

# Buncefield

## Multi-agency Debrief Report and Recommendations



Hertfordshire Resilience Forum  
March 2007



## FOREWORD



The Buncefield oil storage depot explosion and subsequent fire presented a large number of challenges for Hertfordshire's emergency responders not least of which were the magnitude and prolonged nature of the response. We are rightly proud of the multi-agency response to this emergency, which has received considerable praise.

The incident has also demonstrated the benefits of a strong Local Resilience Forum (LRF) where senior officers from across those organisations meet regularly within the LRF, understand and trust one another and whose member organisations have a history of planning, training and exercising together as well as learning from the response to previous major incidents.

I'd like to take this opportunity to repeat my thanks to all those involved in the response: the many responding organisations which make up Hertfordshire Resilience (the county's LRF), the many Fire and Rescue Services from across the UK who supported our own Fire and Rescue Service in the response and also our regional and national partners in both the public sector and industry.

We were fortunate not to be dealing with any fatalities. Nevertheless, the impact of the incident on the residents and businesses of Hemel Hempstead was significant and continues some 15 months after the explosion.

Since December 2005, we have undertaken a measured process, initially within organisations, and subsequently on a multi-agency basis to reflect on our response and draw out a number of lessons learnt. Many examples of good practice and professionalism have been identified. There are also some areas where, with the benefit of hindsight, we may have approached things a little differently or areas where further work is required to enhance response capabilities.

Hertfordshire Resilience recognises the importance of sharing learning with the wider emergency planning community and we have produced this report, as part of a series of initiatives, to share our experiences and that learning. The LRF will be drawing up its own action plan to address the specific issues and work areas which we have identified for our own Resilience Forum. We hope others will find it useful in reviewing their own plans and local resilience arrangements.

Although, we hope that there will not be another "Buncefield", we believe that the lessons identified in our own response to that particular incident, could be applied to other major incidents and emergencies and hope that if ever others are faced with an incident with consequences similar to Buncefield, they will benefit from our experience and the learning contained within this report.

A handwritten signature in black ink, appearing to read 'C. Tapster'.

Caroline Tapster  
Chair of Hertfordshire Resilience  
March 2007

## INTRODUCTION



The recommendations contained within this report are the product of a series of debriefs. Each organisation within the Local Resilience Forum (LRF) conducted their own internal debriefs prior to taking part in the multi-agency debrief, which had the following objectives:

1. To review the multi-agency response to the Buncefield Oil Storage Depot major incident and examine the effectiveness of that multi-agency response at a Strategic, Tactical and, where relevant, Operational level;
2. To highlight areas of good practice;
3. To identify areas and or issues where the multi-agency response went less well and could be improved upon;
4. To make recommendations to enhance future multi-agency responses to major incidents;
5. To share the learning from the multi-agency debrief with the emergency planning community nationally.

This report draws principally on the output from sessions facilitated by Professor Jonathon Crego from the International Centre for the Study of Critical Decision Making, at which all of the key agencies involved in the multi-agency response to the Buncefield incident, at either a Strategic or Tactical level were represented.

Professor Crego's event generated a wealth of very useful information, which was then reviewed and analysed by representatives from the LRF to pull out the many significant issues which the debrief process had thrown up. Each of these issues, which are summarised below, is followed by a recommendation to address the issue concerned. The 42 issues have been collated under the following sub-headings:

- Preparation;
- Incident response;
- Issues at the Strategic Co-ordinating Group (SCG);
- Wider issues;
- Identified successes;
- Recovery.

The multi-agency response which was mobilised for the incident has received considerable praise. Nevertheless, LRF agencies are committed to a process of continued improvement in order to offer the highest possible level of response to those affected by a major emergency in Hertfordshire. The debrief has highlighted a number of occasions where the response did not go as well as one might have wished, however, these instances should not detract from the many examples of good practice and professionalism, for which the agencies and individuals involved in the response to the Buncefield incident have rightly been congratulated.



## PREPARATION AND PLANNING



**Issue 1** Linkages between on and off-site COMAH plans to ensure a shared understanding of safety cases and the possible consequences of an off-site incident.

In the preparation of the Buncefield off-site plan(s), warning and informing arrangements were limited to the Public Information Zone (PIZ) as defined by the Health and Safety Executive (HSE) which is itself informed by the site operators' safety cases. In this instance, PIZ's for both the British Pipelines Agency (BPA) plan and the whole complex plan were 185 metres.

***Further consideration and guidance is required as to how operators' safety cases and the HSE determine PIZ's to inform the production and content of off-site plans.***

**Issue 2** Planning for a "worst case" scenario.

The basis of the off-site planning arrangements was that of preparation for a single tank fire (the "worst case" scenario outlined in site operator safety cases) and this was used to shape any likely off-site arrangements, which might need to be put in place. In hindsight the off-site plan would have been of more value during the incident had this "worst case" been stretched to include arrangements for a more catastrophic scenario, including one where the on-site control measures/safety systems failed.

To a certain extent, basing one's plans around a "worst case" worst case scenarios would run the risk of generating more work and detailed contingency planning than might be judged a reasonable or sensible use of resources (particularly since COMAH costs are met by the site operator). However, it is suggested that more challenges should be built into LRF plans than is the case at present. The use of "peer review", undertaken on a formal basis, it is suggested, could provide that useful element of challenge which to date has not been part of multi-agency site specific plans.

***It is recommended that the LRF adopt a formal scheme of peer review and external challenge to ensure that plans extend further than a likely incident scenario and that planning assumptions should be rigorously challenged, including plans making provision for the catastrophic failure of on-site safety systems. It is suggested that this approach is employed for all site specific plans and not just for COMAH planning.***

**Issue 3** Proper engagement with all relevant local authorities in the development and implementation of off-site planning arrangements.

