



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

BioNet Systematic Flora Survey Web Service data standard

BioNet Web Services Version 1.0



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1. Introduction

The BioNet Systematic Flora Survey Web Service is an open application programming interface (API). It enables IT application developers to integrate Systematic Flora Survey data held in the BioNet Systematic Flora Survey database with software applications. As an open data initiative, the scope of applications spans the full breadth of potential uses – from mobile apps to organisational decision management business systems.

The BioNet Systematic Flora Survey Web Service is designed to align with the proof-of-concept national standard as defined at February 2020. All fields defined within the proof-of-concept national standard are presented in the SiteData and Observation tables of the BioNet Systematic Flora Survey Web Service. Other NSW specific fields are included and have been highlighted within the definition.

The web service does not replace the existing BioNet Atlas user interface, as it is intended to be used by software applications, not as a user interface.

This document provides detailed information on the data that are available through the BioNet Systematic Flora Survey Web Service. To ensure that this version of the data standard applies to the web service, please check the [online metadata](#) and confirm that the version of this document aligns with the value in 'bioNet:dataStandardVersion' for 'EntitySetName=SystematicFloraSurvey_SiteData' (see Figure 1).

```
<EntitySet Name="SystematicFloraSurvey_SiteData"  
EntityType="BioSvcApp.Models.tblFloraSurvey_SiteData"  
bioNet:bioNetOpenAPIVersion="3.1.0.0" bioNet:dataStandardVersion="1.0"  
bioNet:dateLastBulkUpdate="14/03/2020"/>
```

