

Air Tube Transport System Policy

V3.0

August 2026

Summary

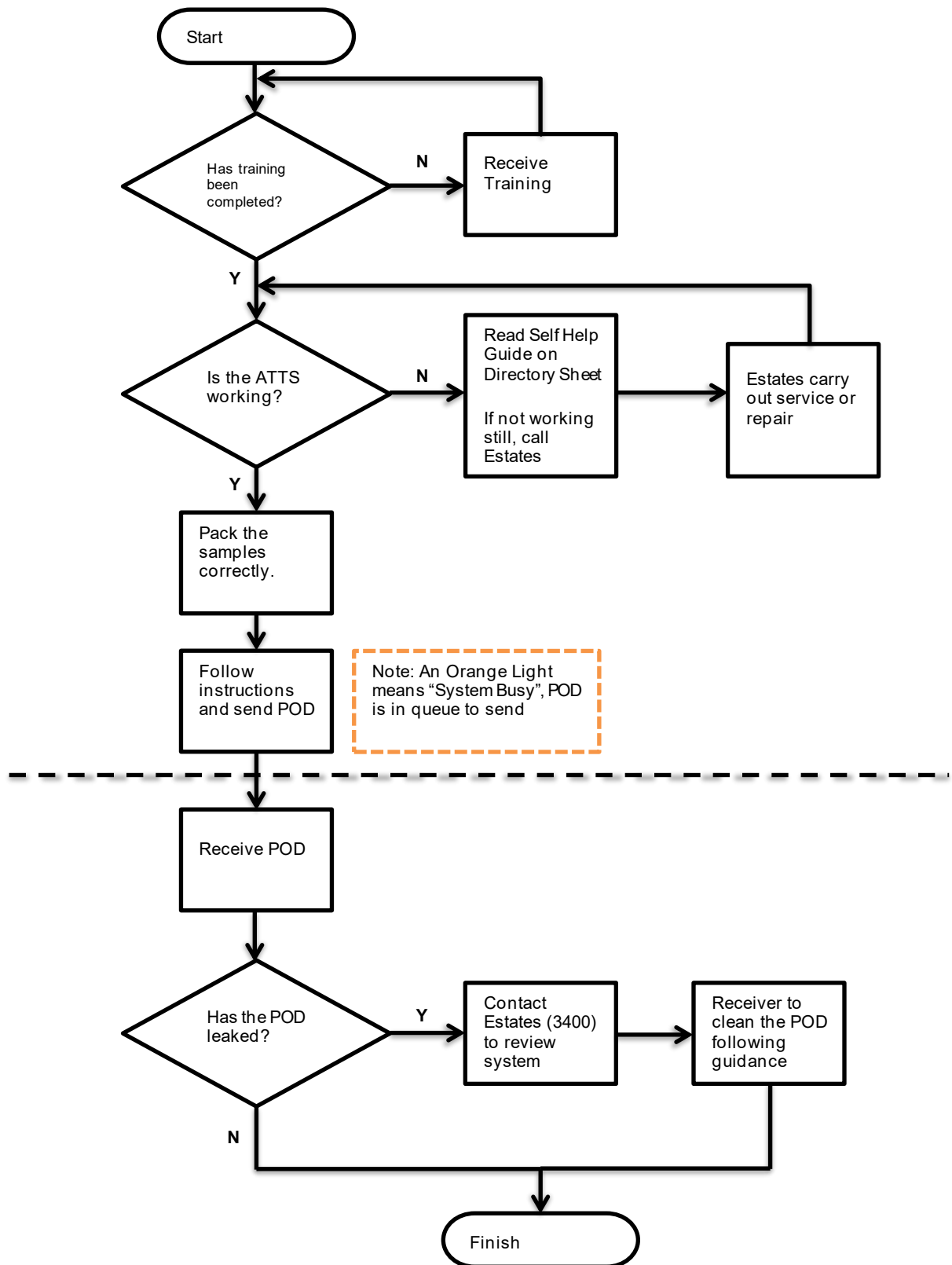


Table of Contents

Summary	2
1. Introduction	5
2. Purpose of this Policy/Procedure.....	5
3. Scope.....	5
4. Definitions/Glossary	5
5. Ownership and Responsibilities	6
5.1. Role of the Estate Operations Department	6
5.2. Role of the Managers and Service Leads	6
5.3. Role of Individual Staff	7
5.4. Role of the Infection, Prevention and Control Department (IPAC)	7
5.5. Role of the Portering Service	7
6. Standards and Practice	7
7. Dissemination and Implementation	13
8. Monitoring compliance and effectiveness	13
9. Updating and Review	14
10. Equality and Diversity	14
Appendix 1. Governance Information.....	15
Appendix 2. Equality Impact Assessment.....	17
Appendix 3. Decontamination Process	18
Appendix 4. Fire Alarm Sounding Sign.....	20
Appendix 5. System Authorisation Sign	21
Appendix 6. Instructions on Using the Air Transport Tube (ATTS or POD) System ..	22
Appendix 7. Training Records for Air Tube Transport System	23

Data Protection Legislation

The Trust must comply with the UK GDPR, Data Protection Act 2018, and Data (Use and Access) Act 2025 by ensuring all personal data is processed lawfully, fairly, transparently, and for a defined purpose.

Before processing personal data, an appropriate Article 6 UK GDPR lawful basis must be identified and recorded. Where special category data is involved, a relevant Article 9 condition must also be documented.

All staff, contractors, students, volunteers, agency workers, and third parties working on behalf of the Trust are responsible for complying with data protection legislation.

Further guidance is available in the Trust's Information Use Framework and Information Governance policies. Advice can also be obtained from the Information Governance Team.

1. Introduction

- 1.1. The Air Tube Transport System (ATTS) is used to transfer documents, specimens and medicines around the hospital. The item to be transported in the ATTS is placed into plastic carriers called PODS. These PODS are the only container type which can be used in the ATTS.
- 1.2. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

