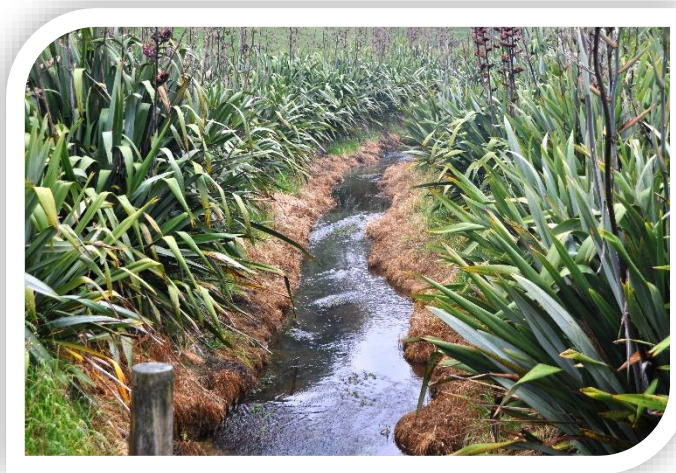




Farm Data Standards

Farm Features and Attributes

Data Dictionary Version 1.2



Andrew Cooke, Sailee Patel
24 August 2018



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Ministry for Primary Industries
Manatū Ahu Matua





1 Document Management

1.1 Referenced Documents

Open Geospatial Consortium - [OGC® WaterML](#)

Open Geospatial Consortium - [OGC Soil Data IE](#)

OVERSEER - [Best Practice Data Input Standards](#)

International Organization for Standardization (ISO) - [ISO 19110](#)

Dairy NZ - [Sustainable Dairy Water Accord](#)

INSPIRE¹ Data Specification - [Agricultural and Aquaculture Facilities](#)

INSPIRE Data Specification – [Cadastral parcels](#)

INSPIRE Data Specification – [Geographical Grid Systems](#)

INSPIRE Data Specification – [Hydrography](#)

INSPIRE Data Specification – [Area Management/Restriction/Regulation Zones and Reporting Units](#)

INSPIRE Data Specification – [Soil](#)

INSPIRE Data Specification – [Protected Sites](#)

INSPIRE Data Specification – [Land Cover](#)

INSPIRE Data Specification – [Transport Networks](#)

INSPIRE Data Specification – [Utility and Government services](#)

INSPIRE Data Specification – [Habitats and Biotopes](#)

INSPIRE Data Specification – [Elevation](#)

INSPIRE Data Specification – [Natural Risk Zones](#)

European Petroleum Survey Group - [EPSG parameter registry guide](#)

Wolfert, S and Allen, J. Farming for the future: Towards better information-based decision-making and communication. 2011. A Report for the Centre of Excellence in Farm Business Management pp 27.

¹ Infrastructure for Spatial Information in Europe

INSPIRE Feature Concept Register - <http://inspire.ec.europa.eu/featureconcept>

INSPIRE Data Specification on Administrative Units – Technical Guidelines
<https://inspire.ec.europa.eu/id/document/tg/au>

International System of Units - https://en.wikipedia.org/wiki/International_System_of_Units

1.2 Related Documents

Related standards documents on the [Farm Data Standards website](#) include:

- Farm and Model Data Standard
- Pasture Feed and Grazing Data Standard
- Irrigation and Effluent Data Standard
- Land Application Data Standard

Particular reference should be made to the Farm and Model Data Standard which also includes data types with a spatial attribute. These have been referenced accordingly within this document.

1.3 Latest Revisions

The users of this standard should ensure that their copies of the above-mentioned documents are the latest revisions. The latest version of this Standard will always be published at www.farmdatastandards.org.nz.

1.4 Version History

Date	Changes Made	Version #	Authors
24 August 2018	Update Referenced Documents section 1.1 Inclusion of Version History Section 1.4 Update measurement units for area to include m ² Rename Cultivable Area to Cultivable Area	1.2	Andrew Cooke, Sailee Patel
13 December 2016	Changes to Scope and Application section 2.3 Addition of Location Identification section 2.6	1.1.1	Vicki Fabling, Harry Tucker, Andrew Cooke
18 October 2016	Published version	1.1	Vicki Fabling, Harry Tucker, Andrew Cooke



1.5 Review of Standards

Suggestions for improvement of this document will be welcomed. Submit your comments using the feedback mechanisms at www.farmdatastandards.org.nz.



