Title:	**Process required for Local Neonatal Unit to undertake initiation of active cooling prior to transferring to an NICU.**
Reference number	PD-ODN-04
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Target Audience	All Local Neonatal Units within the North West Neonatal Operational Delivery Network
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Contents

Acknowledgement:

This process document has been developed from the original document PD-0DN-04 '*Process required for Local Neonatal Unit to undertake initiation of active cooling prior to transferring to an NICU'* and I would like to acknowledge the contribution each member of the original team has had in developing this version.
This version has included review by Victoria Walsh Parent Engagement lead NWNODN.

Introduction:

The NWNODN supports a standardised approach to Therapeutic Hypothermia across the North West and has produced a North West Cooling Guideline with contribution from clinical experts in the region and in line with the latest BAPM Therapeutic Hypothermia framework. This cooling guideline provides support to all providers in the North West in their approach to therapeutic hypothermia.

It is widely accepted that achieving target temperature as soon as possible, but within 6 hours, has a positive impact on outcome. Whilst all units can passively cool infants meeting cooling criteria, this does not always lead to target temperature being achieved, with reported incidents of over cooling to below 33 degrees or babies not achieving target temperature within acceptable timeframe. Whilst active cooling is an NICU activity as per the Neonatal Service specification, several LNUs across the NWNODN have been successfully initiating therapeutic hypothermia prior to transfer to a tertiary centre for a number of years.

The NWNODN strongly encourages NW LNUs currently offering passive cooling only, to introduce this practice with the support of guidelines, education, and support to facilitate the introduction of the initiation of active therapeutic hypothermia to improve equity of access to early therapeutic hypothermia and achievement of target temperature.

Aim:

This document describes the process required for an LNU to undertake initiation of active cooling prior to transfer. It describes the steps required by an LNU to provide assurance to their Trust and to the network that it is safe for the initiation of an NICU activity to take place in an LNU.

Process for LNU to commence active cooling:

1. Prior to initiating accreditation process

For an LNU to be recognised by the NWNODN as a unit undertaking initiation of active cooling prior to transfer a formal request should be made through the locality Neonatal Steering Group (NSG).

Prior to initiating the accreditation process, the LNU must:

1. gain approval from their Trust Board,
2. have submitted, and received approval for the necessary business case(s) to purchase the required equipment,
3. fulfilled all staff training requirements (appendix 1)

Once these approvals have been received the LNU should email the NWNODN cooling lead clearly stating the intention of the LNU to be recognised as a unit undertaking initiation of active cooling prior to transfer and ask that this request be taken to the relevant locality NSG for consideration. The LNU must include copies of both the Trust Board and business case approvals in the email.

All correspondence regarding the accreditation process should be sent to: NWNODN@alderhey.nhs.uk
If the NSG is in support of the LNU implementing this practice the cooling lead will email the LNU to confirm the decision, establish a joint cooling review group, provide a copy of the requirements form, and arrange an initial meeting. A copy of the requirements form can also be accessed on the NWNODN website: https://www.neonatalnetwork.co.uk/nwnodn/network-guidelines-2/

The Cooling Review Group (CRG) will consist of the following members:
NWNODN CRG:

- NWNODN cooling lead
- NWNODN medic
- Nurse from another LNU currently undertaking active cooling

LNU Cooling Group:

- Cooling lead medic
- Cooling lead ANNP (if available)
- Unit manager
- Clinical educator

If the NSG is not in support of the LNU implementing this practice the cooling lead will email the LNU to provide feedback and guidance regarding additional information or actions required to progress with the process. Once any outstanding actions have been completed the LNU should feedback by email to the cooling lead who will facilitate a further review by the NSG.

2. Requirements Form

Once agreement has been reached by the NSG, the cooling review group has been established, and the initial meeting has been held, the LNU, with support from the cooling review group, must complete the requirement form.

The LNU should send a copy of the completed requirements form, along with copies of the evidence where relevant, to the cooling lead for review.

