

Transforming GDA94 <> GDA2020 using ArcGIS Desktop

Assumptions:

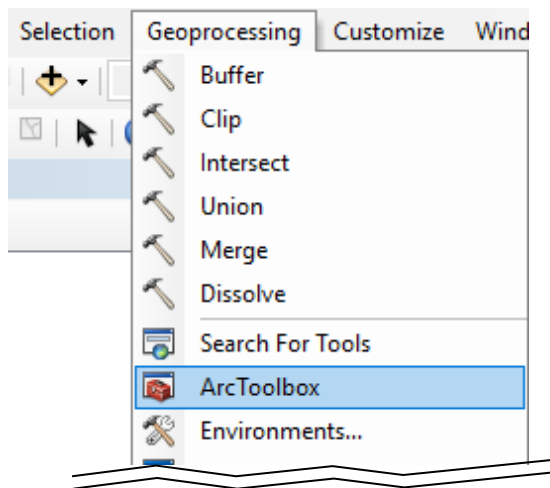
- Data falls within the (mainland) Mackay Local Government Area (i.e. UTM Zone 55)
- Dataset is in grid coordinates (i.e. Easting and Northing)
- The coordinate system of the dataset is MGA94 and the user is transforming to MGA2020

Pre-requisites

- ArcGIS Desktop 10.6+

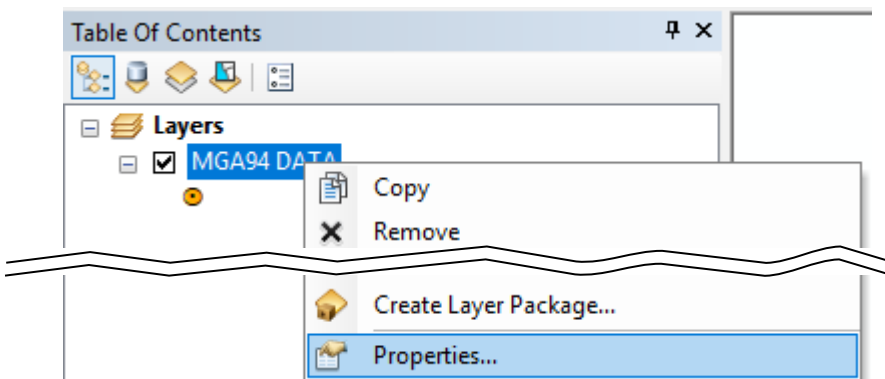
Step 1: Open ArcToolbox

In the **Geoprocessing** menu, click **ArcToolbox**



Step 2: Check the spatial reference information

1. Right-click the layer in the Table of Contents and click **Properties**



This fact sheet provides an overview of the steps to follow when transforming a single dataset from the GDA94 datum to the GDA2020 datum using ArcGIS Desktop software. It has been written for users who may not be familiar with ArcGIS Desktop.

