



CabinetOffice

Logistic Operations for Emergency Supplies

Guidance for Emergency Planners

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Logistic Operations for Emergency Supplies

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1. Objective

The objective of this guidance is to provide a common understanding of the options available to emergency planners for the coordination, prioritisation and acquisition of emergency supplies.

2. Introduction

In August 2007, Sir Michael Pitt was asked by ministers to carry out a review of the summer 2007 flood-related emergencies. Sir Michael's interim report published in December 2007 found that weaknesses in arrangements for the provision of emergency supplies by emergency responders resulted in supplies being sought on an *ad hoc* basis and being delayed as a consequence. In some cases a substantial contribution from the armed forces was required to cope.

In his interim report Pitt urgently recommended:

'the Cabinet Office, with other departments, should urgently consider the costs, benefits and feasibility of establishing arrangements for the urgent acquisition of supplies during an emergency, including the use of call-off contracts or the creation of national or regional stockpiles of equipment and consumables'.

Urgent Recommendation 6, Pitt Interim Report

The Government accepted this recommendation and addressed it through a Cabinet Office-led paper on logistic operations.

The study found:

- Formal logistics cells are rarely planned for in advance as part of a standard emergency response structure.
- For complex or large scale emergencies there is often a reliance on mutual aid from neighbouring agencies including other Local Authorities.
- Local Resilience Forums (LRFs) often seek support from logistic operations professionals, such as the military, British Red Cross, or contractors.
- Stockpiles of supplies exist at a local and national level. Reliance on stockpiles at a local level varies between LRFs. For example - vaccines are stockpiled at a national level while some organisations within LRFs have stockpiles, and; Local Authorities often have blankets for rest centres or sandbags for residential flood defence.

In conclusion, although there were local examples of good-practice for logistic operations, there was no consistent national programme for the acquisition and deployment of emergency supplies.

This guidance is based on the following key principles:

1. **Local Resilience Forums** should set up a multi-agency logistic support capability as a standard part of their emergency planning, response and recovery arrangements.
2. **Regional Offices** should facilitate logistic support arrangements within a region.
3. **Central Government** should provide strategic guidance and advice; also support and co-ordination in the event of exceptional circumstances.
4. **At all levels**, stockpiling of supplies should be a last resort after all other options have been tested.

The guidance sets out the expected roles of:

- LRF-led logistic support cells.
- Government Offices in the Regions.
- Central Government.

Based on local-level best practice, the guidance also provides a check list of options and considerations for:

- Prioritising requirements for emergency supplies.
- Choosing the appropriate method of supply acquisition.

For the purposes of this document, **logistic operations refer to the coordination of the acquisition, distribution and replenishment of supplies essential for the response and recovery to an emergency.**

Accepting that one size does not fit all, we expect emergency planners to use this guidance as a source of information for logistic planning and to adapt the information and advice to fit within a plan that best suits their local arrangements.

3 Logistic Operations Co-ordination

3.1 Local Capability - LRF-Led Logistic Support Cells

Local Resilience Forums are best placed to undertake an assessment of emergency supplies that might be needed in their area, based on Community Risk Registers. However, Forums are neither staffed nor funded in a manner that would provide the resource required for putting in place a logistic operations plan.

LRFs should therefore coordinate a network of agencies, which together would establish local logistic plans, **allocate owners** of specific items/resources, oversee the implementation of the plan and coordinate the activation of the plan in the event of an emergency. Together, the agencies will form a Logistic Support Cell.

The expression 'owner' is used here to describe the group/agency/department with responsibility for provision of the item, be it through the maintenance of contractual arrangements or maintenance of a piece of equipment.

'Owner' has been used in preference to 'procurer' since some items may not need to be procured e.g. use of a large piece of equipment which is already in place.

Where a cost is involved, the owner is not necessarily responsible for providing the funding. For example, a four by four vehicle might be maintained and deployed by a voluntary organisation (and therefore the organisation is the owner) but the costs of using the vehicle during an emergency might be passed onto the local authority.

The responsibilities of individual owners would be expected to be determined on a case by case basis.

