STANDARD

Radio-Frequency Identification Devices

NLIS

National Livestock Identification System



More information:

Damon Holmes
Integrity Systems Company
PO Box 1961
NORTH SYDNEY NSW 2059
Phone: (02) 9463 9376

Email: dholmes@integritysystems.com.au

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RELEASE NOTICES

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29 April 2019	Removed contact name of Mick Prendergast: changed to Damon Holmes	Alison Taylor	0.8

Contents

1 Terminology

1.1.1 Where the word “General” is used in headings, the information pertains to all three species mentioned in this document: cattle, sheep and goats. Any information that is specific to a particular species will have the name of that species in the heading.

2 Introduction

2.1.1 The species covered by this Standard are cattle, sheep and goats.

2.1.2 The National Livestock Identification System (**NLIS**) is Australia’s system for the identification and traceability of cattle, sheep and goats. NLIS was established by SAFEMEAT, the partnership between the red meat industry and government for the purposes of biosecurity, food safety, product integrity and market access.

2.1.3 This Standard provides minimum mandatory specifications and requirements for devices to be supplied to producers for use under NLIS.

2.1.4 ISC operates and administers the NLIS database, the accreditation of devices and the issuing of NLIS logo licences. An NLIS logo licence agreement between the applicant and ISC allows the NLIS Logo licensee to reproduce the NLIS logo on the device. A copy of this agreement is available from ISC.

2.1.5 The NLIS Standards Committee is a technical committee appointed by SAFEMEAT to establish standards for devices that are supplied for use under NLIS. This Committee oversees device accreditation and provides advice and recommendations to ISC on device standards and device accreditation.

2.1.6 Individuals and organisations seeking NLIS accreditation for devices must supply evidence to demonstrate that their device complies with this Standard. Only devices that have been given accreditation by ISC under this Standard can be identified with the NLIS logo and only those which have been given conditional or full accreditation can be supplied to producers for use under NLIS.

2.1.7 Legislation in each State and Territory govern the supply and use of NLIS devices. Device NLIS Logo licensees are required to comply with this legislation.

2.1.8 Device NLIS Logo licensees are required to register devices on the NLIS database. Access to and use of the NLIS Database is governed by the NLIS Terms of Use.

2.1.9 After consultation with the NLIS Standards Committee, ISC can, at its discretion amend this Standard at any time. NLIS Logo licensees, and applicants, will be then be required to comply with the requirements of the new version within the time specified by ISC.

2.1.10 ISC may terminate an NLIS Logo licence agreement or require an NLIS Logo licensee to take remedial action in the case of a breach of the requirements of this Standard.

3 New technologies and devices

3.1 Alternative technologies

3.1.1 ISC will consider proposals for alternative technologies or devices outside of the requirements of this Standard.

3.1.2 Anyone proposing such alternative technologies or devices will be required to:

(a) demonstrate the net commercial benefit to the livestock industry of the alternative technology or device;

(b) demonstrate that the alternative technology or device will not have any adverse effect on the operation of NLIS with existing device technology; and

(c) identify any conflicts with, or deviations to, this Standard;

(d) propose appropriate testing and trial protocols for evaluation of such technologies or devices.

3.2 New devices designs

3.2.1 Device applicants are encouraged to propose innovative designs that promote the retention of devices.

3.2.2 ISC will consider devices that are outside of the requirements of this Standard with respect to their form-factor (shape) or method of application to livestock and such other factors as it considers appropriate.

3.2.3 ISC may require a revised accreditation process and additional experimental trials to demonstrate the retention and readability of these devices.

4 Device accreditation

4.1 Levels of accreditation

4.1.1 There are several "levels" of accreditation which are designed to facilitate the trialling of a device and its commercial supply when certain performance criteria are met.

a. **Experimental accreditation:** Authorises the conduct of approved field trials using a limited number of devices. This accreditation means that the devices used in the trial may carry the NLIS logo and are recognised as official identification devices for regulatory purposes. It is important because it means that any livestock that move off the property do not require devices to be reapplied. Experimental accreditation is subject to ongoing compliance with the requirements of the field trial, this Standard and the NLIS logo licence agreement.

b. **Conditional accreditation**: May be granted after six months of a three year field trial, and authorises the commercial supply of an approved device when a device has been granted accreditation but is still being assessed within the field trial. Conditional accreditation is subject to ongoing compliance with the requirements of the field trial, this Standard and the NLIS logo licence agreement.

