A medical records store with unique, irreplaceable patient information in hard copy; a national museum whose galleries and stores are brimming with items of cultural significance; a public record office, home to a unique historical archive; a law firm, with wills and property deeds in its strongroom; a university library, an essential tool for students and academic staff in their studies and research: these institutions include library, archive and museum services, together with historic houses, but also encompass those engaged in the information services field such as records management services. All differ in scale, their core mission, staffing and client-base, but are linked by the potential impact of an emergency incident such as a fire or flood affecting the collections they store. Objects may either be unique, culturally significant or extremely financially valuable, and therefore impossible or extremely costly to replace. In the case of records and modern library collections, damage or destruction of these items may significantly disrupt service provision, threaten significant reputational damage or breach regulatory requirements.

Emergency response must be prompt, well organized and competent in order to protect collections, facilitating salvage and restoration at the earliest opportunity. The question is whether it is necessary to have a plan for such an emergency to ensure an adequate response. Can professional, capable individuals source the solutions required dynamically on the day to minimize damage without preparation? In an age where an internet search will list a dozen plumbers who would be able to repair a leaking pipe, or find websites detailing procedures for dealing with wet microfiche, is an emergency plan redundant? Surely common sense, a phone and internet access is all that is needed to resolve problems as they emerge on the day?

Why is a plan important?
More effective response through pre-incident planning
Experiences from countless emergency salvage operations in such institutions
indicate that disaster recovery is anything but straightforward. Pre-incident preparation is critical to maximize the success of salvage if the limited time after the incident before which existing damage will rapidly deteriorate can be used to greatest effect. Failure to respond quickly to an incident involving leaking of water, and organize staff and equipment to control and isolate the source of the damage, will potentially result in a leak of a longer duration, resulting in a much larger overall quantity of damaged material, which could have been avoided through quicker action. Simply knowing where stop-valves are so that the flow of water through to burst pipes can be halted could potentially prevent thousands of litres of water discharging, thus avoiding damage to the building fabric, environment, collections within and interruption to the public service.

A plan will avoid such situations as it can provide information that will be critical to successful incident control, which will ultimately save time, and thus avoid the quantity and severity of damage from increasing. The minimization of secondary damage such as mould growth can also be achieved through effective emergency planning. Secondary damage does not appear immediately but worsens over time if interventive action is not taken. This is explained further in Chapter 6. Time is limited and a plan will ensure available time is used as effectively as possible.

Figure 1.1 shows severe mould growth after water-damaged records had been left untreated for three weeks.

![Severe mould growth after water-damaged records had been left untreated for three weeks](image.jpg)
Without a plan, the information, resources and external support you may require become apparent quickly, but institutions may find that they are one step behind other people in the same situation locally who are better prepared. This is particularly apparent in catastrophic incidents or claims surges, affecting multiple buildings in an area, all of which will require pumps, emergency lighting, security and safety equipment. The best prepared get those resources first, whereas those without preparation have to wait.

Without a plan, there is also an assumption that all key personnel will be available to assist and function as normal. Emergency situations can be extremely stressful and a plan provides a crutch, prompting individuals who may feel very overwhelmed with an action list, a starting point. Jim Duff, a conservator from the University of Manchester, recalls ‘having an established in-house disaster plan was a great benefit and provided clear guidelines at a time of stress’. Additionally, without a plan, there is an assumption that catalogues, vital records and reference tools will be accessible. This may not necessarily be the case. Emergencies have a knack of happening at the least convenient time, when key staff are on holiday or new in post, as demonstrated in two of the case studies in Chapter 2.

