Site visit inspection report on compliance with HTA minimum standards

Northumbria University

HTA licensing number 12495

Licensed under the Human Tissue Act 2004 for the

- **storage of relevant material which has come from a human body for use for a scheduled purpose**

17 August 2016

Summary of inspection findings

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

Although the HTA found that Northumbria University ('the establishment') had met the majority of the HTA's licensing standards, two minor shortfalls were found in relation to procedural documentation describing the consent seeking process and procedures pertaining to sending relevant material from the establishment. The HTA has also given advice to the DI about the monitoring and maintenance of storage conditions, and on some areas of governance, including procedural documentation, audits, governance meetings and risk assessments.

Particular examples of 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.

Background to the establishment and description of inspection activities undertaken

The establishment has been licensed since September 2007 and this was the second routine site-visit inspection to assess whether it continues to meet the HTA's standards. The timetable for the site visit was developed taking into account the establishment's latest self-assessed compliance information, a review of the previous inspection findings and pre-inspection discussions with the DI. During the site visit, a visual inspection of the premises, review of documentation, interviews with establishment staff and interviews with students undertaking research, as well as a number of audits were undertaken.

The establishment is part of the Northumbria University in Newcastle, is located within the Faculty of Health and Life Sciences and consists of a tissue bank used to store research samples for various studies being conducted by academic researchers, PhD and undergraduate students.

The establishment's tissue bank consists of one -80^{o}C freezer, one -20^{o}C freezer, one +4^{o}C fridge and one small -20^{o}C freezer which is only used as an emergency store in the event of another freezer failing or temporary storage. The -80^{o}C freezer's temperature is monitored and recorded during working days so that any trends may be detected which may help to identifiy a possible future failure of the freezer. The -80^{o}C freezer has an alarm which, in the event of a power failure, alerts establishment staff via an on-call phone. However, the alarm

would not be triggered if the freezer temperature were to deviate from expected levels. The DI is in the process of purchasing a new alarm system which will monitor the temperature of the -80^{o}C freezer and alert staff to temperature deviations (see Advice, item 7).

At the time of the inspection the tissue bank contained samples from four on-going studies; however, over the academic year, samples from six to eight studies are typically stored.

Relevant material stored at the establishment at the time of the inspection had been obtained from a number of sources, including a collection of samples that had been imported from another country by an academic researcher and lecturer, samples obtained from NHS patients and samples obtained from staff, students and other study participants. The consent requirements of the Human Tissue Act 2004 (HT Act) do not apply to the imported samples however the researcher has given an assurance to the DI that all samples were collected following an informed consent process. The samples collected from NHS patients are being collected and stored as part of a study which has received approval from a recognised research ethics committee and are therefore not subject to the licensing requirements of the HT Act. Although these samples are being stored on the establishment's premises they are not stored under the governance framework of the establishment's licence or within the establishment's tissue bank. These samples are stored in two additional -80^{o}C freezers located in the laboratory buildings and which are overseen by the researcher involved in the study. The researcher has provided the DI with copies of the recognised research ethics committee approval as well as a subsequent extension to this approval regarding the collection of further samples.

Any researcher wishing to obtain and store relevant material within the establishment's tissue bank must apply for and receive ethical approval from the university's research ethics committee of which the DI is a member. Attending the ethics committee meetings helps to provide the DI with oversight of proposed research projects which may involve the collection and storage of relevant material. Should ethical approval be granted for a particular study, the Principal Investigator must sign a declaration to be compliant with the rules of the tissue bank before being allocated a study storage number (SSN). The SSN is made up from various identifiers: an identifier to show which department is conducting the study, for example, department of applied sciences or department of psychology and sport; an identifier to show the year the study was started; an identifier to show the Principal Investigator (usually their initials) or research group and a study number; an identifier to show the individual researcher, again usually their initials, and finally; a sample identifier which is usually a sequential sample number. By using the SSN, each sample held in the tissue bank can be identified via this unique identifier.

As samples are collected and stored by the researcher, a tissue bank form, the 'Human Tissue Bank Sample Log', is completed by the researcher. This form is used to record the number of samples that are being stored in the tissue bank and provides a record of when individual samples are removed for use in research and, as appropriate, returned to the tissue bank following their use. This provides an inventory for each study that shows how many and which samples are being stored within the tissue bank. The sample log form is stored within a locked fridge within the tissue bank and is therefore available for review by the researcher, Principal Investigator and the DI at any time.

