Site visit inspection report on compliance with HTA minimum standards

Leicester Bone Bank

HTA licensing number 11011

Licensed for the

- **procurement, testing, storage and distribution of human tissues and cells for human application under the Human Tissue (Quality and Safety for Human Application) Regulations 2007**

- **storage of relevant material which has come from a human body for use for a scheduled purpose under the Human Tissue Act 2004**

02-10 September 2015

Summary of inspection findings

The HTA found the Designated Individual, the Licence Holder, the premises and the practices to be suitable in accordance with the requirements of the legislation.

Although the HTA found that Leicester Bone Bank (the establishment) had met the majority of the HTA standards, a minor shortfall was found in relation to Governance and Quality Management Systems. The establishment introduced nucleic acid testing for Hep B (HBV DNA), Hep C (HCV RNA), HIV (HIV RNA) on the initial blood sample in order to remove the need to perform repeat donor testing after 180 days, but did not risk assess this change in donor testing practice and its impact on HTLV-I/II testing as part of change control.

Since the previous inspection in 2013, the number of satellite sites where procurement of bone takes place has been reduced from five to three. Of the procurement sites, two sites are within the Leicester area and the third is the Barlborough NHS Treatment Centre. The establishment no longer undertakes the procurement of chondrocytes for patient treatment.

Particular examples of strengths and good practice are included in the concluding comments section of the report.

The HTA's regulatory requirements

The HTA must assure itself that the Designated Individual, Licence Holder, premises and practices are suitable.

The statutory duties of the Designated Individual are set down in Section 18 of the Human Tissue Act 2004. They are to secure that:

- the other persons to whom the licence applies are suitable persons to participate in the carrying-on of the licensed activity;
- suitable practices are used in the course of carrying on that activity; and
- the conditions of the licence are complied with.

The HTA developed its licensing standards with input from its stakeholders. They are designed to ensure the safe and ethical use of human tissue and the dignified and respectful treatment of the deceased. The HTA inspects the establishments it licences against four groups of standards:

- consent
- governance and quality systems
- premises facilities and equipment
- disposal.

This is an exception-based report: only those standards that have been assessed as not met are included. Where the HTA determines that a standard is not met, the level of the shortfall is classified as 'Critical', 'Major' or 'Minor' (see Appendix 2: Classification of the level of shortfall). Where HTA standards are fully met, but the HTA has identified an area of practice that could be further improved, advice is given to the DI.

Reports of HTA inspections carried out from 1 November 2010 are published on the HTA's website.

Licensable activities carried out by the establishment

'E' = Establishment is licensed to carry out this activity.

'E*' = Establishment is licensed to carry out this activity but is not currently carrying it out.

Tissue type	Procurement	Testing	Storage	Distribution
Bones	**E**	**E**	**E**	**E**
Tendons and Menisci			**E**	**E**
Heart Valves			**E**	

Background to the establishment and description of inspection activities undertaken

Leicester Bone and Tissue Bank (the establishment) was set up at Glenfield hospital, Leicester in 1991, and has been licensed by the HTA since 2008 when the Quality and Safety for Human Application Regulations came into force. The hub site at the Glenfield Hospital is licensed for procurement, donor testing, storage and distribution of tissues and cells for human application. Staff based at the hub site oversee licensable activities undertaken at eleven satellite sites where storage (s) and/or procurement (p) or distribution (d) take place - Airedale Hospital (s), Barlborough NHS Treatment Centre (p, s), Bradford Royal Infirmary (s), Broomfield Hospital (s), Calderdale Royal Hospital (s), Lincoln County Hospital (s), Leicester

General Hospital (p, s), Leicester Spire Hospital (p, s), Norfolk and Norwich University Hospital (s, d), Nuffield Orthopaedic Centre Oxford (s) and Pilgrim Hospital Boston (s).

The tissue bank procures femoral heads for allogeneic use from patients undergoing primary hip replacements. Procurement takes place with consent, after potential donors have been assessed at pre-operation clinics. The establishment recently set up a telephone consent system for potential donors who are being treated at Leicester General Hospital.The conversation between the trained consent seeker and potential donors is recorded and reviewed before the donation goes ahead. Consent at the other sites is taken during a face to face meeting with potential donors and is documented in a consent form.