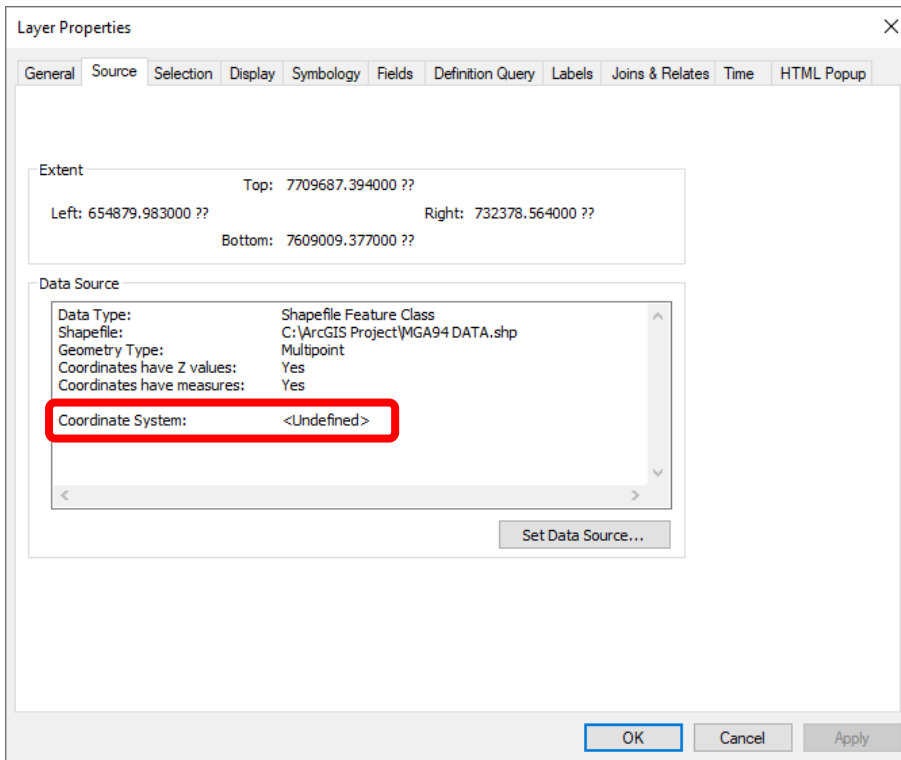
Further Information

For detailed information about GDA94<>GDA2020 transformations refer to the Technical Manuals and Factsheet on the ICSM website: <https://www.icsm.gov.au/gda2020-and-gda94-technical-manuals>

General information and resources relating to the datum modernisation – including a simple explanatory animation, frequently asked questions, fact sheets, technical tools and progress updates – are available on the ICSM website: www.icsm.gov.au

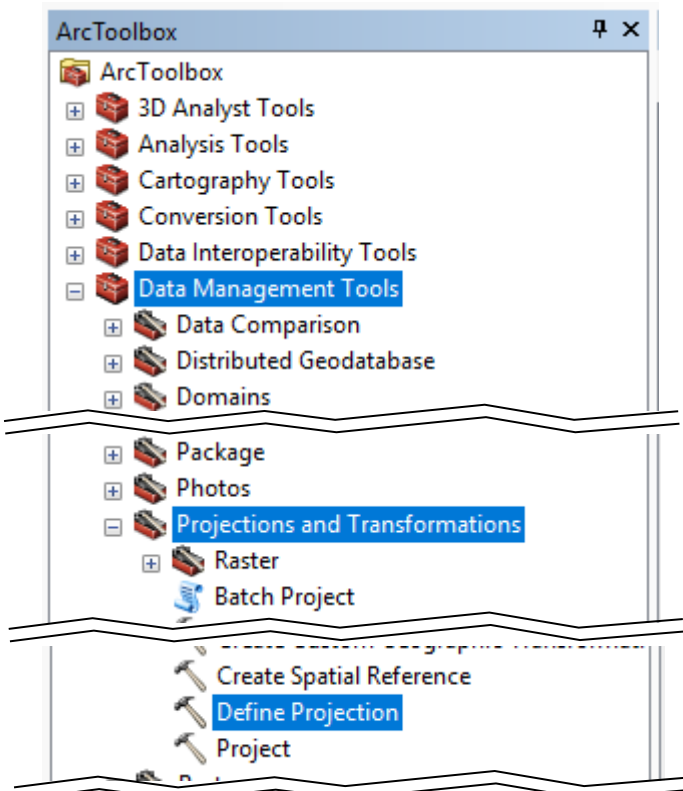


- Click the **Source** tab. If the coordinate system is correct, skip to [Step 4](#). Otherwise, proceed to [Step 3](#).