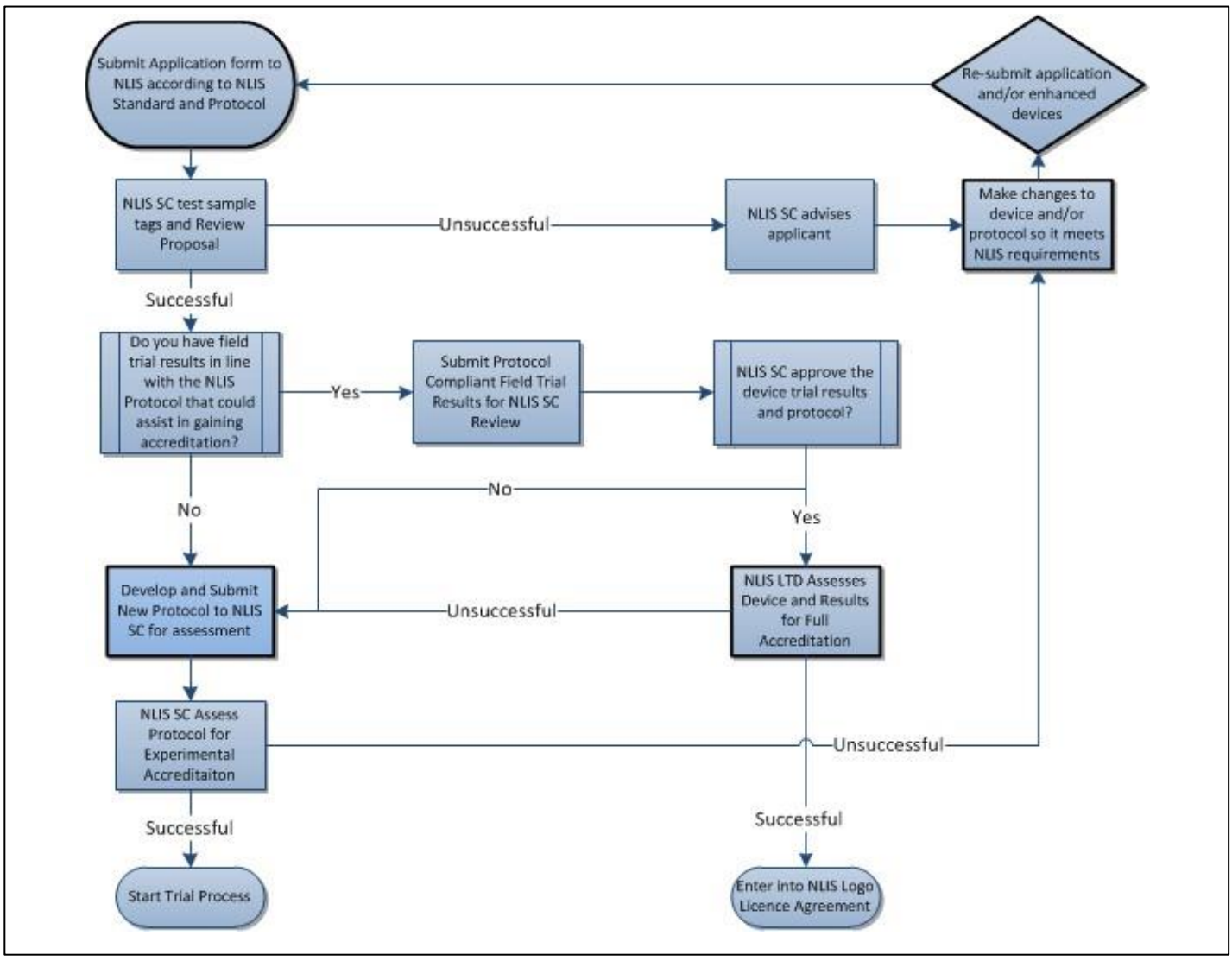
c. **Full accreditation**: Is granted when a device has complied with the three year field trial performances requirements. The trial period may by extended by ISC. Full accreditation is subject to ongoing compliance with the NLIS logo licence agreement.

4.1.2 As set out in paragraph 5.1.1 below, the device covers the tag or internal devices, application tool, packaging and supporting instructions, not individual components.