In the specific instance of the Buncefield off-site plans, liaison with the local authorities was almost entirely centred on Dacorum Borough Council (DBC), despite the fact that the largest tank on the Buncefield complex (tank 12) was located within St. Albans City and District Council (SACDC). Whilst SACDC members were involved in the public consultation process, the involvement in the detailed planning arrangements was limited. This is partly explained by the large areas of open countryside and lack of any significant residential or commercial developments within the PIZ. However; in hindsight it is felt that there could have been more engagement with SACDC in the off-site planning process.

***Where PIZ's cover more than one district/borough council area, both/all local authorities should be fully involved in the preparation, development and exercising of off-site plans.***

**Issue 4** Clearer routes into “health” advice to ensure that the appropriate elements of the health economy are properly engaged and consulted in the development of off-site plans.

In the preparation of off-site plans, the principal engagement with the health economy was via the local Primary Care Trust (PCT) which at that time was in its infancy with public health a part of, yet separate from these arrangements. Consultation about the likely off-site scenarios was limited and did not include any detailed consideration of public health messages, other than the “go in, stay in, tune in” guidance which could be considered as standard generic public advice.

This was thought at the time to have been sufficient to meet the hazards which any likely scenario might present, although no specific direct discussions had been held about the possible toxicity of any likely smoke plumes or whether any particular sections of the surrounding community might have been particularly at risk (i.e. children, asthmatics and the elderly). Had such work been undertaken, some of the tensions and concerns about the speed of health information being made available to the general public and incident responders may well have been reduced.

***As part of the preparation and content of off-site plans, the local authority charged with the production of the multi-agency off-site plan should consult with the PCT, Health Protection Agency (HPA) and other relevant agencies to consider the development of pre-prepared health guidance, based on the worst case scenario, linked to an agreed communications strategy which will also include advice/actions for the primary care sector.***

**Issue 5** Consideration for off-site sampling and monitoring arrangements as part of multi-agency off-site emergency planning arrangements.

Pre-incident multi-agency planning arrangements gave no specific consideration to sampling and monitoring arrangements in the event of an off-site incident being realised. During the actual incident the HPA and the Environment Agency established extensive public health and environmental monitoring arrangements using a number of diverse agencies, including the deployment of London Fire Brigade and Ministry of Defence assets. It has been suggested that this is an area where additional planning and co-ordination, linked to the development of off-site plans is required. In particular, there is a need to establish at a national level which organisation is responsible for commissioning and co-ordinating sampling to assist the work of the Health Advisory Team (HAT).

***Clarification be sought from central government as to who is responsible for the co-ordination and provision of sampling arrangements to ensure that the HAT has the best possible information upon which to base their advice to the SCG.***

## INCIDENT RESPONSE



### Issue 6      Benefit of strong LRF/inter-agency relationships developed over a long period of time.

The multi-agency response to the Buncefield incident was characterised by a strong sense of partnership working, with Category One and Two responders within the LRF working very closely together in an open and constructive manner. This multi-agency “esprit de corp” was judged to have been the product of many years of inter-agency working, firstly under the umbrella of the Hertfordshire Emergency Services Major Incident Committee (HESMIC) which had been in existence some 25 years prior to any legislative requirement and, more recently, it’s subsequent replacement by Hertfordshire Resilience; the name adopted by the county’s LRF. Operationally, there were very clear advantages in the fact that responders locally both at a Strategic and Tactical level knew one another, were clear about their own roles and responsibilities and worked closely to deliver agreed objectives

***All LRF's to review the relationships which exist across their constituent member agencies to consider what, if any, practical actions could be taken to enhance those relationships to make them even more effective.***

### Issue 7      Prolonged duration of an incident can place considerable demands on resourcing of critical command and control structures. This is particularly important for smaller agencies or those that do not traditionally have a 24-hour response culture.

In recent years, Hertfordshire’s experience of major incidents has been shaped by a series of high profile train derailments, whilst each required a sizeable multi-agency response, they were by the very nature relatively short-lived affairs, with many of the resources and personnel being stood down after only a couple of days. The Buncefield incident was of an altogether different magnitude, not only in the amount of resources committed to the incident response. but also in terms of its longevity. The prolonged nature of the incident and the requirement for staff to be relieved at regular intervals and given suitable periods of rest from what were on occasions some very demanding environments, presented those agencies that would not normally operate on a 24-hour basis with particular challenges.

Hertfordshire County Council offered to support DBC by representing them at the SCG and this offer was accepted. This then enabled DBC to concentrate their resources on managing the situation locally with senior officers in the Authority able to focus on sustaining the local response without the additional demands of resourcing a multi-agency SCG. Nevertheless, it is important that all potential attendees are able to resource the SCG if requested and the possible consequences of this factored into organisational plans.

***All Category One responders to ensure that they have plans to cope with providing the right level of trained officer representation at meetings during prolonged incidents.***

***All Category One responders need to be prepared to resource the SCG and to regularly review their representation.***

### Issue 8      Command and control rather than consensus.

There were occasions when agencies more used to working in an environment characterised by

discussion, deliberation and working towards an approved consensus were expected to set aside that way of working, for one where “fast time” decision making and compliance was the required group behaviour. This occasionally created tensions, particularly in respect of the time taken to come back with information upon which important group decisions needed to be taken (i.e. advice about public health information or Personal Protection Equipment (PPE)). There were other occasions where a “best guess” would have been preferable to no decision/no information at all, but a reluctance to take such a decision detracted from the efficiency of the response.

In such circumstances, where a “best guess” is required, a range of options should be presented with an assessment of the risks accompanying such options so that the SCG can take suitably informed decisions, based on limited information.

On this particular occasion, the delays did not have particularly serious consequences. However, it would not be difficult to conceive of other occasions or circumstances where such differences could have created more significant difficulties and as such this is an issue meriting attention.

***All agencies must ensure that all their responding staff are trained to understand the “command and control” protocols employed during the initial response to an incident. It is essential that this is understood throughout each responding agency.***

#### **Issue 9      Consensus rather than command and control.**

Conversely, it was noted that a more reflective and consensus style of decision making lent itself to the management of the recovery phase of the incident, and this less prescriptive approach required those more used to working in a command and control environment to modify their approach.

