# Ecological Data Exchange Specification (working title)

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**Status: Draft** - while the document is in draft, sections of the document may contain placheholders 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
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Creator	TERN
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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	Namespa ce	Name	Description
reg:	http://pu rl.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://ww w.w3.org/ ns/sosa/	SOSA	Sensor, Observation, Sample, and Actuator (SOSA) is a semantic data model to represent observations and samplings.
tern:	https://w 3id.org/ tern/ ontologie s/tern/	TERN Ontology	A profile of SOSA and PROV with minor additions to represent ecological field survey data.
unit:	http://qu dt.org/ vocab/ unit/	QUDT Units vocabulary	A vocabulary of <i>units of measure</i> 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.

### 3.1.1. Plot Description Module Conformance Class Requirements

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

For example:

Property	Value
Status	stable ❷

#### 3.1.1.1. Disturbance Observation

#### 3.1.1.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:disturbance:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value vegetation disturbance.
Comment	TERN's ecologists have determined the feature type is <i>vegetation disturbance</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### **3.1.1.1.2. Result value**

Property	Value
Identifier	urn:shapes:plot-description:disturbance:result-value
Label	Result value
Definition	The value of rdf:value MUST exist in the Disturbance type codes controlled vocabulary.
Comment	The value in sosa:hasResult MUST be a value in sh:in, which is the Disturbance type codes controlled vocabulary.
Status	submitted O
Conformance Classes	TBA
Property	Value
Controlled list items	The result value MUST be from the following list:
	Complete clearing; pasture; but never cultivated
	Complete clearing; pasture; cultivated at some stage
	Cultivated; rain fed
	Cultivation; irrigated; past or present
	Extensive clearing
	Highly disturbed; e.g. Mining; urban
	Limited clearing
	No effective disturbance
	No effective disturbance except HEAVY grazing by hoofed animals
	No effective disturbance except LIGHT grazing by hoofed animals
	No effective disturbance except MEDIUM grazing by hoofed animals
	Not Collected
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### 3.1.1.1.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:disturbance:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

#### 3.1.1.1.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:disturbance:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### 3.1.1.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:disturbance:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### 3.1.1.1.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:disturbance:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### 3.1.1.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:disturbance:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> match the pattern f5a470e8-d29f-4ff6-b50d-529b0444dbe4\$.
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://linked.data.gov.au/def/test/dawe-cv/f5a470e8-d29f-4ff6-b50d-529b0444dbe4.  https://linked.data.gov.au/def/test/dawe-cv/f5a470e8-d29f-4ff6-b50d-529b0444dbe4 is the IRI for "Disturbance type codes".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/disturbance/shapes.ttl
Examples	Valid: /shapes/plot-description/disturbance/valid.ttl
	<pre>Invalid: /shapes/plot-description/disturbance/invalid.ttl</pre>

### 3.1.1.2. Cover class Observation

### 3.1.1.2.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:cover-class:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/cover-class/invalid.ttl</pre>

#### **3.1.1.2.2. 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 O
Conformance Classes	TBA
Property	Value
Controlled list items	The result value MUST be from the following list:  c  d  d  d  d  d
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

### 3.1.1.2.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:cover-class:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/cover-class/shapes.ttl
Examples	Valid: /shapes/plot-description/cover-class/valid.ttl
	<pre>Invalid: /shapes/plot-description/cover-class/invalid.ttl</pre>

### 3.1.1.2.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:cover-class:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/cover-class/invalid.ttl</pre>

### 3.1.1.2.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:cover-class:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-
Status	401fa31c0b32 is the IRI for "Plot Description".  submitted O
Conformance Classes	TBA

Property	Value
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

### 3.1.1.2.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:cover-class:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/cover-class/invalid.ttl</pre>

### 3.1.1.2.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:cover-class:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/6aaa330c-3d60-419b-a29b-a2dbc6d67928.  https://linked.data.gov.au/def/test/dawe-cv/6aaa330c-3d60-419b-a29b-a2dbc6d67928 is the IRI for "Cover class codes".
Status	submitted O
Conformance Classes	TBA