- 2.1. This policy gives information and instruction on the use of the Air Tube Transport System for the transfer of samples across the Royal Cornwall Hospital.
- 2.2. To ensure that the Air Tube Transport System meets the requirements of the Control of Substances Hazardous to Health Regulations 2002, the Management of Health and Safety at Work Regulations 1999, and the Health and Safety at Work etc. Act 1974. There are several other publications that provide good practice advice, including the Health and Safety Executive's Safe use of pneumatic air tube transport systems for pathology specimens (MISC186).

3. Scope

- 3.1. This policy is applicable to users of the system, including all wards and departments where the system is installed.
- 3.2. This policy only applies to the Royal Cornwall Hospital where the system is located.
- 3.3. The policy also applies to the Estates Department who are responsible for managing and maintaining the system, and for ensuring that the system is operated in line with current Health and Safety Executive guidance, manufacturer instructions, and relevant legislation.
- 3.4. Infection Prevention and Control are responsible for ensuring that the system meets the relevant guidelines and legislation.

4. Definitions/Glossary

- 4.1. **ATTS** – Air Tube Transport System; is a series of tubes and stations used to transport samples and other small items around the Royal Cornwall Hospital. The system uses air blown around the tubes to push and pull the carrier pods to the desired location.
- 4.2. **POD** – The POD or carrier is the device used to place samples and items to be transported. There are two types of PODS which can be used, one which opens at only one end and the other which opens at both ends. PODS are sent or received by transfer stations; some wards share stations in which case remote indicators will draw the attention to deliveries. When a delivery has arrived at the transfer station an audible alarm will sound.

These alarms may be cancelled¹ by means of the keypad on each transfer station. (Input * and the number of the alarm indicated on the display).

4.3. **RCH** – Royal Cornwall Hospital.

4.4. **Staff** – any worker at the Royal Cornwall Hospital, who for the purposes of this policy have received training in the safe operation and use of the ATTS.