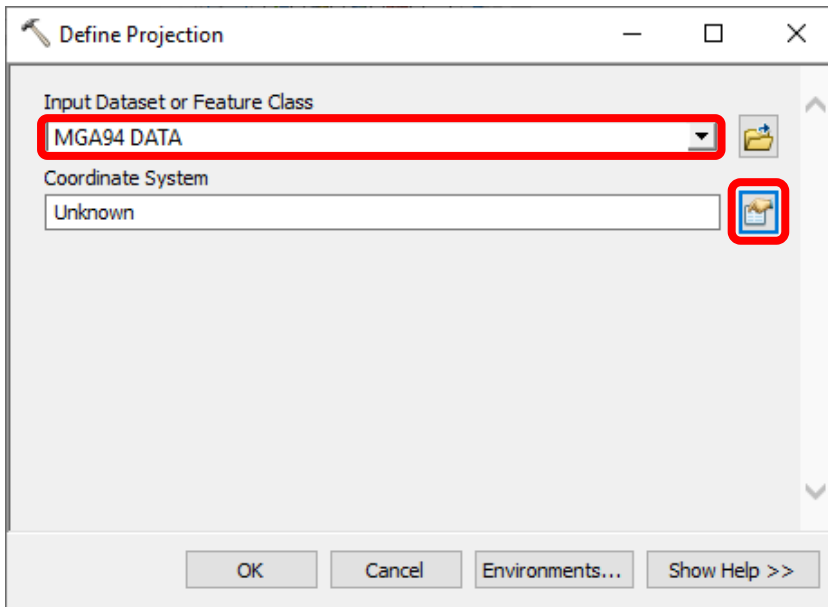


Step 3: Define the Dataset's Projection

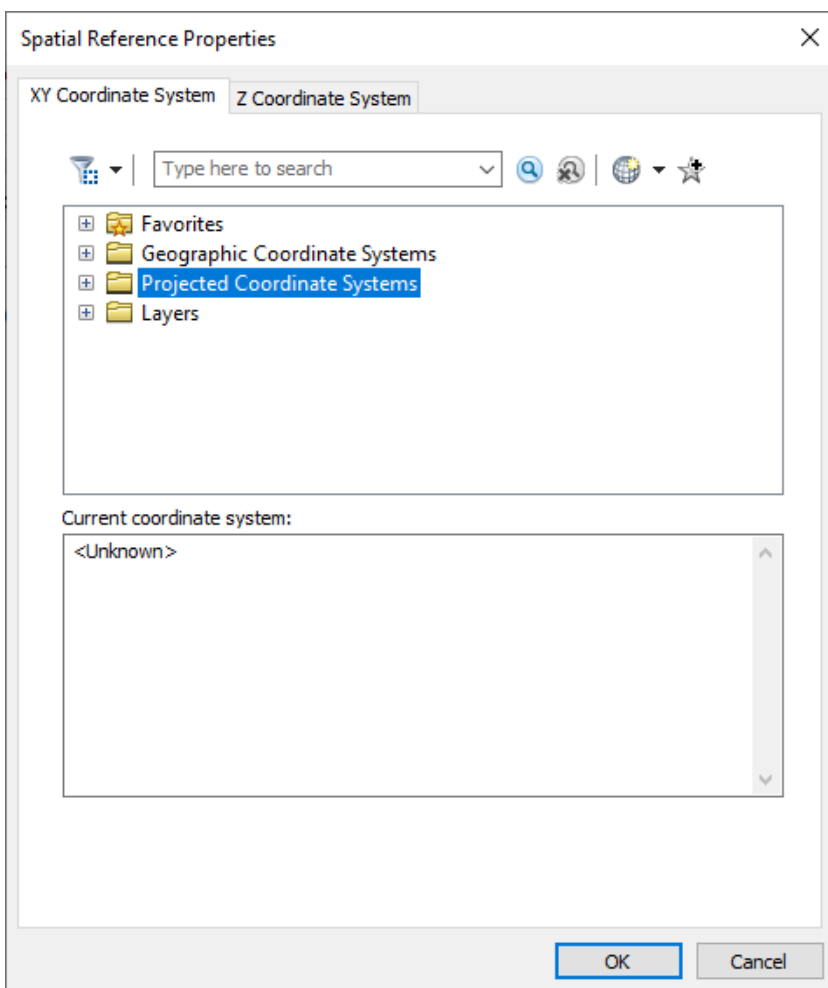
- In the **ArcToolbox** window, expand **Data Management Tools > Projections and Transformations** and double-click **Define Projection**