Property	Value
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

### 3.1.1.3. Most dominant species Observation

### 3.1.1.3.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation stratum.
Comment	TERN's ecologists have determined the feature type is <i>vegetation stratum</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

### 3.1.1.3.2. Result value

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:result-value
Label	Result value
Definition	The value in sosa:hasResult MUST match the pattern biodiversity.org.au/boa/name/apni, which is part of the searching result.
Comment	The value in sosa:hasResult MUST match the pattern biodiversity.org.au/boa/name/apni, which is part of the searching result.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

### 3.1.1.3.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

#### 3.1.1.3.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

### 3.1.1.3.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

### 3.1.1.3.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl</pre>

### 3.1.1.3.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:most-dominant-species:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary MUST match have the value https://biodiversity.org.au/nsl/services/search/names.
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://biodiversity.org.au/nsl/services/search/names.  https://biodiversity.org.au/nsl/services/search/names is the link to search species.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/most-dominant-species/valid.ttl  Invalid: /shapes/plot-description/most-dominant-species/invalid.ttl

### 3.1.1.4. Growth stage Observation

### 3.1.1.4.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

#### **3.1.1.4.2. 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 Vegetation growth stage codes controlled vocabulary.
Comment	The value in sosa: hasResult MUST be a value in sh: in, which is the Vegetation growth stage codes controlled vocabulary.
Status	submitted O
Conformance Classes	TBA
Property	Value
Controlled list items	The result value MUST be from the following list:  ` Advanced Regeneration`  ` Early Regeneration`  ` Mature Age`  ` Mixed Age`  ` Senescent Age`
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

### 3.1.1.4.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

### 3.1.1.4.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

### 3.1.1.4.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

### 3.1.1.4.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

### 3.1.1.4.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:growth-stage:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> match the pattern 89c02383-fb5e-4acd-b248-902a2d579170\$.
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://linked.data.gov.au/def/test/dawe-cv/89c02383-fb5e-4acd-b248-902a2d579170.  https://linked.data.gov.au/def/test/dawe-cv/89c02383-fb5e-4acd-b248-902a2d579170 is the IRI for "Vegetation growth stage codes".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-stage/invalid.ttl</pre>

### 3.1.1.5. Landform pattern Observation

### 3.1.1.5.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value landform.
Comment	TERN's ecologists have determined the feature type is <i>landform</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.2. 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 O
Conformance Classes	TBA
Property	Value

Property	Value
Controlled list items	The result value MUST be from the following list:
iteitis	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
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/landform-pattern/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/landform-pattern/valid.ttl
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/landform-pattern/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/landform-pattern/valid.ttl
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.5.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:landform-pattern:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/19d91a7a-2733-4b84-9d2b-4bda4808c003.  https://linked.data.gov.au/def/test/dawe-cv/19d91a7a-2733-4b84-9d2b-4bda4808c003 is the IRI for "Plot slope codes".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-pattern/invalid.ttl</pre>

### 3.1.1.6. Surface strew size Observation

### 3.1.1.6.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value land surface.
Comment	TERN's ecologists have determined the feature type is <i>land surface</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA

Property	Value
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

### **3.1.1.6.2. Result value**

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:result-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 O
Conformance Classes	TBA
Property	Value
Controlled list items	The result value MUST be from the following list:  Boulder (250mm +)  Cobble (51-250mm)  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

### 3.1.1.6.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:simple-result
Label	Simple result

Property	Value
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-size/invalid.ttl</pre>

#### 3.1.1.6.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-size/invalid.ttl</pre>

### 3.1.1.6.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.

Property	Value
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-
	401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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

### 3.1.1.6.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-size/invalid.ttl</pre>

### 3.1.1.6.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-size:vocabulary
Label	Vocabulary
Definition	The value of tern: vocabulary $MUST$ match the pattern $3b25ce0f-9eb7-4d2d-97ce-143858cfd4d4\$$ .

