

UNIVERSITY OF CAMBRIDGE

[NAME OF DEPARTMENT/LIBRARY]

DISASTER CONTROL PLAN

AND

RECOVERY PROCEDURES

LAST UPDATED

[DATE]

## SECTION 1

### LIBRARIES DISASTER CONTROL PLAN

#### INTRODUCTION

**1** The Libraries Disaster Control Plan aims to provide simple and flexible guidelines for coping with a disaster that occurs in the University Library and any other library that is located within a Faculty, Departmental or College building. The plan should be read in conjunction with the University Serious Incident Management Policy Document and should be included in any Faculty, Departmental or College Contingency Plan.

#### **2** Types of Disaster

In this context a disaster is taken to mean an incident which causes damage or the possibility of damage to library premises, stock or equipment. A disaster can occur at any time.

Damage caused by water penetration due to the effects of fire fighting, leakage from drains, pipe work or weaknesses within the building structure itself are the main areas of risk. Others would include fire damage, the effects of smoke incursion, chemical spillage, bomb threat, a severe outbreak of mould or insect infestation each of which would require specialist treatment.

***On no account should staff put their own, or others' safety at risk, in an attempt to deal with the effects of a serious fire or chemical spill without first receiving confirmation from the emergency services that it is safe to proceed.***

A senior member of the library staff, previously designated, will co-ordinate the response to the incident, insofar as the library is concerned (he or she will hereafter be referred to as the Library Disaster Reaction Co-ordinator or LDRC). In relation to libraries located within buildings occupied by a Faculty etc. the LDRC must liaise closely with the Departmental (etc.) Controller.

**A disaster can be categorised as:**

a) Life Threatening: e.g. fire, flood, bomb threat, etc.

**LIFE THREATENING:**

**ACTION:**

- 1      Sound alarm**
- 2      Evacuate building**
- 3      Contact Security Control (31818)**

b) Property and contents: e.g. storm, flood, water leaks etc.

**PROPERTY AND CONTENTS THREAT:**

**ACTION:**

- Stage 1      Contact Security Control (31818)**
- Stage 2      Call Library Disaster Reaction Co-ordinator  
who will decide on Stage 3 action**

**EMERGENCY SERVICES FIRE/FLOOD INSTRUCTIONS**

- In the event of a fire inform Fire Brigade that the material involved will be damaged by the use of water.
- If and only if it is completely safe to do so, remove priority objects and valuable materials to safety.
- Cover any bookcases vulnerable to falling water from hoses, water pipes, tanks etc., with polythene/plastic sheeting.
- The Fire Brigade are both willing and able to remove material to safety which is threatened by the path of the fire or has already been affected.

## SECTION 2

### LIBRARIES DISASTER RESPONSE GUIDELINES

#### STAGE 3 ACTION

- Library Disaster Reaction Co-ordinator called.
- Action to control emergency, protect collections
- Library Disaster teams called, to include professional conservation advice and assistance, if necessary
- Call to staff responsible for areas affected.
- Situation assessed.
- Necessary support services informed      SEE SECTION 5
  - 1      Estate Management and Building Service
  - 2      (a) Transport   (b) Blast Freeze   (c) Cold Store.  
         (d) Equipment hire.
- Organise a safe working area for the salvage operation to take place.
- Equipment and materials for the salvage operation assembled.
- Guidelines and procedures for salvage teams.
- Maintain records.

See flow-chart following.

Throughout any emergency the action you can take may be restricted by the emergency services - the Library Disaster Reaction Co-ordinator will liaise with them and instruct the library team accordingly.

## DISASTER REACTION FLOW CHART

### STAGE 3 ACTION

Stages 1 and 2 already implemented

Maintenance/Faculty or  
Departmental Controller called  
Sec.2 p3

Library Disaster Reaction Co-ordinator called  
Sec.2 p3

Situation assessed  
Sec.2 p3

Action to stabilise  
situation and control emergency

If stock is threatened or affected  
determine likely needs and  
support services

Disaster teams  
called.  
Sec.4 p8

Curators of affected  
areas are called  
Sec.5 p9

Disaster materials moved  
to affected area  
Sec.3 p5

Teams organised  
and briefed

Necessary support services informed  
Transport Blast Freeze Cold store  
Sec.5 p10