***Agencies who normally operate in a “command and control” culture must understand and be able to operate in the more consensual environment of the recovery stages of an incident.***

#### **Issue 10      Consistency of decision logging and communication of SCG decisions.**

It was recognised that there were a few occasions where different interpretations were made on some decisions taken at the SCG, which resulted in different agencies taking slightly different approaches to addressing a particular issue previously agreed at the SCG. Moreover, there was also an occasion where the Tactical (Silver) Command had a different understanding of a SCG decision than that originally intended. Once again this did not result in any significant difficulties, but the issue has highlighted the potential for confusion and uncertainty where there is not absolute clarity about decisions taken at the SCG or where those decisions are not properly cascaded to other relevant agencies.

It was noted that there may be some technical solutions to enhancing this clarity of decision making and these should be investigated.

***It is recommended that LRF’s develop a common logging system that can be “joined up” to enable the whole incident to be pieced together post incident.***

***It is essential that all responding agencies have trained loggists to accurately record decisions and actions.***

#### **Issue 11      Access to the right information at the right time.**

It was felt that there were occasions during the incident when responders were working off different hard copy and GIS maps and that this was not conducive to a joined up approach to managing the situation. It was recognised that whilst better use could have been made of



existing systems which individual agencies had, there would have been considerable benefits in all responders having access to the same networked mapping system.

***It is recommended that all Category One responders have appropriate and timely access to relevant information that would help them to make accurate and rapid decisions. A networked mapping system would be particularly valuable in such circumstances.***

**Issue 12**      It is likely that the mass casualty arrangements in Hertfordshire would have been tested to breaking point if this incident had happened at a different time of the day/week.

Were the incident to have happened at other times during the working day/week, it is surmised that there would have been a very high level of fatalities and casualties which the emergency services would have had to manage and deal with. The incident has highlighted the importance of resilient mass casualty arrangements and the need for mutual aid protocols to be developed as soon as possible to enhance the systems currently in place.

***Agencies should be encouraged to “think the unthinkable” when planning and ensure that mass casualty arrangements go beyond “traditional” planning horizons, and extend to mutual aid from surrounding areas and regions.***

**Issue 13**      Familiarisation with host SCG buildings and facilities.

There were occasions when those attending the SCG meetings at Police Headquarters were either unable to access the building or, when they did have access, knew their way sufficiently around the building to be able to orientate themselves, attend meetings in other parts of the building, make use of refreshment facilities, etc. independently. This did not lend itself to the efficient use of time and resources.

***SCG representatives from all responding agencies should undertake familiarisation visits to the most likely SCG site so they are familiar with arrangements when they are called to respond.***

**Issue 14**      Need for a better mutual understanding of the role of the Government Liaison Officer (GLO) at the SCG and what is required for it to provide an effective resource at the SCG.

There were occasions where it was felt that communications from the SCG to and from central government were not as effective and timely as they could have been. Some of this could be ascribed to the challenge of properly resourcing the role for a prolonged period, the relative “newness” of the role within the SCG and potentially the fact that whilst information was going up to central government departments via the GLO, this was not replicated in respect of information back down from government departments to the SCG. Where information was requested from the SCG it was provided via the GLO. Where information was required from government departments to the SCG it was not always forthcoming or responded to as promptly as expected.

It should be noted, however, that there were occasions when this system worked particularly well (i.e. in the “fast tracking” of customs arrangements to permit raw materials for the production of additional foam stocks to enter the UK as speedily as possible).

***Government Office teams at the SCG must be properly resourced and all central government departments be encouraged and expected to make full use of their presence as the primary link to and from local responders.***

**Issue 15**      Who leads on air contamination advice and sampling?

Arrangements for the sampling and monitoring of air quality were unclear with a number of

agencies and government departments involved in this activity, each with their own reporting arrangements. This had the potential for creating confusion and uncertainty and could have had more serious repercussions were the content of the smoke plume to have proved more harmful than was in fact the case.

***It is recommended that there be a lead government department to co-ordinate and provide single source scientific advice and be able to provide this in a continuous and timely fashion.***

**Issue 16**      Responding agencies and businesses need to have a mutual understanding of each others needs to be able to communicate and work together effectively in the aftermath of an incident.

Perhaps inevitably there were, on occasions, tensions between the business community who were anxious to be allowed access to their damaged properties and the responding agencies (the emergency services in particular) who needed to restrict access to property until this was both a safe activity and also one which would not compromise the investigative process. It is recognised that greater mutual awareness of the needs of the responding agencies and the business community would have ensured that such tensions were kept to an absolute minimum.

***The LRF should further develop links, plans and protocols to build in consideration of local business community needs in the early stages of a response.***

***The LRF should develop a programme of awareness raising for businesses to understand the needs and operations of the emergency services in the response to an incident.***

***The LRF should identify possible representatives of the business community across Hertfordshire for whom specific emergency response training/briefing could be provided to facilitate good communication with businesses and an open dialogue in the event of a major incident significantly affecting the local business community.***

**Issue 17**      Liaison between local authorities.

DBC did not send a representative to the SCG, but instead asked that their interests be represented by Hertfordshire County Council who were present at the SCG. In general this arrangement worked well with regular communication and briefings between the two, although this was largely undertaken on an “ad hoc” or “as the need arose” basis rather than at agreed regular intervals and consistently before and following SCG meetings. Had this been the case it is suggested that communication would have been even better and miscommunication or misunderstandings even more limited.

***Where one agency is representing another at either the SCG or at Tactical (Silver) Command, it is recommended that protocols for communication are agreed early on and regularly revisited.***

**Issue 18**      There is a great operational benefit in using a fully equipped building as a Tactical (Silver) Command base.

