Ecological Data Exchange Specification (working title)

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Status: Draft - while the document is in draft, sections of the document may contain placeholders such as TBA and TBD.

1. Metadata

IRI	https://linked.data.gov.au/def/rlp/spec (TBC)
Title	Ecological Data Exchange Specification (working title)
Definition	This document lists the normative requirements for data aiming to conform to the TERN Ecosystem Surveillance Ecological Monitoring Protocols. It is to be used as the authoritative, human-readable list of individual requirements from which profile artefacts such as validators are derived from.
Created	2022-03-14
Modified	2022-03-16
Creator	TERN
Publisher	Department of Agriculture, Water and the Environment
License	Creative Commons Attribution 4.0 International (CC BY 4.0)
Further information	This document is part of the Services Agreement for the provision of standardised ecological monitoring protocols and systems for data collection, storage and management. Procurement Number (PRN): 360 000 5101 Commonwealth of Australia as represented by the Department of Agriculture, Water and the Environment ABN 34 190 894 983 (**Department**) The University of Queensland as represented by TERN ABN 63 942 912 684 (**Service Provider**)
Alternate document formats	PDF

2. Preamble

2.1. Abstract

TERN Ecosystem Surveillance have developed 19 modules to standardise ecological monitoring protocols for data collection. The working title for the monitoring protocols is *TERN Ecosystem Surveillance Ecological Monitoring Protocols*.

TERN Data Services and Analytics is developing a standardised data exchange specification to support the exchange of data collected using TERN Ecosystem Surveillance Ecological Monitoring Protocols. The working title for the data exchange specification is *Ecological Data Exchange Specification*.

The Ecological Data Exchange Specification is a profile of the ecological data model known as the TERN Ontology. Data that is conformant to the Ecological Data Exchange Specification is also conformant to the TERN Ontology.

2.2. Normative Status

This specification is normative for the exchange of data collected using TERN Ecosystem Surveillance Ecological Monitoring Protocols.

2.3. Standard Parts

This specification document is one of many resources that together form the Ecological Data Exchange Specification Profile.

Other parts of this standard include:

TBA.

2.4. Namespaces

Prefix	Namespace	Name	Description
reg:	http://purl.org/linked-data/registry#	Registry Ontology	Core ontology for Linked Data registry services. Based on ISO 19135 but heavily modified to suit Linked Data representations and applications.
sosa:	http://www.w3.org/ns/sosa/	SOSA	Sensor, Observation, Sample, and Actuator (SOSA) is a semantic data model to represent observations and samplings.

Prefix	Namespace	Name	Description
tern:	https://w3id.org/tern/ontologies/tern/	TERN Ontology	A profile of SOSA and PROV with minor additions to represent ecological field survey data.
unit:	http://qudt.org/vocab/unit/	QUDT Units vocabulary	A vocabulary of *units of measure* defined using the QUDT semantic data model.

3. Requirements

3.1. Domain Model Conformance

Requirements define the rules and constraints which data must conform to in order to be valid.

A *status* is assigned to each requirement. The *status* code list used in this document is defined by the Registry ontology and a subset of the status codes are redefined here:

- `submitted` - A proposed entry which is not yet approved for use for use. Corresponds to ISO 19135:(redraft) 'submitted'.
- `invalid` - An entry which has been invalidated due to serious flaws, distinct from retrirement. Corresponds to ISO 19135(redraft) 'invalid'.
- `stable` - An entry that is seen as having a reasonable measure of stability, may be used to mark the full adoption of a previously 'experimental' entry.

Requirements that have been accepted and are **stable** are marked with a green check mark.

For example:

Property	Value
Status	`stable` ✓

3.1.1. Plot Description Module Conformance Class Requirements

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/disturbance/index.adoc[]

3.1.1.1. Cover class Observation

3.1.1.1.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:feature-type`

Property	Value
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `vegetation`.
Comment	TERN's ecologists have determined the feature type is *vegetation*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Cover class codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Cover class codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`bc`
	
	`bi`
	
	`c`
	
	`d`
	
	`i`
	
	`r`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

3.1.1.1.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:cover-class:vocabulary`

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `6aaa330c-3d60-419b-a29b-a2dbc6d67928$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/6aaa330c-3d60-419b-a29b-a2dbc6d67928`. `https://linked.data.gov.au/def/nrm/6aaa330c-3d60-419b-a29b-a2dbc6d67928` is the IRI for "Cover class codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/cover-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/cover-class/valid.ttl` Invalid: `/shapes/plot-description/cover-class/invalid.ttl`

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/most-dominant-species/index.adoc[]

3.1.1.2. Growth stage Observation

3.1.1.2.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Growth stages codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Growth stages codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Dead`
	
	`Mature`
	
	`Recruiting`
	
	`Resprouting`
	
	`Senescent`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.2.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:growth-stage:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `096e018a-fb8f-4ba1-9fdc-302164e57682$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/096e018a-fb8f-4ba1-9fdc-302164e57682`. `https://linked.data.gov.au/def/nrm/096e018a-fb8f-4ba1-9fdc-302164e57682` is the IRI for "Growth stages codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-stage/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/growth-stage/valid.ttl` Invalid: `/shapes/plot-description/growth-stage/invalid.ttl`

3.1.1.3. Landform pattern Observation

3.1.1.3.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `landform`.
Comment	TERN's ecologists have determined the feature type is *landform*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Landform pattern codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Landform pattern codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Aluvial fan`
	
