Site visit inspection report on compliance with HTA minimum standards

BCH Stem Cell Bank

HTA licensing number 11024

Licensed for the

- **procurement, processing, testing and storage of human tissues and cells for human application under the Human Tissue (Quality and Safety for Human Application) Regulations 2007; and**
- **storage of relevant material which has come from a human body for use for a scheduled purpose**

17-18 January 2018

Summary of inspection findings

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

Although the HTA found that BCH Stem Cell Bank (the establishment) had met the majority of the HTA standards, six minor shortfalls were found related to the concessional release procedures for fresh cell products, contingency arrangements, absence of oversight of the procedures at the testing laboratory, retention of raw data, reporting of serious adverse events and reactions (SAEARs) and monitoring of storage facilities.

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.

Tissue Category; Tissue Type	Procurement	Processing	Testing	Storage	Distribution	Import	Export
Progenitor Cell, Haematopoietic, Bone Marrow; Bone Marrow	**E**	**E**	**E**	**E**			
Progenitor Cell, Haematopoietic, PBSC; PBSC	**E**	**E**	**E**	**E**			
Mature Cell, T Cell (DLI); DLI	**E**	**E**	**E**	**E**			

Background to the establishment and description of inspection activities undertaken

The establishment is part of the Belfast Health and Social Care Trust and provides stem cell transplant services to patients located mainly within Northern Ireland. The establishment offers transplant services to adult patients at the main hub site at Belfast City Hospital, where processing and storage of stem cells are also performed, and to paediatric and adolescent patients at the Royal Victoria Hospital satellite site, where mandatory testing of blood samples for stem cell transplant takes place. The serology testing laboratory holds accreditation by the United Kingdom Accreditation Service.

Under the stem cell transplant programme, information relating to the harvesting of stem cells is provided to donors at the initial medical assessment and consent is sought by trained consultants. Consent covers testing of mandatory serological markers, storage of stem cells for a maximum of 10 years and the option for the use of the stem cells for research. The adult transplant programme undertakes both autologous and allogeneic transplant services while the paediatric programme performs only autologous stem cell transplants for patients below the age of 16. In this instance, if necessary, consent is sought by independent assessors prior to any collections.

Blood samples for mandatory serological testing are taken within 30 days prior to harvest and are sent to the testing laboratory located at the satellite site via a pneumatic tube system from the hub, or delivered by staff if taken from donors at the satellite. Laboratory staff generate unique barcode IDs, which are placed onto the sample tube and request form. Sample details are added onto the laboratory's electronic database, where results are shared with the stem cell transplant team. Upon receipt at the testing laboratory, samples are centrifuged, and if not assayed immediately, samples are refrigerated between 2-8ºC.

The processing facility is located within the hub site and consists of a single clean room. The microbiological safety cabinets maintain a Grade A environment within a Grade B background. All environmental monitoring is conducted in accordance with the requirements of Directions 003/2010 and Annex I of the EU Guidelines to Good Manufacturing Practice. Plates and samples for microbiological testing are sent to another establishment for incubation. Environmental monitoring results are sent electronically to the Stem Cell Lab and are also stored within the processing records.

As part of the establishment's quality checks, all harvests are tested pre-cryopreservation for viable CD34 counts and leucocyte numbers. Viable CD34 counts and colony forming unit assays are also performed post-cryopreservation, prior to transplant, to verify functionality. All processing results are checked by the Processing Facility Medical Director, who is also the DI, prior to release. Any results which do not meet the establishment's minimum acceptance criteria for transplant will be discussed with the patient's consultant and may be transplanted under concessional release based on clinical need.

