

The First MacKay Hannah Scottish Maritime Transport Conference

Maritime Transport: Scotland's Sustainable Growth Opportunity

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Forth Ports PLC



**PRESENTATION
TO
MARITIME TRANSPORT
CONFERENCE
ON**

MONDAY 5 OCTOBER 2009

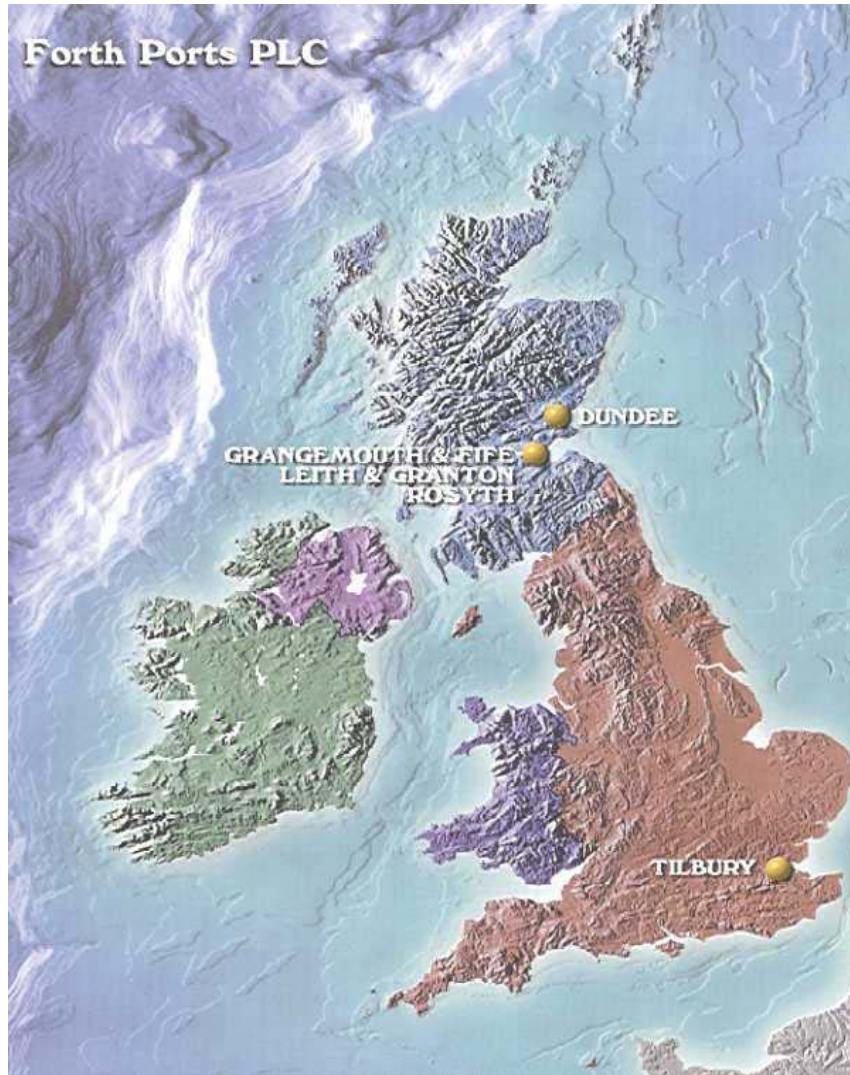


AGENDA

- *Who and What are Forth Ports PLC*
- *Location and Capabilities of Forth Ports PLC*
- *Economic Contribution of UK Ports*
- *Selection of Case Studies where Ports support the Economy*



Forth Ports PLC



- We are the largest ports grouping in Scotland.
- We own eight operational ports on the East Coast of the UK
- We handle in excess of 40m tonnes of cargo per year.
- We employ over 1200 people.



Scottish Ports



Port of Leith



Port of Rosyth



Port of Dundee



Port of Grangemouth

Scotland's Super Regional Port

- **Employees - 500 people**
- **Turnover in excess of £80 million**
- **All offer combined transport solutions with sea, road and rail**
- **Deep sea to Short sea capability**



Port of Methil



Port of Burntisland



Port of Kirkcaldy



Forth Ports PLC

A Competent Harbour Authority



- **Provision of pilot service including a fleet of 50' long, 25 knot pilot boats**
- **Provision of vessel tracking system covering 245 square miles of Forth & Tay Estuaries. Manned 24/7 this uses the most modern technology to track, monitor and passively police vessel movement**
- **Provide towage fleet, all with fire fighting capability**
- **Monitor and record channel depths**
- **Dredge channels**
- **Maintain readiness to respond to oil spills with regularly exercised emergency plans and oil spill equipment held in readiness**



Location

- All of our ports in Scotland and located within the central belt, with the capability to fed to the North , South and West of Scotland very efficiently
- Grangemouth is equidistant (26 miles) from the centre of Edinburgh and the centre of Glasgow – not just an East Coast Port
- Grangemouth is Scotland's main import and export artery for containers
- 70% of Scotland's population lives within a 1 hour drive of the Port of Grangemouth
- The Port of Grangemouth and Leith have active rail links



Information Technology

- Multi million pound investment has been undertaken to put in place new IT system
- IT system controls all of our operations from the point of initial contact with ship in the river, through all cargo handling and storage to onward delivery to the customer
- IT system offers electronic data interface (EDI) link
- IT system provides management information track and trace capability and automatic invoicing



Scottish Ports

Stevedoring Modernisation

- Massive investment in new mobile high capacity general cargo equipment went live January 2009
 - Wide range of attachments for fast resource efficient turn round and deployment
 - Highly productive with one machine equivalent to two traditional port cranes
 - New labour arrangements designed to offer high service levels based around skills
 - Customers benefit from being able to choose service level from:-
 - Standard - Monday – Friday 0800 – 1700
 - Premium - Monday – Friday 0600 – 2200
 - Premium Plus - 24/7
- } Choice allows ship charter costs to be controlled