2 Introduction

2.1 Overview

Pastoral farming is a data rich activity. Most biophysical processes from soil nutrient management to cow performance have both paper based and more organised data bases recording status, productivity and intentions. There are a significant number of tools covering livestock, nutrition and financial management². Most of these require the user to re-enter data from other sources and they overlap in functionality. It is probable that if data had been more accessible their design would have better focussed on the service they undertook to provide. Farmers will benefit from a highly innovative technology sector that delivers applications that are simple to use and access, which source the information they need without impedance and deliver value.

This document is part of a work stream focusing on Data Standards for interchanging farm and land information. Development of this Data Standard began with a workshop of interested parties in November 2015, followed by consultation with a wider group. This draft document is now distributed for final consultation and feedback.

2.2 Outcome Statement

Broad adoption of a common vocabulary and data dictionary for exchange of farm information will result in farmers and other industry parties entering data only once and having that data readily accessible for populating multiple decision-making systems. As a result, industry and individual farm businesses will be better placed to undertake systems analysis to inform management practice. More accurate and structured interchange of farm data will also support industry breeding objectives and other information system targets.

2.3 Scope and Application

This standard relates to Features that are useful at a farm scale, **which have a spatial representation and that are likely to be interchanged**. The standard builds on and complements existing data standards such as those developed by the Open Geospatial Consortium and the Infrastructure for Spatial Information in Europe.

² Wolfert, S and Allen, J. Farming for the future: Towards better information-based decision-making and communication. 2011. A Report for the Centre of Excellence in Farm Business Management pp 27.



The standard addresses:

- Identification of Farm Features using a feature catalogue.
- The attributes of the Farm Features and references to source documents using a Data Dictionary.
- Farm Emergency Locations
- Enumerations relating to Agricultural Buildings and activity values for land (Plot activity values).

2.4 Interpretation

For the purposes of this standard, the word ‘SHALL’ refers to requirements that are essential for compliance with the standard, while the word ‘SHOULD’ refers to practices that are advised or recommended. The term MAY is used to distinguish a permissible or optional practice.

The terms ‘Normative’ and ‘Informative’ have been used in this standard to define the application of the Appendix to which they apply. A ‘Normative’ Appendix is an integral part of a standard while an ‘Informative’ Appendix is only for information and guidance.

2.5 Definitions and Abbreviations

For the purposes of this standard, the following definitions shall apply:

Term	Definition
Cadastral	Map or survey showing the extent, value, and ownership of land.
ha	Hectare. Areas are to be specified in m ² for compliance with international standards ³ . These measurements can be converted, for example to hectares and does not affect what end users will see.
ISO Date	International Standard 8601 date format: “YYYY-MM-DD”
m	metre

³ INSPIRE Feature Concept Register - <http://inspire.ec.europa.eu/featureconcept>



2.6 Location Identification

A Farm Feature or Attribute SHALL be defined as a location. The Animal Data Standard⁴ discusses in section 3.1 the identification of locations or farms. The standard specifies several identifiers that are accepted for property identification in New Zealand and supports the interchange of data using these mechanisms. This Data Standard adopts the same location identification.

Several identifiers are accepted for property identification in New Zealand:

- Ministry of Primary Industry FarmsOnLine identifier;
- NAIT Location identifier (one or more FarmsOnLine identifiers registered with NAIT)
- AgriBase⁵ farm_id (based on a coordinate pair in lat/long, NZTM or NZMG coordinates)
- EPCglobal Serialised Global Location Number⁶ (as used by the NZ Business Number system); and
- Herd Testing Location identifier using the NZMS1 (1939 to 1975) map grid reference.

For historic reasons, it will be necessary to support the interchange of data utilising all of these mechanisms. This standard therefore requires that location identifiers shall be prefixed with a URN namespace identifier. Acceptable URN namespaces for use in New Zealand location identifiers shall be:

- urn:epc:id:sgln or
- a nzl: registered location namespace.

For specific interchanges agreed between two parties, the parties may agree to exchange identifiers within a single namespace only, and dispense with the namespace prefix.