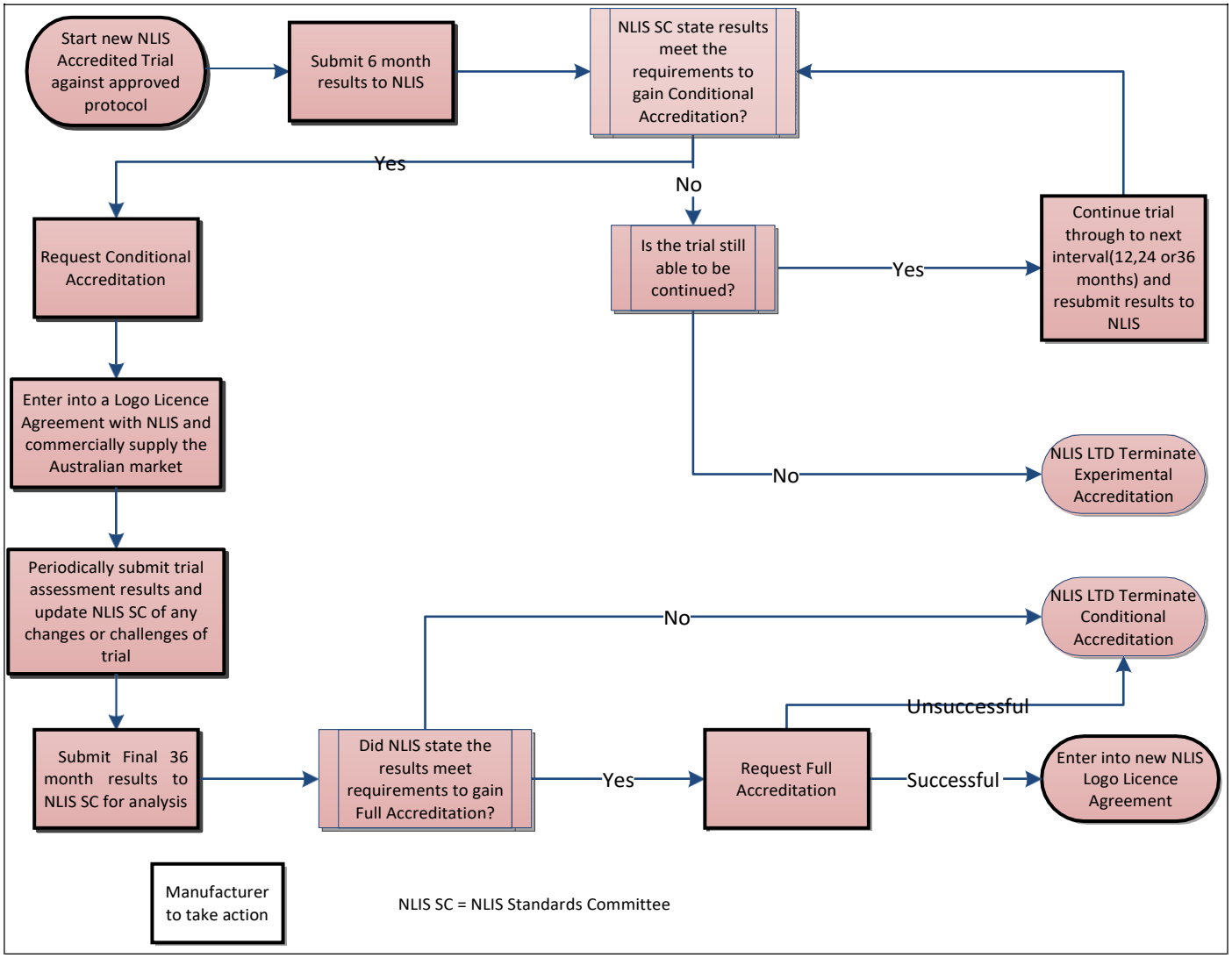
4.1.3 To maintain accreditation, any proposed modification to an accredited "device" (other than packaging) requires review and approval by ISC. ISC, with advice from the NLIS Standards Committee, will assess whether the modified device will maintain accreditation and may, at its discretion, require additional testing or trialling of the modified device. Use of a modified device prior to approval by ISC will be a breach of this Standard.

4.2 **Accreditation Process**

4.2.1 Application Process



4.2.2 Field Trial Protocol



4.3 Application for accreditation

4.3.1 Applicants proposing devices must provide ISC with a completed application form along with the supporting documentation required by the form. Copies of the application form are available from NLIS.

4.3.2 Devices must be registered by ICAR and have a manufacturer and product code and, where a shared manufacturer code is issued, an RFID number range allocated by ICAR. Applicants must provide the ICAR Approval Conformance Test or ICAR Approval Conformance Test results.

4.3.3 Applications must include a proposed field trial protocol, specifying the expected number and types of properties and the number of devices to be trialled on each property.

4.3.4 Applicants must provide a number of samples (as specified on the NLIS Application form) of the proposed device, consisting of 80% breeder devices and 20% post-breeder devices. Sample tags must be printed with the NLIS IDs “TEST1234ABC00001” sequentially. Sample tags MUST NOT be printed with the NLIS logo.

4.3.5 Applicants must also provide a sample of the tool used to apply the devices and the proposed application instructions.

4.3.6 Applicants are encouraged to provide details of the methodology and results of previous field trials where available. ISC, with advice from the NLIS Standards Committee, will assess any field trial results submitted. In particular, ISC will consider the

independence of the trial, the similarity to production systems in Australia and the performance of the device. Based on this assessment ISC may allow a modified trial protocol to gain accreditation.

4.3.7 ISC, with advice from the NLIS Standards Committee, will assess the information and devices submitted for conformance to this Standard.

4.3.8 Based on this assessment and taking into consideration the recommendations of the NLIS Standards Committee, ISC may, in its discretion, reject an application, request additional information from the applicant or grant one of the three levels of accreditation. Where experimental or conditional accreditation is granted, ISC will advise the applicant of the field trial requirements.

4.4 Experimental Accreditation

4.4.1 Experimental Accreditation will allow for a limited number of devices to be produced to allow field trials to be undertaken.

4.4.2 The applicant will be permitted to use the NLIS Logo on these devices. Devices do not need to be removed when animals leave the trial or at the end of the trial.

4.4.3 The applicant will be required to sign an NLIS Logo licence agreement prior to being granted Experimental Accreditation. The licence agreement governs the use of the NLIS logo and must be complied with for device accreditation to be maintained.