The Logistic Support Cell would:

- Conduct advance risk-based planning, based on their community risk register, for the delivery of logistic support in an emergency;
- Allocate an owner for key items;
- Oversee and document the planning process including methods of acquisition, distribution and replenishment;
- Maintain and possibly map a record of local and regional logistic capability;
- Provide the basis of a multi-agency logistic support cell for use in an emergency;
- Provide the focus of planning for mutual aid, and its delivery in an emergency;
- Supervise any exercising of logistic support arrangements;
- Coordinate the activation of the arrangements in the event of an emergency within Strategic Coordinating Group;
- Have as members, or be in contact with, trained procurement staff, including military Joint Regional Liaison Officers.

The multi-agency logistic support capability should be open to Category 1 and Category 2 responders and to others who have a role in procuring and distributing supplies essential in an emergency, such as **voluntary sector organisations**.

The need to activate the Logistic Support Cell during an emergency will depend on the nature of the emergency, the requirement of emergency supplies to respond to the emergency and the amount of pre-planning in place to provide those supplies. Emergency plans should consider:

- The triggers to initiate the setup of the Logistic Support Cell
- How to gather supply requirements in an emergency
- How to action those requirements – lines of communication
- How to handle offers of help
- How to prioritise deployment

3.2 Regional Capability

While the responsibility for procurement of emergency supplies should remain with duty holders at Local Resilience Forum level, some level of regional coordination may be expedient. This is particularly pertinent where an emergency is widespread and several local authorities are seeking to source the same item. The Regional Civil Contingencies Committee (RCCC) is designed to facilitate this activity and would act as 'honest brokers' for prioritising claims on resources. The Regional Operations Centre (ROC) within the Government Regional Office will provide its generic role as a conduit between SCGs and Central Government.

To fulfil their role in logistic operations, the RCCC will need to be aware of mutual aid arrangements between SCGs and generally understand the pressures placed on resources within their region. They will need to maintain contact with SCG Logistic Cell(s) leads, relevant local and regional procurement groups and the Joint Regional Military Liaison Officer for the region to ensure good preparedness for logistic issues in the event of an emergency.

3.3 National Capability

Government Departments control access to some physical stockpiles of specialised items (see Section 4.1) and call-off arrangements for the supply of others. They can also engage with Europe and other international partners, for example the United Nations and the Red Cross, to request assistance if required. However, beyond this capability there is very limited capacity in most Government Departments to broker *ad hoc* agreements with suppliers at a national level, were that to prove necessary.

Wherever possible, logistics support to crisis response will be managed at the local level. However, there will be circumstances in which local responders do not have access to all of the required logistics skills, equipment and / or supplies. In such circumstances, a Logistics Operations Cell will be established within COBR to provide advice and coordination, particularly when the response is required across a number of regions/local areas. If central action is required to actually source and / or distribute supplies, this action will be taken by the relevant government department, coordinating as appropriate with the

local responders – and with the Logistics Operations Cell if it is operating. MoD expertise will be made available in an advisory capacity to Lead Government Departments, as part of a logistics cell within COBR.

4. Prioritising and Acquisition of Supplies

4.1 Prioritising requirements

Emergency supplies can be classified into two groups:

1. Common supplies used in a number of types of emergency e.g. beds, blankets, food;
2. Items that are unusual or of a unique nature specific to the type of incident e.g. high volume pumps.

Common supplies are usually readily available on the market, whilst the unusual or unique may be less commonly available. Examples of emergency supplies include:

Medical supplies	Wheelchairs and baby buggies
Sterilising equipment for water and utensils	Radios and batteries
Food	Satellite phones
Nappies	Emergency lighting
Baby food	Power generators
Cooking equipment	Power cables
Bottled water	Fuel
Water bowsers	Buses/public transport/PSV drivers
Blankets, warm clothing, waterproofs	4x4 and specialist rescue vehicles
Tents and temporary shelters	Inflatable dinghies
Portaloos	Life jackets
Buckets	Flood barriers
Shovels	High capacity water pumps

At both the planning stage and during an emergency, the strategic objectives from CONOPS should be used to prioritise the requirement for particular items. This involves assessing if an item is necessary:

- for the protection of life;
- for the avoidance, or treatment of, injury or ill health;
- to mitigate the worst effects of the denial of essential services; and
- to deal with consequences of those emergencies that provide the basis of national resilience planning assumptions.