Once all requirements are complete, the cooling lead will email the LNU to arrange a pre-assessment visit.

If there are outstanding requirements, the cooling lead will feedback to the LNU clearly stating what actions are required. The LNU will be given the opportunity to address any issues and re-submit the requirements form for further review within 6 weeks.

3. Pre-assessment meeting (virtual)

Once the requirements form has been approved the pre-assessment meeting can take place. This meeting will be an opportunity for the LNU and ODN to discuss the process and clarify any queries, agree the agenda, and set a date for the on-site assessment visit.

4. On-site assessment visit

As a minimum the on-site visit will comprise:

- A full cooling simulation performed by the LNU and assessed by the NWNODN CRG
- Review of equipment, including related documents/training/maintenance etc.
- Evidence of current and planned training and education

If, following the on-site assessment, the NWNODN CRG are satisfied that all criteria have been met the cooling lead will feedback the findings to the NSG.

If, following the on-site assessment, the NWNODN CRG identify any gaps in the process the cooling lead will feedback to the LNU detailing the additional information or actions required. The cooling review group will support the LNU to address any gaps and once complete the LNU will provide evidence to the cooling lead that all outstanding actions have been addressed. Once the NWNODN CRG are satisfied that all criteria have been met the cooling lead will feedback the findings to the NSG.

5. NSG approval and NWNODN confirmation to commence active cooling

If the NSG are satisfied that all requirements have been met, they will provide approval and the NWNODN will send an official letter to the LNU confirming that active cooling prior to transfer can commence.

If NSG are not satisfied that all requirements have been met any gaps in the process will be fed back to the LNU via the NWNODN cooling lead. The LNU will be given 6 weeks to address these gaps and request that these aspects of the process are re-assessed. Depending on the issues identified the re-assessment might be carried out remotely, or a further site visit might be required. The cooling review group will support the LNU to resolve any outstanding issues and re-submit to the NSG for further review. If, following re-submission, the NSG are satisfied that all requirements have been met, they will provide approval and the NWNODN will send an official letter to the LNU confirming that active cooling prior to transfer can commence.

6. Post Approval & Annual Self-Assessment

Continued staff competence will be the LNU's responsibility but support for training and education of staff can be sought through the NWNODN cooling group and education team.

