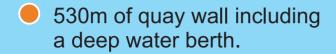




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# Message From the Chief Executive



2014 was an exceptional year for Dublin Port with a 7% increase in cargo volumes on top of the 3% we saw in 2013. The port is now back to the record levels of trade recorded in 2007, with every prospect of continued strong growth in the years ahead.

During 2014, we saw strong increases right across our main business areas, from imports and exports to trade vehicle and ferry passenger numbers. We expect growth to continue into 2015, with importers and exporters choosing to do business through Dublin Port, where they benefit from direct access and frequent services to their main markets.

Dublin Port Company is committed to sustainable investment in port infrastructure and services, including the longer, deeper berths envisaged in our Alexandra Basin Redevelopment Project. These will accommodate the larger ships of the future, carrying increased cargo volumes and greater numbers of passengers. This type of investment will allow Dublin and the wider economy to prosper by ensuring that Dublin Port is ready to facilitate the future trading needs of its customers and the country as a whole.

Having completed major investments during 2014, including the new €3.4m trade car terminal, and with the development of the Alexandra Quay Container Terminal, we are looking forward during 2015 to commencing the Alexandra Basin Redevelopment Project, which the EU is already supporting under its TEN-T infrastructure investment programme.

Eamonn O'Reilly

Edin

**Chief Executive** 



#### **UNCTAD Programme**

Dublin Port Company hosted a training of trainers workshop from March 25 to April 3 for 30 senior managers, representing ports in developing countries. The United Nations Conference on Trade and Development (UNCTAD) runs the port management training programme for developing countries in four languages: English, French, Spanish and Portuguese. The workshop in Dublin was held with the support of Irish Aid and in co-operation with Dublin, Cork and Belfast ports.

The workshop provided training to 30 senior managers from ports in Ghana, Indonesia, Nigeria and the Philippines, who were selected to serve as local and regional instructors for the English-speaking network of the port training programme.

Maureen O'Sullivan TD opened the eight-day training event in Port Centre and welcomed all of the delegates to Dublin. The managers received training in the first four (out of eight) modules of the UNCTAD modern port management course. 2015 sees the Port of Cork Company hosting Part II of the training of trainers event, when modules V to VIII will be delivered in the magnificent surroundings of the National Maritime College.

Dublin Port Company and Port of Cork recently signed an MOU with UNCTAD, reaffirming their strong commitment to UNCTAD's Port Training Programme (PTP) for the next three years.







# World's Third-largest Tall Ship

The 370-feet long, four-masted 'Juan Sebastián de Elcano', the world's third largest tall ship, visited Dublin from June 7-12. The impressive steel-hulled schooner was met by Dublin Port Company's tug boats and a flotilla of yachts from local sailing clubs in a ceremonial escort to mark the ship's arrival in Dublin Bay.

Led by Captain Enrique Torres Piñeyro, the "Elcano" is used primarily as a training ship for the Royal Spanish Navy, preparing its officers for long periods at sea. She arrived in Dublin carrying 191 crew, who participated in a five-day programme of engagements in the capital to promote Spanish-Irish cultural exchange, including free public open days, when visitors were able to board and inspect the magnificent vessel.







## Record Numbers at Riverfest 2014

With more than 56,000 people attending Dublin Port Riverfest 2014, the event not only achieved record numbers but brought a whole new level of family entertainment and interaction to North Wall Quay. It attracted huge media interest from television, radio, press and online media, both at home and abroad.

Key attractions included free visits to three Tall Ships and four Schooners, the largest of which was the 70-metre Gulden Leeuw. Visitors also took part in family trips around the bay on the St Brigid, enjoyed the tug boat dance and were amused by a host of entertainers, including The Pirate Brethren, a 12-man pirate crew from Liverpool who took part in sword fights and sea battles.











#### **Georgia On My Mind**

The Georgian National Ballet Troupe performed on a purpose built stage over the three days of Riverfest on the campshire, which was a huge hit with the audience and indeed with the local Georgian population.

The event, which was also attended by the Georgian Deputy Minister of Culture, also allowed visitors to enjoy the unique Georgian style of polyphonic singing and rich voices which characterise the Rustavi Choir and also many other Georgian performers, including their own martial arts performers who performed a choreographed fight scene from the legend of 'Jason and the Golden Fleece'.









#### Sail Training Ireland

Dublin Port Company and Dublin City Council signed an agreement with Sail Training Ireland to develop a local Dublin-based Sail Training Programme as a legacy to their partnership during the 2012 Tall Ships Festival. This project will result in up to 10 tall ship visits to Dublin per annum, 100 young Dublin trainees undertaking voyages and 5,000 visits on board ships as they are docked at the quayside in Dublin.







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#### **Cruising to Success**

Over 87 cruise liners came into Dublin Port in 2014, including the Marco Polo (above), the Ruby Princess (below), The Club Med 2 (bottom) and mega-yacht, cruiseship Le Boréal, which docked at Dublin Port on June 8. At 142m long, Le Boreal was built by the Italian Fincantieri shipyard and can accommodate 264 guests in 132 luxury cabins.





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#### **Dublin City Liffey Swim 2014**

Dublin Port Company sponsored the 95th Liffey Swim on September 13, which commenced from Watling Street to the Custom House. Over 260 men and 100 ladies competed for the prestigious Liffey Cups, in what is generally regarded as the highlight of the open sea swimming season. The Dublin City Liffey Swim is regarded as an Open Sea Race as for much of the race, swimmers are battling against an incoming tide and are swimming in salt water.







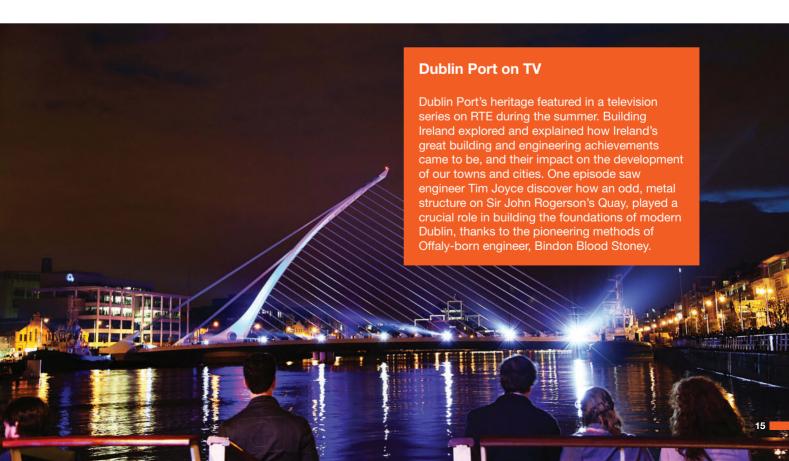
#### Lots of Fun at the Fringe

The 2014 Tiger Dublin Fringe, opened with a bang, as a once-off large-scale outdoor performance turned Santiago Calatrava's Samuel Beckett Bridge into Ireland's largest musical instrument, telling the story of the Harp of Dagda on a massive scale.

Tom Lane's composition was inspired by the frequencies of the elegant supports or 'strings', featuring artists on the bridge, the river and its north and south banks.

This huge undertaking, rejoicing in the bridge and the city, brought together musicians and performers from all over Dublin, and featured lyrics written by Lily Akerman.

They were joined by opera singers, drummers and dancers, who brought the area to life in spectacular new ways.





#### **Vintage Rally**

Ireland's vintage commercials transport extravaganza took place on September 28 at Dublin Port, which saw more than 2,000 visitors enthralled by a plethora of vintage vehicles, including single and double decker buses, army trucks, private cars and motorbikes and a 1927 Garda car. The event also saw two vintage double decker buses taking more than 500 visitors on guided tours of Dublin Port, provided by DPC's management.







Standard acceptance criteria apply. Calls may be recorded.



#### **River Liffey Clean-Up 2014**

Following the success of the 2013 River Liffey clean-up, Dublin City Council and Dublin Port Company organised a further joint operation between May and September 2014. Due to the previous year's operation, the quantity of waste was less, but the scope of operation was lengthened as far west as Heuston Bridge.









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#### **Minister Visits the Port**

Minister for Transport, Paschal Donohoe TD had an early 5am start on Friday, October 10, to witness the first container vessel discharge at Dublin Port. Minister Donohoe was very impressed with the speed of the Ro-Ro operations. He met with Brian Dalton, VTS operator, to discuss ship movements and berthing operations within the Port.





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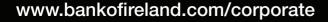
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#### **Liffey Cruise**

Dublin Port Company, Sail Training Ireland and Irish Sailing Association linked up with the Cruising Association of Ireland's yearly Liffey Cruise to create the Dublin Port Parade of Sail on the weekend of September 27 & 28.

Dublin Port Company have installed new permanent pontoons on the River Liffey at North Wall Quay (beside the 3 Arena). A large contingent from the boating community took part in the flotilla to officially open these pontoons, which are now available for use by vessels wishing to visit the Capital City. The purpose of this event is to promote the River Liffey as a destination for the boating community.















Pictured at the official opening of the new trade car terminal are Eamonn O'Reilly CEO, Dublin Port Company; Lucy McCaffrey Chairperson, Dublin Port Company; and Paschal Donohoe TD, Minister for Transport, Tourism & Sport.