4.4.4 The NLIS Number printed on these devices must meet the requirements of this Standard, including commencing with the property identification code (**PIC**) of the participating property.

4.4.5 Supply of these devices is required to meet the legislative requirements of the State or Territory of the participating property.

4.5 Conditional Accreditation

4.5.1 Devices demonstrating compliance with this Standard may make application to ISC for Conditional Accreditation.

4.5.2 To be considered for conditional accreditation, an ICAR Performance Test certificate and test results must be provided to ISC.

4.5.3 The applicant will be required to sign an NLIS Logo licence agreement prior to being granted Conditional Accreditation. The licence agreement governs the ongoing use of the NLIS logo and must be complied with for device accreditation to be maintained.

4.5.4 Devices submitted for accreditation as sheep devices can also be considered for accreditation as a goat device, based on the results of trials conducted on sheep. Devices may not perform as well on goats but where ISC believes that a device is suitable for identifying goats, it can, in its discretion, approve the inclusion of a statement to this effect on the packaging issued with devices and in the NLIS Logo licensee's advertising material.

4.5.5 Where a device is conditionally accredited, the application instructions must include any information as specified on the NLIS Logo licence agreement.

5 Device characteristics

5.1 Elements that comprise a Device

5.1.1 A device is comprised of the following:

(a) Tag/internal device (including any identifier that is required to be applied when an internal device is used);

(b) The system/tools used for application;

(c) Instructions (supplied with the devices) for storage, application and use; and

(d) Packaging and packaging markings/ instructions.

5.1.2 All elements that comprise the device will be evaluated for compliance against this Standard.

5.1.3 A device is approved as a complete unit and components cannot be substituted. A female component must only be used with the male pin approved for use with the device. Device components must not be interchanged with other NLIS accredited devices or management ear tags.

5.2 Technology – General

5.2.1 Devices shall contain a half-duplex (HDX) transponder complying with ISO Standards 11784 and ISO 11785, encoded with a number that commences with the appropriate ICAR-issued prefix. Alternate technologies may be submitted for consideration and shall be assessed in accordance with paragraph 3.

5.2.2 Devices considered for NLIS accreditation will require supporting ICAR documentation that comprises:

(a) Devices submitted for approval to conduct an accreditation trial must have an Approval of Limited Conformance under the ICAR Conformance Standards.

(b) Prior to a device being considered for Conditional Accreditation, the applicant must supply ISC with an Approved Performance Test under the ICAR Performance Standards.

5.2.3 ISC may assess and accredit devices containing transponders which do not comply with clause 5.2.1 provided that:

(a) There is a clearly demonstrated net commercial advantage to the meat industries associated with the introduction of such technology, and

(b) The operation of such technology and associated readers will not have an adverse impact on the reading of devices containing ISO compliant HDX transponders, or on the NLIS database.

5.2.4 The transponder performance in devices submitted for approval to trial will be assessed by ISC and must demonstrate compliance with this Standard. As a guide to commercial performance, when livestock are being handled in a properly configured commercial application, it must be possible to reliably machine – read cattle moving freely in a single file past a reading point with a portal of 1.2 metres. It must be possible to reliably machine – read sheep and goats moving freely up to three abreast, with the device capable of being read at a distance of 0.7 metres.

5.3 Technology – Cattle

5.3.1 Devices approved under this Standard will be in the form of an ear tag, or an internal device/ear tag combination. Alternate device forms may be submitted for assessment in accordance with paragraph 3. However, industry consultation will be required, in addition to technical assessment.

5.3.2 Devices submitted for approval to trial must have been assessed by an NLIS Standards Committee approved testing body as demonstrating a reading performance equal to or better than a Texas Instruments High Performance Transponder Circular Inlay: RI-INL-0243-40.

5.4 Technology – Sheep

5.4.1 Devices approved under this Standard can only be in the form of an ear tag. Alternate device forms may be submitted for assessment. However, industry consultation will be required, in addition to technical assessment.

5.4.2 Devices submitted for approval to trial must have been assessed by an NLIS Standards Committee approved testing body as demonstrating a reading performance equal to or better than a Texas Instruments 23mm Glass encapsulated Transponder: TRPGP40ATGA.

5.5 Technology – Goats

5.5.1 Devices approved under this Standard can only be in the form of an ear tag. Alternate device forms may be submitted for assessment. However, industry consultation will be required, in addition to technical assessment.

5.5.2 Devices submitted for approval to trial must have been assessed by an NLIS Standards Committee approved testing body as demonstrating a reading performance equal to or better than a Texas Instruments 23mm Glass encapsulated Transponder: TRPGP40ATGA.

5.6 Device Encoding – General

5.6.1 The unique number encoded within each transponder must be unable to be reprogrammed, and commence with a 3-character numeric prefix code issued by ICAR.