2.7 Spatial Attributes

Features with location attributes can be described by a set of geographic information. **When transferring data about physical farm features, the following Geographic Coordinates, Geographic Shape, and Feature Identifier SHOULD be interchanged with that data. Geographic coordinates and shape are applicable for each location feature so will not be replicated throughout the document.**

⁴ Animal Data Standard (<http://www.farmdatastandards.org.nz/animal-data/>)

⁵ AgriBase, AsureQuality (<https://secure.asurequality.com/capturing-information-technology-across-the-supply-chain/agribase-database-for-new-zealand-rural-properties.cfm>)

⁶ EPCglobal SGLN and GLN are defined at <http://www.gs1.org/gdsn/standards>



Attributes	Data Types and Notes
Geographic Coordinates	Coordinates representing a location, using latitude and longitude, or a recognised coordinate system identified using the European Petroleum Survey Group (EPSG) parameter registry guide .
Geographic Shape	OGC Web Feature Service URL or string of embedded feature, using a recognised coordinate system identified using the European Petroleum Survey Group (EPSG) parameter registry guide .
Feature Identifier	String: Identifier used to identify the feature
Feature Name	String: Name used to identify the feature
validFrom	ISO Date : Date at which this spatial data object begins
validThrough	ISO Date: Date at which this spatial data object ends



3 Feature Catalogue

This section of the document is a Feature Catalogue aligned to terms described in [ISO 19110](#). Use of features for agricultural purposes overlaps with other uses of the same feature types, and as a result many of the features listed here are defined in other standards. Overlaps are resolved as follows:

- The primary standard for any feature types in another domain is referenced beside that feature type; and
- Appendix A describes attributes for these features that are most relevant to the NZ primary sector, but does not reproduce all attributes from a referenced Standard. The reader is to use the referenced Standard as the definitive source to ascertain relevant attributes.

3.1 Farm Features

Feature Type	Definition	Synonyms	Feature Catalogue/Package
Cadastral Parcel	Area defined by cadastral registers or equivalent. In NZ, the cadastral parcel encompasses the entire area of a farm property.	Land Parcel, Land Title, Property title	INSPIRE D2.8.I.6 Data Specification on Cadastral Parcels – Technical Guidelines
Cadastral Boundary	Part of the outline of a cadastral parcel. One cadastral boundary may be shared by two neighbouring cadastral parcels.	Real property boundary	INSPIRE D2.8.I.6 Data Specification on Cadastral Parcels – Technical Guidelines
Holding	The whole area and all infrastructures included on it, under the control of an operator to perform agricultural or aquaculture activities. It must be composed of one or more Sites. It could be considered as the synthetic geographical representation of a unique operational, economical or legal body.	Farm Unit, Agribusiness Unit, Farm Entity	D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines Farm Entity: Farm and Model Data Standard



Feature Type	Definition	Synonyms	Feature Catalogue/Package
Site	Belonging to a holding, it is the geographical representation of land that constitutes a management unit. It includes all infrastructure, equipment and materials.	Farm Block, Management Block, Land Management Unit (LMU)	D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines Management Block: Farm and Model Data Standard
Plot	Independent portion of land or water surface (clearly delimited e.g. by fences, markers etc) including (or matching) the limits of a Site, that is the support for a specific use directly related to Agricultural activities.		D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines
Field	Special case of a Plot or Site that is used to grow arable crops.		Appendix A.1
Paddock	Special case of a Plot or Site that is used to graze livestock.		Appendix A.2
Wetland	A poorly drained or periodically flooded area where the soil is saturated with water, and vegetation is supported.	Swamp	D2.8.I.8 Data Specification on Hydrography – Technical Guidelines
Drainage Basin	Area having a common outlet for its surface runoff.	Sub-basin, catchment; catchment area; drainage area; river basin; watershed.	D2.8.I.8 Data Specification on Hydrography – Technical Guidelines