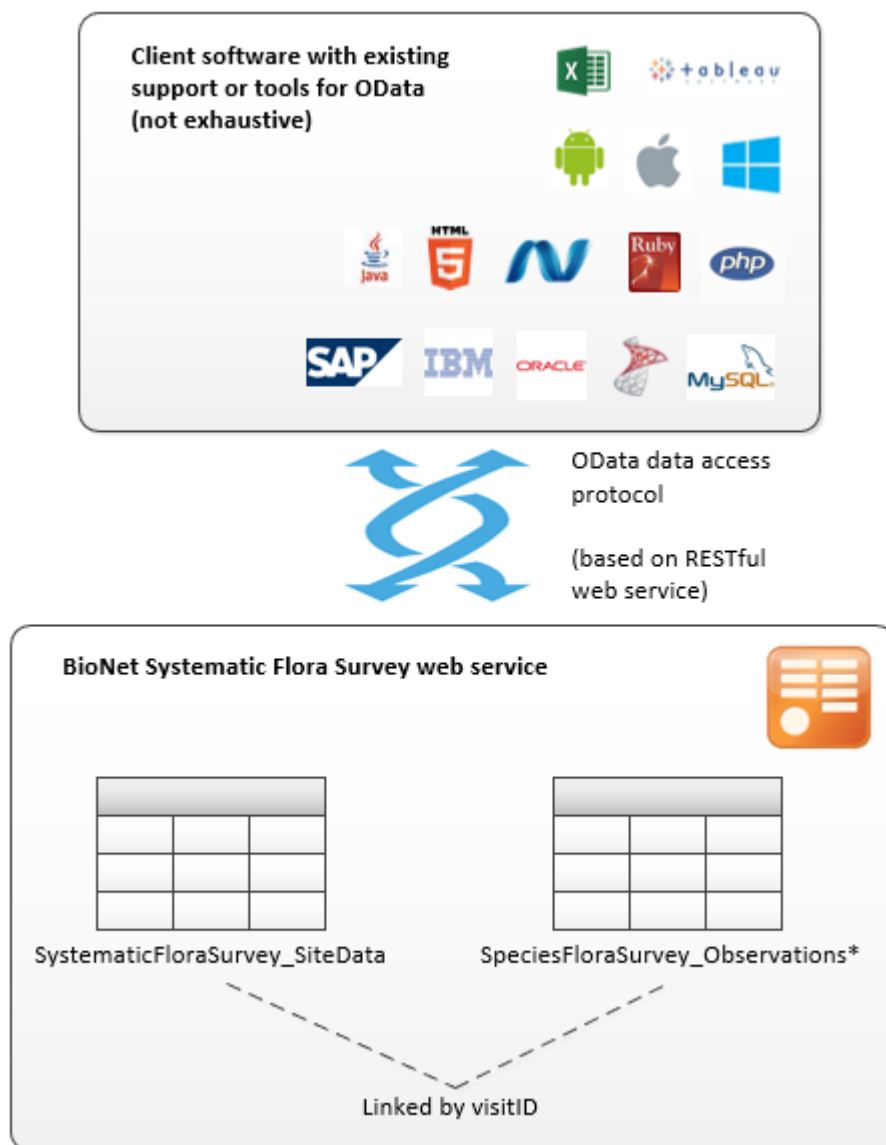
Figure 1 Metadata output

2. Overview of the web service and standard

The web service is an OASIS Open Data (OData) v4.0–based web service. OData provides a standardised RESTful protocol for querying and retrieving data and is already used for the BioNet Species Sightings Web Service. The following resources provide more background about the OData protocol:

- [Unlock your data with OData](#) – a short high-level explanatory video
- [What is the OData protocol?](#) – a short, more technical explanation of the protocol
- [OASIS Open Data Protocol \(OData\) TC](#) – the OASIS standard specification details
- [OData – the best way to REST](#) – the OData community website.

OData makes data available via entity sets. These can be thought of as tables of data, much like a tab within a spreadsheet. The Systematic Flora Survey Web Service will have two available entity sets, which are linked by visitID (see Figure 2).



* SpeciesFloraSurvey_Observations entity set proposed for release in future phase.

Figure 2 Conceptual overview of data exposure using the OData-based web service

The data standard for the SiteData and Observations entity sets is based on the proof-of-concept National Vegetation Plot data standard and the Darwin Core standard. Where data provided by the Department does not fit into an existing term in the proof-of-concept National Vegetation Plot data standard or Darwin Core, terms already in use in the Atlas of Living Australia (ALA) or new proprietary terms have been utilised. Figures 3 and 4 provide a high-level overview of the type of data communicated in each of the entity sets.

