4) does not provide warnings for reservoir flooding. Additionally, incidents may occur with little or no warning time, catching the public and responders unaware, with little if any time to issue prior warnings;
- The impacts on life, property and the environment will be severe, complex and wide-spread, with large numbers of people trapped in buildings or displaced and key utilities & infrastructure disrupted; and
- Recovery of the affected area may take a long time – possibly 6 to 18 months – and those affected will need significant support, including information and advice.

### **7.3 Multi-Agency Co-ordination**

#### *7.3.1 Media & Communications Group (M&CG)*

All media & public information will be co-ordinated by the multi-agency Media & Communications Group (M&CG). The core membership of the M&CG will consist of a nominated Lead Organisation and Supporting Organisations. However, dependent on the nature / location of the specific incident, additional supporting organisations may be drafted-in, as required.

### 7.3.2 The Lead Organisation

The M&CG will be chaired by a senior media & communications professional from the relevant Lead Organisations for that emergency phase, as follows:

Preparedness	Potential Emergency	Emergency / Response	Recovery
Before		During	After
Site Operator / EA / Local Authorities		Kent Police	Local Authorities

### 7.3.3 Supporting Organisations

The relevant Lead Organisation will be supported by equivalent officers from other partner agencies involved in the response, as follows:

- All other 'Lead Organisations'
- KFRS
- SECAMB
- NHS
- HPA
- MCA
- RNLI
- Highways Agency
- Transport Operators
- Utilities Companies
- DEFRA – Nominated 'Lead Government Department' (LGD) for reservoir emergencies

## 7.4 Media Management

### 7.4.1 Statements, Briefings & Press Conferences

The nominated Lead Organisation for the incident will co-ordinate joint statements, briefings and press conferences, with contributions from relevant Supporting Organisations. Individual organisations will have specific areas of responsibility / messages that they will wish to comment upon / communicate (see 7.4.2). However, such information should be shared with and, wherever possible, cleared via the M&CG before it is issued, to ensure a consistent message, particularly where this may impact upon / conflict with another organisation or the multi-agency response.

Consideration should also be given to establishing the nominated Media Briefing Centre (MBC) at the Strategic Co-ordination Centre (SCC). However, the media will clearly look to congregate at the incident scene and other key locations and arrangements for 'on scene' media liaison should be put in place (see 7.4.2).

### 7.4.2 Media Liaison

As far as reasonably practicable, Media Liaison Officers (MLOs) should be deployed to the incident scene and other key locations (e.g. Rest Centres, Designated Receiving Hospitals) where the media are likely to gather and to establish appropriate Media Liaison Points (MLPs) and Forward Briefing Points (FBPs), linking in with the M&CG and, where established, the MBC. However, given the speed of the incident and the extent of the area affected, it is unlikely and undesirable that MLOs will be able to cover all the areas where the media will congregate.

However, working with the responders at those locations and taking into account any health, safety & welfare considerations and available resources, efforts should be made to put in place media liaison arrangements at key locations to retain some element of control.

## 7.4 Warning & Informing the Public

### 7.4.1 Key Target Audiences & Communications Channels

Specific planning for the needs of those affected by a reservoir emergency has yet to be started. However, generic advice / arrangements are set-out in the *KRF Media & Communications Plan*. Additionally, specific arrangements for communicating with vulnerable people and hard-to-reach groups can be found in the *KRF Identifying Vulnerable People in an Emergency Plan*.

### 7.4.2 Key Messages

See **Appendix A, B and C** for:

- Individual agency areas of responsibility / messages
- Joint messages re Reservoir Emergencies, Flooding & Evacuation
- Evacuation cards

## 7.5 Further Information

<i>KRF Media &amp; Communications Plan</i>	<a href="http://www.kentconnects.gov.uk/portals/krf/krf-library/krf-document">www.kentconnects.gov.uk/portals/krf/krf-library/krf-document</a> copies also held by individual agency Media & Communications and Emergency Planning teams.
Reservoir Flood Maps	<a href="http://www.environment-agency.gov.uk/business/sectors/125359.aspx">www.environment-agency.gov.uk/business/sectors/125359.aspx</a>
Reservoir Flooding FAQs	<a href="http://www.environment-agency.gov.uk/business/sectors/125384.aspx">www.environment-agency.gov.uk/business/sectors/125384.aspx</a>
EA Floodline Warnings Direct Service	<a href="http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx">www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx</a>

## **8. Vulnerable People**

Identifying, planning for and providing for the needs of vulnerable groups involves a large number of partners and compiling a large amount of changing information. For this reason it is unrealistic to expect a central list of potentially vulnerable individuals to be maintained. Rather the approach is to maintain a list of partners and contact telephone numbers that can be used to gather relevant information in the event of an emergency.

Records of vulnerable people are held and kept up to date by the County Council, Medway Council, NHS and some other utilities companies and organisations, each organisation will hold records of its own clients. During a flood incident this information will be supplied to the SCG (Strategic Coordinating Group) and other partner organisations as required.

The KRF has published a document titled; '**Identifying Vulnerable People in Emergency**'

This plan describes the inter-agency arrangements for identifying vulnerable people during an emergency.

It is available on the KRF extranet site and from the BMSU.

Due to the nature of the changing situation during a flooding event the status of any persons' vulnerability can change at any time, this is a fact to be aware of in all situations.

Those who may be considered potentially vulnerable are:-

- Children
- Older People
- Mobility Impaired
- Mental/cognitive impaired
- Sensory Impaired
- Individuals supported by Health or local authorities
- Temporarily or permanently ill
- Individuals cared for by relatives
- Homeless
- Pregnant women
- Minority language speakers
- Tourists
- Travelling community
- Static and holiday caravan parks

## 9. Key Infrastructure

Information regarding key infrastructure can sometimes be sensitive, this information can be obtained from the utility provider or the Police for use by the SCG (Strategic Coordinating Group). The Police are guardians for Critical National Infrastructure and Critical Local Infrastructure information around utilities and queries and requests regarding this should be dealt with through the SCG.

Details of specific sites can be found in the Specific Off- site Reservoir Plans. This should not be taken as an exhaustive list of infrastructure at risk.

*Table 9.1 Critical Infrastructure and Vulnerable Facilities and Locations*

Critical Infrastructure	Vulnerable Facilities and Locations
Electricity Sub Stations	Schools
Telephone Exchanges	Care Homes
Police Stations	Nursing Homes
Fire Stations	Nurseries
Hospitals/A&Es	Surgeries/clinics including private
Ambulance Stations	Areas with high concentrations of elderly or vulnerable people
LA Offices/depots	Caravan/campsites/travellers sites
Shopping Centres	Historic Sites
COMAH Sites	SSSIs/AONBs and other protected habitats and landscapes
Prisons	Basement flats (in vulnerable locations)
Water Treatment Works	
Sewage Treatment Works	
Power Stations	
Ports	
Airports	
RNLI Stations	
Train Stations	
Crossings/Tunnels/Bridges	
Transport Hubs	
Transport pinch points	
Bus depots	

## 10. Evacuation Shelter & Rescue

### 10.1 Evacuation

#### The Decision to Evacuate

This will follow a strategy agreed by Strategic Co-ordinating Group and will be predicated on the safety of persons or other living creatures within an identified flood risk area (pre-flooding) or within an area that has already flooded. The decision as to whether to evacuate or shelter should be taken by the Tactical Co-ordinating Group, based upon assessments made by Kent Fire and Rescue and other specialist advisers e.g. Kent Resilience Forum Severe Weather Advisory Group. The Scientific and Technical Advice Cell may also provide specialist advice. However, the final decision may rest with the police Silver Commander on occasions where a prompt decision is required. Where a large-scale evacuation is being considered, the Strategic Co-ordination Group may be required to make a policy decision on the extent and nature of the evacuation. Pull-out cards outlining responder roles during an evacuation can be found in **Appendix B**.

Further information can be found in the **KRF Evacuation and Shelter Plan** and **section 11, Figures 11.3 and 11.4 of the KRF Multi-Agency Pan Kent Flood Plan** outline the response for **Dry and Wet** evacuations.

#### Evacuation Briefing Centre

In cases where a large-scale evacuation has been agreed, the police may establish an Evacuation Briefing Centre to co-ordinate and brief all the agencies involved in the evacuation. Members of the public may be requested to go to designated Evacuation Assembly Points, from which they can be transported on to survivor reception centres or rest centres. Consideration of actions that can be taken before, during and after a flooding emergency situation to promote return and recovery should be central to evacuation planning. It is important that consideration is not just given to evacuation of people and animals, but also to their welfare while absent from their homes, the security of their homes and businesses and then a programme for re-occupation.

#### Evacuation Cell

In either a pre-planned (dry) or spontaneous (wet) evacuation, the creation of an Evacuation Cell may be established to advise the Kent Police Silver Commander on the tactical plan for evacuation. The Bronze Evacuation Commander will be responsible for the implementation of the Silver Commander's evacuation plan and any subsequent plan for the re-occupation of property.

#### Evacuation Cards

The decision to implement door knocking is a Kent Police policy decision (at the appropriate level) and requires the engagement of police resources. If the decision is made to door knock properties in inundation zones, or surrounding areas, then this may be done using evacuation cards, see **Appendix C**.

#### Refusal to evacuate

It should be recognised that it can be a common occurrence for people to refuse to evacuate. As the situation worsens they may change their mind and a wet evacuation or rescue may be required. The decision relating to actions around those refusing to leave will be made by the Bronze Evacuation Cell

Commander. This decision may be referred to the Tactical Co-ordination Group for advice, guidance and/or decision. In a wide area evacuation it may be necessary for the Strategic Co-ordinating Group to make a policy decision around refusal to evacuate, among other elements.

