Worcestershire Acute Hospitals NHS Trust

Standard Operating Procedures

Awake Regional Anaesthesia for Upper Limb Surgery

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Approved by:	Theatre Governance Meeting
Date of Approval:	19th March 2025
Date of Review: This is the most current document and is to be used until a revised version is available	19th March 2028

Aim and scope of Standard Operating Procedure

This document details the process to be followed by all staff for any patient booked for urgent upper limb Ambulatory Trauma (AT) surgery at Kidderminster Treatment Centre (KTC) but the principles apply throughout the Trust.

This Standard Operating Procedure (SOP) has been produced to:

- Maintain patient safety
- Identify roles and responsibilities
- Ensure consistency

Target Staff Categories

Anaesthetists
Surgeons
Administrative staff
Theatre staff
Nursing staff
Trauma Nurse Practitioners

Key amendments to this Standard Operating Procedure

Date	Amendment	Approved by:

Abbreviations

USG Ultrasound Guided

KTC Kidderminster Treatment Centre

Introduction

Regional anaesthesia had advantages for many surgical specialties. Ultrasound guided (USG) nerve blocks provide safe and effective anaesthesia and analgesia. Regional anaesthesia has an important role in enhance recovery programmes and day surgery pathways.

Awake regional anaesthesia allows for “parallel processing” using a dedicated block area whereby the anaesthetist may perform a nerve block on a patient whilst another patient is being operated on. This results in increased efficiency and theatre productivity within the service.

The following guidelines look to ensure provision of high-quality service in the perioperative period for patients undergoing awake regional anaesthesia for upper limb surgery.

Preoperative assessment

Elective patients will have a pre-assessment via the Trust pre-assessment service.

Trauma cases

The admitting T&O team are responsible for assessing and admitting the patient.
It is important to identify factors which would make a patient unsuitable for surgery at KTC (see KTC exclusion criteria on the Pre-op Assessment Key Document page).

Any pre-op queries should be passed to:

- Anaesthetist responsible for that list (contact anaesthetic office on ext 39185 or email gas rota (wah-tr.GASRota@nhs.net) to check which anaesthetist is allocated).

- The elective pre-op team can assist with simple queries but will not be able to assist with seeing patients (wah-tr.AnaestheticsPOAC@nhs.net)
- The trauma anaesthetist at WRH can be asked for simple queries

The patient should be screened for MRSA as soon as requirement for surgery has been confirmed by the parent team.

Relevant blood tests will be requested by the T&O team or the TNP who has clerked the patient and sent to the laboratory. Responsibility for checking results of pre-operative tests lies with the individual who has ordered the investigations. Usually the TNP team will check bloods and MRSA screen and action any deranged bloods or positive MRSA screen. Abnormal results will, in the first instance, be escalated to the T&O team responsible for the patient's care and subsequently the relevant Anaesthetist as appropriate. The Microsoft Teams whiteboard can be used to cascade results to the wider team and discuss any further management.

The plan for the perioperative management of any existing medications, such as anticoagulant drugs and diabetes treatment, should be according to Trust protocol or agreement with operative anaesthetist, taking into account the relative risks of stopping any medication.

All patient will be contacted by the TNP and given fasting instructions for the day of surgery.

Notes should be scanned or sent to KTC for patient's surgery date.

Patient preparation

To facilitate Shared Decision Making

- Patient preferences should be considered
- Patient is informed about surgical options
- Possibliity of awake surgery with a block is explained early on. Explanation should be given in reassuring manner using careful wording and ensuring patient understands that block will remove all sensation.
- Patient is given pre-operative written information about awake hand surgery.
- Patient is signposted to video resources of how the awake surgery process works (available via QR code in patient info leaflet or via Trust T+O internet site).

Patients should be told to expect day case surgery with discharge within 2 hours of surgery. The anaesthetic consent process should include side effects and serious complications of the intended block. Written anaesthetic consent is not required as the block facilitates a surgical procedure.

Patient should be given fasting instructions as for general anaesthetic (6 hours for food, 2 hours for clear fluids including water (dilute squash, tea/coffee with small splash of mik).