Feature Type	Definition	Synonyms	Feature Catalogue/Package
Management, Restriction or Regulation Zone	Area managed, regulated or used for reporting at international, national, regional and local levels. Extended to include information describing activities that are controlled to achieve specific environment objectives within the zone.	Management Zone, Regulation Zone, Restriction Zone	D2.8.III.11 Data Specification on Area Management/Restriction/Regulation Zones and Reporting Units – Technical Guidelines
Riparian Zone	Special case of a management restriction or regulation zone. The interface between land and a watercourse, designated for special protection, such as the Sustainable Dairy Water Accord (SDWA).		Appendix A.4
Soil Body	Part of the soil cover that is delineated and that is homogeneous with regard to certain soil properties and/or spatial patterns. NB: This is synonymous with soil zones as defined in Farm and Model Data Standard.	Soil Type, Soil Zone	D2.8.III.3 INSPIRE Data Specification on Soil – Technical Guidelines ANZSoilML Soil Zone: Farm and Model Data Standard
Protected Site	An area designated or managed within a framework of international, Community and Member States' legislation to achieve specific conservation objectives. IN NZ, this could be used for QEII Conservation zones.	Cultural Site, Ecological Area, Archaeological Site	D2.8.I.9 Data Specification on Protected Sites – Technical Guidelines
Land Cover Unit	The geometry of a Land Cover observation. More commonly used for regional and national planning purposes.	Forest, Pastures, Permanently Irrigated Land, etc	D2.8.II.2 INSPIRE Data Specification on Land Cover – Technical Guidelines
Watercourse	A natural or man-made flowing watercourse or stream.	River, Stream	D2.8.I.8 Data Specification on Hydrography – Technical Guidelines



Feature Type	Definition	Synonyms	Feature Catalogue/Package
Crossing	A man-made object allowing the passage of water above or below an obstacle.	Bridge, Culvert	D2.8.I.8 Data Specification on Hydrography – Technical Guidelines
Dam or Weir	A permanent barrier across a watercourse used to impound water or to control its flow.	Dam, Weir	D2.8.I.8 Data Specification on Hydrography – Technical Guidelines
Waterway	A collection of water link sequences and or individual waterway and/or watercourse links that are characterized by one or more thematical identifiers and/or properties, which perform a navigable route within a water body (oceans, seas, rivers, lakes, channels or canals).	Canal, Navigable Waterway	INSPIRE D2.8.I.7 Data Specification on Transport Networks – Technical Guidelines
Utility Network	Collection of network elements that belong to a single type of utility network.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Utility Link	A linear spatial object that describes the geometry and connectivity of a utility network between two points in the network, e.g. Cable, pipe, and ducts.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Utility Node Container	A point spatial object used for connectivity, and may also contain other spatial objects eg tower, manhole, pole		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Pipe	A utility link or link sequence for the conveyance of solids, liquids, chemicals or gases from one location to another. A pipe can also be used as an object to encase several cables (a bundle of cables) or other (smaller) pipes.	Pipeline	D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines



Feature Type	Definition	Synonyms	Feature Catalogue/Package
Cable	A utility link or link sequence used to convey electricity or data from one location to another.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Duct	A utility link or link sequence used to protect and guide cable and pipes via an encasing construction		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Tower	Simple tower object which may carry utility objects belonging to either single or multiple utility networks		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Manhole	Simple container object which may carry utility objects belonging to ether single or multiple utility networks.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Pole	Simple pole (mast) object which may carry utility objects belonging to ether single or multiple utility networks.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Cabinet	Simple cabinet object which may carry utility objects belonging to ether single or multiple utility networks.		D2.8.III.6 INSPIRE Data Specification on Utility and Government Services – Technical Guidelines
Fence	A mesh, railing, hedge, or the like for preventing free access to an area.	Hedge, Railing	Appendix A.5
Gate	An opening in a fence or other enclosure, for the purpose of giving pedestrian or vehicular entry and exit, and capable of being closed with a barrier.	Grid	Appendix A.5
Road	A collection of road or track link sequences and/or individual road links that are characterized by one or more thematic identifiers and/or properties.	Track, Race	INSPIRE D2.8.I.7 Data Specification on Transport Networks – Technical Guidelines



