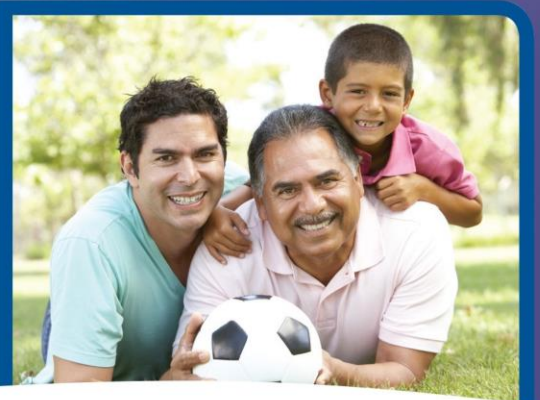
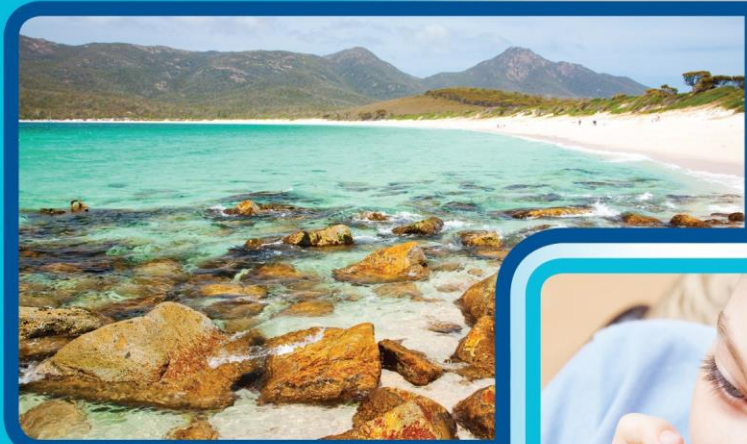


Guide for the Management of Clandestine Drug Laboratories

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Contents

About this publication	3
Introduction	3
Clan lab hazards	4
EHO Safety	5
Police investigation	6
Relevant legislation	6
Site assessment and remediation process	7
○ Phase 1 Trigger for assessment	8
○ Phase 2 Preliminary assessment and action	8
○ Phase 3 Site assessment and remediation	9
○ Phase 4 Validation	9
Roles and Responsibilities	11
References	12

About this publication

These guidelines detail the process of identifying and managing the public health risks associated with clandestine drug laboratories (clan labs). They have been written primarily for local government Environmental Health Officers (EHOs). They may also be referred to by:

- owners (or their agents) and occupiers of sites found to contain clan labs
- professionals assessing or remediating clan lab sites
- other parties involved in the investigation and/or remediation of a clan lab site.

The national *Clandestine Drug Laboratory Remediation Guidelines* (Newell et al. 2011) and the enHealth Guidance on: *Clandestine Drug Laboratories and Public Health Risks* (enHealth 2017) - should be referred to for more detailed information.

Introduction

Clan labs are used to illegally manufacture drugs such as methamphetamines and have been found in rural, regional and metropolitan locations. The number detected in Tasmania has been increasing in recent years.

Environmental contamination is expected to be present in clan labs due to non-ideal manufacturing conditions such as:

- under/over heating
- ingredient mishandling
- spillages
- poor waste disposal practices.

These conditions can result in hazardous chemical residues being deposited on surfaces during the drug manufacturing (cooking) process that remain after the clan lab has ceased operation.

Contamination must be professionally assessed and remediated to ensure that a site does not remain a public health and safety risk.

Property owners are responsible for the remediation of a clan lab site and any associated costs including recovery of those costs from a tenant where applicable.

Authorised Officers under the *Public Health Act 1997 (PHA 1997)*, *Local Government Act 1993 (LGA 1993)* and *Environmental Management and Pollution Control Act 1994 (EMPCA 1994)* are neither expected nor recommended to personally assess, test or remediate a clan lab site. These tasks should be carried out by professionals experienced in this field.

An EHO's role is to help identify the extent of public health risk and facilitate an appropriate assessment and remediation strategy.

Clan lab hazards

The existence of a clan lab should be assumed to be a risk to health, consistent with the precautionary principle.

In many cases, materials used during the manufacture of illicit drugs may cause residual contamination of buildings, furniture, soil, water and air within or close to a clan lab site, due to improper storage, use and disposal of chemicals and waste.

Residual contamination may be present even if there is no apparent evidence of odour or visible staining, and can present a risk to human and environmental health.

A range of chemicals can be found in clan lab operations, depending on the type of drug(s) produced.

These may include reagents, precursors, final products and by-products of reactions. The variety of chemicals used in clan labs and their hazardous nature means that they should be professionally assessed on a case-by-case basis.

