THE CONVENTION CENTRE DUBLIN

JANA DIX  •  ERICA SCHUTT  •  BOBBY WHITNEY

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MSRE Class of 2012
University of San Diego
THE SIGNIFICANCE

- First Carbon-Neutral Convention Center in the World

- Timing

- Location

Images Source: Google images
THE FIRST CARBON-NEUTRAL CONVENTION CENTER...

- Public Private Partnership
  - Irish Government Office of Public Works
  - Spencer Dock Convention Centre Dublin Ltd.

- Public building - high impact iconic building

- Interests

- Set standard for other public buildings
TIMING

- April 2007 - Contract Start Date
- May 2010 - Virtual Completion Date
- September 2010 - Official Opening Date

Images Source: Google images
http://www.flickr.com/photos/caseorganic/6832090847/
LOCATION

- Centrally Located

- Accessible by Air, Sea, Public Transportation, Bike, and Car

Images Source: Google images
DESIGN

- **Design Team**
  - KRJ DA – Kevin Roche, John Dinkeloo & Associates, assisted by Henry J. Lyons
  - Other consultants
    - Structural – O’Connor Sutton Cronin (OCSC)
    - MEP – McArdle McSweeney Assoc.

- **Contractor**
  - Construction Management Partnership (CMP)
  - JV: Treasury Holdings Ltd. + John Sisk & Son Ltd.
  - Project and Bid Managers – Bruce Shaw
DESIGN

- Aesthetic Design
  - High impact façade
  - Glass Atrium Space
  - Panoramic views of Dublin Bay, the River Liffey, centre city, and the Dublin Mountains

Image Source: Google images
DESIGN

- Materials used

Image Source: Google images
Functional Design*

- Brownfield Development
  - Vertical vs. Sprawling design
  - Site Size: 490’ x 250’ = 122,500 SF
- Building Area: 494,300 SF
- Capacity for 8,000 guests
- Building program
  - performance hall (2,000 seats)
  - banqueting facilities (capacity for 3,000)
  - multiple meeting rooms
- Flexibility of spaces
- Durability
  - 100-year design life of structure
  - Replaceable features: cladding designed for 40-year life

TECHNOLOGY

- Ecocem Low Carbon Concrete
  - Saved over 10,500 tons of CO2

- HVAC Systems
  - Energy Recovering Ventilation System ERV
  - Ice storage thermal unit

- Integrated Building Automated Systems

- Lighting Systems
ENERGY SOURCES

- No on-site energy production is available
- Wind and Wave energy from ESB Independent Energy
- Purchase Carbon Credits
OTHER GREEN INITIATIVES

- **Planning and development:**
  - “We will consider environment best practice in new projects and refurbishment.”

- **Resource management:**
  - “We will monitor our Building Management System and take positive steps to maximize efficiency.”

- **Purchasing:**
  - “We will give preference to those products and services that have minimal or beneficial impact on the environment.”

- **Indoor air quality and external air emissions:**
  - “We will strive to minimise the detrimental effects of chemicals and pollutants.”

- **Transport:**
  - “We encourage the use of public transport and offer our employees a ‘Cycle to Work’ scheme.”

- **Conservation:**
  - “As a company, we will actively support green initiatives and organizations.”
REFERENCES