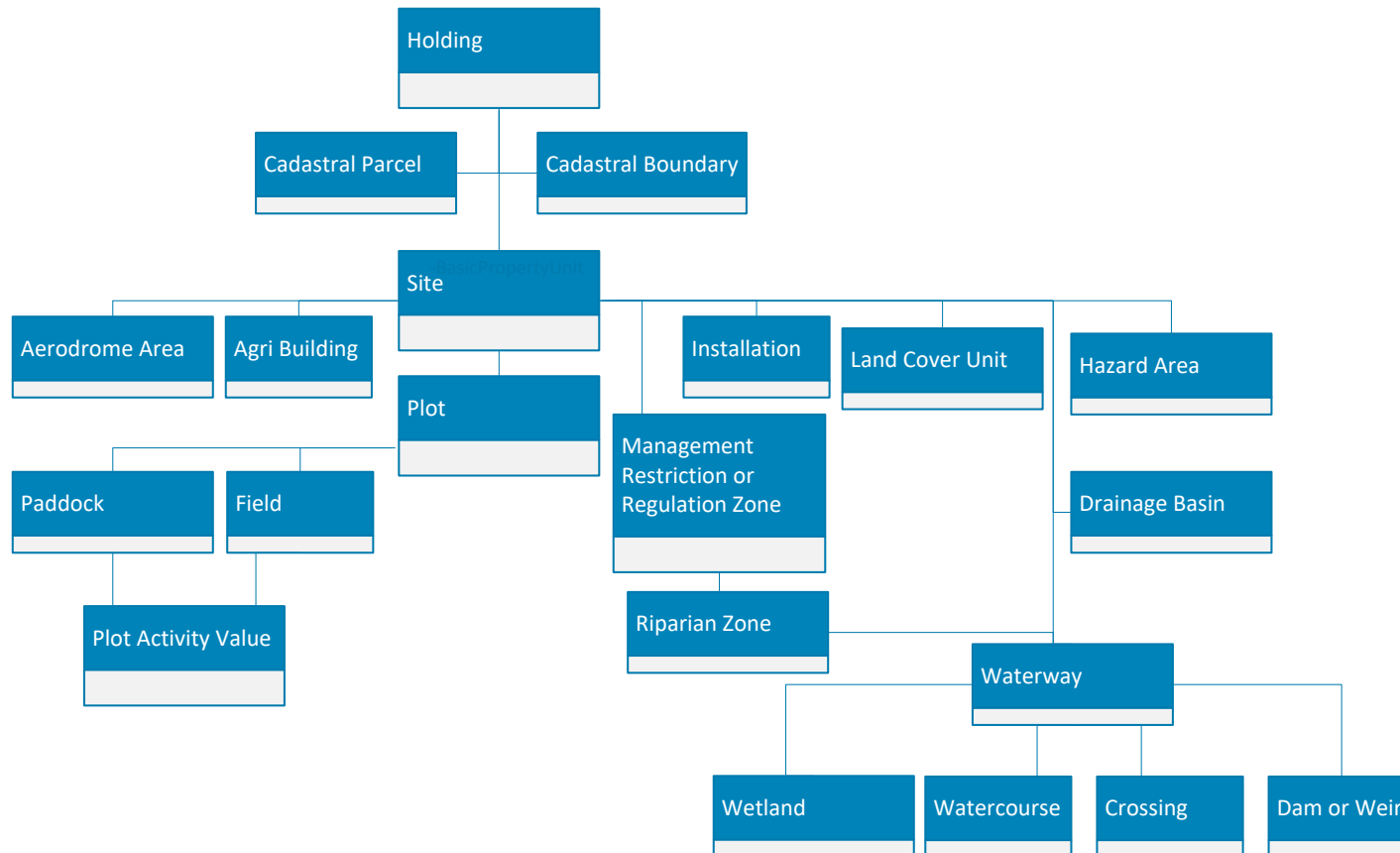
Feature Type	Definition	Synonyms	Feature Catalogue/Package
Aerodrome Area	A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft and/or helicopters.	Runway	INSPIRE D2.8.I.7 Data Specification on Transport Networks – Technical Guidelines
Agri Building	A construction to store agricultural commodities, harvested crops, keeping of animals or storing equipment.	Animal housing, Product storage, Equipment shed	D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines Additional structure attributes – Farm and model – Section 5.8
Installation	Stationary technical unit part of a facility where one or more Agricultural activities are carried out, and any other directly associated activities which have a technical connection with the activities carried out on that site.	Dairy shed, Shearing sheds, offal pit, dump, quarry	D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines Additional structure attributes – Farm and model Data Standard– Section 5.8
Water Management Installation	The source of water used for activities of the Site.	Irrigator, Well, Water Supply	D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines
Contour Line	Linear spatial object composed of a set of adjoining locations characterized by having the same elevation property value. It describes, together with other contour lines present in the area, the local morphology of the Earth's surface	Contour	D2.8.II.1 INSPIRE Data Specification on Elevation – Technical Guidelines
Spot Elevation	Class of spot elevation according to the LAS specification of the American Society for Photogrammetry and Remote Sensing (ASPRS).	Spot Height	D2.8.II.1 INSPIRE Data Specification on Elevation – Technical Guidelines