Port of Leith



Cruise

- Cruise ships have been calling at Edinburgh since the 1960's

Each Year:-

- Leith attracts between 35 and 40
- Rosyth around 15-20
- River Forth calls around 20
- Dundee calls 5-10



Cruise

- Tourism according to VisitScotland is worth £4bn and is a critical to Scotland's future
- New Cruise is an important sector and a new Marketing Campaign being supported by City of Edinburgh and VisitScotland in recognition of Cruise benefits to the capital from passengers as well as crew launched this week
- Cruise recognised as a growing market – Leith passenger growth 2009 = 5%
- The construction of a new berth outside the lock gates capable of handling the largest cruise ships is being explored – funding being explored with Edinburgh Council and Scottish Government
- Study estimates a market of 182,000 – 246,000 passengers per annum by 2014 if a new berth is constructed
- VisitScotland studies indicate cruise passenger spend is higher than other tourist categories



Port of Rosyth

- The only deepwater port on the Forth offering a tidal facility
- Sheltered position means the port is free from east Coast swell
- Approximately 54 hectares in size
- Only one mile from UK motorway network with a direct port link
- Port has a rail link which connects to main East Coast rail line



Port of Rosyth

- First ferry route revived
- Supports both freight and tourism markets





Port of Burntisland



Port of Methil



Port of Grangemouth

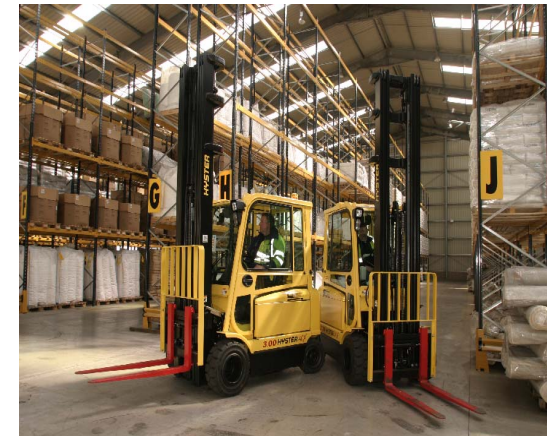
Port of Grangemouth

- Grangemouth is Scotland's largest port
- Main artery for Scottish imports and exports
- National Planning Framework supported by local community, Council and Scottish Government recognises the need to safeguard and enhance ports current and future road and rail capacity and connections
- Potential for distribution park within or outwith the secure ISPS boundary of the port recognised and accepted within long term land use plans for the area
- Port is 26 miles from centre of Glasgow and Edinburgh
- Grangemouth is within a 2 hour HGV drive from 4m Scots and is in the heart of Scotland's main area of production and consumption



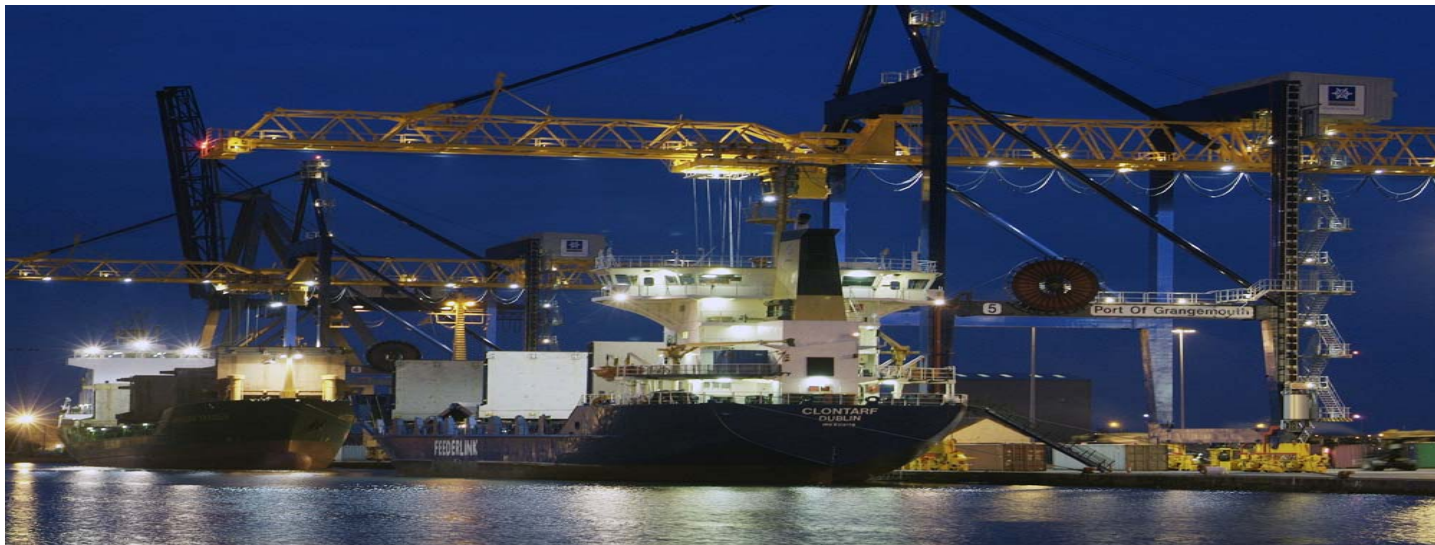
Port of Grangemouth – a True Intermodal Centre

- Grangemouth is a specialist facility suitable for intermodal transfer between sea, road and rail of variety of cargoes in large volumes, including liquid bulk, dry bulk and unitized form
- Grangemouth is rail linked and situated close to the UK motorway network
- Round the clock access for a variety of types and sizes of shipping throughout the year



Container Shipping Connections

- 14 feeder vessels call at the Port each week
- Feeder vessels enjoy priority access and working
- Grangemouth offers an efficient, congestion-free terminal
- Grangemouth offers logistic solutions that avoid bottlenecks in the supply chain
- Main shipping connections are Rotterdam, Antwerp, South Shields, Felixstowe, Southampton and Zeebrugge
- Main feeder lines are MSC, Samskip, Concorde and Feederlink