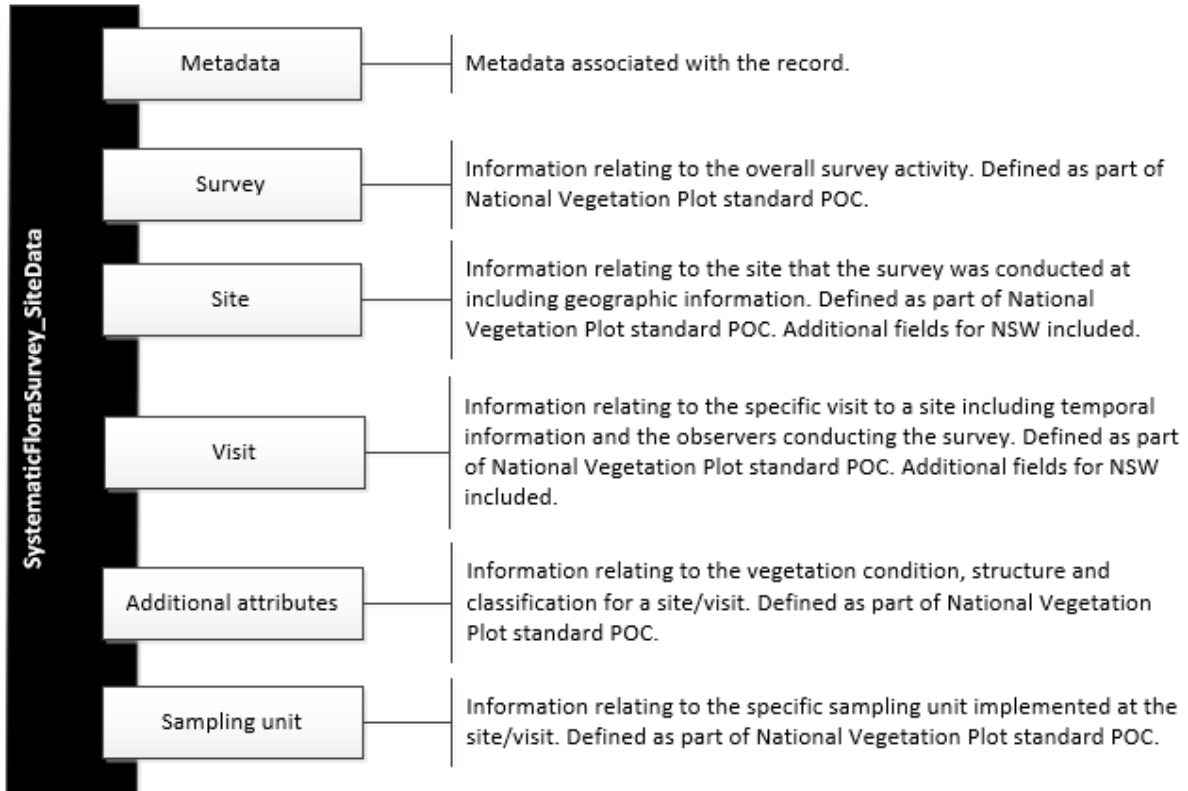


Figure 3 Overview of the categories of data shared via the SystematicFloraSurvey_SiteData entity set

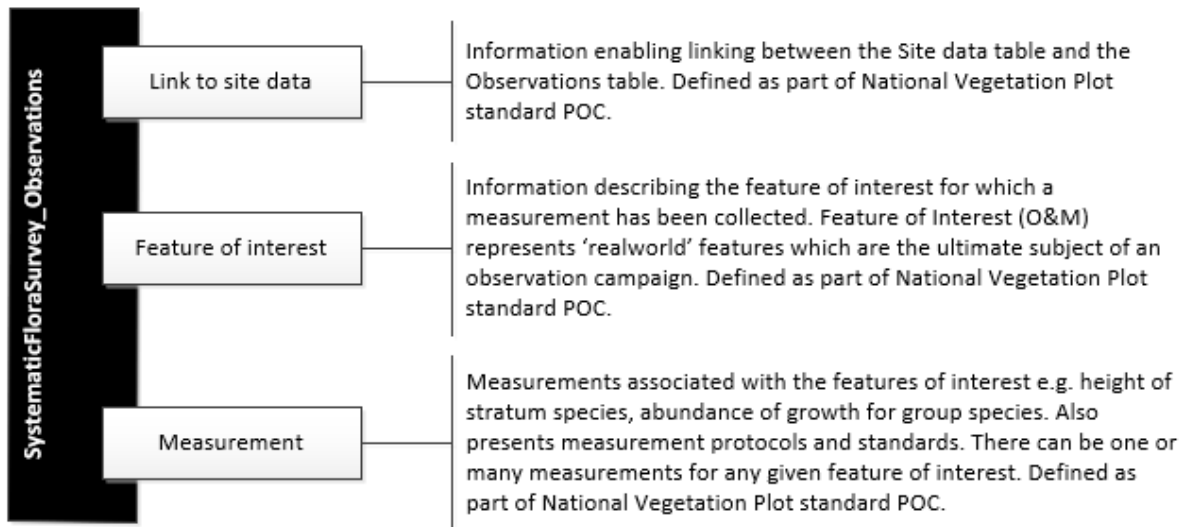


Figure 4 Overview of the categories of data shared via the **SystematicFloraSurvey_Observations** entity set

3. Specifications for the SystematicFloraSurvey_SiteData entity set

Tables 1–6 provide the exact specifications of the data fields available via the Systematic Flora Survey Web Service. Each table presents the group of terms that fall within the relevant category.

All data published in v1.0 of the BioNet Systematic Survey web service is publicly available. No data needing to be withheld or obfuscated in accordance with the Department's [sensitive species data policy](#) will be published. No access restrictions are defined or required.

