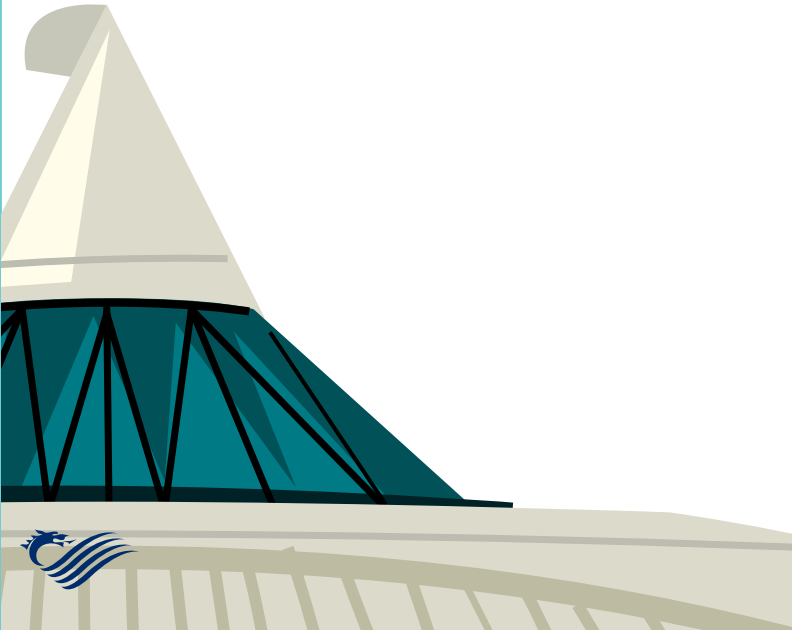


**Darganfod  
Dadlau  
Dewis**

—  
**Discover  
Debate  
Decide**

## **Sustainable Senedd**



## **Beth yw Cynulliad Cenedlaethol Cymru?**

Mae Cynulliad Cenedlaethol Cymru'n cynnwys 60 o Aelodau Cynulliad o bob rhan o Gymru. Maen nhw'n cael eu hethol gan bobl Cymru i'w cynrychioli nhw a'u cymunedau, i wneud cyfreithiau ar gyfer Cymru, ac i sicrhau bod Llywodraeth Cymru yn gwneud ei gwaith yn iawn.

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## **What is the National Assembly for Wales?**

The National Assembly for Wales is made up of 60 Assembly Members from across Wales. They are elected by the people of Wales to represent them and their communities, make laws for Wales and to ensure the Welsh Government is doing its job properly.

## Saving Energy

**The Senedd in Cardiff Bay uses the latest environmentally friendly technology to save energy. The environmentally friendly features concentrate on four main areas:**

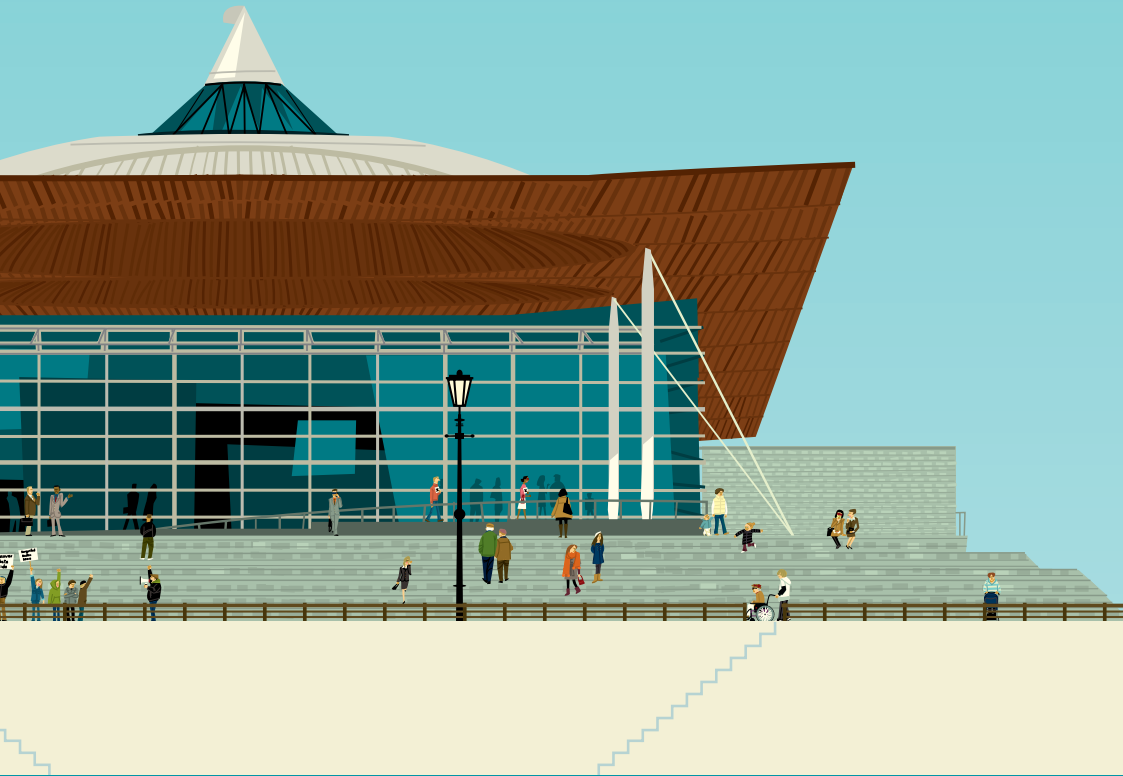
- Lighting
- Heating
- Ventilation (cooling)
- Recycling



Rainwater is collected from the roof and stored in a large tank which holds as much as 100,000 glasses of water. This is known as 'grey water'.