	`Aluvial plain`
	
	`Anastomotic plain`
	
	`Badlands`
	
	`Bar Plain`
	
	`Beach ridge plain`
	
	`Caldera`
	
	`Chenier plain`
	
	`Coral reef`
	
	`Covered plain`
	
	`Delta`
	
	`Dunefield`
	
	`Escarpment`
	
	`Floodplain`
	
	`Hills`
	
	`Karst`
	
	`Laclustrine plain`
	
	`Lava plain`
	
	`Longitudinal dunefield`
	
	`Low hills`
	
	`Made land`
	
	`Marine plain`
	
	`Meander plain`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.3.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:landform-pattern:vocabulary`

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `19d91a7a-2733-4b84-9d2b-4bda4808c003$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/19d91a7a-2733-4b84-9d2b-4bda4808c003`. `https://linked.data.gov.au/def/nrm/19d91a7a-2733-4b84-9d2b-4bda4808c003` is the IRI for "Landform pattern codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-pattern/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-pattern/valid.ttl` Invalid: `/shapes/plot-description/landform-pattern/invalid.ttl`

3.1.1.4. Surface strew size Observation

3.1.1.4.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `land surface`.
Comment	TERN's ecologists have determined the feature type is *land surface*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:result-value`

Property	Value
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Soil surface strew size codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Soil surface strew size codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Boulder (250mm +)`
	
	`Cobble (51-250mm)`
	
	`None apparent`
	
	`Not Collected`
	
	`Pebble (5-50mm)`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

3.1.1.4.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-size:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `3b25ce0f-9eb7-4d2d-97ce-143858cfd4d4$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/3b25ce0f-9eb7-4d2d-97ce-143858cfd4d4`. `https://linked.data.gov.au/def/nrm/3b25ce0f-9eb7-4d2d-97ce-143858cfd4d4` is the IRI for "Soil surface strew size codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-size/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/surface-strew-size/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-size/invalid.ttl`

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/cover-percentage/index.adoc[]

3.1.1.5. Landform element Observation

3.1.1.5.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `landform`.
Comment	TERN's ecologists have determined the feature type is *landform*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Landform element codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Landform element codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Alcove`
	
	`Backplain`
	
	`Bank (stream bank)`
	
	`Bar (stream bar)`
	
	`Barchan dune`
	
	`Beach`
	
	`Beach ridge`
	
	`Bench`
	
	`Berm`
	
	`Blow-out`
	
	`Breakaway`
	
	`Channel bench`
	
	`Cirque`
	
	`Cliff`
	
	`Cliff-footslope`
	
	`Collapse doline`
	
	`Cone (volcanic)`
	
	`Crater`
	
	`Cut face`
	
	`Cut-over surface`
	
	`Dam`
	
	`Deflation basin`
	
	`Drainage depression`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.5.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:landform-element:vocabulary`

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `c1a58967-cb12-4c2c-a7ca-9cee2589919c$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/c1a58967-cb12-4c2c-a7ca-9cee2589919c`. `https://linked.data.gov.au/def/nrm/c1a58967-cb12-4c2c-a7ca-9cee2589919c` is the IRI for "Landform element codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/landform-element/shapes.ttl`
Examples	Valid: `/shapes/plot-description/landform-element/valid.ttl` Invalid: `/shapes/plot-description/landform-element/invalid.ttl`

3.1.1.6. Climatic condition Observation

3.1.1.6.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:climatic-condition:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `climate`.
Comment	TERN's ecologists have determined the feature type is *climate*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/climatic-condition/shapes.ttl`
Examples	Valid: `/shapes/plot-description/climatic-condition/valid.ttl` Invalid: `/shapes/plot-description/climatic-condition/invalid.ttl`

3.1.1.6.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:climatic-condition:result-value`

Property	Value
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Climatic condition codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Climatic condition codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Dry`
	
	`Wet`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/climatic-condition/shapes.ttl`
Examples	Valid: `/shapes/plot-description/climatic-condition/valid.ttl` Invalid: `/shapes/plot-description/climatic-condition/invalid.ttl`

3.1.1.6.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:climatic-condition:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/climatic-condition/shapes.ttl`
Examples	Valid: `/shapes/plot-description/climatic-condition/valid.ttl` Invalid: `/shapes/plot-description/climatic-condition/invalid.ttl`

3.1.1.6.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:site-visit
Label	Site visit
Definition	Observations *MUST* have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/climatic-condition/shapes.ttl
Examples	Valid: /shapes/plot-description/climatic-condition/valid.ttl Invalid: /shapes/plot-description/climatic-condition/invalid.ttl

3.1.1.6.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/climatic-condition/shapes.ttl
Examples	Valid: /shapes/plot-description/climatic-condition/valid.ttl Invalid: /shapes/plot-description/climatic-condition/invalid.ttl

3.1.1.6.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:value-type
Label	Value type

Property	Value
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/climatic-condition/shapes.ttl`
Examples	Valid: `/shapes/plot-description/climatic-condition/valid.ttl` Invalid: `/shapes/plot-description/climatic-condition/invalid.ttl`

3.1.1.6.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:climatic-condition:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `2ebfee89-92db-44b3-bb89-06dd92798ae6$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/2ebfee89-92db-44b3-bb89-06dd92798ae6`. `https://linked.data.gov.au/def/nrm/2ebfee89-92db-44b3-bb89-06dd92798ae6` is the IRI for "Climatic condition codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/climatic-condition/shapes.ttl`
Examples	Valid: `/shapes/plot-description/climatic-condition/valid.ttl` Invalid: `/shapes/plot-description/climatic-condition/invalid.ttl`