5. Ownership and Responsibilities

5.1. Role of the Estate Operations Department

The Estates Department are responsible for:

- Maximise the availability of the ATTS.
- Maintaining the ATTS in line with manufacturer instructions, current Health and Safety Executive guidance, and relevant statutory requirements.
- Managing the contract for the maintenance of the ATTS.
- Ensuring that the system operates correctly in the event of a fire situation.
- Ensuring that the address list is maintained where wards and departments are moved, thus ensuring PODS are delivered to the right locations. Reviews take place as and when required.
- Responding to faults and failures of the ATTS as to minimise the loss of service.
- Ensure the periodic cleaning of dust in the tubes.

5.2. Role of the Managers and Service Leads

The Managers and Service Leads are responsible for:

- Ensuring that all staff under their control are trained on the use of the ATTS if it is required as part of their job role.
- Ensuring that procedures and risk assessments are in place for:
 - Failure of the ATTS.
 - Leaks and spills.
 - Safe operation.
 - Training.

¹ This is not carried out in Clinical Microbiology

5.3. Role of Individual Staff

All staff members are responsible for:

- Safely using the ATTS in line with the operating procedures and risk assessments.
- Reporting to the Estates Department any system errors or failures of the ATTS during its operation.
- Ensuring that they have been adequately trained in the safe use of the ATTS.
- Reporting any leaks or contamination of the ATTS to the Estates Department.
- Staff who have not received training must not use the ATTS.

5.4. Role of the Infection, Prevention and Control Department (IPAC)

IPAC are responsible for:

- Ensuring that the ATTS meets relevant infection prevention and control requirements, current Health and Safety Executive guidance, and local decontamination procedures.
- Advising on the techniques required in the event of a spill or leak.

5.5. Role of the Portering Service

Portering Services are responsible for:

- Ensuring that in the event of a failure of the ATTS there is sufficient support available for the collection and transport of items normally transported by the ATTS.

6. Standards and Practice

- 6.1. The Air Tube Transport System is used to transfer documents, specimens and medicines within the hospital. The item to be transported in the ATTS is placed into plastic carriers called PODS. These PODS are the only container type which can be used in the ATTS.
- 6.2. PODS: There are two types of PODS which can be used, one which opens at only one end and the other which opens at both ends. PODS are sent or received by transfer stations; some wards share stations in which case remote indicators will draw the attention to deliveries. When a delivery has arrived at the transfer station an audible alarm will sound. These alarms may be cancelled by means of the keypad on each transfer station. (Input * and the number of the alarm indicated on the display).
- 6.3. Each transfer station has a display screen and control buttons which allow operation of the system:

Light Colour	Light indicates
Red	Fault
Yellow	Tube in Use
Green	Sending your POD
Flashing Green	Wrong address typed

6.4. All operations using this system should be performed in a manner which obviates any contamination of the air tube itself or the transfer station.

6.5. Users of the ATTS

Only staff who have received specific training on the system are authorised to use it. Training is usually carried out locally as part of induction to the ward or department where the ATTS is in place.

6.6. Uses of the ATTS

The ATTS POD may be used to transport the following, only if suitably protected from contamination and packaged appropriately:

- Paper i.e. patient records.
- Medicine.
- Pathology specimens e.g. blood.
- Microbiology specimens – ALL samples must have properly sealed lids and should be 100% leak proof.
- Blood cultures should be sent to avoid unnecessary delay.
- Capillary blood gas samples. Blood gas samples in “safePico” syringes are acceptable if the safety device is activated, needle has been removed, and syringe has a bung in place.

6.6.1. The ATTS MUST NEVER be used to transport the following:

- Anything containing Formaldehyde (formalin) e.g. Histology specimens.
- No sharps should be sent in the ATTS.
- Personal belongings.
- Food or drink.
- Messages to other wards or departments that could be sent via other means such as email or telephone.