The decision was taken to locate the multi-agency Tactical (Silver) Command at Watford Police Station, some six miles from the Buncefield complex. The Fire and Rescue Service's Silver Commander remained on the fire ground, but the service was represented at the multi-agency Tactical (Silver) Command by a senior fire officer acting as the Fire and Rescue Service Inter-agency Liaison Officer (ILO). This arrangement worked well in that the building contained all the assets one would expect of such a location (i.e. excellent communication facilities including a teleconferencing capability, car parking, a number of adjoining rooms including a large conference room) from which agencies at the Tactical (Silver) Command could operate, liaise

with their own control centres as well as work alongside one another to co-ordinate activities and implement command decisions.

***LRF's to consider pre-designation of potential Tactical (Silver) Commands throughout the LRF area to be used as appropriate, and these rooms should include all the appropriate technology.***

#### Issue 19 Notification of a major incident to utility companies.

Feedback from the utility companies involved in the response has indicated that early notification of a major incident was not universal. Whilst this had no detrimental operational consequences, arrangements for alerting the utility companies needs to be reviewed.

***LRF multi-agency emergency plans should ensure appropriate arrangements for the early notification of utilities and the establishment of effective channels of communication in the event of a major incident.***

#### Issue 20 Call out procedures of non 24-hour services.

Some responding agencies had delays in mobilising their resources due to the nature of their call out arrangements.

***To minimise call out time, agencies should revisit their call out procedures to ensure that they function in a cascade rather than a linear fashion.***

#### Issue 21 Ensure consistency of health and safety advice to responding personnel.

There were inconsistencies across agencies in the health and safety arrangements (in particular the provision of PPE) which were in place for staff from different agencies who were performing similar roles and present in similar locations and exposed to the same hazards. Whilst in this particular incident there is no evidence that the health and well-being of any staff groups suffered because of improper arrangements, there may well in the future be other occasions where such an inconsistency creates tensions, confusion (particularly from a public perspective) and could potentially be harmful to the staff groups involved.

***It is recommended that a consistent approach is adopted across responding agencies on health and safety/PPE issues where staff are performing similar roles, exposed to the same hazards and present in similar locations.***

#### Issue 22 Incompatibility of evacuee data with Police Casualty Bureau forms.

Considerable data was collected at the reception centre about the identities of those people who had been evacuated and who were being provided with temporary shelter and support. Unfortunately, this data was not captured in a format which was compatible with the Police's Casualty Bureau systems which made data entry less efficient than had the standard Casualty Bureau forms been used for recording such information.

***It is recommended that when gathering the relevant information, all partner agencies always use agreed Casualty Bureau forms when registering evacuees/survivors.***

***Hertfordshire Resilience reception centre training sessions should reinforce the importance of using agreed Casualty Bureau forms when registering evacuees/survivors.***

## ISSUES AT THE STRATEGIC CO-ORDINATING GROUP (SCG)



### Issue 23      Uncertainty about how the health economy is represented at the SCG and by whom.

There were occasions, particularly in the first three days of the incident when it was unclear who was representing the health economy and how and by whom information about public health was being fed into the strategic decision making process. Representatives from PCT's, Acute Trusts, HPA at a local and regional level, and the Strategic Health Authority all occupied places around the SCG table at various stages of the incident, many at the same time as each other. This did not always enhance effective decision making and had potential to cause significant tensions and misunderstandings. It should be noted, however, that the strength of relationships with representatives of the local health economy with their senior colleagues on the LRF undoubtedly helped overcome many of these difficulties.

***Clarity is needed on who is playing the lead health role so there are only TWO health representatives around the SCG table representing the health economy – one from the PCT advising on the current capacity issues of the Acute Trusts and PCT's who are responding and the other providing a link to the HAT (which would itself include a Consultant in Communicable Disease Control (CCDC) from the HPA).***

***National guidance is needed to ensure that there is clarity on how the role of the regional HPA fits with the local response of acute teams. These strategic arrangements should replicate the LRF arrangement which has both elements represented.***

### Issue 24      Technical experts need to develop an approach to giving "tactical advice" and how to have it available in a timely manner, especially in the early stages of an incident.

There were occasions on the first day of the incident when advice was requested of technical and health experts and a considerable period of time had elapsed before such advice was eventually forthcoming. Advice where a "best guess" from the experts would have been sufficient to help inform decision making at the time was eschewed in favour of detailed scientific and academic opinion which took considerably longer to materialise, by which time many of those decisions for operational reasons had already been taken.

***There needs to be discussions and training in each LRF to develop the role of tactical advice on technical and health issues, to ensure that it is understood that early broad information will come first, allowing the SCG to take early, broad based, risk assessed decisions around a number of areas. Later more focussed information will allow more informed, detailed discussion.***

### Issue 25      Communicating internally and externally is of vital importance.

There was a recognition amongst responders of the importance of using language which all participants at the SCG and via the teleconferencing equipment their colleagues at the Tactical (Silver) Command understood. However, there were occasions where this good practice lapsed and jargon and technical language featured more prominently in conversations than was necessary. The issue was particularly important in the context of communicating with the public where information about public health was not always easy to understand, sometimes required

interpretation before it could be relayed to third parties or on occasions raised more questions than answered.

***Information needs to be in an understandable language for the audience – all agencies need to practice using clear phrases and avoid unusual technical phrases when communicating with each other and the public.***

**Issue 26** Explaining and communicating rationale behind decisions (i.e. school closures) with neighbouring partners.

Some local authorities bordering Hertfordshire reported after the incident that they were not always clear why certain actions were being taken (i.e. closure of schools) and this gave rise to confusion as to whether they should be taking a similar line. Efforts were made to inform local authorities across the county boundary what action was being taken and why, although this was not always successful. This was partly down to the fact that no other LRF's established an SCG or possibly that those who had been contacted and informed were not sufficiently briefed about the rationale for such actions.

