



**University of Leicester Research Governance Office  
Standard Operating Procedures**

**SOP HTA-A1016A\_UoL**

**Responses to alerts on Haier monitoring system**

**Version 1.0**

Effective Date: 01 December 2024

This SOP will be implemented in line with this document's effective date for all UoL HTA SOPs.

## 1.0 Introduction

When responding to alarm calls raised on the Haier/Invisible Systems Real-Time Online monitoring service for 24/7 monitoring of fridges, freezers and rooms in UoL estate, a procedure to alert Security as a last line of response is required so that there are no missed alerts.

## 2.0 Scope

This SOP has been produced in accordance with the Human Tissue Act 2004 and the Codes of Practice issued by the HTA, in accordance with the HRA regarding sample storage of relevant material. The SOP outlines the expectations of samples in long term storage once project specific REC approvals have expired.

### Definitions:

AB	Adrian Building
CI	Chief Investigator
DI	Designated Individual
GGH	Glenfield General Hospital
LGH	Leicester General Hospital
HB	Hodgkin Building
HRA	Health Research Authority
HWB	Henry Wellcome Building
HTA	Human Tissue Authority
IRAS	Integrated Research Application System
LRI	Leicester Royal Infirmary
MHRA	Medicines and Healthcare products Regulatory Authority
PD	Person Designated
PI	Principal Investigator
REC	Research Ethics Committee
REGI	Research Governance Ethics and Integrity
RKCSB	Robert Kilpatrick Clinical Sciences Building
RTB	Research Tissue Bank
SOP	Standard Operating Procedure
TOIL	Time Off In Lieu
UoL	University of Leicester

## 3.0 Procedure

This SOP outlines the processes required to be followed at the point of an alarm being received from the Haier/Invisible Systems Real-Time Online monitoring service for occurrences within the UoL estate.

Participation on any call-out rota is voluntary and any actual call out will be compensated by Time Off in Lieu (TOIL) being awarded. Also, if any out-of-hours attendance is necessary then the person is not required to come in to work before a period of 11 hours has elapsed.

Those that are likely to be called out onto site for call outs should also ensure they are familiar with the Universities lone working policy UHSP-08.

### 3.1 Research Licence 12384 Geographical Location

Any HTA-relevant material that is stored in a building covered by the UoL HTA Research Licence 12384 must be held under appropriate storage conditions, and where cold storage is required, must be stored in equipment that has the internal temperature monitored by an approved system acceptable for this purpose.

All samples being held under the HTA Research Licence should follow the process as documented in HTA-A1001-UoL.

The HTA Research licence covers the following locations:

- UoL Main Campus buildings: Henry Wellcome Building (HWB), Hodgkin Building (HB), Maurice Shock Medical Sciences Building (MSB) and Adrian Building (AB)
- Robert Kilpatrick Clinical Sciences Building (RKCSB), located at the Leicester Royal Infirmary (LRI)
- Glenfield General Hospital (GGH)
- Leicester General Hospital (LGH)

### 3.2 Response to Alarm notification

Each Department has fridges, freezers and liquid nitrogen storage containing HTA-relevant material and these are currently monitored 24/7 by Realtime Online/Invisible Systems (a third-party company).

Where there is a deviation in temperature for a particular probe, once a set time has elapsed, notification will be made by the monitoring system to the designated number/s for that system. For instance, there may be a duty rota mobile phone or individual/s nominated for the Department concerned. If there is no response to acknowledge the alert, the system will then proceed with notification down a predetermined list of numbers until an answer is received.

An initial check of what is currently and has been happening to the system probe number concerned should be made. If a sensor is showing signs of recovering temperature, it may be left and checked again a short time afterwards.

If a probe recovers temperature, no further action is required for that instance and the system will reset. The alarm will need to be acknowledged on the site to cancel the alarm condition, with details added where necessary. Unacknowledged alarms will proceed with the protocol for escalation.

In the case of a genuine alarm/emergency, such as where the probe shows that the affected unit is not recovering its temperature or not coming back online, the relevant person must come to the site and investigate.

At Main site locations, including the RKCSB, the University Security staff should be made aware using the out-of-hours emergency number – 2023 from university telephones, this is usually the top one of the quick-dial buttons to the right-hand side on Voice over Internet Protocol (VoIP) phones.

Upon arrival at Glenfield or LG Hospitals, inform the Hospital Security staff that you are on site, either in person at the Main Entrance or by telephoning the following:

- **From the Glenfield Hospital, Clinical Sciences Wing and LGH**  
UHL Security 2999  
Hospital Operator 5165 (where Security is needed and not in their office)
- **From Glenfield Hospital, CVRC building**

Security 9-2502999  
Hospital Operator 9-2585165 (where Security is not in their office)

It is also recommended to alert the University Security Staff to an issue at the outlying hospital sites as they may be able to assist, and will have details of emergency call-out contractors should these be needed.

The contact details for a representative of the Group (usually the PI) with responsibility for the contents of the freezer affected should be posted on the front of the door with the inventory and this person should be notified as to the situation (usually by email) to update them on the situation.

### 3.3 Offline / Communication errors

For Offline/Communications Errors, where a device has not been contacted by the system for a defined time, email notification and/or a text message may be sent to the relevant persons. These are not necessarily a cause for immediate concern and should be rectified at the next point that the system updates.