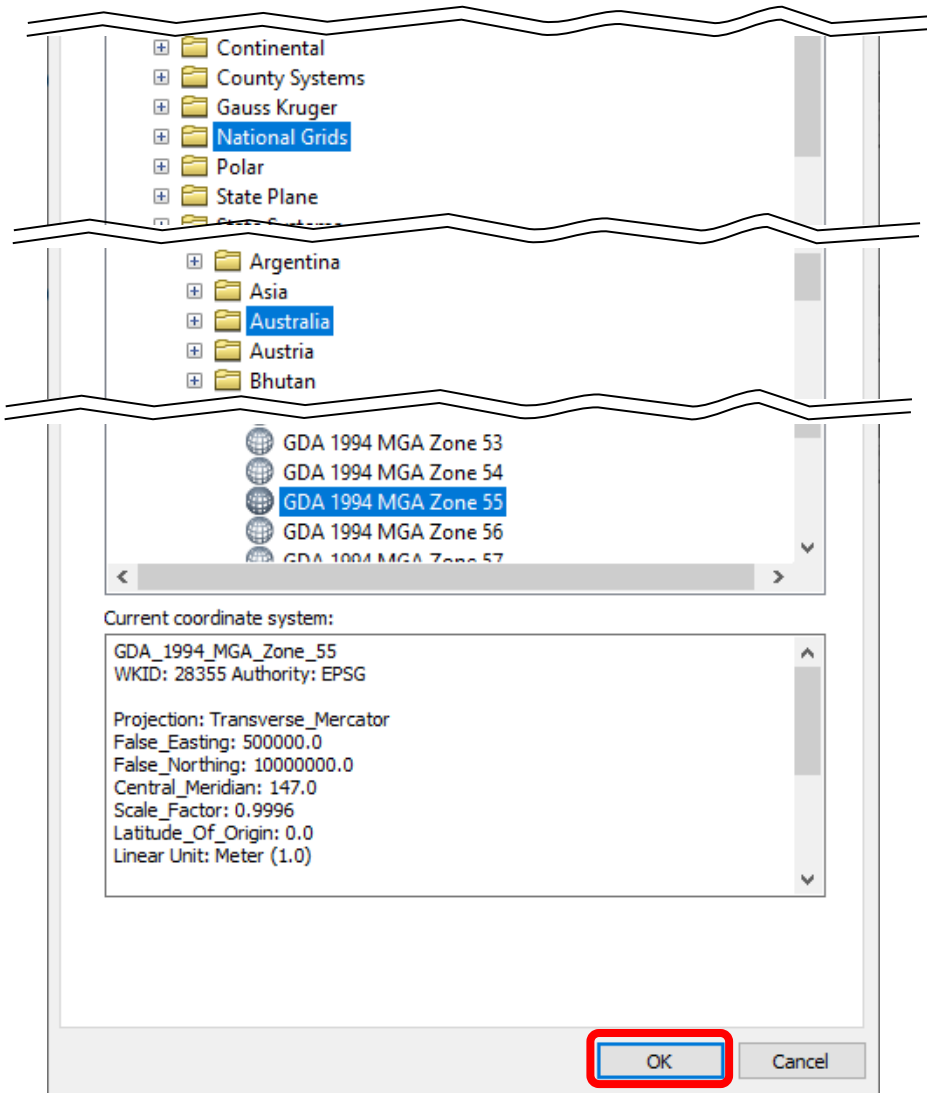


2. Select the **Input Dataset or Feature Class** from the dropdown
3. Browse for the **Coordinate System**

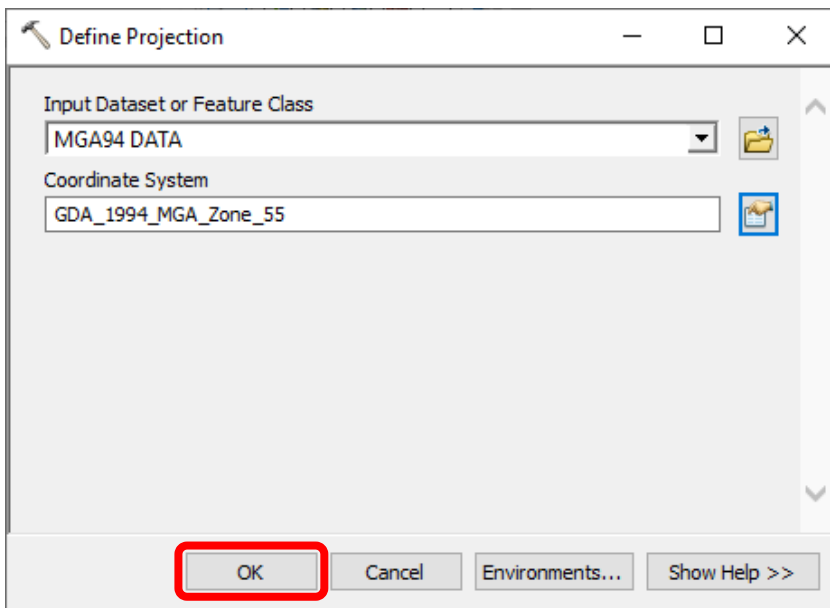


4. Expand **Projected Coordinate Systems > National Grids > Australia**, select **GDA 1994 MGA Zone 55**, and click **OK**