***LRF's should develop protocols for cross-border communication with neighbouring LRF's to share relevant information during an incident and ensure that the same accurate and consistent information is used to inform decision making in other relevant or affected LRF's/SCG's.***

**Issue 27** Have as wide an evidence base as possible before making decisions where time is available.

Although a team was tasked with preparing and presenting a recovery strategy, there was no such cell assigned to considering wider consequence management issues which were effectively dealt with by the SCG as they arose.

***The SCG should give consideration to the establishment of a multi-agency "Consequence Management" cell. They should assess the impact of options in the short, medium and long term to allow the SCG to make the best informed and evidenced decisions.***

**Issue 28** Different agencies trying to source the same resources.

There were occasions when different agencies were seeking to source the same items of equipment or supplies. PPE (face masks in particular) was an example of such equipment which was being procured by different agencies for their own staff (and to various specifications), although a more joined up system of procurement managed by a central team would have provided a more efficient arrangement.

***Where practical, the LRF should ensure that logistical resourcing to support responders is done as a multi-agency function (e.g. PPE, catering, toilets, mobile facilities etc.) as a cell working as part of the Tactical response.***

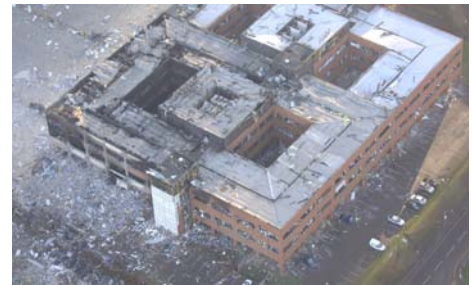
**Issue 29** Resilience of mobile communications for all Category One and Two responders.

Communication problems are not uncommon in major incidents although on this occasion they were relatively minor. However, there were occasions where there would have been significant benefit in agencies being able to talk to one another using the same communications system rather than via mobile telephones which have the potential to be far more vulnerable to disruption. Whilst arrangements are already in hand to enhance inter-operability amongst the emergency services it was suggested that other Category One and some Category Two responders would benefit from access to the same systems which would be distributed, in the event of an incident to key players who had received appropriate training and who had a clear operational need.



***LRF's to consider pooling resources to provide all agencies with training and access to Airwave to ensure good, reliable multi-agency communications. This will require contract negotiations with O2 Airwave that would best be done centrally.***

## WIDER ISSUES



### Issue 30 No power for Police to enforce a cordon around an incident of this nature.

The Police had significant concerns for the safety and welfare of people who wished to cross cordons and gain access to their own property or place of work or those of friends and relatives at a time when it was judged not safe to do so. During this period the fire was still burning, there was the potential for further explosion and the structural integrity of the buildings they wished to visit had not been ascertained. There were considerable hazards spread throughout the area within the cordons and very few of those who wanted such access had any sort of PPE or knowledge of safe systems of work which might have reduced the risk of harm to those individuals.

The Police had to go to considerable lengths to dissuade and discourage people from crossing cordons until it was safe for them to do so and this required considerable tact, diplomacy and negotiation by Police officers and sometimes took up important resources. It was felt that had there been powers to simply preclude access until such time as the Police judged re-entry to be undertaken in a safe manner then these conversations would have been much more straight forward and transparent.

***If a major incident is declared and a SCG convened, the Police Gold Commander should have the power to enforce a cordon, with power of ejection, on a 24-hour rolling basis to ensure public safety in an effected area.***

### Issue 31 If no Cabinet Office Briefing Room (COBR) structure is invoked and no lead government department is nominated, there is a risk of confusion about communication links to central government, meaning that information is not always clear.

It is understood that in this incident no lead government department was designated to take on the overall management of the government response, although a number of government departments were clearly affected by the incident and seeking information or asking that various activities be undertaken at a local level. This meant that communication between central government and the SCG was not always as clear and effective as it might have been and possibly made the role of the GLO that much more challenging.

***There should be one nominated lead government department/ministry responsible for liaison with the Gold Commander via regional liaison at the SCG.***

### Issue 32 No debriefs available from central government.

The sharing of debriefs and recommendations often provide very useful opportunities to spread learning and better understand the challenges and issues with which those parties to the debrief had to confront during the incident. In this instance it would be helpful to hear more from central government as to their own “lessons learnt” which may have implications for how the SCG liaises with central government in any future major incident response.

***Central government should undertake to share their own learning with the wider emergency planning community to assist all in future planning work.***

Issue 33      People not being around (or wanting) to take back possession of their properties post incident due to the Christmas break.

There was considerable frustration particularly on the part of the Fire and Rescue Service, that their presence on the Buncefield site was prolonged by a number of days due to the delays in determining which agency should take possession of the site once the Fire and Rescue Service personnel withdrew. Several attempts were made, the first at a relatively early stage in the incident response, to highlight the importance of this issue being addressed and a proper protocol being established as soon as possible, yet the issue was not finally resolved until after the Christmas period. The issue is particularly important where a major accident investigation is underway and access to certain areas of the site may need to be carefully controlled.

***It is recommended that central government consider developing a process through which responding agencies formally hand site(s) back to the owners (even if they don't want to receive it) or to an agreed third party.***

## IDENTIFIED SUCCESSES



### Issue 34      Joint meetings of the multi-agency Strategic and Tactical Commands with clear protocols for effective communication.

The introduction on this occasion of teleconferencing technology and the staging of joint SCG and Tactical (Silver) Command meetings proved to be a great success. In contrast to previous major incidents in Hertfordshire where sometimes communication between the SCG and the multi-agency Tactical (Silver) Command was quite challenging (when the one wanted to talk to the other they were often involved in their own respective meetings), communication between the two command levels was clear and provided both levels of command with a much clearer understanding of shared objectives, priorities and accountabilities. It was recognised that such arrangements could have the potential to lead to a blurring of roles and the one level of command to become more involved in business which was the preserve of the other, but those involved in the process were alive to this issue and ensured that such a situation did not arise.

It was felt that there was significant potential to make greater use of the technology currently available to deliver an even more joined up approach to communication and the sharing of information.