Donor testing using enzyme linked immunoassays is undertaken under a third party agreement at Leicester Royal Infirmary which has Clinical Pathology Accreditation. The establishment has recently changed its process and performs nucleic acid testing in addition to serology testing on a blood sample taken on the day of donation. Nucleic acid testing is undertaken at another HTA licensed establishment.

Microbiology testing of swabs and bone chips from procured femoral heads are undertaken at Leicester Royal Infirmary and King's Mill Hospital, Nottinghamshire. The establishment disposes donated bone if the swabs or bone chips test positive for microbial contamination.

The hub also stores and distributes tendons and menisci imported by another HTA licensed establishment. The hub, Glenfield Hospital, also stores and uses heart valves supplied by another HTA licenced establishment.

The hub provides most satellite sites with -80^{0}C freezers; one freezer is provided to sites where storage/distribution takes place and two freezers are provided if the site undertakes procurement and storage. In the latter case, one freezer is a quarantine freezer which is used to store freshly procured femoral heads and the second freezer is used to store tissue which is ready to be used for transplantation.

The hub site takes responsibility for installing freezers in a secure area close to theatres. Freezers are plugged into power sockets which are on a emergency power supply in the event that the power supply is interrupted. The hub is responsible for maintaining and calibrating the freezers and checking the alarm system. Access to freezers is controlled; keys are kept in a secure location, usually in a locked key cupboard and only made available to personnel who have received training. Most freezers in the hub and satellite sites are linked to an independent proprietary wireless temperature monitoring system which can be checked remotely and triggers a pager message in the event that the temperature is not maintained. The intention is that all freezers at the hub and satellite sites will be linked and monitored by the wireless system. Staff regularly check the temperature of the freezers.

Each satellite site has a site file containing the relevant standard operating procedures (SOPs), temperature records, freezer log sheets used to log the storage and removal of bone from each freezer and data sheets for ready to use bone. Licensable activities at satellite sites are overseen by a person designated (PD) who is based at the satellite site. Following the inspection the DI informed the HTA that trained staff at satellite sites, would be able to deputise for the PD if required.

A sample of blood for donor testing is taken on the day of donation. Femoral heads are procured under aseptic conditions by orthopaedic surgeons in theatres. A bone chip is removed from the femoral head and the femoral head is swabbed. The swab and bone chip are incubated in broths, in order to detect any microbial contaminants. The femoral head is packaged in a sterile tamper evident screw capped pot which is placed in a second sterile tamper evident screw capped pot. The pots are labelled with the donor details and the date of the procurement. Theatre staff then place the bone in the quarantine freezer. The surgeon and theatre staff complete a Donor Data Sheet which records the donor details, batch

numbers of the broth and the pots used to package the femoral head. Staff from the hub site collect and transfer procured bone to the hub site where they are assigned unique IDs, weighed and stored in designated quarantine freezers. The femoral heads are moved to the designated 'ready to be transplanted' freezers for long term storage (expiry date five years after the date of procurement) once all donor test results and microbiology test results and the donor file has been reviewed by the Head of Service and the Assistant Head of Service. The establishment uses a traffic light system (red and green) to distinguish between bone which is in quarantine and bone which is ready to be transplanted.

Staff used validated containers to transport bone between the hub and satellite sites. Bone is packaged in dry ice or freezer packs as appropriate and labels are attached to the containers. A designated courier service working under a third party agreement transport bone and other tissue to other enduser sites. The labels on the containers provides emergency contact details in the event of an untoward incident.

Staff at the hub site provide training to pre-assessment nurses, consent seekers and scrub practitioners in theatres at the satellite sites where procurement takes place. Satellite sites where procurement takes place are visited weekly and sites where storage for enduse takes place are visited bi-monthly. During visits, staff from the hub site review stock levels, check freezer logs, collect procured bone, replenish stock of bone in the ready to use freezers and collect paper work. Checks are also carried out on temperature monitoring records at the satellite site. Formal audits take place every two years which are documented and actions taken to address any non-conformances.

The hub site consists of designated offices and two rooms containing -80^{0}C freezers (Clinical Sciences Bone Bank and Ramp Bone Bank). Freezer temperatures are continuously monitored using the same proprietary system used in the satellite sites. In addition, there are local freezer alarms and a system which alerts the switchboard at Leicester Royal Infirmary in the event that the temperature is out of specification. The alarms are tested and every six months a major power failure is simulated in order the test the response times for the alarms. The local fire brigade has been informed of the contents of the freezers and have been instructed to move the freezers in the event of a fire.