Consideration of logistic operations should form part of planners' existing risk-based approach, prioritising according to their Community Risk Register and using planning assumptions as a framework for deciding what supplies might be required.

Considerations as to whether to acquire an item/service might include:

- The assessment of the likelihood and impact of an emergency;
- The need for reducing the time spent on acquiring the item during an emergency;
- The public perception of the need for the item to be stockpiled as a form of reassurance e.g. sandbags;
- The possibility that items *might* not be available where even a one per cent chance of not having the goods could lead to catastrophic consequences;
- The possibility that the cost of an item could increase in the event of an emergency so would be cheaper to purchase in advance.
- Is the equipment already available through some other means, for example from one of the National stockpiles listed below.

Stockpiles of both common and unique supplies exist at both local and national level. They vary in scale, location, storage type and intended use. Examples include:

- Common supplies stockpiled by the Ministry of Defence including sandbags, water purifying units, generators, cooking sets and bedding, which are intended for military use.
- High volume pumps maintained by the Department for Communities and Local Government.
- Vaccines and antibiotics stored and refreshed by the Department of Health
- Equipment held as part of the National Emergency Mortuary Arrangement, organised by the Home Office, providing capability for emergencies involving mass fatalities.
- Items used in rest centres such as bedding and refreshments stored by Local authorities.
- Supplies identified by Local Authorities as supporting emergency responders such as lighting, power, fuel and transport.
- Specialist equipment, consumables and vehicles held by police, fire and health departments for specific incidents such as oil spills or chemical incidents.
- Stores of beds, blankets and hygiene packs by some charities.

Key issues for consideration in prioritising requirements are summarised in Annexes A and B.

4.2 Options for Acquisition

Once an item has been identified as necessary, the methods through which to obtain it should be considered.

The spectrum of options includes:

- a. **Community resources** – supplies held by individuals, businesses, organisations and community groups.
- b. **‘Just in time’**: i) **ad-hoc sourcing** – where no prior research has been conducted into suppliers or the market; ii) **recessed capabilities** - where prior research into the market provides reassurance that the items could be provided on demand.
- c. **Mutual aid arrangements** – agreements to share resources between organisations within an LRF or beyond.
- d. **Virtual stockpiles** - Pre-arranged call-off contracts for specific supplies.
- e. **Physical stockpiles** – often used for custom-made items, or those with long lead times or weak supply chains.

In the most extreme scenarios, Part 2 of the Civil Contingencies Act 2004 can be used by the government to requisition supplies, however, it would be imprudent to rely on this mechanism, particularly as it would be invoked centrally rather than locally and is also limited by availability issues.

Broadly, moving down the list from (a) to (e) provides a more reliable source of supplies but increases in the resource required to obtain and maintain them. The options are discussed in more detail below along with examples of each.

a. *Community Resources*

Local communities, individuals and businesses may have certain supplies and equipment, either cached in personal stockpiles for use in an emergency or in every day use. The likely quantity, accessibility and use of these reserves should be considered before decisions are made to acquire supplies centrally. The reliance on such resources might increase in future if Government-endorsed messages promoting greater personal resilience and community resilience are adopted by the public.

Examples include school kitchens for the provision of cooking facilities and use of local buses for transportation of people and supplies.

b. *‘Just in Time’*

Depending on the complexity of the logistics requirements, it may be appropriate to assume that the market can deliver any logistics needs. This approach puts faith in the

market to deliver and assumes that the market will operate effectively even during widespread incidents that could test usual systems. Greater certainty can be achieved if a professional logistics capability exists within the LRF in the form of a Logistics Cell (see section 3.1), containing procurement and distribution expertise.

It can take the form of **ad-hoc sourcing from the open market or recessed capability**, where prior research into the market is undertaken to provide reassurance that the market can provide a sufficient quantity of the item in question on demand through usual supply routes.

Recessed capability is the more reliable option as it requires the good practice of **engaging with potential suppliers in advance of an emergency**. This not only helps develop a network of contacts ready for emergencies, it also allows suppliers to offer assistance beyond their immediate business, such as the distribution capability of supermarket chains.