# New Trade Car Facility

### Dublin Port Company has invested €3.4m in a new Trade Car facility, catering for 2,500 vehicles.

Dublin Port Company's new trade car terminal was officially opened in October 2014 by Minister for Transport, Tourism and Sport, Paschal Donohoe TD.

The new facility is located at East Wall Road and will cater for 2,500 vehicles at a time, monitored by a state-of-the-art security system manned on a 24/7 basis, 365 days a year. The opening follows a 13-month development and construction phase and a €3.4m investment.

#### **80-Metre Flyover Bridge**

The works included the construction of a new 80-metre flyover bridge across East Wall Road. The bridge allows cars to move between the port estate and the new terminal without any interruption to traffic in the surrounding areas. The perimeter of the terminal also incorporates a 'living wall', or vertical façade of green plants, which will be visible from East Wall Road by mid-2015 as a permanent feature of the facility.

Measuring 4.3 hectares, the terminal will accommodate the growing number of trade vehicles entering Dublin Port as Ireland returns to economic growth. Figures for 2014 show a strong increase in numbers.

There were 58,399 trade vehicles recorded in the first nine months of 2014, up 29.8% on the 44,987 that arrived in the same period in 2013. New figures for the third quarter of 2014 show the arrival of 14,802 trade vehicles, mostly new cars destined for car dealerships, up 48.8% on the corresponding quarter in 2013.

#### **Renewed Confidence**

"The opening of the new trade car terminal at Dublin Port signals confidence in Ireland's economic recovery and motor industry," noted Minister for Transport, Tourism and Sport, Paschal Donohoe TD. "The car industry supports thousands of jobs and this investment by Dublin Port Company will further facilitate the growth in this sector. The opening of the terminal





reaffirms Dublin Port Company's commitment to planning for future growth in a timely and forward-thinking manner."

Lucy McCaffrey, Chairperson, Dublin Port Company, added: "Dublin Port Company made a commitment in the Masterplan to utilise existing lands to the greatest extent possible. By locating the new trade car terminal on East Wall Road, Dublin Port Company has further consolidated its use of existing quayside space, allowing other port operations to benefit from improved proximity to the quays. Today's trade car terminal opening is a very practical example of how Dublin Port Company is delivering on that commitment under the Masterplan."

Eamonn O'Reilly, Chief Executive, Dublin Port Company, noted how the new facility will cater for the growing number of trade vehicles arriving at Dublin Port. "We expect 2014 to be Dublin Port's strongest year for trade since the peak of 2007 and trade vehicle imports will be an integral part of future growth," the CEO concluded.





# Tug Of Love!

Tug Master Paul Dorgan explains the key role Dublin Port's tugs play in the life of the port, particularly in adverse weather conditions.

When the wind is howling up a storm, the rain is lashing down like a waterfall and you're trying to get a car carrier into a berth in Dublin Port, who are you going to call? The names Beaufort and Shackleton might not be the first to your lips, but Dublin Port Company's two tug boats are arguably the most vital names to have on your side in such an event.

"Ships that wouldn't normally use tugs, such as ferries, may need them in bad weather. When winds get above 30 knots, we tend to be a little bit busy," smiles Tug Master, Paul Dorgan. "If you get a south-easterly gale, which blows right into the bay, we are very busy. Ships can break down, and we have been called in at short notice to get a ship out of trouble, so we have to be ready for all eventualities."

The affable Tug Master explains, however, that the tug teams' main role "is to assist ships that would be restricted in their movements within the confines of the port. These are larger ships that, in the normal course of navigating, are fine in open water but when they come into the confines of a port, they are not very manoeuvrable and so need the assistance of tugs."

In the main, it's larger vessels, from container ships to cruise liners or deep drafted tankers, who need the assistance of tug boats. "Most ship's masters will know from experience whether they need a tug or not, based on wind strength and direction," Paul notes. "Smaller ships would use just one tug, while larger ships tend to use two tugs, to hold them in up



in the wind. If they don't have tugs, they are at the mercy of the elements and can cause damage to the ship and the infrastructure in the port."

The tug crews tend to do most of their work at night, Paul explains, as the majority of vessels tend to arrive for an 8am start, which means that they might be entering the bay from 5am.

#### A Real Team Effort

When a large ship is arriving into Dublin Port, ensuring it gets safely to its berth is very much a team effort, involving all elements of Dublin Port Company's marine department, including the Harbour Master's office, the VTS team (Vessel



Tracking System), the shipping desk, the pilots and pilot boats, as well as the tugs themselves.

"We are all well used to the procedure of getting a ship safely from the bay to the berth, and vice versa," Paul notes.

The shipping desk receive long-term notice of a ship's arrival from a shipping agent, so the team are aware that a vessel is due into the port on a particular date. On that date, the ship will contact the VTS station, approximately two hours before their ETA. The VTS team then liaise with the ship's master on a berthing time, depending on a number of factors, including tides, available berths etc.

The ship then contacts the VTS team again when they are 30 minutes from the pilot boarding position, south of the main channel in Dublin Bay. This is the signal for the pilot boat to head out to meet the ship, where the pilot boards the incoming vessel to guide it safety into harbour. At the same time, the tug crews board their boats and prepare to meet the vessel at "the Lights" (adjacent to the Poolbeg Lighthouse and the North Bull Lighthouse).

"We know exactly where the ship is because the tugs are fitted with a chart plotter with AIS (Automatic Identification System), which reveals the ship's location and identity," Paul reveals.



Tug Master Paul Dorgan, pictured in the engine room of the Beaufort, one of Dublin Port Company's two tug boats.

"Indeed, we can see every ship in the bay and know exactly what speed they are doing, what course they are on and even the size of the ship, the length, weight, engine type etc.

"We try to meet the incoming ship around the North Bank Lighthouse, between the VTS and the Poolbeg Lighthouse," Paul explains. "The reason we don't meet them further out is because some ships like to keep their speed up coming in for steerage. If a ship was doing above 10 knots, that's not comfortable for us to make our line fast. We like to be a little slower than that, around seven or eight knots, when a ship throws down their heaving line, which we then use to make our line fast."

#### **Good Communication Channels**

It's then all about communication between the pilot and the tugs. "The pilot is the Port's representative, who has exceptional local knowledge of the Port," Paul explains. "Every pilot is a Master Mariner and they have great knowledge of ships and their manoeuvring capabilities, and they liaise very closely with the ship's master. We have a great relationship with the pilots. We know them all very well and all their individual traits and peculiarities," he laughs.

By this stage, it has been decided which tug will be fore of the ship and which will be aft, and all stakeholders know which berth the ship is going to, what other ships are in proximity to that berth, the state of the tide and the weather forecast (wind strength etc).

#### "We know exactly where the ship is because the tugs are fitted with a chart plotter with AIS (Automatic Identification System)."

"If you are swinging a ship into Alexandra Basin, for example, and there's a strong westerly wind blowing, between ourselves and the pilot, we would have to adjust certain parameters to ensure it gets safely to berth," Paul explains. "It might mean the tug which is aft 'putting a drag on' the ship by towing to the east to slow the ship down, in combination with the ship's engines. Some ships have to swing right around so their bow is facing east but all this is established well before it happens, so everyone from the pilot to the tugs are working to the same purpose."

The pilot and the tug master are in constant contact during this process, via their own dedicated radio channel, as clear and

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open communication is critical throughout the berthing process. When the vessel is almost in its berth, the tugs go into "push mode", nudging the ship into place, but Paul reveals that the tugs can also lift the ship off if it is moving too fast towards its berth. "When we get to within five metres, we ease up completely," he explains. "A ship could weigh 30,000 tonnes, which could do a lot of damage to a quay wall and to the ship itself. We hold the ship in position until the mooring lines are out and then the tugs are released."

The tugs are called into action approximately 700 times each year, with Paul estimating that in the region of 50% of this is weather-related work. While the number of vessels needing tugs has fallen from the highs of the Celtic Tiger years, it is creeping back up again as Ireland's economy improves and more large vessels (car carriers in particular) are entering the Port.

#### **Fire Fighting**

Dublin Port's two tugs, Beaufort and Shackleton, are operated by a two-man crew, one tug master and one tug mate, operating the engines, both of whom have strong seafaring experience. The two tugs in Dublin Port also double as fire-fighting boats. "We can push a hell of a lot of water through our fire monitor. We're not fire fighters, per se, but we have fire fighting capabilities and work hand in hand with the fire service," Paul explains.

#### "The current tugs are a lot more powerful than the old fashioned tugs."

If a ship is on its maiden voyage into Dublin Port, the tugs sometimes use the fire monitors to spray water in an arc to welcome it to the Port. Indeed, this use of the tugs will be familiar to most Irish people, who viewed last year's hugely popular TV and cinema ad for the National Lottery, which saw the tugs creating a rainbow across the Liffey.

The tugs are also used to provide visiting dignitaries and representatives from other ports with a tour of Dublin Port,

usually in the company of the Harbour Master, while they are also in operation when the tall ships come to town.

One interesting use of the tugs in recent years was when they were used to tow the Samuel Beckett Bridge through the East Link Bridge and into place. "There was a pilot on the bridge and there were only a couple of metres to spare each side, so that was an interesting job," Paul smiles. "The Dutch engineers had their figures worked out to perfection, though, so it fit perfectly."

#### **Strong Experience**

Paul himself came into Dublin Port in 1983 and has been working on the tugs for 20 years. It's something of a family tradition, as Paul's father was a tug master in Dublin Port, back when the tugs were traditional propeller tugs and not the latest Voith Schneider vessels.