3.1.1.7. Homogeneity measure Observation

3.1.1.7.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:homogeneity-measure:feature-type`
Label	Feature type

Property	Value
Definition	The value of `tern:featureType` *MUST* be link: `vegetation`.
Comment	TERN's ecologists have determined the feature type is *vegetation*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/homogeneity-measure/shapes.ttl`
Examples	Valid: `/shapes/plot-description/homogeneity-measure/valid.ttl` Invalid: `/shapes/plot-description/homogeneity-measure/invalid.ttl`

3.1.1.7.2. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:homogeneity-measure:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/homogeneity-measure/shapes.ttl`
Examples	Valid: `/shapes/plot-description/homogeneity-measure/valid.ttl` Invalid: `/shapes/plot-description/homogeneity-measure/invalid.ttl`

3.1.1.7.3. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:homogeneity-measure:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/homogeneity-measure/shapes.ttl
Examples	Valid: /shapes/plot-description/homogeneity-measure/valid.ttl Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl

3.1.1.7.4. Unit of measure

Property	Value
Identifier	urn:shapes:plot-description:homogeneity-measure:unit-of-measure
Label	Unit of measure
Definition	The result *MUST* have unit:M as the value for tern:unit.
Comment	Result value's unit of measure *MUST* have the value unit:M.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/homogeneity-measure/shapes.ttl
Examples	Valid: /shapes/plot-description/homogeneity-measure/valid.ttl Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl

3.1.1.7.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:homogeneity-measure:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/homogeneity-measure/shapes.ttl`
Examples	Valid: `/shapes/plot-description/homogeneity-measure/valid.ttl` Invalid: `/shapes/plot-description/homogeneity-measure/invalid.ttl`

3.1.1.7.6. Value range

Property	Value
Identifier	`urn:shapes:plot-description:homogeneity-measure:value-range`
Label	Value range
Definition	The result *MUST* not be negative.
Comment	Value *MUST* not be negative.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/homogeneity-measure/shapes.ttl`
Examples	Valid: `/shapes/plot-description/homogeneity-measure/valid.ttl` Invalid: `/shapes/plot-description/homogeneity-measure/invalid.ttl`

3.1.1.7.7. Value type

Property	Value
Identifier	`urn:shapes:plot-description:homogeneity-measure:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:Float`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Float`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/homogeneity-measure/shapes.ttl`
Examples	Valid: `/shapes/plot-description/homogeneity-measure/valid.ttl` Invalid: `/shapes/plot-description/homogeneity-measure/invalid.ttl`

3.1.1.8. Height class Observation

3.1.1.8.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:height-class:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `vegetation`.
Comment	TERN's ecologists have determined the feature type is *vegetation*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:height-class:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Vegetation height class codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Vegetation height class codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	`1`
	`10`
	`11`
	`2`
	`3`
	`4`
	`5`
	`6`
	`7`
	`8`
	`9`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:height-class:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:height-class:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:height-class:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:height-class:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

3.1.1.8.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:height-class:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `b1b05cd1-3b85-4639-a6af-799a34d88d43$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/b1b05cd1-3b85-4639-a6af-799a34d88d43`. `https://linked.data.gov.au/def/nrm/b1b05cd1-3b85-4639-a6af-799a34d88d43` is the IRI for "Vegetation height class codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/height-class/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/plot-description/height-class/valid.ttl` Invalid: `/shapes/plot-description/height-class/invalid.ttl`

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/outcrop-lithology/index.adoc[]

3.1.1.9. Fire history Observation

3.1.1.9.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:fire-history:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `vegetation disturbance`.
Comment	TERN's ecologists have determined the feature type is *vegetation disturbance*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/fire-history/shapes.ttl`
Examples	Valid: `/shapes/plot-description/fire-history/valid.ttl` Invalid: `/shapes/plot-description/fire-history/invalid.ttl`

3.1.1.9.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:fire-history:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Fire history codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Fire history codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Past burn`
	
	`Recently burnt`
	
	`Unburnt`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/fire-history/shapes.ttl`
Examples	Valid: `/shapes/plot-description/fire-history/valid.ttl` Invalid: `/shapes/plot-description/fire-history/invalid.ttl`

3.1.1.9.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:fire-history:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/fire-history/shapes.ttl`
Examples	Valid: `/shapes/plot-description/fire-history/valid.ttl` Invalid: `/shapes/plot-description/fire-history/invalid.ttl`

3.1.1.9.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:fire-history:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/fire-history/shapes.ttl
Examples	Valid: /shapes/plot-description/fire-history/valid.ttl Invalid: /shapes/plot-description/fire-history/invalid.ttl

3.1.1.9.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:fire-history:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/fire-history/shapes.ttl
Examples	Valid: /shapes/plot-description/fire-history/valid.ttl Invalid: /shapes/plot-description/fire-history/invalid.ttl

3.1.1.9.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:fire-history:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:IRI.
Comment	The value of sosa:hasResult *MUST* be a tern:IRI.
Status	submitted ◯
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/fire-history/shapes.ttl`
Examples	Valid: `/shapes/plot-description/fire-history/valid.ttl` Invalid: `/shapes/plot-description/fire-history/invalid.ttl`

3.1.1.9.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:fire-history:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `6e9d2f51-ce64-4c67-8391-d14a8bf96b6b$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/6e9d2f51-ce64-4c67-8391-d14a8bf96b6b`. `https://linked.data.gov.au/def/nrm/6e9d2f51-ce64-4c67-8391-d14a8bf96b6b` is the IRI for "Fire history codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/fire-history/shapes.ttl`
Examples	Valid: `/shapes/plot-description/fire-history/valid.ttl` Invalid: `/shapes/plot-description/fire-history/invalid.ttl`