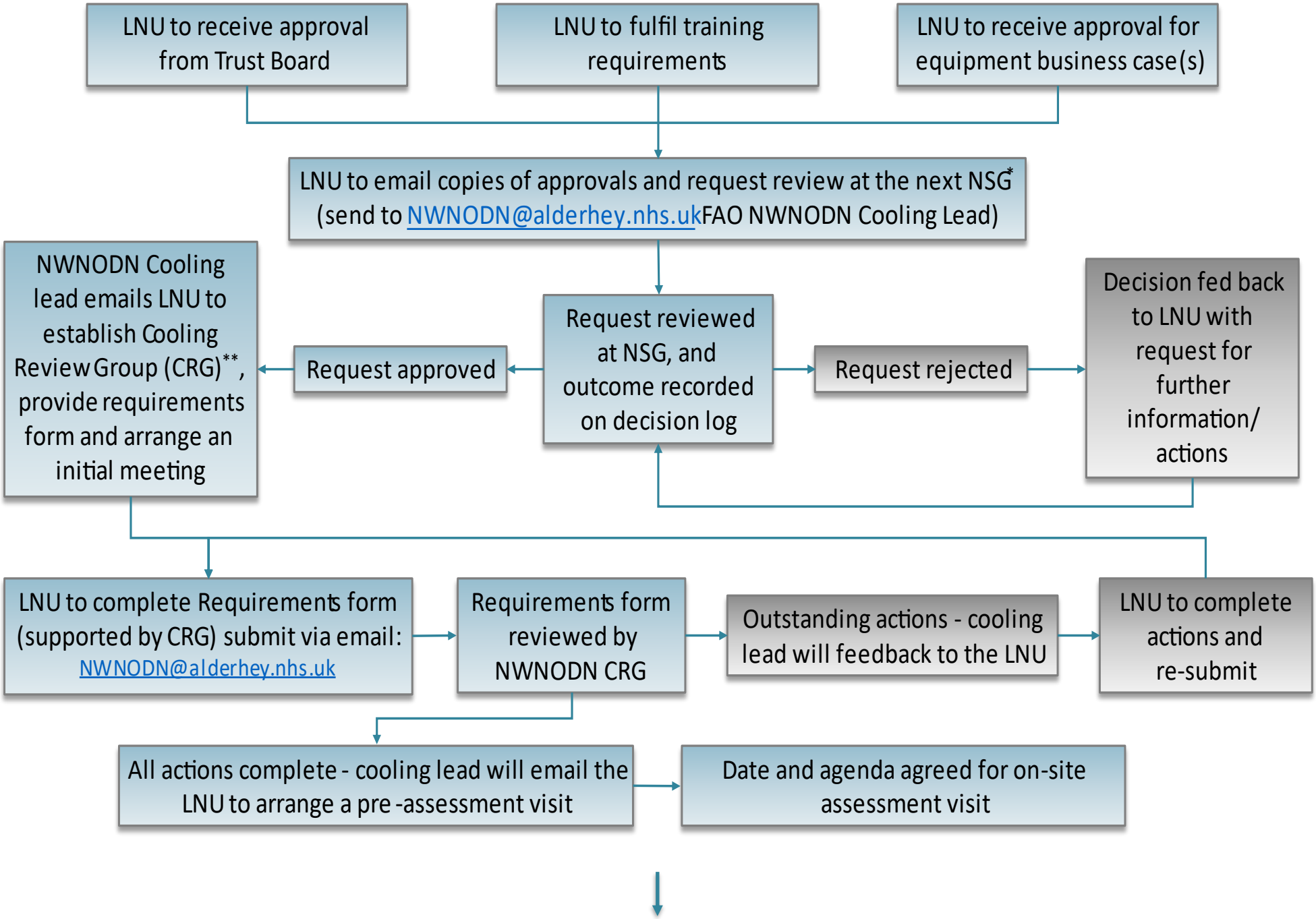
Each LNU undertaking the initiation of active cooling will be required to complete the LNU Annual Self-Assessment Competency Form which must be signed by the LNU Lead for Cooling and sent back into the ODN annually every January. Failure to return a completed Annual Self-Assessment Competency Form within 6 weeks of the 1st January will result in the unit having to suspend the treatment until the form is completed and received by the ODN.