The enHealth Guidance on: *Clandestine Drug Laboratories and Public Health Risks* provides further details on the health risks of clan labs including exposure considerations and health effects (enHealth 2017).

There is no accepted health-based safe level of exposure to residual contamination resulting from the manufacture of illicit drugs. A risk-based analysis compares site data with Investigation Levels to determine the need for further assessment or development of an appropriate remediation plan.

Investigation Levels have been developed for indoor air, indoor surfaces and outdoor soil and represent the concentration of a contaminant above which further appropriate investigation and evaluation is required.

The National Guidelines (Newell et al. 2011) provide Investigation Levels for a number of key chemicals. As an example, the common clan lab drug methamphetamine is odourless, but can be an inhalation or dermal contact hazard until residues are cleaned from surfaces.

The Investigation Level for methamphetamine on an indoor surface is 0.5 µg/100 cm².

The **chemical toxicity** of residues found at a clan lab will depend on the:

- starting materials/chemicals used
- manufacturing process
- amount of residue.

The **amount of residue** found at a clan lab depends on:

- the size of the lab
- how long the lab has been operating
- how chemicals have been stored and disposed
- any spillages that have occurred.

Corrosive chemicals often found in clan labs include:

- hydrochloric acid
- sodium hydroxide
- ammonia.

Solvents often found in clan labs include:

- ethyl ether
- benzene
- toluene
- denatured alcohol.

Note: solvents are potentially explosive; some clan labs are discovered after an explosion.

Other **chemicals and/or drug materials** found in clan labs include:

- methamphetamine
- ephedrine
- pseudoephedrine
- hazardous metals such as mercury and lead.

Other hazards include:

- pressurised gas cylinders
- faulty electrical wiring.

Potential **health effects** from contaminated clan labs will vary depending on:

- the chemicals a person is exposed to
- the quantity of each chemical a person is exposed to
- the duration of a person's exposure
- the health status of a person exposed.

Radiation Hazard

It is possible a clan lab may have stock material of thorium nitrate and 'furnace' equipment containing thorium oxide as the result of an old synthesis method for making phenyl-2-propanone (P2P).

These chemical compounds possess their own hazards and additionally thorium is a radioactive material (^{232}Th). Radiation exposure risks are due to inhalation, ingestion or via open wounds. P2 breathing protection, gloves and suits would be suitable for a lightly thorium contaminated environment.

Disposal of the radioactive compound needs to be advised by Public Health Services – Environmental Health Unit. Radioactive contamination could only be detected using specialist radiation detection equipment.

EHO Safety

EHOs responding to a nuisance complaint about a clan lab should not enter the premises if there is a potential health and safety risk.

A visit to a clan lab site may be needed for several reasons including posting notices, confirming a premise is secured against unprotected access or occupancy or to conduct a visual assessment of the condition of the premises pre- or post-remediation.

EHOs should always balance the evidentiary value of a site visit against potential risks to their own health and safety.

EHOs responding to a notification of a clan lab should not enter the premises and always assume it to be a health and safety risk until informed or it is demonstrated otherwise.

Tasmania Police, Tasmania Fire Service, Public Health Services, and/or the Environment Protection Authority (EPA) Tasmania should be contacted for assistance where necessary.

Site visits before remediation should only be conducted by qualified and experienced professionals.

Police investigation

When attending a clan lab, Tasmania Police, with the assistance of the Tasmania Fire Service (HAZMAT) and/or Forensic Science Service Tasmania (FSST), render the site safe and collect samples.

The following items are identified, processed and packaged for transport and disposal by a chemical transport contractor:

- chemicals
- glassware
- equipment (e.g. heaters, scales)
- containers
- drug products.

Tasmania Police is not responsible for the assessment and remediation of a site following the completion of an investigation.

When the police are close to finishing processing the scene, they will contact the environmental health department at the responsible council to notify them of the discovery of a clan lab site and its potential hazards and risks.

It is recommended that EHOs discuss details of potential contamination with the police investigator to help identify the extent of public health risk and facilitate an appropriate assessment and remediation strategy.

Responsibility for managing the site, including remediation, returns to the property owner once the police have completed their investigation and removed material of evidentiary value from the property.

Once this process has taken place, council can utilise their relevant powers under the *PHA 1997*, *LGA 1993* or *EMPCA 1994* to ensure that a clan lab site is properly assessed and, where required, remediated.

Relevant legislation

The *Public Health Act 1997* Division 2 – Unhealthy premises, the *Local Government Act 1993* Division 6 – Nuisances and the *Environmental Management and Pollution Control Act 1994* Division 2 – Environment protection notices are all relevant to the management of clan labs.

Public Health Act 1997, Division 2 – Unhealthy premises

Sections 86 to 93 of the *PHA 1997* apply to unhealthy premises where the safety of persons occupying them is considered to be at risk.