Equipment hire  
Sec.5 p1

Salvage procedure  
Sec.6 pp14 - 21

Undamaged stock protected

Damaged stock identified and sorted

For air-drying Sec. 6p18

For freezing Sec. 6p19

For specialist processing

Listed

Listed

Listed

sorted

Individually wrapped  
Sec. 6p19

Individually wrapped  
Sec. 6p19

air dry

Packed in crates

Transport to blast freezer/coldstore  
Sec.6p19

#### **Freeze Dry**

#### ALL SATURATED PRINTED MATERIAL

Coated paper  
interleave with silicon paper  
wrap

Vellum bindings  
wrap in crepe bandages

Vellum leaved Mss. and  
material with water soluble  
inks/colours to be discussed  
with DRC prior to any treatment

### SECTION 3

#### LIBRARY DISASTER BOXES

Emergency supplies are stored in [xx] plastic boxes

#### Locations

Box 1 [insert locations]

Box 2

In addition to the items in the boxes, the following items are also available for use in an emergency.

#### Items

#### Location

Plastic crates

If greater numbers are required,  
contact:  
Drying Restoration Services,  
(see Section 5)

Large rolls of Polythene

University Library Conservation Department  
33017  
out-of-hours: Alan Farrant 440559

Blotting paper

University Library Conservation Department

Silicone paper

University Library Conservation Department

Wet Strength paper

University Library Conservation Department

## LIBRARY DISASTER BOX CONTENTS

Tyvek coveralls	
Safety goggles	
Safety helmets	protective wear
Wellingtons	
Gloves	
Dust/mist respirators	
Disposable plastic aprons	
Torches	
Mops	
Mopbuckets	
Spontex sponges	
Rolls of absorbent cloth	for mopping up
Squeegees (long handled)	
Multi-format sorbents	
Miniboom sorbents	for containment of creeping water
Polythene	for protecting material from falling water
Nylon rope	tying polythene in place in place
Scissors	
Knives	
Dry cleaning sponges	for removing soot and smoke damage
Water Spray bottles	for gently washing off debris from books
Paint brushes	for use with above
Crepe bandages	wrap vellum bindings prior to freezing
Plastic buckets with lids	for damaged microforms.
Newsprint	
Blotting paper	
Multisorb wet strength paper	interleaving
Silicone paper	
Clipboards	
Disaster lists	
Pencils	for writing disaster lists
Waterproof pens	for crate labels
Self adhesive labels	for crate identification
Polythene freezer bags	
Cling film	wrapping material prior to freezing
Freezer tape	
Dustbin liners	for rubbish only
Flat cardboard boxes	construct boxes, pack books for freezing
Adhesive tape & dispenser	for sealing boxes

## SECTION 4

### LIBRARY EMERGENCY PROCEDURES

If any member of the department called to an emergency see library holdings being threatened or affected in any way they will contact the LDRC or deputy.

1st	Ext	Home tel.
2nd	Ext	Home tel.
3rd	Ext	Home tel.

On arrival and after assessing the situation, the LDRC will decide which disaster team members should be called out (if any) and supervise any salvage operation.

#### **First aid measures**

As far as is consistent with personal safety, the team will act to contain the incident or prevent damage to holdings, e.g. use of hand held extinguishers or the use of polythene sheeting.

#### **Building**

In the event of any incident involving the building contact

1st \_\_\_\_\_ Ext \_\_\_\_\_ Home tel. or pager \_\_\_\_\_

2nd \_\_\_\_\_ Ext \_\_\_\_\_ Home tel. or pager \_\_\_\_\_

3rd \_\_\_\_\_ Ext \_\_\_\_\_ Home tel. or pager \_\_\_\_\_

**LIBRARY DISASTER TEAMS FOR CALL OUT**

Team Leaders

Team 1

Team 2

Team 3

Volunteer team members:

Name	Ext.	Home tel.	Location
------	------	-----------	----------



## **Freeze Drying**

Rank Hovis MacDougal  
Lord Rank Research Centre  
Lincoln Road  
High Wycombe  
Bucks HP12 3QR

Telephone 01494 526191

Contact Dr. Roger Angold  
Dr. S. Branch

Specialists in the treatment of rare material

---

## **Co-operative aid**

There is a two way informal agreement between the Cambridge Colleges Consortium and the University Library to assist each other in the event of a disaster.