Container Operations

- £30m investment completed during December 2008
- New cranes have been acquired along with straddle carriers and enlarged terminal area
- 3 berths are available
- Terminal operates on a common user basis
- Stevedoring service operates on shifts to provide 24 hour cover Sunday to Friday
- New IT systems address ships scheduling, capacity management, operational planning and cargo revenue accounting



Port of Grangemouth

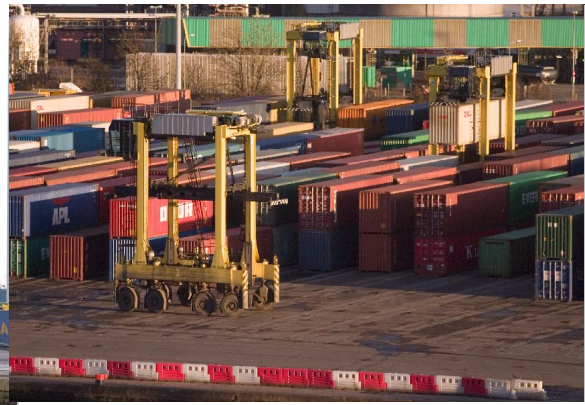
2005 - The Old



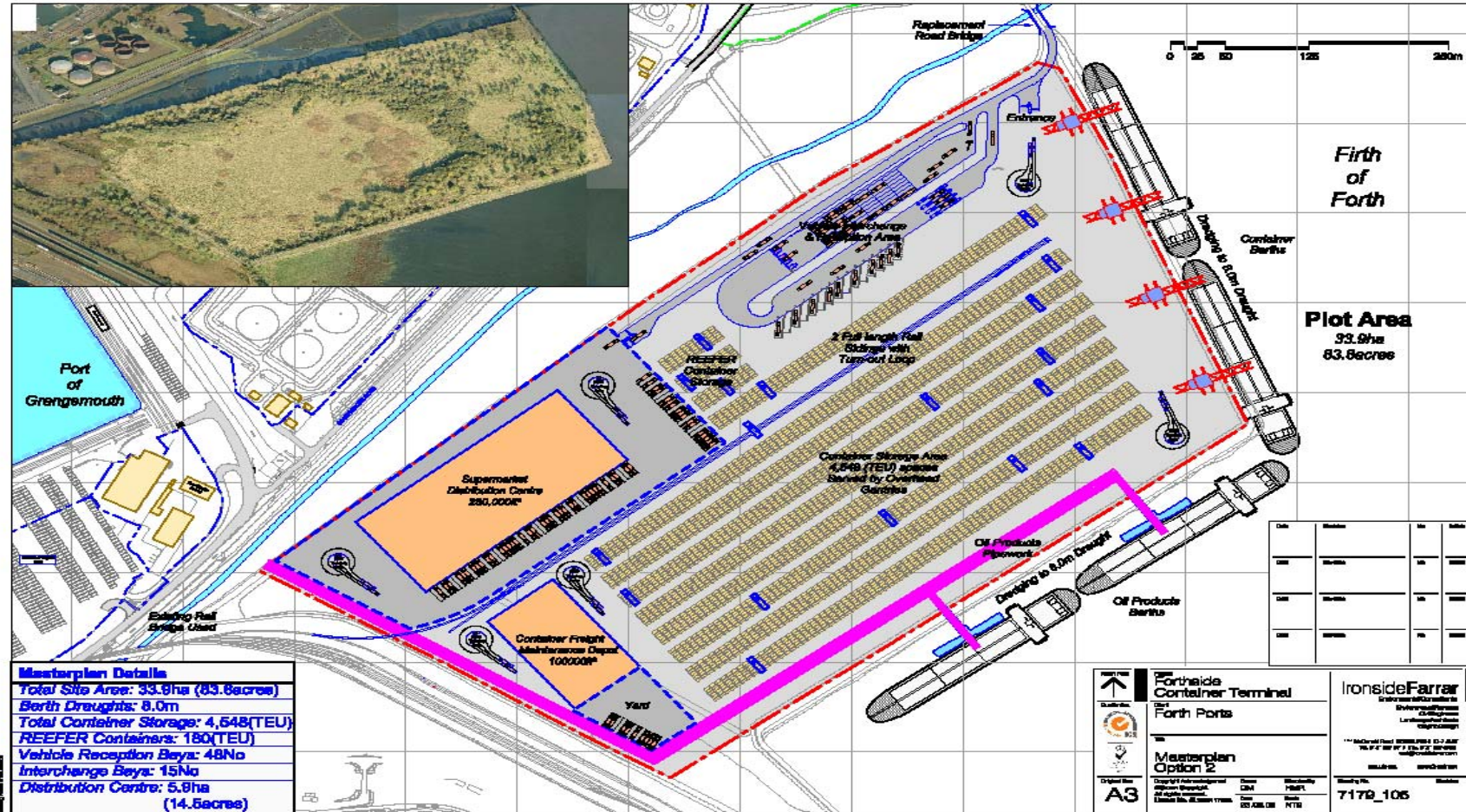
2009 - The New



Port of Grangemouth Not Capacity Constrained Container Expansion Potential 1M TEU