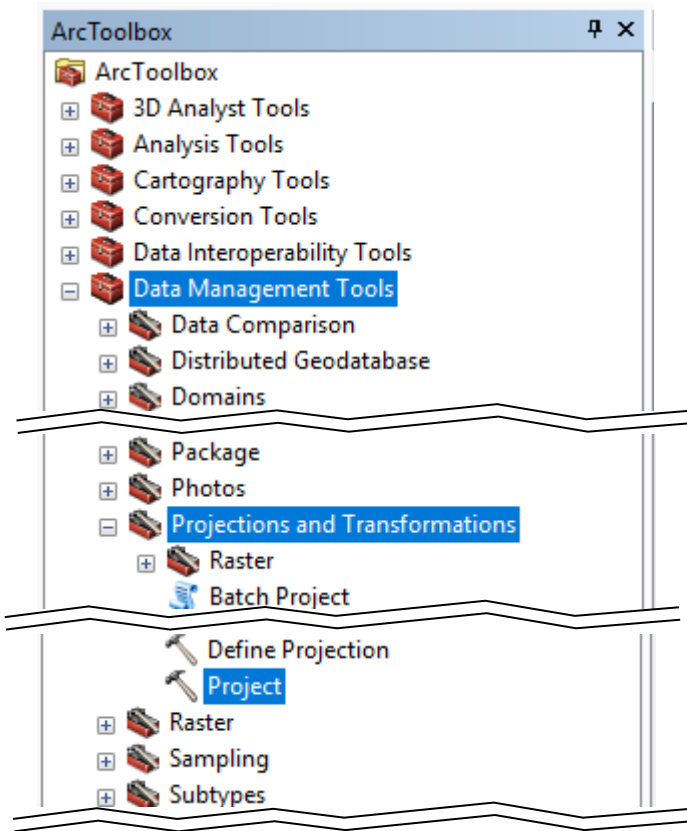


5. Click **OK**

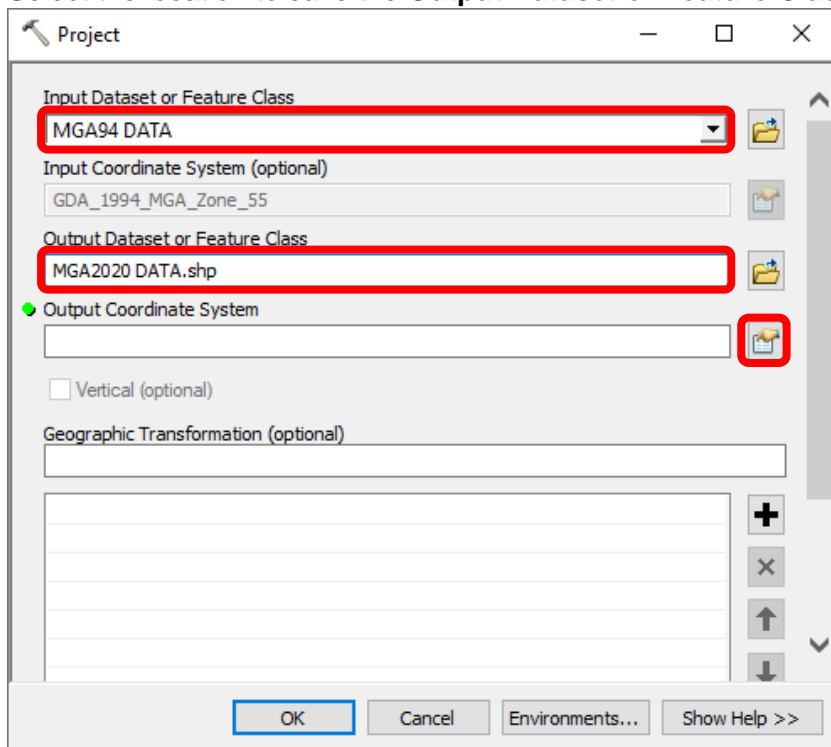


Step 4: Transform the data into the new coordinate system

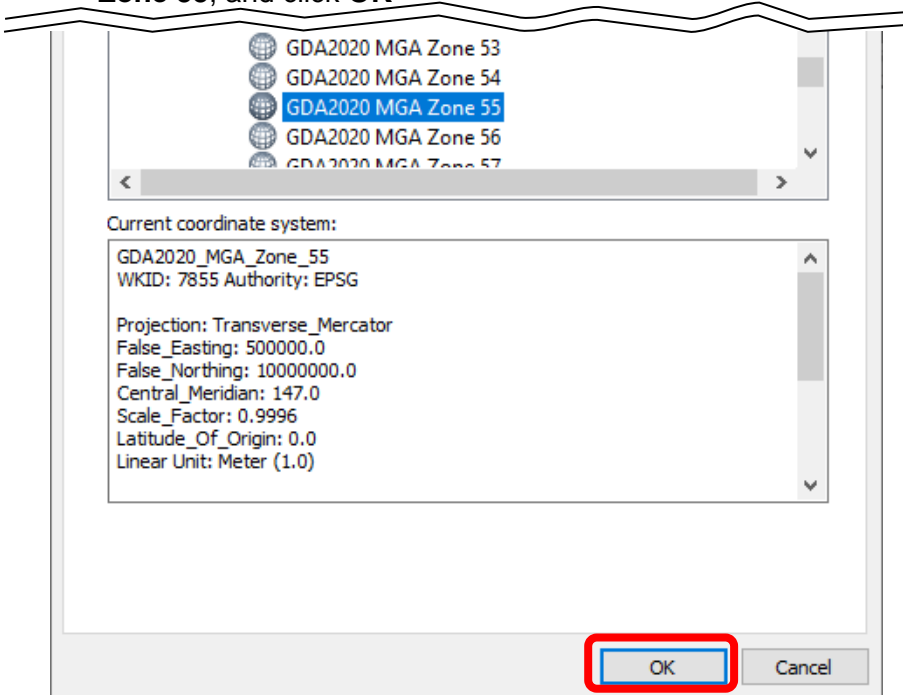
1. In the **ArcToolbox** window, expand **Data Management Tools > Projections and Transformations** and double-click **Project**



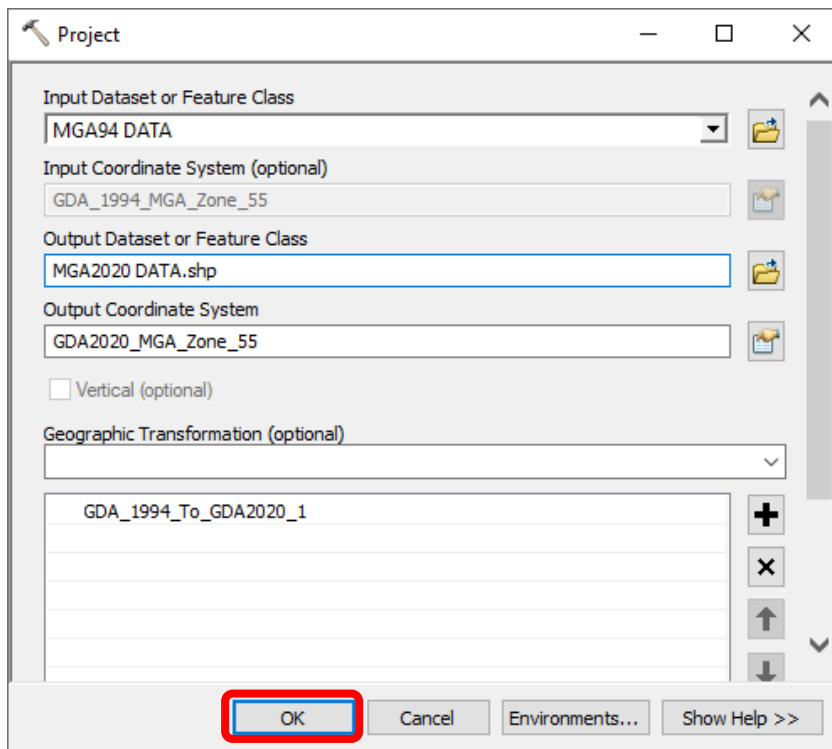
2. Select the **Input Dataset or Feature Class** from the dropdown
3. Select the location to save the **Output Dataset or Feature Class**



4. Browse for the **Output Coordinate System**
5. Expand **Projected Coordinate Systems > National Grids > Australia**, select **GDA2020 MGA Zone 55**, and click **OK**



6. ArcGIS will automatically populate the transformation parameter*
7. Click **OK**



*GDA_1994_To_GDA2020_1 will apply a 7-parameter similarity transformation to the data, delivering the same result as the GDA94-GDA2020 conformal only transformation grid recommended for use in Queensland. Refer to the [Geocentric Datum of Australia 2020 Technical Manual](#) for more detail.