SEPM Products

# Release 2021-01

New Features

| Document Information | |
|---|---|
| **Abstract** | This document describes new features in the SEPM product release 2021-01 |
| **Version** | 2021-01 |
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Software Engineering & Project Management
Gerliswilstrasse 42
CH-6020 Emmenbrücke
Schweiz

Tel. +41 79 632 28 20
www.sepm.ch
info@sepm.ch

# Contents

# 1 Overview

## 1.1 Changes Overview

This release ***2021-01*** covers the following improvements:

- ***SEPM X-Translator*** : Detail improvements and implementation of various customer requests.
- The ***AutoCAD DWG/DXF Format*** uses the latest Techsoft3D RealDWG 2022 library. Some entity types LEADER and MLEADER are now imported as line and text geometries.
- ***SEPM NEPLAN Interface***: Detail improvements when exporting to V10.
- The ***SEPM XPlanung Interface*** based on the new SEPM Business Services architecture is in the starting blocks.

## 1.2 Installation/Upgrade

### 1.2.1 Change to Actions

Customers that overwrite or define the following methods of the SEPM product in a module like "nis_xyz_x_translator_extras" should now delete this functionality:

- x_translator_plugin.x_activate_simple_translator()
- x_translator_plugin.init_actions()

A corresponding configuration option has been integrated into the product, see the setting *x_translator_settings.gui_action_customisation* for more details.

### 1.2.2 AutoCAD DXF/DWG Format

This version comprises a new version of the helper program ***DwgAcp.exe***. If you use the "AutoCAD DWG/DXF" format you'll need to uninstall the existing *DwgAcpSetup.msi* and install the new setup. The installation directory in this realse is:

```
C:\Program Files\SEPM\DwgAcp80
```

### 1.2.3 Smallworld-Versions

This release supports all Smallworld version from Smallworld 4.0 up to Smallworld 5.2.7.

### 1.2.4 PostGIS-Version

The Jars to access PostGIS have been updated, see x_translator\data\lib:

- postgis-jdbc-2.5.0.jar
- postgresql-42.2.20.jar

If you want to access PostGIS 3, you should use this SEPM version 2021-01.

### 1.2.5 GDAL target format

The announced GDAL target format could not be completed on schedule. It will be released at a later time.

### 1.2.6 MIF and Shape Attribute Names

An improved export of MIF and Shape attribute names has been implemented in version 2018-01. Unfortunately this change was not listed in the corresponding Release Notes. This is made up for now:

In version 2017-02 and before attribute names were restricted to plain Ascii. Some accented- or umlaut-characters have been replaced (e.g. 'Ö' was converted to 'OE' or 'é' to 'e'). This restriction has been relaxed since many tools can now support different encodings. Characters that return true to the method *letter?* are now also included in the attribute name. This is now the default behaviour.

If you want to keep the old behaviour the following Magik configuration needs to be done:

1)

`x_translator_settings.shape_attribute_name_substitutions` and
`x_translator_settings.mif_attribute_name_substitutions`

Copy the commented shared constants to your customer configuration and uncomment

2)

Configure the following shared constants to False:

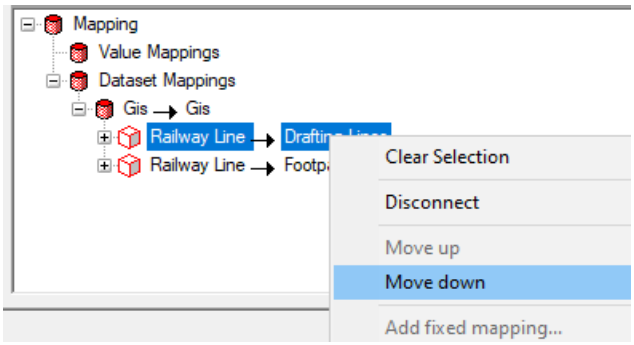
`x_translator_settings.shape_is_letter_characters` and
`x_translator_settings.mif_is_letter_characters`

# 2 SEPM X-Translator

## 2.1 General Changes

### 2.1.1 Actions 'Move up' and 'Move down'

When configuring a mapping it is now possible to rearrange the collections mappings with the commands 'Move up' and 'Move down'.




### 2.1.2 Statistics Logfile

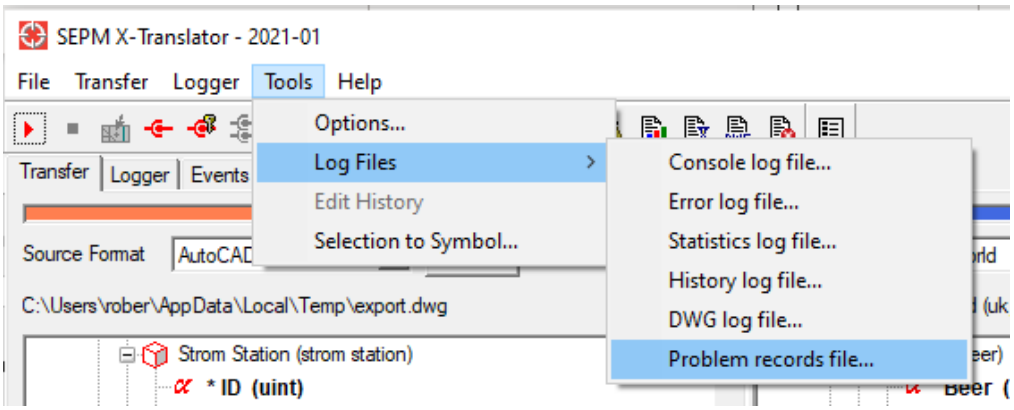
When importing to Smallworld, the statistics logfile now shows the total number of correctly inserted and failed database records:

```
HISTORY
=======

Source format: tfd
Target format: smallworld
...
Total errors: 20
Total warnings: 0
Total inserted: 573
Total failed: 6
...
```