The hub maintains records of all donations in individual donor files and records information on three databases. The hub freezer log is a central stock list and contains information and the location of stored bone at the hub and satellite sites. This database lists all donations and patients for whom the bone has been allocated across all the sites. Satellite sites have to contact the hub site and receive authorisation before bone or other tissue can be removed from the ready to use freezers and implanted into a named patient. The database also notes the blood group of the donor and this information is used to ensure that bone from Rhesus negative donors is allocated to women of child bearing age.

The donor recipient database stores traceability information and records details of donors and recipients. The establishment has commissioned a third database, which is currently being validated and will be used to record all the information in the Donor Data sheets, freezer location, donor test results and recipient details.

This was the fifth routine site visit inspection of Leicester Bone bank and included a visual inspection of the hub site and the following satellite sites where storage (s), procurement (p) distribution (d) take place - Bradford Royal Infirmary (s), Broomfield Hospital (s), Leicester General Hospital (p, s) and Norfolk and Norwich University Hospital (s, d). The inspection included a visit to Leicester Royal Infirmary where donor serology tests and microbiology testing of swabs and bone chips are performed.

Interviews were held with the Medical Lead (Consultant Orthopaedic surgeon) who is the DI, the Head of Service, Assistant Head of Service, Site Supervisor (satellites in the Leiceter area) and the member of staff who enters data and is being trained to take on the role of Site

Supervisor (other satellite sites). This inspection did not cover the samples which are stored on site for the scheduled purpose of research as the HTA understands that there has been no change in the number of samples since these samples were last reviewed by the HTA during the previous inspection in August 2013. There have been no research donations since the previous inspection.

A document review was undertaken. SOPs covering donor selection including the rationale for medical history and lifestyle questions, procedure used to interview potential femoral head donors, telephone consent script, checking and saving recorded telephone consent conversations, bone donor screening, retrieval of femoral heads, collection of femoral head , checks undertaken during site visits, implantation of femoral head, allocation of bone for transplant at satellite site, delivery and dispatch arrangements for tendons and recall of tissue.

Staff training records, audits undertaken by staff at the hub site of activities at the satellite sites, external audit report undertaken on 13 August 2014, risk assessments which cover satellite sites, transport of tissues, use of freezers were also reviewed.

The agreements between the establishment and providers of the following services were reviewed - pathology laboratory at Leicester Royal Infirmary for donor testing; supply of sterile pots to package femoral heads; provision of wireless temperature monitoring service; provision of freezer maintenance and calibration service; designated courier service for transport of tissues. Agreements between University Hospitals Leicester NHS Trust and Trusts or organisations where the satellite sites are located were also reviewed. The agreements include the requirement to report serious adverse events and reactions to the hub site within 24 hours of discovery.

Audit trails were undertaken on four femoral heads in storage at the hub site and at each satellite site. The unique identification number was traced from the freezer logs at the site to the electronic databases at the hub site. Records of consent, information recorded on the 'Femoral Head Donor Data sheet', microbiology test results for the bone chip and the swab, donor serology test results and repeat serology test results or nucleic acid test results and authorisation of bone for transplant by the Head of Service and Deputy Head of service, as appropriate, were reviewed. There were no discrepancies in the paper records, but there were two minor discrepancies in the electronic records which were sampled.

Records relating to a pulmonary valve, meniscus and tendon which included the unique number of the tissue, origin of the tissue and transport were checked. There were no discrepancies.

Clinical notes for four bone donors were requested. A sticker stating 'Bone Bank Donor' had been placed on the cover of three out of the four clinical files belonging to bone donors. A femoral head was recorded as 'wasted' in the local electronic database used by a satellite site, but electronic records in the hub site did not state that it had been disposed of.

Inspection findings

The HTA found the Designated Individual and the Licence Holder to be suitable in accordance with the requirements of the legislation.