Grangemouth Outer Container Option

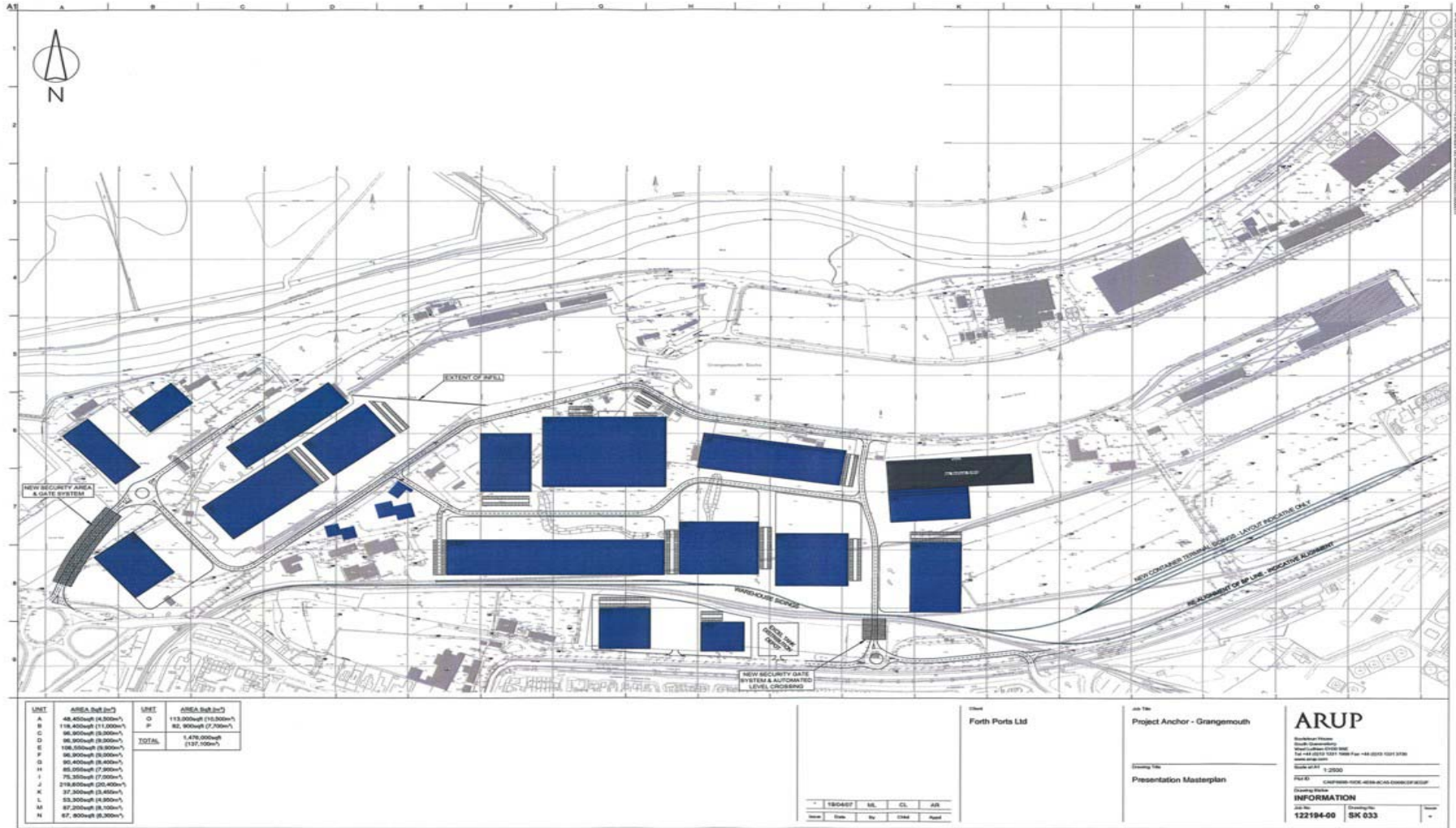


Port of Grangemouth Scotland's Distribution Hub

- Owing to its position as a major intersect point for Scotland's logistics, Grangemouth is now recognised as Scotland's distribution hub
- Grangemouth offers potential to develop an additional 1.5m sq.ft. of warehousing for further common user or dedicated use
- All warehouses benefit from multi modal solutions as they are located in close proximity to container terminal and are road and rail linked



Masterplan Proposal



ARUP
 122194-00 SK 033

Forth Ports Ltd
 Project Anchor - Grangemouth
 Presentation Masterplan

Masterplan Proposal Initial 3D View



Port of Dundee



Port of Dundee

- Strong regional port handling a variety of commodities. Significant agricultural product throughput supporting to distilling industry
- Access to port across main East Coast rail line meaning bridges required but opportunity for railhead exists
- Access to port cross main trunk road
- Road access to port major constraint



Renewable Energy Dundee Initiative

Concept for a New Era

Create through Partnership of the City and its Community components, including Port of Dundee, a range of long term sustainable energy industries developing Dundee as World leading centre for renewable energy.



What is our Offering?