### 2.1.3 New Command to show Not-Imported-Objects

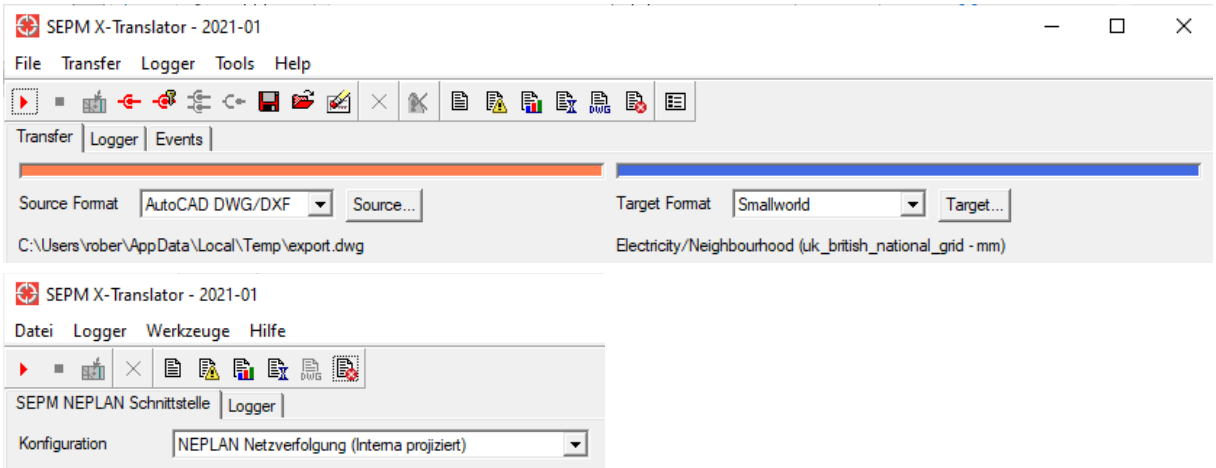
During Smallworld-Import a logfile "problem_records.txt" gets created, showing the attribute values of those objects that could not be created. The user can now show this logfile with a menu command, similar to the other logfiles.




*New menu entry 'Problem records file...'*

### 2.1.4 Icons for Logfiles

Icons have been added to the toolbar for fast access to the logfiles. Many thanks to A. Favard from GE France for the contribution of these icons.



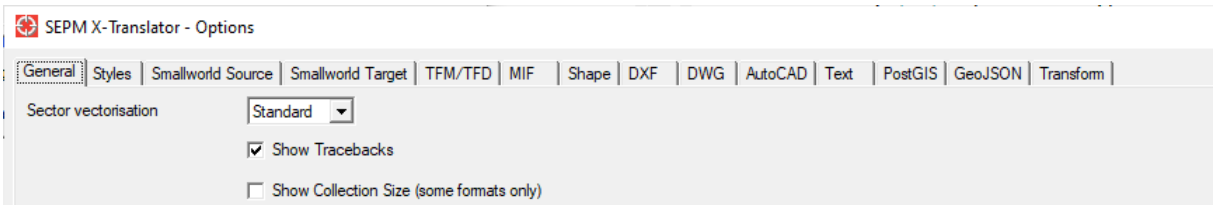

*Icons for the display of the console, error, statistics, history, DWG and Not-imported-objects logfiles.*

### 2.1.5 Options GUI

With the following commands formats can be registerd or unregistered for the GUI:

```
x_translator_settings.register_available_source_format()
x_translator_settings.unregister_available_source_format()
x_translator_settings.register_available_target_format()
x_translator_settings.unregister_available_target_format()
```

This allows hiding unused formats from the user. For hidden formats the options are no longer displayed in the options window:




*INTERLIS and ISYBAU options have been removed from the Options GUI.*

### 2.1.6 Authorization of a Simple GUI Configuration

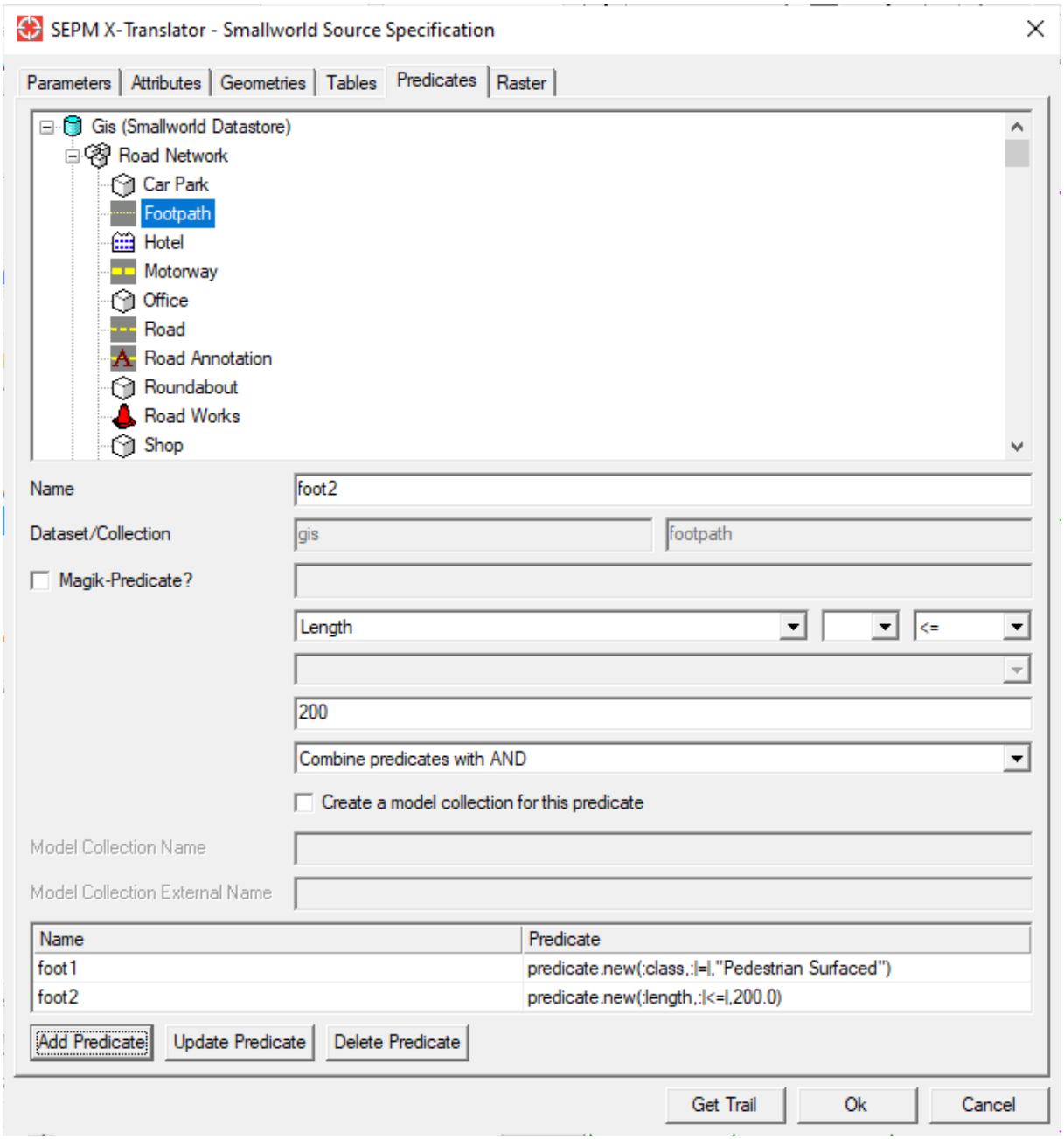
With the key ***:right*** you can authorise an individual configuration in the Simple GUI. If set, the configuration is only shown to those users being part of the corresponding authorization group.