6.6.2. The weight limit for each POD is 1.5kg; the system will not operate correctly if this weight is exceeded.

6.7. Sending Carriers

	Action	Reason
1.	Load the carrier ensuring sufficient packaging (for example paper towels) to absorb leakage. All pathology samples must be placed within sealed plastic bags. Medicines must be packed to avoid leakage, and pre-filled syringes must be enclosed in sealed plastic bags (ensuring there are no needles attached).	To ensure no leakage occurs. Note: transfer stations not conforming to this requirement will be isolated from the system.
2.	Place package inside the POD and add a paper towel and the sample (or pharmacy item) and place another paper towel on top. Close the carrier.	To protect the load against shocks and as a precaution to absorb any possible leakage.
3.	Check that the display on the transfer station screen states "Normal mode".	Ensures the system is available. The yellow light means it is in use; the red indicates a fault.
4.	Type in the destination number on the keypad (The destination list can be found on the Transfer Station).	This must be typed before inserting the carrier in the station.
5.	Place the carrier into the station and remove hand immediately.	The micro switch will detect the carrier and then send it.

If the station is unavailable use the nearest working station available. If the system is unavailable, it is the sender's responsibility to organise an alternative means of transmission.

6.8. Receiving Carriers

	Action	Reason/Response
1.	When a delivery is made to the transfer station an alarm is noticed. Go to the station to receive the delivery and cancel the indicator using the keypad on the transfer station screen.	The indicator is a light and/or audible alarm situated near the nurses' station where the station is located on a Ward, other departments will have their own arrangements.
2.	Cancel the alarm by typing * followed by the number of your area which will show as a lit numbered light (1 to 16). These numbers can be seen on the face of the console for the transfer station.	The alarm will continue unless this is performed.

	Action	Reason/Response
3.	Where the transfer station is in a publicly accessible area, then obtain a key from a senior nurse on the ward and unlock the receipts box situated under the station. Elsewhere, such as the labs, this does not apply.	All deliveries are held within a locked box as a matter of security.
4.	Check the see-through carrier for leaks before undoing it.	The carrier must not be opened if there is any danger of contamination.
5.	If a leakage is noticed inside the carrier, do not undo the carrier.	Extent of leak must be determined and appropriate action invoked. See the cleaning section.
6.	If a leakage is identified and has spread to the outside of the carrier.	Isolate the carrier following infection control procedures. Contact the Estates Helpdesk or On-Call Engineer immediately. If the handler has come in contact with the leak, then consideration should be made to contacting the Needlestick Bleep.
7.	If no leak is apparent, undo the carrier and retrieve the contents.	This frees an empty carrier for sending from the station next time it is required.
8.	Retain the carrier at the holding area at the station.	This ensures an empty carrier is available for the next time it is necessary to send through the system.

6.10. Problem Solving

6.12.1. If the station is unavailable, then use the next working station available. If the system is unavailable, it is the sender's responsibility to organise an alternative means of transmission.

6.12.2. The system has many automatic correction features. These require time to activate so please allow 15 minutes on discovering a fault before raising a call. Steady amber light indicates an action is in progress and may mean an engineer is already dealing with a problem.

6.12.3. Error messages

If an error message is displayed and it is not obvious how to correct it, check the self help guide and if there is still a problem, then phone the Estates Helpdesk on 3400. Out of hours Estates can be contacted through the switchboard.

Errors commonly shown:

Symptom	Fault	Action
Comm Error.	Communication error on equipment.	Phone Estates Helpdesk on Ext. 3400.
Station blocked on receive.	Carrier stuck on ejection switch.	Remove carrier from transfer station and press button “C” on keypad.
Station blocked on send.	Carrier stuck on ejection switch or a variety of other causes.	Phone Estates Helpdesk on Ext. 3400.
Station unable to reset.	Electronic trip faulty.	Phone Estates Helpdesk on Ext. 3400.
Carrier manually removed.	Carrier removed by sender.	No action.
Carrier ejected during sending.	Sender entering 2 carriers in close succession or a faulty switch.	Send one at a time. If problem persists phone Estates Helpdesk on Ext. 3400.
Clearing	System automatic process	No action
Clearing no carrier found.	Carrier as not arrived at destination.	Wait – this is an automatic procedure. Phone Estates Helpdesk on Ext. 3400 if waiting for more than 15 minutes.
Station blocked with 2 carriers.	Two carriers arriving at the same time. The system clears automatically.	No action.

Note: Error messages are displayed for all users, but the message may not apply to the machine you are using.