Cell harvests and their accompanying pilot vials for quality control checks are cryopreserved using controlled-rate freezing. The controlled-rate freezers are linked electronically to the processing laboratory where Stem Cell Bank staff can view live temperature freezing profiles remotely, to monitor cryopreservation. Following cryopreservation, the products are transferred to liquid nitrogen storage tanks for storage below -140ºC. All tanks are linked to a continuous temperature monitoring system which alerts staff remotely if deviations in temperature occur. Products awaiting serology results will be stored separately in a qualified dry shipper. Any harvest with a positive serology result is stored separately in a quarantine liquid nitrogen tank. There is contingency equipment available for all critical units. Dry shippers used to transfer and temporarily store the cells are regularly qualified.

The establishment is also licensed for storage of relevant material for use for a scheduled purpose under the Human Tissue Act 2004. Although licensed for this activity, the establishment does not currently store any relevant material for a scheduled purpose.

The inspection included a visual inspection of the apheresis collection facility and storage facilities for reagents and consumables, the processing clean room, the storage facility for cryopreserved products and the testing laboratories. The inspection also included discussions with the DI, staff from the Stem Cell Bank, the Quality Manager and staff from the testing laboratories. Audits included a review of three patient notes – one adult autologous PBSC harvest, one adult allogeneic PBSC donation and one paediatric autologous PBSC harvest wherein each case, evidence of appropriate consent, serology testing, recording of consumables and traceability was reviewed. Confirmation of serological result traceability from one patient's notes to the testing laboratory electronic system was performed. No discrepancies were found.

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

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

Governance and Quality

Standard	Inspection findings	Level of shortfall
GQ1 All aspects of the establishment's work are supported by ratified documented policies and procedures as part of the overall governance process.		
g) There are procedures to ensure that an authorised person verifies that tissues and / or cells received by the establishment meet required specifications.	BM harvests and DLIs are routinely released on a concessional basis due to the cells not having microbial or environmental monitoring results available at the time of transplant. The concessional release form for fresh BM and DLIs transplant is always signed by the recipient's consultant prior to processing taking place. As a result there is no record of the recipient's consultant acknowledging, as part of the decision to use a sample, any non-conformances that may have occurred during processing and that may have the potential to affect the quality and safety of the final product. This was evident during a three-month period where the particle counter used during processing was not fully validated. No acknowledgement of this non-conformance by the clinician was evident in the concessional release form viewed.	**Minor**
t) There are procedures for the re-provision of service in an emergency.	While discussions are currently taking place between the Trust and the establishment for a possible contingency arrangement, there are no firm procedures in place for the re-provision of services.	**Minor**

GQ2 There is a documented system of quality management and audit.		
b) There is an internal audit system for all licensable activities.	There is insufficient oversight of licensable activities at the testing laboratory. While the establishment performs comprehensive internal and independent audits at the Stem Cell Bank, audits at the testing laboratory are not independent and the internal audit does not assess compliance against the full scope of relevant HTA standards, including, for example, a review of equipment maintenance reports and temperature monitoring data of critical storage equipment.	**Minor**
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.		
GQ4 There is a systematic and planned approach to the management of records.		
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.	Raw data relating to activities at the testing laboratory are not retained for the required 10 year period.	**Minor**
GQ7 There are systems to ensure that all adverse events 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.	The testing laboratory has no documented procedures for reporting SAEARs to the DI, and onwards to the HTA within 24 hours from the point of discovery, as set out in the “Guide to Quality and Safety Assurance for Human Tissues and Cells for Patient Treatment” which forms the Annex to Directions 003/2010.	**Minor**

Premises, Facilities and Equipment

Standard	Inspection findings	Level of shortfall
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.	The establishment's procedures for the storage of blood samples prior to serological testing may include overnight storage of samples at 2-8ºC, if samples arrive at the testing laboratory late in the day. While there is a temperature log sheet available for the refrigerator, recording of temperatures is not performed daily. There are also no alarm systems in place to alert staff in the event of a temperature excursion and no procedures for the review of temperature trends to provide assurance that the samples are stored in conditions as set out by the establishment prior to assay.	**Minor**