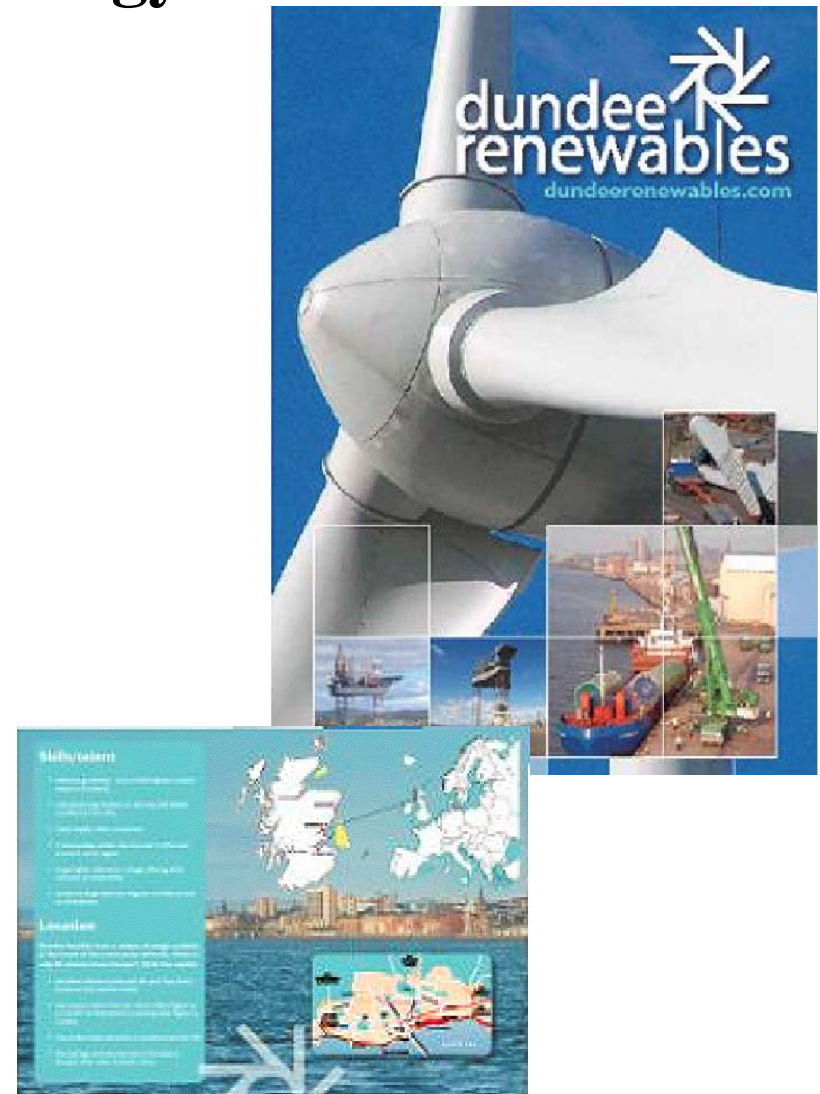
Location, Location, Location

- Existing protected land/water interface
- Deep water, tidal berths free of air draft restrictions
- Sufficiently large landbank for manufacturing and storage
- Labour availability
- Full range of port services
- Location close to Round 3 offshore development site
- High capacity deepwater quays
- Expertise and capability in handling heavy indivisible loads
- Full range of port services capable of supporting raw materials in finished goods:-
 - a) Large scale manufacturing
 - b) Offshore Development support
 - c) Longer term inspection, repair and maintenance
- Marine capability to accept specialist development vessels
- 100MW interconnector installed in Port – a legacy from Carolina Power Station



What is our Strategy?

- Secure major OEM (Inward Investment)
- Develop R&D aspects supported by Educational establishments
- Cluster support industries
- Develop operational, inspection, repair and maintenance base for offshore support
- Develop large scale multifuel electricity generation plant
- Be Scotland's first carbon neutral city
- Provide competitive heat and power to Port Tenants, Dundee City and the New Waterfront Development



PUT SIMPLY

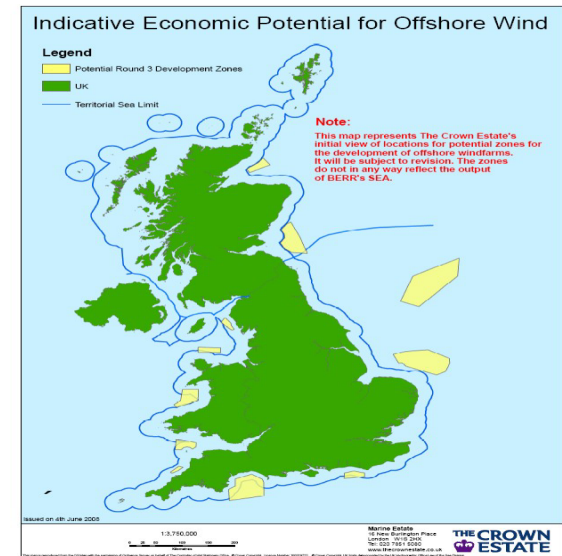
BE TO RENEWABLE ENERGY WHAT ABERDEEN IS TO OIL AND GAS