Cambridge Colleges Consortium  
Telephone 01223 843221  
Contact N. Hadgraft or M. Jefferson

Cambridge University Library  
Alan Farrant 33028  
(01223) 440559  
Jan Coleby 33017  
(01223) 232957

---

## **Sources for Alternative /Supplementary services, materials and equipment.**

### **Safety and protective equipment for disaster teams**

Fisons Scientific Equipment  
Bishop Meadow Road  
Loughborough  
Leicestershire  
LE11 0RG

Telephone 01509 231166

Preservation Equipment Ltd  
Shelfanger  
Diss  
Norfolk  
IP22 2DG

Telephone 01379 651527

**Additional plastic crates**

Mail Box International Ltd

Telephone 0161 330 5577

---

**Dehumidifiers Hire of pumps, wet /dry vacuums, fans etc.**

HSS Hire Shops

254 Newmarket Road

Cambridge

CB5 8JL

Telephone 01223 460410

---

**Microforms processors**

Chadwick Healey

Telephone 01223 215512

---

**Corrugated Cartons**

Essex Corrugated Containers Ltd.

Brunel Road

Manor Trading estate

Benfleet

Essex

SS7 4PS

Telephone 01268 565656

---

**Silicone Paper, Blotting Paper, etc.**

John Purcell Paper  
15 Rumsey Road  
London  
SW9 OTR

Telephone 0171 7375199

J.v.O. Papers  
15 Newell Street  
Limehouse  
London  
E14 7HP

Telephone 0171 987 7464

---

**Absorbent, and Cleaning Materials, Plastic Bags, Buckets, Mops, etc.**

Lind Disposables  
Station Yard  
King Street  
Kirton  
Boston Lincolnshire  
PE20 1LF

Telephone 01205 724444

---

**Polythene in Rolls**

Mackay  
85 East Road  
Cambridge  
CB1 1BY

Telephone 01223 369933

**Freezer Bags, Tape,**

Company Lakeland Plastics Ltd.  
Alexandra Buildings  
Station Precinct  
Windermere  
Cumbria

Telephone 015394 88100

## **SECTION 6**

### **LIBRARY SALVAGE PROCEDURE**

#### **1. ENTRY INTO DISASTER AREA**

It is vital that the disaster area is entirely safe and entered only after permission has been granted by emergency services attending.

No team member should enter the disaster area without the permission of the LDRC and, in relation to a library located within a Faculty etc. building, the Departmental Controller.

- It is envisaged that entry to the disaster area will take place in two stages.
  - (a) entry for environmental control and protection of undamaged holdings.
  - (b) entry by full disaster team for salvage.
- Team members should enter the disaster area precisely as instructed by the LDRC and with due care for personnel safety.
- Team members should not go beyond that part of the disaster area in which they are working except by express permission of the LDRC.

#### **2. PROCEDURE FOR LDRC AND TEAM LEADERS**

- It is vital that the DRC is satisfied that every member of the team(s) understands his/her duties before the salvage operation begins.
- Initial action must be focused on the need to protect any undamaged material.
- Specialist advice will be necessary before the removal of damaged material.
- Experience in previous salvage operations shows that 1 1/2 hours is the probable maximum period for an effective shift, after which there should be a break for rest and refreshment. Facilities will need to be available.
- Designate operations area for cleaning, packing and sorting of damaged material.

- Issue team members with appropriate protective clothing and equipment from disaster boxes etc.
- Apportion duties, e.g.
  - salvage in disaster area
  - removing material to operations area
  - working within operations area
  - operating back up equipment (pumps etc.)
- Assess what can realistically be done with the resources available and whether more help may be needed
- Detailed guidance on removal, cleaning, packing of damaged material follows this section.
- Salvage priority lists should be referred to where appropriate, these lists are held by senior staff responsible

### **3.REMOVAL, CLEANING, PACKAGING, TRANSPORT OF DAMAGED MATERIAL**

- The aim is to remove material from the disaster area with the minimum of damage. Do not open any books unnecessarily.
- Identify types of material damaged e.g. printed books, MSS, (parchment, paper) other water soluble media, newspapers, coated paper, photographs, microforms, etc.
- List summarily all material removed.
- Categorise material according to slight or serious damage.
- Set-up treatment area for air-drying slightly damaged material, adjacent to the operations area if possible.
- Set up cleaning unit within the treatment area for material to be air-dried.
- Pack and transport heavily damaged material to blast freezer facility.
- Transfer frozen material to cold store where necessary.

The salvage of damaged archival and library material is the most critical procedure in disaster control. Mistakes made in assessment and handling of this material may prove very costly in the long term, yet speed of decision and action is most important.