Compliance with HTA standards

Governance and Quality

Standard	Inspection findings	Level of shortfall
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately.		
a) There are documented risk assessments for all practices and processes.	The establishment currently undertakes nucleic acid testing for Hep B (HBV DNA), Hep C (HCV RNA), HIV (HIV RNA) on the initial blood sample. This change to donor testing avoids the need to recall donors in order to repeat test after 180 days. However, as a consequence of this change, the establishment no longer undertakes repeat testing for HTLV-I. The establishment did not risk assess the change in donor practice as part of an effective change control. A risk assessment entitled *'Risk of transmission of HTLV infection'* was produced during the inspection. However this risk assessment does not take into consideration the risk of recently acquired HTLV-I infection (see advice items 3 and 5).	**Minor**

Advice

The HTA advises the DI to consider the following to further improve practices:

No.	Standard	Advice
1.	GQ1b	The DI is advised to review documents, forms and risk assessments and archive documents relating to practices which no longer take place at the establishment to inform staff practice. Among other changes the DI is advised to consider making the following amendments to documents – • In SOP 6.2/01- Bone Donor Screening – reflect current practice -the testing sequence following procurement of bone - microbiology testing serology testing, followed by nucleic acid testing. • To provide a summary information sheet on HTLV I/II to staff who seek consent in addition to sheets on transmissible infections such as HIV, Hep B and Hep C which are provided. • In the agreement which covers donor testing at Leicester Royal Infirmary, include the requirement to store sera and transfer the sera

		to the HTA licenced establishment which undertakes nucleic acid testing • SOP 7.9/05 -Allocation of Bone for Transplant at Satellite site- document current practice -the establishment requests the Rhesus status of all donors and recipients. • Include references to the recent edition of the Guide to Quality and Safety Assurance for Human Tissues and Cells for Patient Treatment – revised in June 2015 which includes an updated Annex B – Laboratory tests required for donors and the requirement for HTLV-I antibody testing in the relevant documents. • To include how staff should define the expiry date for femoral heads in the relevant SOPs.
2.	GQ4b	The DI is advised to consider formalising the procedure for checking entries made in the computer databases. This will help to ensure data integrity when the establishment moves to using the bespoke database as the single source of information.
3.	GQ5a	The DI is advised to consider steps which could be taken to strengthen donor assessment in order to ascertain the risk of recently acquired HTLV I infections in potential donors (see advice item 5).
4.	GQ7	Staff at satellite sites receive training in understanding the type of events which would be classified as serious adverse incidents. The DI is advised to provide staff at satellite sites with refresher training in SAEARs, as necessary, in order to ensure that they continue to maintain their awareness of incidents which have to be reported to the HTA.
5.	GQ8	The establishment undertakes antibody testing of donors for HTLV-1 on the initial blood sample, but does not repeat test after 180 days. The DI is advised to risk assess this practice by further developing the risk assessment entitled *'Risk of transmission of HTLV infection'.* Consideration should be given to recent travel and exposure history which includes stay in areas of high HTLV I prevalence and the geographic origin of recent sexual partners, given that some areas in the world have been identified as areas of high prevalence for HTLV I, and potential donors may have sexual partners who originate from those areas. The risk assessment should take into account current estimates of the window period for HTLV-1.

Concluding comments

There were many areas of good practice observed during the inspection. There are good lines of communication between the DI and staff at the hub site. Staff the hub site are very supportive of staff based in the satellite sites. Satellite sites are visited on a regular basis to monitor licensable activities, train new staff and review site files to ensure that records are accurate and complete. In addition staff at the hub site can be contacted at anytime by theatre staff based at satellite sites in order to enable the the release of tissues at short notice.There are robust sytems in place for monitoring the temperature of freezers used to store bone, testing of alarm systems and taking action if the event of freezer failures.

Audits, including external audits are undertaken on a regular basis. Staff show commitment to continuous improvement as evidenced by the move to telephone consenting in order to

increase the number of donations, the implementation of the wireless temperature monitoring system and plans to implement a bespoke central database.

The HTA was impressed with the level of commitment shown by staff who work under the licence and the effort they have put towards ensuring traceability by maintaining the centralized databases currently in use and commissioning and populating a bespoke database which will link all steps in the chain from donation to implantation of bone.

There are some areas of practice that require improvement, including a minor shortfall relating to change control when changes were made to donor testing practice, as the establishment no longer undertakes repeat testing for HTLV I. The HTA has given advice to the Designated Individual with respect to reviewing and updating documents and increasing awareness of the types of incidents which should be reported to the HTA.

