# NZLUSG – Meeting 1 Minutes

**Group:** New Zealand Land Use Steering Group (NZLUSG)

**Meeting:** 1 (Remote)

**Date:** Tuesday 13 January 2026

**Time:** 1:00 pm – 3:30 pm

**Chair/Convener:** Richard Law (BSI)

**Minute-takers:** James Ardo (BSI) and Richard Law (BSI)

## Attendance

**Present:**

Richard Law (BSI); James Ardo (BSI); Laise Harris (BSI); Stella Belliss (BSI); Haydon Jones (WRC); Carolina Faka'osi (LINZ); Ashton Eaves (HBRC); Robert Cardwell (Market.Economics); Deborah Burgess (MfE).

**Apologies:**

Greg Byrom (LINZ); Anne-Gaelle Ausseil (MFE).

## Actions and decisions register (collated)

| Ref | Type | Record | Owner | Due | Status |
|---|---|---|---|---|---|
| A | Decision | Class **2.3.0**: add explicit **5-year** period for rotational crops | Richard/BSI | Prior to May 2026 draft | Agreed |
| B | Decision | **2.2.2 Intensive Dry Stock**: remove sentence directing deer/goats/horses to extensive class | Richard/BSI | Prior to May 2026 draft | Agreed |
| C | Decision | **2.6.4 Horse studs**: clarify intensive vs pastoral (pastoral → **2.2.2**) | Richard/BSI | Prior to May 2026 draft | Agreed |

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|---|---|---|---|---|---|
| D | Decision | Apply **2 ha threshold + zoning context** to distinguish peri-urban vs rural residential. Add new class 2.X.0 "Smallholder farm" and elaborate at the tertiary level at a future point. | Richard/BSI (inputs as needed) | Prior to May 2026 draft | Agreed |
| E | Action | Email input on urban classes (class 3) and relevant LINZ datasets | Carolina (LINZ) | Prior to May 2026 draft | Open |
| F | Proposal | Utilities/transport restructure: move navigation/communication into utilities (create **3.5.8**), remove **3.6.5**, rename **3.6.0** to Transportation | Richard/BSI | Prior to May 2026 draft | Proposed |
| G | Action (proposed) | Contact ABARES re ISO 19144-3:2024 LUML and collaboration | Richard/BSI | Future | Proposed |
| H | Decision/Note | Provenance: retain current approach; PROV-N/lookup approach noted for future exploration | Richard/BSI | Future | Noted |
| I | Issue | Distinguish real change vs methodological change in future releases | Richard/BSI + group | Future | Open |
| J | Decision | Prioritise tertiary elaboration of **2.2.0** grazing modified pasture systems | Richard/BSI | 2026 map planning | Agreed |
| K | Decision | Without additional data acquisition, elaborate **class 3** land | Richard/BSI | 2026 map planning | Agreed |
| L | Decision | Attributes: no new attributes; keep permeability optional | Richard/BSI | Ongoing | Agreed |
| M | Decision | Keep survey open longer | James/BSI | Ongoing | Agreed |

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|---|---|---|---|---|---|
| N | Action | Use LRIS stats to define user domains; call top 1–3 users/orgs per domain | James/BSI | Future | Open |
| O | Action | Provide draft dataset to NZLUSG for review/comment | Richard/BSI | May 2026 | Planned |
| P | Action | Schedule Meeting 2 for June 2026 final release; include overview + validation results | Richard/BSI | Before June 2026 | Planned |

## Minutes

### Welcome & refresher (1:00) — Richard Law

Richard opened with a statement on the purpose of the NZLUSG, and an overview of NZLUM v0.3 which the NZLUSG is tasked with considering.

**Purpose:**

- Review NZLUM now that it has been implemented as a pilot national map.
- Consider changes raised by end users (or those informed by end users).
- Ensure NZLUM does not have a single "owner".

**Refresher:**

- New Zealand lacks a national land-use map.
- Regional variants have been produced ad hoc—useful regionally but not suitable for national-scale reporting, modelling, or change detection.

### Introductions (1:10) and requirements gathering (1:20) — All

Participants outlined interests/requirements:

- **Robert Cardwell:** Urban and rural economic modelling; WISE modelling (Auckland, Wellington, Waikato); cellular automata land-use change modelling for natural hazards scenarios.

- **Haydon Jones (Waikato RC):** Land use as key driver of impacts/change; national foundational layer; SOE monitoring/reporting; land-use modelling; riparian monitoring; modelling inputs; prioritisation tools; catchment characterisation.
- **Ashton Eaves (HBRC):** Land-use change; hazard exposure; fragmentation and highly productive land loss; upstream land use and water quality; targeting planting/forestry for erosion control; carbon crops vs productive crops (ETS); phasing out productive land.
- **Deborah Burgess (MfE):** National requirements/RM needs; key dataset and policy impacts; modelling risk for climate adaptation scenarios; cropping/cultivation for national modelling.
- **Carolina Faka'osi (LINZ / Toitū Te Whenua):** Greg apologised. Greg and Carolina manage **DVR property data** (land-use codes); LINZ keen to contribute to classification development via maintenance of national property datasets.