Table 1 Metadata data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
institutionCode	1	The name (or acronym) in use by the institution having custody of the object(s) or information referred to in the record.	Text	'NSW Department of Planning, Industry and Environment'	VARCHAR (200)	None
ownerInstitutionCode	1	The name (or acronym) in use by the institution having ownership of the object(s) or information referred to in the record.	Text	'NSW Department of Planning, Industry and Environment', 'Birds Australia', 'Australian Museum'	VARCHAR (150)	None
collectionCode	1	The name, acronym, code or initialism identifying the collection or data set from which the record was derived.	Always 'BioNet Atlas of NSW Wildlife'	'BioNet Atlas of NSW Wildlife'	VARCHAR (50)	None
dcterms_rights	1	Information about rights held in and over the resource. Typically, rights information includes a statement about various property rights	Text	'CC-BY 4.0'	VARCHAR (300)	None

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Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		associated with the resource, including intellectual property rights.				
dcterms_rightsHolder	1	A person or organisation owning or managing rights over the resource.	Text	'NSW Department of Planning, Industry and Environment ', 'Birds Australia', 'Australian Museum'	VARCHAR (150)	None
dcterms_bibliographicCitation	1	A bibliographic reference for the resource as a statement indicating how this record should be cited (attributed) when used.	Atlas of NSW Wildlife <current date> <HH:MM> <AM/PM> +<HH:MM offset from UTC>. Note: the date and time are AEST adjusted for daylight saving and reflect the data and time that the web service data was last refreshed from the source data (BioNet Atlas of NSW Wildlife database).	'Atlas of NSW Wildlife 22/08/2014 12:47 AM +10:00'	VARCHAR (50)	None
dcterms_available	1	Date that the resource became or will become available.	DD/MM/YYYY HH:MM:SS AM/PM +HH:MM offset from UTC	'16/04/2010 4:02:29 PM +11:00'	DATETIME	None
dcterms_modified	1	The most recent date-time on which the resource was changed.	ISO 8601:2004(E). Note: OData only supports datetime offset, which mandates that the offset from Coordinated	'16/04/2010 4:02:29 PM +11:00'	DATETIME	None

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Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
			Universal Time (UTC) is given. For many historical records in the BioNet Atlas of NSW Wildlife we cannot be certain that the server capturing the data at the time was adjusted for daylight savings. To this end, the offset should not be relied upon.			
informationWithheld	0–1	Additional information that exists, but that has not been shared in the given record. [Systematic Flora Survey Web Service v1.0 will not publish any data subject to the sensitive species data policy, so informationWithheld does not require population. Future releases of the web service may publish data subject to sensitive species data policy and the informationWithheld field will be populated at this time.]	Text		VARCHAR (300)	None
dataGeneralizations	0–1	Actions taken to make the shared data less specific or complete than in its original form. [Systematic Flora Survey Web Service v1.0 will not publish any data subject to the sensitive species data policy,	Text		VARCHAR (300)	None

BioNet Systematic Flora Survey Web Services data standard 1.0

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		so dataGeneralization field does not require population. Future releases of the web service may publish data subject to sensitive species data policy and the dataGeneralization field will be populated at this time.]				
dcterms_language	1	The language of the resource.	RFC 4646 [RFC4646]	'en' for English	VARCHAR (3)	None

Table 2 Survey data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
surveyID	1	A unique ID that provides a link to attributes of a specified survey. A survey being an activity to undertake observations at one or more sites.	Integer	'2986'	INT	None
surveyName	1	Name of the Survey.	Text	'Botany Wetland Vegetation Survey'	VARCHAR (40)	None
surveyOrganisation	0-1	Name of organisation or individual for whom Survey is being conducted.	Text	'NSW Department of Planning, Industry and Environment', 'Bankstown City Council'	VARCHAR (40)	None
surveyType	1	Description of type of survey conducted.	Text	'Vegetation Survey'	VARCHAR (40)	None
surveyMethodology	1	Formal name of the survey methodology utilised.	Text	'Native Vegetation Interim Type Standard – January 2010'	VARCHAR (MAX)	None
studyMethodologyDescription	1	Further description or information regarding the survey methodology utilised.	Either text description or URL link	' www.environment.nsw.gov.au/research-and-publications/publications-search/native-vegetation-interim-type-standard '	VARCHAR (MAX)	None