3.1.1.10. Structural formation Observation

3.1.1.10.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:structural-formation:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `vegetation`.
Comment	TERN's ecologists have determined the feature type is *vegetation*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/structural-formation/shapes.ttl`
Examples	Valid: `/shapes/plot-description/structural-formation/valid.ttl` Invalid: `/shapes/plot-description/structural-formation/invalid.ttl`

3.1.1.10.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:structural-formation:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Vegetation structural formation codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Vegetation structural formation codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Bryophtyes`
	
	`Bryophyteland`
	
	`Chenopod Shrubs`
	
	`Chenopod shrubland`
	
	`Closed bryophyteland`
	
	`Closed chenopod shrubland`
	
	`Closed fernland`
	
	`Closed forbland`
	
	`Closed forest`
	
	`Closed grassland`
	
	`Closed heathland`
	
	`Closed hummock grassland`
	
	`Closed mallee forest`
	
	`Closed mallee shrubland`
	
	`Closed rushland`
	
	`Closed samphire shrubland`
	
	`Closed sedgeland`
	
	`Closed shrubland`
	
	`Closed tussock grassland`
	
	`Fernland`
	
	`Ferns`
	
	`Forbland`
	
	`Forbs`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/structural-formation/shapes.ttl`
Examples	Valid: `/shapes/plot-description/structural-formation/valid.ttl` Invalid: `/shapes/plot-description/structural-formation/invalid.ttl`

3.1.1.10.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:structural-formation:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/structural-formation/shapes.ttl`
Examples	Valid: `/shapes/plot-description/structural-formation/valid.ttl` Invalid: `/shapes/plot-description/structural-formation/invalid.ttl`

3.1.1.10.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:structural-formation:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/structural-formation/shapes.ttl`
Examples	Valid: `/shapes/plot-description/structural-formation/valid.ttl` Invalid: `/shapes/plot-description/structural-formation/invalid.ttl`

3.1.1.10.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/structural-formation/shapes.ttl
Examples	Valid: /shapes/plot-description/structural-formation/valid.ttl Invalid: /shapes/plot-description/structural-formation/invalid.ttl

3.1.1.10.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:IRI.
Comment	The value of sosa:hasResult *MUST* be a tern:IRI.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/structural-formation/shapes.ttl
Examples	Valid: /shapes/plot-description/structural-formation/valid.ttl Invalid: /shapes/plot-description/structural-formation/invalid.ttl

3.1.1.10.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:vocabulary

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `6e9baf51-566e-4a5d-93c4-a6e097dc364d$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/6e9baf51-566e-4a5d-93c4-a6e097dc364d`. `https://linked.data.gov.au/def/nrm/6e9baf51-566e-4a5d-93c4-a6e097dc364d` is the IRI for "Vegetation structural formation codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/structural-formation/shapes.ttl`
Examples	Valid: `/shapes/plot-description/structural-formation/valid.ttl` Invalid: `/shapes/plot-description/structural-formation/invalid.ttl`

3.1.1.11. Growth form Observation

3.1.1.11.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.2. Result value

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:result-value`

Property	Value
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Growth form codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Growth form codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Aquatic`
	
	`Bryophyte`
	
	`Chenopod`
	
	`Cycad`
	
	`Epiphyte`
	
	`Fern`
	
	`Forb`
	
	`Fungus`
	
	`Grass-tree`
	
	`Heath-shrub`
	
	`Hummock grass`
	
	`Lichen`
	
	`NC`
	
	`Other Grass`
	
	`Palm`
	
	`Rush`
	
	`Samphire Shrub`
	
	`Seagrass`
	
	`Sedge`
	
	`Shrub`
	
	`Shrub Mallee`
	
	`Tree`
	
	`Tree Mallee`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.5. Used procedure

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32`. `https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32` is the IRI for "Plot Description".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.6. Value type

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.11.7. Vocabulary

Property	Value
Identifier	`urn:shapes:plot-description:growth-form:vocabulary`

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `d0fc07a7-3ec9-45ed-8850-885a32828d3c$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c`. `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c` is the IRI for "Growth form codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/growth-form/shapes.ttl`
Examples	Valid: `/shapes/plot-description/growth-form/valid.ttl` Invalid: `/shapes/plot-description/growth-form/invalid.ttl`

3.1.1.12. Aspect Observation

3.1.1.12.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:aspect:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `landform`.
Comment	TERN's ecologists have determined the feature type is *landform*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/aspect/shapes.ttl`
Examples	Valid: `/shapes/plot-description/aspect/valid.ttl` Invalid: `/shapes/plot-description/aspect/invalid.ttl`

3.1.1.12.2. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:aspect:simple-result`

Property	Value
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/aspect/shapes.ttl`
Examples	Valid: `/shapes/plot-description/aspect/valid.ttl` Invalid: `/shapes/plot-description/aspect/invalid.ttl`

3.1.1.12.3. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:aspect:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/aspect/shapes.ttl`
Examples	Valid: `/shapes/plot-description/aspect/valid.ttl` Invalid: `/shapes/plot-description/aspect/invalid.ttl`