## Questions from preparation (from 1:45) — Led by Richard Law

*Adequacy of the taxonomy (classes, definitions, arrangement)*

Richard tabled the guiding questions (taxonomy adequacy; hierarchy; missing/moved/combined classes; definitions; deductive vs inductive approach).

**Rotational / periodic land uses (cropping/horticulture/grazing)**

- Ashton raised rotational cropping in horticulture and rotational pasture grazing systems, and whether NZLUM adequately deals with these "mobile"/periodic land uses.
- Richard noted rotational land uses are difficult to detect/record. NZLUM is "inter-annual" but periodicity is not defined; rotational horticulture may need a specific timeframe (e.g., record crops grown in previous five years; beyond that considered lapsed/changed). Richard asked whether annual mapping would reveal rotational practices without special handling.
- Deborah asked about dataset generation frequency; noted LCDB now identifies annual cropping rather than relying on single observations; suggested a minimum 5-year period to understand a parcel.
- Haydon supported a 5-year timeframe as suitable. Discussion also noted distinguishing true rotation vs transition (possibly 5 or 10 years). Stella noted potato growers may take 10 years to return to the same area due to pests.
- The group noted that class definitions (especially cropping/horticulture) may need targeted attention for timeframe clarity (5 vs 10 years).

**Decision:**

- Class **2.3.0** to include an explicit **5-year** period for rotational crops.

## Intensive vs extensive dry stock; horses

- Haydon raised that horses can be intensive (e.g., Waikato) and definitions should capture intensity/use rather than stock type; stock density would be ideal but is not accessible.
- Discussion included whether physiography (flat/hill/high country) could be used as a proxy where stock density data is absent, with stock density treated as a future attribute if data becomes available.

## Decisions:

- For **2.2.2 Intensive Dry Stock**, remove the final sentence currently directing deer/goats/horses into extensive class, acknowledging these systems are often intensive.
- Amend **2.6.4 Horse studs** to clarify it applies to the intensive parts of horse studs, while relatively more extensive pastoral aspects should be captured under **2.2.2**.

## Nature Conservation and zoning alignment

- Ashton asked whether **1.1.0 Nature Conservation** aligns with government zoning plans.
- Richard noted 1.1 is intended to map directly to PAN-NZ. This can be reviewed when a zoning standard is operational; some zones may be suitable for concordance in other subclasses of class 1.

## Urban classes (class 3) – LINZ input

- Carolina noted urban classes under class 3 are a large subject and will email suggestions, including LINZ datasets that could be used.

## Action:

- Carolina to email further input on urban classes under class 3 and relevant LINZ datasets.

## Rural residential vs "lifestyle" properties; parcel size threshold and zoning context

- Deborah raised need to distinguish rural residential vs lifestyle categorisation; noted a <2 ha threshold for "residential" but need to distinguish urban residential, rural residential, and larger semi-residential properties (avoid "lifestyle" term).

- Discussion included options such as "small" vs "large" rural residential, and/or alignment to zone framework standards.
- Robert noted classification can be improved over time and while attributes are important, end users can be expected to consider their own additions and modifications to meet their needs. (Pre-determined, "baked-in" thresholds may make this more difficult?)
- Haydon noted mismatch between valuation dataset "lifestyle" class and NZLUM residential classes; recommended cross-referencing district zoning and applying parcel size threshold (e.g., 2 ha). If >2 ha and in a general rural/rural production zone, then it is likely some form of primary production (commercial/supplementary/hobby). Haydon emphasised reflecting actual use and avoiding vagueness because "lifestyle" can span very different uses/impacts. Haydon's suggestion is that any parcel < 2 ha (but above 0.4 ha) with a dwelling (perhaps through DVR improvements, or an electoral address point), and an appropriate zone, is "rural residential". In fragmentation methodology, any parcel > 2 ha (with or without a dwelling) is considered non-residential. Parcels <= 2 ha without a dwelling are probably in transition to residential. Haydon suggests that parcels > 2 ha in a non-urban zone should be classified under class 2, even when DVR land use is recorded as lifestlye, but they may also need some other indicator of primary production. If this is difficult, when perhaps we could use a new secondary class of undifferentiated "small to medium-lot production" under class 2. The term "small to medium" aligns with land fragmentation size categories and terminology with the assumption that properties > 40 ha aren't classified as lifestyle in any circumstance.
- Haydon's view is that "lifestyle" is not a land use, it rather suggests some type/s of primary production occurring, at a variety of scales, but with the inference that it is not the resident's primary source of income. But NZLUM should attempt to reflect the actual undertaken activity on the land, and not the **motivation** of the activity ("to maintain a lifestyle").

**Decision:**

- Apply a **2 ha parcel-size threshold, presence of dwelling, and appropriate zoning context** to identify rural residential land (Class 3). Do not use the term "lifestyle".
- Properties > 2 ha in a rural context that are otherwise identified only as "lifestyle" (e.g. through DVR or other sources), should rather be considered some type of primary production (Class 2), including the option of a new secondary class, 2.X "Smallholder farm". Tertiary classes thereof could follow a size gradation as used in land fragmentation reporting.