Information (***appendix 2***) about what to expect following a particular nerve block, including advice on how to protect a limb to prevent damage, analgesia and any follow up will be given by ward staff before discharge.

Scheduling of cases

Scheduling of patients by the Trauma Nurse Practitioners (TNP) and surgical secretaries will be in accordance with current Kidderminster Treatment Centre admission criteria (***Appendix 3***). Any divergence from these guidelines may be reasonable following discussion with the wider team (Surgeon, Anaesthetist, Theatres and KTC ward staff) via either direct email initially or Microsoft Teams whiteboard.

All suitable patients will be offered a date for surgery in order of clinical priority irrespective of their listing consultant. This should ideally be within two weeks of initial injury. All cases must be agreed and signed off by the consultant upper limb surgeon operating that week, at least 48 hours prior to surgery. This will enable appropriate order of cases to be discussed and confirmed to avoid changes to list order on day of operating.

ANY changes to the operating list content or order MUST be discussed with the operative surgeon to avoid changes on the day of surgery. This can be either be by direct email or vis MS whiteboard.

Day of Surgery

Process

07:30 Admission to ward

08:00 Review by surgical and medical teams

08:30 Team Brief

Ideally list should start with a case under local anaesthteic (i.e. carpal tunnel release) to facilitate block performance.

Patient will wait in admission area. When it is time for surgery patient will be brought to the Block Bay (within 2nd stage recovery).

Block performed within block bay by anaesthetist.

Block bay must be equipped as per Appendix 4.

Once block is performed the arm could be placed into a protective sling. Plaster cast can be removed and tourniquet applied when needed.

Once block is ready patient will be transferred into operating area by Theatre Assistant. The Assistant should be a staff member able to support patients through Local Anaesthetic cases and able to document observations (BP, SPO2, Heart rate, Respiratory rate) every 15 minutes. If a GA is required then the assistant should be replaced by a qualified ODP.

Anaesthetist retains responsibility for patient and must be immediately available for 15 minutes after siting the block and then immediately contactable for verbal advice and able to attend rapidly (i.e. within 2 minutes) if assistance is required during the surgical procedure.

After surgery patient will be brought round to 2nd stage recovery (see postoperative care and instructions).

Fasting

6 hours for food, 2 hours for clear fluids including water (dilute squash, tea/coffee with small splash of mik).

Patients are suitable for sip till send (one cup of water sipped every hour while awaiting surgery) unless the anaesthetist specifically gives instructions that they are not.

Use of electronic devices

Patients are encouraged to use electronic devices as distraction during surgery. This includes videos, music or audiobooks listened to using headphones.

Monitoring

Intraoperative patient monitoring may be delegated to the assistant who will have been trained in patient monitoring according to Association of Anaesthetists guidelines.

Recommended minimum standard of monitoring includes NIBP, ECG and pulse oximetry on admission, every 15 minutes in theatre and on arrival to second stage recovery. More frequent observations may be taken with respect to clinical need or any abnormal values.

Discomfort during the procedure

If there is discomfort during the procedure:

- Anaesthetist should be informed immediately

- Surgeon may infiltrate up to 10ml 1% Lignocaine
- Anaesthetist may elect to use IV analgesia (i.e. fentanyl) or may decide to give general anaesthetic to complete procedure.

An accurate record of the anaesthetic should be documented in the patient notes as well as any events/discussion in theatre between the patient and theatre team regarding pain/discomfort/intervention.

Safety Steps

The sequential safety steps recommended by the NatSSIP document are applicable to all operations carried out at Kidderminster. Specific safety standards include:

- Consent and site marking (incuding 'Prep, stop, block' check)
- Team Brief
- Sign In
- Time Out
- Implant check
- Sign out
- Debrief
- Reconciliation of items (swabs, sharps and instruments).

Full details of these safety checks can be found on the Theatre Key Document page.

Personnel

The clinical team will consist of:

- Consultant surgeon +/- assistant
- Scrub nurse
- Theatre assistant
- Anaesthetic assistant/ODP
- Consultant anaesthetist
- Admitting/discharge nurse

Minimum staffing must ensure that all members of team are able to take appropriate breaks throughout day. How this works can be discussed at the Team brief.