Offshore Wind

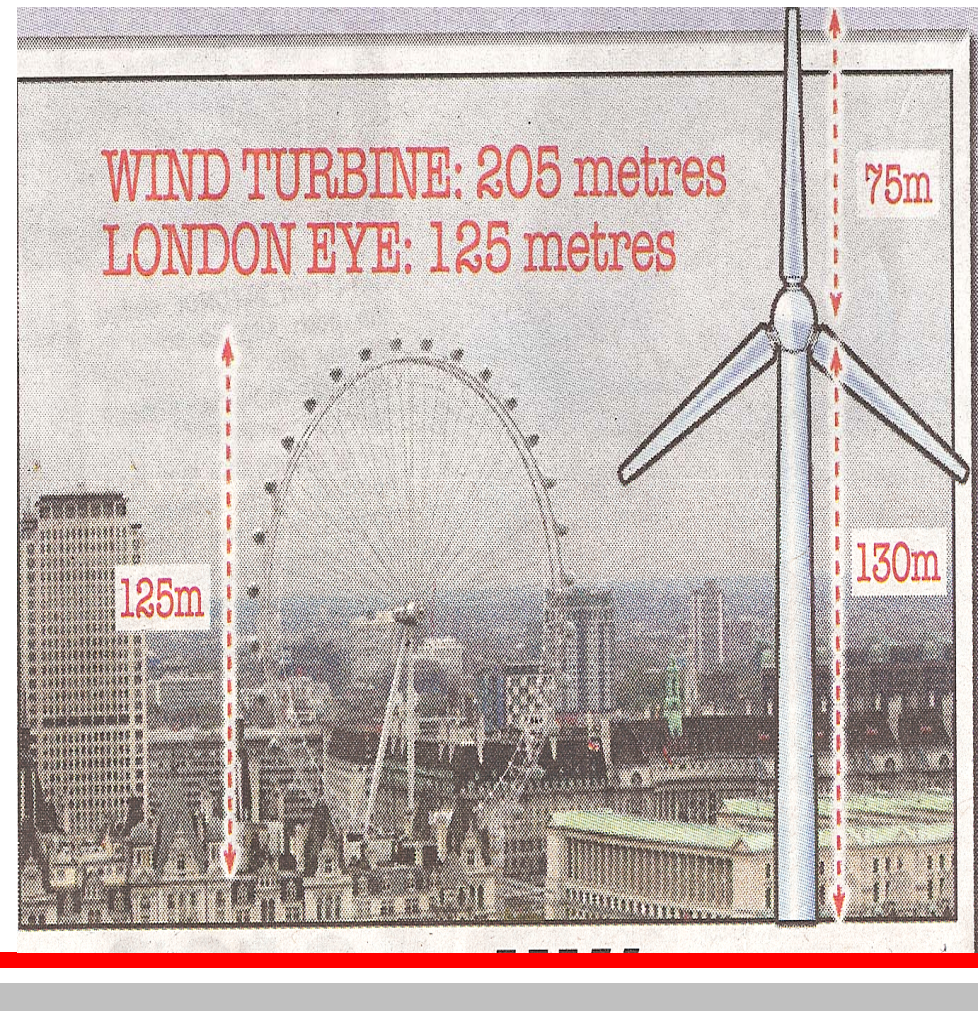
A Large Scale Opportunity

- Currently 3,500 onshore turbines in the planning system in Scotland and 15,000 offshore
- As things stand majority of turbines will be imported from Germany or Denmark, with current plants away from coasts and are compounded by scale of offshore turbines and size of developments
- **Opportunity exists now** for tower manufacture importing blades & nacelles from sites around City
- Opportunities will be in import & distribution and operations & maintenance.



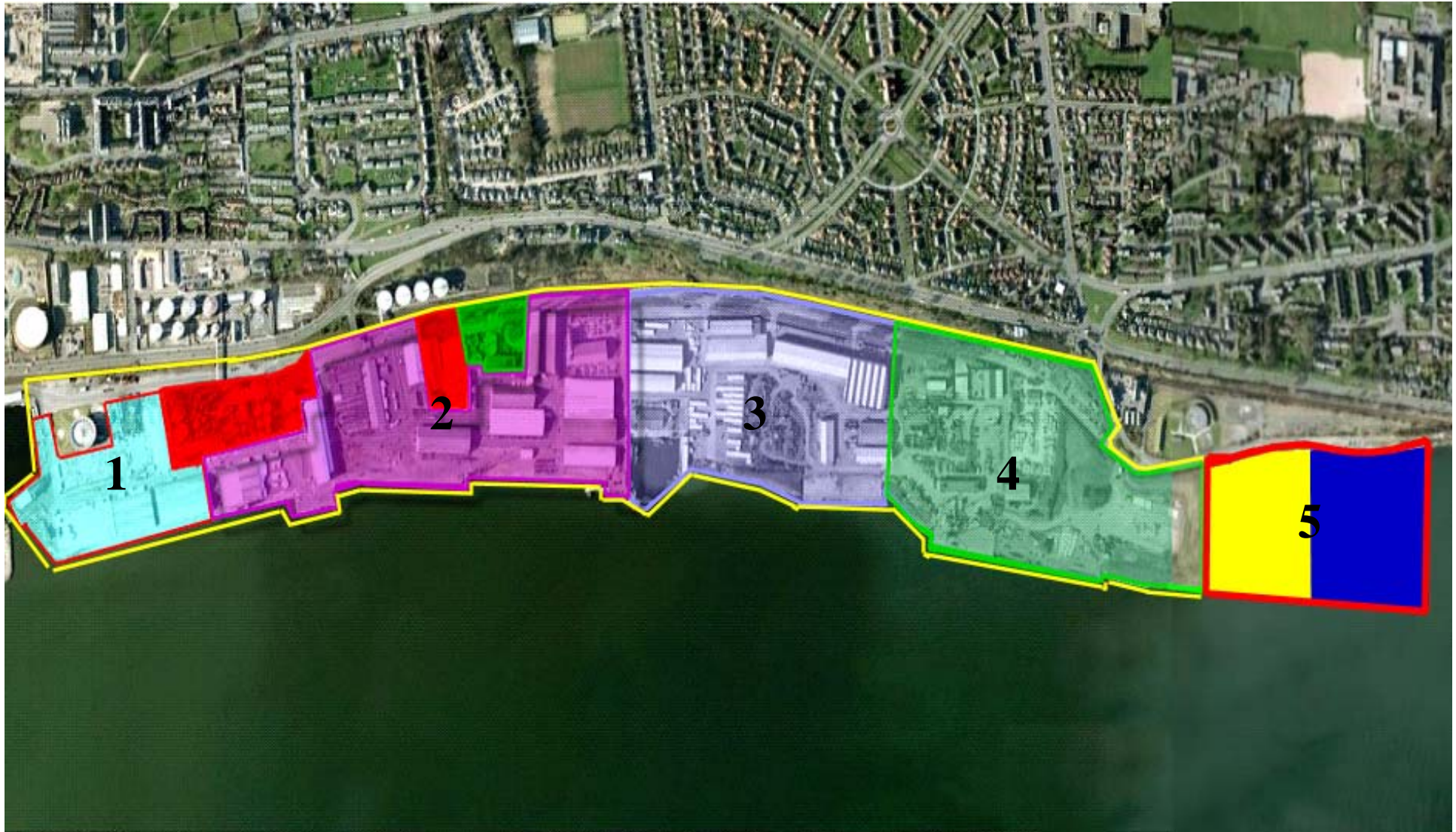
Dundee Capable of Supporting Large Scale Manufacture and Shipping

- Following a review of UK Ports, Government identified that Dundee best suited for the offshore and service sectors