Feature Type	Definition	Synonyms	Feature Catalogue/Package
Hazard Area	Discrete spatial objects representing a natural hazard namely geological, hydro-meteorological or biological. For additional attributes, refer to the Health and Safety Data Standard.	Hazard, Bluff	D2.8.III.12 INSPIRE Data Specification on Natural Risk Zones – Technical Guidelines
Emergency Locations	Spatial objects representing an emergency location eg evacuation point		Appendix

3.2 Feature Hierarchy

The diagram below illustrates the hierarchy of each spatial feature **as defined by NZ Farm Data Standards**, beginning with the Holding as the broad definition of the total farm area. Each vertical level represents a sub-layer of the preceding feature.





Appendix A - Feature Attributes Data Dictionary (Normative)

This section provides more detail on spatial features in Section 3 that do not have a reference document, but are still considered as important features for spatial data on NZ farms. Note that each feature will have geographic coordinates and shape attributes and a Feature Identifier and/or Feature Name as described in [Section 2.6](#).

A.2 Plot Special Case Attributes

A Plot consists of geographical features with detailed information about the management activities performed on them, such as irrigation and drainage. The spatial blocks that a farmer uses to manage land may be different to those defined by land titles, soil, or climate zones. In New Zealand we use the term “Management Blocks” to define blocks that are managed differently, which is the equivalent of a Site in the INSPIRE framework. Typically these differ in irrigation or effluent application, fertilisers applied, and types and numbers of stock grazed. A Site can be separated into plots, and then further into paddocks or fields, which define sub-sections of a Site/Management Block. Refer additional attributes relating to pastoral blocks and support blocks contained in the [Farm and Model Data Standard Section 5.5](#)

A Paddock describes the special case of a plot that is used specifically for grazing livestock. It is an individual area delineated by a boundary. The paddock attributes listed here have been defined specifically to reflect NZ pastoral farming and may be used in addition to the attributes of a Plot or Site.

A Field describes the special case of a plot that is used specifically for arable cropping. It is an individual area delineated by a boundary. The field attributes listed here have been defined specifically to reflect the NZ arable cropping and may be used in addition to the attributes of a Plot or Site.



Feature	Attributes	Data Types and Notes
Plot	Plot Type	Enumeration: Field, Paddock
	Plot Name	String: the name used to refer to the field or paddock within the farm.
	Plot Activity Value	Enumeration: the type of vegetation grown here: e.g. permanent grassland. For INSPIRE code list, see Appendix C.2
	Secondary Plot Activity Value	String: Description of any secondary values relevant to the plot, i.e. fodder beet section on grazing plot.
	Pasture Type	Enumeration: Ryegrass/white clover, Browntop, Unimproved/tussock grasslands, SummerC4 (paspalum) pastures, C4 (kikuyu) pastures, Lucerne, Grass only (enumeration defined by Overseer ⁷)
	Pasture utilisation	Integer: %
	Average pasture N Concentration	Integer: %
	Total area	Float: Total plot area expressed in m ² (SI unit) or hectares (ha, accepted non-SI unit). Implementations must clearly specify which unit is used, and ensure consistent use. For spatial data interchange m ² should be used. ⁸
	Effective Area	Float: Effective area of the plot taking into account slope. Valid units for expressing area are m ² (SI unit) or hectares (ha, accepted non-SI unit). Implementations must clearly specify which unit is used, and ensure consistent use. For spatial data interchange m ² should be used. ⁸
Cultivable Area	Float: Effective area of the plot for cultivation (cropping) purposes. Valid units for expressing area are m ² (SI unit) or hectares (ha, accepted non-SI unit). Implementations	

⁷ OVERSEER is a trademark and a computer software model: See www.overseer.org.nz for more information. Parameters should be collected in line with the OVERSEER Best Practice Data Input Standards: (<http://www.overseer.org.nz/files/download/119b106220ef304>).