Overall, the just in time option provides exceptional flexibility but a relatively uncertain level of guarantee. It relies on a mature, effective and highly responsive supply chain, which will be unaffected by the emergency. It assumes that responders are able to request precisely what is wanted with an informed knowledge of lead times and volumes and requires an understanding of how the market operates in an emergency. It also requires suppliers to have sufficient business continuity planning in place to ensure business resilience in an emergency. It is possible that this level of market awareness required may actually require more resource than the tendering process for a call-off contract (see below). There is also a risk that prices may escalate with increased demand during a crisis.

Examples of just in time arrangements include creating lists of local contractors who are willing to provide services at short notice, including local supermarkets.

Be aware that some companies may operate more effectively during a crisis if they are provided with the problem and the need, rather than a specific request. In this way they can determine the best course of action based on their resources and expertise. For example, a supermarket chain may utilise the resources of its distribution depot, rather than relying on a local outlet.

c. Mutual Aid Arrangements

Mutual aid arrangements enable organisations engaged in the response to an emergency to request urgent support from other parts of the country. The Cabinet Office issued a short guide on mutual aid for Local Authorities in December 2008, which includes a model agreement for the provision of mutual aid.¹ In order for such arrangements to operate effectively, there will need to be a sharing of resource/equipment inventories between mutual aid partners in order to identify where gaps exist and investigate alternative acquisition options to fill these gaps.

¹ www.cabinetoffice.gov.uk/ukresilience/news/mutual_aid.aspx

Mutual aid arrangements present perhaps the easiest method of planning for logistics, although caution should be exercised on relying solely on immediate neighbours, as the floods of summer 2007 showed that they too can be affected or will be unable to share resources because they fear being affected.

Mutual aid agreements already exist between the emergency services through their national bodies e.g. CFA, ACPO NHS etc. Local Authorities in several regions also have memorandums of understanding, allowing information on suppliers to be shared before an emergency and resource to be shared during an emergency.

Mutual aid may be enhanced through the use of the brokerage tool on the National Resilience Extranet, once available.

d. Virtual Stockpiles

Virtual stockpiles involve establishing, in advance, arrangements to provide supplies in an emergency. This is normally achieved through the use of call-off contracts, which usually provide for the supply of goods or services over a fixed period of time, rather than a specified quantity. They allow the purchaser to:

- Negotiate best value for money for supplies on an as-required-basis.
- Remove the need to conduct individual tendering exercises for every resource requirement.
- Provide quick access to supplies as and when required.
- Have access to specialist services which are not normally required on a day-to-day basis.
- Incur the expenditure only at the point of need.
- Set the terms for works or services, for example maintenance, where the volume cannot be reliably set in advance.

As well as private business, charities hold some supplies of equipment and/or have knowledge and expertise in procuring and distributing supplies. It is therefore important for planners to engage with the voluntary sector and consider the use of memorandums of understanding to supply these resources.

One 'real-life' example is a call-off contract between four Local Authorities and the WRVS to provide staff and refreshments at Rest Centres and Survivor Reception Centres. Virtual stockpiles do not offer the same certainty of the physical stockpile, being dependent on the supplier to deliver in the event of an emergency, and may require some expenditure on up-front contractual costs, however, they are more cost effective than physical stockpiles.

Organisations entering into call-off contracts need to ensure that the supplier is resilient (having a business continuity plan in place would be one test of this) and that the supplier is not overstretching themselves by entering into multiple contracts that they are unable to meet in the event of all contracts being activated at the same time e.g. in the event of a widespread emergency.

e. Physical Stockpiles

A physical stockpile is a large stock of goods or materials that has been purchased and is held in storage for when it is needed. This is a traditional way of meeting logistics demands in all kinds of circumstances and can offer reassurance. It builds capacity in the response network and may bring discounts or other benefits due to the large volumes procured. It is often used for custom-made items with a long lead time for manufacture.

However, physical stockpiles can have significant costs covering procurement, storage and maintenance. These costs are present whether the material is used or not, and with perishable goods there are also regular replacement costs. There is also a significant risk of redundancy through the wrong supplies being stockpiled. In addition, the guarantee of availability is still dependent on supply networks between the stockpile and the point of use and an assumption that maintenance ensures the material is ready to use.