3.1.1.12.4. Unit of measure

Property	Value
Identifier	`urn:shapes:plot-description:aspect:unit-of-measure`
Label	Unit of measure
Definition	The result *MUST* have `unit:DEG` as the value for `tern:unit`.
Comment	Result value's unit of measure *MUST* have the value `unit:DEG`.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/aspect/shapes.ttl
Examples	Valid: /shapes/plot-description/aspect/valid.ttl Invalid: /shapes/plot-description/aspect/invalid.ttl

3.1.1.12.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:aspect:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/aspect/shapes.ttl
Examples	Valid: /shapes/plot-description/aspect/valid.ttl Invalid: /shapes/plot-description/aspect/invalid.ttl

3.1.1.12.6. Value range

Property	Value
Identifier	urn:shapes:plot-description:aspect:value-range
Label	Value range
Definition	The result *MUST* have a value between 0 exclusive and 360 inclusive.
Comment	Value *MUST* be between 0 exclusive and 360 inclusive.
Status	submitted ◯
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/aspect/shapes.ttl`
Examples	Valid: `/shapes/plot-description/aspect/valid.ttl` Invalid: `/shapes/plot-description/aspect/invalid.ttl`

3.1.1.12.7. Value type

Property	Value
Identifier	`urn:shapes:plot-description:aspect:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:Float`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Float`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/aspect/shapes.ttl`
Examples	Valid: `/shapes/plot-description/aspect/valid.ttl` Invalid: `/shapes/plot-description/aspect/invalid.ttl`

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/second-most-dominant-species/index.adoc[]

Unresolved directive in requirements-sections-by-protocols/requirements-sections-plot-description.adoc - include::../requirements-by-module/plot-description/slope-type/index.adoc[]

3.1.1.13. Surface strew lithology Observation

3.1.1.13.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-lithology:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `land surface`.
Comment	TERN's ecologists have determined the feature type is *land surface*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/surface-strew-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/surface-strew-lithology/valid.ttl Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl

3.1.1.13.2. Result value

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:result-value
Label	Result value
Definition	The value of rdf:value *MUST* exist in the Soil lithology codes controlled vocabulary.
Comment	The value in sosa:hasResult *MUST* be a value in sh:in, which is the Soil lithology codes controlled vocabulary.
Status	submitted ◯
Conformance Classes	TBA
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Adamellite`
	
	`Agglomerate`
	
	`Alcrete (bauxite)`
	
	`Amphibolite`
	
	`Andesite`
	
	`Anhydrite`
	
	`Aplite`
	
	`Arkose`
	
	`Ash (fine)`
	
	`Ash (sandy)`
	
	`Basalt`
	
	`Bombs (volcanic)`
	
	`Breccia`
	
	`Calcarenite`
	
	`Calcareous mudstone`
	
	`Calcareous sand`
	
	`Calcilutite`
	
	`Calcirudite`
	
	`Calcrete`
	
	`Charcoal`
	
	`Chert`
	
	`Clay`
	
	`Coal`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-lithology/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-lithology/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-lithology/invalid.ttl`

3.1.1.13.3. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-lithology:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-lithology/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-lithology/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-lithology/invalid.ttl`

3.1.1.13.4. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:surface-strew-lithology:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-lithology/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-lithology/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-lithology/invalid.ttl`

3.1.1.13.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/surface-strew-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/surface-strew-lithology/valid.ttl Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl

3.1.1.13.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:IRI.
Comment	The value of sosa:hasResult *MUST* be a tern:IRI.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/surface-strew-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/surface-strew-lithology/valid.ttl Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl

3.1.1.13.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:vocabulary

Property	Value
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `1d50eb79-685f-45ea-84b4-627154eddede$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/1d50eb79-685f-45ea-84b4-627154eddede`. `https://linked.data.gov.au/def/nrm/1d50eb79-685f-45ea-84b4-627154eddede` is the IRI for "Soil lithology codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/surface-strew-lithology/shapes.ttl`
Examples	Valid: `/shapes/plot-description/surface-strew-lithology/valid.ttl` Invalid: `/shapes/plot-description/surface-strew-lithology/invalid.ttl`

3.1.1.14. Slope Observation

3.1.1.14.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:slope:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `landform`.
Comment	TERN's ecologists have determined the feature type is *landform*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.1.14.2. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:slope:simple-result`

Property	Value
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.1.14.3. Site visit

Property	Value
Identifier	`urn:shapes:plot-description:slope:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Plot Description are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.1.14.4. Unit of measure

Property	Value
Identifier	`urn:shapes:plot-description:slope:unit-of-measure`
Label	Unit of measure
Definition	The result *MUST* have `unit:DEG` as the value for `tern:unit`.
Comment	Result value's unit of measure *MUST* have the value `unit:DEG`.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope/shapes.ttl
Examples	Valid: /shapes/plot-description/slope/valid.ttl Invalid: /shapes/plot-description/slope/invalid.ttl

3.1.1.14.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:slope:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/nrm/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope/shapes.ttl
Examples	Valid: /shapes/plot-description/slope/valid.ttl Invalid: /shapes/plot-description/slope/invalid.ttl

3.1.1.14.6. Value range

Property	Value
Identifier	urn:shapes:plot-description:slope:value-range
Label	Value range
Definition	The result *MUST* have a value between 0 and 90 inclusively.
Comment	Value *MUST* be between 0 and 90 inclusive.
Status	submitted ◯
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.1.14.7. Value type

Property	Value
Identifier	`urn:shapes:plot-description:slope:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:Float`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Float`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.2. Cover Module

This module has two sub protocols - Full protocol and Lite protocol.