Considerations and Process

*Figure 10.1 Command and Control in evacuation scenario*

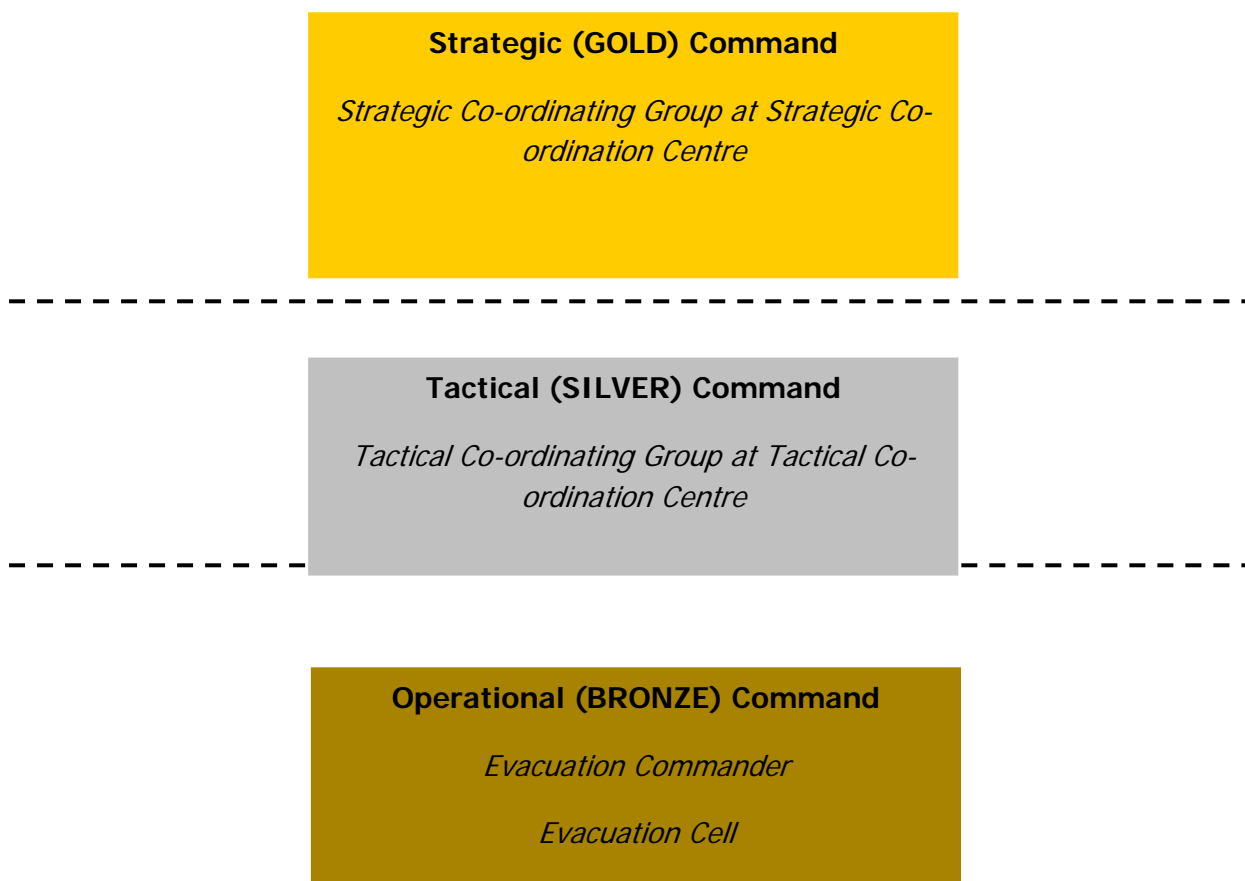
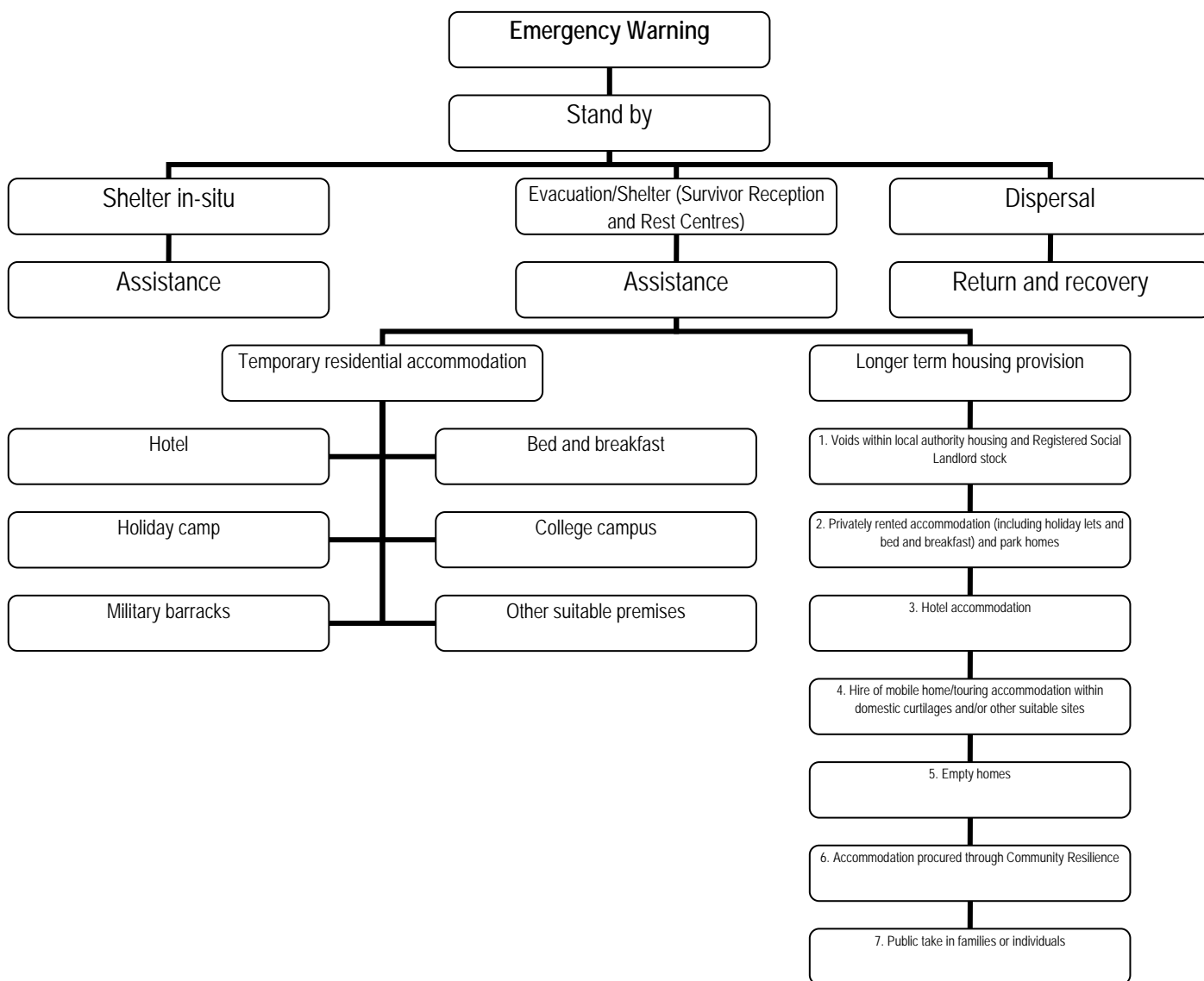




Figure 10.2: Evacuation & Shelter Structure Chart



## **10.2 Shelter**

### Legislation & Guidance

Statutory legislation and local guidance informs roles and responsibilities in relation to emergency shelter and homelessness within the Kent and Medway administrative areas. The National Assistance Act places duties upon county and unitary councils to provide services for vulnerable individuals, including children under 16, people with a disability, frail elderly and refugees. In addition, the Housing Act imposes a statutory duty upon district and unitary councils to give a priority need for accommodation to "a person who is homeless or threatened with homelessness as a result of an emergency such as flood, fire or other disaster". Premises used to accommodate or provide services to individuals and communities affected by emergencies such as a reservoir inundation comprise survivor reception and rest centres.

### Survivor Reception Centre

This is a safe and secure area located, for operational purposes, as close to the emergency scene as possible. It will receive survivors who have not been injured or only have minor injuries. The welfare role and logistical support for the operation of the survivor reception centre will rest with relevant personnel from the District(s) and Kent County Council or Medway Council with support from the National Health Service and voluntary sector. However, it is likely that the time-scales required to mobilise the local authority response will mean that the police will have to open and staff the survivor reception centre at the outset. The Police will facilitate evidence gathering, documentation and the maintenance of order and security.

### Rest Centre

A rest centre is a facility established to provide temporary accommodation and welfare for a large number of displaced people at short notice and is intended to provide basic care for up to 48 hours. District(s) and Kent County Council or Medway Council will take the lead in establishment, management and staffing with support from the National Health Service and voluntary sector. Wherever possible, a single venue should be selected where the functions of the survivor reception centre and rest centre can be combined. This aids co-ordination and avoids the disruption and logistical difficulties involved in moving evacuees from one premises to another.

Kent County Council maintains a Rest Centre Directory and responders should make use of other KRF documents pertaining to evacuation and shelter.

### 10.3 Rescue

Requests for assistance and rescue assets should be made via the SCG (Strategic Coordinating Group)

This paragraph relating to the coordination of flood rescue is taken from the 'DEFRA Flooding Concept of Operations'

*'The duty to coordinate inland flood rescue lies with the Police and they will have primacy during major flood events. It is fully recognised that during a major flood event flood rescue assets will be deployed from a wide range of organisations including emergency services provided by volunteers (RNLI, Mountain Rescue, Lowland Search and Rescue, Cave Rescue etc.).*

*In order to ensure a safe and efficient response it is essential that these resources are capable of operating within the area of operation and do so under a single unified command system. Therefore it is likely the command system employed will be based upon the Fire and Rescue Incident Command System as applied in the flooding context i.e. adapted to take account of the specialist search and rescue nature of flooding and supported by dedicated flood rescue advisers. The issue surrounding coordination of the rescue effort is not yet clear.'*

This is yet to be confirmed locally for the KRF.

#### 10.3.1 Fire and Rescue Service

No body or organisation currently has a statutory duty for rescue during a flood emergency.

In addition to its wider statutory duties, Kent Fire and Rescue Services provides strategic leadership for water rescue and pumping operations and acts as specialist operations adviser during the flood response stage.

Potential resources for flood response and rescue and be found in **Appendix E** of this document.

Kent Fire and Rescue Service has recently (2008) carried out a review of the rescue capabilities within the Kent Resilience Forum Area, a copy of this report can be obtained from the BMSU for the KRF at the address on the front page of this plan or from Kent Fire and Rescue Service.

There are further national Fire and Rescue resources available via the Fire and Rescue Service National Coordination Centre (FRSNCC) in West Yorkshire. Contact number in **Appendix A** of the Pan Kent Flood Plan.

The following information should be provided as a minimum:

- location of incident or expected time/location of impact;
- nature of incident and any specific hazards, i.e. known chemical contamination;
- prevailing weather and (where known) water conditions;

- estimated number of persons requiring rescue;
- local resources already in attendance/available;
- estimate of mutual aid resources required; and
- location (grid reference / name and address) of rendezvous point. Including local access issues created by the flooding.

