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. |
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| Creator | TERN |
| Publisher | Department of Agriculture, Water and the Environment |
| License | Creative Commons Attribution 4.0 International (CC BY 4.0) |
| Further information | This document is part of the Services Agreement for the provision of standardised ecological monitoring protocols and systems for data collection, storage and management. Procurement Number (PRN): 360 000 5101 Commonwealth of Australia as represented by the Department of Agriculture, Water and the Environment ABN 34 190 894 983 (Department) The University of Queensland as represented by TERN ABN 63 942 912 684 (Service Provider) |
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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 ⊘ |

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

3.1.1.3. 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 |

| Property | Value |
|------------------------|---|
| 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 Invalid: /shapes/plot-description/disturbance/invalid.ttl |

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 |

| Property | Value |
|------------------------|---|
| 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 |
| Source | TERN Ecosystem Surveillance Ecological Monitoring Protocols |

| Property | Value |
|------------|--|
| 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-bdd3-401fa31c0b32 is the IRI for "Plot Description". |
| Status | submitted O |
| Conformance Classes | TBA |
| Source | TERN Ecosystem Surveillance Ecological Monitoring Protocols |

| Property | Value |
|------------|--|
| 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> |

3.1.1.2.6. 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 |
| Source | TERN Ecosystem Surveillance Ecological Monitoring Protocols |

| Property | Value |
|------------|--|
| 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> |

3.1.1.3. 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 <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 |
| 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 |
| Validators | /shapes/plot-description/most-dominant-species/shapes.ttl |

| Property | Value |
|----------|--|
| 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 MUST 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. Landform element Observation

3.1.1.7.1. 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 MUST 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-element/shapes.ttl |
| Examples | Valid: /shapes/plot-description/landform-element/valid.ttl |
| | <pre>Invalid: /shapes/plot-description/landform-element/invalid.ttl</pre> |

3.1.1.7.2. Result value

| Property | Value |
|------------|---|
| Identifier | urn:shapes:plot-description:landform-element:result-value |
| Label | Result value |

| Property | 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: |
| Remo | 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> |

3.1.1.7.3. 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> |

3.1.1.7.4. 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> |

3.1.1.7.5. 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> |

3.1.1.7.6. 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> |

3.1.1.7.7. **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 |

3.1.1.8. Climatic condition Observation

3.1.1.8.1. 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> |

3.1.1.8.2. 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 |
| | <pre>Invalid: /shapes/plot-description/climatic-condition/invalid.ttl</pre> |

3.1.1.8.3. 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> |

3.1.1.8.4. 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> |

3.1.1.8.5. 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> |

3.1.1.8.6. 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> |

3.1.1.8.7. 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> |

3.1.1.9. Height class Observation

3.1.1.9.1. 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 <i>MUST</i> 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> |

3.1.1.9.2. Result value

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

| Property | Value |
|------------------------|--|
| Conformance Classes | TBA |
| Property | Value |
| Controlled list items | The result value MUST be from the following list: |
| | 2 |
| | 3 |
| | 4 |
| | 5 |
| | 6 |
| | 7 |
| | 8 |
| 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 |

3.1.1.9.3. 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 |
| Conformance Classes | TBA |
| Source | TERN Ecosystem Surveillance Ecological Monitoring Protocols |
| Validators | /shapes/plot-description/height-class/shapes.ttl |

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

3.1.1.9.4. 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> |

3.1.1.9.5. 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 |
| Conformance Classes | TBA |
| Source | TERN Ecosystem Surveillance Ecological Monitoring Protocols |
| Validators | /shapes/plot-description/height-class/shapes.ttl |

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

3.1.1.9.6. 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> |

3.1.1.9.7. Vocabulary

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

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

3.1.1.10. Outcrop lithology Observation

3.1.1.10.1. 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 <i>MUST</i> 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> |

3.1.1.10.2. 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 <i>MUST</i> 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: |
| itellis | 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> |

3.1.1.10.3. 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 |
| | <pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre> |

3.1.1.10.4. 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> |

3.1.1.10.5. 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> |

3.1.1.10.6. 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> |

3.1.1.10.7. 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 |
| | <pre>Invalid: /shapes/plot-description/outcrop-lithology/invalid.ttl</pre> |