**Reference noted:**

- Parcel-size thresholds used in national land fragmentation indicator: https://environment.govt.nz/assets/Publications/land-fragmentation-report.pdf (tables 5 and 6 adapted below)

| Broad parcel size classes | Code | Detailed parcel size classes (ha, interval) |
|---|---|---|
| Very small | A | (0,2] |
| Small | B | (2,4] |
|  | C | (4,8] |
| Medium | D | (8,20] |
|  | E | (20,40] |
| Large | F | (40,100] |
|  | G | (100,+∞) |

| Broad parcel size classes | Code | Detailed parcel size classes (ha, interval) | With dwelling |
|---|---|---|---|
| Urban residential | X1 | (0,0.2] | Y |
|  | X2 | (0.2,0.4] | Y |
| Rural residential | X3 | (0.4,1] | Y |
|  | X4 | (1,2] | Y |
| Non-residential | X5 | (2,+∞) | Y or N |

### Community Services placement

- Carolina queried whether **3.2.3 Community Services** should be separated into its own category rather than sitting under Public Recreation and Services.

**No decision recorded.**

**Communication vs utilities (structure proposal)**

- Carolina suggested communication under transport/communication might fit under utilities.
- Richard noted navigation and communication is the exception within the transport/communication grouping; other subclasses relate to transportation.

**Action (proposed):**

- Expand utilities to include navigation/communication assets; remove **3.6.5** and replace with new **3.5.8**; rename **3.6.0** to "Transportation".

**Formal specification (ISO 19144-3:2024 LUML)**

- Richard raised whether NZLUM should be described using LUML; proposed discussing with ABARES (Australia) and noted adoption challenges.
- Deb and Richard discussed that pest control forms part of land use in ISO; Richard noted possible overlay/management-practice concepts (e.g., hunting permits as pest control/recreation distinct from primary land use).

**Action (proposed):**

- Richard to speak with ABARES regarding LUML and potential collaboration.

**Defence areas**

- Defence areas in natural contexts considered acceptable under class 1; defence in built-up contexts may require a separate class (examples raised: Linton, Ohakea).

**Action (proposed):**
- Add a defence class under class 3 with subclasses for the three service branches.

**Data sources / provenance recording**

- Richard noted data source recording is currently a vague list of organisations; not controlled/enumerated; weighting differs by case and absence of data can also inform decisions. DOI option exists but uncommon.
- Ashton supported continuing to record provenance as future challenges are likely. Deb considered the current approach useful; no clear alternative proposed. Richard noted PROV-N has been used previously and a feature-ID-to-lookup-table approach could be explored later.

**Decision:**

- No immediate change to provenance approach; PROV-N/lookup option noted for future exploration.

**Real change vs method change**

- Robert raised the need to ensure future updates distinguish real land-use change from methodological change.

**No decision recorded.**

### Tertiary classes to prioritise for mapping (within preparation questions)

- No explicit prioritisation discussion occurred, but the group's discussion focus was production agriculture and plantations (except possible reference to water and wastewater).
- Some interest also exists in built-up land (class 3), with some "low-hanging fruit" due to available data, particularly residential.

**Decisions:**

- Prioritise tertiary elaboration of **2.2.0 (grazing modified pasture systems)**, then other class 2 areas as newly acquired data permits.
- Without additional data acquisition, elaborate **class 3** land.

### Attributes (within preparation questions)

- Attributes were viewed as helpful; inclusion should be based on broad expected value across many applications to reduce duplicated effort by end users. Not all application needs should be met via NZLUM attributes.

**Decisions:**

- No new attributes proposed.
- **Permeability** remains optional (data absent, but recognised as useful).

### Online survey results & discussion (2:45) — James Ardo

- Survey has received **no submissions**.
- Potential reasons: low benefit; open ~3 months including summer break; email requests perceived as spam; survey length.
- Suggestion: shorten survey (possibly single open-text field) and use an LLM to identify themes across submissions.

**Decisions:**

- Leave survey open longer.
- Use LRIS engagement statistics to group users into domains; identify top 1–3 users/organisations per domain and call them to discuss use and improvement ideas.

### Open floor (3:10) — All

- Question: with 3D urban models/digital twins, might future mapping include 3D/vertical integration of land uses?
- Need for cost-effective capture of better regional-scale land-use source data; concern that current accessible sources are inadequate.
- Suggestion: ministerial lobbying for limited access to **NAIT** dataset as an alternative to AgriBase for stocking-rate information at farm scale.
- Suggestion: state data source limitations/caveats more clearly (e.g., DVR caveats).
- Robert suggested funding approach: identify a "beachhead" organisation/end-user with strong need and funding capacity (example raised: Rabobank) that can tolerate an imperfect/prototype dataset while supporting operationalisation.

### Next meeting / Meeting 2 (3:25) — Richard Law

- Draft dataset to be sent to NZLUSG for review and comment in **May 2026**.
- Schedule Meeting 2 to coincide with final **June 2026** dataset release; agenda to include general overview and validation results.

### Close (3:30)

Meeting closed at **3:30 pm**.