

5-4.2.5.2 Feature Bindings

The feature binding describes the association between two feature types. Each feature binding is contained within the type definition for a “source” feature type in the Feature Catalogue, and describes the relation of a feature type (the “target”) to the source feature type. A feature binding specifies:

- the name of the feature association;
- the target feature type;
- the role of the target feature type in relation to the source feature (the “role” is the name of the association end at the target);
- the type of association end at the target (ordinary association, aggregation, or composition); and
- the multiplicity of the target feature type.

EXAMPLE: The **TrafficSeparationScheme** feature type is associated to the **TrafficSeparationSchemeLanePart** feature by the **TrafficSeparationSchemeAggregation** association. This association is an aggregation and is depicted in the Figure 5-2 UML diagram below:

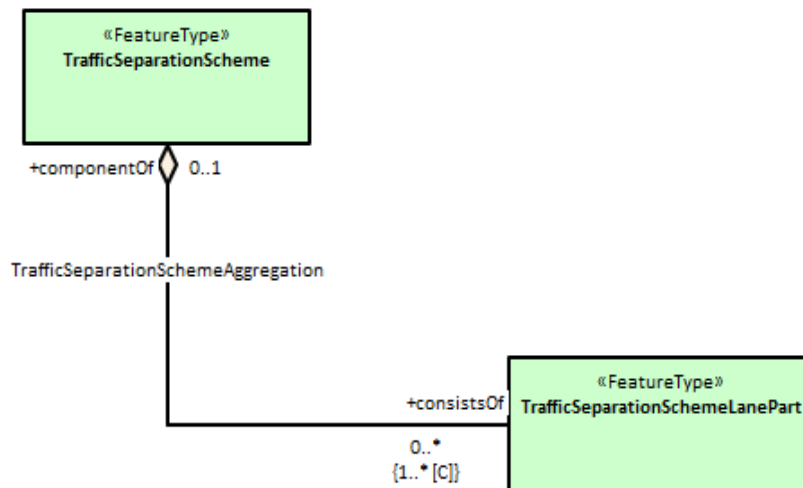


Figure 5-2 – TrafficSeparationSchemeAggregation association between TrafficSeparationScheme and TrafficSeparationSchemeLanePart feature classes

In accordance with UML conventions, the diamond at the TrafficSeparationScheme end means that TrafficSeparationScheme is the “whole” or “container” in the association and TrafficSeparationSchemeLanePart is the “part” or “containee”. The feature bindings in the respective feature types in the XML Feature Catalogue are:

In the TrafficSeparationScheme:

```

<S100FC:featureBinding roleType="association">
  <S100FC:multiplicity>
    <S100Base:lower>0</S100Base:lower>
    <S100Base:upper xsi:nil="true" infinite="true"/>
  </S100FC:multiplicity>
  <S100FC:association ref="TrafficSeparationSchemeAggregation"/>
  <S100FC:role ref="consistsOf"/>
  <S100FC:featureType ref="TrafficSeparationSchemeLanePart"/>
</S100FC:featureBinding>
  
```

In TrafficSeparationSchemeLanePart:

```

<S100FC:featureBinding roleType="aggregation">
  <S100FC:multiplicity>
    <S100Base:lower>0</S100Base:lower>
    <S100Base:upper xsi:nil="false" infinite="false">1</S100Base:upper>
  
```

```
</S100FC:multiplicity>
<S100FC:association ref="TrafficSeparationSchemeAggregation"/>
<S100FC:role ref="componentOf"/>
<S100FC:featureType ref="TrafficSeparationScheme"/>
</S100FC:featureBinding>
```

Note that data formats may impose constraints on whether bindings are actually encoded in either of the participating feature instances in datasets.

5-4.2.5.3 Information Bindings

The information binding describes the association between a feature and information type or between two information types. Each information binding is contained within the type definition for a “source” feature or information type in the Feature Catalogue, and describes the relation of an information type (the “target”) to the source type. An information binding specifies:

- the name of the information association;
- the target information type;
- the role of the target information type in relation to the source feature or information type (the “role” is the name of the association end at the target);
- the type of association end at the target (ordinary association, aggregation, or composition); and
- the multiplicity of the target information type.

The structure in the XML Feature Catalogue is similar to the example in clause 5-4.2.5.2 except that one or both of the types will be an information type and the XML will be for “informationBinding” instead of “featureBinding”.

As for feature bindings, data formats may impose constraints on whether bindings are actually encoded in either of the participating feature instances in datasets (for example, that for an information association linking a feature to an information type, the binding is encoded only in the feature instance and therefore the Feature Catalogue may not include the binding in the information type, only in the feature type).