#### *10.3.2 RNLI*

Instructions provided to Chief Fire Officers in January 2008 states:

The RNLI will respond to requests for assistance with the Search and Rescue (SAR) of inland flooding:

- a. Where there is a potential risk to life
- b. When an appropriate authority makes a request to the RNLI Headquarters operations

Room - This is staffed continuously. Contact number in **Appendix A of the Pan Kent Multi-Agency Flood Plan**.

Providing such assets can be made available without degrading the RNLI primary function which is to provide a lifeboat service around the coasts of the UK and the Republic of Ireland.

Assuming the above criteria can be met, the RNLI will assemble teams/boats at an agreed RV close to the scene of operations. A Divisional Inspector of Lifeboats (DI) or his nominated Deputy will be the RNLI's On Scene Co-ordinator and RNLI assets will only deploy on his instruction. RNLI personnel will be dependent upon rest and refreshment arrangements provided by the local Fire and Rescue Service.

At times of heightened risk, RNLI assets may, if requested, be able to pre-position following severe weather/flood warnings.

The RNLI DI or nominated Deputy reserves the Right to withdraw RNLI teams and equipment once the risk to life has passed.

The RNLI provided this further information:

The RNLI have two Type B flood rescue teams within the east division covering Norfolk to the Isle of Wight. The equipment is based at Ipswich and our 45 trained volunteers are scattered around the coast. These teams, once requested will be underway and potentially on scene in Kent within 3 to 4 hours minimum.

Additionally the RNLI has 2 Type B teams at 4 other divisional bases located in the North of England, Wales, Scotland and Ireland, and also an extra 6 Type B teams worth of equipment at Poole. In the event of large scale national flooding the RNLI may send assets anywhere deemed necessary and in accordance with national requirements. The RNLI would generally be incorporated within the KFRS command and control system.

### *10.3.3 Others*

Other resources are available on request including air support from the Aeronautical Rescue Coordination Centre (ARCC). Contact number in **Appendix A** of the Pan Kent Multi-agency Flood Plan.

Information regarding the equipment available for rescue is detailed in **Appendix E – Resources**

## **11. Recovery**

Below is a general overview of the recovery arrangements following a flood incident. More detailed arrangements and information will be found in the Pan Kent Recovery Framework.

During the emergency / response phase a Recovery Advisory Group (RAG) will be established to advise the SCG on recovery issues. In the recovery phase, management of the incident will be handed over from the SCG to the RCG, which will be formed from the core membership of the RAG.

Information on responder roles and responsibilities during the recovery phase can be found in **Section 5 - Actions, Roles & Responsibilities** on page 22.

### **11.1 Overview of Recovery Arrangements**

#### District & Borough Councils, Medway Council and Kent County Council

Will chair the RCG during the recovery phase and co-ordinate the multi-agency response with full support from all other organisations. This will include:

- Establish priorities for action in consultation with other organisations.
- Re-establishment of remaining non-critical public services that have not been maintained in business continuity management plans as and when is appropriate.
- Provision of advice and co-ordination of social housing issues
- Co-ordination of public health issues in close co-operation with Primary Care Trust and Health Protection Agency
- Co-ordination of environmental health issues in close co-operation with the Environment Agency and Health Protection Agency
- Assess decontamination requirements and capabilities in close co-operation with the Government Decontamination Service, as necessary.
- Provision of advice and support to affected persons
- Supervise building control matters
- Co-ordinate voluntary sector involvement
- Provision of business continuity advice to the community
- Management of transport issues in close co-operation with KCC Highways, Medway Highways, Highways Agency and Kent Police.
- In conjunction with Kent Police, evaluate area / site security arrangements.
- Take steps to repair damaged defences owned and maintained by local authorities.

Kent Fire and Rescue Service

- Provide pumping and salvage assistance
- Advise on fire safety for affected commercial premises

Kent Police

- Maintain public order and security
- Establish and maintain cordons
- Manage traffic flows
- Support Humanitarian Assistance Centre; deploy family liaison officers as required

The Environment Agency

Present activity is largely confined to restoring the condition of watercourses and structures and post event 'surgeries' for those affected by a flood. These seek to explain the circumstances of the flood, respond to queries, gather information relevant to better understanding the flooding mechanisms (which may also serve to inform any future flood risk management measures) and encourage registration with the Flood Line Warnings Direct service. In conjunction with these gatherings and also more generally available, the Environment Agency has prepared a booklet, 'After a Flood' that provides information and advice for those living in flood risk areas.

The Environment Agency will, of course, and in so far as circumstances allow, take steps to repair any damage to flood defence assets and restore the standard of protection afforded by them and the conveyance capacity of watercourses. Limited stocks of sandbags are held against this eventuality. By exception, some may be made available to other responders.

NHS

- Provide public health advice and reassurance
- Monitor health effects in the community
- Reconfigure services as circumstances require
- Co-ordinate voluntary sector health related assistance

Health Protection Agency

- Monitor and advise on public health impacts

Transport

- Restore transport infrastructure
- Work with police to establish a traffic management strategy

- Adapt public transport services as necessary

Utility companies

- Re-establish supplies in accordance with Emergency Plans.

*Stand down arrangements by each organisation involved in the recovery phase will be co-ordinated through the local authority.*

Key Considerations in the Recovery Phase:

- clean up and waste disposal
- repairs to public assets / infrastructure – schools, buildings, roads, bridges
- restoration of power, communications and water
- domestic and business insurance issues
- displaced businesses
- humanitarian assistance needs including homeless / displaced residents and psychological impacts.
- The handover phase from response to recovery

More information can be found in the National Recovery Guidance:

[http://www.cabinetoffice.gov.uk/ukresilience/response/recovery\\_guidance.aspx](http://www.cabinetoffice.gov.uk/ukresilience/response/recovery_guidance.aspx)

## **11.2 Emergency Expenditure Arising From Reservoir Inundation**

Recommendation 83 of the Pitt Review states that "Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies". Local Authorities maintain General Funds for such unforeseeable eventualities. The Environment Agency is responsible for providing advice on enactment of financial/compensation provision in the event of a dam breach. However, there are a number of organisations and funding schemes (either operated by or accessible through the UK government) that may help local responders meet extra-ordinary financial costs incurred during the response to, and recovery from, an emergency. The following three web links provide information on funding sources.

CLG (2009) *The Bellwin Scheme* (online) various documents available at:

<http://www.communities.gov.uk/localgovernment/localgovernmentfinance/bellwinscheme/> (January 2011)

CLG (2009) *Support for Recovery from Exceptional Emergencies* (online) available at:

<http://www.communities.gov.uk/publications/fire/recoveryfunding> (January 2011)

Cabinet Office (2009) *Recovery Guidance – Economic Issues Financial impact on Local Authorities* (online) available at:

[http://www.cabinetoffice.gov.uk/ukresilience/response/recovery\\_guidance/economic\\_issues/financial\\_aid.aspx](http://www.cabinetoffice.gov.uk/ukresilience/response/recovery_guidance/economic_issues/financial_aid.aspx) (January 2011)



## 12. Training and Exercise

A programme of training and exercising is to be investigated with regard to type of event and frequency by the KRF Training and Exercise Group.

Each organisation is responsible for ensuring that relevant staff are fully trained in their own emergency response procedures and their particular role in support of the operation of this plan.

This plan will be subject to annual review and update of the contact details and alerting procedures. A full review will be conducted every 3 years from publication.

### 12.1 Debriefs

All incidents involving the activation of this Plan, in full or in part should be debriefed in line with the procedures documented in the **KRF Incident & Exercise Debrief Protocol** available from

<http://www.kentconnects.gov.uk/krf/krf-library/krf-document/KRF%20MA%20Incident%20-%20Exercise%20Debrief%20Protocol%20v1.0%20April%202010.pdf>

### 12.2 Training & Exercising Links with the Local Multi Agency Flood Plans

The KRF, led by the Environment Agency and KCC have produced a programme of multi-agency one day events which include a morning session of flood training, followed by an exercise in the afternoon. This has been rolled out across the KRF area to raise awareness of the multi-agency response to flooding, organisations roles, multi-agency flood plans and provide a networking opportunity for responders.

It is recommended that the KRF Training and Exercising group will look at ways in which the training and exercise programme for this plan can be assimilated into the wider flood training programme.

### 11.3 Training & Exercise Schedule

Figure 11.1: Training and Exercise Schedule

Organiser	Title of exercise/training	Type	Date	Relevant lessons or link

*KRF Off-site Reservoir Inundation Emergency Plan (v.1.0, 2011)*

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## Appendix A. Media & Communications Strategy: Supporting Information