3.1.3. Cover - Full protocol Conformance Class Requirements

3.1.3.1. In canopy sky Observation

3.1.3.1.1. Datatype

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:datatype`
Label	Datatype
Definition	The value of `rdf:value` *MUST* have the datatype xsd:boolean.
Comment	The value in `sosa:hasResult` *MUST* be xsd:boolean.
Status	`submitted` ◯
Conformance Classes	`TBA`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.1.2. Feature type

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.1.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.1.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Full protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.1.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`. `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0` is the IRI for "Cover - Full protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.1.6. Value type

Property	Value
Identifier	`urn:shapes:cover-full:in-canopy-sky:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:Boolean`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Boolean`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-full/in-canopy-sky/invalid.ttl`

3.1.3.2. Substrate type Observation

3.1.3.2.1. Feature type

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `land surface substrate`.
Comment	TERN's ecologists have determined the feature type is *land surface substrate*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.2. Result value

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Soil substrate codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Soil substrate codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Bare`
	
	`Black ash`
	
	`Coarse Woody Debris`
	
	`Crypto`
	
	`Gravel`
	
	`Lichen on outcrop`
	
	`Lichen on rock`
	
	`Litter`
	
	`Not Collected`
	
	`Other`
	
	`Outcrop`
	
	`Rock`
	
	`Unknown`
	
	`Water`
	
	`White ash`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Full protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`. `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0` is the IRI for "Cover - Full protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.6. Value type

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.2.7. Vocabulary

Property	Value
Identifier	`urn:shapes:cover-full:substrate-type:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `b061d7db-a608-4062-96d4-b367d6d9a792$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/b061d7db-a608-4062-96d4-b367d6d9a792`. `https://linked.data.gov.au/def/nrm/b061d7db-a608-4062-96d4-b367d6d9a792` is the IRI for "Soil substrate codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-full/substrate-type/invalid.ttl`

3.1.3.3. Uppermost height Observation

3.1.3.3.1. Feature type

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant occurrence`.
Comment	TERN's ecologists have determined the feature type is *plant occurrence*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.2. Simple result

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.3. Site visit

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Full protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.4. Unit of measure

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:unit-of-measure`
Label	Unit of measure
Definition	The result *MUST* have `unit:M` as the value for `tern:unit`.
Comment	Result value's unit of measure *MUST* have the value `unit:M`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`. `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0` is the IRI for "Cover - Full protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.6. Value range

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:value-range`

Property	Value
Label	Value range
Definition	The result *MUST* at least be 1.5 m.
Comment	Value *MUST* be at least 1.5 m.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.3.7. Value type

Property	Value
Identifier	`urn:shapes:cover-full:uppermost-height:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:Float`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Float`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-full/uppermost-height/invalid.ttl`

3.1.3.4. Growth form Observation

3.1.3.4.1. Feature type

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.

Property	Value
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.2. Result value

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Growth form codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Growth form codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Aquatic`
	
	`Bryophyte`
	
	`Chenopod`
	
	`Cycad`
	
	`Epiphyte`
	
	`Fern`
	
	`Forb`
	
	`Fungus`
	
	`Grass-tree`
	
	`Heath-shrub`
	
	`Hummock grass`
	
	`Lichen`
	
	`NC`
	
	`Other Grass`
	
	`Palm`
	
	`Rush`
	
	`Samphire Shrub`
	
	`Seagrass`
	
	`Sedge`
	
	`Shrub`
	
	`Shrub Mallee`
	
	`Tree`
	
	`Tree Mallee`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Full protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`. `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0` is the IRI for "Cover - Full protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.6. Value type

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.4.7. Vocabulary

Property	Value
Identifier	`urn:shapes:cover-full:growth-form:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `d0fc07a7-3ec9-45ed-8850-885a32828d3c$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c`. `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c` is the IRI for "Growth form codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-full/growth-form/invalid.ttl`

3.1.3.5. Field species name Observation

3.1.3.5.1. Datatype

Property	Value
Identifier	`urn:shapes:cover-full:field-species-name:datatype`
Label	Datatype
Definition	The value of `rdf:value` *MUST* have the datatype xsd:string.
Comment	The value in `sosa:hasResult` *MUST* be xsd:string.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/field-species-name/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-full/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-full/field-species-name/invalid.ttl`

3.1.3.5.2. Feature type

Property	Value
Identifier	`urn:shapes:cover-full:field-species-name:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant occurrence`.
Comment	TERN's ecologists have determined the feature type is *plant occurrence*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-full/field-species-name/invalid.ttl`

3.1.3.5.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-full:field-species-name:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-full/field-species-name/invalid.ttl`

3.1.3.5.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-full:field-species-name:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Full protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-full/field-species-name/invalid.ttl`

3.1.3.5.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-full:field-species-name:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0`. `https://linked.data.gov.au/def/nrm/576f634e-2706-4f18-b561-0636d4c007d0` is the IRI for "Cover - Full protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-full/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-full/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-full/field-species-name/invalid.ttl`

3.1.3.5.6. Value type

Property	Value
Identifier	urn:shapes:cover-full:field-species-name:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:Text.
Comment	The value of sosa:hasResult *MUST* be a tern:Text.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-full/field-species-name/shapes.ttl
Examples	Valid: /shapes/cover/cover-full/field-species-name/valid.ttl Invalid: /shapes/cover/cover-full/field-species-name/invalid.ttl