Generally speaking, a stockpile is the most risk-averse means of providing goods. For specialist commodities stockpiles are the most reliable approach, however, for many other items of more general use there is probably no need to stockpile if procurement arrangements are sufficiently robust.

In between these two extremes is a grey area where items such as sandbags, or demountable flood barriers might reside, i.e. not too specialist, but not too commonly available. There are also a small number of common items that local responders may find useful to stockpile, such as those needed to establish rest centres.

A common example of a local physical stockpile is that of bunks and bedding for use in rest centres.

Outside of these examples, the cost of storage and maintenance of any stockpile can be a limiting factor in their use and they are therefore generally not recommended.

Key issues for consideration in choosing the method of acquisition are summarised in Annexes A and B.

4.3 Key Principles of Acquisition

In summary, options for acquisition range from the simplest, but less reliable, community-based resourced to the more expensive, but most reliable, physical stockpiling.

An evaluation system could be used to aid decision making, for example –

Items to be stockpiled should meet the following criterion:

- *Not available locally in sufficient quantities to meet predicted need;*
- *Cannot be obtained in time to meet need (eg long lead time);*
- *Storage is a practical option having regard to shelf-life and maintenance needs, size and number needed;*
- *May be transported in sufficient time to be of use (bearing in mind transport networks may be affected by the emergency);*
- *Ideally may be used in a number of different types of emergency;*
- *Appropriate cost recovery mechanisms are in place;*
- *Funding is available to maintain the stockpile in perpetuity.*

Conversely items that should not be stockpiled are:

- *Generally available locally and from an easily augmentable source;*
- *Can be accessed 24/7 through robust arrangements.*

For example, storing vast numbers of portable toilets for what would be a very occasional use would seem unrealistic and would lead to enormous difficulties in mobilising and servicing the stock. A good network and system to procure these from different sources, and hiring complete with transportation and contracted service backup (e.g. cleaners and emptying vehicles) from large event organisers used to such challenges would appear to be preferable.

However, a good logistics approach should operate a mixture of these options to optimise diversity of supply and cost-benefits. A basic flow chart to assist with deciding which options should be applied is provided in Annex B.

4.4 Procurement Options and Resilience

While there is no definitive answer for the method of acquisition for most items/services (as it is dependent on local risks and resources), whatever method is chosen should be supported by robust financing arrangements, which have been agreed between all partners before an emergency happens.

Arrangements might include standard contract-invoice payments, corporate credit cards, pre-arranged purchasing agreements with supermarkets, prearranged prices for specific supplies or services, formal agreements negotiated for emergency supplies, or possibly agreement of no payment, such as in the case of shared community resources.

The method of acquisition should also be as resilient as possible to avoid the supply being compromised by an emergency i.e. avoid putting all your eggs in one basket:

- If possible, sourcing should be from geographically diverse suppliers in case all local suppliers are affected by an event.
- The business continuity plans of suppliers should be factored into decisions on preferred suppliers, especially for key items.
- Avoid dependence on a single company and avoid competing with other emergency planners for a company's stock (these issues should come to light in multi-agency discussions and through mutual aid agreements). Keep supply chains diverse and share plans with relevant public and private sector bodies.
- Consider concurrent scenarios occurring e.g. transport not being available due to bad weather or fuel restrictions and panic buying by the public.