Under section 86 an EHO may issue a certificate stating that premises are so unhealthy that no person can safely occupy them and in accordance with section 87 a council may make a

closure order to forbid human occupation or habitation and require the owner to do any works considered necessary to put the premises in a state safe for human occupation.

If a defective or unhealthy premise is considered offensive, injurious or prejudicial to health under section 91, a rectification notice may be served on the owner of the premises, as detailed in section 92. A rectification notice requires the person on whom it is served to rectify any defect, but without prohibiting occupation.

Public Health Services *Guide to Assessing Unhealthy Premises* is an additional useful resource to the provisions of the *PHA 1997* and can be found at www.dhhs.tas.gov.au.

Local Government Act 1993, Division 6 – Nuisances

The definition of nuisance under the *LGA 1993* includes anything that causes, or is likely to cause, danger or harm to the health, safety or welfare of the public.

Once a council is satisfied that a nuisance exists, it can be addressed under section 200 by serving an abatement notice on any person whose act or default contributes to or causes the nuisance, or if that person cannot be ascertained or found then the owner or occupier.

Under section 201 a council general manager may take necessary action to abate the nuisance if there is immediate danger to any person or property, the responsible person cannot be found or an abatement notice has not been complied with.

In addition, the council may charge the owner or occupier of the land for the cost of any action taken.

Environmental Management and Pollution Control Act 1994, Division 2 – Environment protection notices

Environmental harm (including environmental nuisance) is defined in accordance with section 5 of *EMPCA 1994* as any adverse effect on the environment, of whatever degree or duration, and is clarified further as either material or serious environmental harm.

In line with section 44(2), an environmental protection notice (EPN) may be served by a council officer on the person who is or was responsible for the activity causing the environmental harm.

The EPN may also require that the person take specified action within a specified period to prevent, control, reduce or remediate the environmental harm.

Site assessment and remediation process

Before starting remediation the EHO and/or land owner should:

- liaise with the police investigator for details of potential contamination at the site including soil and wastewater, if a septic tank or other onsite wastewater system is in place
- be aware of hazards and risks, especially personal safety, before entering the premises and take into account relevant information provided by the police investigator, including the need for appropriate personal protective equipment such as respiratory/eye protection, hand and foot protection, and skin and clothing protection
- prevent unauthorised access to the premises
- notify neighbours if adjacent properties are affected or are at risk.

The premises should be ventilated for at least 48 hours before beginning the remediation. This will allow volatile solvents and gases that have been absorbed into porous surfaces to evaporate.

The premises should also be closed off from public access until remediation is complete and the site is safe to re-enter.

The national *Clandestine Drug Laboratory Remediation Guidelines* (Newell et al. 2011) describe four phases for the assessment and remediation of clan labs.

Phase 1 - Trigger for assessment

Police will usually notify the appropriate council of the existence of a clan lab and provide information outlining the nature of the suspected illicit manufacturing activity and the identity of chemicals detected on the site.

Information provided will help in identifying the actions necessary to mitigate any potential health risks posed by the level of contamination at the site and if so, triggers Phase 2.

Phase 2 - Preliminary assessment and action

A key consideration at this phase is formally confirming with the site owner their intentions for the property once the existence of a clan lab has been identified (ie whether they wish to retain it for human habitation, demolish it or use it for some other purpose).

The confirmation of the intended use will inform future steps including the extent of assessment and remediation required or whether the matter is one for resolution under the *PHA 1997*, the *LGA 1993*, *EMPCA 1994*, or other legislation.

For example, where the intention is to demolish the premises, assessment may be limited to assessing possible site contamination in soil or water on the site – this is best dealt with in consultation with the EPA.

Based on the information provided in Phase 1, a site visit is recommended by the EHO only if it has been confirmed as safe to do so.

An EHO may form an initial opinion based on the information provided in Phase 1 and use this as the basis to issue a notice requiring a preliminary assessment by a suitably qualified expert and the provision of a report detailing the human health risk outcomes of that assessment.

A site visit by an EHO should only be conducted if it is safe to do so.

It is strongly recommended that any premises be declared unfit for human habitation and access limited or strictly controlled until the risks are better characterised.

The EHO makes an assessment based on the information provided in the preliminary assessment as to whether the premises is currently fit for use (and therefore no further action needed) or requires remediation and if so, proceeds to Phase 3.

In certain circumstances, premises may be so contaminated that demolition is needed as remediation is not achievable or economically viable.

Phase 3 - Site assessment and remediation

The property should be investigated by a suitably qualified professional to determine if the property poses a risk to human or environmental health and what remediation is necessary.

Such an assessor should have experience in the fields of environmental engineering, environmental science, environmental health or occupational hygiene.