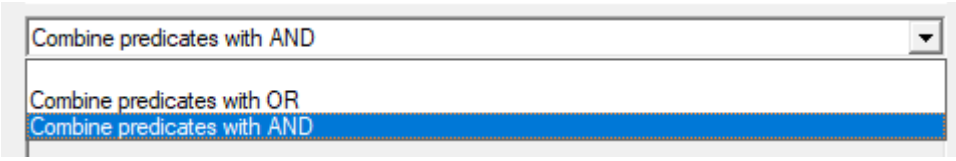
```
_block
        x_translator_settings.register_simple_gui_configuration(
                x_translator_settings.simple_gui_config[:geojson_simple_gui],
                property_list.new_with(
                        :external_name, "Import GeoJSON",
                        :method_name, :|simple_gui_import_geojson()|,
                        :default_values,
                        property_list.new_with(
                                :path, _proc()
                                        _return x_translator_settings.get_simple_gui_path( "" )
                                        _endproc
                                      ),
                        :file_or_dir, :dir,
                        :path_filter, {"Zipped GeoJSON(*.zip)", "*.zip",
                                "GeoJSON", "*.geojson", "JSON", "*.json"},
                        :path_title, "Select the GeoJSON source data",
                        :right, :x_translator_geojson_import
                              ) )
_endblock
$
```

*Sample configuration of the Simple GUI parameter **:right**.*

## 2.2 Smallworld Format

### 2.2.1 Join Predicates with AND

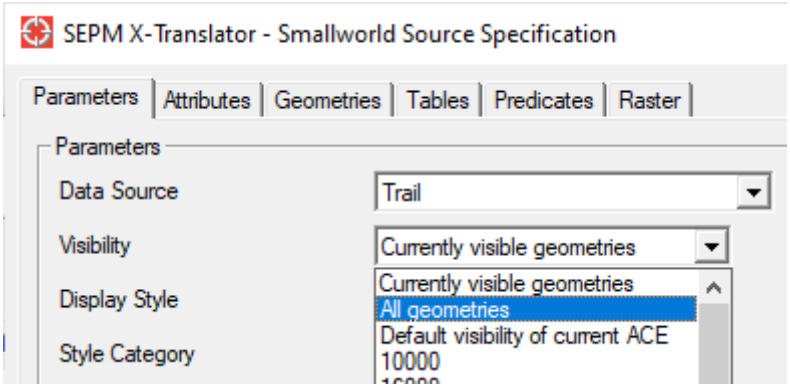



When exporting from Smallworld predicates can be either combined using a logical OR or AND.

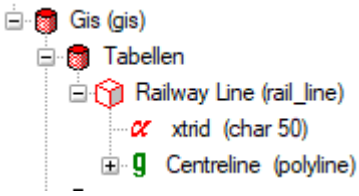
### 2.2.2 Clipboard Export Change

Until now when exporting the objects in the clipboard always all geometries have been exported. Now the selection of "Currently visible geometries" and "All geometries" under ***Visibility*** is used:

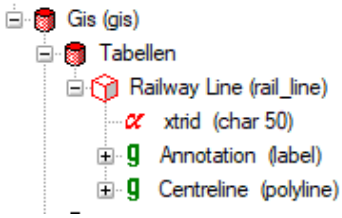




Object control visibility




"Currently visible geometries"