4.5 Cataloguing Arrangements for Logistic Supplies

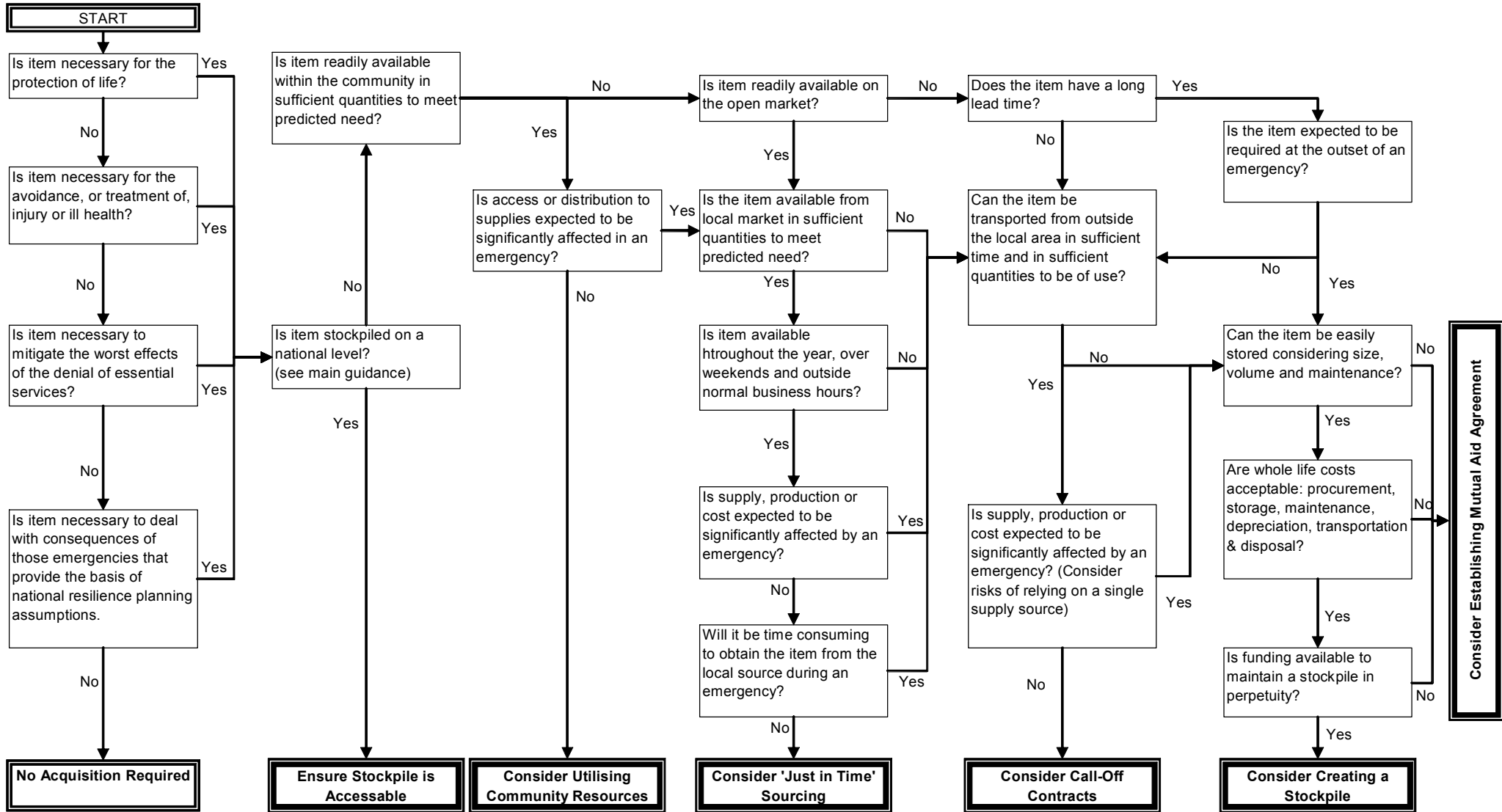
A simple method for categorising the arrangements for the choice, acquisition and procurement of emergency supplies is illustrated in Annex C. Copies of the catalogue should be distributed in a form that will aid access in a crisis, for example, through the National Resilience Extranet once available.