Property	Value
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://linked.data.gov.au/def/test/dawe-cv/3b25ce0f-9eb7-4d2d-97ce-143858cfd4d4. https://linked.data.gov.au/def/test/dawe-cv/3b25ce0f-9eb7-4d2d-97ce-
	143858cfd4d4 is the IRI for "Soil surface strew size codes".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-size/invalid.ttl</pre>

### 3.1.1.7. Cover percentage Observation

### 3.1.1.7.1. Feature type

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

### **3.1.1.7.2. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:cover-percentage:simple-result
Label	Simple result

Property	Value
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 O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/cover-percentage/shapes.ttl
Examples	Valid: /shapes/plot-description/cover-percentage/valid.ttl
	<pre>Invalid: /shapes/plot-description/cover-percentage/invalid.ttl</pre>

#### 3.1.1.7.3. Site visit

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

#### **3.1.1.7.4. Unit of measure**

Property	Value
Identifier	urn:shapes:plot-description:cover-percentage:unit-of-measure
Label	Unit of measure
Definition	The result MUST have unit: PERCENT as the value for tern: unit.
Comment	Result value's unit of measure <i>MUST</i> have the value unit:PERCENT.
Status	submitted O

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

### 3.1.1.7.5. Used procedure

uspishanosialet descriptioniseves persentageinsed progedure
urn:shapes:plot-description:cover-percentage:used-procedure
Used procedure
The observation's sosa:usedProcedure MUST have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
submitted 🔾
TBA
TERN Ecosystem Surveillance Ecological Monitoring Protocols
/shapes/plot-description/cover-percentage/shapes.ttl
Valid: /shapes/plot-description/cover-percentage/valid.ttl  Invalid: /shapes/plot-description/cover-percentage/invalid.ttl
] 

### 3.1.1.7.6. Value range

Property	Value
Identifier	urn:shapes:plot-description:cover-percentage:value-range
Label	Value range
Definition	The result MUST have a value between 0 and 100 inclusively.
Comment	Value <i>MUST</i> be between 0 and 100 inclusive.
Status	submitted O

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

### 3.1.1.7.7. Value type

Property	Value
Identifier	urn:shapes:plot-description:cover-percentage: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 O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/cover-percentage/shapes.ttl
Examples	Valid: /shapes/plot-description/cover-percentage/valid.ttl
	<pre>Invalid: /shapes/plot-description/cover-percentage/invalid.ttl</pre>

### 3.1.1.8. Landform element Observation

### 3.1.1.8.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:landform-element:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value landform.
Comment	TERN's ecologists have determined the feature type is <i>landform</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	/shapes/plot-description/landform-element/shapes.ttl
Examples	Valid: /shapes/plot-description/landform-element/valid.ttl
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.2. 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 O
Conformance Classes	TBA
Property	Value

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

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
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:landform-element:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:landform-element:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/landform-element/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/landform-element/valid.ttl
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:landform-element:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:landform-element:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/landform-element/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/landform-element/valid.ttl
	<pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre>

### 3.1.1.8.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:landform-element:vocabulary
Label	Vocabulary
Definition	The value of tern: vocabulary <i>MUST</i> 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/test/dawe-cv/c1a58967-cb12-4c2c-a7ca-9cee2589919c. https://linked.data.gov.au/def/test/dawe-cv/c1a58967-cb12-4c2c-a7ca-9cee2589919c is the IRI for "Landform element codes".
Status	submitted O
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
	Titvairu. / Shapes/ prot-description/ tahururin-etement/ invario.ttt

### 3.1.1.9. Climatic condition Observation

### 3.1.1.9.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value climate.
Comment	TERN's ecologists have determined the feature type is <i>climate</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/climatic-condition/shapes.ttl
Examples	Valid: /shapes/plot-description/climatic-condition/valid.ttl
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