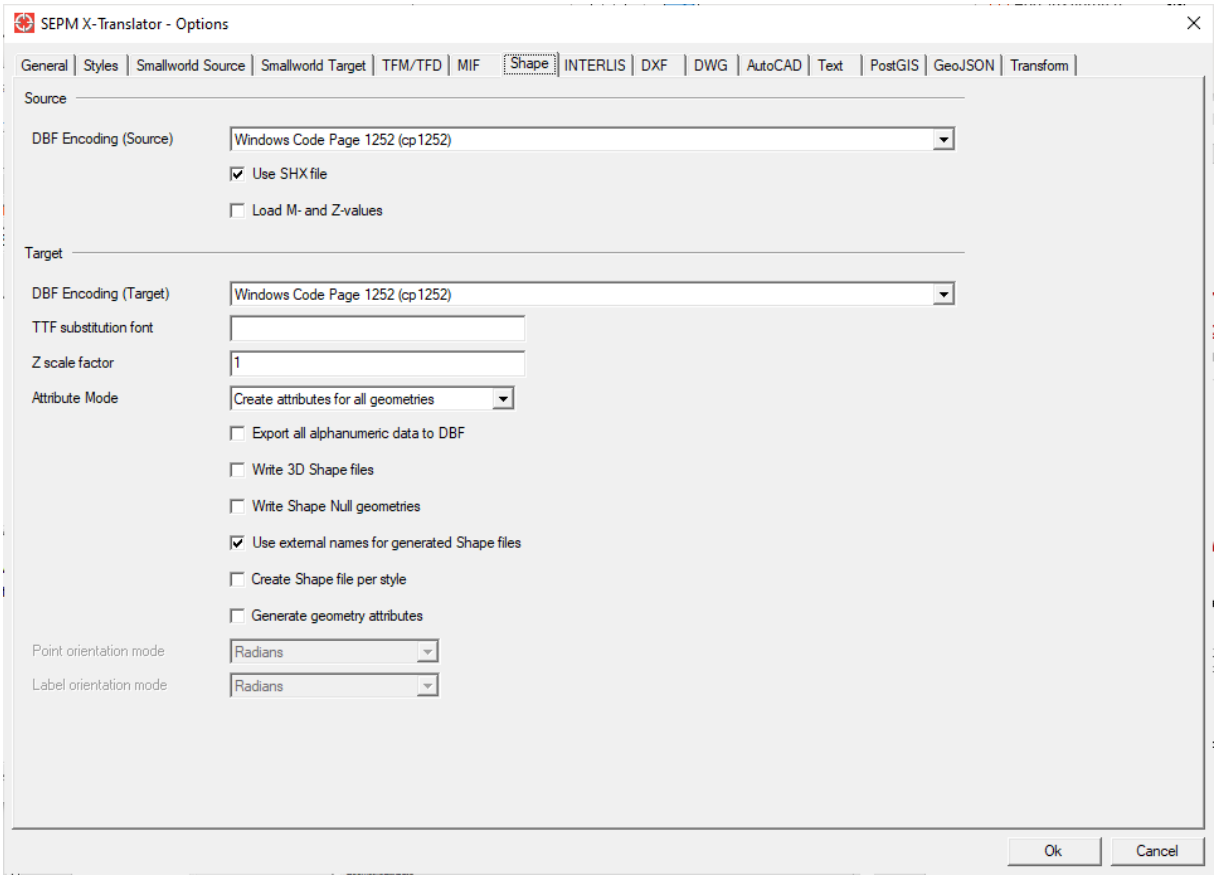



"All geometries"

## 2.3 Shape Format

### 2.3.1 DBF Encoding

In previous versions, in the Shape target options, a DBF Encoding option was available which was actually used for the source and target formats. This was confusing and is now changed to two seperate options for source and target:




*New options **DBF Encoding (Source)** and **DBF Encoding (Target)***

## 2.4 AutoCAD DWG/DXF Format

### 2.4.1 Layer Color

The new API *x_dxf_layer_color* is introduced to define a DXF Layer color for a Smallworld collection.

```
_pragma(classify_level=advanced,topic={x_translator})
_method min_road.x_dxf_layer_color
        ## Parameters    :
        ## Returns       :
        ## Function      :

        _return colour.called(:blue)
_endmethod
$
```