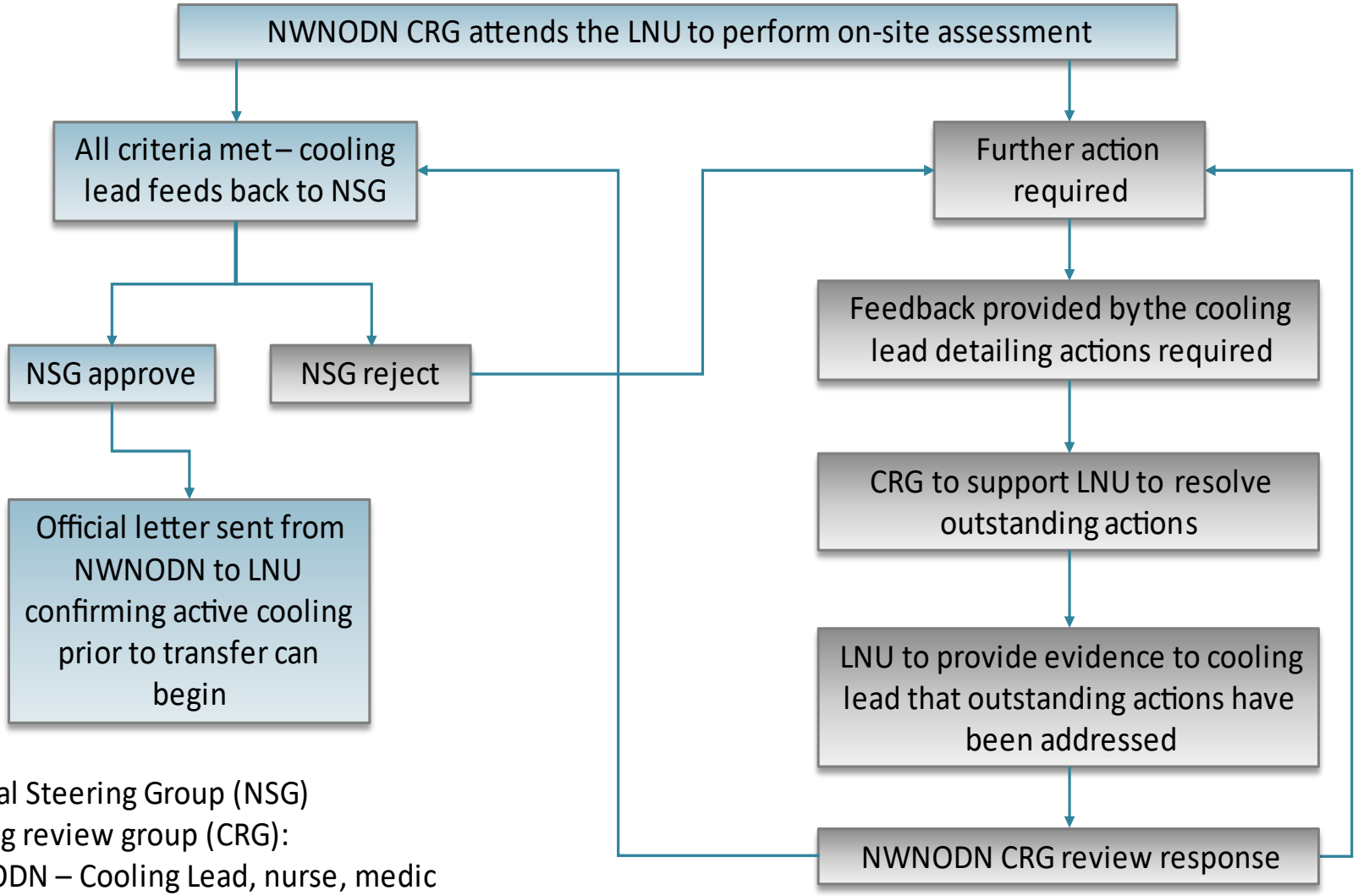
All completed Self-Assessment forms will be stored by the NWNODN within the Cooling File in SharePoint.

If at any time the LNU feels they no longer meet the requirements described in this document, they must inform the NWNODN at the earliest opportunity for support and guidance to ensure requirements are met and the practice can continue. For more detail see the governance section.

If at any point concerns are raised prior to the self-assessment period in January the NWNODN Cooling SIG can review the LNUs competency and undertake a individual review of the unit depending on the concern raised.

Figure 1 – Process Flowchart





* Neonatal Steering Group (NSG)

** Cooling review group (CRG):

- NWNODN – Cooling Lead, nurse, medic
- LNU – Nurse, medic, unit manager,clinical educator

Equipment:

The following equipment and associated processes must be available to commence active cooling

- Rectal probe to monitor core temperature continuously
- Robust resource pack, clinical care pathway or care plans to support staff to instigate and manage safe passive cooling in line with the NWNODN guideline
- Servo controlled active cooling system available
  - This should have an automated system for initiation of cooling, maintenance at the target temperature for 72 hours and re-warming
- Clear guidance, including pictures, available to support set up of equipment
- CFM monitoring available
- Clear guidance including pictures available to support use of CFM both application of needles/buttons and interpretation
- The equipment should record the aEEG
  - This aEEG should be able to be viewed and copied to form part of the decision making regarding ongoing cooling at the NICU.
  - There should be a process in place to allow aEEG data to be downloaded or copied from the LNU for viewing by Connect NW and the NICU.