6.13. Spillages

If any leakage occurs it needs to be dealt with immediately. Follow normal procedures for cleaning up bodily fluid spills, this could involve contacting the Facilities Helpdesk or following departmental and Ward procedures. A cleaning procedure is included in this document.

6.14. Contamination of a carrier

Check for leaks before opening the carrier. If there is leakage, don't open and follow ward or department procedures for dealing with spills and bodily fluids. Contact Infection, Prevention and Control for advice.

6.15. Contamination of the main tube

- 6.15.1. If leakage into the tube itself is suspected DO NOT USE THE SYSTEM, phone Estates Helpdesk on Ext. 3400. The system must be closed down and its use discontinued until corrective action has been taken.
- 6.15.2. The system will be taken off-line whilst a professional contracted service provider can carry out a full clean of the system. Whilst the system is off-line alternative arrangements for the transfer of items usually sent using the ATTS should be made.

6.16. System Failure

- 6.16.1. If the system fails, the computer controller remembers where each carrier is in the system and its prescribed destination. Upon restoration of power the system will resume where it left off and carriers will reach their chosen station. The user will be unable to use the system until the situation is rectified but the screen display and lights will update as appropriate. A continuous yellow light is likely to mean the system is being worked on to correct a problem.
- 6.16.2. If the system has failed, then wards and departments will need to make alternative arrangements for the transfer of items usually sent via the ATTS. Provision of these alternative arrangements will be made in conjunction with the Portering Service through the Facilities Helpdesk on 2468.

6.17. Help and Advice

- 6.17.1. To get assistance on the operation of the ATTS, or if you are experiencing difficulties with the system then please contact the Estates Helpdesk on 3400 where a call will be logged.
- 6.17.2. In the event of an out-of-hours failure or emergency affecting the system, the user must contact RCH Switchboard and request the on-call Estates Engineer.
- 6.17.3. If the station is unavailable use the nearest working station. If the system is unavailable, it is the sender's responsibility to organise an alternative means of transmission.

6.18. Fire Alarm

The fire alarm is linked to the Air Tube Controller and in the event of a fire or if the fire alarm is activated then the system is suspended until the alarm is deactivated. Fire alarm tests should not adversely affect the running of the system.

6.19. Security

The send/receive stations are in areas where staff are in almost constant attendance or where public access is clearly restricted. Anyone seen tampering with the station should be challenged. The incident should be reported to the

appropriate Senior Manager. Receiving boxes should be secured when no one is present.

6.20. Health and Safety

All due diligence should be exercised in the operation of the pneumatic tube system in accordance with the Health and Safety at Work etc. Act 1974, sections 2 and 7.

6.21. Note for sending stations with a base feed.

The technique for inserting PODS into units with a base as opposed to top insertion is to place the POD on the palm of the hand and guide it into position. Remove the hand immediately after depositing the carrier POD. Do not grasp the POD and do not hold in position any longer than necessary. A very strong vacuum is applied to the system after 5 seconds waiting time.

6.22. Damage caused maliciously or through misuse

Any damage to the system that is deemed to have been caused either through misuse or maliciously will be recorded on the Trust incident reporting system, and the department or ward responsible will be charged for the repair or replacement.

6.23. Misuse of the ATTS

6.23.1. The ATTS is part of the safe systems for the timely transfer of physical items to support patient care.

6.23.2. The misuse of the system to send inappropriate items increases the traffic in the system and will add delays to the system.

6.23.3. Staff who misuse the system deliberately may be subject to disciplinary action following the appropriate policy.

7. Dissemination and Implementation

7.1. The policy will be included in the Trust Documents Library and disseminated through the Divisional Governance arrangements.

7.2. Training should be arranged through the line management structures within the departments and wards where the ATTS is available.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Safe use of the System.
Lead	Estates and Facilities Head of Performance Improvement, Governance and Compliance.