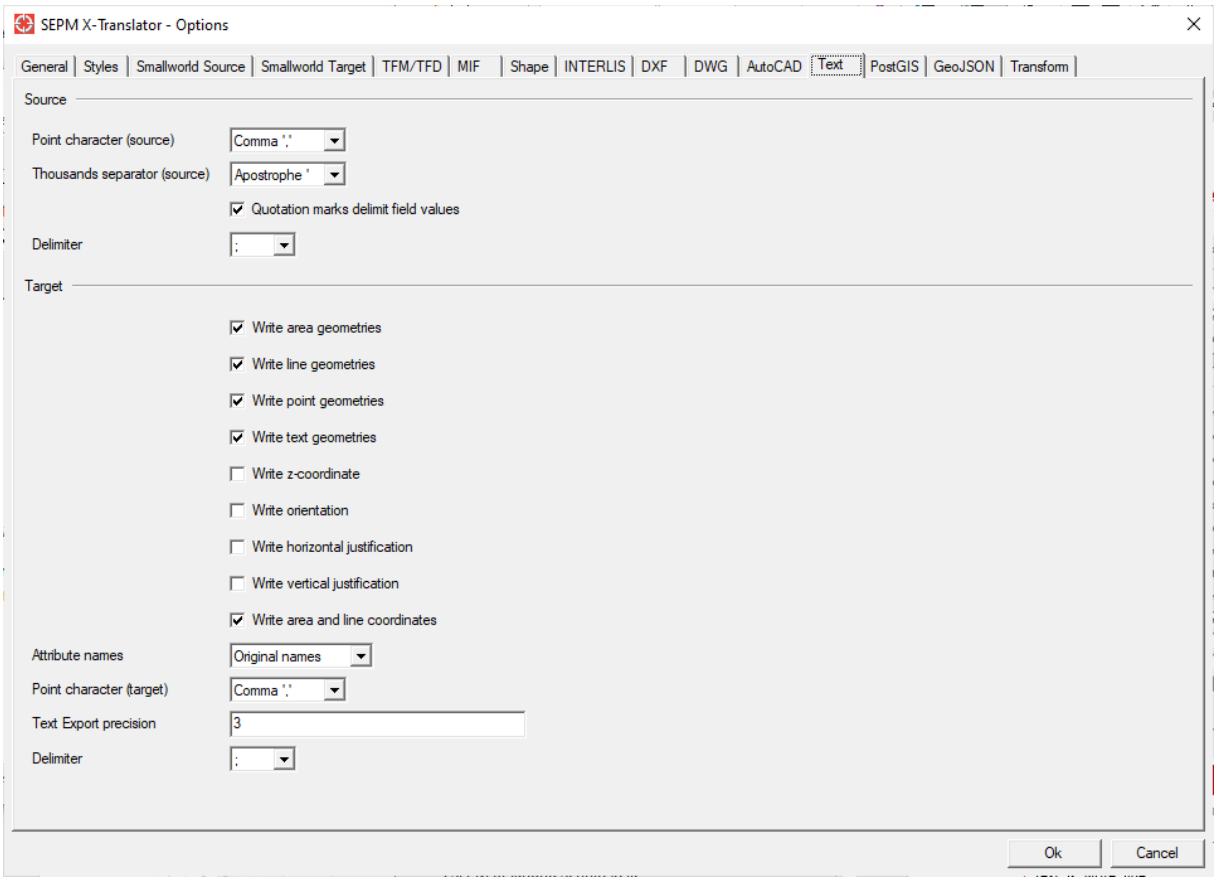
### 2.4.2 Newly imported Entities

The following entities can now be imported:

- LEADER is imported as a line geometry (the arrowhead is lost)
- MLEADER is imported as line and text geometries
- SPLINE is imported as a linear line geometry

## 2.5 Text Format

### 2.5.1 Options to not export Geometries

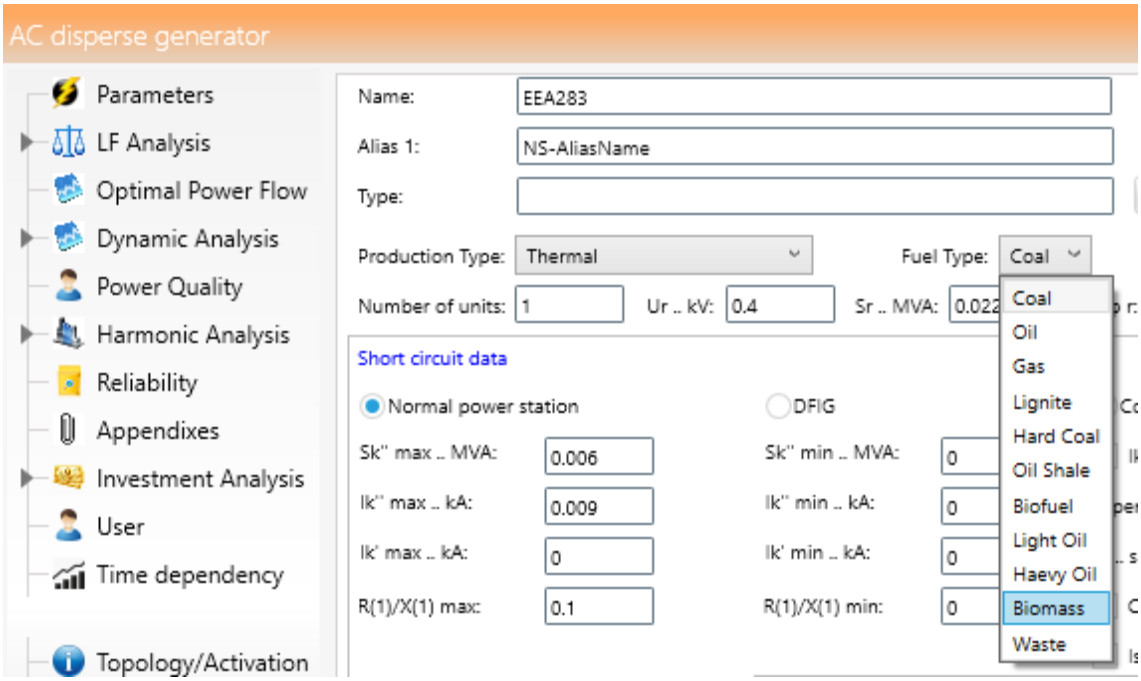



| Option | Description |
|---|---|
| **Write area geometries**<br>**text_is_write_area** | If true, export area geometries |
| **Write line geometries**<br>**text_is_write_line** | If true, export line geometries |
| **Write point geometries**<br>**text_is_write_point** | If true, export point geometries |
| **Write text geometries**<br>**text_is_write_text** | If true, export text geometries |

Thanks to this new options the export of the corresponding geometry types can be completely suppressed (for example if you only want to export alphanumeric data).

# 3 SEPM NEPLAN Interface

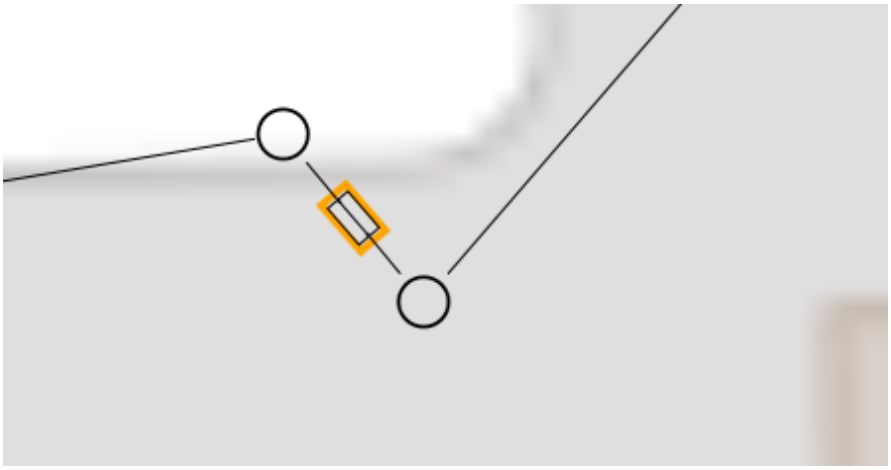
### 3.1.1 Support for "Fuel Type" etc




Subtypes of the production type (for example the Fuel Type of thermal producers) can now be set.

### 3.1.2 Overhead Line Switch

The algorithm to place the overhead line switch pin positions has been optimized.