### **3.1.1.9.2. Result value**

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

#### 3.1.1.9.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

#### 3.1.1.9.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

### 3.1.1.9.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

### 3.1.1.9.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

### 3.1.1.9.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:climatic-condition:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/2ebfee89-92db-44b3-bb89-06dd92798ae6. https://linked.data.gov.au/def/test/dawe-cv/2ebfee89-92db-44b3-bb89-06dd92798ae6 is the IRI for "Climatic condition codes".
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre>

# 3.1.1.10. Homogeneity measure Observation

### 3.1.1.10.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:homogeneity-measure:feature-type
Label	Feature type
Definition	The value of tern:featureType MUST be vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

### 3.1.1.10.2. 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 O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	/shapes/plot-description/homogeneity-measure/shapes.ttl
Examples	Valid: /shapes/plot-description/homogeneity-measure/valid.ttl
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

#### 3.1.1.10.3. 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 protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

#### 3.1.1.10.4. 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 <i>MUST</i> have the value unit:M.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

#### 3.1.1.10.5. 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/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

#### 3.1.1.10.6. Value range

Property	Value
Identifier	urn:shapes:plot-description:homogeneity-measure:value-range
Label	Value range
Definition	The result <i>MUST</i> not be negative.
Comment	Value MUST not be negative.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

### 3.1.1.10.7. 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 O
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
	<pre>Invalid: /shapes/plot-description/homogeneity-measure/invalid.ttl</pre>

# 3.1.1.11. Height class Observation

### 3.1.1.11.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:height-class:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

#### 3.1.1.11.2. Result value

Property	Value
Identifier	urn:shapes:plot-description:height-class:result-value
Label	Result value

Property	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 O
Conformance Classes	TBA
Property	Value
Controlled list items	The result value MUST be from the following list:  1 2 3 4 5 6 7
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

### 3.1.1.11.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:height-class:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

#### 3.1.1.11.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:height-class:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

### **3.1.1.11.5. Used procedure**

Property	Value
Identifier	urn:shapes:plot-description:height-class:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

### 3.1.1.11.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:height-class:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

### 3.1.1.11.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:height-class:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/b1b05cd1-3b85-4639-a6af-799a34d88d43.  https://linked.data.gov.au/def/test/dawe-cv/b1b05cd1-3b85-4639-a6af-799a34d88d43 is the IRI for "Vegetation height class codes".
Status	submitted O

Property	Value
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
	<pre>Invalid: /shapes/plot-description/height-class/invalid.ttl</pre>

# 3.1.1.12. Outcrop lithology Observation

### 3.1.1.12.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value land surface.
Comment	TERN's ecologists have determined the feature type is <i>land surface</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/outcrop-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre>

### 3.1.1.12.2. Result value

Property	Value
Identifier	urn:shapes:plot-description:outcrop-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 O

Property	Value
Conformance Classes	TBA
Property	Value

Property	Value
Controlled list items	The result value MUST be from the following list:
itenis	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/outcrop-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre>

### **3.1.1.12.3. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/outcrop-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl  Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl

#### 3.1.1.12.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/outcrop-lithology/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre>

### 3.1.1.12.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/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/outcrop-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre>

#### 3.1.1.12.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern: IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/outcrop-lithology/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre>

### 3.1.1.12.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:outcrop-lithology:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/1d50eb79-685f-45ea-84b4-627154eddede.  https://linked.data.gov.au/def/test/dawe-cv/1d50eb79-685f-45ea-84b4-627154eddede is the IRI for "Soil lithology codes".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/outcrop-lithology/shapes.ttl
Examples	Valid: /shapes/plot-description/outcrop-lithology/valid.ttl  Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl

## 3.1.1.13. Fire history Observation

### 3.1.1.13.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:fire-history:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value vegetation disturbance.
Comment	TERN's ecologists have determined the feature type is <i>vegetation disturbance</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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

#### **3.1.1.13.2.** 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 O
Conformance Classes	TBA
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

#### 3.1.1.13.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:fire-history:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.