### 1. Individual Agency Responsibilities / Messages

<p><b>Site Operator</b></p> <ul style="list-style-type: none"> <li>On detecting a potentially serious problem relating to the dam or lake notify Kent Police, KCC or Medway Council and the EA that:             <ul style="list-style-type: none"> <li>An emergency drawdown is required to mitigate the impact;</li> <li>Control of the situation has been lost and failure is inevitable;</li> <li>A large uncontrolled release of water has occurred.</li> </ul> </li> </ul> <p><b>Environment Agency</b></p> <ul style="list-style-type: none"> <li>Information about their reservoirs regulatory role / inspection regime and operation of any associated EA assets e.g. flood barriers, defences or alleviation schemes.</li> <li>If combined with other types of flooding, consider the following:</li> </ul> <p><u>Background Information &amp; Timing</u></p> <ul style="list-style-type: none"> <li>Specific details of rivers / watercourse involved</li> <li>General description of incident</li> <li>Expected weather patterns</li> <li>Time of incident – avoid giving precise times and stick to <i>'morning, afternoon, evening, overnight, next day / two days'</i>.</li> </ul> <p><u>Impact &amp; Scale</u></p> <ul style="list-style-type: none"> <li>The flood warning status ('Flood Alert', 'Flood Warning' &amp; 'Severe Flood Warning') which describes the extent of potential impact.</li> <li>Avoid using phrases such as <i>'peak'</i> or <i>'surge'</i>. Give information such as <i>'Levels will remain high for the next two days and people should remain vigilant,'</i> or <i>'rainfall in the next day will not cause current river levels to rise'</i></li> <li>Can it be related to a previous event? e.g. <i>'We expect flooding to be similar to 2003 when 100 homes and businesses flooded in x town.'</i></li> <li>Can we provide more precision on locations that need to take action? e.g. <i>'The lower town area is particularly at risk over the next two days.'</i></li> </ul> <p><u>Added Value</u></p> <ul style="list-style-type: none"> <li>We will develop proactive opportunities to promote 'multi-agency response', e.g. sandbagging, evacuations, a community protected by a flood defense scheme</li> <li>Make sure that interviewees are readily available. Hold joint interviews to promote 'multi-agency response' where possible.</li> </ul>	<p><b>Kent Police</b></p> <ul style="list-style-type: none"> <li>Whether or not there are casualties - at early stage numbers and seriousness / nature of injuries must not be confirmed (<i>it is essential to collate casualty figures centrally to avoid inaccurate information being released</i>)</li> <li>Casualty Bureau telephone number (when set up)</li> <li>Reassurance that the emergency services are coping</li> <li>Public information e.g. evacuations, road closures, advice about travel etc in conjunction with the Highways Agency</li> <li>Time of next briefing</li> <li>Priority is to save lives</li> <li>Rescue and assisting in evacuations</li> </ul> <p><b>Kent Fire &amp; Rescue Service (KFRS)</b></p> <ul style="list-style-type: none"> <li>Facts and figures on no. of crew involved</li> <li>How responding to incident (No details about number of casualties and fatalities to be released), pumping water from sites, emergency rescues</li> <li>Health and safety of sites</li> </ul> <p><b>South-East Coast Ambulance Service (SECAMB)</b></p> <ul style="list-style-type: none"> <li>Facts and figures on no. of crew involved</li> <li>How responding to incidents (No details about number of casualties and fatalities to be released)</li> </ul> <p><b>Health Protection Agency (HPA) / Food Standards Agency (FSA)</b></p> <ul style="list-style-type: none"> <li>Health information if there are health implications e.g. polluted food and drinking water (see also <b>Water Companies</b>).</li> </ul> <p><b>NHS Trusts</b></p> <ul style="list-style-type: none"> <li>Details about receiving hospitals - No details about number of casualties and fatalities to be released</li> <li>Affected services and business continuity arrangements.</li> </ul> <p><b>Highways Agency</b></p> <ul style="list-style-type: none"> <li>Info on road closures, diversions (motorways &amp; trunk roads) - in conjunction with Kent Police and KCC and Medway Council Highway Services.</li> </ul> <p><b>Medway Council</b></p> <ul style="list-style-type: none"> <li>As per <b>KCC &amp; District Councils</b>.</li> </ul>	<p><b>Maritime &amp; Coastguard Agency (MCA) / Royal National Lifeboat Institute (RNLI)</b></p> <ul style="list-style-type: none"> <li>Information on their role in the response / rescue effort and relevant health &amp; safety advice e.g. around swift / deep waters.</li> </ul> <p><b>Kent County Council (KCC) &amp; District Councils</b></p> <ul style="list-style-type: none"> <li>Provide information to their local communities (including business local communities) to warn and inform through all phases of a flooding incident through the website, local radio and other forms of media</li> <li>Information / responsibilities will include:             <ul style="list-style-type: none"> <li>Details of rest centres (locations, times, contact telephone numbers etc), evacuation routes and details of District Councils website for more information</li> <li>Provision of welfare and trauma support at rest centres, while coordinating voluntary sector support</li> <li>Provision of emergency beds and blankets at rest centres if required</li> <li>Assisting with evacuation by providing transport to rest centres if required</li> <li>Traffic management – information on road closures, diversions etc. (non-motorway &amp; trunk routes).</li> <li>Provision of sandbags - check before releasing information as this will depend on the council's policy</li> </ul> </li> </ul> <p><b>Water Companies</b></p> <ul style="list-style-type: none"> <li>Would need to provide information:             <ul style="list-style-type: none"> <li>Directly to customers on public health advice if drinking water supplies were affected.</li> <li>On locations of alternative supplies of water such as bottled water and static tanks, in conjunction with other agencies.</li> <li>To the SCG, if support is required from other agencies in order to protect / restore water supplies e.g. pumping water from flooded sites, back-up power supplies to site, support in the delivery and deployment of alternative water supplies.</li> </ul> </li> </ul> <p><b>Electricity / Gas Companies</b></p> <ul style="list-style-type: none"> <li>Would need to provide information of critical infrastructure and implications for the public.</li> </ul>
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## 2. Joint Messages: Flooding

Preparedness Phase	Potential Emergency Phase	Emergency / Response Phase	Recovery Phase
Before a Flood	During a Flood	After a Flood	After a Flood / returning home
<ul style="list-style-type: none"> <li>• Prepare a 'Flood Kit' and include the following:                             <ul style="list-style-type: none"> <li>○ Pack a small bag with essential belongings and include warm clothes;</li> <li>○ Torch (check batteries), radio (wind up or battery powered);</li> <li>○ Food, water and other drink;</li> <li>○ Mobile phone (pre-input useful numbers);</li> <li>○ Any medicines that you might need to take</li> <li>○ Any important documents that you have; and</li> <li>○ A first aid kit.</li> </ul> </li> <li>• <b>Remember: Keep this bag easily accessible.</b></li> <li>• Collect personal belongings, including insurance and bank details, and essential telephones numbers together, and keep them in a waterproof bag.</li> <li>• Move people, pets, valuables and sentimental items upstairs or in a high place downstairs.</li> <li>• Keep a separate list of useful telephone numbers to hand (this should include your local Council, your insurance company and Floodline – 0845 988 1188)</li> <li>• Find out where and how to turn off your Gas and Electricity. Ensure that you switch it off if flooding is imminent before evacuating.</li> <li>• If possible, move electrical equipment and furniture upstairs</li> <li>• Any furniture that you cannot move upstairs, try to raise well off the floor</li> <li>• Alert neighbours and assist the elderly, infirm and those with small children</li> <li>• Block doorways and air bricks</li> <li>• Avoid walking and driving through floodwater, there could be hidden hazards.</li> <li>• Keep up to date with local radio for further information and announcements and via <b>Floodline 0845 988 1188</b>.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to listen to situation updates on your local radio and via <b>Floodline 0845 988 1188</b>.</li> <li>• Keep dry and out of floodwater if possible</li> <li>• Stay in your property, <u>if safe to do so</u> (see advice below), unless advised otherwise by the emergency services or the floodwater has receded.</li> <li>• <b><i>Reservoir Emergency-Specific Advice: If you are told to evacuate your property because it is in the path of the flood, you should leave your house as soon as possible as <u>it will not be safe to shelter there</u>. If you have not been told to evacuate you should await further information: tune into local radio or television stations and look out for the emergency services or other officials in the area.</i></b></li> <li>• It is important not to underestimate the danger of floodwaters:                             <ul style="list-style-type: none"> <li>○ Do not walk through moving water. 15cm (six inches) of moving water can knock you off your feet. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.</li> <li>○ Do not drive through floodwaters. It only takes 60cm (two feet) of water to lift and sweep away a 4x4 car or small lorry; and</li> <li>○ There may be hidden dangers in the water including rubble, vegetation and exposed drains.</li> </ul> </li> <li>• Do not walk on river banks, sea defences or cross bridges over torrential rivers.</li> <li>• Avoid contact with floodwater and wash any exposed parts before handling food or attending to wounds</li> <li>• If possible, move electrical equipment and furniture upstairs.</li> </ul>	<ul style="list-style-type: none"> <li>• Contact your insurers as soon as possible and follow their advice. Most insurers have a 24hr helpline. Do not throw away damaged goods until your insurer has authorised you to do so. It is a good idea to take photographs of the damage.</li> <li>• Check the safety of electricity and gas before use. A qualified electrician needs to check any electrical equipment and circuits that have been exposed to floodwater.</li> <li>• Avoid contact with any remaining floodwater or items having had contact with floodwater unless wearing protective gloves / clothing.</li> <li>• Boil all tap water until it is declared safe by the water supply company</li> <li>• Wash yours and your children's hands frequently with bottled water if your supply has not been declared fit for use. Disinfect any children's toys.</li> <li>• Dispose of any contaminated food, including tinned food, defrosted food, and packaged food that have been exposed to floodwater.</li> <li>• Seek medical assistance if any health issues appear, especially flu like symptoms.</li> <li>• Ventilate your property whilst taking care for security.</li> <li>• Do not throw rubbish and furniture outdoors; wait for an organised collection.</li> <li>• During these hard times, bogus / cowboy builders / traders are frequently offering their services. Make sure that you get a written quotation that is on letter headed paper with a landline contact number and address.</li> </ul>	