Failure to plan is a false economy
Effective emergency response is difficult without a plan. However, Matthews, Smith and Knowles (2009), reporting the results of the 2005 study of 635 libraries, archives and museums in the UK, ‘Safeguarding Heritage at Risk’, found that a significant proportion of libraries, archives and museums have no written procedure: 28% archives, 26% libraries and 14% museums. The reason for this may be that the institution considers the risk of an incident occurring as low, but most often the reasons cited are a lack of time and a concern over how much planning and preventative measures might cost. One principal aim of this book is to show that the plan process can be fast-tracked and is often much less onerous than initially feared. Budgeting only becomes a major issue for the purchase of emergency stockpile equipment, which will be discussed in Chapter 7, and costs need not be excessive. An effective plan should also prevent damage from escalating, which will save institutions significant sums of money if there is an incident. Failure to plan is a false economy.

Obligation to plan for irreplaceable collections
Should an emergency incident occur, causing devastating damage to a collection, which the staff were ill-equipped to salvage, the phrase ‘I didn’t
have time’ would sound very hollow. Time must be freed to ensure plans are composed. Some have argued this is a moral obligation of heads of service for irreplaceable collections. Indeed there is a UNESCO accord, the Radenci Declaration (1998), which states:

All institutions caring for the cultural heritage . . . should integrate risk preparedness and management within their operations to avoid loss or damage in both normal and exceptional times . . . . The goal is to avoid loss or damage to cultural heritage in the event of emergencies by improving prevention, preparedness, response and recovery measures. It is achieved by developing, implementing and monitoring strategies which assess and reduce risk, improve response capacity and ensure co-operation of all relevant parties in local, national and international emergency management.

The declaration goes on to require that adequate funding is provided, good working relationships with the emergency services are fostered, manuals of emergency procedures are produced, emergency supplies are provided and training is held regularly. Emergency planning is essential and it is incumbent on those with responsibility for cultural heritage to ensure appropriate measures are in place. This process need not, with appropriate support and guidance, become unmanageable and unwieldy, but rather be completed efficiently, quickly and sustainably, in a manner which will maximize the chances of successful implementation in real emergency situations.

**Environment of increasing risks and threats**

Those working in libraries, archives and museums are well aware of the importance of the collections for which they are responsible and the requirement to protect them from damage. Standards exist, such as BS5454, which provide guidance on how to minimize threats to collections from perils such as water and fire, as well as long-term issues associated with poor environmental conditions. Collection custodians strive to ensure that the building environment poses minimal risks to their assets as far as is practically achievable within building constraints and budgets.

Nevertheless incidents occur and a residual risk will remain. The abovementioned study ‘Safeguarding Heritage at Risk’ found 30% of respondents in the last five years had suffered an incident they would categorize as a disaster, of which 21% had suffered more than one. Water damage accounted for 68% of incidents, with other perils much less common, notably fire at 11%. Residual risks persist because of external factors that cannot be controlled and the capacity for human error. A large proportion of
water-damage recovery projects handled at Harwell Document Restoration Services are attributable to building contractors’ human error, where there is no intention of causing collection damage, but their presence certainly heightens the risk of escapes of water through the nature of their activity. An external contractor may not be aware of the nature of the collection, nor consider fully the repercussions and implications of even a small leak. There may also be impacts as a result of bad housekeeping and bad practice in neighbouring institutions.

Figure 1.2 shows damage to an archive store caused by a fire in the neighbouring workshop of a different organization.

There are some, although thankfully few, examples of arson and deliberate damage to organizations in the heritage and information services sector. Two UK libraries have been significantly affected by deliberate damage: a library store was affected during the riots in Salford in 2011 and an arsonist attacked a library in Kent in 2005, both causing damage to thousands of books. National institutions are high profile and potential terrorist targets, and higher education libraries have been targets for civil disobedience such as occupations.

Figure 1.2 Damage to an archive store caused by a fire in the neighbouring building of a different organization © Harwell Document Restoration Services
In addition to these risks, there is the background of a changing climate and the impact of extreme weather on buildings. The Intergovernmental Panel on Climate Change’s 2007 report (Pachauri and Reisinger, 2007) states:

There is high agreement and much evidence that with current climate change mitigation policies and related sustainable development practices, global greenhouse gas emissions will continue to grow over the next few decades. Altered frequencies and intensities of extreme weather, together with sea level rise, are expected to have mostly adverse effects on natural and human systems.