Property	Value
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre>

#### 3.1.1.13.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:fire-history:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre>

### 3.1.1.13.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:fire-history:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-
	401fa31c0b32 is the IRI for "Plot Description".

Property	Value
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre>

### 3.1.1.13.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:fire-history:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre>

### 3.1.1.13.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:fire-history:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/6e9d2f51-ce64-4c67-8391-d14a8bf96b6b. https://linked.data.gov.au/def/test/dawe-cv/6e9d2f51-ce64-4c67-8391-d14a8bf96b6b is the IRI for "Fire history codes".

Property	Value
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre>

### 3.1.1.14. Structural formation Observation

#### **3.1.1.14.1. Feature type**

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

#### 3.1.1.14.2. 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 O

Property	Value
Conformance Classes	TBA
Property	Value

Property	Value
Controlled list items	The result value MUST be from the following list:
iteritis	Bryophyteland
	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
	Forbland
	Grassland
	Heathland
	Hummock grassland
	Isolated bryophytes

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
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

### **3.1.1.14.3. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

#### 3.1.1.14.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/structural-formation/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/structural-formation/valid.ttl
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

### **3.1.1.14.5. Used procedure**

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

#### 3.1.1.14.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/structural-formation/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/structural-formation/valid.ttl
	<pre>Invalid: /shapes/plot-description/structural-formation/invalid.ttl</pre>

### 3.1.1.14.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:structural-formation:vocabulary
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/test/dawe-cv/6e9baf51-566e-4a5d-93c4-a6e097dc364d.  https://linked.data.gov.au/def/test/dawe-cv/6e9baf51-566e-4a5d-93c4-a6e097dc364d is the IRI for "Vegetation structural formation codes".
Status	submitted O
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

### 3.1.1.15. Growth form Observation

### 3.1.1.15.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:growth-form:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value vegetation.
Comment	TERN's ecologists have determined the feature type is <i>vegetation</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA

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
	<pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre>

#### **3.1.1.15.2. Result value**

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

Property	Value
Controlled list items	The result value MUST be from the following list:
пения	Aquatic
	Bryophyte
	Chenopod
	Cycad
	Epiphyte
	Fern
	Forb
	Fungus
	Grass-tree
	Heath-shrub
	Hummock grass
	NC
	Rush
	Sedge
	Shrub
	Shrub Mallee
	Tree Mallee
	Tree-fern
	Tree/Palm
	Tussock grass
	Vine
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/growth-form/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/growth-form/valid.ttl
	<pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre>

### **3.1.1.15.3. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:growth-form:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre>

#### 3.1.1.15.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:growth-form:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre>

### 3.1.1.15.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:growth-form:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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

#### 3.1.1.15.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:growth-form:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre>

#### **3.1.1.15.7. Vocabulary**

Property	Value
Identifier	urn:shapes:plot-description:growth-form:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> 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/test/dawe-cv/d0fc07a7-3ec9-45ed-8850-885a32828d3c. https://linked.data.gov.au/def/test/dawe-cv/d0fc07a7-3ec9-45ed-8850-885a32828d3c is the IRI for "Vegetation growth form codes".
Status	submitted O
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

## 3.1.1.16. Aspect Observation

### 3.1.1.16.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:aspect:feature-type
Label	Feature type
Definition	The value of tern:featureType MUST be landform.
Comment	TERN's ecologists have determined the feature type is <i>landform</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

### 3.1.1.16.2. Simple result

Property	Value
Identifier	urn:shapes:plot-description:aspect: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 O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

#### 3.1.1.16.3. 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 protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

#### **3.1.1.16.4.** 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.

Property	Value
Comment	Result value's unit of measure <i>MUST</i> have the value unit: DEG.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

### 3.1.1.16.5. 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/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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

### 3.1.1.16.6. Value range

Property	Value
Identifier	urn:shapes:plot-description:aspect:value-range
Label	Value range
Definition	The result <i>MUST</i> have a value between 0 exclusive and 360 inclusive.
Comment	Value <i>MUST</i> be between 0 exclusive and 360 inclusive.