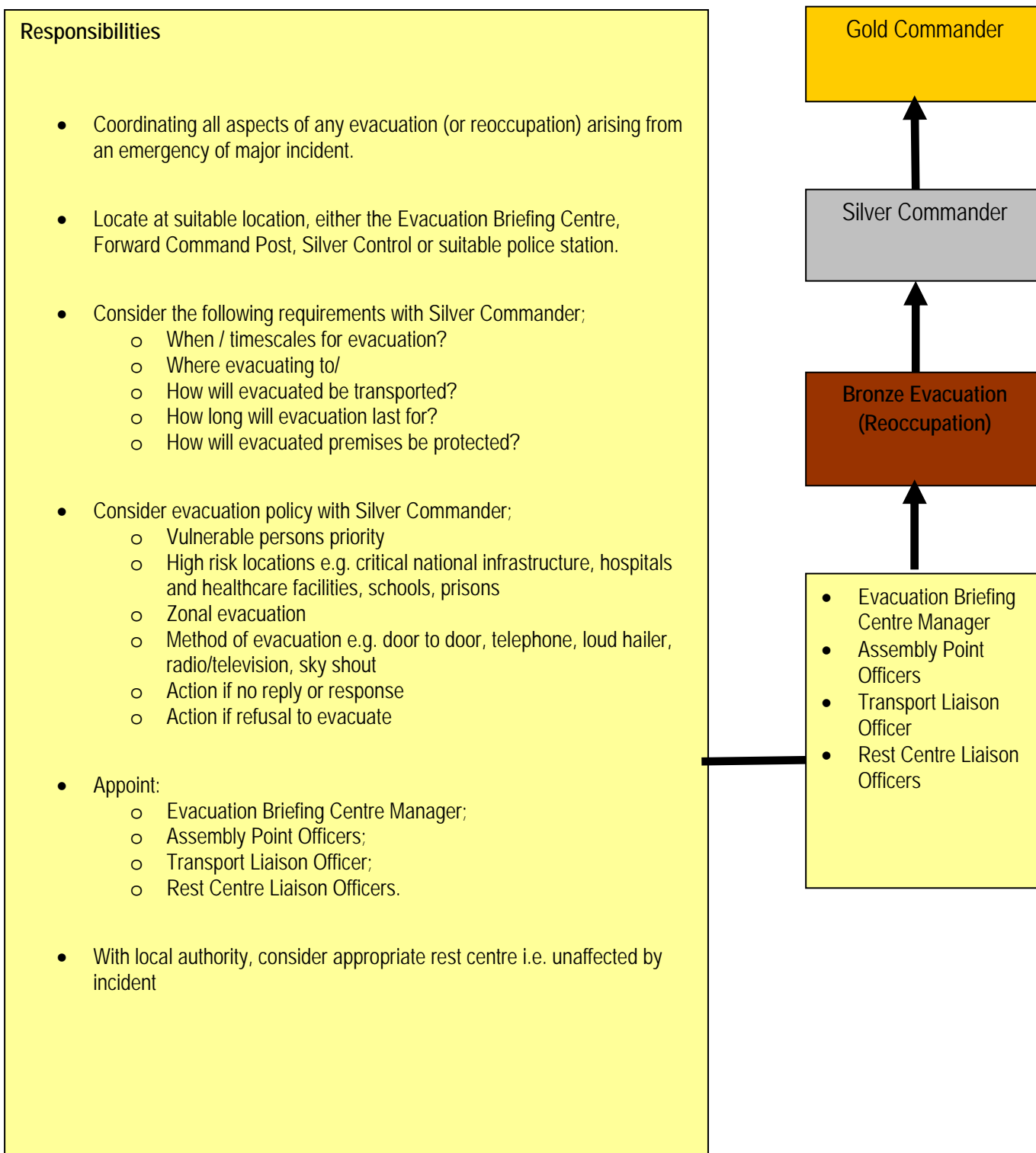
### 3. Joint Messages: Evacuation

Preparedness Phase	Potential Emergency Phase	Emergency / Response Phase	Recovery Phase
Before Evacuation		During Evacuation	After Evacuation
<ul style="list-style-type: none"> <li>Risk is inherently unpredictable. We would only ask the public to evacuate in cases where there is a credible risk to loss of life.</li> <li>Kent Resilience Forum (KRF) and its partners have been working for some time to develop plans to handle mass evacuation. However there are things you can do to prepare yourself in the event of an emergency.</li> <li>Talk about what to do with your friends and family.</li> <li>Think about an emergency contact list</li> <li>Prepare a grab bag and keep it in the office or at home which includes warm clothes, water, first-aid kit and wet wipes.</li> <li>Think about insurance, what happens when your water or power goes off, what's your child's school emergency plans and what will the school do if you are not able to collect them.</li> <li>Businesses and public buildings should have evacuation plans in the event of incident. It is your duty to prepare those in your care or employment to evacuate in an emergency. For guidance on what to expect think about:</li> <li>Have you plans in place to receive messages/instruction and act on them?</li> <li>Are plans in place so all those in your care can see/hear all emergency messages?</li> <li>Will your plans work in all types of emergency?</li> <li>Visit the <a href="http://www.kentprepared.org.uk">www.kentprepared.org.uk</a> website for guidance and further information on how you can prepare for an emergency.</li> </ul>		<p>If evacuation becomes necessary:</p> <ul style="list-style-type: none"> <li>Stay calm and do not panic.</li> <li>Police officers and / or other officials will try to visit all properties at risk to advise on the requirement to evacuate.</li> <li>The area affected is <i>[insert details]</i></li> <li>Pre-arranged destinations for those evacuating (Rendezvous Points) are: <i>[insert details]</i></li> <li>Those who can self-evacuate, should do so. Those vulnerable groups such as the elderly and children will be evacuated by the relevant authorities.</li> <li>If road conditions permit, move vehicles to unaffected areas and ask friends / family if you can share their parking facilities.</li> <li>Always carry with you:                             <ul style="list-style-type: none"> <li>Your medication;</li> <li>Emergency contact numbers;</li> <li>Important documents such as a driving license or passport;</li> <li>Some basic essentials in your grab bag.</li> </ul> </li> <li>Within the secure cordon the authorities will maintain the security of valuables and property. Looters will be dealt with severely</li> <li>You should not attempt to return to the area until it is safe to do so.</li> <li>Further information for those affected or concerned can be found at: <i>[insert details]</i></li> </ul>	<ul style="list-style-type: none"> <li>Thank you for your co-operation and support.</li> <li>We are doing all we can to return everyone affected to a degree of normality.</li> <li>However you will not be able to return until it is safe to do so.</li> <li>Those that cannot return due to damage to their property or business premises will be assisted.</li> <li>Some public services may still be affected, but we will try and keep disruption to a minimum.</li> </ul>

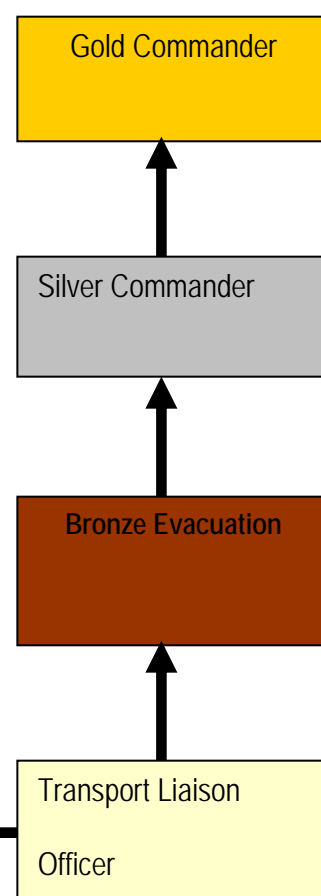
## Appendix B – Evacuation Pull-outs

### Police Evacuation Roles

#### Bronze Evacuation (and Reoccupation)



- Establish Evacuation Cell comprising of the following organisations as appropriate;
  - Kent County Council or Medway Council
  - District or Borough Council
  - Kent Fire and Rescue Service
  - South East Coast Ambulance
  - Highways Agency
  - Kent / Medway Highways Services
  - Voluntary Sector
  - Health
  - Environment Agency
  - Transport Companies
  - Prison Service
  - Military
  - Animal Welfare e.g. RSPCA
- Consider appropriate Evacuation Assembly Points
- Liaise with local authority and voluntary agency staff in respect of provision of welfare support to the evacuees including;
  - Medical assessment and treatment;
  - Clothing;
  - Food and drink;
  - Interpreters;
  - Telephone access;
  - Information for survivors;
  - Welfare support.
- Consider personnel resources required for evacuation.
- Consider deploy CBRN Communication trailers and barriers
- Consider air support
- Ensure completed Evacuee Forms are forwarded to the Casualty Bureau.
- Consider media services for public communication
- Liaise Bronze Community for public reassurance
- Update Silver Commander on evacuation progress



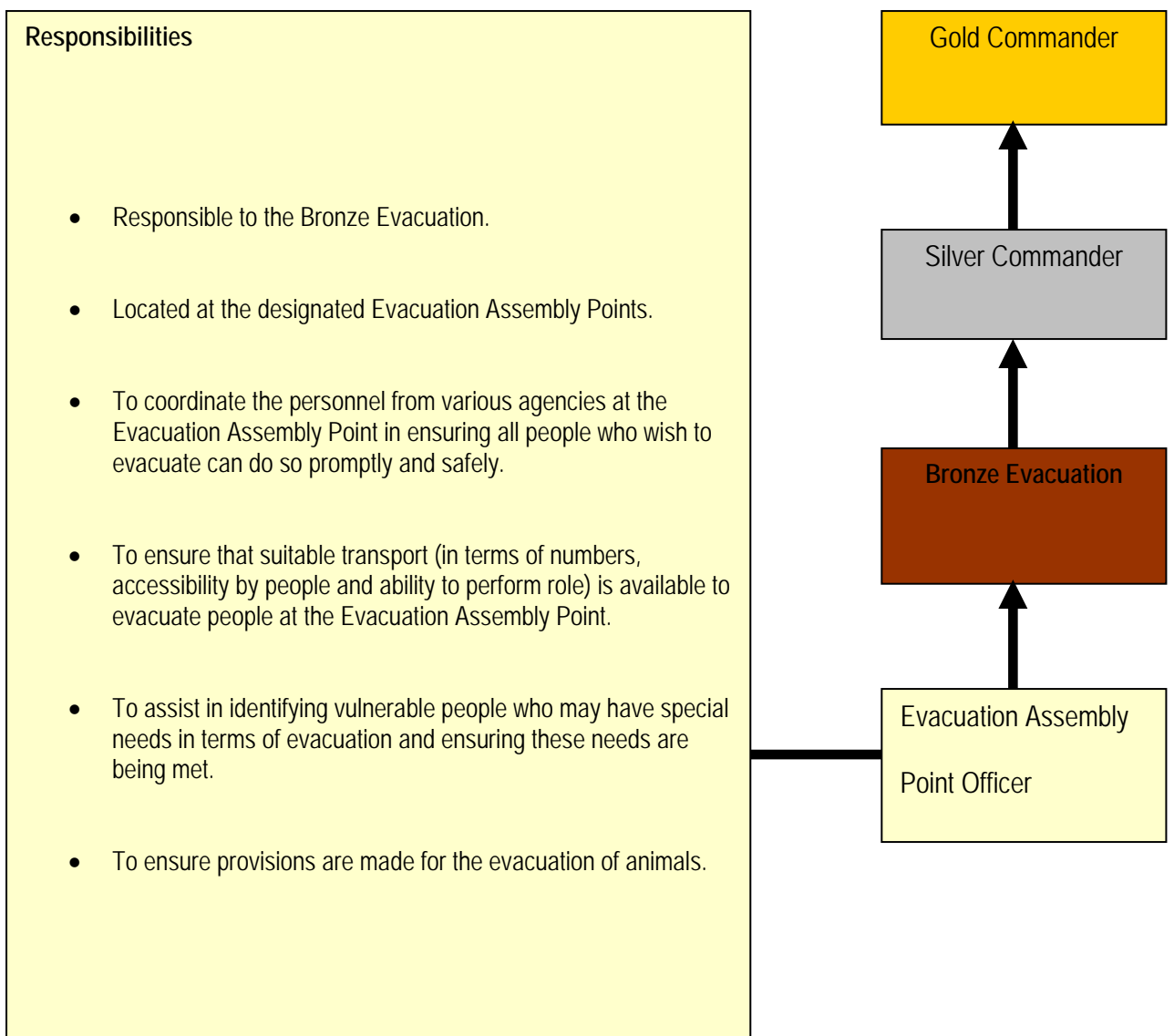
## **Evacuation Briefing Centre Manager**