5.6.2 The 64 bit RFID number as described in ISO11784 shall be encoded as follows

Bit No.	Description	Value
1	Flag for animal (1) or non-animal (0) identification	Must be 1
2 – 4	Retag counter	Must be 0
5 – 9	User information field	Must be 0
10 – 15	Reserved field	Must be 0
16	Flag indicating the existence of a data block (1) or no data block (0)	Must be 0
17 – 26	Manufacturer code	Manufacturer code as issued by ICAR
27 – 64	National identification code	Unique serial number.

5.7 NLIS number – General

5.7.1 States/Territories allocate Property Identification Codes (PICs) to livestock properties. Properties with NLIS livestock species use the same PIC for all species.

5.7.2 When the device is manufactured under the control of the NLIS Logo licensee, an NLIS number is to be generated and accurately associated with the RFID number of the

transponder inside the device. The NLIS number is printed on the outside of the ear tag and is read visually.

5.7.3 The 16-character NLIS number, which is the primary identifier, shall be unique and in the following format:

3	A	B	C	D	1	2	3	X	B	D	0	0	2	3	5

Character No.	Description	Value
1 - 8	PIC of Issue	The 8-character Property Identification Code (PIC) issued by the State or Territory of the property to which the devices are issued.
9	Manufacturer Code	The Manufacturer Code assigned to each manufacturer by ISC
10	Device Type Code	See Appendix A.1
11	Year of Manufacture Code	See Appendix A.2
12 – 16	Serial Number	The first character can be a number or a letter, except O and I which cannot be used. The remaining 4 characters must be numbers.

5.8 Printing on ear tag – General

5.8.1 The following information shall be printed on the ear tag:

a. The unique NLIS number,

b. The NLIS logo,

5.8.2 The words “DO NOT REMOVE” may be required to be printed on the tag. Refer to the below species/tag format requirements.

5.9 Printing on ear tag – Cattle

5.9.1 For two-piece tags the NLIS logo and the words “DO NOT REMOVE” must be printed on the component applied to the back of the ear

5.9.2 The NLIS logo and the NLIS number shall be printed on the female component fitted to the inside of the livestock’s ear.

5.9.3 Approved NLIS cattle tags must not carry any additional information such as property name or other management information

5.10 Printing on Two-Piece Tags - Sheep

5.10.1 For two-piece ear tags, the NLIS logo and NLIS number must be printed on the female component, with the option of the last five components of the NLIS number being duplicated on the male pin. Where this option is exercised, the packaging of two-piece tags must be designed to prevent any disassociation of the NLIS number on the female component of the tag and the numbering on the male pin.

5.10.2 Additional information that facilitates the identification of the property (such as brand or property name) can be printed on the male component of the tag where space permits. The symbols “V” vaccinated with Gudair vaccine), “T” (terminal lamb to be slaughtered before first permanent teeth cut) and “S” (vaccinated for scabby mouth) may be printed in accordance with State requirements.

5.10.3 When neither of the above options to print the last five components of the NLIS number on the male pin is taken, then the words “DO NOT REMOVE” must be printed on the male pin.

5.11 Printing on Two-Piece Tags - Goats

5.11.1 For two-piece ear tags, the NLIS logo and NLIS number must be printed on the female component, with the option of the last five components of the NLIS number being duplicated on the male pin. Where this option is exercised, the packaging of two-piece tags must be designed to prevent any disassociation of the NLIS number on the female component of the tag and the numbering on the male pin.

5.11.2 Additional information that facilitates the identification of the property (such as brand or property name) can be printed on the male component of the tag where space permits.

5.11.3 When neither of the above options to print the last five components of the NLIS number on the male pin is taken, then the words “DO NOT REMOVE” must be printed on the male pin.

5.12 Printing on One-Piece Tags - Sheep

5.12.1 The complete NLIS number can be printed on one face of the tag, or the PIC can be printed on one face and the last eight digits of the number printed on the other face.

5.12.2 The NLIS logo and additional information (other than the NLIS ID) may be located anywhere on the tag provided the visual readability of the PIC and NLIS ID at 0.75 metres is not compromised.

5.12.3 The symbols “V” (vaccinated with Gudair vaccine), “T” (terminal lamb to be slaughtered before first permanent teeth cut) and “S” (vaccinated for scabby mouth) may be printed in accordance with State requirements.

5.12.4 The printing of the NLIS number shall not extend around the curve of a one-piece tag.

5.13 Printing on One-Piece Tags - Goats

5.13.1 The complete NLIS number can be printed on one face of the tag, or the PIC can be printed on one face and the last eight digits of the number printed on the other face.

5.13.2 The **NLIS logo** and additional information (other than the NLIS number) may be located anywhere on the tag provided the visual readability of the NLIS Number at 0.75 metres is not compromised.

5.13.3 The printing of the NLIS number must not extend around the curve of a one-piece tag.

5.14 Indicate presence of internal RFID device - Cattle

5.14.1 If the device is an internal device, it must be supplied with an ear tag which is applied to indicate the presence of the internal device.

5.14.2 The ear tag must be a large non-recyclable permanent ear tag in white (for breeder devices) or orange (for post-breeder devices). Such ear tags must be printed with the NLIS Logo, the NLIS ID and the words DO NOT REMOVE. No other information may be printed on the tag.