Property	Value
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

### 3.1.1.16.7. 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 O
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
	<pre>Invalid: /shapes/plot-description/aspect/invalid.ttl</pre>

## 3.1.1.17. Second most dominant species Observation

### 3.1.1.17.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value vegetation stratum.
Comment	TERN's ecologists have determined the feature type is <i>vegetation stratum</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA

Property	Value
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

#### **3.1.1.17.2. Result value**

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:result-value
Label	Result value
Definition	The value in sosa:hasResult MUST match the pattern biodiversity.org.au/boa/name/apni, which is part of the searching result.
Comment	The value in sosa:hasResult MUST match the pattern biodiversity.org.au/boa/name/apni, which is part of the searching result.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

### **3.1.1.17.3. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

#### 3.1.1.17.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

### 3.1.1.17.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

### 3.1.1.17.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

### **3.1.1.17.7. Vocabulary**

Property	Value
Identifier	urn:shapes:plot-description:second-most-dominant-species:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary MUST match have the value https://biodiversity.org.au/nsl/services/search/names.
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://biodiversity.org.au/nsl/services/search/names.  https://biodiversity.org.au/nsl/services/search/names is the link to search species.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/second-most-dominant-species/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/second-most-dominant-species/valid.ttl
	<pre>Invalid: /shapes/plot-description/second-most-dominant-species/invalid.ttl</pre>

# 3.1.1.18. Slope type Observation

### 3.1.1.18.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:slope-type:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA <i>MUST</i> have a tern:featureType with the value landform.
Comment	TERN's ecologists have determined the feature type is <i>landform</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl
	<pre>Invalid: /shapes/plot-description/slope-type/invalid.ttl</pre>

#### 3.1.1.18.2. Result value

Property	Value
Identifier	urn:shapes:plot-description:slope-type:result-value
Label	Result value
Definition	The value of rdf:value MUST exist in the Plot slope codes controlled vocabulary.
Comment	The value in sosa:hasResult <i>MUST</i> be a value in sh:in, which is the Plot slope codes controlled vocabulary.
Status	submitted O
Conformance Classes	TBA
Property	Value

Property	Value
Controlled list items	The result value MUST be from the following list:
	Cliffed
	Gently inclined
	Level
	Moderately inclined
	Precipitous '
	`Steep
	Very gently inclined
	Very steep
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl
	<pre>Invalid: /shapes/plot-description/slope-type/invalid.ttl</pre>

## 3.1.1.18.3. Simple result

Property	Value
Identifier	urn:shapes:plot-description:slope-type:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl
	<pre>Invalid: /shapes/plot-description/slope-type/invalid.ttl</pre>

#### 3.1.1.18.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:slope-type:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl
	<pre>Invalid: /shapes/plot-description/slope-type/invalid.ttl</pre>

## 3.1.1.18.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:slope-type:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl  Invalid: /shapes/plot-description/slope-type/invalid.ttl
	mivana. / snapes/prot-description/stope-type/invaria.tti

### 3.1.1.18.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:slope-type:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl  Invalid: /shapes/plot-description/slope-type/invalid.ttl

## 3.1.1.18.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:slope-type:vocabulary
Label	Vocabulary
Definition	The value of tern:vocabulary <i>MUST</i> match the pattern d893e669-c530-4bc3-a057-a5799ffcb5db\$.
Comment	IRI of tern:vocabulary in sosa:hasResult MUST have the value https://linked.data.gov.au/def/test/dawe-cv/d893e669-c530-4bc3-a057-a5799ffcb5db.  https://linked.data.gov.au/def/test/dawe-cv/d893e669-c530-4bc3-a057-a5799ffcb5db is the IRI for "Plot slope codes".
Status	submitted 🔾
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope-type/shapes.ttl
Examples	Valid: /shapes/plot-description/slope-type/valid.ttl  Invalid: /shapes/plot-description/slope-type/invalid.ttl