Staffing

Appropriate staffing should be available when any infant commences active cooling

- This will include junior medical staff (Tier 2) and nursing staff Band 6 or above present on the unit all the time an infant is receiving active cooling, the neonatal shift co-ordinator should also be present to oversee nursing care and LNU management.
- A consultant should be involved in clinical decision making to commence active cooling and must be present on site until the arrival of the transport team.

Education and Training

Initial Training

- Medical staff Tier 2/ANNPs involved in the care of babies with suspected HIE should have training and be competent in neurological assessment, initiation, and interpretation of aEEG monitoring and nursing staff should be able to undertake neurological nursing observations.
- As a minimum requirement all nursing staff band 6 and above and medical staff involved in the care of a baby receiving active cooling should receive training in the use of cooling equipment and have in date equipment competency paperwork to support this.
- Local pathways and guidelines should reflect NWNODN guidelines on active cooling at an LNU, incorporating equipment guidance as required. Resources to support training and education can be accessed using Moodle: https://learning.neonatalnetwork.co.uk/
- Units should have an identified lead nurse and medic responsible for cooling who will have either observed cooling at an NICU and/or attended SIM sessions.
- Leads must have dedicated non-clinical time to co-ordinate training, competencies, links to the network cooling group and undertake clinical governance activities related to cooling.
- It is essential that all the training requirements are fulfilled before a unit commences active cooling prior to transfer.

Continued Competence:

- All LNUs to undertake the annual NWNODN 'Self-Assessment Cooling Form' (Appendix X). Completed forms are to be sent back into the NWNODN FAO Cooling Lead using email: nwnodn@alderhey.nhs.uk
- Each LNU is responsible for maintaining staff education and training in cooling and encourage staff to actively participate in network and national education and learning events around Cooling.
- Each neonatal unit must have at least one representative attend every NWNODN Cooling SiG meeting who will be responsible for disseminating information back to their colleagues at the LNU.

Governance:

The provider must agree to follow the agreed network pathway, ensuring in all cases:

- There is discussion and agreement with Connect NW and/or an established NICU cooling centre prior to initiation of active cooling.
- All cases of active cooling are subsequently transferred to an NICU cooling centre for ongoing assessment and management.
- There should be a documented peer review process after each case involving the multidisciplinary team with midwifery/obstetric involvement, this should include review of any opportunities to prevent neonatal encephalopathy, appropriateness of therapeutic hypothermia and timeliness of referral. It is recommended that as a minimum this would involve an exception report, MDT practice review and referral to MN**SI**
- There should be regular audits carried out against the standards set out in guidelines.
- There must be local processes in place for storing and saving CFM images in clinical notes. Data should also be downloaded from cooling machines after each episode of use and stored in clinical notes where possible.
- LNUs will participate in an on-going process of review and re-validation by the NWNODN

Family Involvement:

- All LNUs initiating active cooling are expected to provide evidence of the following:
  - The provision of specific training for staff on counselling families on HIE and cooling.
  - Information resources about HIE and active cooling available for families.
  - Demonstrate on-going involvement and support of families within the cooling work which may include links to HIE charities, involvement of the ODN parent Advisory Group (PAG) and involvement from the NWNODN Parent Engagement Lead.

Guidance for Units Already Undertaking Cooling At the Time of this Guideline being implemented

Those LNUs already undertaking the initiation of active Cooling at the time this guideline is ratified, will not be required to undertake the full accreditation process. instead they will be required to start completing the LNU Annual Self-Assessment Competency Form from the 1st January 2024 to evidence their on-going learning and commitment to providing safe cooling.

Appendices:

Cooling Training To be completed Prior to Requesting to start the process for initiating.	
	Sign once met
• LNU staffed attended NWNODN Train the trainer event	
• Evidence in-unit training has commenced and training plans and events in place *prior* to request to NWNODN	
• The LNU actively participates in the NWNODN Cooling SIG and a representative regularly attends meetings	