Researchers do not have uncontrolled access to the locked tissue bank. Should a researcher wish to add new samples to the tissue bank, remove for use, return after use or remove samples for disposal then an appointment must be made with a member of the laboratory staff. Dedicated laboratory staff are responsible for the tissue bank and grant access to the storage fridge or freezer during dedicated times. The DI has appointed two Persons

Designated to support him, who are team leaders and manage the laboratory staff responsible for the tissue bank. By controlling access to the tissue bank in this way the DI has helped to minimise samples being placed into the tissue bank without the prior approval of the DI. This helps to assure the DI that only samples that are being collected and stored as part of an approved study are being stored within the establishment under the HTA licence.

It is usual for a researcher to dispose of any remaining relevant material at the end of a particular study, with this disposal being recorded on the sample log form. Examples of samples being recorded as disposed of were reviewed during the inspection as part of a review of the archived, historical sample log forms. Although archived in a folder held by the DI, sample log forms (which provide tracability records for samples from any particular study), are not backed up in any other format (see Advice, item 5).

The establishment's operation manual states that the DI undertakes an audit of all samples within the tissue bank against the relevant sample log form on a six monthly basis, however due to time constraints, these scheduled audits have been occurring between an eight to twelve-month interval. The audits are a further control mechanism by which the DI can assure himself that all samples being held in the tissue bank have been correctly recorded and labelled and the researcher is logging any removal and return of samples. The audits undertaken by the DI do not include any checks on donor consent as they pertain only to the numbers of samples being stored. Advice has been given to the DI to consider broadening the scope of these audits to include a verification that donor consent has been obtained for the audited samples (see Advice, item 4).

In cases where participants are being recruited to a study and samples are being collected at the establishment, consent for the collection and use of the samples from the donors is sought by the individual researcher or research assistant assigned to a particular study. The consent process begins with a researcher approaching potential participants, either at relevant meetings or through advertisements placed around the university, outlining the study and asking for interested parties to contact the researcher. Should a researcher be contacted by a potential study participant, a study participant information sheet which outlines the details of the study and what is involved in participating in the study is sent to the potential participant. Should the potential participant still be interested in enrolling onto the study, they are invited to attend a face-to-face consent meeting with the researcher or research assistant during which a second copy of the study participant information sheet is given to, and discussed with, the participant. The information sheet gives details of study procedures, including any samples that will be taken as part of the study, and what will happen to them. Information about whether or not it will be possible for the participant to withdraw their consent, and any restrictions on timeframes when consent can be withdrawn (for example, prior to sample analysis or randomisation of samples) is discussed. If, after these discussions about the study and having had the opportunity to ask any questions, the potential participant still wishes to enrol onto a study, the researcher or research assistant asks the participant to read and sign the study consent form. Consent forms are filed and held securely by the researcher.

All staff seeking consent, and academic staff acting as Principal Investigators, must attend the university's mandatory ethical training which the DI had input into during its development. The training includes details of the regulatory framework and the requirements of the HT Act regarding fully informed consent. Researchers must undergo the training every three years so that knowledge is refreshed and any updates can be given. Although the training is mandatory for research staff at the establishment, the declaration which is completed by Principal Investigators does not currently include a statement that the Principal Investigator

will verify that all staff involved in seeking consent have undergone the ethical training (see Advice, item 2).

During the inspection, a traceability audit was undertaken. Six samples stored under licence in the establishment's tissue bank, two from each of the three studies that were active at the time of the inspection, were chosen at random. Two were from studies where samples were stored in the -20^{o}C freezer and one was from a study where samples were stored in the -80^{o}C freezer. Each of the sample's details were checked against the sample log form and the relevant donor consent form. In all six cases the samples were recorded on the sample log form and consent forms signed by the donors were available. No anomalies were identified during the audit.