***Consider holding joint meetings via teleconferencing facilities early on to assist in information sharing. Also consider using more advanced technology such as electronic mapping and video conferencing to make most effective use of time.***

***When using teleconferencing, agencies should use pre-agreed protocols to make meetings effective and efficient.***

### Issue 35      Early declaration of crime scene to protect evidence.

The fact that in the early stages of the incident, the Police Gold Commander took the decision to designate the area in and around the Buncefield site as a crime scene brought significant advantages in ensuring that the potential for evidence to be compromised or lost was kept to a minimum. It has subsequently been shown that such a decision significantly enhanced the investigation process and made the work of those involved in the investigation easier than it would otherwise have been.

***Police Gold Commanders should make an early decision whether to designate incident scenes as crime scenes to protect investigations and preserve evidence.***

### Issue 36      The early set up of forward planning groups by the SCG (i.e. the recovery group and joint investigation team).

There was a very early recognition in the major incident response that activity in two particular areas: recovery and investigation should be progressed as soon as practicably possible. In terms of developing a recovery strategy this had already begun by the end of the first day with a more formal multi-agency structure in place within the next two days. Arrangements were also made to establish a joint investigation team, comprised of the Police, the HSE and the Environment Agency. This ensured that any investigatory activity was properly co-ordinated, that efficient use was made of available resources and that relevant information was shared amongst the investigating bodies.

***The SCG should consider the instigation of forward planning groups at a very early stage***

***in the incident to consider future needs and enable planning with appropriate resources from responding agencies.***

***The role of “Recovery Silver” should be a separate one from the Tactical (Silver) Command for the emergency to allow the two functions to develop simultaneously with the SCG ensuring that the initial recovery process is fully embedded into the emergency response and that the activity of the one group did not clash or contradict that of the other.***

***It is recommended that the Hertfordshire Resilience Generic Major Incident Plan be revised to incorporate the above guidance.***

**Issue 37      Engagement at Tactical (Silver) Command with utility providers.**

As part of the debrief process with the utility companies involved in the multi-agency response, there was considerable positive feedback about how they had worked together and with other organisations at the Tactical (Silver) Command. They met regularly outside of the formal Tactical (Silver) Command meetings to consider shared issues and to liaise with the Police and local authorities to address areas of mutual interest (e.g. site access and recovery priorities).

***It is recommended that the establishment of a specific “Utilities” cell jointly located and feeding in to the Tactical (Silver) Command level should be adopted as good practice for major incidents which have a significant and widespread impact upon utilities and their operations.***

**Issue 38      Early establishment of shift patterns at the SCG and Tactical (Silver) Command.**

There was an early recognition that this was likely to be a prolonged incident which would require regular changes in personnel. Those organisations present at both the SCG and Tactical (Silver) Command ensured that changes in shifts were planned well in advance and that proper handovers were conducted prior to any changes.

***It is recommended that where there is a possibility that relief shifts will be required this should be identified as early as possible to ensure that all agencies plan for this from an early stage and conduct proper handovers prior to any changes in personnel.***

**Issue 39      Consistency of “talking heads” allowed regular, frequent and open dialogue with journalists.**

Following the incident response, considerable positive feedback was received from the national and international media about the way in which the media management was conducted. One area of good practice which was particularly highlighted was the benefits which were derived from having a continuity and consistency in personnel who were put up to speak to the media. This not only assisted with ensuring a continuity of message, but also helped to establish a positive relationship between the media and spokespersons for the various LRF agencies.

***Media plans for the LRF response should note the benefits of having the same representative at press briefings and should seek to implement this where practicable.***



## RECOVERY



### Issue 40 Building recovery planning into response plans.

Whilst it is clear that during the emergency response significant and early attention was given to the issues of planning for and implementing recovery arrangements, this was not an area which had received much attention within the LRF prior to the incident. The arrangements which were developed during and immediately after the incident proved to be very effective in co-ordinating the multi-agency response to recovery and these structures will now be incorporated into all relevant LRF plans.

***Guidance on recovery should be built into emergency plans and should outline clear roles and responsibilities in order to ensure a joined up and comprehensive response.***

### Issue 41 The importance of keeping the business community informed about the operational response, likely timescales, etc.

Considerable effort was paid to trying to keep the business community informed about the progress of the operational response and at what point cordons might be lifted, with the Chief Executive of the Hertfordshire Chamber of Commerce and Industry playing a particularly valuable role in providing an identifiable route in to the business community. Nevertheless, there were still occasions when communication with the business community did not work as well as that community would have liked. This occasionally resulted in confusion and misinformation, particularly with regard to access.

***The business community should be engaged with early on in the incident to facilitate good communication with businesses and an open dialogue.***

### Issue 42 Recognising the importance of involving relevant communities in recovery arrangements.

It was felt that one of the most significant factors in the success of recovery structures and arrangements was the strength of the relationships which existed with the business and local residential communities affected by the incident particularly at a district/borough council level. The fact that DBC had, over time, developed a strong relationship with the local business community and had already been working with them to develop proposals to develop and regenerate the affected area undoubtedly contributed to that success.

***Relationships with local communities and the business communities across Hertfordshire should continue to be developed and enhanced so that they can fully contribute to the recovery phase of an incident.***