"The current tugs are a lot more powerful than the old fashioned tugs. They're shorter, but they have capability of 55-tonne Bollard Pull, which is almost three times the power of the older tugs," the Tug Master explains. "Engine-wise they have around 5,500 horsepower, so they can pull a fair weight, and you need that, because ships are getting bigger all the time, especially modern cruise liners like the Dawn Princess, which are 294 metres long."

The liners don't use tugs as often as one might think, however, as they are fitted with stern thrusters and azipods, the latter being a very manoeuvrable propulsion system. However, 2014 saw more than 90 cruise liners berthing at Dublin Port, so it is a growing concern and the Dublin Port Masterplan includes plans for a dedicated liner terminal.

"You get a real feel for this job and that comes from experience," Paul concludes. "With different ships, weather conditions and even different pilots, no two jobs are the same, which makes it very interesting work. As jobs go, it's a perfect job for a seafarer. Even though people go away to sea, as family circumstances change, they tend to settle down and get a shore-side job but there aren't many jobs for seafarers shore-side. The Port is a great employer of ex-seafarers, and this is a great job."





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### Corporate Social Responsibility

# **Giving Back to the Community**

## Corporate Social Responsibility is at the heart of Dublin Port Company's strategy.

Corporate Social Responsibility (CSR) has a central and important place at the heart of Dublin Port Company's Strategic Plan, where they define CSR as "the commitment of the Port to contribute to sustainable economic development – working with employees, the local community and society at large to improve the quality of life, in ways that are both good for the business of the Port and good for Dublin City, its citizens and visitors".

In particular, Dublin Port Company recognise their role in the local communities with which they have had strong connections over past generations and their CSR programme comprises three elements of support for these local communities:

- Education as a means to improve the economic wellbeing of local people through to the generation of employment opportunities in the local economy;
- Community events;
- · Sports in local communities and in Dublin Bay.

The CSR policy approved by the Board sets a target for the company's cash contribution to CSR activities at 1% of Profit Before Tax.

Below is an illustrative range of some of Dublin Port's CSR activities during 2014, across the three strands of their support.

#### **NCI Early Learning Initiative**

Dublin Port commenced a multi-annual programme to support National College of Ireland's (NCI) activities including its Early Learning Initiative (ELI).

ELI is an educational support programme that operates in four parishes in the port area. It commenced programme implementation in 2006 after a period of research and development. The ELI supports schools, families and Early Childhood Care and Education Centres (ECCE) in the community to participate in a range of educational activities that are aimed at addressing educational disadvantage. It does this through the provision of a programme of activities, professional development training and resources for children, parents, families, schools and ECCE practitioners that span the early years through to third level.

#### Ringsend and District Response to Drugs (RDRD)

Dublin Port have supported Ringsend & District Response to Drugs (RDRD) for many years. RDRD works with young people and their families in their struggle to become free of drugs.

To date, RDRD has worked with 178 families in the local community. Many of the families are living in very tragic and traumatic circumstances. Some experience serious illnesses, suicide, poverty, loss and the dreadful feeling of hopelessness. In Dublin Port Company's experience, providing knowledge and support through rehabilitation and education



can make a very positive impact on the family lifestyle and their environment.

Each year, the Ringsend & District Response to Drugs, in partnership with Dublin Port Company, hosts a graduation



ceremony to celebrate a number of participants that achieve drug free status. This sends a strong message that there is hope and you can make a difference. To date, 78 people have successfully maintained their drug free status with the project.

In addition, RDRD runs an awareness festival each year, including a wide range of creative programmes through art, drama, workshops, information evenings and competitions in schools.

In 2014, over 500 families from areas such as Pearse St, Ringsend and East Wall participated in the festival.

#### **Scholarships Programme 2014**

Since the commencement of the DPC Scholarships
Programme in 2001, over 600 students have received
financial support for their third level educational choices. Last
year, 32 successful applicants were awarded scholarships,
ranging up to four years in duration. All applicants were
required to attend for interview and all applications were
objectively assessed by an independent interview panel.

In total, DPC currently supports over 100 local students in furthering their education at third level. From 2001 to 2014, 599 students received funding through the scholarships programme.

Applications will open again in August 2015.

#### **Sport**

Dublin Port and the River Liffey are vibrant areas for water sports activity and Dublin Port Company recognises the value of these activities to the local communities. They continued to provide support to the two local rowing clubs' (St. Patrick's and Stella Maris) annual regattas, the Dublin Currach race, which is held in the Tolka estuary, the Poolbeg Yacht and Boat Club's and Clontarf Yacht Club's sailing regattas and the annual Liffey Swim.

In addition, the company provided support to the Clan na Gael GAA club in Ringsend. The support goes beyond the realm of sport as the club is deeply rooted in local community activities. The club provides its facilities to various local community groups, including Special Olympics, local resident groups, local charities, Ringsend and Irishtown Response to Drugs and the Ringsend and Irishtown community centre.

The club also plays an active role in education and has set up a partnership programme with Trinity College whereby, in exchange for the use of club facilities, Trinity College students provide grinds to local Junior and Leaving Certificate students.





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## New Firefighting System Installed

## Dublin Port Company have invested in a state-of-the-art firefighting system, providing added reassurance to port clients and users.

Against a background of increasing requirements for firefighting capability in SEVESO sites, Dublin Port Company (DPC) joined together in recent years with operators of SEVESO facilities in Dublin Port, Dublin Fire Brigade and the Health and Safety Authority to review the adequacy of such systems in the Port. This review produced a definitive study which recommended the building of a new firefighting system capable of delivering 50,000 litres per minute at a minimum pressure of 10 bar to replace an older system with a capacity of 16,000 litres per minute.

DPC engaged engineering consultants to design the new system supplied with water directly from the river. This new

saltwater fire main would not only meet the new requirements but would replace the old salt water fire main, which was to be decommissioned once the new fire main was installed and commissioned.

#### **New Quay Structure**

The chosen location for the new system's pumps and water intake was a new quay structure located at the northern end of Berth 51. Two statutory consents were required, foreshore and planning. Foreshore was required as the design for the new pump station envisaged a 10m x 4m platform extending over the water and supported on piles. This structure was required to support the five main fire pumps and one smaller



"jockey" pump. Planning permission was required for the building needed to accommodate the electrical switchgear, back-up emergency generator and transformer.

The contractors selected to build the project were DM Mechanical (for the pipe work) and BAM Civil (for the pump house). The overall cost estimate for the project was €9.6m.

The project was approved in July 2012. Works on the fire main pipes started in September 2012 and the pump house works started in April 2013.

The pipe work consists of 3.5km of 600mm and 500mm diameter pipe, laid mostly overground with connections into each of the Port's SEVESO sites and additional connections









throughout the network to allow Dublin Fire Brigade to connect its fire tenders.

#### **Five Main Pumps**

The pump house has five main fire pumps (with one pump in standby) along with a system jockey pump.

The pumps (main and jockey) are controlled by a PLC system, located in the pump house. HMI interfaces are used to control and monitor the system. One HMI is located in the pump house and a second HMI is located in DPC's port operations control centre, which is manned 24 / 7.

The jockey pump's function is to maintain system pressure and, under normal operating conditions, it will keep pressure above 11 bar, with a stop pressure of 14 bar. This compensates for minor leaks. When the pressure in the line falls below 10 bar and the jockey pump cannot maintain system pressure, indicating fault conditions or high demand, the system goes into alarm.

The alarm monitoring station in the port operations control centre is now active, requesting interaction from the operator to acknowledge the alarm condition. The operator now starts the main fire pumps if required.



New Emergency 2.5 Mega Watt Back-up Generator.









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organisations and individuals outside of DFB personnel. All training instructors are qualified fire officers, providing the latest in safety training. The content and delivery of all courses are of the highest quality in excellence and best practice. **COURSES INCLUDE:** • Advanced Marine Firefighting 5-day – (STCW-95)

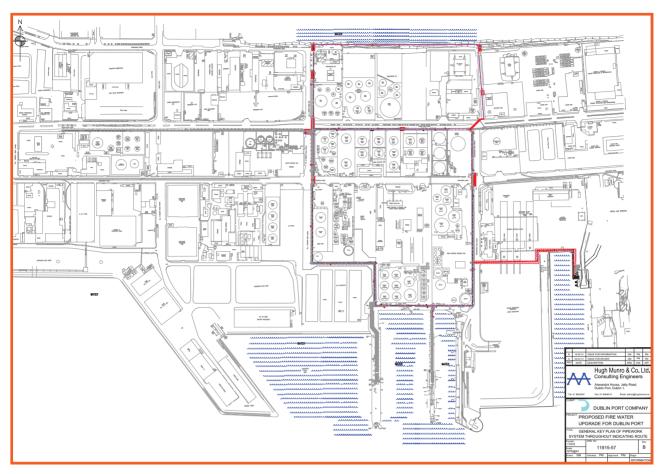
DFB External Training was established by Dublin Fire Brigade

(DFB) as an independent training entity. It provides essential fire, health and safety training to private and public sector