Factors an assessor should consider may include:

- information provided by the police investigator, which usually includes where cooking was carried out, whether the clan lab was active or inactive and the location(s) of hot spots
- the extent of residue and staining on walls, ceilings and other surfaces
- evidence of confined 'cooking' activities, (e.g. only in the shed or laundry but not the rest of the site). In such cases, the shed may need to be demolished and removed. Assessment may still be required post-demolition to determine soil and/or off-site contamination. Other areas of the site may also have been used and therefore should also be assessed.
- Where contamination is identified requiring remediation, a further notice may be issued imposing the requirement for remediation to be undertaken and the effectiveness of this remediation.

A remediation plan should be prepared by a professional cleaning contractor. The plan should be based on the findings of the initial police investigation and the assessor's report and agreed by the relevant stakeholders (property owner, EHO and assessor/cleaning contractor). The plan should include:

- items to be disposed of due to damage or contamination
- items to be removed from the site for cleaning
- procedures for cleaning.

Items suspected to have been used in the manufacturing process and/or show evidence of acid etching, chemical staining or other visible contamination including sinks, bathtubs and toilets should be either cleaned according to the assessor's advice, or discarded.

Items should also be discarded if they emit a chemical odour. Professional cleaning contractors familiar with remediation requirements of clan labs should be used.

Where an assessor reports that Investigation Levels have not been exceeded and therefore remediation is not required, it is recommended that properties are given a general clean.

Phase 4 - Validation

Once remediation has been completed, the assessor must confirm in writing that any remediation processes undertaken have achieved their stated aim and that the property no longer poses a health risk.

A copy of the assessor's report must be provided to council. This report can be used as evidence of compliance with the council notice that may have been served on the owner.

All documentation received in relation to the notice should be retained on the relevant property file.

Once the report is received that validates that the premises is fit for purpose, an inspection by the EHO to visually confirm that the reported action has taken place is recommended.

If the remediation is deemed inadequate, further remediation activities will be required before the assessor can deem the site fit.

Roles and Responsibilities

Individuals and Groups of Individuals	Responsibilities
Tasmania Police	<ul style="list-style-type: none"> Initial investigation of clan lab and relevant prosecution activities. Notify council EHO of the presence of a clan lab. Process and organise packaging, transport and disposal of equipment and chemicals found in a clan lab that are relevant to the police investigation. Provide relevant details of contamination at a site to EHO on request.
Local Government – Environmental Health Department	<ul style="list-style-type: none"> Respond to potential residual contamination at a clan lab site after notification has been received from Tasmania Police or complainant of such a nuisance. Liaise with police investigator to clarify potential contamination at the site. Issue and follow-up on closure order or rectification notice in accordance with the <i>PHA 1997</i> to property owner of a clan lab site. Alternatively issue an abatement notice on the owner or occupier of the land in line with the <i>LGA 1993</i> or an EPN in accordance with <i>EMPCA 1994</i>. Facilitate prohibition of unauthorised access to a clan lab site. Notify potentially affected parties of risks and hazards of a clan lab, e.g. neighbours. Liaise with assessment/cleaning/demolition contractors as required. Oversee the remediation of residual contamination at a clan lab site.
Property Owner(s)	<ul style="list-style-type: none"> Appoint an assessor to assess contamination at a clan lab site. Manage the remediation of the site. Submit the assessor’s report to council confirming that contamination levels are within acceptable levels.
Assessors (suitably qualified professional)	<ul style="list-style-type: none"> Assess potential contamination, hazards and risks at a clan lab site. Confirm in writing, to the property owner and/or council that a property previously used as a clan lab: <p style="margin-left: 20px;">does not require remediation</p> <p style="margin-left: 20px;">OR</p> <p style="margin-left: 20px;">has been remediated to a satisfactory level and is fit for use.</p>
Chemical disposal/transport contractor	<ul style="list-style-type: none"> Transport and dispose of equipment and chemicals found at a clan lab site to a landfill site approved by the EPA to receive hazardous waste.
Cleaning contractor/ remediation professional	<ul style="list-style-type: none"> Write a remediation plan before commencing. Remove contamination and hazards from a clan lab property, and arrange for correct disposal. Remediate the site so it is fit for its intended use.

References

enHealth 2017. enHealth Guidance on: Clandestine Drug Laboratories and Public Health Risks.

[https://www1.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/\\$File/Guidance-Clandestine-Drug-Laboratories-Public-Health.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/$File/Guidance-Clandestine-Drug-Laboratories-Public-Health.pdf)

Newell P, Hugel J, Vallely P, Wright J, Makin S, Borysko L, Lau A. 2011. Clandestine Drug Laboratory Remediation Guidelines. Commonwealth of Australia.

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