### **Responsibilities**

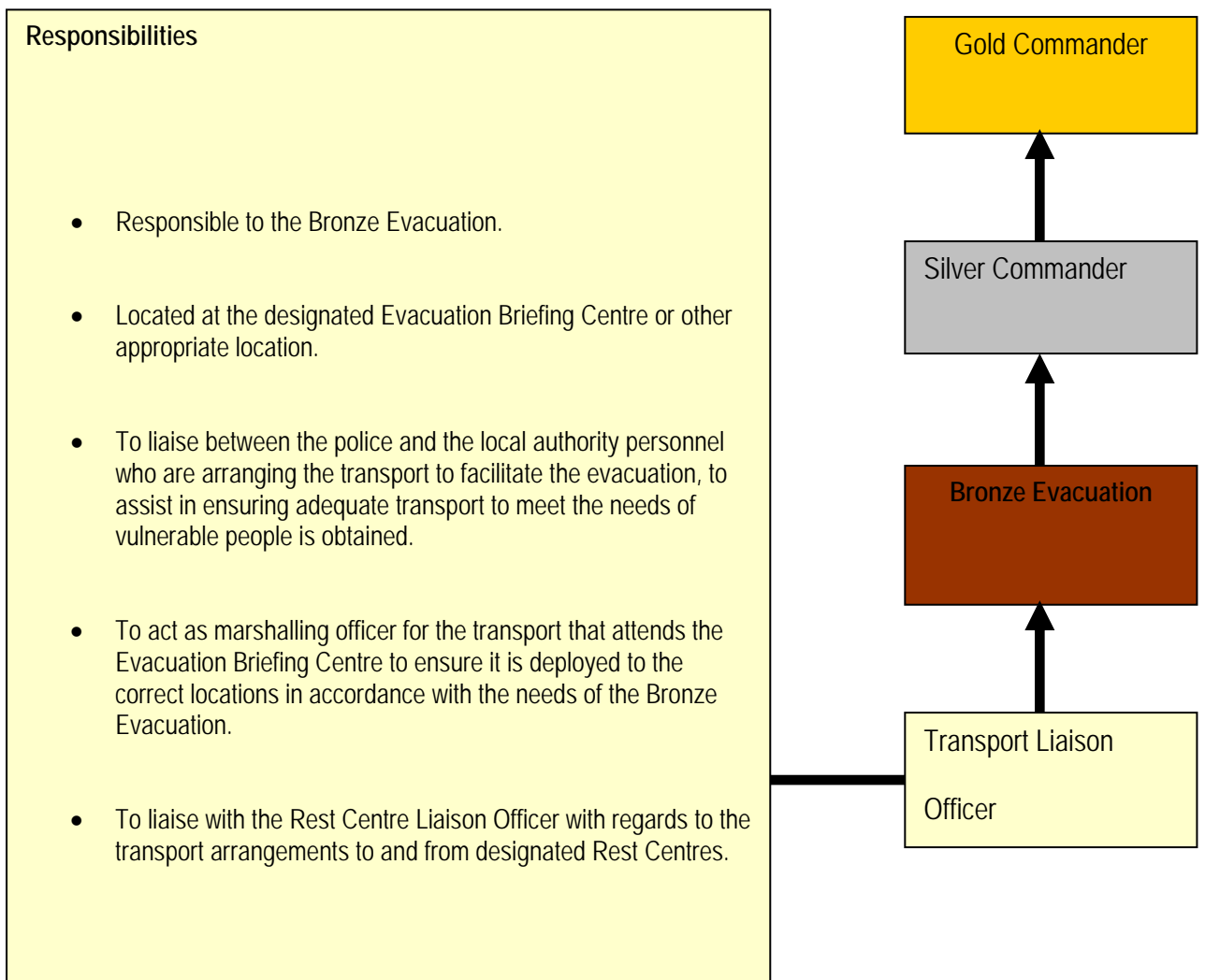
- Responsible to the Bronze Evacuation.
- Located at the designated Evacuation Briefing Centre.
- To coordinate the personnel from various agencies at the Evacuation Briefing Centre to ensure they are adequately briefed on the scale, nature and timescale of the evacuation required, where the Evacuation Assembly Points are located, and where people will be taken to as a place of safety.
- To work in conjunction with the local authority, other statutory and voluntary agencies to form multi-agency teams to attend designated Evacuation Assembly Points and to notify the public by the means agreed by the Silver Commander and Bronze Evacuation (e.g., door to door, use of loud hailers, etc.).
- To ensure that police personnel deployed to facilitate the evacuation are adequately briefed on their role and have adequate personnel protective equipment for their role and the conditions.
- To ensure the health, safety and welfare needs of police personnel involved in the evacuation are adequately met.
- To ensure provisions are made for the evacuation of animals.
- To assist the media deployed to the Evacuation Briefing Centre to ensure they have current and accurate information about the evacuation for broadcast to the public.



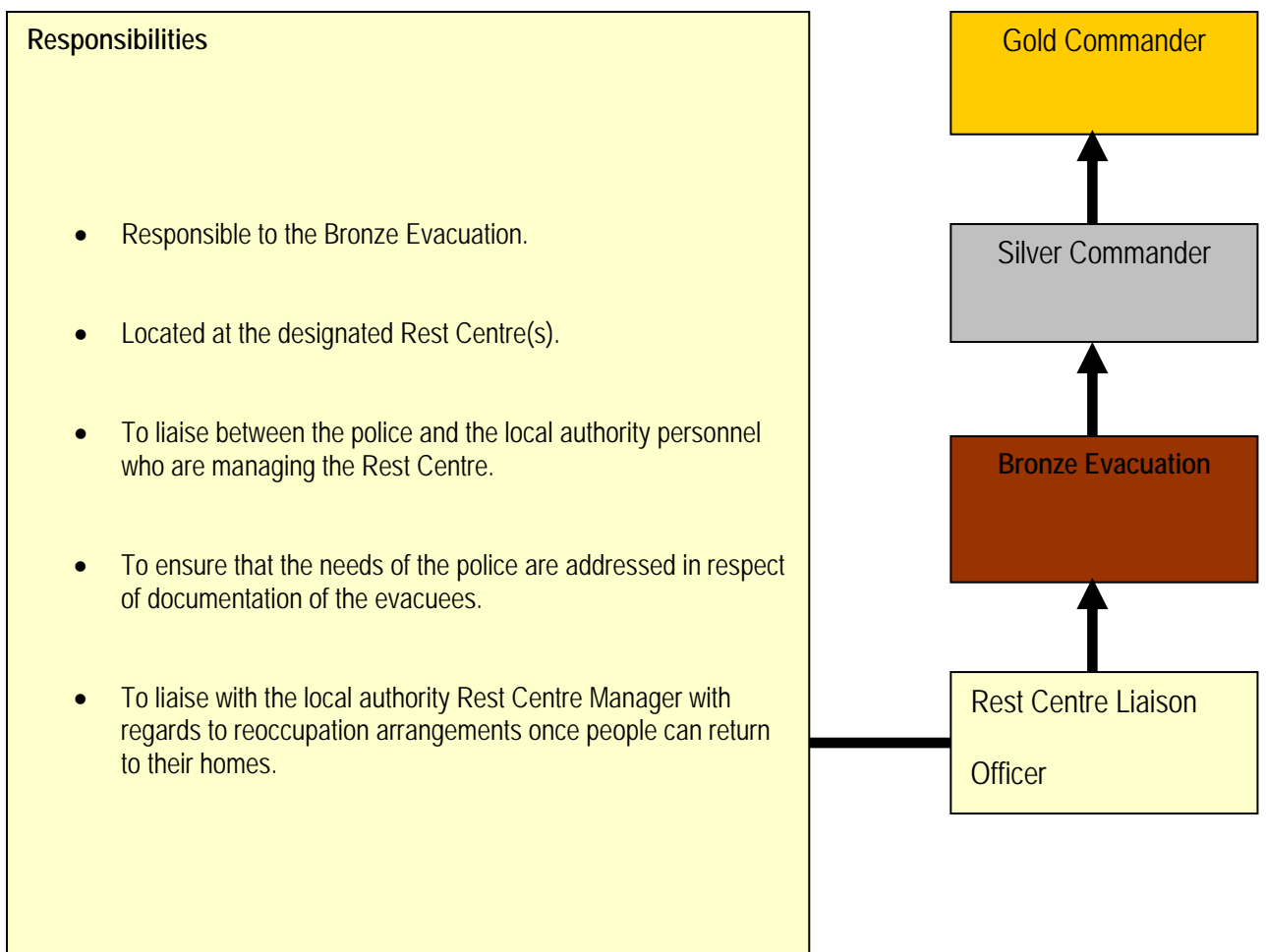
### Evacuation Assembly Point Officers



### Transport Liaison Officer



### Rest Centre Liaison Officer



### Local Authority Evacuation Role

<p><b>FLOODING</b></p> <p>district responsibility will be to:</p> <ul style="list-style-type: none"><li>• Provide humanitarian assistance, such as rest centres</li><li>• Provide technical services and support to other agencies</li><li>• Lead in recovery working</li><li>• Ensure that critical function delivery can be maintained</li><li>• Exercise a community leadership role</li></ul>
<p>You may want to consider the following focus points:</p> <ul style="list-style-type: none"><li>• Establish which is the lead organisation</li><li>• Establish nature, extent and duration of event with particular regard to the district area</li><li>• Establish number of properties that could be affected for different scenarios</li><li>• Establish availability of personnel</li><li>• Establish availability of rest centres</li><li>• Establish availability of contractor(s)</li><li>• Prepare <i>Frequently Asked Questions</i> for Contact Centre and Intranet</li><li>• Check stocks of sandbags</li><li>• Business continuity issues</li><li>• Data available to assist evacuation planning</li></ul>
<p>You may want the following services included in the Emergency Centre team:</p> <ul style="list-style-type: none"><li>• Engineering</li><li>• Environmental Health</li><li>• Housing &amp; Homelessness</li><li>• Street Scene</li></ul>
<p>You may want to deploy the following personnel:</p> <ul style="list-style-type: none"><li>• Incident Liaison Officers</li><li>• Rest Centre Team</li></ul>
<p>You may want the following agencies represented at the Emergency Centre:</p> <ul style="list-style-type: none"><li>• Kent County Council Emergency Planning Officer (Duty EPO 01622 221 321)</li><li>• Kent Police</li><li>• Kent Fire &amp; Rescue</li><li>• South East Coast Ambulance Service (SECAMB)</li><li>• NHS Kent &amp; Medway</li><li>• Environment Agency (EA)</li><li>• SERCO</li></ul>