*Example of the node positions of a overhead line switch*

### 3.1.3 Adapt SymbolSize Individually

With the following new configuration settings it is possible to adapt the symbol sizes for GIS and schematic diagrams:

```
nis_rwo_record.neplan_symbolsize_gis
nis_rwo_record.neplan_symbolsize_schematic
```

### 3.1.4 Mapping to Regulating Transformer

The mapping to the NEPLAN object ***Regulating Transformer*** is now possible. The following shows an example of such a configuration:

```
_pragma(classify_level=restricted,topic={x_translator},usage=redefinable)
_method nis_el_int_transformer.neplan_keyword
        ## Parameters    :
        ## Returns       :
        ## Function      :

        _if _self.neplan_is_traforegulator _is _true
        _then
                _return :traforegulator
        _endif
_endmethod
$
```

### 3.1.5 Support for House Service Internals

House Service Internals (nis_el_internal_distri_box) are now supported.

# 4 SEPM ISYBAU Interface

## 4.1 SEPM X-Database ISYBAU

### 4.1.1 External Collection Names

When generating the data model from the XML Schema identical external collection names have been created. For example the objects with the internal names *s_schacht* and *h_schacht* both had the external name "Schacht". Now also the external name uses a prefix, for example "S Schacht" or "H Schacht".

# 5 SEPM XPlanung Interface

## 5.1 SEPM Business Services

The currently being implemented SEPM Business Services are a redesign of the SEPM Interface architecture. They offer translation services, and will also cover requirements like validation and integration services. They are implemented as a service oriented architecture using microservices.

## 5.2 SEPM XPlanung Interface "Version 0.9"

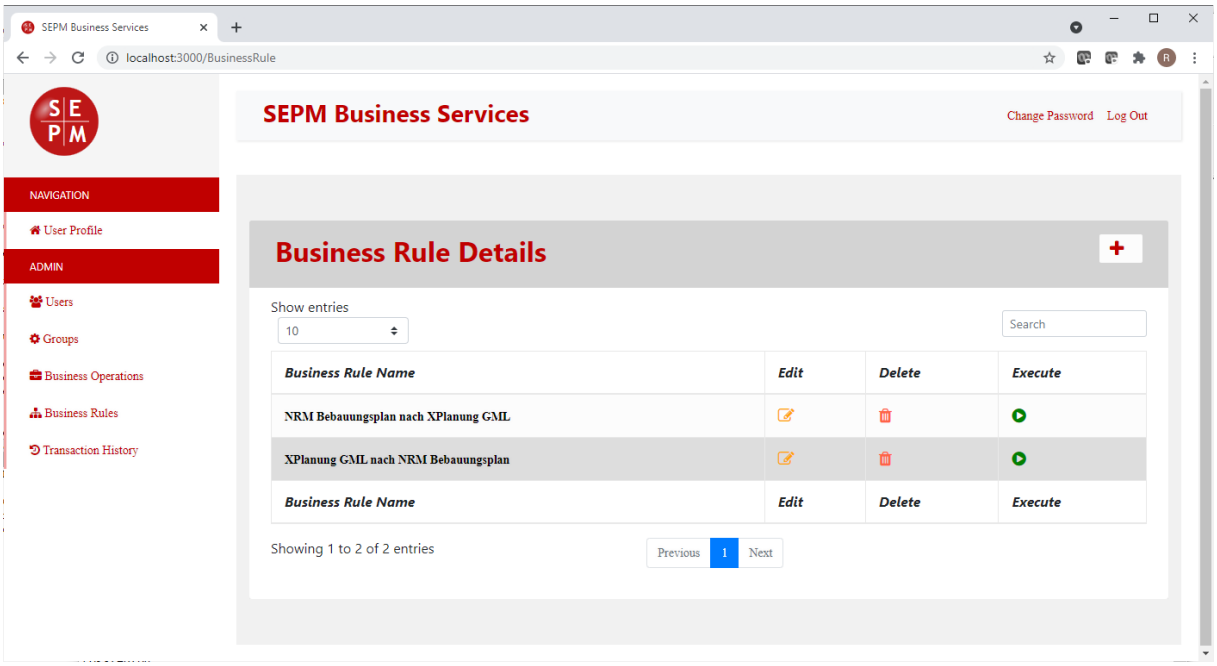
### 5.2.1 Overview

The SEPM XPlanung Interface is a bidirectional interface between the Smallworld BPlan application and the XPlanung GML model. It is the first interface based on the SEPM Business Services architecture.

This interface transfers the full scope of XPlanung GML data. We are currently still polishing the mapping, which will take a big volume due to the extensive data models and data catalogues on both sides.

The production release will be soon, when the OS numbers and point and text representations have been fully mapped.