Many buildings were not designed or constructed to cope with such extremes, heightening the risk of damage through water ingress, particularly where collections are housed at ground level or below.

Figure 1.3 shows flash flooding as a result of a month’s typical rainfall falling in three hours.

**Definition and terminology**

For these reasons, planning is essential to protect vital, irreplaceable records and cultural heritage. There is a question though as to what kind of plan is required: there are many terms currently used in public and private spheres, which all broadly refer to the procedures an organization will follow if there is an emergency. ‘Disaster planning’ was historically the term most widely used in the heritage sector in particular, but in recent years ‘emergency planning’ has superseded this. The content of such documents is broadly the same, but avoidance of the word ‘disaster’ is seen as more positive and, indeed, disastrous situations can be averted if emergency plans are successfully implemented.

The term ‘emergency planning’ outside the heritage sector usually refers to the ‘blue-light’ phase of an incident. Indeed only incidents sufficiently serious to involve the

**Figure 1.3 Flash flooding in the city centre of Londonderry in July as a result of a month’s typical rainfall falling in three hours**

© Harwell Document Restoration Services
emergency services would qualify as an emergency in other sectors. It also refers to wider civic response to major incidents such as the aftermath of an earthquake, flood or other natural disaster. ‘Crisis planning’ is another phrase that is used for response to emergency situations, although it usually typically refers to the communications sphere and public relations issues generated in such circumstances.

‘Business continuity planning’ is a term used in the commercial field for incidents that cannot be managed through normal working procedures and which pose a serious threat to an organization through injury to staff, damage to buildings, or an interruption to systems and IT. The scope of business continuity planning is discussed more in Chapter 9, where it will be argued that libraries, archives and museums must include business continuity strategies in their planning. Where heritage and information services organizations differ is that small-scale incidents, outside the scope of a business continuity plan, would require a prompt and effective response, and must therefore be captured within the plan. Dealing with damage to a shelf of books or files may not threaten business as usual, but if those are valuable, irreplaceable or contain vital business information, effective response is required.

Definition and scope of plans
All these elements should appear in emergency procedures for libraries, archives and museums. For the purposes of this book, the term ‘emergency plan’ will be used, which is intended to encompass the procedures to ‘any incident which threatens human safety and/or damages or threatens to damage or destroy an institution’s buildings, collections, contents, facilities or services’ (Matthews and Eden, 1996). This is the definition of ‘disaster’ that was used in the abovementioned 2005 study ‘Safeguarding Heritage at Risk’ (Matthews, Smith and Knowles, 2009). This definition works effectively because it is broad, encompassing not just the collection, but also the building, the service provision and most importantly the people.

Practical disaster recovery experience has shown that although many emergency plans work effectively for collections salvage, they are less successful in dealing with the wider implications of the incident, such as damage to the building infrastructure, impact on services and communications. The focus is often narrowly on preservation of collections. The reason for this is that often the impetus for writing plans comes from collections, curatorial or conservation staff whose main concern is for the objects. In major incidents, however, response is much more complex as, while collection salvage is important, many other issues must be concurrently considered and a more holistic approach is required.
Those institutions whose existing document is not known as an ‘emergency plan’ need not amend the title provided that all aspects of people, collections, services and buildings are considered in the content. Indeed, for those organizations embedded in a larger institution such as a university or local authority it makes sense to adopt the corporate term so that plans are appropriately integrated and fully used in major incidents.

**Will your existing plan work in practice?**

Where organizations already have emergency plans, theoretically the hard work is done and dealing with emergency situations should be simple. However, many users find that plans do not work as effectively as they had hoped when they are required. Ostensibly the boxes are ticked: priority lists, salvage guidance notes, telephone numbers of key staff and suppliers are provided, but real emergency response is chaotic and the plan’s performance a disappointment.