You may want to refer to the following plans (if applicable):

- Major Emergency Plan
- KRF Pan Kent Strategic Emergency Response Framework
- Multi- Agency Flood Plan
- KCC Flood Plan
- KRF Pan Kent Multi- Agency Flood Plan
- KCC Rest Centre Directory
- KCC Rest Centre Guidance
- City Centre Evacuation Plan
- KRF Humanitarian Assistance Plan
- KRF Vulnerable Persons Plan

### Environment Agency Evacuation Role

<b>Role</b>
<ul style="list-style-type: none"> <li>• Data provision to Strategic Coordination Group and Tactical Coordination Group as requested</li> <li>• Staff provided to relief effort under agree command and control structure on site, if requested, deemed appropriate and agreed at SCG.</li> </ul>
<b>Resources</b>
<ul style="list-style-type: none"> <li>• Most available EA resources are listed in <b>Appendix E</b></li> </ul>

### Data Available and Potentially Required During an Evacuation

<b>Data Available</b>
<p><b>Data from Environment Agency</b></p> <ul style="list-style-type: none"> <li>• Flooding Outlines for a number of return periods (<i>NOT AVAILABLE IN ALL AREAS</i>)</li> <li>• We can provide mapping where requested and the data is available</li> <li>• The EA hold some flood animations and animated model runs (<i>NOT AVAILABLE IN ALL AREAS</i>)</li> <li>• Possible number of properties affected in a given area</li> <li>• Forecast and potential scenario</li> </ul>
<p><b>Data from Local Authority</b></p> <ul style="list-style-type: none"> <li>• Mapping within SFRA (Strategic Flood Risk Assessment) <ul style="list-style-type: none"> <li>○ Flood Outlines, including for different return periods</li> <li>○ Hazard Mapping including depth and velocity</li> <li>○ Inundation zones</li> <li>○ Breach modelling</li> </ul> </li> </ul> <p style="text-align: center;"><b>NOT ALL THIS DATA IS AVAILABLE IN ALL AREAS OR IN ALL SFRA</b></p>
<p><b>Kent Highways Services</b> also have a <a href="#">flood depth indication tool</a> which can be used to identify vulnerable areas on the highways infrastructure during a flood. This can assist in identifying safe evacuation routes.</p>

**Appendix C: Evacuation Cards**

**Evacuation Area ...**

**MAJOR INCIDENT IN YOUR AREA**

**There is a concern that you and your property are at risk from flooding from a local reservoir.**

**EVACUATE YOUR PROPERTY NOW**

**Make your way to ..... by foot/car**

**Do not drive (delete as appropriate)**

**If you need assistance please alert one of Police Officers in the area.**

**Before leaving your home remember to:**

**Switch off gas, electricity and water at mains**

**Close and lock all windows and doors**

**Take any medication and medical equipment with you**

**Take your pets and some pet food**

**If a neighbour has particular needs, please inform one of the officials or Police Officers**

**If you choose to go elsewhere, complete the details overleaf and hand this to one of the Police Officers in your area.**

**Remember to tune-in to BBC Radio on (insert frequency) FM & (insert frequency) AM to keep up-to-date on the situation.**

**ONLY COMPLETE THIS IF YOU ARE NOT GOING TO**

.....(insert reception centre details).....

**NAME:** .....

**CURRENT ADDRESS:** .....

.....

**POST CODE:** .....

**NUMBER OF PEOPLE IN HOUSEHOLD:**.....

**CONTACT NUMBER (MOBILE NUMBER IS PREFERRED:**

.....

**WHERE WILL YOU BE STAYING (PLEASE COMPLETE EVEN IF STAYING AT YOUR PROPERTY):** .....

.....

.....

**POST CODE:** .....**TEL. NO.**.....

## **THANK YOU FOR YOUR COOPERATION**

**IF YOU CHOOSE NOT TO LEAVE YOUR HOME PLEASE READ AND SIGN THE STATEMENT BELOW –**

I have been informed that I should evacuate my home/premises, due to a reservoir emergency. I understand that if I choose to remain in my home/premises, I do so at my own risk.

**Signed**.....

## **Appendix D: Command & Control Centre Information**

### **Strategic Co-ordinating Group (Gold Group)**

**Name:** Multi Agency SCC (Strategic Co-ordinating Centre) / Gold Group

**Location:** Kent Police Headquarters, Force Control Room, Sutton Road, Maidstone, Kent, ME15 9BZ

**Parking:** Access and parking is in Lansdowne Avenue for the Force Contact and Control Centre. For the main office access is via Sutton Road and parking is either in the small area at the front of the building or Lansdowne Avenue.

**Access in working hours:** You will access via the reception area and be directed to the SCC.

**Access outside working hours:** You will access via the FCR reception.

**Requirements:** You will be required to wear ID. You will need to supply to reception; your full name, details of your organisation, and vehicle details, including make, model and registration. You will be issued with an personal identification badge.

**Additional Information:** Press Officers must also register in this way.

*Further information should be obtained from the Police or from your SCC User Guide (if your organisation has a copy)*

### **Tactical Co-ordinating Group (Silver)**

**Name:** Multi Agency TCC (Tactical Co-ordinating Centre) / Silver

**Location:** At a designated Coordination Centre at police Premises or the County Emergency Centre; County Emergency Centre, 4th Floor Invicta House, County Hall ME14 1XX

**Parking:** Nearby public car parks. At weekends the car park besides the building, in Lower Boxley Road, is open as a public pay and display.

**Access in working hours:**

During the working day access will be via the main door - the one facing Sessions Square, looking south towards Week Street - in the usual way. The outside door needs a staff swipe card to get in, so we would expect to have somebody at that entrance to direct people up to the 4th floor.

**Access outside working hours:**

Outside working hours KCC's Major Emergency Plan has procedures for gaining access to the building, which is normally empty, locked and alarmed. The Emergency Planning Duty Officer has these procedures and we will be responsible for opening up. Access will then be via the north door from the footpath running beside the car park, between the short stub of Lower Boxley Road and Sandling Road. We will have somebody at that door to let people in, sign them into the building and direct them up to the 4th floor.

**Requirements:**

Attending staff will be required to wear ID.



*KRF Off-site Reservoir Inundation Emergency Plan (v.1.0, 2011)*

**Additional Information:**

If the County Emergency Centre is to be opened and set up we would expect to clarify the exact access arrangements at the time; if it is to be activated people will need to report to the south door during the normal working day and the north door outside normal hours.

**Environment Agency Area Incident Room**

**Name:** Environment Agency Area Incident Room

**Location:** Orchard House, London Road, Addington, West Malling, Kent, ME19 5SH

**Parking:** There is free parking on site, but it can be limited at busy times.

**Access in working hours:**

Via reception area.

**Access outside working hours:**

Access doors will be locked and you will need to alert the Area Incident Room of your arrival. Someone will be despatched to reception to collect you.

**Requirements:**

ID is to be worn at all times.

**Further information on Command and Control Centres can be found in the Pan-Kent flood plan.**

### Appendix E: Resources

Resource	Who / Where
Sandbags	<p><b>KCC Approx.</b> 10k filled bags at Emergency Response Depots in Kent. <i>Some District and Borough Councils may hold stocks of sandbags, contact the council concerned for more information.</i></p> <p><b>Environment Agency.</b> The EA does have a stock of sandbags available (filled and unfilled and a sand bagging machine), these are mainly used as part of the EA's defence duties, but could be made available at the request of an SCG.</p>
Boats	<p><b>Kent Fire and Rescue Service:</b></p> <p><b>Boats – Non tidal</b></p> <ul style="list-style-type: none"> <li>• 2 x 4 metre rigid inflatable craft (powered), capable of carrying a crew of 3, and rescuing up to 5 people. These boats are based at Larkfield and Whitstable Fire Stations (1 at each).</li> <li>• 2 x 3.8 metre fully inflatable craft, (non-powered) capable of carrying a crew of three and rescuing up to 5 people. These boats are based at Strood and Sheppey Fire Stations (1 at each).</li> </ul> <p><b>Boats – Tidal</b></p> <ul style="list-style-type: none"> <li>• 1 x 8.5 metre (tidal) rigid inflatable craft (powered), capable of carrying a crew of 2, and rescuing up to 16 people. This boat is based at Sheppey Fire Station.</li> <li>• <b>Kent Police:</b> 2 inflatable crafts and an aluminium flood boat on wheels; 2 crew all trained to advanced power boat/rescue boat</li> <li>• <b>Environment Agency:</b> 2 aquapeche (1 large 1 small), 2 Dory's, 2 Avon inflatable. All these craft are powered and although the EA have no trained personnel for rescue at present these resources could be made available for use by trained personnel from other organisations.</li> <li>• <b>Port of London Authority:</b> 1 x 6.5 metre delta rigid inflatable boat, with road going trailer, fitted with 150bhp outboard engine. (10 crew trained to RYA power boat level 2) 10 Crew all trained to RYA level 2. Port of Dover can be asked if needed.</li> </ul>
Pumps	<p><b>Kent Fire and Rescue Service:</b></p> <ul style="list-style-type: none"> <li>• 86 front line appliances capable of pumping in flooding situations.</li> <li>• 1 High Volume Pump (HVP) capable of pumping between 7-8000 litres per minute. This is located at Whitstable Fire Station;</li> <li>• 2 water management units which have 1.8km of hose each, for pumping water. These can be used alone and/or in conjunction with the HVP. These units are based at Tonbridge and Faversham Fire Stations.</li> </ul> <p>Kent Fire and Rescue Service use High Volume Pumps (HVPs), which are 150mm in diameter and can pump water up to 3km in distance, assuming there is a suitable discharge point.</p> <p><b>Environment Agency:</b> The Environment Agency has 1 x 24" pump, 3 x 8" pumps, 17 x 6" pumps and another 2", 3" &amp; 4" pumps and hose. These are mainly used as part of the EA's defence duties, but could be made available at the request of an SCG.</p>