Table 3 **Site data fields**

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
siteID	1	A unique ID to identify a sampling feature (O&M), such as a site, transect, station.	Alphabetic code	'GIR04S7M'	VARCHAR (40)	None
originalSiteCode	0-1	A site identifier defined or maintained by the original owner of the data (where available).	Alphabetic code	'GIR04S7M'	VARCHAR (40)	None
stateProvince	1	The name of the next smaller administrative region than country (state, province, canton, department, region, etc.) in which the Location occurs.	3-letter code for state. Note: Where the record does not overlap a valid Australian state, this field gives the value 'N/A'.	'NSW'	VARCHAR (15)	None
county	1	The full, unabbreviated name of the next smaller administrative region than stateProvince (county, shire, department, etc.) in which the Location occurs. In the context of NSW, the Local Government Area.	Text. Note: Where the record does not occur in a NSW LGA this field give the value 'N/A'.	'Clarence Valley', 'Dubbo', 'Tumut'	VARCHAR (120)	None
IBRAID	1	The unique ID associated with the IBRA region.	Alphabetic code Marine records attributed with N/A.	'NET'	VARCHAR (max)	None
IBRA	1	The name of the IRBA (Interim Biogeographic Regionalisation for Australia) Region within which the record occurs. This is based on IBRA version 7.0.	Controlled vocabulary as per Australia's bioregions (IBRA) . Note: If 'N/A' is given, this indicates that this	'New England Tablelands'	VARCHAR (100)	None

BioNet Systematic Flora Survey Web Services data standard 1.0

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
			field does not apply to the record.			
IBRASubregionID	1	The unique ID associated with the IBRA subregion.	Alphanumeric code	'NET02'	VARCHAR (max)	None
			Marine records attributed with N/A.			
IBRASubregion	1	The name of the IRBA (Interim Biogeographic Regionalisation for Australia) Subregion within which the record occurs. This is based on IBRA version 7.0.	Controlled vocabulary as per Australia's bioregions (IBRA) . Note: where a subregion occurs outside of NSW then the subregion name is not given, just the name of the state e.g. QLD. Note: If 'N/A' is given, this indicates that this field does not apply to the record.	'Beardy River Hills'	VARCHAR (100)	None
geodeticDatum	1	The ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic coordinates given in decimalLatitude and decimalLongitude are based.	Alphanumeric code	'GDA94'	VARCHAR (5)	None
decimalLatitude	1	The geographic latitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic centre of a Location. Positive values are north of the Equator, negative values are south of the	Decimal number	'-36.864246125'	NUMERIC (12,9)	None

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		Equator. Legal values lie between -90 and 90, inclusive.				
decimalLongitude	1	The geographic longitude (in decimal degrees, using the spatial reference system given in geodeticDatum) of the geographic centre of a Location. Positive values are east of the Greenwich Meridian, negative values are west of it. Legal values lie between -180 and 180, inclusive.	Decimal number	'149.927962884'	NUMERIC (12,9)	None
locationDescription	0-1	Description of the location associated with the site.	Text	'Saltwater Creek at Kincumber'	VARCHAR (MAX)	.
aspect	0-1	The aspect of the location where the observations was made measured in degrees clockwise from true North.	Integer	'30'	INT	None
slope	0-1	The slope of the location where the observation was made measured in degrees from horizontal.	Integer	'15'	INT	None
landformPattern	0-1	A description of landform at a broad scale (best mapped at 1:200,000) based on slope, morphological type, dimensions, mode of geomorphological activity and geomorphological agent.	Text Controlled vocab: Refer to section A1.1 below	'FLOOD PLAIN', 'DUNEFIELD', 'HILLS'	VARCHAR (100)	None
landformElement	0-1	A description of landform at a finer scale (best mapped at	Text	'cliff', 'footslope', 'valley flat'	VARCHAR (100)	None

