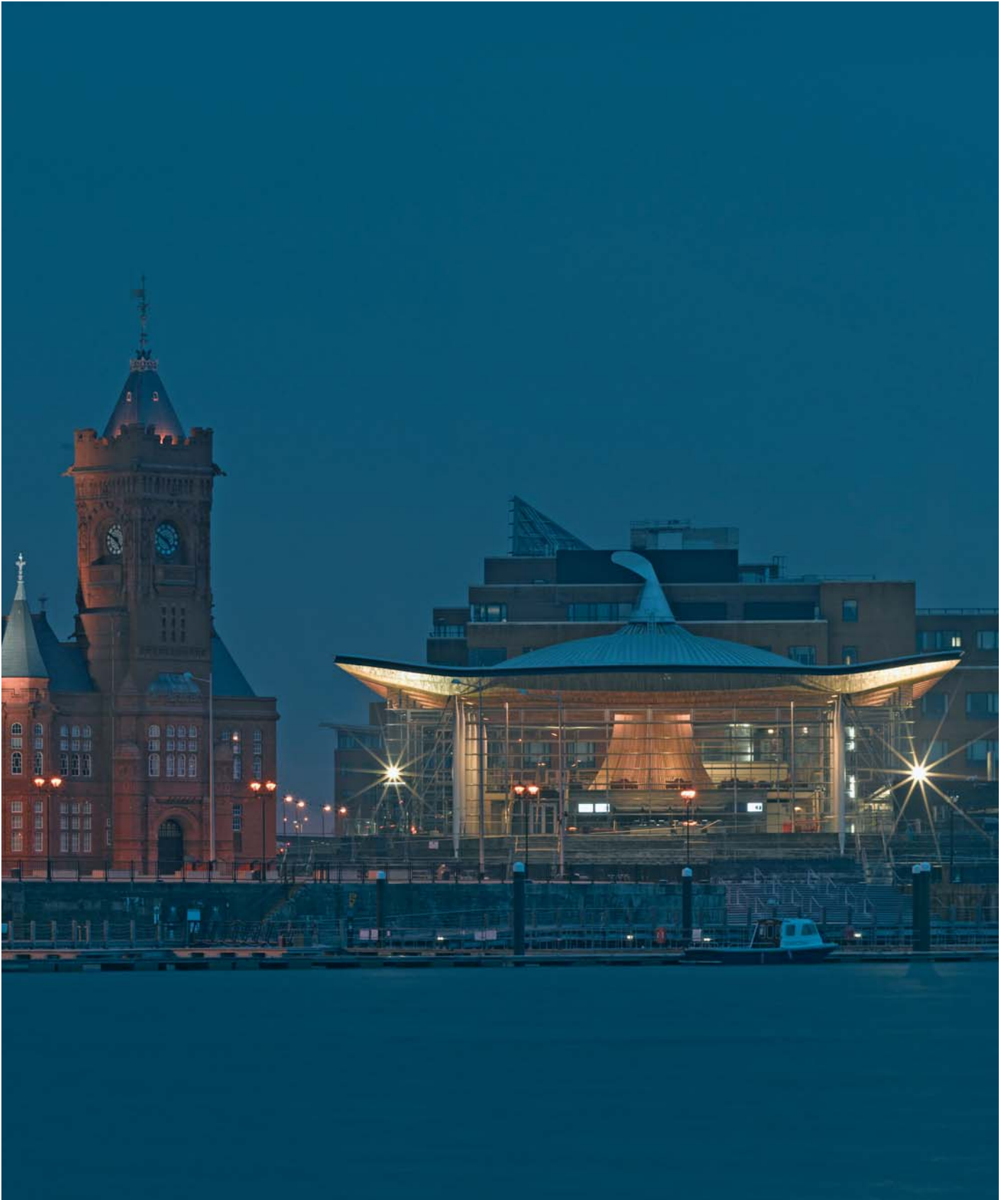


The National Assembly for Wales



Project Description

In April 1998, an international design competition was held for a building to house the National Assembly for Wales. The brief set out a functional specification for the building, expressing a clear desire for an open and democratic building, appropriate for the 21st century. The competition jury members recommended a concept design which they felt symbolised a new form of democracy of which the whole of Wales could be proud. The building was completed in 2005 and officially opened by Her Majesty the Queen on 1st March 2006, accompanied by Prince Philip, Prince Charles and The Duchess of Cornwall.

The Assembly building is situated in the Cardiff Bay area, close to the Victorian Grade I listed Pierhead Building and the new Wales Millennium Centre. It was both the client's and architect's aspiration to create a design sensitive to the surrounding developments, completing the 'jigsaw' of development in the immediate vicinity. The brief included stipulations that:

- the building be an exemplar for access;
- sustainable strategies and renewable energy systems be implemented throughout;
- the building should have a minimum 100-year life span;
- wherever possible, Welsh materials be used.

Other elements of the brief included a 610 sq m. (6,566 sq ft) debating chamber for 60 to 80 members, three committee rooms, offices, a media briefing room, a members' lounge, public galleries and a main hall offering reception, public café and exhibition areas.

In response to the initial design brief, the architect developed a concept for a building that would engage with Cardiff Bay, Wales and beyond. The client's brief outlined that the building should be a transparent envelope, looking outwards to Cardiff Bay, providing visibility to the inner workings of the Assembly and encouraging the public to engage with it. The embodiment of democratic values - openness, transparency and participation - is therefore the driving factor in the design of the new Senedd (Parliament or Senate). Spatially, the building reflects the democratic process, reinforcing the importance of the electorate by placing the public above the elected assembly members, with the debating chamber as both the physical and metaphorical centre of the design. In addition, the Assembly building's highly progressive environmental agenda aims to set a new standard for public buildings in Britain.