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

Consent

Standard	Inspection findings	Level of shortfall
C1 Consent is obtained in accordance with the requirements of the Human Tissue Act 2004 (HT Act) and as set out in the Code of Practice.	Although all establishment staff interviewed during the inspection described the same procedure for seeking consent, the establishment does not have a documented procedure describing who may seek consent, the process for seeking consent or details of what information must be given to those giving consent. *This shortfall relates to the findings during the inspection. Following the inspection and prior to the release of the final inspection report, the DI has submitted evidence to the HTA demonstrating that the procedure has now been updated to reflect the requirements of the HTA's standards. The HTA now considers this standard to be fully met.*	**Minor** ***Fully Met***

Governance and Quality

Standard	Inspection findings	Level of shortfall
GQ5 There are documented procedures for the distribution of body parts, tissues or cells	Although samples are not regularly transferred out of the establishment, the establishment does not have any documented procedures governing the distribution of relevant material from the establishment. *This shortfall relates to the findings during the inspection. Following the inspection and prior to the release of the final inspection report, the DI has submitted evidence to the HTA demonstrating that the procedure has now been updated to reflect the requirements of the HTA's standards. The HTA now considers this standard to be fully met.*	**Minor** ***Fully Met***

Advice

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

No.	Standard	Advice
1.	GQ1	During a review of consent forms and study participant information sheets, it was found that these documents were not part of the establishment's document control system. The DI is advised to ensure that all consent forms and information sheets are document controlled so that the researcher can ensure that only the most up-to-date version of the documents are being used to seek and record donor consent.
2.	GQ1	The establishment's operation manual and associated forms provide an overview of the procedures taking place under the licence; however, some procedures are not fully described within the manual. The DI is advised to review the operation manual and include details of procedures or include more detail in existing procedures to ensure that all procedures taking place at the establishment are consistently described. Areas which would benefit from detailing within the operation manual include (but are not limited to): • Detailing that consent can only be sought by trained staff • Amending the Principal Investigator's declaration to include a statement indicating that only trained staff will seek consent for the study • The process by which the DI is made aware of and can review samples being brought into the establishment from outside organisations • Details of how and when the sample tracking form should be updated • Amending the disposal procedure to include recording the disposal of samples on the sample log form.
3.	GQ2	The DI has informal discussions with staff working at the tissue bank and researchers during his normal day-to-day activity. Additionally, governance and any issues relating to the tissue bank are discussed at the regular university research ethics committee meetings. The DI is advised to consider holding formal governance meetings relating solely to the tissue bank and its use. These

		meetings should include staff working at the tissue bank, Principal Investigators and individual researchers and may help to provide an additional governance tool for the DI so that he can be made aware of any issues at the tissue bank and can disseminate relevant information to the tissue bank's users.
4.	GQ2	The DI undertakes regular audits of the samples being stored within the establishment's freezer and fridges, against their records, to assure himself that the expected number of samples are present and that they have all been recorded appropriately. The DI is advised to broaden the scope of these audits and to trace a subset of the samples back to the relevant donor consent forms. This will give further assurance to the DI that all samples have been obtained with appropriate consent.
5.	GQ4	The sample log forms provide traceability records for samples from any particular study, showing samples being added to the tissue bank, removed for use, returned following use and disposal. The DI retains all completed sample log forms at the end of the study, which collectively provide a historical record of samples collected and details of if/when they were used and when they were disposed of. The DI is advised to electronically scan and store sample log sheets on the university's network so that the information contained within the forms is backed up. The DI may also wish to consider electronically scanning current versions of sample log forms in this back up process so that, should anything happen to the stored forms (such as loss or damage), all of the current data would not be lost.
6.	GQ8	The establishment has overarching risk assessments in place that relate to health and safety risks. In addition, the risks to the samples and donors have been considered, such as the risks of equipment failure and researchers not following the procedures as set out in the operating manual correctly. The DI is advised to review the risk assessments and expand the scope of the current risks to include more specific risks to the samples for example, the risk of losing traceability, or the risk of a donor not being fully informed during a consent seeking process. In addition to these overarching risk assessments, individual researchers also perform risk assessments which are focused on health and safety risks. The DI is also advised to ensure that risks relating to the samples and donors are included in the study specific risk assessments undertaken by the researchers. Risk assessments should include the risks relating to the premises, practices and procedures connected with licensed activities, including: • receiving and/or storing specimens without appropriate consent documentation; • storing or using human tissue after consent withdrawal; • storage failure or other damage affecting human tissue quality for useful research; • loss of human tissue; • sample mix-up or loss of traceability; • transport of specimens to and from the establishment ; • security arrangements; • incorrect disposal.