Ideally the list would run throughout the day without stopping the list. To help this the theatre team should, when possible, relieve each other for breaks and lunch. If this is not possible then a pause for lunch may be required. The theatre co-ordinator is responsible for checking the list in advance to ensure staffing will allow the team to continue throughout the day.

On completion of planned surgery, the patient can be transferred with a sling to second stage recovery for postoperative care. The discharge nurse will take handover from a member of surgical team.

Postoperative care and discharge

The discharge nurse will collection of patient when ready. When a GA has been used the responsible adult should escort the patient home and provide support for the first 24 hours after surgery.

Patients are provided with relevant discharge paperwork to include an information pack ('Postoperative information following ambulatory hand surgery' ***Appendix 2***), pain medication and necessary wound care items. The discharge nurse will also make a note of the Consultants follow up request.

Patients who are discharged from hospital prior to resolution of a nerve block should be provided with written information about the expected duration of block, who to contact should they experience any issues related to the nerve block and clear instructions regarding appropriate analgesia around the time of block resolution.

Post regional anaesthesia neurological deficit that is picked up either by patient phone call, routine feedback or referral back to the surgical service at a later date should be managed as outlined in Appendix 5.

All patients, including those who have undergone regional anaesthesia, are asked to complete an online questionnaire on the day after surgery. This will facilitate audit and quality improvement work related to patient satisfaction, analgesic efficacy, consent, complications and adverse events.

Training and Education

All anaesthetists completing the RCoA curriculum (2021) should be able to independently deliver a range of safe and effective upper limb peripheral regional anaesthetic techniques.

Structured training should be provided to all anaesthetists in training. This should include an understanding of the relevant anatomy, physiology, pharmacology, ultrasound physics, non-technical skills and the management of complications of regional anaesthesia. There should

be a nominated anaesthetist responsible for training, with adequate programmed activities allocated. Anaesthetists with a specific interest in regional anaesthesia should deliver regular theatre sessions to ensure the maintenance of their skills and experience.

All anaesthetists and the wider theatre team should be aware of the serious complications of regional anaesthesia including wrong sided block and local anaesthetic toxicity. Regular multidisciplinary training should be organized and aimed at reducing risk, recognition and management of such complications.

Anaesethtic staff should have completed the cmopetenceis set out in Appendix 4.

References

1. **Guidelines for the provision of Anaesthesia services, GPAS, RCOA 2024**
2. **M Sebastion, T Quick, N Haslam. Peripheral nerve block follow up and initial management of post-operative unexpected/persistent neurological dysfunction. RA-UK, BOA.**

Appendices

1. **Pre-operative Patient Information Leaflet including – Leaflet/QR code**

WAHT-PI-2288
Brachial plexus bloc

2. **Post operative Information following awake ambulatory upper limb – leaflet/QR code**

WAHT-PI-2289
Regional Anaesthes

3. **Kidderminster Treatment Centre referral guideline**

The Worcestershire Acute Hospital NHS Trust Adult Surgical Admission Criteria for Kidderminster Treatment Centre and Birch Day Unit, Alexandra Hospital