Should these conditions persist without intervention, a further notification will be sent after 24 hours. If this is the case then an investigation of the issue will need to be made.

Checking via the Real-Time Online/Invisible Systems website to analyse the situation will give an indication of the issue and allow it to be monitored and responded to if necessary. This is available on SMART devices but is better via the website on a PC/laptop.

The website should be made accessible (by individual account and password) to all on any rota and groups with samples covered.

If internet access is available at the time of a call, log in to the system on this address:  
<https://www.realtime-online.com/>

### 3.4 Generator tests

When there is a generator test or power failure on the site, this loss of power can cause the system to alarm and it may be that such a power interruption has triggered the alarm. In this case, if received out-of-hours, phone the relevant Security Team (UoL- 0116 2522023; UHL - 0116 2502999) to ask if there has been a recent interruption to the power supply for the site. If there has been such an event then the system should be left to continue if the power has been restored but monitored to ensure all has returned to normal operation.

If no power interruption is known to have happened, then there will be a need to respond to ascertain the reason for the alarm.

### 3.5 Additional For areas that contain liquid nitrogen alarm systems

In addition to the freezer monitoring systems there may be probes on liquid nitrogen (LN2) storage. This will alert in the same manner as with the other procedures but response should be as outlined below.

**IMPORTANT** - The nature of this storage method requires that no one person should be in a room or other enclosed area alone and another person must be called to accompany the

responder investigating. Furthermore, the UHL and/or UoL Security staff **must** be made aware of your presence on site using the methods outlined above for freezer monitoring.

The liquid nitrogen reserve in the sample storage containers is generally sufficient that it should be safe overnight or over a weekend but will need investigation as soon as possible. It may be that the lid has been left open and just needs to be closed.

If the nitrogen level has become so low as to endanger the contents, then a top up would be required from any reserves available but only if it is safe to do so and when accompanied by at least one other responsible person.

There are many samples stored in these so it is likely to be impracticable for them to be relocated to another vessel in the event of a catastrophic loss of liquid from their container. Therefore it may be necessary to transfer to another device such as -80 freezer as a temporary measure, where space permits.

If there has been a major loss of liquid, then the supplier may need to respond to fill the tank as soon as possible on the next available day. In this case, let the relevant person at site know as soon as possible so that this may be arranged.

If gas alarm from the room is audible, please do not enter for your own safety. Ensure local LN2 procedures are followed in addition to the health and safety policy for lone working.

REMEMBER: Working with LN2 should not be undertaken alone and conducted in pairs only.

#### **4.0 Role of Security in call out procedures**

Where an alarm raised by the monitoring system has not been acknowledged after a predetermined time, a text to speech message will be made to UoL Security as a last resort. They will then respond according to an agreed protocol, telephoning the numbers provided by each Department.

Information will be given to the departmental responder as to what the alarm condition is, the location and the system number plus the name of the affected device. Person/s responding should acknowledge the notification, then take appropriate action.

Security may if requested, with sufficient staff available, then visit site and assess the situation and feedback to the person responding for the relevant department, then await further instruction. There should be an identifiable person and their contact details clearly displayed on the front of all units and rooms for this purpose. This is not to be used as a means of providing resolution to the situation but as a means of assessment only.

In the event that there is a failure of plant or electrical supply to the area, Security will be able to contact the relevant out-of-hours contractor to request a visit to site and keep the site under surveillance until they arrive to rectify or advise on the situation, notifying the responsible person of the expected time of arrival for the contractor so that any interim measures may be put into place to alleviate any potential damage.

Security will keep the Departmental contact informed of progress until such time as they are instructed that it is acceptable for them to depart. In the event that the contact is not available there should be a set of named individuals within the Department/College to escalate to.

Regular testing of the alert cascade down to Security will be made by arrangement in advance


with the Control Room to notify when a test is taking place and when completed. The Security operative will inform the relevant party to feed back that information has been received correctly. Date and time of these tests will be arranged to limit disruption to the normal working of the Control Room. An incident report will be created by Security for each occurrence.

## 5.0 Responsibilities

Responsibility	Undertaken by	Activity
On call laboratory members of staff / Chief Investigators (CI) / Principal Investigators (PI)	On call laboratory members of staff	To acknowledge the alert and check the online system. To attend site where, temperature probe is not recovering coming back online to investigate the cause. When coming on-site to notify UoL security and UHL security if GGH /LGH sites affected. Where LN2 alarms are triggered the cause of the trigger should be investigated. If site visit is required, two individuals must attend to ensure compliance with health and safety requirements are maintained.
Security Office Staff	Security Office Staff	To follow agreed protocol. To attend freezer areas when requested. Follow up with out of hours contractor when applicable.
Person Designated (PD)	Person Designated (PD)	To organise quarterly testing of alarm systems and document.

## 6.0 Development and approval record for this document

This table is used to track the development and approval of the document.

Author	Job title	Reviewed by	Approved by	Date approved
Tim Barnes	Person Designated (PD)	UoL Human Tissue Governance Committee (HTAC)	Professor Peter Bradding 	28/11/2024

## 7.0 Review Record

This table is used to track the changes made on revised/reviewed versions.

Date	Issue number	Reviewed by	Description of changes (If any)