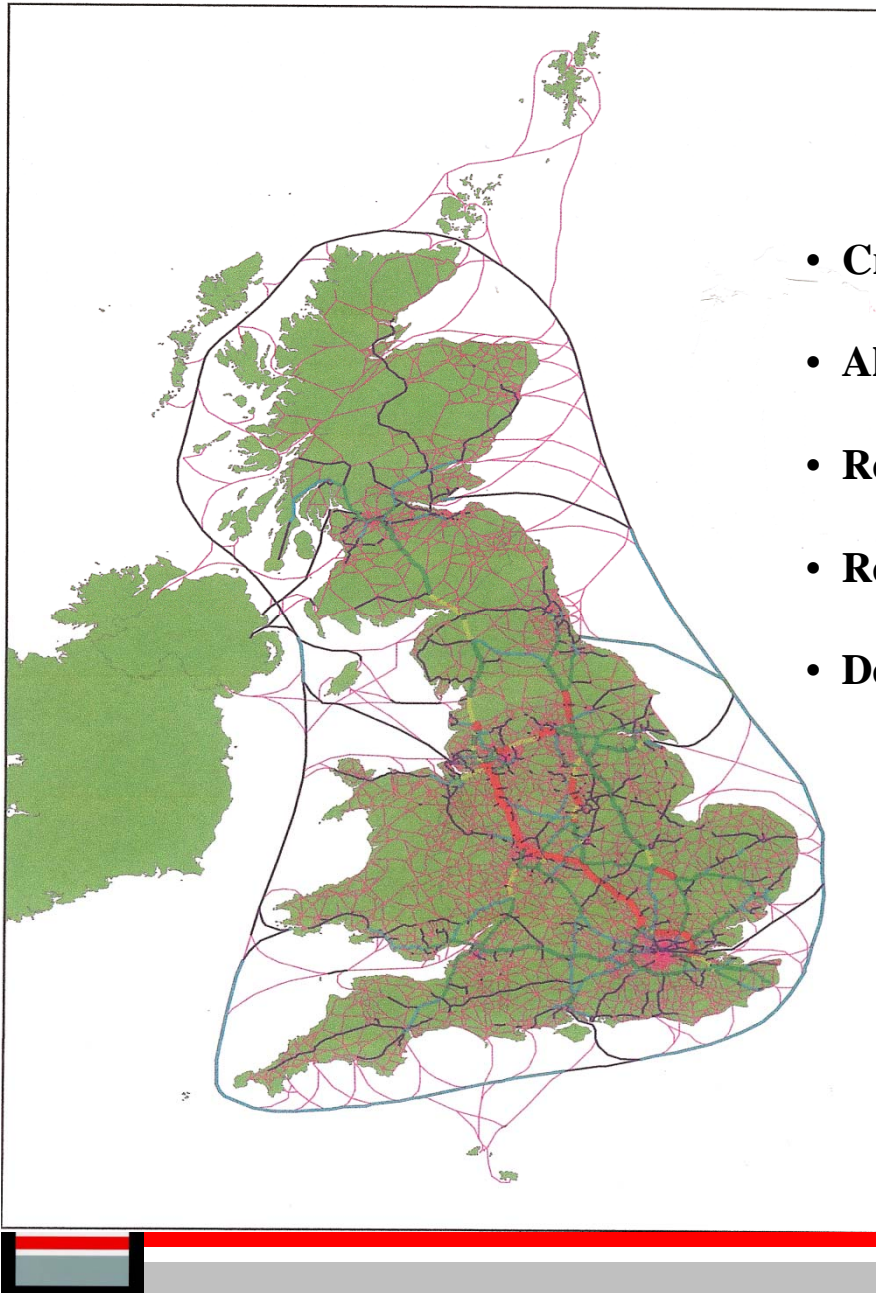


Dundee Masterplan

- 1) Multi fuel plant site 15 acres 2) General Port operations 50 acres 3) Potential Nacelle manufacture 30 acres 4) Potential wind turbine manufacturer 30 acres 5) Crown Estates reclaim 20 acres



POSSIBLE UK Motorway of the Seas Solution



- **Critical Freight Corridors to support Coastal Shipping**
- **Almost unlimited capacity**
- **Reflects historic UK trade routes**
- **Reduces road congestion**
- **Delivers environmental benefit**

UK PORTS FACILITATING UK'S INTERNAL TRANSPORT

Ports Support Sustainable Transport Solutions by Having:-

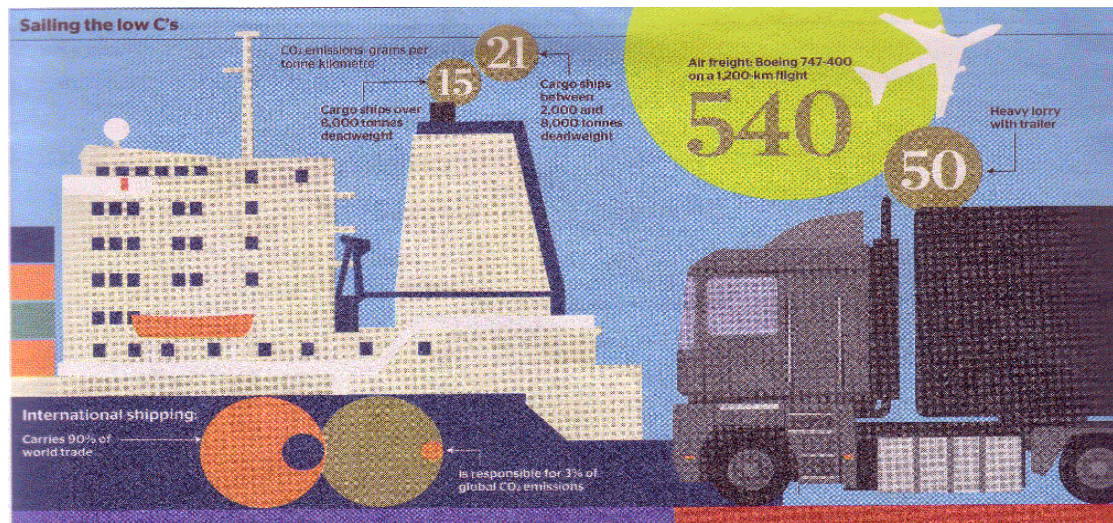
- Rail connections to receive and distribute cargo prior to, or post shipping
- Sea transport options that mean some cargo (30MT in 2004) arrives and leaves port by sea
- Pipeline connections to minimise transport of liquid bulk products
- Ports capacity is enormous and can offer even more sustainable solutions
- Shipping is responsible for 1% of CO2 emissions compared to 20% from road transport



AIR POLLUTION

1. **IMO Greenhouse Gas Study identified that in 2007**
 - . **International Trade shipping movements produced 3% of World's CO₂ emissions = 843m tonnes**
2. **Sulphur emissions from ships estimated t 6.5m tonnes or 4% of World's annual emissions**
3. **Nitrogen Oxide calculated at 5m tonnes, 7% of Global emissions**
4. **Emissions of CFC from shipping 6k tonnes or 3% of Global emissions**
5. **Halon emissions 400 tonnes or 10% of Global emissions**