3.1.1.11. Fire history Observation

3.1.1.11.1. 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 |
| | <pre>Invalid: /shapes/plot-description/fire-history/invalid.ttl</pre> |

3.1.1.11.2. 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 |

3.1.1.11.3. 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> |

3.1.1.11.4. 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> |

3.1.1.11.5. 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 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". |

| 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> |

3.1.1.11.6. 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> |

3.1.1.11.7. 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> |

3.1.1.12. Growth form Observation

3.1.1.12.1. 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 <i>MUST</i> 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-form/shapes.ttl |
| Examples | Valid: /shapes/plot-description/growth-form/valid.ttl |
| | <pre>Invalid: /shapes/plot-description/growth-form/invalid.ttl</pre> |

3.1.1.12.2. 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 |

| Property | Value |
|------------------------|-------|
| Conformance Classes | TBA |
| Property | Value |

| Property | Value |
|-----------------------|---|
| Controlled list items | The result value MUST be from the following list: |
| items | 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> |

3.1.1.12.3. 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> |

3.1.1.12.4. 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> |

3.1.1.12.5. 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 🔾 |
| 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> |

3.1.1.12.6. 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> |

3.1.1.12.7. Vocabulary

| Value |
|--|
| urn:shapes:plot-description:growth-form:vocabulary |
| Vocabulary |
| The value of tern:vocabulary <i>MUST</i> match the pattern d0fc07a7-3ec9-45ed-8850-885a32828d3c\$. |
| 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". |
| submitted O |
| TBA |
| TERN Ecosystem Surveillance Ecological Monitoring Protocols |
| /shapes/plot-description/growth-form/shapes.ttl |
| Valid: /shapes/plot-description/growth-form/valid.ttl Invalid: /shapes/plot-description/growth-form/invalid.ttl |
| |

3.1.1.13. Aspect Observation

3.1.1.13.1. 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> |

3.1.1.13.2. Simple result

| Property | Value |
|------------------------|--|
| Identifier | urn:shapes:plot-description:aspect:simple-result |
| Label | Simple result |
| Definition | The observation's sosa:hasSimpleResult <i>MUST</i> 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> |

3.1.1.13.3. 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> |

3.1.1.13.4. 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> |

3.1.1.13.5. 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 |

3.1.1.13.6. 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 MUST 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> |

3.1.1.13.7. 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> |

3.1.1.14. Second most dominant species Observation

3.1.1.14.1. 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> |

3.1.1.14.2. 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> |

3.1.1.14.3. 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> |

3.1.1.14.4. 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> |

3.1.1.14.5. 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> |

3.1.1.14.6. 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> |

3.1.1.14.7. 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> |

3.1.1.15. Slope type Observation

3.1.1.15.1. 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> |

3.1.1.15.2. 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 MUST 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> |

3.1.1.15.3. 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> |

3.1.1.15.4. 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> |

3.1.1.15.5. 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 |
| | Titvatia. / Shapes/ prot-description/ stope-type/ invariation |

3.1.1.15.6. 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 |

3.1.1.15.7. 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 |
| | <pre>Invalid: /shapes/plot-description/slope-type/invalid.ttl</pre> |

${\bf 3.1.1.16.}\ Surface\ strew\ lithology\ Observation$

3.1.1.16.1. 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> |

3.1.1.16.2. 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: |
| itellis | 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> |

3.1.1.16.3. 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> |

3.1.1.16.4. 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> |

3.1.1.16.5. 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> |

3.1.1.16.6. 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> |

3.1.1.16.7. 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 |

3.1.1.17. Slope Observation

3.1.1.17.1. 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> |

3.1.1.17.2. 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> |

3.1.1.17.3. 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> |

3.1.1.17.4. 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> |

3.1.1.17.5. 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 |
| | mivana. / snapes/ prot-description/ stope/ invaria. cci |

3.1.1.17.6. 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> |

3.1.1.17.7. 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 https://linked.data.gov.au/def/test/dawe-cv/. These IRIs must be replaced once the authoritative IRI is known.