Information Category	Detail of process and methodology for monitoring compliance
Tool	Trust Incident monitoring system.
Frequency	Reporting by exception to the Estates and Facilities Safety Group or Senior Leadership Team.
Reporting arrangements	The Estates Senior Leadership Team will receive a monthly report on incidents relating to systems in the Trust and this will form part of the report.
Acting on recommendations and Lead(s)	Senior Estates Manager (Electrical) will act on the recommendations of the Estate Senior Leadership Team.
Change in practice and lessons to be shared	Implementation of changes will be communicated using the policy and through the Divisional Governance Groups or equivalent meetings.

9. Updating and Review

The policy and procedures will be updated every three years or sooner in the event of changes to legislation, fire safety guidance, system design changes or significant system failure or contamination

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the [Equality Diversity and Inclusion Policy](#) or the [Equality and Diversity website](#).

10.2. Quality and Equality Impact Assessment (QEIA)

The QEIA process allows RCHT to monitor the impact of changes to its policies and services, ensuring that nobody is unduly disadvantaged. The Quality and Equality Impact Assessment (QEIA) Form is available via the link in [Appendix 2](#).

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Air Tube Transport System Policy V3.0
This document replaces (exact title of previous version):	Air Tube Transport System Policy V2.0
Date Issued/Approved:	July 2026
Date Valid From:	August 2026
Date Valid To:	August 2029
Author/Owner:	Bob Davies, Senior Estates Manager (Electrical)
Contact details:	01872 253400
Brief summary of contents:	Policy and procedure describing the use of the Air Tube Transport System.
Suggested Keywords:	Samples, transfer, document, safety.
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Director of Estates and Facilities
Approval route for consultation and ratification:	Estates and Facilities Senior Leadership Team
Manager confirming approval processes:	Head of Estates
Name of Governance Lead confirming consultation and ratification:	Head of Performance Improvement, Governance and Compliance
Links to key external standards:	None Required
Related Documents:	Fire Safety Policy
Training Need Identified:	Yes – use of the system
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet

Information Category	Detailed Information
Document Library Folder/Sub Folder:	Estates and Facilities/Estates

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
September 2015	V1.0	Initial Issue	Phil Bond, Governance Lead, Estates
August 2019	V2.0	Updated the summary, additional guidance from WHTM included. Updated the notes around using the help guide first.	Phil Bond, Governance Lead, Estates
August 2026	V3.0	Updated and put into new format	Bob Davies, Senior Estates Manager (Electrical). Phil Bond, Head of Performance Improvement, Governance and Compliance.

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust [The Policy on Policies \(Development and Management of Knowledge Procedural and Web Documents Policy\)](#). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

The QEIA process allows RCHT to monitor the impact of changes to its policies and services, ensuring that nobody is unduly disadvantaged.

Please ensure you have completed a Quality and Equality Impact Assessment (QEIA) using this link to complete the form:

[E11 QEIA Policy](#)

For guidance, please see the [QEIA Essentials – Quick Reference Guide](#) or contact as required below:

Equality, Diversity and Inclusion guidance, please contact: rcht.inclusion@nhs.net.

Quality Governance guidance, please contact Jillian Tozer: jillian.tozer3@nhs.net

Appendix 3. Decontamination Process

CLEANING PROCEDURE: To be performed by a member of staff under the direction of the Senior Manager in the area in which the contamination is discovered/occurs.

It is imperative that the main tube of the system is not contaminated with any biological material, noxious agents or potentially dangerous medicines. This protocol is written assuming the only decontamination applicable will be to the carriers and secondary containers used in the system.

Establish the extent of any spillage. If in any doubt phone the help line and await further instructions. If the spillage involves Pharmacy preparations, please consult Pharmacy before taking any other action. Pharmacy has special procedures for assessing problems and dealing with them.

Follow general Health and Safety principles.

Wear gloves, glasses and plastic apron when handling a carrier or any part of the pneumatic tube system that is suspected of being contaminated.

The contaminating substances and the materials used during the decontamination must be disposed of safely and procedures followed for the safe disposal of clinical waste.

Discard the specimen(s) appropriately (into a yellow plastic bag or sharps container).

Cleaning and Disinfection of External Surfaces of the System

The external features of the system e.g. stations, auto-return stations and lockable cabinets, should be carefully wiped over with a solution of Hypochlorite (10,000-ppm available chlorine).