Annex A: Drivers for Logistic Operations – Factors to Consider When Deciding how to Obtain Emergency Supplies

Availability and Access	The operational imperative	The cost and potential benefits
<i>The availability and ready access of supplies and equipment (can the market provide or will it fail?)</i>	<i>Assessment of the operational need for supplies and equipment</i>	<i>An assessment of the cost and benefits of acquiring and maintaining the supplies and equipment</i>
<ul style="list-style-type: none"> • The extent to which the items are available on the open market from existing suppliers (including, in practical terms, issues like availability of items at different times of year, over weekends and outside normal business hours, such as at night and during public holidays); • The extent to which items are available in large volumes and whether the market is able to supply surge capacity at short notice; • Readiness and the notice period required by suppliers - the period will be based on the level of risk willing to be taken; • The sustainability of the method of supply – how long will the fixed resource, or replacements, be needed; • The substitutability of goods and suppliers, including perhaps splitting procurement of the same item between suppliers for resilience and flexibility; • Sourcing could be from geographically diverse suppliers in case all local suppliers are affected by an event. • The perishability (sell by/use by date) of stock and the extent to which items require regular maintenance (e.g. electricity generators); • Stockpiling could distort markets, potentially increasing costs for other purchasers; • Is the resilience of suppliers assured by business continuity plans; • The role of private sector businesses in providing logistics support and capacity through their well established and 'just in time' distribution networks, • Supermarkets are now run 'lean' and might take time to ramp up production in excess of their base level stock; • Whether an item is a consumable or a non-consumable 	<ul style="list-style-type: none"> • The assessment of the likelihood and impact of an emergency; • Reducing the time spent on logistic operations during an emergency; • Long lead times; • The public perception of the need for stockpiles as a form of reassurance e.g. sandbags; • The question of accessibility of centralised or dispersed stockpiles i.e. the extent to which existing stockpiles can be distributed quickly to areas affected by an emergency; • 'Fatal risks' - reducing risks that items <i>might</i> not be available where even a one per cent chance of not having the good could lead to catastrophic consequences; • Securitisation of risk – fixing the risk to assure the outcome; • Concurrent scenarios occurring – a set of agreed concurrency assumptions agreed locally would be useful to underpin this, including for example, scenarios such as transport not being available due to fuel restrictions and panic buying by the public; • If certain supplies are used in day-to-day business as well as in emergencies, the ongoing use and replenishment of stock based on cycle times could be factored in (rotation: first-in, first-out) to reduce or prevent wastage; • It may be better to deploy goods with no expectation of their return, replacing as necessary, as the costs of cleaning or transporting the goods outweigh the benefits; • Good planning should ensure that not everyone has contracts with the same company for the same items or, if they do, that the supplier will still be able to honour the contract. 	<ul style="list-style-type: none"> • Whole life costs, including procurement, storage, maintenance, depreciation, transportation and disposal should be considered; • Cost might be unstable or predicted to rise (particularly in an emergency), it might be cheaper to buy in bulk in advance; • Goodwill of suppliers in donating goods cannot always be relied upon • The cost of land rent and storage costs in the UK makes the stockpiling of items a potentially expensive option; • Trade off between cost and viability of transporting goods versus keeping stockpiles; • Hiring versus buying; • When faced with fulfilling a contract and supplying an order under difficult circumstances, a company may prefer to pay the penalty. Therefore reliance on reputation instead of penalty clauses can be used as a lever; • Robust financing arrangements should be in place and understood before an emergency. Ad-hoc sourcing (“do it and worry about it afterwards”) can increase risks and should not be a substitute for planning before an event. • 'Crisis Card' or 'Crisis Purchase Scheme' arrangements exist between some supermarkets and emergency responders and these options should be explored.

Annex B considers many of these factors in the form of a flow diagram.

Annex B: Flow Diagram to Assist Acquisition Decisions



Annex C: Example of Logistic Supplies Cataloguing

Note: These are hypothetical examples, not necessarily recommended choices.

Serial No.	Item	Planning Assumption/Risk	Lead Supply Agency	Quantity/Timing	Primary Procurement Route	Secondary Procurement Route
001	Portaloos	Interrupted water supplies esp. flooding	Water Industry	Within 12 hours	Ad-hoc sourcing	Community Resources
002	4x4 Vehicle	Cold weather event or flooding	Voluntary Organisation (VO)	Within 1 hour of event as required - for pick-up/delivery role	MoU with VO (community resource or physical stockpile – depends on how item is used on daily basis and funding arrangements)	Mutual aid agreement with other LRF or VO
003	Blankets	Evacuation of X people	Local Authority	Immediate. One per person	Stockpiled.	In event depleted stockpile, excess by <i>ad-hoc</i> sourcing