## SUMMARY OF RECOMMENDATIONS

No	Issue	Recommendation(s)	Who
<b>PREPARATION AND PLANNING</b>			
1.	Linkages between on and off-site COMAH plans to ensure a shared understanding of safety cases and the possible consequences of an off-site incident.	Further consideration and guidance is required as to how operators' safety cases and the HSE determine PIZ's to inform the production and content of off-site plans.	HSE/EA/CCS
2.	Planning for a "worst-case" scenario.	It is recommended that the LRF adopt a formal scheme of peer review and external challenge to ensure that plans extend further than a likely incident scenario and that planning assumptions should be rigorously challenged, including plans making provision for the catastrophic failure of on-site safety systems. It is suggested that this approach is employed for all site specific plans and not just for COMAH planning.	Herts Resilience
3.	Proper engagement with all relevant local authorities in the development and implementation of off-site planning arrangements.	Where PIZ's cover more than one district/borough council area, both/all local authorities should be fully involved in the preparation, development and exercising of off-site plans.	Herts Resilience
4.	Clearer routes into "health" advice to ensure that the appropriate elements of the health economy are properly engaged and consulted in the development of off-site plans.	As part of the preparation and content of off-site plans, the local authority should consult with the PCT, Health Protection Agency (HPA) and other relevant agencies to consider the development of pre-prepared health guidance, based on the worst case scenario, linked to an agreed communications strategy which will also include advice/actions for the primary care sector.	LA's / HPA / NHS
5.	Consideration for off-site sampling and monitoring arrangements as part of multi-agency off-site emergency planning arrangements.	Clarification be sought from central government as to who is responsible for the co-ordination and provision of sampling arrangements to ensure that the HAT has the best possible information upon which to base their advice to the SCG.	HPA, EA, LA's

## INCIDENT RESPONSE

6.	Benefit of strong LRF/inter-agency relationships developed over a long period of time.	All LRF's to review the relationships which exist across their constituent member agencies to consider what, if any, practical actions could be taken to enhance those relationships to make them even more effective.	LRF's
7.	Prolonged duration of an incident can place considerable demands on resourcing of critical command and control structures. This is particularly important for smaller agencies or those that do not traditionally have a 24-hour response culture.	All Category One responders to ensure that they have plans to cope with providing the right level of trained officer representation at meetings during prolonged incidents.  All Category One responders need to be prepared to resource the SCG and to regularly review their representation.	Cat 1 / Cat 2 responders
8.	Command and control rather than consensus.	All agencies must ensure that all their responding staff are trained to understand the "command and control" protocols employed during the initial response to an incident. It is essential that this is understood throughout each responding agency.	Cat 1 / Cat 2 responders
9.	Consensus rather than command and control.	Agencies who normally operate in a "command and control" culture must understand and be able to operate in the more consensual environment of the recovery stages of an incident.	Cat 1 / Cat 2 responders
10.	Consistency of decision logging and communication of SCG decisions.	It is recommended that LRF's develop a common logging system that can be "joined up" to enable the whole incident to be pieced together post incident.  It is essential that all responding agencies have trained loggists to accurately record decisions and actions.	LRF's  Cat 1 / Cat 2 responders
11.	Access to the right information at the right time.	It is recommended that all Category One responders have appropriate and timely access to relevant information that would help them to make accurate and rapid decisions. A networked mapping system would be particularly valuable in such circumstances.	CCS

12.	It is likely that the mass casualty arrangements in Hertfordshire would have been tested to breaking point if this incident had happened at a different time of the day/week.	Agencies should be encouraged to “think the unthinkable” when planning and ensure that mass casualty arrangements go beyond “traditional” planning horizons, and extend to mutual aid from surrounding areas and regions.	LRF's / NHS
13.	Familiarisation with host SCG buildings and facilities.	SCG representatives from all responding agencies should undertake familiarisation visits to the most likely SCG site so they are familiar with arrangements when they are called to respond.	LRF's
14.	Need for a better mutual understanding of the role of the Government Liaison Officer (GLO) at the SCG and what is required for it to provide an effective resource at the SCG.	Government Office teams at the SCG must be properly resourced and all central government departments be encouraged and expected to make full use of their presence as the primary link to and from local responders.	CCS
15.	Who leads on air contamination advice and sampling?	It is recommended that there be a lead government department to co-ordinate and provide single source scientific advice and be able to provide this in a continuous and timely fashion.	Central Government
16.	Responding agencies and businesses need to have a mutual understanding of each others needs to be able to communicate and work together effectively in the aftermath of an incident.	<p>The LRF should further develop links, plans and protocols to build in consideration of local business community needs in the early stages of a response.</p> <p>The LRF should develop a programme for awareness raising for businesses to understand the needs and operations of the emergency services in the response to an incident.</p> <p>The LRF should identify possible representatives of the business community across Hertfordshire for whom specific emergency response training/briefing could be provided to facilitate good communication with businesses and an open dialogue in the event of a major incident significantly affecting the local business community.</p>	<p>LRF's / LA's</p> <p>Hertfordshire Resilience</p>
17.	Liaison between local authorities.	Where one agency is representing another at either the SCG or Tactical (Silver) Command, it is recommended that protocols for communication are agreed early on and regularly revisited.	Cat 1 / Cat 2 responders



18.	There is a great operational benefit in using a fully equipped building as a Tactical (Silver) Command base.	LRF's to consider pre-designation of potential Tactical (Silver) Commands throughout the LRF area to be used as appropriate, and these rooms should include all the appropriate technology.	LRF's
19.	Notification of a major incident to utility companies.	LRF multi-agency emergency plans should ensure appropriate arrangements for the early notification of utilities and the establishment of effective channels of communication in the event of a major incident.	Hertfordshire Resilience
20.	Call out procedures of non-24 hour services.	To minimise call out time, agencies should revisit their call out procedures to ensure that they function in a cascade rather than a linear fashion.	Cat 1 / Cat 2 responders
21.	Ensure consistency of health and safety advice to responding personnel.	It is recommended that a consistent approach is adopted across responding agencies on health and safety/PPE issues where staff are performing similar roles, exposed to the same hazards and present in similar locations.	LRFs
22.	Incompatibility of evacuee data with Police Casualty Bureau forms.	<p>Ensure that when gathering the relevant information, all partners always use agreed Casualty Bureau forms when registering evacuees/survivors.</p> <p>Hertfordshire Resilience reception centre training sessions should reinforce the importance of using agreed Casualty Bureau forms when registering evacuees/survivors.</p>	Hertfordshire Resilience
<b>ISSUES AT THE STRATEGIC CO-ORDINATING GROUP ("GOLD")</b>			
23.	Uncertainty about how the health economy is represented at the SCG and by whom.	Clarity is needed on who is playing the lead health role so there are only TWO health representatives around the SCG table representing the Health Economy – one from the PCT advising on the current capacity issues of the Acute Trusts and PCT's who are responding and the other providing a link to the HAT (which would itself include a Consultant in Communicable Disease Control (CCDC) from the HPA).	Department of Health