4. Anaesthetic and Recovery Staff Duties for Regional Block Lists

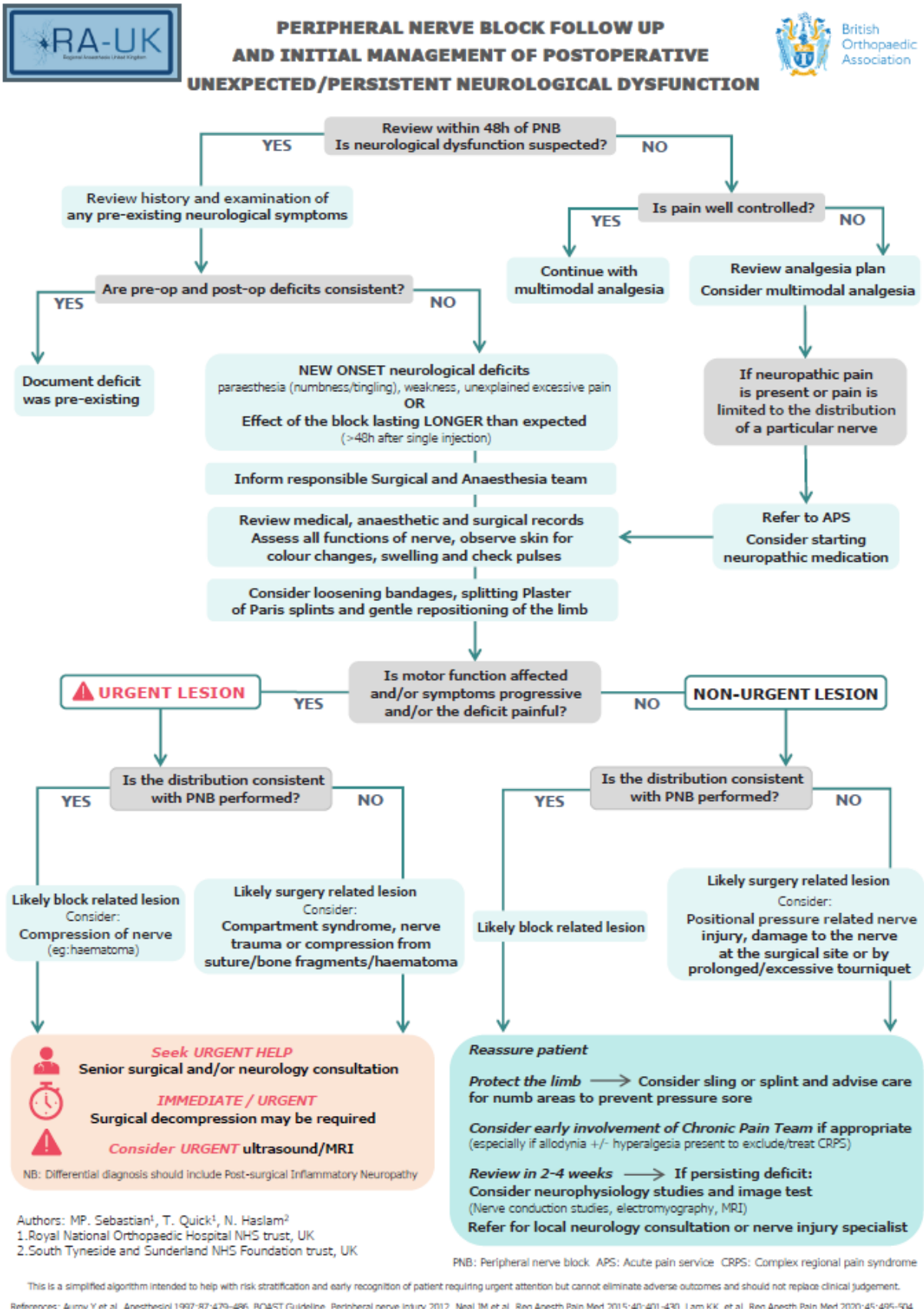
Anaesthetic Duties

- Prepare relevant equipment in designated block area
- Ensure there is enough stock to fulfil the list
- Receive and check in patient
- Apply monitoring to the patient (ECG, BP and Pulse Oximetry via a Mini-Me)
- Input Sent For, Anaesthetic Start and Regional Block times in Bluespier
- Assist Anaesthetist with the Regional Block
- Give support and reassurance to the patient as necessary
- Ensure the patient is free from Aqua-Gel and Blood after Regional Block
- Apply Tourniquet
- Remove plaster cast if present (unless a full plaster, this needs to be done in the AR)
- Escort patient back to their bay, seat or Theatre
- Clean area/equipment and prepare for next patient
- Restock Regional Block Trolley at the end of the session

Recovery Duties

- Obtain keys and retain keys for the AR
- Receive patient into theatre/AR (remove plaster if full cast)
- Monitor patients' vital signs and record on anaesthetic sheet
- Assist Anaesthetist if case converts to a GA (if not anaesthetic trained reverse roles with Anaesthetic Practitioner)
- If converted to GA then recover patient accordingly
- Transfer patient to the 2nd stage recovery area and hand over to ward nurse
- Prepare to receive next patient

