

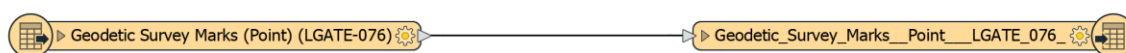
FME UAT Findings

During testing it has been identified that multiple agencies run scheduled FME workbenches to extract an area of interest from services and save to a local database. This has been identified as a process that will potentially be impacted by the GDA2020 implementation (depending on how the workbench is structured). We have developed the advice below as a potential solution that can be implemented immediately.

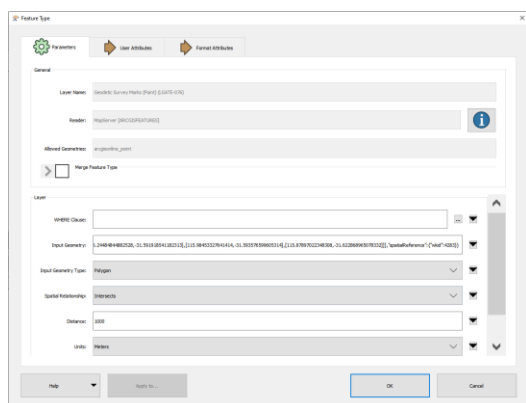
Please note: The SLIP team would recommend that the data downloads extracts are the more reliable option in this scenario rather than extracting via services.

Example Scenario – Simple FME workbench extract misalignment due to GDA2020

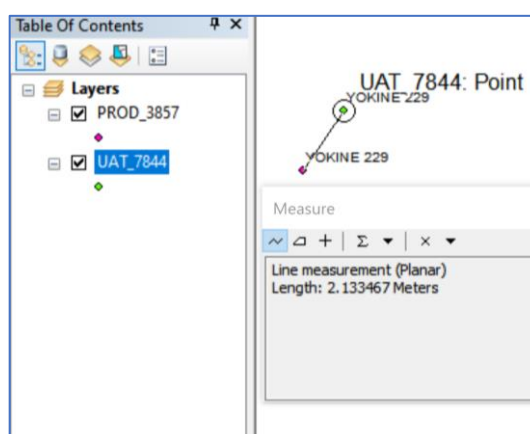
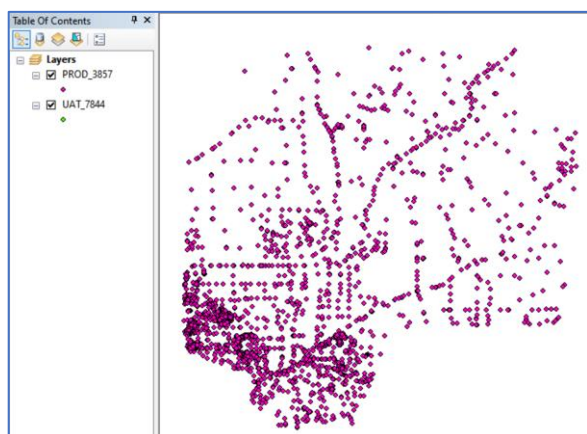
In the following example we have used a basic script that takes an extract of the area of interest and saves it to a local file geodatabase:



In this example we are applying an input geometry polygon to set the Area of Interest (AOI)

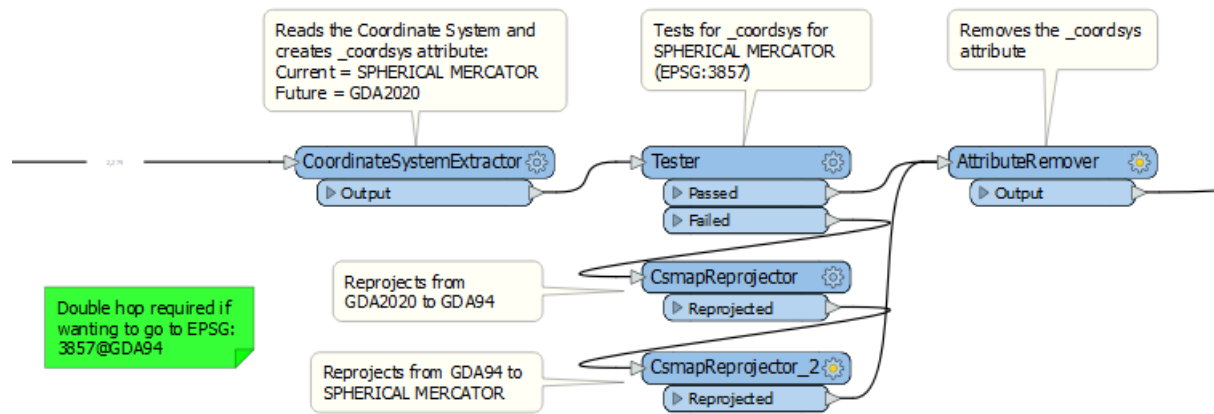


We are then writing directly to a file geodatabase leaving the output projection the same as the source. The image below displays the resulting misalignment that occurs between our and extract from the SLIP UAT (7844) and the SLIP PROD (3857) environment.