3.1.4. Cover - Lite protocol Conformance Class Requirements

3.1.4.1. In canopy sky Observation

3.1.4.1.1. Datatype

Property	Value
Identifier	urn:shapes:cover-lite:in-canopy-sky:datatype
Label	Datatype
Definition	The value of rdf:value *MUST* have the datatype xsd:boolean.
Comment	The value in sosa:hasResult *MUST* be xsd:boolean.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/in-canopy-sky/valid.ttl Invalid: /shapes/cover/cover-lite/in-canopy-sky/invalid.ttl

3.1.4.1.2. Feature type

Property	Value
Identifier	urn:shapes:cover-lite:in-canopy-sky:feature-type
Label	Feature type

Property	Value
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-lite/in-canopy-sky/invalid.ttl`

3.1.4.1.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-lite:in-canopy-sky:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-lite/in-canopy-sky/invalid.ttl`

3.1.4.1.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-lite:in-canopy-sky:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Lite protocol are made in the context of a site visit.
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/in-canopy-sky/valid.ttl Invalid: /shapes/cover/cover-lite/in-canopy-sky/invalid.ttl

3.1.4.1.5. Used procedure

Property	Value
Identifier	urn:shapes:cover-lite:in-canopy-sky:used-procedure
Label	Used procedure
Definition	The observation's sosa:usedProcedure *MUST* have the value https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a.
Comment	IRI of procedure *MUST* have the value https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a. https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a is the IRI for "Cover - Lite protocol".
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/in-canopy-sky/valid.ttl Invalid: /shapes/cover/cover-lite/in-canopy-sky/invalid.ttl

3.1.4.1.6. Value type

Property	Value
Identifier	urn:shapes:cover-lite:in-canopy-sky:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:Boolean.
Comment	The value of sosa:hasResult *MUST* be a tern:Boolean.
Status	submitted ◯
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/in-canopy-sky/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/in-canopy-sky/valid.ttl` Invalid: `/shapes/cover/cover-lite/in-canopy-sky/invalid.ttl`

3.1.4.2. Substrate type Observation

3.1.4.2.1. Feature type

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `land surface substrate`.
Comment	TERN's ecologists have determined the feature type is *land surface substrate*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.2. Result value

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Soil substrate codes controlled vocabulary.
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Soil substrate codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Bare`
	
	`Black ash`
	
	`Coarse Woody Debris`
	
	`Crypto`
	
	`Gravel`
	
	`Lichen on outcrop`
	
	`Lichen on rock`
	
	`Litter`
	
	`Not Collected`
	
	`Other`
	
	`Outcrop`
	
	`Rock`
	
	`Unknown`
	
	`Water`
	
	`White ash`

Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.

Property	Value
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Lite protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`. `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a` is the IRI for "Cover - Lite protocol".

Property	Value
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.6. Value type

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/substrate-type/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/substrate-type/valid.ttl` Invalid: `/shapes/cover/cover-lite/substrate-type/invalid.ttl`

3.1.4.2.7. Vocabulary

Property	Value
Identifier	`urn:shapes:cover-lite:substrate-type:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `b061d7db-a608-4062-96d4-b367d6d9a792$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/b061d7db-a608-4062-96d4-b367d6d9a792`. `https://linked.data.gov.au/def/nrm/b061d7db-a608-4062-96d4-b367d6d9a792` is the IRI for "Soil substrate codes".
Status	`submitted` ◯

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/substrate-type/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/substrate-type/valid.ttl Invalid: /shapes/cover/cover-lite/substrate-type/invalid.ttl

3.1.4.3. Uppermost height Observation

3.1.4.3.1. Feature type

Property	Value
Identifier	urn:shapes:cover-lite:uppermost-height:feature-type
Label	Feature type
Definition	The value of tern:featureType *MUST* be link: plant occurrence.
Comment	TERN's ecologists have determined the feature type is *plant occurrence*, defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/uppermost-height/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/uppermost-height/valid.ttl Invalid: /shapes/cover/cover-lite/uppermost-height/invalid.ttl

3.1.4.3.2. Simple result

Property	Value
Identifier	urn:shapes:cover-lite:uppermost-height:simple-result
Label	Simple result
Definition	The observation's sosa:hasSimpleResult *MUST* have a value that is the same as the value in the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult *MUST* be the same as the value in sosa:hasResult.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.3.3. Site visit

Property	Value
Identifier	`urn:shapes:cover-lite:uppermost-height:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Lite protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.3.4. Unit of measure

Property	Value
Identifier	`urn:shapes:cover-lite:uppermost-height:unit-of-measure`
Label	Unit of measure
Definition	The result *MUST* have `unit:M` as the value for `tern:unit`.
Comment	Result value's unit of measure *MUST* have the value `unit:M`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.3.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-lite:uppermost-height:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`. `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a` is the IRI for "Cover - Lite protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.3.6. Value range

Property	Value
Identifier	`urn:shapes:cover-lite:uppermost-height:value-range`
Label	Value range
Definition	The result *MUST* have a value be at least 1.5 m.
Comment	Value *MUST* be at least 1.5 m.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.3.7. Value type

Property	Value
Identifier	`urn:shapes:cover-lite:uppermost-height:value-type`

Property	Value
Label	Value type
Definition	The result *MUST* be an instance of `tern:Float`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:Float`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/uppermost-height/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/uppermost-height/valid.ttl` Invalid: `/shapes/cover/cover-lite/uppermost-height/invalid.ttl`

3.1.4.4. Growth form Observation

3.1.4.4.1. Feature type

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant individual`.
Comment	TERN's ecologists have determined the feature type is *plant individual*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.2. Result value

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:result-value`
Label	Result value
Definition	The value of `rdf:value` *MUST* exist in the Growth form codes controlled vocabulary.