The shipping and port industry are committed to take further actions to reduce further these emissions



Economic Contribution of Ports

Historically drives Global Development & Trade

Seaports impact at a National, Regional & Local level on:-

- Our Economy
- Our Society
- Our Environment
- They are a vital part of our Transport infrastructure enabling access to the Global distribution network thereby promoting trade and competition



Economic Contribution of Ports

- Ports are gateways for trade and travel
- In terms of tonnage handled, UK ports sector is largest in Europe. In 2007 UK Ports handled 580M tonnes of freight. (Source Oxford Economics)
- Over 95% of UK imports and exports by volume and 75% by value pass through UK Ports
- Total value of UK imports £249Bn and exports £191Bn (Dept Trans 2004)
- The UK Ports Sector contributed £7.6Bn to GDP or 0.5% of the total output of the UK economy. To put this in some context this is more than the:-
 - Hotel Sector
 - Manufacture of Aerospace industries



Economic Contribution of Ports

- The Ports Sector in 2007 contributed £3Bn in tax receipts.
- Main component parts were:-
 - Employment Taxes £1.4Bn
 - Corporation Tax £1.0Bn
- In total the Ports Sector supported 363,000 jobs in 2007
- Or put another way 1.3% of all UK jobs
- 132,000 people are directly employed in the Ports
- 150,000 are employed in Ports supply chain
- 80,000 people owe their job to the consumer spending of ports staff
- For every job generated in the port another 1.74 will be generated elsewhere
- In total Ports Sector supports £17.9Bn in GDP (1.2% of Total)



Economic Contribution of Ports

- Ports enable a range of industries to function therefore overall economic impact on ports is greater still
- Fishing in 2007 from UK Ports supported 6,670 vessels, 12,700 fisherman, contributing £363M to GDP
- UK marine aggregates 547 jobs, £114M
- Ports support Offshore Oil and Gas extraction
- Industries reliant on imports and exports are enabled by Ports. Estimates are 45,000 jobs and GDP contribution of £6.9Bn



CASE STUDY 1

OCEAN POWER DELIVERY/LEITH DOCK

Project/contract: Agucadoura wave farm project, Portugal
Value: £5.4m
Scottish Suppliers Include: Ross Deeptech, Stonehaven (steel structures); Camcal, Lewis (tube fabrication); Briggs Marine, Burntisland (operations); Hydrobond Engineering, Aberdeen; Hytec Hydraulic Engineering, Kirkcaldy; Forth Ports, Edinburgh; Viking Moorings, Aberdeen; Hughes Offshore, Aberdeen; Gray Fabrication, Cupar; McCartney Underwater Technology, Aberdeen; Forth Estuary Engineering, Edinburgh; Delta Marine, Lerwick

When the 3,300 tonne transport ship Sea Power set sail for Portugal earlier this year it represented a triumph of Scottish innovation and industry.

The Pelamis Wave Energy Converter that the ship was taking to the Port of Peniche on Portugal's Atlantic coast – one of three being supplied by Ocean Power Delivery – had harnessed world-leading technology and traditional marine and engineering skills.



CASE STUDY 2

TALISMAN ENERGY & SCOTTISH & SOUTHERN ENERGY

Project/contract: Beatrice offshore wind farm demonstrator
Value: £35m
Scottish Suppliers Include: Burntisland Fabrications Limited, CamCal, Amish; Isleburn, McKay & Macleod, Evanton; Gray Fabrications, Cupar, Narvida, Glenrothes (all fabrication)

The Scottish oil and gas expertise which has reaped a rich harvest from the North Sea is now helping break new ground in renewable energy.

The Beatrice demonstrator project, a joint venture between Scottish and Southern Energy and Talisman Energy (UK), will see the world's deepest offshore wind turbines installed to assess their technical and economic feasibility.



CASE STUDY 3

- a) **E.ON UK Renewables/Dumfries & Galloway**
- b) **Forth Energy, Dundee, Leith. Rosyth and Grangemouth**

Project/contract: a) Steven's Croft Biomass Plant, Lockerbie
b) Forth Energy, Leith Docks

Value: a) Stevenscroft £90m
b) Forth Energy £ being evaluated

Scottish Suppliers Include: Scottish Power (connection); McAlpine, Glasgow (civil engineering); Hardie Engineering, Dumfries (switchroom). Forestry products suppliers will include James Jones, Dumfries; Howie Forest Products, Dalbeattie

The construction of the UK's largest biomass plant is already bringing millions of pounds to the local economy but the real benefits will be from operation.

Forth Energy, a JV Company between two of Scotland's largest PLCs Scottish & Southern Energy PLC and Forth Ports PLC are preparing proposals for the development of dedicated biomass power stations at 4 port sites at Dundee, Leith, Rosyth and Grangemouth. The total installed capacity would be 400MW.



CASE STUDY 4

Airtricity/Stirlingshire

Project/contract: Braes of Doune wind farm
Value: £75m
Scottish Suppliers Include: Vestas, Campbeltown (turbines); Alfred McAlpine, Glasgow (civils); Scottish & Southern Energy (grid connection); A J Clark, Kilmarnock (foundations); RJT Jedburgh (roads, peat movement); Sorley, Dunfermline (turbine electricals), Mott MacDonald, Glasgow (technical advice); Natural Research, Banchory (Red Kite Monitoring); Land Use Consultants, Glasgow (EIA, on site ecologist), Scott Wilson, Glasgow (planning assistance/on site geotechnical engineer), Sgurr Energy, Glasgow (technical advice); Forth Ports

Since its first Scottish wind farm won planning approval three years ago, Dublin-based Airtricity has embarked on a major investment programme over the water.

Staff in a dedicated base in Greenock now oversee eight existing or planned projects including Braes of Doune in Stirlingshire.

Construction activity at the site began in July 2005 on the 72MW Wind farm and by February 2007 its 36 turbines had been Commissioned and in service.