⁸ See section 6.1.3 at <https://inspire.ec.europa.eu/id/document/tg/au>



Feature	Attributes	Data Types and Notes
		must clearly specify which unit is used, and ensure consistent use. For spatial data interchange m ² should be used. ⁸
	Grazeable Area	Float: The area of the plot that may be grazed by livestock, in m ² (SI unit) or hectares (ha, accepted non-SI unit). Implementations must clearly specify which unit is used, and ensure consistent use. For spatial data interchange m ² should be used. ⁹
	Ownership	Enumeration: Owned, Leased
	Topography	Enumeration: Flat, Rolling, Easy hill, Steep hill (this enumeration is defined by OVERSEER ²)
	Date Start	ISO 8601 Date – Date started operating for specific paddock type
	Date End	ISO 8601 Date - Date ended(ceased) operating for specific paddock type

A.4 Riparian Zone Attributes

The riparian zone is a special case of the management restriction or regulation zone, describing the interface between land a river or stream. A riparian zone is considered a terrestrial biome in its own right and plays a considerable role in ecology, environmental management, and soil conservation. This term is used predominantly in the New Zealand dairy industry context, closely tied to riparian management plans which include riparian planting, fencing, and exclusion of stock from waterways. The Sustainable Dairy Water Accord ([SDWA](#)) describes the attributes contained here.

Feature	Attributes	Data Types and Notes
Riparian Zone	Riparian Zone Type	Enumeration: Waterway, Drain, Wetland, Other (Definitions used in SDWA)
	Riparian Zone Name	String: Identification or description of the Riparian Zone.

⁹ See section 6.1.3 at <https://inspire.ec.europa.eu/id/document/tg/au>



Feature	Attributes	Data Types and Notes
	SDWA Management	Boolean – Describes if this feature is subject to SDWA Management requirements
	SDWA Compliant	Boolean – Describes if the feature is compliant with the SDWA
	SDWA Dispensation	Boolean – Describes if a SDWA dispensation is granted for this feature
	Fenced	Integer % - Percentage of feature fenced to exclude stock as defined in the SDWA
	Riparian Management Planting	Integer % - Percentage of Riparian planting as detailed in the Riparian Management Plan which is complete for this feature
	Regular Stock Crossing Point	Boolean – As defined in the SDWA
	Related Zone	String - Reference to a related riparian zone/s.
	Plan	String - Reference to, or citation of a plan (management or action plan) that describes the environmental objectives and measures that shall be undertaken in the zone to protect the environment.



A.5 Fence and Gate Attributes

Feature	Attributes	Data Types and Notes
Fence	Fence Type	Enumeration: Wire, Post and rail, Other
	Batten Distance	Float: m Distance between battens
	Wires/Rail Distance	Float: m Distance between wires or rails
	Number of Wires/Rails	Integer: Number of wires or rails
	Electric Wire Number	Integer: Number of wires electrified
	Planned Life	Enumeration: permanent, temporary, moveable.
Gate	Gate Type	Enumeration: Metal, Wooden, Other
	Latch Type	String

A.6 Emergency Location Attributes

Feature	Attributes	Data Types and Notes
Emergency Location	Emergency Location Type	Enumeration: First Aid Point, Evacuation Point, Emergency Vehicle Access Point, Ingress Point, Sign-in Point, Aerodrome Area



Appendix B – INSPIRE Feature Attributes Data Dictionary (Informative)

This Appendix is **Informative** and describes the attributes deemed most relevant to New Zealand’s primary production systems. In all cases, these attributes derive from the INSPIRE Data Specification documents already referenced, and these documents remain the primary or **Normative** source.

Feature	Attributes	Data Types and Notes
Cadastral Parcel	National Cadastral Reference	String: National code of the cadastral parcel as recorded by LINZ
	Area Value	Float: m ² Registered area value
Basic Property Unit	National Cadastral Reference	String: National code of the cadastral parcel as recorded by LINZ
	Area Value	Float: m ² Registered area value
Holding		Additional Holding Attributes are defined in the Farm and Model data standard as ‘Farm Entity’
Site		Additional Site Attributes are defined in the Farm and Model data standard as ‘Management Block’.
Plot	Plot Activity Value	Enumeration: Appendix C.2
	Area	Float: m ²
Drainage Basin	Area	Float: m ²
	Origin	Enumeration: natural, manMade
Management, Restriction or Regulation Zone	Competent Authority	String: description of the organisation(s) responsible for managing, restricting or regulating measures or activities within the zone
	Legal Basis	String: reference to, or citation of the legislative instrument or document that required the establishment of a zone.