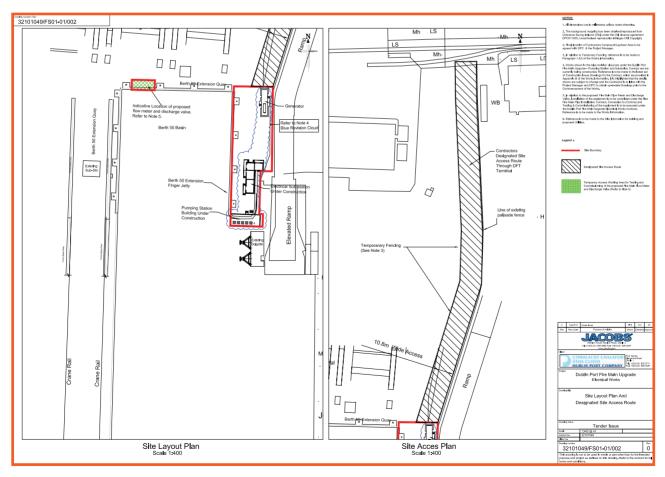
- Marine Firefighting 3-day (STCW-95)
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- · C.A.F.S. Operator
- · ROSPA Accredited Advanced Driving
- Compartment Fire Behaviour/Instructor
- · B.A. Wearer/Instructor
- Rope Rescue
- Fire Marshal/Fire Safety Awareness/Fire Manager
- Safe Use of Portable Fire Firefighting Equipment
- · Occupational First Aid
- · Emergency First Responder
- · A.E.D. Training
- · Emergency Medical Technician
- Confined Spaces
- Manual Handling
- · Water Awareness
- · Height Awareness
- Driver Awareness



Dublin Fire Brigade keeping you safe



11915-57 (B) General Keyplan of Pipework System Throughout Indicating Route.



Drg32101049-FS01-01-002-Site Layout Plan.



The new Fire Main Pump House.

Once the operator hits the start button, the first pump comes online and thereafter the system is fully automated.

It takes 20 seconds for the first pump to ramp up to full speed. From here on, the control of the pumps is determined by system pressure and, if the first pump cannot maintain the required pressure, the second pump will come online and so on. With the four pumps running simultaneously, the system can deliver 46,250 litres per minute at a pressure of 12.6 bar (at the furthest location from the pump house).

The stopping of the pumps is similarly determined by pressure in the system. As demand for firewater reduces, pressure in the system rises and pumps are automatically stopped one after the other.

#### **Surpassing Recommended Capability**

If there is a requirement for more than 46,250 litres per minute, the new firewater system is augmented by the port's separate oil jetty system. The two systems operating together can



The new 500mm diameter Fire Main Pump.

deliver 60,000 litres per minute at 12 bar, thereby surpassing the recommended capability of 50,000 litres per minute.

The new firefighting system is powered off mains electricity but has a backup 2.5 MVA diesel generator that starts automatically should mains power be lost. The system was fully commissioned in December 2014.



The pumps are controlled by a PLC system.

## Taking Sustainability Seriously

Dublin Port Company recently launched its first annual Sustainability Report, which showed the positive results active across energy, waste and water, as well as its impressive CSR development.



Dublin Port Company's first Sustainability Report was launched recently by Paschal Donohoe TD, Minister for Transport, Tourism and Sport. The new report, to be published annually, provides an account of Dublin Port Company's sustainable development responsibilities, challenges and achievements from the previous year with regard to economic, environmental and social considerations.

The report documents the integrated approach that Dublin Port Company takes to facilitating the movement of passengers and goods through Ireland's largest, busiest port – servicing an economic need – balanced with the needs of the port's natural and built environment, and the local communities it operates alongside.

In launching the report, Minister Donohoe highlighted Dublin Port's status "as a port of national significance and its contribution to the economic, environmental and social development of the country and our capital city". He went on to describe the publication of the report as "a milestone in assisting individuals and organisations to further understand

Dublin Port's significant role in this regard, and its future potential. It is important that ports take a holistic approach to their operations, including sustainable business practices, and I commend Dublin Port on its clear progress in this regard."

Eamonn O'Reilly, Chief Executive, Dublin Port Company, noted how the report "provides an accessible account of the economic, environmental and social considerations that drive our approach to doing business more sustainably today, while shaping Dublin Port's future. We are committed to measuring and reporting on our activities as Dublin Port strives to facilitate economic growth, protect our environment and enrich the lives of local communities. The publication of a new Sustainability Report is further testament to Dublin Port Company's commitment."

His views were echoed by Lucy McCaffrey, Chairperson, Dublin Port Company, who said: "Dublin Port Company is dedicated to operating a sustainable port that is good for business, the city of Dublin and its citizens. It is imperative that we give an account of our stewardship and Dublin Port's

journey to greater sustainability that will facilitate not only a thriving economy, but also a vibrant sea- and cityscape for this generation, and future generations to come."

#### **Joint Energy Efficiency Agreement**

The launch of the new report, which was attended by customers and staff, local community groups, individuals, and elected representatives, also saw Dublin Port Company and the Sustainable Energy Authority of Ireland (SEAI) signing a joint energy efficiency agreement. As a member of the Public Sector Energy Partnership Programme, the agreement means that Dublin Port Company and SEAI will work in partnership to achieve a target of 33% energy efficiency savings and improvements by 2020.

The Sustainability Report includes progress made on energy, waste and water up to 2013. These include:

- 200,000 kWh of energy saved using a building management system installed at Port Centre in 2012; enough energy to power approximately 40 Irish homes for a year;
- Almost 20,000 kWh generated from Dublin Port's first wind turbine installed in 2012, enough to power 6.2 houses per day;
- 96% of waste recycled in 2013, compared to 40% in 2009;
- 200,000m³ water consumed in 2013, compared to 400,000m³ in 2009;
- Metered water levels reduced to 26,553 m³ in 2013, compared to 260,000 m³ in 2009;
- 95% reduction in water consumption achieved over four years by 2013 through elimination of leakages on the port's 260 hectare estate.

#### **Energy Action Plan**

During 2014, Dublin Port Company prepared an Energy Action Plan to provide a framework for the continuation and expansion of their many energy reduction initiatives, including:

- The installation of a modern combined heat and power unit in Port Centre which during its first full year of operation in 2013 generated an energy saving of 200,000kWh;
- The installation of new lighting systems in Ro-Ro Terminal 2 which will save an additional 45,000kWh per annum;

- The planned installation of more efficient lighting systems in Port Centre (to achieve energy annual reduction of 35,000kWh);
- The commencement of a trial of new LED street lighting which, if successful, would lead to upgrading street lights throughout the Port estate over time;
- Trialling of gas fuelling of one of their pilot boats;
- The generation of 20,000kWh in 2013 by the 11kW wind turbine which was installed in 2012.

#### **Waste Management**

DPC has made significant improvements over the past years with regards to waste management. Through awareness programmes and improved management systems, they have increased their recycling rate from 40% in 2009 to 96% in 2013.

#### **Air Emmissions**

During an environmental audit completed in 2010 by DPC's environmental team on a customer site, it was identified that there was potential for emissions to air due to the nature of their operations. During 2011, DPC completed air monitoring to verify emission levels within the vicinity of its site.

Cargo particles were identified within the samples taken and DPC requested the customer to review their operations and ensure appropriate Standard Operating Procedures (SOPs) were in place to reduce the risk of emissions to air. Further to this, DPC also requested the customer to implement its own air monitoring programme. A positive relationship developed at the initial stage of the air monitoring programme to ensure it addressed all concerns of both parties. The monitoring took place over a one month period from September to October, 2013, with results confirming no exceedance of limits.





Ciaran Callan, Maintenance and Services Manager at Dublin Port Company (right) and Stephen Collier, Technical Craft Supervisor, pictured with Dublin Port's first wind turbine.

#### **Water Consumption & Sampling**

DPC's industry-leading water consumption reduction programme over recent years has enabled them to achieve a 95% reduction in water consumption by the systematic elimination of leakages across the port's 260 hectare estate.

Monthly samples of surface water effluent samples and potable water samples are taken by DPC Maintenance & Services (M&S) personnel and tested by an independent laboratory, with all results reviewed monthly.

#### **Community Highlights 2013**

DPC's commitment to its Corporate Social Responsibility (CSR) programme is underpinned by the policy set out in the Company's Strategic Plan 2012 to 2016.

2012 saw DPC establishing an Advisory Group, with membership from both the Board and the Executive, in this regard. The CSR policy approved by the Board sets a target for the Company's cash contribution to CSR activities at 1% of Profit Before Tax.

In keeping with this commitment, DPC is keenly aware of the strong connection with local communities which has been established over many years. DPC's CSR programme focuses on three areas: education; community and sport.

#### Education

Since the commencement of the DPC Scholarships
Programme in 2001, over 600 students have received
financial support for their third level educational choices. In
2013, 34 successful applicants were awarded scholarships,
ranging up to four years in duration. All applicants were
required to attend for interview and all applications were
objectively assessed by an interview panel.

In total, DPC currently supports over 100 local students in furthering their education at third level. From 2001 to 2013, 601 students received funding through the scholarship programme.

DPC is also proud to support The Early Learning Initiative (ELI) at the National College of Ireland (NCI). The programme engages with parents, educators and the community as a whole in encouraging children's learning journey at pre-school level and preparing them for later success in school.

The ELI mission is working in partnership with local communities to support educational journeys and achievements. The long-term vision is that ELI will lead the way in providing first class educational support programmes within local communities, thereby enabling children, young people and their families to develop the dispositions, skills and knowledge needed to achieve their educational, career and life goals.