5.14.3 Alternatively, a generic visual tag may be provided. Such tags must be triangular and light green in colour, with the letter R or word “RUMEN”, the NLIS logo, and the words DO NOT REMOVE printed on the tag. The maximum dimensions of this tag cannot exceed 55mm wide and 75mm high.

5.15 Device Colour - Cattle

5.15.1 Other than internal devices, devices must be coloured as follows:

- Predominantly white for the Breeder devices
- Predominantly orange for the Post-breeder devices

5.15.2 'Predominantly' is defined as a minimum of 75% of the visible area. This applies to the visible surface of the male pin and visible surface of the female component of the tag. The colour of printing is not included in the calculation of this percentage.

5.16 Device Colour – Sheep

5.16.1 A breeder ear tag (either one-piece or two-piece) must be either:

- Predominantly yellow, or
- Predominantly coloured in accordance with the national year of birth colour system.

5.16.2 For two-piece tags, there is discretion for the female component to be predominantly yellow and for the male pin to adopt the national year of birth colour system.

5.16.3 A post-breeder ear tag must be predominantly pink, including the male pin when the device is a two-piece tag.

5.16.4 'Predominantly' is defined as a minimum of 75% of the visible area. The colour of printing is not included in the calculation of this percentage.

5.17 Device Colour – Goat

5.17.1 A breeder ear tag (either one-piece or two-piece) must be either:

- Predominantly yellow, or
- Predominantly coloured in accordance with the national year of birth colour system.

(a) For two-piece tags, there is discretion for the female component to be predominantly yellow and for the male pin to adopt the national year of birth colour system.

5.17.2 A post-breeder ear tag must be predominantly pink, including the male pin when the device is a two-piece tag.

5.17.3 'Predominantly' is defined as a minimum of 75% of the visible area. The colour of printing is not included in the calculation of this percentage.

5.18 Device Design - Cattle

5.18.1 The role of an NLIS cattle ear tag is to facilitate identification for traceability purposes only and shall not be a combination of NLIS and management tags. "2 in 1" style tags are not eligible for NLIS accreditation.

5.18.2 Two Piece Devices:

- The female component must not have a face surface area exceeding 14cm2. The male component must not exceed 35mm in diameter.
- Button devices must have a diameter that does not exceed 35mm.
- Triangular devices must have maximum dimensions of 42mm wide at the base and be no higher than 40mm high.

5.18.3 One Piece Devices:

- Must not exceed dimensions of 12cm long X 3cm wide.

5.19 Attachment of Unapproved Devices – General

5.19.1 Attachments or additions to NLIS accredited devices using any part of the structure of the NLIS accredited device are not permitted and will be considered to be part of the accredited device and as such will be in breach of the NLIS Standard. Devices with attachments and/or additions will be considered to be non-conforming devices.

5.20 Device loss rates – General

5.20.1 NLIS approved devices should remain attached to livestock until they die or are slaughtered.

5.20.2 The physical loss of devices from livestock on typical Australian meat, dairy and feedlot properties must not exceed 3.5% within 3 years under normal field conditions. This includes a maximum of 0.5% transponder failure.

5.20.3 Failure at application shall not exceed 2% of application attempts. Any attempt to apply a device that does not result in the device being applied effectively, while following the applicant's instructions, is considered a failure.

5.20.4 Devices must be designed to prevent unauthorised removal and reuse. Two piece devices must have a cap on the component of the device containing the transponder designed to prevent the pin being removed and the device being subsequently attached with a new pin.

5.20.5 Performance is measured against the performance criteria published by the NLIS Standards Committee. Refer to the Appendix. *Not applicable at the moment

5.21 Device design- Cattle

Devices must be designed to prevent unauthorised removal and reuse and be tamper evident. Two piece devices must have a hardened cap on the component of the device containing the transponder designed to prevent the pin being removed and the device being subsequently attached with a new pin.

5.22 Device design – Sheep

Devices must be designed to prevent unauthorised removal and reuse and be tamper resistant. Two piece devices must have a cap on the component of the device containing the transponder designed to prevent the pin being removed and the device being subsequently attached with a new pin.

5.23 Device design – Goats

Devices must be designed to prevent unauthorised removal and reuse and be tamper resistance. Two piece devices must have a cap on the component of the device containing the transponder designed to prevent the pin being removed and the device being subsequently attached with a new pin.

5.24 Safety and animal welfare – General

5.24.1 Once the livestock is restrained, installation of devices must not pose undue risk to the operator and cause minimal discomfort or danger to the livestock.

5.24.2 The NLIS Logo licensee must specify on the accompanying directions for use whether any precautions need to be taken during application to prevent the ears of livestock being ripped.

5.24.3 Devices must not be capable of causing contamination of meat or edible offal, damage to the hide, or be capable of adversely affecting the health and well-being of livestock following attachment.

5.24.4 The application instructions supplied as part of the device must ensure that application and use of devices comply with State/Territory and National Animal Welfare Standards.

5.25 Physical deterioration – General

5.25.1 Devices must maintain structural integrity and printing must remain visually readable for at least seven years after application to livestock under Australian conditions.