The most likely cause of damage will be water penetrating from above or used in fire fighting. In basements there will be additional damage caused by standing or rising water. A general salvage guideline therefore in non basement areas, is to start at the top and work downwards, i.e. to remove books on top shelves first and those on the floor last. This procedure is recommended because the material on top shelves will, as time passes, tend to absorb most water and swell, making it increasingly difficult to remove them without damage.

The absorption of water will also make the material much heavier causing the shelving units to become top-heavy and unstable.

When standing or rising water is the cause of damage, material on the lowest shelves must be cleared first

Submerged material does not necessarily demand priority for salvage, provided that it is not suffering further damage by being trodden on. This guideline however does not apply to material with water soluble inks, hand coloured plates etc.

It is important not to take up too much time on documentation. The priority is to move the material as quickly as possible.

There will be difficult border line judgements to make between air-drying material or sending for it for blast freezing. In order to avoid delay the latter option is better in cases of doubt, as frozen material can be freeze dried or in some instances air-dried at a later date. The LDRC will decide if a book is to be frozen or air dried.

It is strongly advised that paper leaved manuscripts or other material containing fugitive inks should be sent for blast freezing, prior to freeze drying. These are the best methods of preventing any further movement or loss of pigment/ink, unless however the damage is slight and can be air dried safely. Expert advice should be sought on this matter. This is vital where parchment or vellum leaved manuscripts are concerned, and on no account should action be taken with this material with out first discussing its condition with the LDRC or Deputy. The LDRC will decide if the book is to be frozen or air-dried and after the details have been entered on the Damage List, it will be placed in an appropriate plastic crate which should carry a number for identification and reference. ( If in doubt blast- freeze). This will stabilise and make safe the item or items and provide time to consider the most appropriate method for drying.

#### **4. GUIDELINES**

N.B. In the case of manuscript and photographic material always consult the LDRC or Deputy before taking any action.

These are divided into five sections, namely

- A.** Removal of material from disaster area.
- B.** Recording and categorisation of damage.
- C.** Cleaning and air- drying of slightly damaged material.
- D.** Handling, packing and transport of material to be sent for freezing.
- E.** Treatment of damaged microforms and photographs

##### **A. Removal of material from disaster area**

- Removal of damaged material from shelves and floor must be supervised by team leaders.
- In cases where water penetration from above is continuing, use polythene sheeting to cover salvage area between shelving bays to ease working conditions.
- If upper shelves are tightly packed and the shelving bay is unstable use team members to push against shelving while others pull material out.
- Use minimal force to remove tightly wedged material. Be prepared for adjoining volumes, files or boxes falling out when one is removed.
- Empty shelving systematically, working downwards left to right, or upwards right to left to facilitate recording on damage lists and to minimise mixing up of material. Do not open any books unnecessarily.

Station trolley(s) close to salvage area for loading with material for removal, or form human chain for removal of material to operations area.

## **B Recording and categorisation of damage**

- When possible, record all items removed from the disaster area on damage lists (see Appendix ). The most important information to record is, the class mark and or title of each item as well as its crate number, if it is to be removed.
- Use separate damage lists for each type of material, e.g. MSS, printed books, photographs etc.
- The LDRC should be available in the operation area where the damage lists are being filled in to help identify the type of material damaged and to categorise each item according to slight or heavy damage.
- The LDRC, or a designated team member working with him/her should write out and affix labels for each crate of material to be removed from the site.

The LDRC, or designated team member, must also decide which damaged items may safely be cleaned. No fire damaged items should be cleaned, as they will be too brittle.

## **C. Cleaning and air-drying of slightly damaged material**

- Slightly damaged material should be carried on trolleys or by hand from the operations area to the treatment area. Ideally this should be a large well ventilated area adjacent to the operations area, well supplied with tables/benches.
- Where no drying area is available on site pack material for transport to designated off-site area.
- In the treatment area, position cool fans to assist the flow of air.
- A dehumidifier stationed in the treatment area is also desirable to speed up the drying process and maintain a safer environment.
- Items for cleaning should be handled with great care. Hand-held water sprays may be used to remove surface deposits of foreign matter e.g. mud/solids. On no account should items be rubbed or brushed. If in doubt do not attempt cleaning.
- Stand wet or damp books upright and carefully fan out the pages. Do not open books more than 45 degrees. A cool fan placed near by and played gently onto the leaves can be a useful means for controlled drying.
- Books may be interleaved with white blotting paper one sheet for each 1/4 in. approximately, changing these at intervals. This helps to speed up the drying process but is not essential.