During 2013, more than 3,400 children, parents and professionals in the Docklands took part in one of ELI's programmes, with satisfaction rates averaging 98% across all programmes. Assessments indicate that children's oral language, literacy and numeracy skills have improved and that young people have high aspirations for the future.

#### **Community Activities**

Dublin Port Company also continued its support for Ringsend & District Response to Drugs (RDRD). The project team work with families that are experiencing tragic and traumatic circumstances, including serious illnesses, suicide, poverty, drug addiction, alcoholism, domestic violence and homelessness. RDRD provides knowledge and support through the form of rehabilitation and education. One of the most important programmes the project continues to provide is the six week drug awareness programme. In 2013, the project provided support services to 228 families in the local



### **Driving Brighter Possibilities**

At ESB, we have always worked to bring light and energy to Ireland, creating brighter possibilities for people in whatever walk of life they are in. Through innovation and investment, we are pushing the boundaries of what's possible, creating a new energy landscape where electric cars, renewable and smart technologies are helping to drive a decarbonised Ireland. But it's not just through innovative technologies we're making a difference; each year, we contribute over €2bn to the Irish economy through investment, dividends, tax and jobs. Now that's bright; the possibilities are endless.







community, a 28% increase on the 178 families it supported the previous year.

A graduation ceremony is held every year to celebrate the participants who achieve drug free status. To date, 89 people have successfully maintained their drug free status with the project.

Dublin Port Company worked with Dublin City Council between June and August 2013 to remove extraneous waste from the River Liffey, including bicycles, traffic cones, shopping trolleys, trees and general waste from the river bed and banks.

During the 2013 clean-up, a total of 26 tipper loads were removed during four phases of work:

Phase 1 – Frank Sherwin Bridge to Rory O'Moore Bridge

Phase 2 – Rory O'Moore Bridge to Father Matthew Bridge

Phase 3 – Father Matthew Bridge to O'Donovan Rossa Bridge

Phase 4 – O'Donovan Rossa Bridge to Halfpenny Bridge

#### **Sport**

Dublin Port and the River Liffey are vibrant areas for water sports activity. Recognising the value of these activities to the local communities, DPC continued to provide support to the two local rowing clubs' (St. Patrick's and Stella Maris) annual regattas, the Dublin Currach race held in the Tolka estuary, the Poolbeg Yacht and Boat Club's sailing regatta and the annual Liffey Swim.

In addition, the Company provided support to the Clan na Gael GAA club in Ringsend. This support goes beyond the realm of sport as the club is deeply rooted in local community activities. The club provides its facilities to various local community groups, including Special Olympics, local resident groups, local charities, Ringsend and Irishtown Response to Drugs and the Ringsend and Irishtown community centre.

The club also plays an active role in education and has set up a partnership programme with Trinity College whereby, in exchange for the use of club facilities, Trinity College students provide grinds to local Junior and Leaving Certificate students.

Over the course of 2013, the CSR Advisory Group, established by the Company in 2012, began to assess the effectiveness of the Company's CSR spend through presentations and site visits.

The CSR Advisory Group continued this process in 2014 with a view to bringing forward recommendations to the Board as to the appropriate level of expenditure on CSR activities and, in particular, the split of expenditure across the main categories of spend.

#### **Dublin Bay Birds Project**

Dublin Bay is one of Ireland's most important wetlands for migratory wintering waterbirds and holds the fourth largest breeding tern colony in Ireland. In 2013, Dublin Port Company embarked on a three-year Dublin Bay Birds project with BirdWatch Ireland, a new programme of waterbird monitoring and research. The project examines in greater detail how birds use Dublin Bay for feeding and roosting, while investigating their movements between Dublin Bay and neighbouring wetlands. The 2013 highlights include the individual marking of 118 Oystercatchers with coded rings, bi-monthly waterbird counts and the construction of a new temporary nesting site in the Tolka Estuary, since colonised by the terns.

Additional surveys of the Port area (between the two sea walls) included all-day surveys, gull roost surveys, nocturnal observations, tern foraging movements and spring low tide observations.





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"Our commitment to achieving the highest feasible environmental standards requires us to better understand the environment within which we operate, particularly the natural habitats within and adjacent to the Port," noted a company spokesperson. "2013 was the first full year of our multi-annual cooperation with BirdWatch Ireland in the Dublin Bay Birds project and this project is beginning to increase greatly the understanding of the habitats within the Bay and the movements of birds throughout the year."

#### 2014 Initiatives

As mentioned, the Sustainability Report is to become an annual publication and DPC has put in place a number of initiatives during 2014, including the development of an internal magazine, The Mariner, to inform staff and the wider community on DPC news, as well as the development of an air monitoring programme to assist in pattern identification.

Other 2014 initiatives included updating DPC's existing Traffic Measurement System to increase accuracy on vehicle classification on primary access routes, as well as the development of a company intoxicant testing policy, with the provision for random testing in line with best practice.

#### **Wind Energy**

DPC has been very proactive in managing its energy use and reducing its carbon footprint in line with its environmental commitments through certification with both Ecoports and ISO 14001. In order to progress this on-going carbon reduction programme to a higher level, DPC purchased an 11kW wind turbine to provide electricity at a cost of €60,000. This project was defined as a pilot stage and subject to performance, the case would be explored as to the value of replacing the plant with a significant MW unit.

The 11kW wind turbine features active blade pitch control.
The blades are automatically controlled to optimise aerodynamic performance under different operating conditions. Bigger blades give more power but demand a more sophisticated control mechanism. This feature enables the turbine to pick up on low wind speeds and, above rated speed,

the turbine can safely draw rated power, which is not achievable with a stall controlled machine. In extreme winds, the blades can be feathered 90 degrees out of the wind, which greatly reduces the wind load. Finally, the blade pitching mechanism serves as a very effective emergency brake.

The turbine also features active yaw control. A wind vane and anemometer are monitored by the turbine microprocessor and used to direct the yaw motor so that the turbine is optimally aligned to the wind. Not only does this improve efficiency but it reduces fatigue loading on the turbine.

If the turbine were to experience some unforeseen set of events and went into an over speed, its failsafe hydraulic brake will bring the machine to a standstill. The brake is failsafe in that it must actively be kept open.

The structural design of the blades has been optimised for performance, strength and durability, while the turbine employees a monopole mast which can withstand hurricane force winds.

The turbine is GSM (Global System for Mobile Communications) linked, so it can be continually monitored and its data recorded. In the event of a fault, it will be immediately and automatically diagnosed. In the event of extreme weather, the turbine can be remotely shut down.

The wind turbine was installed on March 30, 2012. DPC are reviewing and recording the performance of the wind turbine on a weekly basis. Between January 1 and December 31, 2013, a total of almost 20,000kWh had been generated by the wind turbine, enough energy to power 6.2 houses per day.



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## IWT Rail Link a Spur to Success

IWT's rail freight service, connecting Ballina and Dublin Port, has proved a massive success for both exporters and importers since its launch in 2009.

The decision to run a rail freight service from Ballina to Dublin Port by International Warehousing & Transport (IWT) may have seemed like folly during the economic downturn, but it has proved a shrewd move for the Irish transport and logistics company, which now operates seven trains per week each way between the Mayo town and the port.

Before IWT began their service, rail freight in Ireland was controlled and operated by CIE/Irish Rail, whose services ran from Cork, Waterford, Limerick, Sligo and Ballina to Dublin's North Wall, along the north quays, close to Dublin Port.

"In 2005, however, Irish Rail made the decision to get out of unit load rail freight," recalls Derek D'Arcy, Director at IWT.

At that time, IWT were a freight customer of Irish Rail. "We could pay for one container on a train, if that was what we needed," Derek recalls. When they exited the rail freight business, Irish Rail informed IWT that they would put in place a facility for a company to lease a full train: it was up to the company to then sell the space on the entire train, consisting of 18 carriages. IWT then enquired about leasing a number of trains on a weekly basis to run right into the Port itself.

"We gathered a group of people in a room in the Department of Transport," recalls Derek, "including representatives from the Department themselves, the Irish Exporters Association, Dublin Port Company, shippers, stevedores etc, and put the proposal forward that we were interested in running a train from Dublin



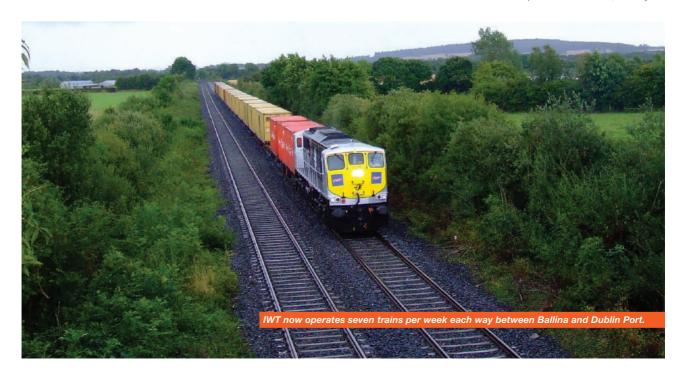
Port to Ballina and vice versa. We needed the cooperation of a number of stakeholders. Dublin Port Company came on board straight away, as did Burke Shipping Group and Irish Rail, so we knew immediately that this could work."

At that time, bulk goods trains ran down to the Tara Mines site at Dublin Port, and all it took was a little maintenance and track repair to the east of that line, so the train could run further into the Port area.