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Resource	Who / Where
Transport	KCC Passenger Transport West Malling, Aylesford and other locations county wide <i>Some District and Borough Councils may have access to transport vehicles, contact the council concerned for more information.</i>
Plant and vehicles	<b>Kent Highway Services.</b> Emergency Response Depots. <i>Some District and Borough Councils may have access to plant and vehicles, contact the council concerned for more information.</i>  <b>Environment Agency:</b> The Environment Agency has a fleet of various vehicles, plant and trailers including 4X4s. These are mainly used as part of the EA's defence duties, but could be made available at the request of an SCG.  KCC can co-ordinate volunteer 4x4 vehicles for responder use in an emergency. See volunteer organisation website: <a href="http://www.southeast4x4response.org.uk/">http://www.southeast4x4response.org.uk/</a>
Temporary Defences	Some temporary defence is held by the <b>Environment Agency</b> in Kent.
Catering	<b>KCC and Medway</b> School Meals Contractors. School Kitchens.
Waste	<b>KCC and Medway</b> Management. Waste Management
Specialist advice on structures	<b>KCC Kent Highway Services</b> District/Borough Council Building Control
Air support	<b>Aeronautical Rescue Co-ordination Centre (ARCC) and Military Aid.</b>
Voluntary Sector Involvement	Various Organisations County wide

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Resource	Who / Where
Data Available	<p><b>Data from Environment Agency</b></p> <p><b>Fluvial and Coastal flood maps</b></p> <ul style="list-style-type: none"> <li>• Flooding Outlines for a number of return periods (<i>NOT AVAILABLE IN ALL AREAS</i>)</li> <li>• Can provide mapping where requested and the data is available</li> <li>• The EA hold some flood animations and animated model runs (<i>NOT AVAILABLE IN ALL AREAS</i>)</li> <li>• Possible number of properties affected in a given area</li> <li>• Forecast and potential scenario</li> </ul> <p><b>Reservoir maps</b></p> <ul style="list-style-type: none"> <li>• Inundation outline maps</li> <li>• Hazard maps</li> </ul> <p><b>Data from Local Authority</b></p> <p><b>Fluvial and Coastal flood maps</b></p> <ul style="list-style-type: none"> <li>• Mapping within SFRA (Strategic Flood Risk Assessment) <ul style="list-style-type: none"> <li>○ Flood Outlines, including for different return periods</li> <li>○ Hazard Mapping including depth and velocity</li> <li>○ Inundation zones</li> <li>○ Breach modelling</li> </ul> </li> </ul> <p><b>NOT ALL THIS DATA IS AVAILABLE IN ALL AREAS OR IN ALL SFRA</b></p> <p><b>Reservoir maps</b></p> <ul style="list-style-type: none"> <li>• Inundation outline maps</li> <li>• Hazard maps</li> </ul>
Other Resources	<p><b>Kent Fire and Rescue Service:</b></p> <ul style="list-style-type: none"> <li>• 45 life jackets, 45 pairs of waders and other ancillary PPE as a non-mobile special. These are based at Maidstone, Canterbury and Medway Fire Stations</li> <li>• 10 x 5 metre air track paths capable of being towed by a rescue boat, these have a capacity of rescuing 10 members of the public, these are based at Strood, Sheppey, Whitstable and Larkfield Fire Stations</li> <li>• Some councils hold supplies of bedding and other supplies on behalf of KCC</li> </ul> <p><b>Environment Agency:</b> The Environment Agency has mobile welfare units and lightening rigs. These are mainly used as part of the EA's defence duties, but could be made available at the request of an SCG</p>

Appendix F – Kent Fire and Rescue Services Water Safety Aid Memoir

Hazards	Risks	Control Measures
Water		<b>Pre-planning!</b> Equipment, training, procedures, command arrangements and site familiarisation
Current, flow, under-tow, whirlpools, eddies-hydraulic features + force of water	Entrapment, drowning	<b>KEEP OUT!</b> Correct PPE= Life-jackets/PFDs, defensive swimming, early rescue-downstream throw lines, never work alone, never put feet down in flowing water if swept away.
Depth of water/ mud	Entrapment, drowning	<b>KEEP OUT!</b> Probe ground, correct PPE=Life-jackets
Water temperature	Cold water shock causing drowning, hypothermia	<b>KEEP OUT!</b> Early rescue, never work alone, PPE=Life-jackets/boots/waders/dry suit + thermal suit etc
Water clarity	Entrapment, drowning	<b>KEEP OUT!</b> Probe ground ahead
Pollution	Infection/health	<b>KEEP OUT!</b> PPE=boots/waders/dry suit (barrier protection), hand and face washing, discipline (no smoking, eating, drinking in risk area)
Debris	Impact injuries	<b>KEEP OUT!</b> Upstream spotters, agreed warning signals-whistles

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Hazards	Risks	Control Measures
Weather/ Environment/ Specialised Operations		Pre-planning! Equipment, training, procedures, command arrangements and site familiarisation
Weather	Fatigue/hypothermia or hyperthermia	Relief crews, welfare, rest & recuperation (R&R) arrangements
Riverside/ shoreline conditions- cluttered/slippery/silt-traps, onlookers	Slipping, tripping and falling, silt traps and additional casualties	Enforced 3 metre risk zone, lighting, safety brief, minimum level of PPE (Lifejackets, boots, gloves etc.), never work alone, site familiarisation
Inadequate lighting	Disorientation, getting lost	Personal torches, scene lighting, personal issue light sticks, tight command & control over personnel
Background noise	Warnings not heard-failure of communication	Whistles and hand signals.
Overhead power lines	Electrocution	Risk assess, safety brief
Specialised operations	Fatigue of specialised personnel/unsafe personnel in risk area	Relief crews, adequate resources, R&R, 3 metre risk zone
Work equipment Falling into water	Cessation of work/delays/impact injuries	Adequate resources, safety observers, safety brief
Surface vessel movements	Impact/unguarded props	Safety brief, command and control, safety observers (upstream and downstream spotters- throw line operators)

## **Appendix G: How to contact UK Power Networks in an Emergency**

### **How to report a power cut or emergency**

All power cuts should be reported to our 24-hour management centre using the free phone 24-hour hotline for your area:

**London 0800 028 0247**

**South East (Kent, Surrey & Sussex) 0800 783 8866**

- Your call will be answered by an automated message system, the call agents are trained to deal with Category 1 and 2 responders.
- To help us help you, we need to know **the postcode and address of at least one of the properties** affected by the power cut and **the time the power cut happened**.
- Explain to the call agent who you are and why you are calling - that is, your role and your involvement in the incident.
- If you are able to offer help to the customers affected then please tell us.
- To restore supplies we reconnect the largest number of customers possible at each stage.
- If you have information that you think could influence our restoration strategy please tell us but be aware that we may not be able to act on this for technical reasons.
- If power is essential to the affected property or properties then business continuity plans should consider this and have strategies in place to mitigate against power cuts.

**Informing us of a power cut is an action and not a reasonable mitigation strategy.**

### **Business as usual response**

- Will aim to arrive at site as soon as possible
- Until we have established the location and cause of a power cut, which in reality can take the first three hours, we may not have enough detailed information to give you estimated restoration times for the property or area affected.
- Locating the cause of a power cut can be complex. Historically 90% of customers are restored within three hours and over 99% of customers are restored within 18-hours of us first becoming aware of the problem. Under adverse conditions, such as during bad weather, power cuts can take longer to fix.

### **Non-business as usual response – emergency response**

- Will declare a System Emergency
- UK Power Networks response will be managed by the UK Power Networks Strategic Team
- Strategy Team will appoint a "Gold/Silver Liaison Officer" and will liaise by telephone or in person at our discretion
- Will divert non-essential work resource to concentrate on the response

To help us help you, we need to know **the postcode and address of at least one of the properties** affected by the power cut and **the time the power cut happened**. Always ask for a call or an incident number and note it down in your log (it will be in the format "CALL-12345-X" or "INCD-12345-X").

- Tell us this number whenever you call back for an update. Don't expect us to keep you updated unless we offer to.

## **Appendix H: References & Useful Links**

### **KRF Documents**

KRF (2010) *Pan Kent Multi Agency Flood Plan* [online] available from the KRF BMSU using the contact details on the front page of this plan.

KRF (2010) *Pan Kent Strategic Emergency Response Framework* [online] available from <http://www.kentconnects.gov.uk/krf/krf-library/krf-document/Pan%20Kent%20Strategic%20Emergency%20Framework.pdf>

KRF (2010) *Pan Kent Emergency Recovery Framework* [online] available from <http://www.kentconnects.gov.uk/krf/krf-library/krf-document/KRF%20Pan%20Kent%20Emergency%20Recovery%20Framework%20Issue%201%20-%20May%202010.pdf>

KRF (2009) *Humanitarian Assistance Plan* [online] available from <http://www.kentconnects.gov.uk/krf/krf-library/krf-document/KRF%20Humanitarian%20Assistance%20Plan%20-%20v1.0%20November%202009.pdf>

KRF 2009 *Vulnerable persons plan* [online] available from <http://www.kentconnects.gov.uk/krf/krf-library/krf-document/KRF%20Vulnerable%20Persons%20Plan%20-%20v1.0%20-%20November%202009.pdf>

KRF (2009) *Science & Technical Advice Cell (STAC) Plan* [online] available from  
Please contact the KRF BMSU because it is a protected document. Tel: 01622 798591 Email: [krf@kent.police.pnn.uk](mailto:krf@kent.police.pnn.uk)

KRF (2010) *Media & Communications Plan* [online] available from  
Please contact the KRF BMSU because it is a protected document. Tel: 01622 798591 Email: [krf@kent.police.pnn.uk](mailto:krf@kent.police.pnn.uk)

### **DEFRA and Cabinet Office Guidance**

Cabinet Office (2011) *UK Resilience: Homepage* [online] available from <http://interim.cabinetoffice.gov.uk/ukresilience.aspx>

DEFRA (2010) *National Flood Emergency Framework for England* [online] available from <http://www.defra.gov.uk/environment/flooding/documents/planning/emergency-framework-290710.pdf>

DEFRA (2010) *On and Off-Site Reservoir Plans Guidance: Homepage* [online] available from <http://www.defra.gov.uk/environment/flooding/reservoir/flood-plans.htm>



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**Flood Forecasting Centre, Met Office and Environment Agency**

[Met Office \(2011\) \*Public Sector: Emergency Response: Homepage\* \[online\] available from http://www.metoffice.gov.uk/publicsector/emergencies/](http://www.metoffice.gov.uk/publicsector/emergencies/)

Flood Forecasting Centre (2011) *Hazard Manager: FFC Services Online* [online] available from <http://www.fcc-environment-agency.metoffice.gov.uk/services/web.html>

Environment Agency (2011) *River and Sea Levels: monitoring service* [online] available from <http://www.environment-agency.gov.uk/homeandleisure/floods/riverlevels/default.aspx>

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