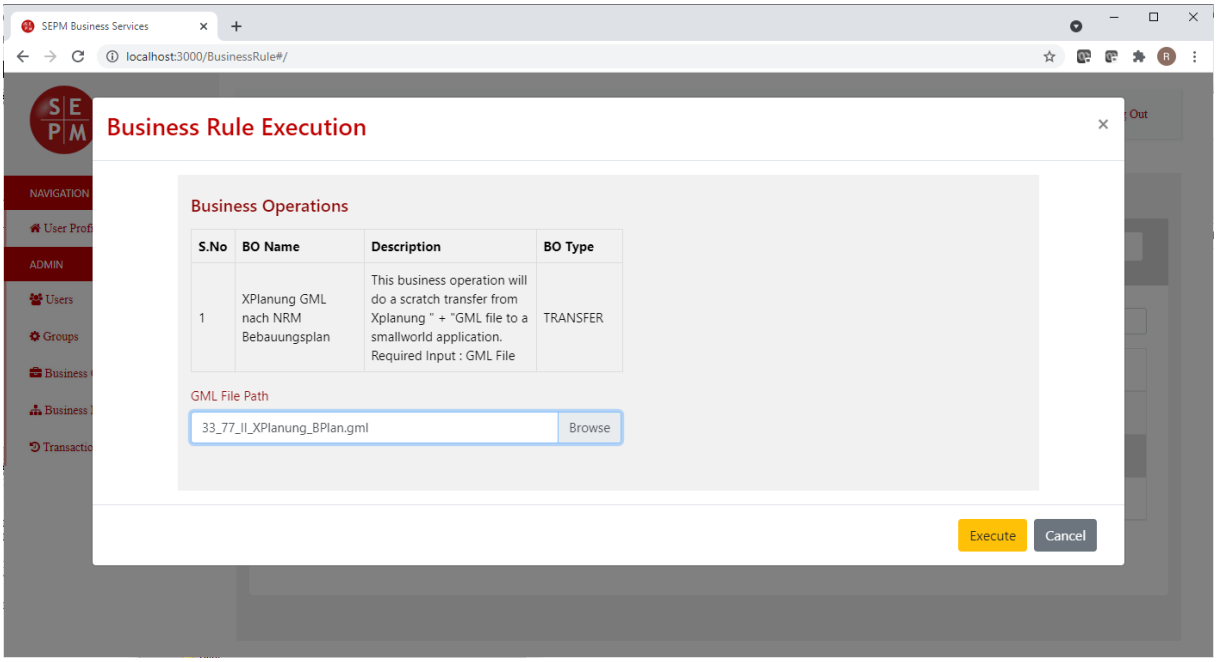
### 5.2.2 Operation



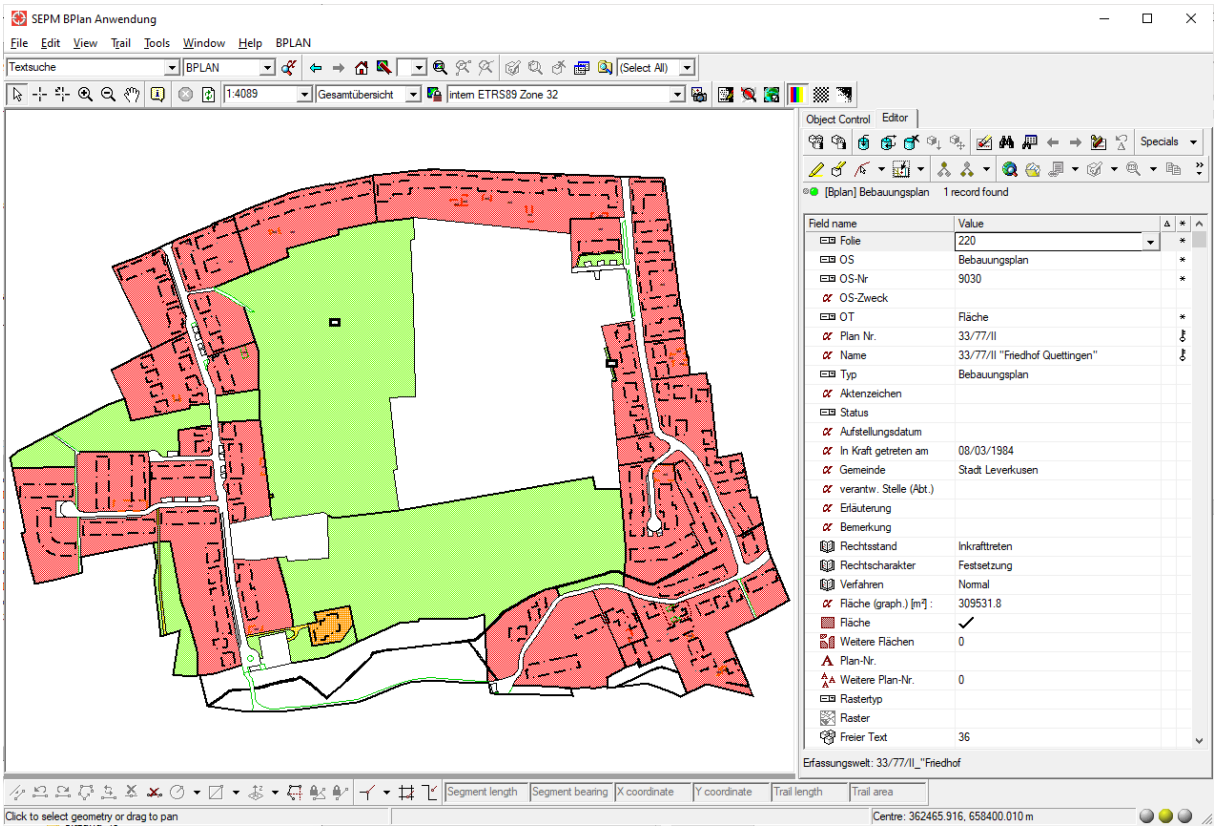

You can log into the SEPM Business Services through a browser. Currently the following two interfaces are available:

- NRM Bebauungsplan nach XPlanung GML : Export of a building plan
- XPlanung GML nach NRM Bebauungsplan : Import of a XPlanung file