#### **Hugely Successful**

August 2009 saw the first train running from Ballina to Dublin Port, stopping on Alexandra Road. "At the time, Dublin Port cordoned off the road and we lifted our containers from the train to the quay wall," noted Derek.

Initial take-up was good and IWT soon began running two trains per week in each direction. "We began with our own business and then sold container space on the train, mainly to





The IWT rail link brings materials to the west of Ireland mainly from across Europe, while it also exports goods from Sligo, Mayo and Galway right across the world, as far away as South America and New Zealand.

European shipping and transport companies or manufacturers who were supplying ingredients to companies in the west of Ireland," explains Colin Dunne, Joint Managing Director, IWT.

Colin believes that the operation proved successful because previously, rail freight in Ireland was "only ever seen as a domestic proposition and we saw it as being much bigger than that. We already had an operation in Holland so we used our contacts there to tap into that market, the Benelux region and Germany."

Admitting that loading and unloading on Alexandra Road wasn't "an ideal situation", particularly when the service increased within six months to five trains per week in each direction, IWT approached Dublin Port Company with a proposal to consider extending the railway track onto the quay wall.

"We put a business plan to them and they agreed that it was a good idea, so much so that DPC invested €1.5m in building 1.4 kilometres of rail spur which runs along Alexandra Road and veers off to Ocean Pier," Derek explains.

"It wasn't just because of our growing volumes," Colin adds. "I think Dublin Port Company recognised that this is the model that is applied throughout Europe. If you're not ship-side, you're not a player in an international freight context, plus, you're adding an extra element in terms of cost and time."

#### **Significant Investment**

So successful has the rail proved that IWT are now running seven trains per week in each direction. Equipment is utilised on a 'roundtrip' basis, thereby removing both the laden and empty freight mileage from the Irish road network, reducing our carbon footprint and providing a statistically safer mode of transport. It has proved a significant investment for IWT.

"We have bought a haulage company, purchased a depot and invested over €1m in equipment, so this is a big operation," Colin notes. "Since we started this operation in 2009, the spend on rail freight in Ireland is probably in the region of €12-15m. Rail freight can be as competitive in the overall transport picture and it is proven in terms of integrity of service. During the really bad snow, we operated as normal, which might not have happened if our clients were dependant on road transport."

Previously, all the containers in Ireland were stored in port in Dublin, Cork, Waterford and Belfast, Derek explains. Now, however, IWT's Ballina depot means that their clients in the west of Ireland can have containers delivered within maybe half an hour, compared to the five hours it might take to get it from Dublin, so "it has effectively brought shippers and their global suppliers closer to Dublin Port".

"It enhances the attractiveness of Dublin as the port of choice to clients delivering to or from the west of Ireland," sums up Colin.

The IWT rail link brings materials to the west of Ireland mainly from across Europe, while it also exports goods from Sligo, Mayo and Galway right across the world, as far away as South America and New Zealand.

#### **Environmental Advantages**

It is also extremely good news for the environment. It is estimated that the IWT train takes approximately 250 trucks per week off Irish roads, which is a massive 13,000 less container trucks on our roads every year, which equates to 1,200 tonnes of CO<sup>2</sup> emissions saved. Perhaps even better news is that there is huge potential for even more savings.

"Rail freight represents less than 1% of every piece of freight that moves on this island," Colin explains, "so there is huge untapped potential there."

So could a similar rail freight line work for other parts of the country?

"Yes, it could, and we are constantly looking at other routes," Colin reveals. "What is required is stakeholders and commitment. There is a very substantial risk to something like this. But as an international company, we have significant worldwide shipping so we can effectively be our own biggest customer when it comes to rail freight. It wasn't without risk but we had enough belief in the product, in ourselves and in where we saw it going: that is why we established the only containerised rail transport in and out of Dublin Port."

#### **Multiple Benefits**

The benefits for a potential client are manifold. Flexibility is a major advantage, Derek stresses, while Colin points out other potential gains.

"Multinational companies are interested in quality, price and innovation," he says. "They also want to deliver on sustainability and to decrease their carbon footprint, especially when it doesn't cost them anything. Rail freight can do all of that. It also leads to a more fluid supply chain. The fact that companies in the west of Ireland can now have a container on site within perhaps half an hour cannot be underestimated. That's not just about cost of shipping but the cost of the entire factory. It requires a mature buyer to look at rail and to incorporate it into their supply chain."

Colin also feels that there is scope for success in terms of moving domestic freight around Ireland. "If you are at a concept stage at looking at locating a distribution centre in the west of Ireland, it should be rail-side," he advises. He cites the example of the hotel sector as a perfect formula, where, for example, clean linen goes in one direction and dirty



Colin Dunne, Joint Managing Director, IWT.

linen comes back, so there are no empty containers. "If that industry, and many others, were structured in a way that was complementary to rail, there are endless opportunities," he says.

IWT turns over in the region of €40-45m per year, a substantial amount of which goes through Dublin Port and the company is keen to highlight its superb working relationship with Dublin Port Company.

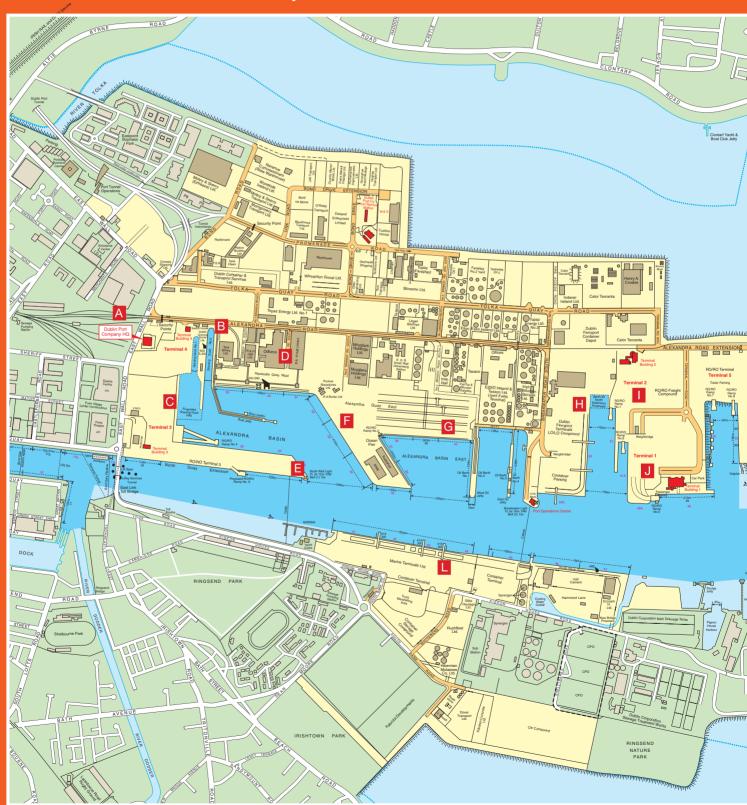
"IWT see ourselves as one of the stakeholders in the port, "Colin concludes. "We see Dublin Port Company as progressive, with a can-do attitude, and they are quick to change and to embrace new ideas and proposals."

#### **About IWT**

International Warehousing & Transport (IWT), a wholly owned Irish company with offices in Dublin, Ballina and Rotterdam, is a leading provider of European and global logistics services. Founded in 1981, the company is run by the current Directors, following a management buyout in 2003. For more information, see www.iwt-irl.com.

## Map of Dublin Port

Dublin Port is a 260 hectare area spanning both North and South banks of the River Liffey.



- A Dublin Port Company HQ
- B Graving Dock
- C Terminal 3: RoRo P&O
- D Dry Bulk Area
- E North Wall Lighthouse
- F Ocean Pier West: Cruise Ships
- G Alexandra Quay West: LoLo

- H DFT
- I Terminal 2: RoRo Stena Line
- J Terminal 1: RoRo Irish Ferries
- K Terminal 5: RoRo Seatruck
- L LoLo Marine Terminals
- M ESB Chimneys
- N North Bank Lighthouse

- O Great South Wall
- P Poolbeg Lighthouse
- Q North Bull Lighthouse
- R North Bull Wall
- S Bull Island



## Port Facilities & Services

### Dublin Port Company (under the Harbours Act, 1996) vested on the 3rd March 1997.

#### **Limits of Dublin Port**

Under the 1996 Harbours Act the limits of Dublin Port consist of the waters of the River Liffey commencing from and including Rory O'Moore Bridge and extending to an imaginary straight line drawn from the Baily Lighthouse on the north in the County of Dublin and extending through the North Burford Buoy and thence through the South Burford Buoy and thence to Sorrento Point on the south including all bays, creeks, harbours and all tidal docks within such area.

#### **Anchorage**

For information on anchoring positions please refer to the admiralty chart No. 1415.

Anchorage is position 53°n 21, 6°w 12, sand over stiff marl. This anchorage is very exposed and a vessel should be prepared to leave at the first sign of a shift of Wind E.

#### Approach and berthage

The approach to the harbour of Dublin is well lighted and of easy access. There is a channel across the Bar which is 7.8m below LAT. Vessels drawing up to 10.2m can enter the port at high water of normal tides. Vessels drawing up to 7m can enter at any state of tide.