Implementing an emergency plan is not as simple as following a recipe, as common sense and an element of interpretation are required. Because of their scale and related strained resources, salvage will be delayed and damage to collections will worsen unavoidably in some situations. Even with a good and well functioning emergency plan, response and recovery is not easy work: it is potentially physically demanding, unpleasant and upsetting. However, some plans either fail completely or only work in a limited way in a real emergency. Why do some plans work ineffectively in real fire or flood situations?

**Plans are not used properly**

When an emergency plan is not actually implemented in an emergency it can be extremely frustrating for the plan author. In all likelihood, it contains good quality information but, through a lack of communication about its existence or location, response is made without reference to the plan. Plans are sometimes used initially, but if the content or layout is not user-friendly, users cannot find the information they need quickly and disregard the plan. If the last time someone looked at their plan was over two years ago, its efficacy will be compromised. Training, testing of the quality of the content and maintaining that process would have averted this scenario. This outcome can also be the result of senior staff not being involved properly in the planning process. They have no ownership of or trust in the content of the plan and therefore choose to operate in their own way in an emergency. This underlines the importance of gaining buy-in to the plan, as explained elsewhere in this book.
Plans do not tell users what they can and should do
Some plans amount to little more than lists of information that will be useful in an emergency but give no guidance on how such information should be used. Salvage guidance notes, priority lists and lists of equipment in disaster kits are all important but they provide no structure detailing how to organize the salvage operation, or how roles and responsibilities should be allocated. Successful emergency response relies on a collaborative approach with staff working together in clearly defined roles, with guidance on what they need to organize and what they are authorized to do. Failure to provide firm guidance can cause dithering. The plan must give clear guidance on emergency expenditure – what is permissible and if limits are exceeded who should be approached to release funds? The cost of hiring a dehumidifier for two weeks, for example, is a tiny fraction of the potential cost and operational disruption triggered by a mass mould outbreak because an area has not properly dried out. Roles and responsibilities are discussed in Chapter 3.

Plans are inflexible
Major incident disaster recovery is demanding even for well prepared organizations simply because of the scale of the incident. As is explained in Chapter 6, salvage techniques appropriate for small-scale incidents can be totally counter-productive in the context of a much bigger incident given time constraints. A flexible approach is required so that organizations can manage a range of incidents effectively, which requires training and confidence among the team of staff managing the incident. Plans must consider the spectrum of possible incidents and be scalable and flexible. Similarly they must be resilient for the absence of key individuals. Emergency incidents often happen when it is least convenient and if plans presuppose that certain individuals may be available in person to deal with the situation there is a strong possibility of the plan failing due to the absence of that key person.

Plans are not integrated
Over-reliance on other departments within a parent organization (such as the wider public authority or academic institution – see Chapter 3 for more on this), most particularly facilities, can cause problems too, particularly in the context of a surge event where multiple buildings are affected in your area. The level of support from a parent organization depends on the assessment of managers in that organization of your importance within its wider interests and priorities, and they may not afford you the level of resource you had expected. Managers of organizations have to target limited resources on high
priority areas. Those in local authorities prioritize people before they consider heritage or other assets. Pumps and dehumidifiers, which will be in limited supply, are more likely to be targeted at civic infrastructure such as power substations and medical centres than towards public libraries and archives, and justifiably so. Pre-incident negotiation can help ensure awareness is raised about the nature of collections, but inevitably they will not be the top priority in an incident where human safety is threatened. If the primary source cannot help, what is the back-up plan?

A poor relationship with the facilities service is immensely problematic for incident response, as well as overall risk management. Anecdotal evidence in training and real salvage situations indicates that many working in the heritage and information services organizations find the relationship with facilities challenging. Often this relates to a lack of mutual understanding. The library service must understand the number of sites the facilities section is responsible for, as well as budgetary and resource constraints, but the facilities section must understand the special circumstances and speed of response required for an incident involving objects that will deteriorate quickly if there is fire or flood damage. This is discussed in Chapter 10.