5.25.2 There shall be no apparent physical deterioration of devices that adversely affects compliance with retention or readability requirements of the standard within seven years of application on livestock in Australian conditions.

5.25.3 After seven years, printing on devices shall be readable at a distance of 0.75 metres under normal daylight conditions while attached to livestock.

5.26 Transponder performance – General

5.26.1 The transponder must perform to the satisfaction of ISC when compared to a nominated benchmark transponder.

5.26.2 The transponder within devices must be reliably machine-readable for a minimum of seven years following the installation of devices in typical Australian field conditions. Transponder failure must not exceed 0.5% over the first three years.

6 Supply of accredited devices

6.1 Validation of Device Orders – General

6.1.1 The NLIS Logo licensee must have an algorithm validation procedure to check the validity of the PIC provided on each order prior to printing.

6.1.2 Where required by State/Territory authorities, the NLIS Logo licensee must check the PIC supplied by producers ordering devices against the name and address details on the State or Territory PIC register.

6.1.3 The NLIS Logo licensee must check each device to ensure that the NLIS number and RFID number are unique, that the RFID number is encoded correctly, that neither number has been issued by that NLIS Logo licensee before, and that the transponder can be reliably read as a livestock transponder prior to dispatch of the device to a producer.

6.1.4 The NLIS Logo licensee supplying accredited devices must transmit to the NLIS database, and if required, to State/Territory databases, information on the date each order is to be dispatched, the transponder and NLIS numbers associated with each device, the PIC of the property on which devices are to be used, and other information as required. Such information must be transmitted prior to dispatch of the devices.

6.1.5 The NLIS Logo licensee must also ensure that in the production file submitted to the database at the time of manufacture and dispatch, the NLIS number printed on each device is correctly associated with the RFID number of the transponder contained in the device and the contents of the file has been acknowledged as valid by the NLIS database prior to dispatch of the devices.

6.1.6 Any NLIS Logo licensee supplying of two-piece devices must have a batch identification system and record the batch of male pins issued to each order so the batches of male pins can be accurately correlated with female components if the male pin fails.

6.2 Quality systems – General

6.2.1 The NLIS Logo licensee supplying devices must have an ISO 9001 certified Quality Management System which, as far as is practical, eliminates the possibility of errors associated with the fulfilment of device orders.

6.2.2 The NLIS Logo licensee must have a procedure for recall and replacement of defective products. The NLIS Logo licensee must alert ISC of all NLIS device complaints from producers, processors or stock agents about device quality, performance and reliability.

6.2.3 The NLIS Logo licensee must maintain, for at least seven years, a copy of producer orders, the date each order was dispatched and the details regarding the transponder and NLIS numbers for each device. Records relating to orders and dispatch details can be kept in electronic form if backup systems are in place.

6.2.4 The ISO 9001 Quality Management System for an NLIS Logo licensee must be a standalone quality program audited in Australia to cover all operations performed. Any NLIS Logo licensee sourcing components from overseas suppliers or outsourcing any of its manufacturing processes are to note the sourcing and outsourcing in their ISO 9001 Quality Management System and hold on file a current ISO 9001 Quality Management System certificate covering those supplies and that outsourcing.

6.2.5 The NLIS Logo licensee must write into their ISO 9001 Quality Management System that the NLIS audit is to be considered an internal audit of the licensee and the finding of the NLIS audit will be considered by the ISO 9001 Quality Management System auditor and could affect ISO 9001 Quality Management System certification.

6.2.6 All complaints received by the NLIS Logo licensee must be logged and reviewed by the third party auditor and the NLIS auditor.

6.2.7 The ISO 9001 Quality Management System auditor's reports from the annual audits and tri-annual re-certification audits must be submitted to NLIS within five days of receiving the audit report. Audit reports relating to the production and supply of accredited devices from NLIS Logo licensee's own internal audits are to be submitted to NLIS within seven days of the audit.

7 Auditing and reporting

7.1 **Auditing**

7.1.1 Before ISC enters into an NLIS Logo licence agreement with an applicant, the applicant must demonstrate to the satisfaction of ISC. that the device and the arrangements for the supply of devices complies with the requirements of this Standard, by means of an initial audit.

7.1.2 After the NLIS Logo licence agreement is signed by both parties, audits will be conducted at a frequency to be determined by ISC.

7.1.3 A copy of this Standard and any non-conformance issues reported by ISC or a State/Territory or Federal Government authority in the preceding 12-months must be supplied to the NLIS Logo licensee's independent auditor before the annual audit.

7.1.4 Within five working days of receipt of the independent auditor's report relating to production and supply of accredited devices, a copy must be submitted to ISC.

7.1.5 ISC may, at its discretion, schedule and conduct additional audits at the NLIS Logo licensee's premises, or any premises which the NLIS Logo licensee uses:

(a) Where ISC considers that such audits are required to verify compliance by the NLIS Logo licensee with this Standard;

(b) If an audit report indicates that the NLIS Logo licensee is not complying with or may not be complying with the requirements of this Standard; or

(c) In any other circumstances that ISC considers appropriate.