- Interleave each page of wet or damp books printed on **coated paper** with silicone paper. This is essential to prevent blocking. If blocking has already occurred the book must be sent for freezing.
- For the treatment of MSS material or other material where the inks/pigments are fugitive it is vital to seek advice. Where inks/pigments are not fugitive MSS or unbound papers may be placed individually on or between sheets of blotting paper.
- Guarded and filed MSS may be removed from bindings, to assist drying, advice should be sought from a conservator.
- Light weights may be placed on interleaved piles of paper leaves, provided they do not come into direct contact with items. Weights should never be used with parchment or vellum documents, as these may become transparent.
- Particular care should be taken to protect and support applied and pendent seals on paper and parchment documents.
- All blotting paper and newsprint used in the treatment area should be changed at regular intervals to speed up the drying process.

#### **D. Handling, packing and transport of material to be sent for blast freezing**

- No attempt should be made during salvage or packing to separate books or papers stuck together. All such items should be wrapped as they are and sent for freezing. The only exception to this recommendation can be where there is a trained conservator available with the necessary skills to separate bundles of papers or documents stuck together.
- All heavily wetted or saturated material should be individually wrapped in polythene secured with adhesive tape, or polythene bags, or cling film to exclude as much air as possible.
- Books with vellum bindings should be wrapped in crepe bandage to prevent distortion, starting at the lower edge and winding across the boards from spine to fore-edge to spine with a small overlap. A polythene or cling film wrapping may then be added.
- Books and files should be packed in crates standing upright, and packed closely enough to support one another to minimise distortion. Larger volumes should be packed flat.

- MSS, loose papers, small maps etc. to be sent for freezing should, where possible, be packed flat in the crates in polythene bags or wrapping.
- In the event of boxed or wrapped material being saturated it should be removed from the boxes and wrappings, re-wrapped in polythene and packed as in the previous recommendation.
- Folio volumes which do not fit into the crates must be individually wrapped with extra care and laid together flat, if possible, in the van or truck for transport to the blast freezer. If the blast freezer is too small to accommodate items of this size they should be sent directly to the cold store with instructions to lay them flat individually until fully frozen, when they may be stacked. This method of freezing is not so effective as blast freezing but is acceptable.
- Large maps, charts and plans suffering water damage pose difficult problems. It is advisable, therefore, to consult an experienced conservator on this matter.
- Modern printed maps, charts and plans may safely be air-dried, but MSS and hand coloured maps etc. will have to be frozen and freeze dried.
- Large maps etc. for freezing may be laid flat and packed between boards in the following manner:-

Polythene - Blotting paper - Map - Blotting paper - Polythene - Blotting Paper - Map - Blotting paper - Polythene and so on.

The parcel should then be secured with webbing straps round the boards. The same procedure for freezing applies as with folio volumes. It must be emphasised that large areas of wet paper are very difficult to handle.

- Larger maps etc., or fragile rolled maps, or saturated maps inside tubes must be transported rolled with polythene wrapping.
- Badly distorted crumpled maps etc. should be left in whatever shape they are, wrapped in polythene and transported for freezing.
- Pack all crates carefully in freezer lorry. If crates are placed on top of one another ensure that they are stacked securely with lids in-place. Do not stack crates with items protruding above top edges.

### **E. Treatment of damaged microforms and photographs**

- Water damaged microforms should be immersed in cold water in buckets. No attempt should be made to unwind or separate this material. Buckets should be half-filled only and have tightly fitting lids ( good quality babies napkin buckets are ideal) so that material can be transported in them to the film processing laboratory for conservation.
- Water damaged photographic material, (negative and positive), glass plate negatives etc. discuss with DRC, as treatments suitable for photographic material are dependent on its period.

### **DAMAGE LISTS**

1. Although items must be recorded time spent should be kept to a minimum. Salvaging stock is the most important aspect.
2. Where possible material salvaged should be entered on the damage lists produced for this purpose.
3. Each list should contain material of the same classification, e.g. Books, MSS, Photographs.
4. Although part of the form deals with the degree of damage, its main purpose is to indicate what is damaged and where to locate it. It is vital, therefore, that the classmark and title, or full reference, together with the crate number (as applicable) are entered clearly and correctly.