It is not uncommon for plans for large organizations to be very thorough for the main repository but to fail to cater for satellite sites, such as off-site stores and branch libraries. An integrated approach is essential at all locations where collections are kept and from which services operate.

Plans lack testing and training

Above all, a lack of testing of the plan content and staff training thwart effective response. Testing a plan and rehearsing its procedures will usually throw up minor niggles, which are much more easily rectified in a dry run. In one training scenario, the location given in the plan for the emergency kit was outdated, and when eventually it was found it could not be moved as it was too heavy. This problem was rectified immediately and shortly afterwards a real flood occurred. Without the training, the response to the flood would have been impaired. Training in the procedures will give greater confidence to individuals in their role. Although this does not make disaster response easy, it is less overwhelming if the issues have been considered in advance, rather than first considered in the midst of a real emergency. Even good quality plans do not work well if individuals cannot navigate them rapidly to find the information they need. Make an effort to provide a user-friendly, intuitive layout; the more familiar the plan is to the user, the more effectively it will be used.

The remainder of this book provides guidance on how to avoid these
pitfalls by showing what information should be available in a good emergency plan, how to present it to best effect, how to communicate the content of the plan effectively to potential users and ensure their proficiency in its application, and finally to ensure the plan is properly maintained.

**Writing an effective plan – how to use this book**

The type of plan required will be one that ensures the following:

- Problems are identified and reported to the appropriate people quickly.
- Staff and user safety is prioritized throughout.
- There is swift control and containment of damage to building and collection.
- Service disruption to users is minimized.
- Affected stock is salvaged, treated for damage and reinstated.
- Building fabric is restored.
- There is a return to business as usual as quickly as possible.

Figure 1.4 on the next page is a possible template for the contents page of a disaster plan.

**Using templates**

Each of the elements listed in Figure 1.4 is discussed in the book as indicated. Some checklists are also included. These are obviously generic and will require adaptation to specific set-ups, but they broadly outline key issues to be considered and indicate how response can be managed safely and sensibly. Remember that for effective planning, it is not possible merely to fill in the blanks of a template or to ask colleagues in other institutions to see their plan and copy their structure and content with only cursory adaptation. One size does not fit all. Such plans are not tailored and rarely work in practice: your facilities team may have a different remit; you may hold different types of object and more or fewer items in total; you may have entirely different working patterns and staff dynamics. They may have a different strategy, and, while it is useful to compare their approach, plans should be written as bespoke documents.

The guidance in this book must be applied and adapted to the specifics of your own organization: some organizations may find that the emphasis on business continuity is unnecessary for them; others may choose to take emphasis away from salvage onto business continuity because of differing core missions and priorities. Each element should be considered carefully,
however, as the content included is included on the basis of practical experience. Nothing listed above is suggested arbitrarily: somebody has needed this information before in an emergency and benefited from its inclusion or regretted its omission.

It is important not to be put off by how much material is listed above and grow concerned about how much time it will take. The section that requires most work is the selection of priorities for salvage and deciding on how your Emergency Management Team is composed. Everything else can be achieved through the adaptation and fine-tuning of guidance notes in this book (for example identifying suitable contractors from suggested lists here using online directories, filling in telephone numbers and staff, and fine-tuning material such as floor plans probably already in existence).

Figure 1.4 Possible template for the contents page of a disaster plan
It is possible to have a plan that has a lot of information in it which is nevertheless clear, succinct and easy to use. Remember that access to office space may not be possible. Sometimes a plan with fewer sections and pages may seem attractive, but critical information may be missing when required, and the layout may be too compacted to be user-friendly. An emergency plan should be a single point of reference, well laid out and thoughtfully presented, prompting individuals about what to do and providing critical information that may not otherwise be accessible. The remainder of this book will demonstrate how this can be done.