		National guidance is needed to ensure that there is clarity on how the role of the regional HPA fits with the local response of acute teams. These strategic arrangements should replicate the LRF arrangement which has both elements represented.	
24.	Technical experts need to develop an approach to giving “tactical advice” and how to have it available in a timely manner, especially in the early stages of an incident.	There needs to be discussions and training in each LRF to develop the role of tactical advice on technical and health issues, to ensure that it is understood that early broad information will come first, allowing the SCG to take early, broad based, risk assessed decisions around a number of areas. Later more focussed information will allow more informed detailed discussion.	LRF's / HPA
25.	Communicating internally and externally is of vital importance.	Information needs to be in an understandable language for the audience – all agencies need to practice using clear phrases and avoid unusual technical phrases when communicating with each other and the public.	Cat 1 / Cat 2 responders
26.	Explaining and communicating rationale behind decisions (i.e. school closures) with neighbouring partners.	LRF's should develop protocols for cross-border communication with neighbouring LRF's to share relevant information during an incident and ensure that the same accurate and consistent information is used to inform decision making in other relevant or affected LRF's/SCG's.	LRF's
27.	Have as wide an evidence base as possible before making decisions where time is available.	The SCG should give consideration to the establishment of a multi-agency “Consequence Management” cell. They should assess the impact of options in the short, medium and long term to allow the SCG to make the best informed and evidenced decisions.	LRF's
28.	Different agencies trying to source the same resources.	Where practical, the LRF should ensure that logistical resourcing to support responders is done as a multi-agency function (e.g. PPE, catering, toilets, mobile facilities etc.) as a cell working as part of the Tactical response.	LRF's
29.	Resilience of mobile communications for all Category One and Two responders.	LRF's to consider pooling resources to provide all agencies with training and access to Airwave to ensure good, reliable multi-agency communications. This will require contract negotiations with O2 Airwave that would best be done centrally.	LRF's / CCS

### **WIDER ISSUES**

30.	No power for Police to enforce a cordon around an incident of this nature.	If a major incident is declared and a SCG convened, the Police Gold Commander should have the power to enforce a cordon, with power of ejection, on a 24-hour rolling basis to ensure public safety in an effected area.	Central Government / CCS
31.	If no Cabinet Office Briefing Room (COBR) structure is invoked and no lead government department is nominated, there is a risk of confusion about communication links to central government, meaning that information is not always clear.	There should be one nominated lead government department/ ministry responsible for liaison with the Gold Commander via regional liaison at the SCG.	Central Government / CCS
32.	No debriefs available from central government.	Central government should undertake to share their own learning with the wider emergency planning community to assist all in future planning work.	Central Government / CCS
33.	People not being around (or wanting) to take back possession of their properties post incident due to the Christmas break.	It is recommended that central government consider developing a process through which responding agencies formally hand site(s) back to owners (even if they don't want to receive it) or to an agreed third party.	LRF's / Central Government

### **IDENTIFIED SUCCESSES**

34.	Joint meetings of the multi-agency Strategic and Tactical Commands with clear protocols for effective communication.	<p>Consider holding joint meetings via teleconferencing facilities early on to assist in information sharing. Also consider using more advanced technology such as electronic mapping and video conferencing to make most effective use of time.</p> <p>When using teleconferencing, agencies should use pre-agreed protocols to make meetings effective and efficient.</p>	LRF's
35.	Early declaration of crime scene to protect evidence.	Police Gold Commanders should make an early decision whether to designate incident scenes as crime scenes to protect investigations and preserve evidence.	Police Gold Commanders

36.	The early set up of forward planning groups by the SCG (i.e. the recovery group and joint investigation team).	<p>The SCG should consider the instigation of forward planning groups at a very early stage in the incident to consider future needs and enable planning with appropriate resources from agencies.</p> <p>The role of “Recovery Silver” should be a separate one from the Tactical (Silver) Command for the emergency to allow the two functions to develop simultaneously with the SCG ensuring that the initial recovery process is fully embedded into the emergency response and that the activity of the one group did not clash or contradict that of the other.</p> <p>It is recommended that Hertfordshire Resilience Generic Major Incident Plan be revised to incorporate the above guidance.</p>	<p>LRF's</p> <p>Hertfordshire Resilience</p>
37.	Engagement at Tactical (Silver) Command with utility providers.	It is recommended that the establishment of a specific “Utilities” cell at Tactical (Silver) Command level should be adopted as good practice for major incidents which have a significant and widespread impact upon utilities and their operations.	LRF's
38.	Early establishment of shift patterns at the SCG and Tactical (Silver) Command.	It is recommended that where there is a possibility that relief shifts will be required this should be identified as early as possible to ensure that all agencies plan for this from an early stage and conduct proper handovers prior to any changes in personnel.	SCG representatives
39.	Consistency of “talking heads” allowed regular, frequent and open dialogue with journalists.	Media plans for the LRF response should note the benefits of having the same representative at press briefings and should seek to implement this where practicable.	LRF's
<b>RECOVERY</b>			
40.	Building recovery planning into response plans.	Guidance on recovery should be built into emergency plans and should outline clear roles and responsibilities in order to ensure a joined up and comprehensive.	LRF's
41.	The importance of keeping the business community informed about the operational response, likely timescales, etc.	The business community should be engaged with early on in the incident to facilitate good communication with businesses and an open dialogue.	SCG's / Hertfordshire Resilience

42.	Recognising the importance of involving relevant communities in recovery arrangements.	Relationships with local communities and the business communities across Hertfordshire should continue to be developed and enhanced so that they can fully contribute to the recovery phase of an incident.	LRF's
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