The HTA requires that the Designated Individual addresses the shortfall by submitting a completed corrective and preventative action (CAPA) plan within 14 days of receipt of the final report (refer to Appendix 2 for recommended timeframes within which to complete actions). The HTA will then inform the establishment of the evidence required to demonstrate that the actions agreed in the plan have been completed.

The HTA has assessed the establishment as suitable to be licensed for the activities specified subject to corrective and preventative actions being implemented to meet the shortfall identified during the inspection.

Report sent to DI for factual accuracy: 07 October 2015

Report returned from DI: 20 October 2015

Final report issued: 03 November 2015

Completion of corrective and preventative actions (CAPA) plan

Based on information provided, the HTA is satisfied that the establishment has completed the agreed actions in the CAPA plan and in doing so has taken sufficient action to correct all shortfalls addressed in the Inspection Report.

Date: 30 March 2017

Appendix 1: HTA standards

The HTA standards applicable to this establishment are shown below; those not assessed during the inspection are shown in grey text. Individual standards which are not applicable to this establishment have been excluded.

Human Tissue (Quality and Safety for Human Application) Regulations 2007 Standards

Consent

Standard
C1 Consent is obtained in accordance with the requirements of the HT Act 2004, the Human Tissue (Quality and Safety for Human Application) Regulations 2007 and as set out in the HTA's Codes of Practice.
a) If the establishment acts as a procurer of tissues and / or cells, there is an established process for acquiring donor consent which meets the requirements of the HT Act 2004 the Human Tissue (Quality and Safety for Human Application) Regulations 2007 (Q&S Regulations) and the HTA's Codes of Practice
b) If there is a third party procuring tissues and / or cells on behalf of the establishment the third party agreement ensures that consent is obtained in accordance with the requirements of the HT Act 2004, the Q&S Regulations and the HTA's Codes of Practice.
c) The establishment or the third party's procedure on obtaining donor consent includes how potential donors are identified and who is able to take consent.
d) Consent forms comply with the HTA Codes of Practice.
e) Completed consent forms are included in records and are made accessible to those using or releasing tissue and / or cells for a Scheduled Purpose.
C2 Information about the consent process is provided and in a variety of formats.
a) The procedure on obtaining consent details what information will be provided to donors. As a minimum, the information specified by Directions 003/2010 is included.
b) If third parties act as procurers of tissues and / or cells, the third party agreement details what information will be provided to donors. As a minimum, the information specified by Directions 003/2010 is included.
c) Information is available in suitable formats and there is access to independent interpreters when required.
d) There are procedures to ensure that information is provided to the donor or donor's family by trained personnel.
C3 Staff involved in seeking consent receive training and support in the implications and essential requirements of taking consent.
a) Staff involved in obtaining consent are provided with training on how to take informed consent in accordance with the requirements of the HT Act 2004 and Code of Practice on Consent.
b) Training records are kept demonstrating attendance at training on consent.

Governance and Quality

Standard
GQ1 All aspects of the establishment's work are supported by ratified documented policies and procedures as part of the overall governance process.
a) There is an organisational chart clearly defining the lines of accountability and reporting relationships.
b) There are procedures for all licensable activities that ensure integrity of tissue and / or cells and minimise the risk of contamination.
c) There are regular governance meetings, for example health and safety, risk management and clinical governance committees, which are recorded by agendas and minutes.
d) There is a document control system to ensure that changes to documents are reviewed, approved, dated and documented by an authorised person and only current documents are in use.
e) There are procedures for tissue and / or cell procurement, which ensure the safety of living donors.
g) There are procedures to ensure that an authorised person verifies that tissues and / or cells received by the establishment meet required specifications.
h) There are procedures for the management and quarantine of non-conforming consignments or those with incomplete test results, to ensure no risk of cross contamination.
i) There are procedures to ensure tissues and / or cells are not released from quarantine until verification has been completed and recorded.
j) There are procedures detailing the critical materials and reagents used and where applicable, materials and reagents meet the standards laid down by the European directives on medical devices and in vitro diagnostic medical devices.
k) There is a procedure for handling returned products.
l) There are procedures to ensure that in the event of termination of activities for whatever reason, stored tissues and / or cells are transferred to another licensed establishment or establishments.
m) The criteria for allocating tissues and / or cells to patients and health care institutions are documented and made available to these parties on request.
o) There is a complaints system in place.
p) There are written agreements with third parties whenever an activity takes place that has the potential to influence the quality and safety of human tissues and / or cells.
q) There is a record of agreements established with third parties.
r) Third party agreements specify the responsibilities of the third party and meet the requirements set out in Directions 003/2010.
s) Third party agreements specify that the third party will inform the establishment in the event of a serious adverse reaction or event.
t) There are procedures for the re-provision of service in an emergency.

