# Area worksheet

Question 1

We want to replace the tiles on the machine hall floor at T3. Can you figure out how many tiles are required?

Follow the steps to calculate the number using the plan below:

1. Calculate the area of the entire machine hall floor - **yellow**

2. Count the number of turbines - **grey circles**

3. Calculate the area of each turbine cover

4. Subtract the area of all the turbine covers from the area of the machine hall floor to find the total area that requires re-tiling

5. If each tile is 10cmx10cm, how many tiles are required to replace all of the tiles on the machine hall floor?

Plan:
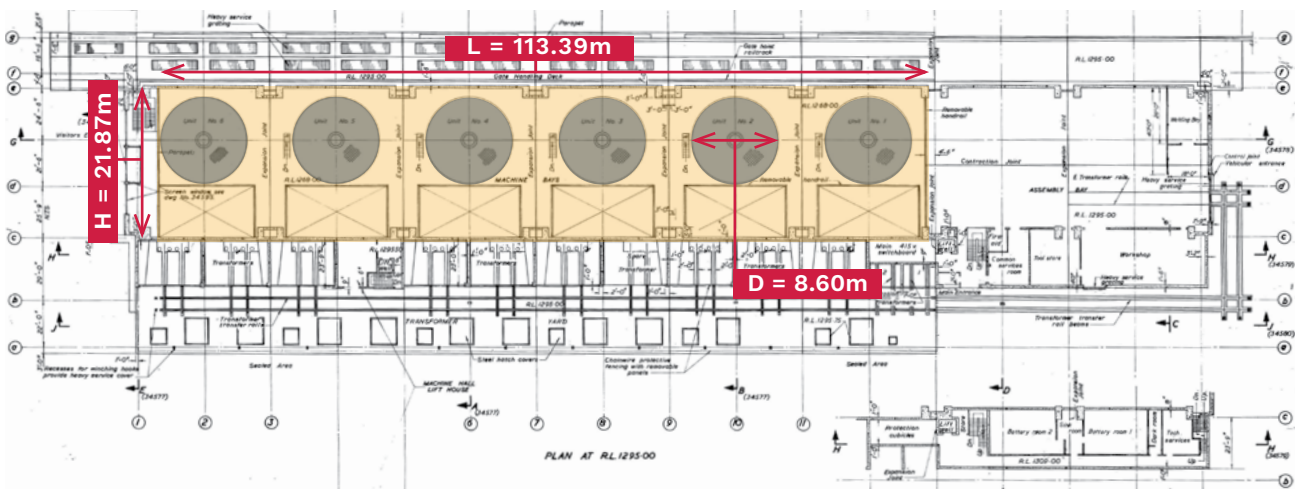
Show your working here:

Calculate the water catchment area, depicted in **blue,** of the Snowy Mountains Scheme shown in the map.

To generate electricity using our hydro generators we require water. One of the most important jobs at Snowy is to calculate how much water we have available. Depending on where rain falls, it is collected in different catchment areas across the Snowy Mountains Scheme.

The three simple shapes you are familiar with (triangle, rectangle, circle) can be used to find the approximate area of the eastern catchment area of the scheme. Draw these shapes onto the image below so that all of the shaded area is roughly contained within the shapes.

Hint: There is no wrong way to approach this question.
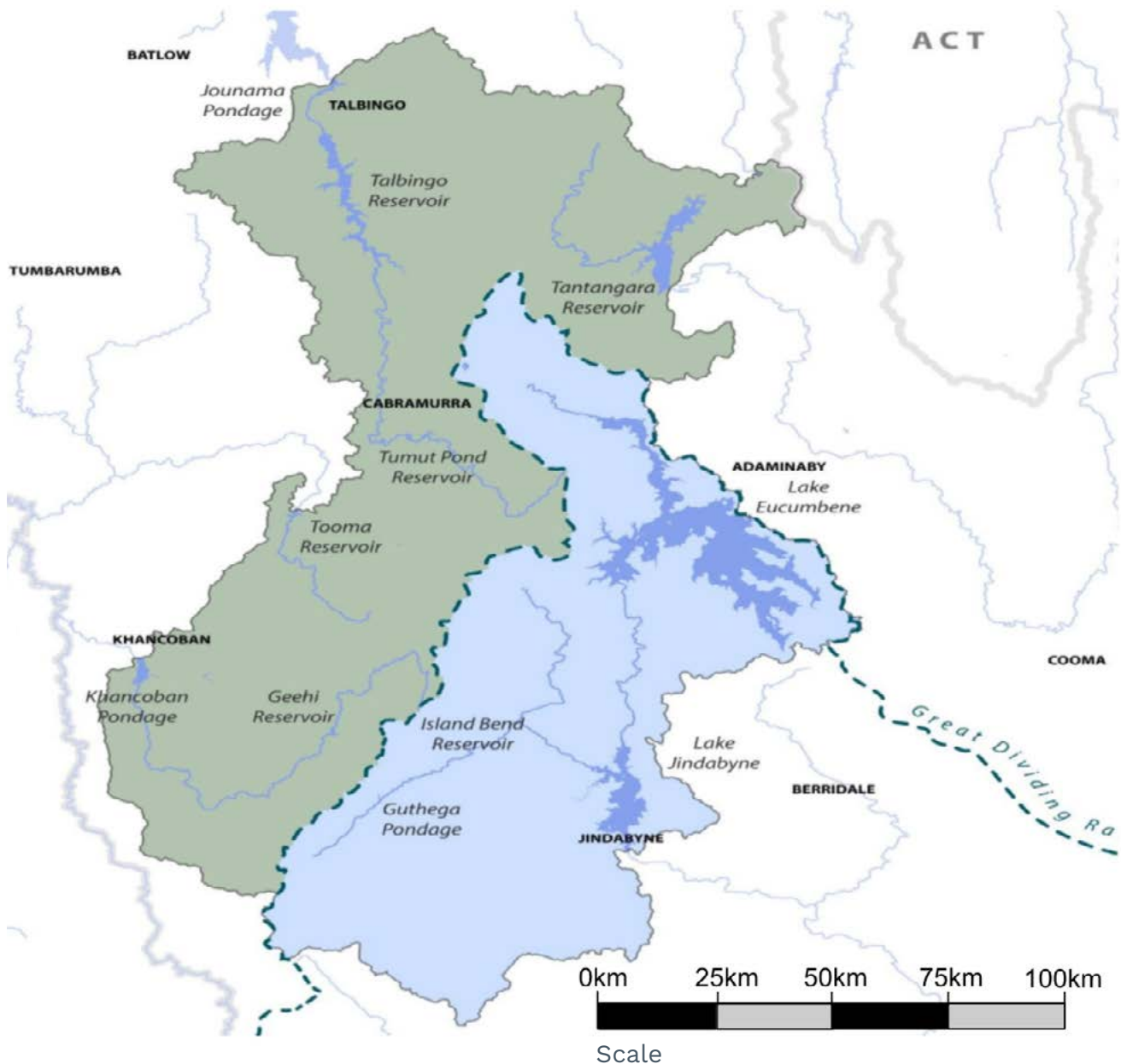
Let's do this again but this time we will calculate the area of the catchment. Using as few shapes as you can approximate the area of the eastern catchment. Then find the total area of the catchment by using the scale on the map and the following formulas:

Formulas

Triangle: Area: (base ÷ 2) x height

Rectangle: Area: base x height

Circle: Area: π x radius²

Semi-circle: Area: circle/2

Scale