Vessels proceeding to the Dublin Bay Buoy, which is a Roundabout Buoy to be passed on the vessel's port side, should proceed through the Traffic Separation Scheme which was introduced during 1997. The scheme comprises of two elements, an inward lane and outward lane at North Burford and South Burford. For larger craft this is the only access to Dublin Port.

#### **Tides**

Mean H.W. Springs Dublin Bar 4.1m. Mean H.W. Neaps, 3.4m. Prevailing winds are S.W.

All depths refer to chart datum. This datum is referred to as C.D. and is 2.51m below Ordnance Datum Malin Head.

#### **Verification of depths**

Verification of depths in the port should be obtained from Port Operations, Eastern Breakwater Road, Dublin 1. Tel: (01) 887 6028/887 6033.

#### **Pilotage**

Dublin Port Company is the pilotage authority for the Dublin Pilotage District. The limits of the compulsory Pilotage District are the waters of the River Liffey below Butt Bridge and so much of the sea westward of the sixth meridian West longitude as lies between the parallels of latitude passing through the Baily Lighthouse on the North and through Sorrento Point on the South, including all bays, creeks and harbours and all tidal and enclosed docks within such area. The pilotage service is based in the Port Operations building situated on the Eastern Breakwater Road and is operated by direct boarding fast cutters each capable of speeds up to 20 knots. Dublin Port V.T.S. operates VHF channel 12.

To request a Pilot contact Dublin Port Company shipping desk at Tel: (01) 887 6028/887 6033.

#### Towage

Dublin Port Company operates two tugs with twin Voith propellers and are 50 tonne bollard pull. The tugs also have a fire fighting capacity.

To request towage contact Dublin Port Company shipping desk at Tel: (01) 887 6028/887 6033 or VHF channel 12.

#### **Graving dock**

Dublin Port has one operational graving dock situated to the west of Alexandra Quay. The dock is 202 metres long and can be divided to accommodate small or medium sized vessels.

For graving dock services contact Dublin Graving Docks Ltd. Alexandra Road
Tel: (01) 887 9506.

#### Stevedoring

Eight private companies are licensed by Dublin Port Company to provide stevedoring services in the port.

Dublin Ferryport Terminals	Dublin Stevedores
Irish Ferries	Marine Terminals Ltd.
P&O Ferries	Portroe Stevedores
Stena Line	Seatruck Ferries



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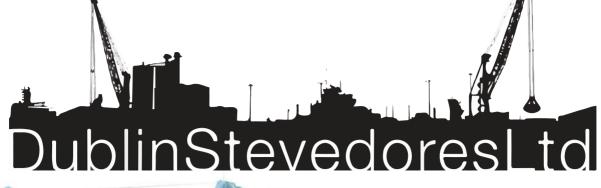


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### Trade Statistics

## Record Year for Dublin Port

## Dublin Port Company is facilitating Ireland's economic recovery as cargo volumes grew by 7% in 2014.

2014 was a record year for trade at Dublin Port, with year-on-year growth of 7%. Total throughput for 2014 was 31m gross tonnes, with 7,108 ship arrivals in the year, bringing the port's activity back to the record levels of 2007.

Imports in 2014 were over 18m gross tonnes, while exports exceeded 12m gross tonnes, representing increases of 6.3% and 8% respectively on 2013 trade levels.

#### **Summary of 2014 Trade Statistics**

	2014	2013	% change
Throughput ('000 gross tonnes)	30,849	28,840	7.0%
Imports ('000 gross tonnes)	18,358	17,271	6.3%
Exports ('000 gross tonnes)	12,491	11,569	8.0%
Ro-Ro (freight units)	821,876	761,958	7.9%
Lo-Lo (TEUs)	565,698	516,872	9.4%
Ferry Passengers	1,710,275	1,607,987	6.4%
Tourist Vehicles	462,215	428,468	7.9%
Trade Vehicles	81,169	60,905	33.3%

#### **An Exceptional Year**

"2014 was an exceptional year for Dublin Port with a 7% increase in cargo volumes on top of the 3% we saw in 2013," noted Eamonn O'Reilly, Chief Executive, Dublin Port Company. "The port is now back to the record levels of trade recorded in 2007, with every prospect of

continued strong growth in the years ahead."

The recovery in the Port's trade has been export-led, with volumes of exports 1.6m gross tonnes greater than in 2007. On the import side, there has been continuing recent growth (driven by improving domestic consumption) and this has pushed Dublin Port's overall volumes ahead to equal previous record levels of 31m gross tonnes.

High levels of growth were recorded for trade vehicles, mostly new cars destined for dealerships around the country. The port received 81,169 trade vehicles in 2014, up 33.3% on the previous year. To accommodate the growing number of trade vehicles entering the port, Dublin Port opened a new €3.4m 4.2 hectare trade car terminal at East Wall Road in October 2014. This new terminal can cater for 2,500 vehicles at a time.

#### Port of Choice for Ro-Ro and Lo-Lo Services

There was particularly strong growth in the unitised modes, with Ro-Ro trailers ahead by 7.9% and Dublin Port's Lo-Lo container business ahead by 9.4%. In 2014, the Ro-Ro sector achieved strong results with 821,876 units while Lo-Lo containers finished the year at 565,698 twenty foot equivalent units (TEU). The strong performance of the unitised business highlights Dublin Port as the island's port of choice for both Ro-Ro and Lo-Lo services.

On the tourism side, 1.7m ferry passengers travelled through the port in 2014, representing a 6.4% increase on last year and placing Dublin Port on a par with major airports, including Cork and Shannon. In addition, 2014 was a strong year for the port's cruise business, with 140,000 visitors on 86 cruise ships.

#### Trade Statistics - continued

#### **Direct Access to Market**

"During 2014, we saw strong increases right across our main business areas, from imports and exports to trade vehicle and ferry passenger numbers," Eamonn O'Reilly explained. "We expect growth to continue into 2015, with importers and exporters choosing to do business through Dublin Port, where they benefit from direct access and frequent services to their main markets.

Table 1: Gross Tonnage by Cargo Mode '000

<b>Gross Tonnes</b>	2014 YTD	2013 YTD	% VAR
Ro-Ro	19,796	18,133	9.2%
Lo-Lo	5,507	5,172	6.5%
Bulk Liquid	3,624	3,498	3.6%
Bulk Solid	1,885	1,998	-5.7%
Break Bulk	37	39	-5.1%
Total	30,849	28,840	7.0%
Unitised	25,303	23,305	8.6%
Non-Unitised	5,546	5,535	0.2%
Total	30,849	28,840	7.0%

Table 2: Unitised Freight

Units	2014 YTD	2013 YTD	% VAR
Ro-Ro Freight Units	821,876	761,958	7.9%
Lo-Lo TEUs	565,698	516,872	9.4%

Table 3: Tourism & Trade Vehicles

Units	2014 YTD	2013 YTD	% VAR
Trade Vehicles	81,169	60,905	33.3%
Passengers	1,710,275	1,607,987	6.4%
Vehicles	462,215	428,468	7.9%

"Dublin Port Company is committed to sustainable investment in port infrastructure and services including the longer, deeper berths envisaged in our Alexandra Basin Redevelopment Project. These will accommodate the larger ships of the future, carrying increased cargo volumes and greater numbers of passengers. This type of investment will allow Dublin and the wider economy to prosper by ensuring that Dublin Port is ready to facilitate the future trading needs of its customers and the country as a whole."



## Ro Ro Terminals

Terminal	Operator	Berth Details	Facility Details	Contact Details
T1	Irish Ferries	Berth No.49 Length 213m Depth at L.A.T. 11m standard	No. 5 ramp Two Tier Ramp Upper Deck Length of Shore Ramp 43m Width of Shore Ramp 10.8m Maximum Vehicle Load 40 tonnes Lower Deck Length of Shore Ramp 40m Width of Shore Ramp 20m Maximum Vehicle Load 180 tonnes	+353 1 607 5700 www.irishferries.com
T1	Irish Ferries	Berth No. 51A Length 190m Depth at L.A.T. 8m standard	No. 9 ramp Single Tier Ramp Length of Shore Ramp 45m Width of Ramp 20m Maximum Vehicle Load 180 tonnes	+353 1 607 5700 www.irishferries.com
T1	Isle of Man Steampacket Co.	Details as above	Details as above	1800 805 055 www.steam-packet.com
T2	Stena Line	Berth No. 51 Length 205m Depth at L.A.T. 8m standard	Ramp No. 1 Two Tier Ramp  Upper Deck Length of Shore Ramp 49m Width of Shore Ramp 12m Maximum Vehicle Load 40 tonnes Lower Deck Length of Shore Ramp 46m Width of Shore Ramp 20m Maximum Vehicle Load 180 tonnes	+353 1 204 7777 www.stenaline.com
ТЗ	P&O Ferries	Berth No. 21 Length 238m Depth at L.A.T. 7m standard	Ramp No. 6 Single Tier Ramp Length of Shore Ramp 41m Width of Shore Ramp 20m at ship end Maximum Vehicle Load 180 tonnes	+353 1 876 2345 www.poferries.com