GQ2 There is a documented system of quality management and audit.
a) There is a quality management system which ensures continuous and systematic improvement.
b) There is an internal audit system for all licensable activities.
c) An audit is conducted in an independent manner at least every two years to verify compliance with protocols and HTA standards, and any findings and corrective actions are documented.
d) Processes affecting the quality and safety of tissues and / or cells are validated and undergo regular evaluation to ensure they continue to achieve the intended results.
GQ3 Staff are appropriately qualified and trained in techniques relevant to their work and are continuously updating their skills.
a) There are clearly documented job descriptions for all staff.
b) There are orientation and induction programmes for new staff.
c) There are continuous professional development (CPD) plans for staff and attendance at training is recorded.
d) There is annual documented mandatory training (e.g. health and safety and fire).
e) Personnel are trained in all tasks relevant to their work and their competence is recorded.
f) There is a documented training programme that ensures that staff have adequate knowledge of the scientific and ethical principles relevant to their work, and the regulatory context.
g) There is a documented training programme that ensures that staff understand the organisational structure and the quality systems used within the establishment.
h) There is a system of staff appraisal.
i) Where appropriate, staff are registered with a professional or statutory body.
j) There are training and reference manuals available.
k) The establishment is sufficiently staffed to carry out its activities.
GQ4 There is a systematic and planned approach to the management of records.
a) There are procedures for the creation, identification, maintenance, access, amendment, retention and destruction of records.
b) There is a system for the regular audit of records and their content to check for completeness, legibility and accuracy and to resolve any discrepancies found.
c) Written records are legible and indelible. Records kept in other formats such as computerised records are stored on a validated system.
d) There is a system for back-up / recovery in the event of loss of computerised records.
e) The establishment keeps a register of the types and quantities of tissues and / or cells that are procured, tested, preserved, processed, stored and distributed or otherwise disposed of, and on the origin and destination of tissues and cells intended for human application.

f) There are procedures to ensure that donor documentation, as specified by Directions 003/2010, is collected and maintained.
g) There is a system to ensure records are secure and that donor confidentiality is maintained in accordance with Directions 003/2010.
h) Raw data which are critical to the safety and quality of tissues and cells are kept for 10 years after the use, expiry date or disposal of tissues and / or cells.
i) The minimum data to ensure traceability from donor to recipient as required by Directions 003/2010 are kept for 30 years after the use, expiry or disposal of tissues and / or cells.
j) Records are kept of products and material coming into contact with the tissues and / or cells.
k) There are documented agreements with end users to ensure they record and store the data required by Directions 003/2010.
l) The establishment records the acceptance or rejection of tissue and / or cells that it receives and in the case of rejection why this rejection occurred.
m) In the event of termination of activities of the establishment a contingency plan to ensure records of traceability are maintained for 10 or 30 years as required.
GQ5 There are documented procedures for donor selection and exclusion, including donor criteria.
a) Donors are selected either by the establishment or the third party acting on its behalf in accordance with the criteria required by Directions 003/2010.
b) The testing of donors by the establishment or a third party on behalf of the establishment is carried out in accordance with the requirements of Directions 003/2010.
c) In cases other than autologous donors, donor selection is carried out by authorised personnel and signed and reviewed by a qualified health professional.
d) There is a system in place either at the establishment or at a third party acting on its behalf to record results of donor selection and associated tests.
e) Testing of donor samples is carried out using CE marked diagnostic tests.
f) Samples taken for donor testing are clearly labelled with the time and place the sample was taken and a unique donor identification code.
GQ6 A coding and records system facilitates traceability of tissues and / or cells, ensuring a robust audit trail.
a) There is a donor identification system which assigns a unique code to each donation and to each of the products associated with it.
b) An audit trail is maintained, which includes details of when the tissues and / or cells were acquired and from where, the uses to which the tissues and / or cells were put, when the tissues and / or cells were transferred elsewhere and to whom.
c) The establishment has procedures to ensure that tissues and / or cells imported, procured, processed, stored, distributed and exported are traceable from donor to recipient and vice versa.