## ${\bf 3.1.1.19.}\ Surface\ strew\ lithology\ Observation$

## 3.1.1.19.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:feature-type
Label	Feature type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a tern:featureType with the value land surface.
Comment	TERN's ecologists have determined the feature type is <i>land surface</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

#### 3.1.1.19.2. 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 O
Conformance Classes	TBA
Property	Value

Property	Value
Controlled list items	The result value MUST be from the following list:
rems	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
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

## **3.1.1.19.3. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:simple-result
Label	Simple result
Definition	Instances of tern:Observation MUST have a sosa:hasSimpleResult where the value is the same as the rdf:value on the value node of sosa:hasResult.
Comment	Value of sosa:hasSimpleResult MUST be the same as the value in sosa:hasResult.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

### 3.1.1.19.4. Site visit

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/surface-strew-lithology/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/surface-strew-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

## 3.1.1.19.5. Used procedure

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:used-procedure
Label	Used procedure
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:usedProcedure where the value is https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32 is the IRI for "Plot Description".
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

### 3.1.1.19.6. Value type

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:value-type
Label	Value type
Definition	Instances of tern:Observation with sosa:observedProperty value TBA MUST have a sosa:hasResult where the value node is an instance of tern:IRI.
Comment	The value in sosa:hasResult MUST be a tern:IRI.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/surface-strew-lithology/shapes.ttl

Property	Value
Examples	Valid: /shapes/plot-description/surface-strew-lithology/valid.ttl
	<pre>Invalid: /shapes/plot-description/surface-strew-lithology/invalid.ttl</pre>

## 3.1.1.19.7. Vocabulary

Property	Value
Identifier	urn:shapes:plot-description:surface-strew-lithology:vocabulary
Label	Vocabulary
Definition	The value of tern: vocabulary <i>MUST</i> 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/test/dawe-cv/1d50eb79-685f-45ea-84b4-627154eddede.  https://linked.data.gov.au/def/test/dawe-cv/1d50eb79-685f-45ea-84b4-627154eddede is the IRI for "Soil lithology codes".
Status	submitted O
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

## 3.1.1.20. Slope Observation

## 3.1.1.20.1. Feature type

Property	Value
Identifier	urn:shapes:plot-description:slope:feature-type
Label	Feature type
Definition	The value of tern: featureType MUST be landform.
Comment	TERN's ecologists have determined the feature type is <i>landform</i> , defined by the Australian Soil and Land Survey Field Handbook.
Status	submitted O
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols

Property	Value
Validators	/shapes/plot-description/slope/shapes.ttl
Examples	Valid: /shapes/plot-description/slope/valid.ttl
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

### **3.1.1.20.2. Simple result**

Property	Value
Identifier	urn:shapes:plot-description:slope: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 O
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
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

#### 3.1.1.20.3. Site visit

Property	Value
Identifier	urn:shapes:plot-description:slope:site-visit
Label	Site visit
Definition	Observations <i>MUST</i> have a value for tern:hasSiteVisit.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

#### **3.1.1.20.4.** 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 <i>MUST</i> have the value unit:DEG.
Status	submitted O
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
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

### 3.1.1.20.5. 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/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32.
Comment	IRI of procedure <i>MUST</i> have the value https://linked.data.gov.au/def/test/dawe-cv/1ff9e97c-3bdd-44c9-bdd3-401fa31c0b32. https://linked.data.gov.au/def/test/dawe-cv/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
	Titvatia. / Shapes/ prot-description/ stope/ invaria. cci

### 3.1.1.20.6. 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 O
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
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

#### 3.1.1.20.7. 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 O
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
	<pre>Invalid: /shapes/plot-description/slope/invalid.ttl</pre>

# 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 <a href="https://linked.data.gov.au/def/test/dawe-cv/">https://linked.data.gov.au/def/test/dawe-cv/</a>. These IRIs must be replaced once the authoritative IRI is known.