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		1:15,000) based on slope, morphological type, dimensions, mode of geomorphological activity and geomorphological agent.	Controlled vocab: Refer to section A1.2 below			
ElevationInMeters	0-1	The estimated elevation of the location where the observation was made measured in metres above sea level. Sourced from ANUCLIM.	Decimal number	'150.68'	NUMERIC (5,2)	None
annualRainfallInMillimeters	1	The estimated annual rainfall of the location where the observation was made measured in millimetres. Sourced from ANUCLIM.	Decimal number	'1205.51'	NUMERIC (5,2)	None
annualMeanTemperatureInCelsius	1	The estimated annual mean temperature of the location where the observation was made measured in degrees Celsius. Sourced from ANUCLIM.	Decimal number	'17.52'	NUMERIC (5,2)	None

Table 4 Visit data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
visitID	1	The unique key assigned to a Census. A Census is a time distinct assessment conducted within a survey at a designated site.	Alphanumeric	'CPXEI0000001'	VARCHAR (12)	None
visitNo	1	The replicate number for the visit.	Text	'1'	VARCHAR (12)	None
visitDate	1	The datetime which an observation occurred.	ISO 8601:2004(E)	'1978-06-01'	VARCHAR (25)	None
visitOrg	0-n	The name of the organisations responsible for recording the original Occurrence.	Text	'NSW Department of Planning, Industry and Environment'	VARCHAR(MAX)	None
visitObservers	0-n	A list (concatenated and separated) of names of people, groups, or organisations responsible for recording the original Occurrence.	Text	'Oliver P. Pearson, Anita K. Pearson'	VARCHAR (500)	None
siteDescription	0-1	Description of the site.	Text	'Grey/white Sand soil. Previously cleared.'	VARCHAR(MAX)	None

Table 5 Additional Attributes data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
condition	0-1	The state of a patch of vegetation at the time of sampling relative to some specified standard or benchmark (where available).	Text Controlled vocab: Refer to section A1.3 below		VARCHAR (50)	None
structuralForm	0-1	Shorthand structural formation codes representing the second level of vegetation classification in the hierarchical system (where available).	Text Controlled vocab: Refer to section A1.4 below	'Woody: rainforest'	VARCHAR (50)	None
ownersClassification	0-1	The original identifier for the vegetation classification of the site used by the data owner.	Alphanumeric	'1512'	VARCHAR (12)	None
currentClassification	1	The unique identifier for the vegetation classification of the site. Note: BioNet Systematic Flora Survey Web Service (v1) presents PCTID in this field.	Alphanumeric	'1512'	VARCHAR (12)	None
currentClassificationDescription	1	A colloquial plant community description that can be understood by non-botanists. It may include common names of dominant plant species, or names of a geographical	Text	'River Red Gum open woodland wetland of intermittent watercourses mainly of the arid climate zone'	VARCHAR (MAX)	None

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		<p>region, a substrate, a soil type or a climatic zone.</p> <p>Note: NSW specific field. BioNet Systematic Flora Survey Web Service (v1) presents PCTName in this field.</p>				
PCTAssignmentCategory	1	<p>Classification indicating the confidence with which a replicate has been assigned to a PCT via the quantitative classification method.</p> <p>'Primary' indicates that the replicates classification centroid is within a threshold distance of the PCT classification centroid;</p> <p>Secondary indicates that the replicates classification centroid is outside a threshold distance of the PCT classification centroid.</p>	Controlled vocab: either 'Primary' or 'Secondary'	'Primary'	VARCHAR (12)	None

Table 6 Sampling Unit data fields

Note: samplingUnit fields are not explicitly captured in BioNet at present and are not populated in the v1.0 release.

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
samplingUnitID	0-1	Identifier associated with the sample plot employed at the site/visit (where available).	Alphanumeric		VARCHAR (12)	None
samplingUnitArea	0-1	The area (m ²) covered by the sample plot (where available).	Integer	'4'	INT	None
samplingUnitShape	0-1	The geometrical shape; usually square, rectangular, circular or point or transect (plotless) (where available).	Controlled vocab: Refer to section A1.5	'square'	VARCHAR (12)	None

4. Specifications for the SystematicFloraSurvey_Observations entity set

As discussed in the overview, additional observations and measurements associated with a given visit record will be supplied via a linked table aligned with the structure of the Observations table proposed by the National Survey Standard. Each observation will be linked back to the visit record of the SiteData table using the visitID with Table 7 documenting the fields that will be made available via the Systematic Flora Survey Web Service.