Project management
The process of plan composition or redraft can become protracted if a timetable is not established for completion at the outset. Although with appropriate support none of the tasks involved is especially difficult, the process of gathering information can be time-consuming and frustrating. Momentum can easily be lost, draining initial motivation to complete the plan and ensure it is a plan tailored to the individual organization. In these circumstances the plans can linger in incomplete draft for months, sometimes years. Alternatively, through frustration at lack of progress and support, plans can be completed hurriedly with key content lacking and poor layout. Such plans rarely work well in practice.

Getting initial buy-in
In some organizations, the planning process is deferred until complete buy-in to the process has been achieved with all senior management. This is often the case in the corporate sector where the first step in the business continuity ‘life-cycle’, designed to ensure that the business continuity concept is embedded in business practice, is for the executive of the organization to write a policy document, endorsing the process and requiring staff at all levels to participate in planning.

It is important to gain the buy-in of a group of people to endorse the plan if the plan is to be used in a real emergency. Without this ratification, the plan may not be used in an emergency and prove a paper exercise, which does not translate to any meaningful contribution to disaster recovery. A formal policy may not be necessary for libraries, archives and museums but can be a useful tool if keen, committed individuals find they are simply not being provided with information and input when required and top-down support would be helpful. Even if a policy is not deemed necessary, meeting senior colleagues before the work commencing to garner their support will smooth the
information-gathering phase of plan composition. As will be discussed in Chapter 3, senior managers are likely to be allocated an emergency role. At the beginning of the planning process, the Emergency Management Team exercise described on page 46 can quickly convey why their involvement is essential. Inviting speakers from similar institutions that have suffered real incidents also demonstrates how a major emergency could happen and provides some context to the planning process.

Who should write the plan?
The question remains as to who draws the plan together into an initial draft. In some organizations the research and composition are completed by one individual, for sign-off and approval by senior management. In other organizations, the tasks are delegated to a larger group. Each approach has its advantages: one person focusing on the task may result in a faster completion than a larger group with other competing priorities, but a collections manager will not necessarily have the detailed knowledge to write guidance for health and safety, or business continuity procedures which other colleagues would have. A group approach may mean that the persons who would ultimately be responsible for tasks draft the procedures, which may result in less iteration, but often results in a more protracted composition period.

It may be that some individuals cannot contribute time to writing the plan, but they must at the very least review draft content and take ownership of the elements that involve them. Even if one person co-ordinates the information gathering and collation of the plan, this is made much easier if colleagues elsewhere within the service and in other departments such as facilities understand why the information is required. The profile of the plan will be better and the ownership of senior staff in its content will be greater. On balance, it is often best if one person co-ordinates the planning process and composes the document, but interviews and involves all those likely to be involved in an emergency process during this time, and that their sign-off is sought for all sections pertinent to them. The whole process requires the input and stewardship of the senior manager of the organization to ensure the composition process is kept to a reasonable schedule.

Schedule
Having agreed the content and author(s), set deadlines. The priority tasks to begin with are to determine:

• the Emergency Management Team and contact information
• priority lists
• procedures for isolating utilities
• external suppliers (especially salvage suppliers).

During the composition process, risks remain. Consider what information would be most crucial if an incident were to happen tomorrow and prioritize the completion of these sections.

The second advised phase will be to draft instructions on what to do if there are emergencies and to commence discussions with external agencies and departments from whom you’ll need support. Development of these relationships may require some time before they come to fruition. At this stage, to establish rapport with local fire services personnel invite them to meet you and tour the building (see Chapter 4, and the Royal Horticultural Society case study) and discuss issues such as insurance, finance arrangements for suppliers, and business continuity objectives. Start the process of procuring emergency kit and recruit additional personnel to assist in emergencies beyond the Emergency Management Team.

The final stage will be to fine-tune the roles and responsibilities for the EMT for salvage and incident management, and adapt material such as salvage instructions, filling in the remainder of the blanks. Many plans copy and paste this information into their plans, but do not remove instruction on object types they do not retain, or add in those object types they do have but were not included on the copied list. Minor niggles like this can become magnified in implementation as they add to the size of the plan and can undermine its quality and credibility.