Property	Value
Comment	The value in `sosa:hasResult` *MUST* be a value in `sh:in`, which is the Growth form codes controlled vocabulary.
Status	`submitted` ◯
Conformance Classes	`TBA`
Property	Value

Property	Value

Controlled list items	The result value MUST be from the following list:
	
	`Aquatic`
	
	`Bryophyte`
	
	`Chenopod`
	
	`Cycad`
	
	`Epiphyte`
	
	`Fern`
	
	`Forb`
	
	`Fungus`
	
	`Grass-tree`
	
	`Heath-shrub`
	
	`Hummock grass`
	
	`Lichen`
	
	`NC`
	
	`Other Grass`
	
	`Palm`
	
	`Rush`
	
	`Samphire Shrub`
	
	`Seagrass`
	
	`Sedge`
	
	`Shrub`
	
	`Shrub Mallee`
	
	`Tree`
	
	`Tree Mallee`

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Lite protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`. `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a` is the IRI for "Cover - Lite protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.6. Value type

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:value-type`
Label	Value type
Definition	The result *MUST* be an instance of `tern:IRI`.
Comment	The value of `sosa:hasResult` *MUST* be a `tern:IRI`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.4.7. Vocabulary

Property	Value
Identifier	`urn:shapes:cover-lite:growth-form:vocabulary`
Label	Vocabulary
Definition	The value of `tern:vocabulary` *MUST* match the pattern `d0fc07a7-3ec9-45ed-8850-885a32828d3c$`.
Comment	IRI of `tern:vocabulary` in `sosa:hasResult` *MUST* have the value `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c`. `https://linked.data.gov.au/def/nrm/d0fc07a7-3ec9-45ed-8850-885a32828d3c` is the IRI for "Growth form codes".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/growth-form/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/growth-form/valid.ttl` Invalid: `/shapes/cover/cover-lite/growth-form/invalid.ttl`

3.1.4.5. Field species name Observation

3.1.4.5.1. Datatype

Property	Value
Identifier	`urn:shapes:cover-lite:field-species-name:datatype`
Label	Datatype
Definition	The value of `rdf:value` *MUST* have the datatype xsd:string.
Comment	The value in `sosa:hasResult` *MUST* be xsd:string.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/field-species-name/shapes.ttl`

Property	Value
Examples	Valid: `/shapes/cover/cover-lite/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-lite/field-species-name/invalid.ttl`

3.1.4.5.2. Feature type

Property	Value
Identifier	`urn:shapes:cover-lite:field-species-name:feature-type`
Label	Feature type
Definition	The value of `tern:featureType` *MUST* be link: `plant occurrence`.
Comment	TERN's ecologists have determined the feature type is *plant occurrence*, defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-lite/field-species-name/invalid.ttl`

3.1.4.5.3. Simple result

Property	Value
Identifier	`urn:shapes:cover-lite:field-species-name:simple-result`
Label	Simple result
Definition	The observation's `sosa:hasSimpleResult` *MUST* have a value that is the same as the value in the value node of `sosa:hasResult`.
Comment	Value of `sosa:hasSimpleResult` *MUST* be the same as the value in `sosa:hasResult`.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-lite/field-species-name/invalid.ttl`

3.1.4.5.4. Site visit

Property	Value
Identifier	`urn:shapes:cover-lite:field-species-name:site-visit`
Label	Site visit
Definition	Observations *MUST* have a value for `tern:hasSiteVisit`.
Comment	Observations following the Cover - Lite protocol are made in the context of a site visit.
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-lite/field-species-name/invalid.ttl`

3.1.4.5.5. Used procedure

Property	Value
Identifier	`urn:shapes:cover-lite:field-species-name:used-procedure`
Label	Used procedure
Definition	The observation's `sosa:usedProcedure` *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`.
Comment	IRI of procedure *MUST* have the value `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a`. `https://linked.data.gov.au/def/nrm/aa1525f9-c3f2-4f7d-98cc-6a7d3aec9d8a` is the IRI for "Cover - Lite protocol".
Status	`submitted` ◯
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/cover/cover-lite/field-species-name/shapes.ttl`
Examples	Valid: `/shapes/cover/cover-lite/field-species-name/valid.ttl` Invalid: `/shapes/cover/cover-lite/field-species-name/invalid.ttl`

3.1.4.5.6. Value type

Property	Value
Identifier	urn:shapes:cover-lite:field-species-name:value-type
Label	Value type
Definition	The result *MUST* be an instance of tern:Text.
Comment	The value of sosa:hasResult *MUST* be a tern:Text.
Status	submitted ◯
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/cover/cover-lite/field-species-name/shapes.ttl
Examples	Valid: /shapes/cover/cover-lite/field-species-name/valid.ttl Invalid: /shapes/cover/cover-lite/field-species-name/invalid.ttl

3.2. TERN Ontology Conformance

TBD.

4. Editors Notes

4.1. Working titles

Both this specification and the ecological field collection protocol do not have canonical names yet. The below will be changed and updated once formal names are provided by DAWE.

- Ecological Data Exchange Specification (this document)
- TERN Ecosystem Surveillance Ecological Monitoring Protocols

4.2. Placeholders

4.2.1. Placeholder text

Placeholder values TBA, TBD and TBC must be replaced with actual values.

4.2.2. Placeholder IRIs

IRIs of controlled vocabularies are currently placeholders with the namespace https://linked.data.gov.au/def/nrm/. These IRIs must be replaced once the authoritative IRI is known.