As a publicly-funded building, cost certainty was seen as one of the most important criteria for the New Assembly Building. Following a review of the procurement options, the architect was re-commissioned under a Design & Build, fixed-price contract which meant that the total cost of the development could be assured from the beginning. In light of this approach, prefabrication techniques with off-site assembly were maximised. In addition, natural materials including timber, slate and stone were chosen for their life-cycle cost, including value, durability and maintenance regime, with each element specified to achieve a 100-year design life in the challenging marine environment of Cardiff Bay.

Data

Place/Date

Cardiff, Wales 1998-2005

Client

National Assembly for Wales

Cost

£40,997,000

Gross Internal Area

4,000 m²

Team

Structural Engineer

Arup

Environmental Consultant

BDSP Partnership

Project Managers

Schal

Landscaping

Gillespies

Fire Engineering

Warrington Fire Research

Acoustics

Sound Research Laboratories

Access

Vin Goodwin Access Consultant

Broadcasting Consultant

Department Purple

Wind Engineering

Arup

Lift Consultant

Arup

Facade Engineering

Arup

Bomb Blast

TPS consult

Sustainability Statement

- As a public building, the new National Assembly for Wales demonstrates a political commitment to addressing the issue of sustainability. The building exemplifies high environmental standards and has been awarded a BREEAM rating of 'Excellent', the highest score for a building in Wales.
- Three core objectives influence the environmental systems in the building; to reduce energy demand; apply renewable energy sources and utilise energy efficient sources and systems to cover residual energy demand.
- Virtually all areas of the building are naturally ventilated, although a mixed-mode system can be used to assist ventilation in the debating chamber, committee rooms and public galleries when occupancy and / or thermal / solar loads are increased. A six-metre-high purpose built rotating wind cowl provides ventilation to the debating chamber. It rotates to produce a negative pressure on the leeward side of the cowl, allowing air to be drawn out of the chamber. The inspiration comes from traditional oast houses, which used self-orientating wind cowls to draw air through the hop-drying kilns. With the environmental design complementing the structural design, air-conditioning has been eliminated from all offices and functional areas.
- To reduce CO2 emissions further, a biomass boiler - processing both wood chips and pellets - provides high grade heating to heat emitters (low-level natural ventilators) and heater batteries within air-handling units.
- Water usage is minimised through the application of appropriate fixtures and fittings and the utilisation of rainwater harvesting to minimise the consumption of potable mains water. Rainwater collected from the large roof canopy is fed into a rainwater storage tank which can provide sufficient water annually for lavatories, irrigation for landscaping and general cleaning and maintenance.
- Roof lights and customised roof ventilators serving the committee rooms / offices reflect low-level winter daylight into the space, assisting daylight penetration. To permit natural daylight into the debating chamber, a glazed lantern has been installed on the domed roof beneath the wind cowl. Daylight is reflected into the space below via a series of concentric aluminium rings which make up the debating chamber funnel.
- A conical mirror suspended under the wind cowl has been installed to reflect daylight from low altitude winter sun into the chamber. The mirrored cone can be manually raised and lowered into the throat of the funnel to respond to the need of daylight levels and reduce the possibility of glare or to achieve 'grey-out' conditions for broadcasting.
- Given the challenging weather conditions of Cardiff Bay, the brief called for key materials such as timber, slate and stone to be chosen for their life-cycle cost, including value, durability and maintenance regime, with each element specified to achieve a 100-year design life. Where possible, indigenous materials and labour have been used, leading to significant embodied energy savings. Extensive timber within the building is FSC (Forest Stewardship Council) certified - from sustainable sources - and the construction process (involving timber formwork etc) also aimed to meet these standards. Materials were also chosen to reduce the use of embodied energy within materials.
- This ground source heat pump (GSHP) system provides cooling for mixed mode spaces and technical computer suites and low grade heat, which is required for the under-floor heating system. The GSHP system increases operation efficiency compared to conventional chillers, so that primary energy consumption and associated emissions are correspondingly reduced.

Contacts

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Location

Image Number : N/A

Bus

National Bus Services run to Cardiff Central Station, where the connecting services, numbers 8 & 9, can be joined at stands W2 & W3 (just outside the station on Wood Street).

There is also the Bay Express bus service which departs from Cardiff Central Station every 10 minutes and stops outside the Wales Millennium Centre.

Alternatively, service number 7 runs from St Mary's Street. All services run approximately every fifteen minutes and stop on Pierhead Street, a short walk/ approximately 200 metres from the Pierhead building.

Train

Services run every twenty minutes from Cardiff Queen Street Station to Cardiff Bay Station. The station is a few minutes walk from the Pierhead building.

Car Parking

The nearest pay and display car park is at Mermaid Quay, a short walk from the Pierhead building. The car park is permanently staffed by security guards. Voucher parking is available outside the Norwegian Church.

Disabled carparking facilities

Parking is available for disabled visitors by pre arrangement in the Assembly car park. This is available either through an Assembly Member's private office in the case of meetings with Assembly Members, Ministers or officials. For Plenary Meetings, Committee Meetings or a pre-arranged visit at the National Assembly Exhibition and Visitors Centre, parking can be arranged through the Assembly Booking Line. Visitors must be able to display their disabled parking badge on arrival.