Note prolonged contact with metal and hypochlorite will cause damage.

Wipe dry.

Cleaning and Disinfection of Carriers

Blood or body fluids	Immerse the carrier directly in a solution of Hypochlorite (10,000ppm available chlorine) for five minutes
Faeces, pus, tissue, Urine or other samples not grossly contaminated with blood.	Wash spillage off the carrier with detergent prior to disinfection with Hypochlorite.
Sputum and samples where mycobacterium is suspected	Wash off gross contamination with detergent and then use 5% Virusesolve + spray used for Cat 2 and 10% Virusesolve + used in Cat 3 lab for decontamination.
Rinse and dry carriers thoroughly after disinfection.	

Cleaning the tube itself

This procedure is to be used only by Estates staff members, and the need for it should never arise if Trust procedures have been followed. There is at present no approved method, other than the destruction of components, that will guarantee complete decontamination of the system.

Using the cleaning carrier, remove red lid and place sponge/foam inside the carrier and soak with solution of Hypochlorite (10,000ppm available chlorine).

Send the cleaning carrier along the contaminated run with the red cap uppermost when loaded into the sending station. Make sure someone is at the receiving station to send the cleaning carrier immediately back.

This should be repeated, if necessary, dependant on the severity of the contamination.

When the decontamination is completed remove the sponge/foam from carrier and discard. Follow the procedure for decontamination of carrier.

If there was a major spillage, involving risk of infection, or any problems with the above, seek the advice of the medical microbiologist before putting the affected parts of the system back into use.

**DO NOT
USE IF FIRE
ALARM IS
SOUNDING**

No one may use this system unless first trained and authorised by Ward or Department Manager to do so.

Appendix 6. Instructions on Using the Air Transport Tube (ATTS or POD) System

Instructions on Using the Air Transport Tube (ATTS or POD) System

Brief Instructions:

1. No one is permitted to use the system unless they have received approved training. Circumventing this rule will result in disconnection.
2. Ensure that the sample is enclosed in a separate closed package/sample bag.
3. Pack the sample in the carrier between paper towels or other absorbent material placed at either end to provide a buffer against shocks to the carrier.
4. Insert destination label to be clearly visible.
5. Ensure the lid is snapped closed and that nothing is trapped preventing closure.
6. Type the destination.
7. Place the carrier in the station, remove hand immediately, and the launch will take place in a few seconds.
8. Deliveries to the station will be automatically stored in a locked box. The key is available from the senior nurse on duty.
9. The alarm is cancelled by noting the number of the light which is lit on the panel and typing * followed by that number.
10. Problems – phone the helpline (weekdays 0900 – 1700) or contact Estates.

Appendix 7. Training Records for Air Tube Transport System

By completing and signing this form the Trainee is accepting that they have received the appropriate training for the use of the Air Tube Transport System (ATTS/POD).

Trainee			Trainer	
Name	Date Trained	Sign	Sign	Date

DUTY OF CARE

Notice to All users of the Pneumatic Tube System.

Please note all users of the pneumatic tube system have a duty to satisfy the Trust rules for safe sample packaging as detailed in the policy and procedure and the universal precautions documents which are the basis of training in each area.

In addition to containment of approved specimen bottles within sealed polythene bags, it is essential to pack each end of the carrier POD with a paper towel to absorb any leakage and to act as a buffer against the considerable percussive effects of moving through the system.

Failure to comply may result in contamination, with a consequent closure of part or all of the pneumatic tube system affecting the whole hospital. In addition to disciplinary action, an individual causing such harm may be liable for the costs of replacing the affected parts of the system.

To safeguard all staff from contamination and to ensure this policy is adhered to laboratories will not accept specimens which are inadequately packed. These will be returned unopened, by hand. This will inevitably cause delay in sample processing. Individual stations will be rendered inoperable by the system administrator if a ward persistently flaunts the guidelines. In such cases the station will not return to use until a retraining programme has occurred.

Note: The portering service may be unable to provide the necessary cover to areas.