GQ7 There are systems to ensure that all adverse events, reactions and/or incidents are investigated promptly.
a) There are procedures for the identification, reporting, investigation and recording of adverse events and reactions, including documentation of any corrective or preventative actions.
b) There is a system to receive and distribute national and local information (e.g. HTA regulatory alerts) and notify the HTA and other establishments as necessary of serious adverse events or reactions.
c) The responsibilities of personnel investigating adverse events and reactions are clearly defined.
d) There are procedures to identify and decide the fate of tissues and / or cells affected by an adverse event, reaction or deviation from the required quality and safety standards.
e) In the event of a recall, there are personnel authorised within the establishment to assess the need for a recall and if appropriate initiate and coordinate a recall.
f) There is an effective, documented recall procedure which includes a description of responsibilities and actions to be taken in the event of a recall including notification of the HTA and pre-defined times in which actions must be taken.
g) Establishments distributing tissue and / or cells provide information to end users on how to report a serious adverse event or reaction and have agreements with them specifying that they will report these events or reactions.
h) Establishments distributing tissues and / or cells have systems to receive notifications of serious adverse events and reactions from end users and notify the HTA.
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately.
a) There are documented risk assessments for all practices and processes.
b) Risk assessments are reviewed regularly, as a minimum annually or when any changes are made that may affect the quality and safety of tissues and cells.
c) Staff can access risk assessments and are made aware of local hazards at training.
d) A documented risk assessment is carried out to decide the fate of any tissue and / or cells stored prior to the introduction of a new donor selection criteria or a new processing step, which enhances the quality and safety of tissue and / or cells.

Premises, Facilities and Equipment

Standard
PFE1 The premises are fit for purpose.
a) A risk assessment has been carried out of the premises to ensure that they are fit for purpose.
b) There are procedures to review and maintain the safety of staff, visitors and patients.
c) The premises have sufficient space for procedures to be carried out safely and efficiently.
e) There are procedures to ensure that the premises are secure and confidentiality is maintained.

f) There is access to a nominated, registered medical practitioner and / or a scientific advisor to provide advice and oversee the establishment's medical and scientific activities.
PFE2 Environmental controls are in place to avoid potential contamination.
a) Tissues and / or cells stored in quarantine are stored separately from tissue and / or cells that have been released from quarantine.
c) There are procedures for cleaning and decontamination.
d) Staff are provided with appropriate protective clothing and equipment that minimise the risk of contamination of tissue and / or cells and the risk of infection to themselves.
PFE3 There are appropriate facilities for the storage of tissues and / or cells, consumables and records.
a) Tissues, cells, consumables and records are stored in secure environments and precautions are taken to minimise risk of damage, theft or contamination.
b) There are systems to deal with emergencies on a 24 hour basis.
c) Tissues and / or cells are stored in controlled, monitored and recorded conditions that maintain tissue and / or cell integrity.
d) There is a documented, specified maximum storage period for tissues and / or cells.
PFE4 Systems are in place to protect the quality and integrity of tissues and / or cells during transport and delivery to its destination.
a) There is a system to ensure tissue and / or cells are not distributed until they meet the standards laid down by Directions 003/2010.
b) There are procedures for the transport of tissues and / or cells which reflect identified risks associated with transport.
c) There is a system to ensure that traceability of tissues and / or cells is maintained during transport.
d) Records are kept of transportation and delivery.
e) Tissues and / or cells are packaged and transported in a manner and under conditions that minimise the risk of contamination and ensure their safety and quality.
f) There are third party agreements with courier or transport companies to ensure that any specific transport conditions required are maintained.
g) Critical transport conditions required to maintain the properties of tissue and / or cells are defined and documented.
h) Packaging and containers used for transportation are validated to ensure they are fit for purpose.
i) Primary packaging containing tissues and / or cells is labelled with the information required by Directions.
j) Shipping packaging containing tissues and / or cells is labelled with the information required by Directions.