### 5.2.3 XPlanung Import

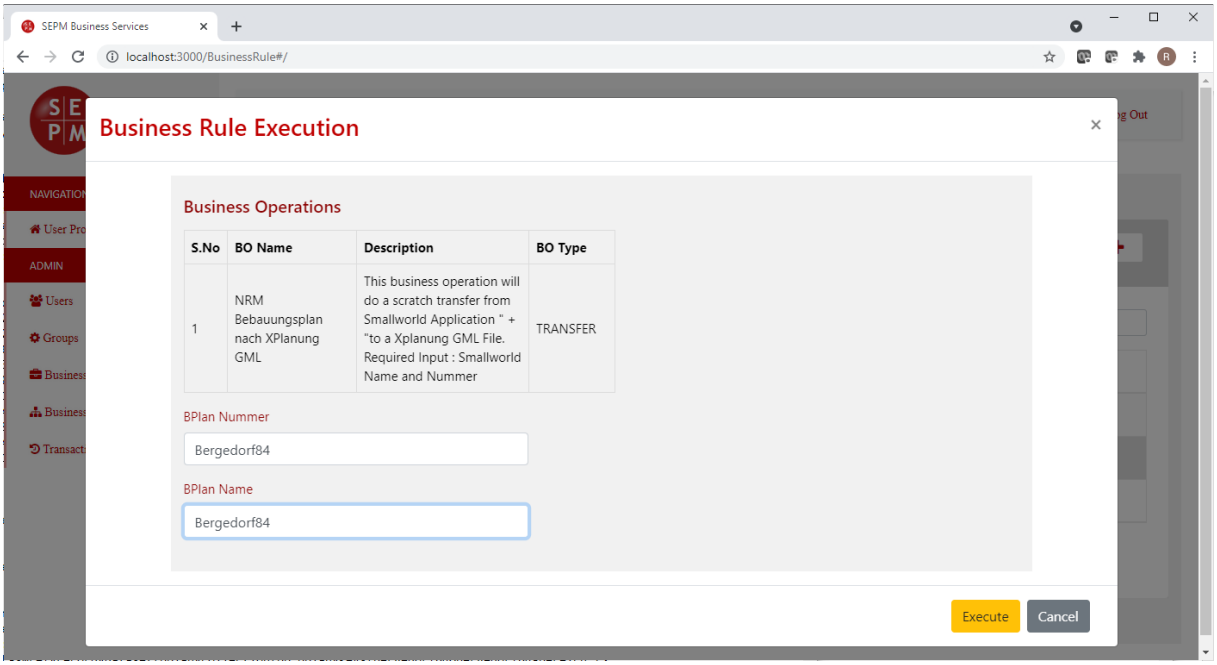



Select the GML file




The file is read and converted into a pan object.

### 5.2.4 XPlanung Export




Enter Name and Number of the plan to export.



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<xplan:XPlanAuszug xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xplan="http://www.xplanung.de/xplangml/5/2"
xmlns:ns4="http://www.opengis.net/ows/1.1" xmlns:ns5="http://www.opengis.net/fes/2.0" xmlns:ns6="http://www.opengis.net/wfs/2.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" gml:id="GML_08ff6bdf-787a-4d1b-b57c-f3746a2cc042"
xsi:schemaLocation="http://www.xplanung.de/xplangml/5/2 http://www.xplanungwiki.de/upload/XPlanGML/5.2/Schema/XPlanung-Operationen.xsd">
    <gml:boundedBy xsi:nil="true"/>
    <gml:featureMember>
        <xplan:BP_Plan xmlns="" gml:id="GML-swrefVrecordVdatasetZbplanVcollectionZbp_bplanVkeysZBergedorf84QBergedorf84">
            <gml:boundedBy xsi:nil="true"/>
            <xplan:name>Bergedorf84</xplan:name>
            <xplan:nummer>Bergedorf84</xplan:nummer>
            <xplan:raeumlicherGeltungsbereich>
                <gml:Polygon srsName="EPSG:25832" gml:id="GML_7d346b81-9124-4ca4-9dc1-af40adc53fe7">
                    <gml:exterior>
                        <gml:LinearRing>
                            <gml:posList count="63" srsDimension="2" axisLabels="" uomLabels="">580779.815 5927135.13 580783.498 5927128.834 580794.137
5927134.702 580804.056 5927140.223 580814.232 5927145.043 580820.897 5927147.817 580823.379 5927142.727 580832.184 5927124.675 580835.127 5927124.048
580851.397 5927120.583 580871.553 5927105.223 580889.162 5927091.804 580897.425 5927085.484 580903.453 5927080.331 580925.382 5927060.496 580938.98
5927063.328 580942.103 5927054.456 580952.667 5927023.068 580954.494 5926993.491 580952.327 5926956.221 580951.97 5926948.97 580928.011 5926950.187
580903.568 5926948.548 580873.533 5926946.363 580859.546 5926942.894 580845.622 5926939.439 580835.422 5926935.882 580825.84 5926932.542 580823.849
5926931.849 580812.198 5926940.58 580794.306 5926953.988 580774.518 5926968.996 580758.501 5926983.951 580744.047 5926997.449 580718.482 5927017.448
580709.655 5927024.355 580704.255 5927028.102 580660.418 5927058.484 580639.669 5927074.258 580642.382 5927080.793 580643.652 5927083.852 580666.472
5927136.201 580683.985 5927128.912 580692.406 5927133.314 580696.081 5927134.216 580697.428 5927134.547 580697.654 5927134.681 580699.112 5927135.547
580701.61 5927136.828 580704.855 5927138.493 580712.24 5927143.878 580712.824 5927144.304 580726.281 5927147.734 580724.876 5927150.123 580723.548
5927152.378 580726.376 5927154.576 580732.433 5927160.474 580735.937 5927164.43 580741.493 5927170.701 580741.623 5927170.748 580754.821 5927177.859
580779.004 5927136.517 580779.815 5927135.13</gml:posList>
                        </gml:LinearRing>
                    </gml:exterior>
                </gml:Polygon>
            </xplan:raeumlicherGeltungsbereich>
            <xplan:gemeinde>
                <xplan:XP_Gemeinde>
                    <xplan:gemeindeName>Freie und Hansestadt Hamburg</xplan:gemeindeName>
                </xplan:XP_Gemeinde>
            </xplan:gemeinde>
            <xplan:planArt>1000</xplan:planArt>
            <xplan:verfahren>1000</xplan:verfahren>
            <xplan:rechtsstand>3000</xplan:rechtsstand>
            <xplan:bereich xlink:href="#GML-swrefVrecordVdatasetZbplanVcollectionZbp_bplanVkeysZBergedorf84QBergedorf84-Bereich"/>
        </xplan:BP_Plan>
    </gml:featureMember>
    <gml:featureMember>
        <xplan:BP_BauGrenze xmlns="" gml:id="GML-swrefVrecordVdatasetZbplanVcollectionZbp_begrenzungslinieVkeysZ13529">
            <gml:boundedBy xsi:nil="true"/>
```


The data is extracted and exported into a XPlanung GML file which can be downloaded after the transfer.