01 Where could this water be used?

02 Where wouldn't it be used? Why?



There is a lot of glass used in the Senedd building. For example the outside walls are all made of glass.

03 Why do you think so much glass is used?

There is a large circular window at the top of the funnel in the Siambur. A conical mirror reflects daylight inside. In the funnel, attached to a steel frame, are 89 reflective aluminium tubes that help to do this.

04 What is this for?

05 Look at the steel and aluminium in the materials kit. What are the differences and similarities?

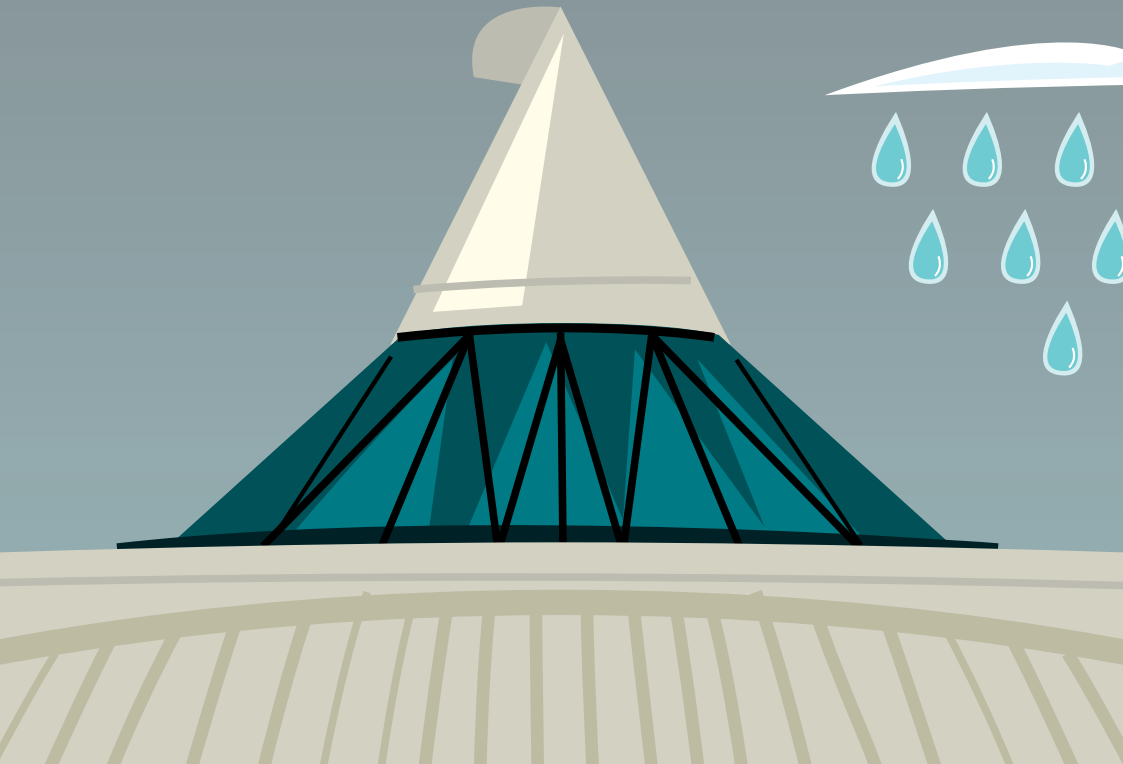


## The Roof Cowl

At the top of the funnel is a roof cowl that is 6 metres high. This rotates with changes in wind direction, allowing warm air to be drawn out and cooler air to enter from underneath the Siambr floor.

Under the Senedd are 27 pipes drilled 100 metres into the ground. Water is pumped through these pipes and heated by the earth to 14C (57.2F).

06 What do you think this warm water might be used for?



## Biomass Boiler

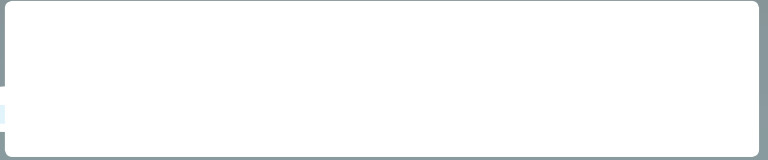
The Senedd uses a Biomass boiler that burns recycled wood pellets. Look at these in the materials kit and describe them in the space below.



07 What do you think the boiler is used for?



08 Why is burning wood pellets better than using other fuels such as coal?



## Construction

Many different materials were used to build the Senedd, some natural and some man made.

- 09 Look around you, how many different materials can you see? List them below and identify which are man made and which are natural.









**1000 tonnes of Welsh slate were used to make the floor of the building.**

- 10 Look at the piece of slate in the materials kit. What benefits could this material have as flooring?**

**Two types of wood were used in the construction. The ceiling is made from cedar wood and oak is used in the Siambr.**

- 11 There are samples of these two woods in the materials kit. Look carefully at them. Can you spot any differences?**

**Panels of wool cloth are attached to the walls in the Siambr and the meeting rooms. Look at these in the kit.**

- 12 What do you think they are for?**