PFE5 Equipment is appropriate for use, maintained, quality assured, validated and where appropriate monitored.
a) Critical equipment and technical devices are identified, validated, regularly inspected and records are maintained.
b) Critical equipment is maintained and serviced in accordance with the manufacturer's instructions.
c) Equipment affecting critical processes and storage parameters is identified and monitored to detect malfunctions and defects and procedures are in place to take any corrective actions.
d) New and repaired equipment is validated before use and this is documented.
e) There are documented agreements with maintenance companies.
f) Cleaning, disinfection and sanitation of critical equipment is performed regularly and this is recorded.
g) Instruments and devices used for procurement are sterile, validated and regularly maintained.
h) Users have access to instructions for equipment and receive training in the use of equipment and maintenance where appropriate.
i) Staff are aware of how to report an equipment problem.
j) For each critical process, the materials, equipment and personnel are identified and documented.
k) There are contingency plans for equipment failure.

Disposal

Standard
D1 There is a clear and sensitive policy for disposing of tissues and / or cells.
a) The disposal policy complies with HTA's Codes of Practice.
b) The disposal procedure complies with Health and Safety recommendations.
c) There is a documented procedure on disposal which ensures that there is no cross contamination.
D2 The reasons for disposal and the methods used are carefully documented.
a) There is a procedure for tracking the disposal of tissue and / or cells that details the method and reason for disposal.
b) Disposal arrangements reflect (where applicable) the consent given for disposal.

Appendix 2: Classification of the level of shortfall (HA)

Where the HTA determines that a licensing standard is not met, the improvements required will be stated and the level of the shortfall will be classified as 'Critical', 'Major' or 'Minor'. Where the HTA is not presented with evidence that an establishment meets the requirements of an expected standard, it works on the premise that a lack of evidence indicates a shortfall.

The action an establishment will be required to make following the identification of a shortfall is based on the HTA's assessment of risk of harm and/or a breach of the HT Act or associated Directions.

1. **Critical shortfall:**

   A shortfall which poses a significant direct risk of causing harm to a recipient patient or to a living donor,

   Or

   A number of 'major' shortfalls, none of which is critical on its own, but viewed cumulatively represent a systemic failure and therefore are considered 'critical'.

   A critical shortfall may result in one or more of the following:

   (1) A notice of proposal being issued to revoke the licence

   (2) Some or all of the licensable activity at the establishment ceasing with immediate effect until a corrective action plan is developed, agreed by the HTA and implemented.

   (3) A notice of suspension of licensable activities

   (4) Additional conditions being proposed

   (5) Directions being issued requiring specific action to be taken straightaway

2. **Major shortfall:**

   A non-critical shortfall.

   A shortfall in the carrying out of licensable activities which poses an indirect risk to the safety of a donor or a recipient

   or

   A shortfall in the establishment's quality and safety procedures which poses an indirect risk to the safety of a donor or a recipient;

   or

   A shortfall which indicates a major deviation from the **Human Tissue (Quality and Safety for Human Application) Regulations 2007** or the **HTA Directions**;

   or

   A shortfall which indicates a failure to carry out satisfactory procedures for the release of tissues and cells or a failure on the part of the designated individual to fulfil his or her legal duties;

   or

   A combination of several 'minor' shortfalls, none of which is major on its own, but which, viewed cumulatively, could constitute a major shortfall by adversely affecting the quality and safety of the tissues and cells.

   In response to a major shortfall, an establishment is expected to implement corrective and preventative actions within 1-2 months of the issue of the final inspection report. Major shortfalls pose a higher level of risk and therefore a shorter deadline is given, compared to minor shortfalls, to ensure the level of risk is reduced in an appropriate timeframe.

3. **Minor shortfall:**

   A shortfall which cannot be classified as either critical or major and, which can be addressed by further development by the establishment.

   This category of shortfall requires the development of a corrective action plan, the results of which will usually be assessed by the HTA either by desk based review or at the time of the next inspection.

   In response to a minor shortfall, an establishment is expected to implement corrective and preventative actions within 3-4 months of the issue of the final inspection report.

Follow up actions

A template corrective and preventative action plan will be sent as a separate Word document with both the draft and final inspection report. You must complete this template and return it to the HTA within 14 days of the issue of the final report.

Based on the level of the shortfall, the HTA will consider the most suitable type of follow-up of the completion of the corrective and preventative action plan. This may include a combination of

- a follow-up site-visit inspection
- a request for information that shows completion of actions
- monitoring of the action plan completion
- follow up at next desk-based or site-visit inspection.

After an assessment of your proposed action plan you will be notified of the follow-up approach the HTA will take.