5. Follow-up proforma for possible neurological deficit post regional anaesthesia



Worcestershire Acute Hospitals NHS Trust

PERFORMANCE CRITERIA FOR ASSESSMENT OF COMPETENCY BOOKLET FOR:

THEATRE PRACTITIONERS ASSISTING IN REGIONAL ANAESTHESIA (AWAKE HANDS LIST)

PERFORMANCE CRITERIA	INITIAL SELF ASSESSMENT OF COMPETENCE	COMPETENT-Mentor/Assessor Signature/Date		
	Candidate Enter YES or NO & Date	Safe	Unsafe	Date
1.Clinical Competency Regional Anaesthesia (Knowledge)				
• Define Regional Anaesthesia				
• Demonstrate an understanding of the principles of Regional Anaesthesia and the differences between General and Local Anaesthesia.				
• Identify and discuss different Regional Blocks i.e Brachial, Intrascaline etc				
2. The Practitioner is able to: Identify and source the correct equipment				
• Demonstrate the preparation and safe usage of Regional Anaesthesia equipment i.e Ultra-sound and Nerve Stimulator (HNS12)				
• Identify and describe the differences between Luer and NR Fit needles and syringes and the reasons why the differences				
• Demonstrate correct selection and application of a Tourniquet				
• Identify and source the correct drugs needed for a Regional Block				
3. The Practitioner is able to describe and initiate the Stop Before You Block practice (SBYB)				
• Discuss the reasons why we SBYB				

• Discuss the process of SBYB and how it is recorded.				
4. The Practitioner is able to recognize and understand the treatment of Local Anaesthetic Systemic Toxicity. (LAST)				
• Demonstrate an understanding of the symptoms of LAST				
• Demonstrate knowledge of where the Intralipid is kept within the department				
5. The Practitioner is able to assist with Regional Blocks:				
• Identify the equipment needed for a regional block with regards to needle choice and syringes etc				
• Demonstrate the safe injection of local anaesthetic under the instruction of the anaesthetist				
• Demonstrate correct application of tourniquet				
6. The Practitioner is able to care for the blocked patient within theatre				
• Demonstrate appropriate application of monitoring				
• Demonstrate the recording of observations on the anaesthetic chart				

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and included as an appendix to key document when submitted to the appropriate committee for consideration and approval.

Please complete assessment form on next page;

Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	x	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust	☒	Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	**Jaime Greenwood**

Details of individuals completing this assessment	**Name**	**Job title**	**e-mail contact**
	James Hutchinson	**Anaesthetist**	**James.hutchinson7@nhs.net**
Date assessment completed	**26/03/25**		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title: Awake Regional Anaesthesia for Upper Limb Surgery**			
What is the aim, purpose and/or intended outcomes of this Activity?	The aim is to provide standardised and evidence based approach to managing awake hand surgery under regional anaesthetic.			
Who will be affected by the development & implementation of this activity?		Service User Patient Carers		Staff Other _____
Is this:	New Standard Operating Procedure			

What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.	National guidelines for perioperative and anaesthetic care from Royal College of Anaesthetists, Centre for Perioperative Care and Association of Anaesthetists of GB and Ireland.
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	Key guideline authors engaged with
Summary of relevant findings	

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale**. Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age		x		
Disability		x		
Gender Reassignment		x		
Marriage & Civil Partnerships		x		
Pregnancy & Maternity		x		
Race including Traveling Communities		x		
Religion & Belief		x		
Sex		x		
Sexual Orientation		x		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)		X		
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)		X		

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
	No risk identified	.		
How will you monitor these actions?				
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)	**At the next point of guideline approval**			

Section 5 - Please read and agree to the following Equality Statement

1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation

1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.

1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carer's etc, and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	James Hutchinson
Date signed	26.03.2025
Comments:	Consultant Anaesthetist and Clinical Director for Theatres and Anaesthetics
Signature of person the Leader Person for this activity	
Date signed	
Comments:	