		Risk assessments should be reviewed periodically (typically, every 1-3 years) and the actions to mitigate risks updated as necessary. Risk assessments should also be reviewed following an incident.
7.	PFE2	The establishment's -80°C freezer in the tissue bank is defrosted and cleaned twice each year. The DI is advised to undertake a risk assessment of the defrosting frequency to determine if twice each year remains appropriate for example, to clear ice build up or if less frequent defrosting and cleaning may pose fewer risks to the stored samples which have to be moved to another freezer during cleaning procedures.
8.	PFE3	The DI is encouraged to continue with plans to purchase a temperature monitoring system to monitor the temperature of the establishment's -80°C freezer. The new system will trigger the alarm if the temperature deviates from the desired range. The DI is also advised to consider whether extending this new temperature monitoring system to the -20°C freezer would also help to minimise the risk of sample loss through freezer failure. In addition, the DI is advised to consider recording the daily temperatures of the -20°C freezer in the same was as the -80°C freezer is monitored to help detect any trends or deviations from the required storage temperature.

Concluding comments

Athough two minor shortfalls were identified, good practice was also observed during the inspection.
Although the DI has been offered advice about expanding the scope of the risk assessments, the assessments that are in place demonstrate that the DI has considered a number of scenarios that may pose risks to the stored samples and or lead to non-compliance with the HTA's regulatory requirements. For example, one risk assessment covered the risk of the DI being away from work for an extended period. As a mitigating measure, the DI has identified Persons Designated, who if the DI were absent for a prolonged period, would apply to take over the role of DI until his return.

There are a number of areas of practice that require improvement, as noted in the two minor shortfalls. The HTA has also given advice to the DI about the monitoring and maintenance of storage conditions, and on some areas of governance, including procedural documentation, audits, governance meetings and risk assessments.

The HTA requires that the DI 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: 13 September 2016

Report returned from DI: 16 September 2016

Final report issued: 18 October 2016

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.

Consent standards
C1 Consent is obtained in accordance with the requirements of the Human Tissue Act 2004 (HT Act) and as set out in the code of practice
• Consent forms comply with the HTA's Code of Practice • Consent forms are in records and are made accessible to those using or releasing relevant material for a scheduled purpose • If the establishment obtains consent, a process is in place for acquiring consent in accordance with the requirements of the HT Act 2004 and the HTA's Codes of Practice • Where applicable, there are agreements with third parties to ensure that consent is obtained in accordance with the requirements of the HT Act 2004 and the HTA's Codes of Practice • Consent procedures have been ethically approved
C2 Information about the consent process is provided and in a variety of formats
• Standard operating procedures (SOPs) detail the procedure for providing information on consent • Agreements with third parties contain appropriate information • Independent interpreters are available when appropriate • Information is available in suitable formats, appropriate to the situation • Consent procedures have been ethically approved
C3 Staff involved in seeking consent receive training and support in the implications and essential requirements of taking consent
• Standard operating procedures (SOPs) detail the consent process • Evidence of suitable training of staff involved in seeking consent • Records demonstrate up-to-date staff training • Competency is assessed and maintained

Governance and quality system standards
GQ1 All aspects of the establishments work are supported by ratified documented policies and procedures as part of the overall governance process
• Policies and procedures are in place, covering all activities related to the storage of relevant material for research in connection with disorders, or the functioning, of the human body • Appropriate risk management systems are in place • Regular governance meetings are held; for example, health and safety and risk management

committees, agendas and minutes

- Complaints system

GQ2 There is a documented system of quality management and audit

- A document control system, covering all documented policies and standard operating procedures (SOPs).
- Schedule of audits
- Change control mechanisms for the implementation of new operational procedures

GQ3 Staff are appropriately qualified and trained in techniques relevant to their work and are continuously updating their skills

- Qualifications of staff and training are recorded, records showing attendance at training
- Orientation and induction programmes
- Documented training programme, (e.g. health and safety, fire, risk management, infection control), including developmental training
- Training and reference manuals
- Staff appraisal / review records and personal development plans are in place