7.1.6 Audits may be undertaken without prior notice to the NLIS Logo licensee.

7.1.7 The Auditor will prepare an audit report and provide a copy of the report for signature during an exit meeting with the NLIS Logo licensee.

7.1.8 The NLIS Logo licensee must implement any corrective or preventative actions which the Auditor or ISC specifies.

7.1.9 The NLIS Logo licensee must pay all costs, fees and expenses associated with the audits.

7.2 **Reporting**

7.2.1 The NLIS Logo licensee must provide quarterly reports to ISC. reconciling the number of NLIS devices manufactured with the number of devices uploaded to the NLIS database.

8 Appendices

A.1 Device codes

Species	Device Type	Code
Cattle	Breeder ear tag	B
Cattle	Breeder rumen bolus	C
Cattle	Post-breeder ear tag	E
Cattle	Post-breeder rumen bolus	F
Sheep	Breeder ear tag	S
Sheep	Post-breeder ear tag	T
Goats	Breeder ear tag	K
Goats	Post-breeder ear tag	L

A.2 Year of Manufacture Codes

Year of Manufacture	Code
2014	K
2015	L
2016	M
2017	N
2018	P
2019	Q

This sequence continues and will restart with “A” in 2029. The letters “I” and “O” are not used.

A.3 Glossary of Terms

Term	Definition
Applicant	A person who has applied for a device to be considered for NLIS accreditation.
Auditor	ISC. or a person or organisation approved by ISC. to conduct audits.
Breeder device	A device for application to livestock that are still on their property of birth.
Year of birth colour system	A tagging application system of eight colours that rotate through a defined sequence that visually denotes the age of the sheep or goats.
Cattle	Refers to Cattle, Buffalo and Bison.
Device	An ear tag, bolus or other piece of equipment that is attached to or inserted in livestock and which provides a means of identifying them.
Ear tag	A device which is attached to the ear of livestock and provides

	a means of identifying them.
Internal Device	Refers to into the body of livestock an RFID device that is internal e.g. a Rumen Bolus or an Implant
National Livestock Identification System (NLIS)	Australia's national system for the identification and tracing of livestock.
NLIS Logo	The logo used to identify devices accredited under the NLIS programs.
NLIS Logo Licensee	A person who has entered into an NLIS Logo License agreement with ISC.
ISC.	The subsidiary of Meat & Livestock Australia which is responsible for NLIS database operations and associated support services, which underpin the delivery of the NLIS program. This includes database development and hosting, support services (Helpdesk and Communications) and device accreditation.
NLIS Standards Committee	The committee responsible for NLIS Device Standards and Protocols for trials of new devices for which accreditation is sought.
Permanent Identification device	A device that is permanently attached to livestock on the property of birth or at a subsequent property and which cannot be legally removed until the livestock is slaughtered.
Post-breeder device	A device for application to livestock which are no longer on their property of birth and which are not already identified with a Breeder or Post-breeder device (the latter must be predominantly orange in colour).
Processor	A person, organisation or company actively engaged in the slaughter of livestock for human consumption.
Producer	A person, organisation or company actively engaged in the raising of cattle, sheep and goats (including fibre, meat and dairy livestock) for subsequent sale, and includes dairy farmers and feedlot operators.
Property	A parcel of land, consisting of one or more blocks within the one locality, operating as part of a livestock enterprise.
Property Identification Code (PIC)	The eight-character alphanumeric code allocated by the relevant State or Territory authority to identify a specific property (or three-character brand in Western Australia).
Reader (hand-held or fixed)	Readers contain a transceiver that activates the transponder in a device. The device transmits a signal containing a unique number. The signal is received by the reader and the number decoded.
Recycling	The process of collecting, accounting for, disinfecting, reissuing and recovering transponders and/or redistributing NLIS

	accredited devices used for the identification of livestock.
RFID breeder device	An electronic RFID ear tag to identify livestock still on their property of birth.
RFID post-breeder device	An electronic RFID ear tag to identify livestock no longer on the property of birth, and introduced livestock that have lost their original breeder tag.
Rumen capsule or bolus	A device for insertion in the rumen of ruminant species which is designed to remain permanently in the rumen or reticulum.
SAFEMEAT	The National committee of red meat industry. State/Territory and Commonwealth leaders responsible for developing and monitoring the implementation of food safety policy in the red meat industries.
NLIS Logo licensee	The entity holding the NLIS Logo licence with ISC.
Transponder	An integrated circuit (microchip) that has the capacity to respond to an electronic signal at the appropriate frequency from a reader and once activated, respond with a signal containing the encoded number that can be decoded by the reader.
Vendor	A person, organisation or company selling livestock.
Visual post-breeder device	An ear tag, pink in colour, used to identify sheep and goats that are no longer on the property of birth and introduced livestock that have lost their original breeder tag. Details printed on the tag can be read visually.
Visual breeder	An ear tag used to identify livestock still on their property of birth (origin). Details printed on the tag can be read visually.