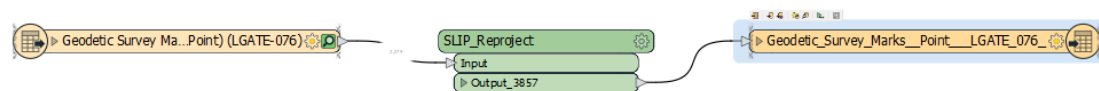
Solution

A relatively easy solution to this is to add a process to test and reproject to the desired datum (in this case we have used EPSG:3857). (Details of each transformer setting can be found “*Transformer Settings*” at the end of this document)



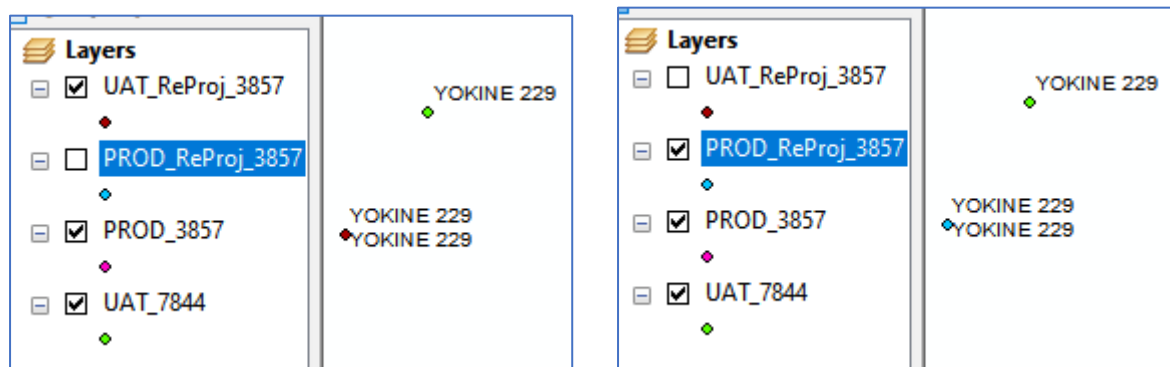
This additional process can be combined as a custom transformer and then added to each layer being called in the workbench by cutting and pasting.

A sample version of this custom transformer can be found at <https://github.com/datawagovau/fme-workbenches/tree/master/gda2020-slip-services-reproject>



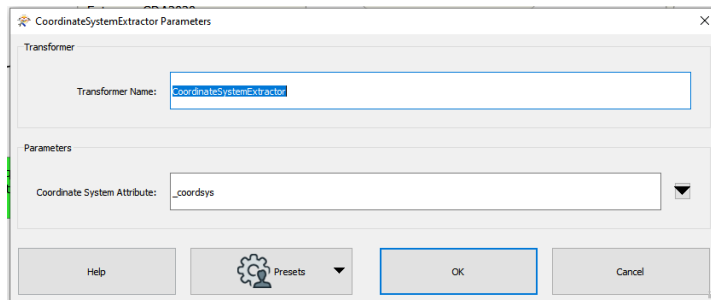
This will enable the output to remain consistent regardless of whether the service is 3857 or 7844 (See example below). This can be implemented immediately and will mean when the updated GDA2020 service goes live no further change will be required.

Comparison of reprojected UAT and reprojected PROD to existing PROD shows consistent alignment:



Transformer Settings

CoordinateSystemExtractor



CoordinateSystemExtractor Parameters

Transformer

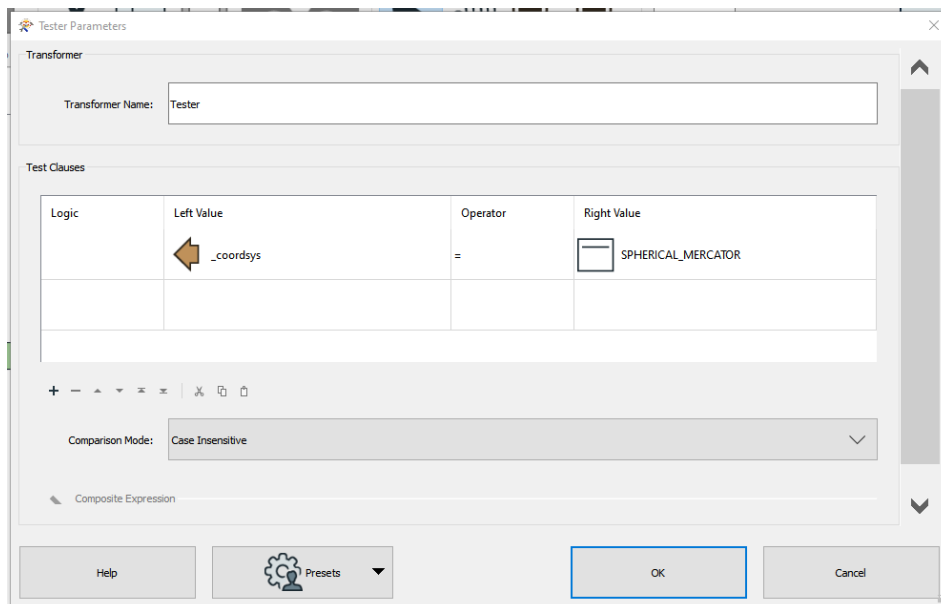
Transformer Name:

Parameters

Coordinate System Attribute:

Help Presets OK Cancel

Tester



Tester Parameters

Transformer

Transformer Name:

Test Clauses

Logic	Left Value	Operator	Right Value
	<input type="text" value="_coordsys"/>	=	<input type="text" value="SPHERICAL_MERCATOR"/>

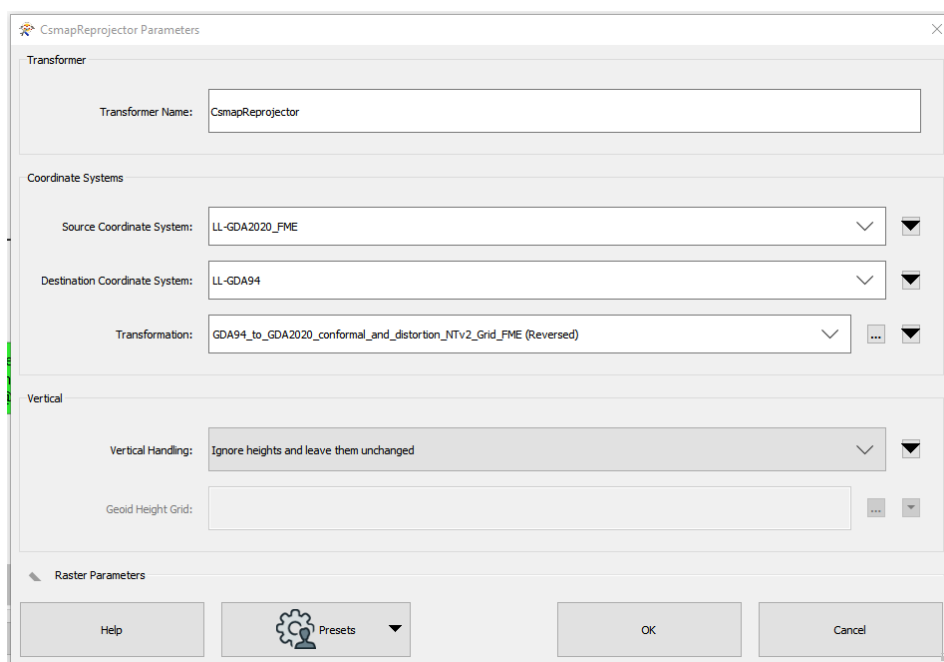
+ - < > = % & © &boxtimes

Comparison Mode:

Composite Expression

Help Presets OK Cancel

CsmapReprojector



CsmapReprojector Parameters

Transformer

Transformer Name:

Coordinate Systems

Source Coordinate System:

Destination Coordinate System:

Transformation:

Vertical

Vertical Handling:

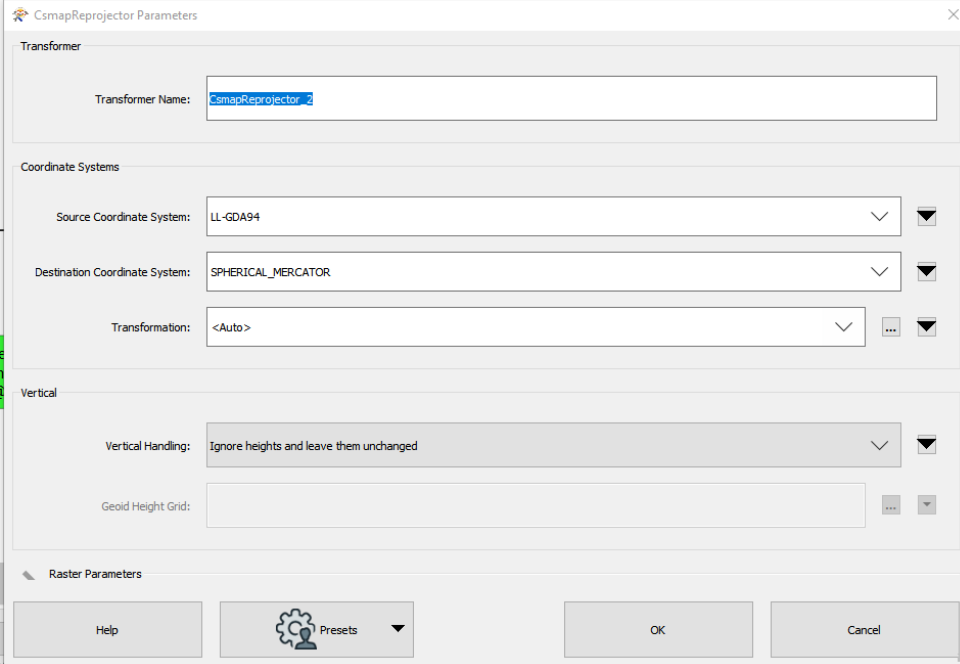
Geoid Height Grid:

Raster Parameters

Help Presets OK Cancel

CsmapReprojector 2

**Note this step is only required if needing to reproject to EPSG:3857*



The CsmapReprojector Parameters dialog box is shown. It has a title bar with a close button. The dialog is divided into several sections: Transformer, Coordinate Systems, Vertical, and Raster Parameters. The Transformer section has a text field for 'Transformer Name' containing 'CsmapReprojector 2'. The Coordinate Systems section has three dropdown menus: 'Source Coordinate System' set to 'LL-GDA94', 'Destination Coordinate System' set to 'SPHERICAL_MERCATOR', and 'Transformation' set to '<Auto>'. The Vertical section has a dropdown for 'Vertical Handling' set to 'Ignore heights and leave them unchanged' and a text field for 'Geoid Height Grid'. The Raster Parameters section is currently collapsed. At the bottom, there are buttons for 'Help', 'Presets' (with a gear icon), 'OK', and 'Cancel'.

Transformer

Transformer Name: CsmapReprojector 2

Coordinate Systems

Source Coordinate System: LL-GDA94

Destination Coordinate System: SPHERICAL_MERCATOR

Transformation: <Auto>

Vertical

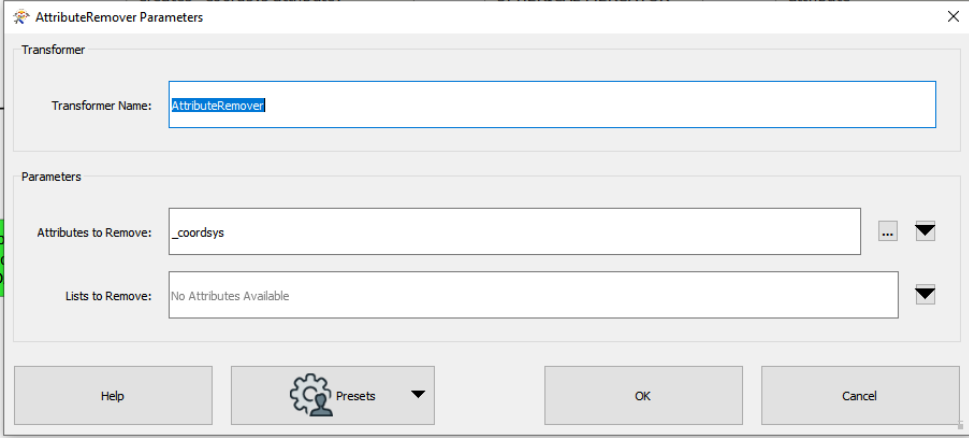
Vertical Handling: Ignore heights and leave them unchanged

Geoid Height Grid:

Raster Parameters

Help Presets OK Cancel

AttributeRemover



The AttributeRemover Parameters dialog box is shown. It has a title bar with a close button. The dialog is divided into two main sections: Transformer and Parameters. The Transformer section has a text field for 'Transformer Name' containing 'AttributeRemover'. The Parameters section has two text fields: 'Attributes to Remove' containing '_coordsys' and 'Lists to Remove' containing 'No Attributes Available'. At the bottom, there are buttons for 'Help', 'Presets' (with a gear icon), 'OK', and 'Cancel'.

AttributeRemover Parameters

Transformer

Transformer Name: AttributeRemover

Parameters

Attributes to Remove: _coordsys

Lists to Remove: No Attributes Available

Help Presets OK Cancel