

Handling, storage and disposal of waste

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2. Scope of Policy

The document outlines the procedures for the handling, storage and disposal of waste in the West Wing. This policy is in line with University policy [S5/11 Hazardous disposal waste](#) and S5/14 Disposal of Biological/Clinical Waste. It is the responsibility of the personnel within the West Wing to properly dispose of waste and this document outlines the procedure for different types of waste.

The disposal of chemical and biohazard waste from the laboratory environment is subject to specific rules and regulations imposed by the Health and Safety Executive and the Environment Agency.

With the exception of chemical waste, Oxford University departments on Oxford University Hospital Trust (OUHT) sites use the NHS Trust's waste streams. The purpose of this policy is to outline the correct waste segregation for NDCN units located on OUHT sites. Disposal of chemicals through the University Safety Office is outlined in NDCN Safety Policy 0001.

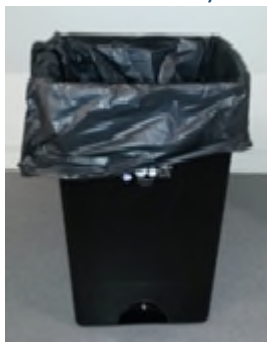
3. Types of waste

The main types of waste that are produced by NDCN are as follows:

- General
- Glass
- Biological
- Clinical
- Chemical
- Batteries
- Electrical (WEEE)
- Hazardous electrical (WEEE)
- Recycling
- Other waste

4. Waste streams

a) General waste



General waste that has not been contaminated with anything lab based goes out using the black bins that are lined with black bags. No sharps, biological waste, chemical waste, batteries, electrical items or pressurised containers are to be disposed of via this route.

- no glass,
- no needles,
- no lab waste,
- no chemical waste,
- no batteries,
- no electrical items (includes power lead),
- no pressurised containers
- no gloves (including uncontaminated gloves)

b) Glass waste



Clean glass for recycling: bottle must be **cleaned/rinsed**; labels must be **defaced or covered** by white stickers and placed in the waste room for removal.

Clean lab broken glass (such as Pyrex and Borosilicate, bin pictured on the left) can be found in the autoclave room on Level 5. Bottles must be clean. Labels also require being **removed**. This bin is **not recycled**, and goes out as general waste.

c) Biological waste



Liquid biological waste must be treated with 1-2% Virkon solution (30mins contact) before being disposed to drains using copious amounts of water.

Note: human blood must go out as clinical waste and **not** be sent down the sink as coagulated blood will block the lab sink waste pipe.



Solid biological waste must go in orange bags (*gloves, tubes, containers*). When 3/4 full, close/tape the bag up and bring it to the disposal room (66-02). Bags are collected daily by the Hospital cleaning team and subjected to heat-treatment before disposal.

Limb bins (pictured left) are to be used for serological pipettes and tips **ONLY** (those would pierce orange bags).



Limb bins and orange bags are solely available in the West Wing.

Dispo jar (pictured right) can be used for solid biological waste. Once 3/4, close lid tight and place in the autoclave trolley located at the end of the laboratory.



d) Clinical waste & sharps waste



Clinical waste includes **human blood and tissue**, as well as **animal tissue** and **syringes** (whether used as a whole or split in parts).

Blood must be disposed of in a closed leak-tight tube directly into the clinical waste bin (pictured left).

Sharps (e.g. **needles, scalpel blades, glass slides**) are to be disposed directly into clinical waste bins.

➤ **Sharps must never be re-sheathed!**

e) CHEMICAL WASTE

The appropriate disposal route of chemicals must be identified prior to work starting. Contact the Facilities Team or COSHH forms if in doubt.

Note that where chemicals have more than one property, the lowest threshold must be followed.

i. Non-hazardous water miscible or soluble material

Dispose to drains – the material must be diluted and washed away with copious amounts of cold water.

ii. Acids

Acids solution must be diluted below a concentration of 1% and be disposed of in laboratory sink with copious amount of water. **A relevant risk assessment must be in place for such procedure to assess the volume disposed of.**

If in doubt, please contact Facilities team for advice.

iii. Organic solvents

In small quantities, <100ml, allow to evaporate in a fume cupboard with a warning label.

For larger quantities of chlorinated and non-chlorinated waste solvents these must be stored separately for disposal. They are kept in labelled 10L jerricans under a fume cupboard until full, or if a seal-tight cap is used, can be stored in the laboratory. Waste jerricans must never be overfilled so they can be taken down safely to the chemical waste store, placed in boxes and labelled as below.

If reusing a jerrican, ensure that all previous labels have been removed or defaced.

iv. Flammable waste

Where flammable waste is a mixture please label with the solvents that are contained, with the concentrations of each constituent.

Flammable waste must be collected in the 10L jerricans for disposal and labelled as above. These are available from the intranet pages or the Facilities Team.

v. Chlorinated waste

Must be collected and be labelled clearly with the exact content (list any contaminant).

Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

vi. Flammable chlorinated

MUST be collected in a separate vessel to chlorinated waste and **MUST** be labelled as such.

Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

Do not mix these wastes, when full arrange collection through the University Safety Office.

vii. HPLC Waste

This can be collected and disposed of in glass Winchesters. These must be labelled as 'hazardous waste' and labelled with what solvents (and concentration) and what aqueous (and concentration).

Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

viii. Phenols

All phenols must be disposed of via the Safety Office and **NEVER** down the drains or other bins.

Do not attempt to dispose of phenol by 'pooling' into a larger container. Instead use an empty wide necked container (e.g. dispo jar) and drop the phenol-containing tubes in. Seal the container, label accordingly and dispose of via the Safety Office.

Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

Tips and other plastic items contaminated with traces of phenol should be left to vent under a fume hood for at least 7 days – or until the phenol has fully evaporated – in an opened dispo jar and be disposed of as domestic waste.

ix. Physiological salts

Dispose to drains.

x. Low toxicity organic and inorganic salts (e.g. copper salts)

Solutions can be disposed to drains; however, solids must be disposed of via the Safety Office.

Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xi. Water-miscible solvents

Can be disposed of down the drain, however, no more that 100ml/day/lab.

xii. Toxic inorganic compounds

Arrange for disposal via the Safety Office. Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request

form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xiii. Toxic organic compounds

Arrange for disposal via the Safety Office. Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xiv. Reactive inorganics or organics and explosives

This includes alkali metals, azides and hydrides - Seek advice from the facilities team. Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xv. Carcinogens

Seek advice from the Safety Office. Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xvi. Waste Oil

Arrange for disposal via the Safety Office. Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

xvii. Large spill of solvent, alkali or acid

- If used to soak up a solvent spillage allow to evaporate in a fume cupboard,
- If used to soak and acid or alkali spill collect in a suitable container and Contact Facilities Team to arrange waste collection via the Safety Office. Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

THE FOLLOWING SUBSTANCES ARE PROHIBITED FROM DISPOSAL VIA DRAINS BY THE TRADE EFFLUENTS (PRESCRIBED PROCESSES AND SUBSTANCES) REGULATIONS 1989:

- Mercury and its compounds
- Cadmium and its compounds
- gamma-Hexachlorocyclohexane
- DDT
- Pentachlorophenol
- Hexachlorobenzene
- Hexachlorobutadiene
- Aldrin
- Dieldrin
- Endrin
- Carbon Tetrachloride
- Polychlorinated Biphenyls
- Dichlorvos
- 1, 2-Dichloroethane
- Trichlorobenzene
- Atrazine
- Simazine
- Tributyltin compounds
- Triphenyltin compounds
- Trifluralin
- Fenitrothion
- Azinphos-methyl
- Malathion
- Endosulfan

These substances need special consideration and handling – if you are aware that you will use and generate waste that includes these compounds you must inform the laboratory manager so that they can be disposed of in the appropriate manner.

f) BATTERIES

All batteries are sent off for recycling by the facilities team.
Please dispose of domestic batteries through local recycling routes.

Spent batteries need to be segregated by type:

- Alkaline,
- Lithium – **cover terminals with tape**
- Cadmium (Cd) – **cover terminals with tape**
- Nickels (Ni) – **cover terminals with tape**
- Nickel-Cadmium (NiCd) – **cover terminals with tape**

The terminals of dry sealed batteries must be covered to avoid possible short circuits.

If a battery shows sign of deformation, it must be brought directly to Facilities Team who will see it packed immediately and safely with the Divisional Safety Officer to prevent a fire.

Collection of batteries is arranged with the Safety Office by the Facilities Team.

g) ELECTRICAL WASTE (WEEE)

WEEE extends to all electrical waste, computers, plugs, lab equipment to **electrical cables**.

If the item come from the lab, you must ensure that the item has been decontaminated and that you complete a building decontamination form. The WEEE waste is then disposed of by the facilities team through Bouygues or Select depending on the location of the waste.

Suitable Waste Transfer Notes are kept by Facilities for a minimum of 2 years.

h) HAZARDOUS ELECTRICAL (WEEE)



Hazardous electrical WEEE extends to all electrical waste that has hazardous components – examples of this are oils, coolants, LCD and LED screens, UV lamps, ion exchange cells...

Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

i) RECYCLING

For domestic and office recycling there are recycling points in the office, write-up space and kitchen areas.

Paper, cardboard, PET plastic (type that cannot be scrunched up), aluminium are recycled.

- **Glass must be kept separately.**
- Do not contaminate recycling bins with liquid or food – the entire content of the bag will be thrown away as general waste otherwise.



Where possible arrange collection of packaging with vendors.

Major chemical suppliers (VWR, Fisher) will collect glass winchesters and cardboard packaging.

You can also negotiate the collection of packaging when buying instrumentation.

Pipette tip boxes, major companies have a recycling scheme, contact your local rep to arrange regular collection – facilities will help with collection.

- Starlab
- Corning/Axygen
- Starlab
- SLS

j) OTHER WASTE



- Pressurised containers (like the one pictured) must be disposed of via the Safety Office, this includes aerosols.
- Mercury lamps must be disposed of via the Safety Office.

Users will be required to complete a hazardous waste disposal request form (HW1 link on Safety Office hazard waste page <https://safety.web.ox.ac.uk/hazardous-waste-policy>).

- Ordinary tungsten and halogen light bulbs need no special disposal arrangements – they are neither hazardous nor do they fall under the WEEE Regulations. Gas

discharge lamps (GDLs including fluorescent lamps) must not be placed in waste skips and care should be taken not to break them.

- Any other waste that has not been mentioned please contact Facilities Team, we're here to help!

5. Document Control

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