Feature	Attributes	Data Types and Notes
	Plan	String: reference to, or citation of a plan (management or action plan) that describes the environmental objectives and measures that shall be undertaken in the zone to protect the environment.
Protected Site	Legal Foundation Date	ISO DateTime: The data that the protected site was legally created.
	Site Designation	
	Site Protection Classification	Enumeration: natureConservation, archaeological, cultural, ecological, landscape, environment, geological
Watercourse	Length	Float: m
	Width Range Upper	Float: The upper bound of width along its length
	Width Range Lower	Float: The lower bound of width along its length
Crossing	Crossing Type Value	Enumeration: aqueduct, bridge, culvert, siphon
Utility Network	Utility Network Type	Enumeration: electricity, oilGasChemical, sewer, water, thermal, telecommunications, crossTheme
Tower	Tower Height	Float: m The height of the tower
Pole	Pole Height	Float:m The height of the pole
Pipe	Pipe Diameter	Float: m Pipe outer diameter
	Pressure	Float: bar The maximum allowable operating pressure at which a product is conveyed through a pipe, commonly expressed in "bar".
Duct	Duct Width	Float: m
Aerodrome Area	Aerodrome Type	Enumeration: aerodromeHeliport, aerodromeOnly, heliportOnly, landingSite
	Surface Composition Value	Enumeration: asphalt, concrete, grass



Feature	Attributes	Data Types and Notes
AgriBuilding	AgriBuilding Type	Enumeration: See Appendix C.1 for valid values
Installation	Description	String: A description of the facility
Water Management	Water Quantity	Float: m ³ The quantity of water given by the water source
Installation	Type of Water Source	Enumeration: onFarmGroundWater, onFarmSurfaceWater, offFarmSurfaceWater, offFarmWaterFromCommonWaterSupplyNetworks, otherSources
Contour Line	Contour Line Type	Enumeration: master, ordinary, auxiliary
	Down Right	Boolean

Appendix C – Enumeration Lists

C.1 Type of AgriBuilding Value Enumeration List

NOTE: This Enumeration list is an abridged version of the INSPIRE Code list for AgriBuilding. Please refer to [D2.8.III.9 INSPIRE Data Specification on Agricultural and Aquaculture Facilities –](#)

[Technical Guidelines](#) for the complete enumeration list.

Animal Housing
Animal Housing Cattle
Animal Housing Pigs
Animal Housing Poultry
Animal Housing Other Species
Storage
Product Storage
Supply Storage
Fuel Tank
Water Tank
Manure Storage and Treatment Facility
Manure Silo Solid Dug
Manure Silo Liquid Manure
Manure Silo Slurry
Equipment Garage
Technical Installation
Greenhouse
Shed
Other



C.2 Plot Activity Value Enumeration List

Note that Pastoral, Cut and carry, Trees and shrub, riparian, wetland, and house, have been added to the list from the OVERSEER [Best Practice Data Input Standards](#). See the [Pasture, Grazing, & Feed Data Standard](#) for enumerations of crop classes, feed types, grazing systems, and pasture types.

Arable land seed and seedlings	Linseed (oil flax)
Aromatic plants, medicinal and culinary plants	Mushrooms
Barley	Normally producing olives for oil production
Berry species	Normally producing table olives
Cereals for the production of grain (including seed)	Nursery
Citrus plantation	Nuts
Common wheat and spelt	Oats
Cotton	Olive plantations
Cut and Carry	Open field
Dried pulses and protein crops for grain production (including seed and mixtures of cereals and pulses)	Other arable land crops
Dried pulses and protein crops of which peas, field beans and sweet lupins	Other cereals for the production of grain
Durum wheat	Other fibre crops
Energy crops (for the production of biofuels or other renewable energy)	Other industrial crops not mentioned elsewhere
Fallow land	Other oil seed crops
Flax	Other wine
Fodder roots and brassicas (excluding seed)	Pastoral
Fresh vegetables, melons and strawberries	Permanent crops
Fruit and berry plantation	Permanent grassland
Grain maize	Permanent grassland excluding rough grazings, pasture and meadow
Green maize	Permanent grazing grassland
Hemp	Temporary grazing grassland
Hops	Potatoes (including early potatoes and seed potatoes)
House	Quality wine
Industrial crops	Raisins



Leguminous plants	Rape and turnip rape
Rice	Table grapes
Riparian	Temporary grass
Rye	Tobacco
Soya	Trees and Shrub
Sugar beet (excluding seed)	Wetland
Sunflower	

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