GQ4 There is a systematic and planned approach to the management of records

- Documented procedures for the creation, amendment, retention and destruction of records
- Regular audit of record content to check for completeness, legibility and accuracy
- Back-up / recovery facility in the event of loss of records
- Systems ensure data protection, confidentiality and public disclosure (whistle-blowing)

GQ5 There are documented procedures for distribution of body parts, tissues or cells

- A process is in place to review the release of relevant material to other organisations
- An agreement is in place between the establishment and the organisation to whom relevant material is supplied regarding the tracking and use of material and eventual disposal or return

GQ6 A coding and records system facilitates traceability of bodies, body parts, tissues and cells, ensuring a robust audit trail

- There is an identification system which assigns a unique code to each donation and to each of the products associated with it
- An audit trail is maintained, which includes details of when and where the relevant material was acquired, the consent obtained, the uses to which the material was put, when the material was transferred and to whom

GQ7 There are systems to ensure that all adverse events are investigated promptly
• Corrective and preventive actions are taken where necessary and improvements in practice are made • System to receive and distribute national and local information (e.g. HTA communications)
GQ8 Risk assessments of the establishment's practices and processes are completed regularly and are recorded and monitored appropriately
• Documented risk assessments for all practices and processes • Risk assessments are reviewed when appropriate • Staff can access risk assessments and are made aware of local hazards at training

Premises, facilities and equipment standards
PFE1 The premises are fit for purpose
• A risk assessment has been carried out of the premises to ensure that they are appropriate for the purpose • Policies in place to review and maintain the safety of staff, authorised visitors and students • The premises have sufficient space for procedures to be carried out safely and efficiently • Policies are in place to ensure that the premises are secure and confidentiality is maintained
PFE 2 Environmental controls are in place to avoid potential contamination
• Documented cleaning and decontamination procedures • Staff are provided with appropriate protective equipment and facilities that minimise risks from contamination • Appropriate health and safety controls are in place
PFE3 There are appropriate facilities for the storage of bodies, body parts, tissues and cells, consumables and records.
• Relevant material, consumables and records are stored in suitable secure environments and precautions are taken to minimise risk of damage, theft or contamination • Contingency plans are in place in case of failure in storage area • Critical storage conditions are monitored and recorded • System to deal with emergencies on 24 hour basis • Records indicating where the material is stored in the premises

PFE 4 Systems are in place to protect the quality and integrity of bodies, body parts, tissues and cells during transport and delivery to a destination

- Documented policies and procedures for the appropriate transport of relevant material, including a risk assessment of transportation
- A system is in place to ensure that traceability of relevant material is maintained during transport
- Records of transportation and delivery
- Records are kept of any agreements with recipients of relevant material
- Records are kept of any agreements with courier or transport companies

PFE5 Equipment is appropriate for use, maintained, quality assured, validated and where appropriate monitored

- Records of calibration, validation and maintenance, including any agreements with maintenance companies
- Users have access to instructions for equipment and receive training in use and maintenance where appropriate
- Staff aware of how to report an equipment problem
- Contingency plan for equipment failure

Disposal Standards

D1 There is a clear and sensitive policy for disposing of human organs and tissue

- Documented disposal policy
- Policy is made available to the public
- Compliance with health and safety recommendations

D2 The reason for disposal and the methods used are carefully documented

- Standard operating procedures (SOPs) for tracking the disposal of relevant material detail the method and reason for disposal
- Where applicable, disposal arrangements reflect specified wishes

Appendix 2: Classification of the level of shortfall

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 risk to human safety and/or dignity or is a breach of the Human Tissue Act 2004 (HT Act) or associated Directions

   or

   A combination of several major shortfalls, none of which is critical on its own, but which together could constitute a critical shortfall and should be explained and reported as such.

   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 that:

   - poses a risk to human safety and/or dignity, or
   - indicates a failure to carry out satisfactory procedures, or
   - indicates a breach of the relevant CoPs, the HT Act and other relevant professional and statutory guidelines, or
   - has the potential to become a critical shortfall unless addressed

   or

   A combination of several minor shortfalls, none of which is major on its own, but which, together, could constitute a major shortfall and should be explained and reported as such.

   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, but which indicates a departure from expected standards.

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 or site visit.

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.