Note: All definitions of Observations table (and associated controlled vocabularies) are in draft and to be developed as part of further work on a National Veg Plot standard. Observations table will not be populated in the v1.0 BioNet Systematic Flora Survey Web Service release.

Table 7 Link To Site Data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
surveyID	1	Definition as per SiteData entity set. In the Observations entity set, this field provides a key to SiteData.Survey records.	Integer	'2986'	INT	None
siteID	1	Definition as per SiteData entity set. In the Observations entity set, this field provides a key to SiteData.Site records.	Alphabetic code	'GIR04S7M'	VARCHAR (40)	None
visitID	1	Definition as per SiteData entity set. In the Observations entity set, this field provides a key to SiteData.Visit records.	Alphanumeric	'CPXEI0000001'	VARCHAR (12)	None
samplingUnitID	1	Definition as per SiteData entity set. In the Observations entity set, this field provides a key to	Alphanumeric		VARCHAR (12)	None

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		SiteData.SamplingUnit records.				

Table 8 Feature Of Interest data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
featureOfInterestParentID	1	A unique ID that provides a link from a "subsidiary " feature of interest to a broader feature of interest.	Alphanumeric	TBA	TBA	None
featureID	1	A unique ID that links together the observations (e.g. O&M) or measurements (e.g. OBOE) for a feature of interest. Note: O&M the OGC Observations and Measurements standard (www.ogc.org/standards/om). Note: OBOE indicates the Extensible Observation Ontology (github.com/NCEAS/oBoe/).	Alphanumeric	TBA	TBA	None
featureOfInterest	1	Feature of Interest (O&M) represents 'realworld' features which are the ultimate subject of an observation campaign, i.e. the features from an application domain that are not artefacts of the observation process (sampling features).	Linked controlled vocab: See section A1.6	'stratum'	VARCHAR (50)	None
featureOfInterestQualifier	1	A descriptor for the type of feature of interest.	Linked controlled vocab: -See section A1.6	'highest'	VARCHAR (50)	None
originalFeatureOfInterestQualifier	0-1	Accommodates the fact that different jurisdictions have different definitions of feature of interest. This a free text field enabling users to share data as-held.	Free text	TBA	VARCHAR (50)	None
originalFeatureOfInterestQualifierDescription	0-1	Description of the originalFeatureOfInterestQualifier. This a free text field enabling users to describe the as-held content to aid interpretation by other users.	Free text	TBA	VARCHAR (255)	None

Table 9 Measurement data fields

Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
protocol	0–1	A procedure explains the steps to be carried out to make the measurement and arrive at reproducible results. A procedure is reusable and might be involved in many observations.	Free text	'20 by 20 Vegetation Plot (old type)', 'Bat Ultrasound', 'Cage Trapping'	VARCHAR (255)	For Category 2 & 3 Sensitive species these data are withheld from Public, Registered and Licensed users.
characteristic	1	The object of the protocol/procedure and the thing to which the result/value applies.	Linked controlled vocab: See section A 1.8	'height'	VARCHAR(50)	None
characteristicQualifier	0-1	A descriptor for the type of value of the characteristic e.g. avg, min, max.	Linked controlled vocab: See section	'min'	VARCHAR(12)	None
value	1	This is the specific measurement attribute of the characteristic we are looking at. Note: if a value is given then 'lower' and 'upper' must be 'N/A'.	Free text	'2.4'	VARCHAR(12)	None
lower	0-1	Lower value of the range. Used when a range of values is given rather than a value. Notes: Lower and upper must both be present if used. If 'lower' and 'upper' are given, 'value' must be N/A.	Free text	'N/A'	VARCHAR(12)	None
upper	0-1	Lower value of the range. Used when a range of values is given rather than a value.	Text	'N/A'	VARCHAR(12)	None

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Field name	Occurrence	Definition	Format	Example	Data type	Access restrictions
		Notes: Lower and upper must both be present if used. If 'lower' and 'upper' are given, 'value' must be N/A.				
category	0-1	Grouping or classification of entities within the identified feature of interest that can be used to enable further interpretation of the data.	Text	'Eucalyptus largiflorens'	VARCHAR (255)	None
description	0-1	Description of the category.	Text	'species'	VARCHAR (255)	None
standard	1	The units associated with the measurementValue. Recommended best practice is to use the International System of Units (SI).	Text	'metres'	VARCHAR (150)	None

Appendix 1 Controlled vocabularies

A1.1 landformPattern

Sourced from Australian Soil and Land Survey Field Handbook (2009). See Landform Pattern Glossary (pp. 55-72).