Advice

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

No.	Standard	Advice
1.	C1d	The DI is advised to amend the establishment's consent forms to include all the serological tests that will be performed as standard, and include the stipulation that other medical tests may be performed if required.
2.	GQ2b	The establishment's current procedure is for patients to come in for the mandatory serology blood samples one week prior to harvest to ensure virology results are available on the day of the harvest. This practice should be documented within the relevant SOP.
3.	GQ4h	The controlled-rate freezing curves for each cryopreservation event are reviewed and this check is documented as part of the product release procedure. The freezing profile is duplicated but both copies are stored within a single processing record. The DI is advised to ensure controlled-rate freezing curves are electronically backed-up or stored separately to prevent any loss of raw data.
4.	GQ7a	The DI should ensure all adverse incidents that occur at the testing laboratory that may impact HTA-licensed activities are reported to the Stem Cell Bank. For example, staff at the Stem Cell Bank were unaware of an incident where serology testing kits were moved following a rise in cold room temperatures above the recommended range. This will help the DI ensure that the appropriate corrective and preventative actions have been taken in response to any given incident.

5.	PFE3b	The cold room where the testing kits are kept is monitored electronically. In the event of a temperature deviation, the alarm system notifies first the office, followed by the emergency number in the laboratory and finally the Operational Manager. In the event of a temperature deviation during the non-working days, the DI is advised to add another point of contact in the event the Operational Manager is unavailable.
6.	PFE5b	While the cold room used for the storage of serology kits is temperature monitored and alarmed, the cold room was not serviced in the previous year due to an oversight by the service contractor. The DI should ensure all critical storage facilities are maintained according to manufacturer's recommendations.

Concluding comments

A number of strengths and good practices were observed during the inspection. The establishment has robust training programme that ensures staff are regularly appraised and re-trained. This includes, for example, monthly gowning revalidation for processing staff and competency re-assessments, performed in pairs. This training programme is thoroughly recorded within each staff member's Stem Cell Training log. The establishment's audit schedule is comprehensive and reviews the establishment's practices from different aspects; for example, observational audits of procedures and interviews with relevant staff. Follow up actions from audit findings are clearly described and disseminated at governance meetings to prevent re-occurrences. Procedures at the Stem Cell Lab show processing staff have an awareness of the requirements for maintaining a Grade A/B clean room, which reduces any risks for non-conforming products. For example, procedures are in place to record not only the displayed clean room pressures, but also to calculate the required differential cascades.

To improve the quality of practices, the establishment has plans to implement a checklist in the front of processing records so all crucial checks are clearly detailed and can be carried out by designated personnel, in the absence of the Processing Facility Medical Director. The establishment has started implementing new governance procedures to obtain accreditation by the Joint Accreditation Committee – European Society of Blood and Marrow Transplantation (EMBT) and the International Society for Cellular Therapy in the near future.

There are a number of areas of practice that require improvement, resulting in six minor shortfalls. The HTA has given advice to the Designated Individual with respect to consent forms, reporting adverse incidents, temperature monitoring, alarm systems and maintenance of storage facilities.

The HTA requires that the Designated Individual addresses the shortfalls 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 shortfalls identified during the inspection.

Report sent to DI for factual accuracy: 15 February 2018

Report returned from DI: 2 March 2018

Final report issued: 7 March 2018

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.
n) The establishment ensures imports from non EEA states meet the standards of quality and safety set out in Directions 003/2010.
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.
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.
b) Where processing of tissues and / or cells involves exposure to the environment, it occurs in an appropriate, monitored environment as required by Directions 003/2010.
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 shortfall which poses a significant risk to human safety and/or dignity or is a breach of the Human Tissue Act 2004 (HT Act) or associated Directions,

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 breach in the relevant Codes of Practices, the HT Act and other relevant professional and statutory guidelines;

or

A shortfall which indicates a failure to carry out satisfactory procedures 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.

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.