A1.2 landformElement

Sourced from Australian Soil and Land Survey Field Handbook (2009). See Landform Element Key and Glossary (pp. 44-54).

A1.3 condition

Sourced from Field Survey for Vegetation Classification (2008) (to be confirmed)

Note: Definition of the condition field (and associated controlled vocabularies) are in draft and to be developed as part of further work on a National Veg Plot standard. This field will not be populated in the v1.0 BioNet Systematic Flora Survey Web Service release.

A1.4 structuralForm

Sourced from Field Survey for Vegetation Classification (2008) (to be confirmed).

Note: Definition of the structural form field (and associated controlled vocabularies) are in draft and to be developed as part of further work on a National Veg Plot standard. This field will not be populated in the v1.0 BioNet Systematic Flora Survey Web Service release.

A1.5 samplingUnitShape

- square
- rectangle
- transect
- circle
- point
- plotless

A1.6 featureOfInterest/featureOfInterestQualifier

The featureOfInterest and featureOfInterestQualifier fields are linked and can/must use the following linked controlled vocabularies, as shown in Table 10.

The featureOfInterest is the observed thing. In AEKOS – Ecological entity, Biotic entity, biotic aggregate, organism group, population/ species group, assemblage e.g. all the trees, eucalypts.

Note: All definitions of Observations table (and associated controlled vocabularies) are in draft and to be developed as part of further work on a National Veg Plot standard. Observations table will not be populated in the v1.0 BioNet Systematic Flora Survey Web Service release.

Table 10 featureOfInterest and featureOfInterestQualifier fields

featureOfInterest stratum	
qualifier	definition
Emergent	Emergent layers occur where the tallest defined stratum is not the predominant layer. Has a tree growth form and a height range of ≤ 0.5 median height of the layer.
Canopy	Has a tree growth form and a height range of ≤ 0.5 median height of the layer.
Subcanopy	Has a tree growth form and a height range of ≤ 0.5 median height of the layer.
Low Tree Layer	Has a tree growth form and a height range of less than the Subcanopy (T2) layer.
Tallest Shrub Layer	Has a shrub or low tree growth form and a height range of less ≤ 8 m.
Lower Shrub Layer	Where present, forms a distinct layer below the tallest shrub layer (S1) and has a shrub growth form.
Ground layer	This layer may contain graminoids, forbs, sprawling vines and other plants that are short in stature and overlap in height with the grasses. Seedlings of trees and shrubs will generally be included in this layer, if not already allocated to a separate shrub layer. The ground layer most frequently extends from 0 cm to 100 cm.

A1.8 characteristic/characteristicQualifier

The characteristic and characteristicQualifier fields are linked and can/must use the following linked controlled vocabularies, as shown in Table 11.

Note: All definitions of Observations table (and associated controlled vocabularies) are in draft and to be developed as part of further work on a National Veg Plot standard. Observations table will not be populated in the v1.0 BioNet Systematic Flora Survey Web Service release.

Table 11 characteristic and characteristicQualifier fields

characteristic growth form	
qualifier	definition
Tree	Woody plant >2 m tall with a single stem or branches well above the base.
Tree mallee	Woody perennial plant usually of the genus Eucalyptus. Multi-stemmed with <5 trunks of which at least 3 exceed 100 mm diameter at breast height (DBH) usually >8 m tall.
Shrub	Woody plant multi-stemmed at the base (or within 200 mm from ground level) or if single stemmed <2 m tall.
Mallee shrub	Commonly <8 m tall usually with >5 trunks of which at least 3 of the largest do not exceed 100 mm DBH.