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## Ro Ro Terminals

Terminal	Operator	Berth Details	Facility Details	Contact Details
T4		Berth No. 25 Length 290m Depth at L.A.T. 7m standard	Ramp No. 4 Double Tier Ramp  Upper Deck Length of Shore Ramp 41.5m Width of Shore Ramp 10.5m Maximum Vehicle Load 40 tonnes Lower Deck Length of Shore Ramp 46m Width of Shore Ramp 20m Maximum Vehicle Load 180 tonnes	+353 1 887 6000 www.dublinport.ie
Т5	Seatruck Ferries	Berth No. 52 Length 200m Depth at L.A.T. 7m standard	Ramp No. 7 Single Tier Ramp Length of Shore Ramp 35m Width of Shore Ramp 20m at ship end Maximum Vehicle Load 180 tonnes	+353 1 823 0492 www.seatruckferries.com
T5	Seatruck Ferries	Berth No. 53 Length 156m Depth at L.A.T. 7m standard	Ramp No. 8 Single Tier Ramp Length of Shore Ramp 48m Width of Shore Ramp 20m at ship end Maximum Vehicle Load 100 tonnes	+353 1 823 0492 www.seatruckferries.com
Ocean Pier	CLdN (Cobelfret)	Berth No. 36/37 Length 200m Depth at L.A.T. 7m standard	Ramp No. 2 Single Tier Ramp Length of Shore Ramp 60m floating Linkspan Width of Shore Ramp 31m Maximum Vehicle Load 200 tonnes	+353 1 856 1608 www.cobelfret.com

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Berth 50A







Berth 51

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1998 – Merchants Ferries Extension

2003 – Berth 51 A&B

2004 – Berth 50A Development

2010 – Berth 50 Extension

2010 – Graving Docks

2012 - Berth 53 Bankseat

2012 - Dublin Port Rail Track

2013 - Dublin Port Firemain Upgrade - Pumping Station

2014 – Alexandra Quay East - Phase 3

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## Lo Lo Terminals

Terminal	Operator	Berth Details	Facility Details	Contact Details
Dublin Ferryport Terminals	DFT	Berth No's 50 & 50A Total Berth Lengths 580m Depth at L.A.T. 9.00-11.00m standard	Cranes 3 x 40 tonnes gantry 1x 45 tonnes gantry Reachstacker 1 x 45 tonnes Second-handling equipment 8 x 40 RTG cranes 1 x 12 FLT 4 x 18 tonne empty handlers Reefer Points 250 Area 15.2 hectares	+353 1 607 5700 info@dft.ie
Marine Terminals Ltd	MTL	Berth No's 41,42,43,44,45 Total Berth Lengths 700m Depth at L.A.T. 8.50-11.00m standard	Cranes 3 x 45 tonne Ship to Shore Gantry Second-handling equipment 4 x 40 tonne RMG Reefer Points 300	+353 1 667 7765 www.peelports.co.uk
Ocean Pier	Burke Shipping	Berth No.'s 32,33,38,39,40 Total Berth Length 900m Depth at L.A.T. 10m	Cranes 2 x 400 mobile (104 tonnes SWL) 3 x 250 mobile (65 tonnes SWL) 6 x 250 tonnes RTG's Second-handling equipment 3 Kalmar reachstackers 20 tugmasters 11 Novatech Flexmasters Reefer points 300 Warehousing 300,000sq feet	+353 1 836 5736 www.burkeshipping.com

## **Bulk**

Terminal	Operator	Berth Details	Facility Details	<b>Contact Details</b>
Ocean Pier Dry Bulk/ Break Bulk	Common User	Berth No's 29,30,31,32,33,34	Cranes 2 x 400 mobile (104 tonnes SWL) 3 x 250 mobile (65 tonnes SWL) 1 x 20 tonnes electric portal grabbing crane	+353 1 887 6000 www.dublinport.ie
South Bank Quay	Common User	Berth 46 & 47	Cranes 2 x 250 mobile	+353 1 887 6000 www.dublinport.ie
Liquid Bulk	Common User	Berths 4 oil jetties	41 Hectare oil zone storage capacity 330,000 tonnes facilities for handling oil products, bitumen, chemicals and liquid petroleum gases linked to a common user pipe line system.	+353 1 887 6000 www.dublinport.ie
Alexandra Basin East	Common User	Berths 29,30 & 31		+353 1 887 6000 www.dublinport.ie

## **Cruise**

Terminal	Operator	Berth Details	Facility Details	<b>Contact Details</b>
Cruise	Various	Berths 18,33,36/37,		+353 1 887 6000
Tourism		35,38,39,40		www.dublinport.ie
		Smaller vessels can		
		berth up river close to		
		the city		



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# Ro Ro Schedule

#### **Irish Ferries**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Passengers & Freight) Tel: +353 1 607 5700	Holyhead	2	05.55 17.25	08.05 20.55	Terminal 1
Fast Ferry (Passengers) Tel: +353 818 300 400	Holyhead	2	13.40 19.15	14.30 08.45*	Terminal 1

#### **Stena Line**

Ferry		Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
	<b>Ferry</b> (Passengers & Freight) 53 1 204 7777	Holyhead	4	23.45 05.45 12.10	02.15 08.20 15.10	Terminal 2
	• ( )	Tiolyfieau	4	05.45	08.20	Terrima 2

### **P&O Ferries**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Freight)	Liverpool	3	05.15	09.15	Terminal 3
<b>Tel:</b> + 353 1 876 2345			10.30	15.00	
(Passengers)			17.30	21.30	
<b>Tel:</b> +353 1 407 3434					

#### \* Next Day Sailing

Terminals 1 & 2 Ferryport, Alexandra Road, Dublin 1

Terminal 3 North Wall Extension, East Wall Road, Dublin 1

Terminal 4 Alexandra Road, Dublin 1

Terminal 5 Alexandra Road Extension, Dublin 1

Ocean Pier Branch Road North, Alexandra Road, Dublin 1

The above schedules are subject to change and should be checked with the ferry company at the time of booking.

## Ro Ro Schedule

### **Isle Of Man Steam Packet Company**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Fast Ferry	Douglas		Seasonal	Seasonal	Terminal 1
<b>Tel:</b> 1800 805 055					

#### **Seatruck Ferries**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Freight)	Liverpool	2	05.00	09.00	Terminal 5
<b>Tel:</b> +353 1 823 0492			17.00	21.00	
	Heysham	1	11.20	14:30	Terminal 5

### **CLDN** (Compagnie Luxembourgeoise De Navigation)

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
ConRo Ferry	Zeebrugge	1 Thursday	11.00	17.30	Ocean Pier
	Zeebrugge	1 Sunday	11.00	17.30	Ocean Pier
	Rotterdam	1 Thursday	18.30	17.30	Ocean Pier
	Rotterdam	1 Sunday	18.30	01.00*	Ocean Pier

#### \* Next Day Sailing

Terminals 1 & 2 Ferryport, Alexandra Road, Dublin 1

Terminal 3 North Wall Extension, East Wall Road, Dublin 1

Terminal 4 Alexandra Road, Dublin 1

Terminal 5 Alexandra Road Extension, Dublin 1

Ocean Pier Branch Road North, Alexandra Road, Dublin 1

The above schedules are subject to change and should be checked with the ferry company at the time of booking.





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# Lo Lo Schedule

### **European**

Country	Port	Frequency	Agent	Line	Contact Details
Belgium	Antwerp	2 sailings weekly 2 sailings weekly		BG Freight Line Eucon	+353 1 803 8700 +353 1 607 5700
Cyprus	Limassol	1 sailing weekly	Jenkinson Agencies	Borchard Lines	+353 1 816 3500
France	Le Havre  Marseilles (Exports Only)  Radicatel	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	CMA-CGM (Ireland) Ltd  Jenkinson Agencies	CMA-CGM MSC Borchard Lines Eucon	+353 1 887 7423 +353 1 294 8704 +353 1 816 3500 +353 1 607 5700
Greece	Piraeus	1 sailing weekly	Jenkinson Agencies	Borchard Lines	+353 1 816 3500
Italy	Genoa (Exports Only) Salerno	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	Jenkinson Agencies Jenkinson Agencies	Borchard Lines Borchard Lines	+353 1 816 3500 +353 1 816 3500
Netherlands	Rotterdam	2 sailings weekly 2 sailings weekly 2 sailings weekly 4 sailings weekly 1 sailing weekly	Burke Shipping Group  Burke Shipping Group	Eucon X-Press CL Samskip/DFDS BG Freight Line Evergreen	+353 1 607 5700 +353 1 819 2600 +353 1 631 0900 +353 1 803 8700 +353 1 819 2600
Portugal	Leixoes Setubal	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	MacAndrews (Ireland) Ltd Jenkinson Agencies MacAndrews (Ireland) Ltd	MacAndrews & Co. Ltd Borchard Lines MacAndrews & Co. Ltd	+353 1 855 2644 +353 1 816 3500 +353 1 855 2644
Spain	Barcelona (Exports Only) Bilbao Castellon	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	Jenkinson Agencies MacAndrews (Ireland) Ltd Jenkinson Agencies	Borchard Lines MacAndrews & Co. Ltd Borchard Lines	+353 1 816 3500 +353 1 855 2644 +353 1 816 3500
Turkey	Mersin Izmir Istanbul	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	Jenkinson Agencies Jenkinson Agencies Jenkinson Agencies	Borchard Lines Borchard Lines Borchard Lines	+353 1 816 3500 +353 1 816 3500 +353 1 816 3500

### Irish Sea

Country	Port	Frequency	Agent	Line	<b>Contact Details</b>
UK	Cardiff	1 sailing monthly	Connect Logistics	Cardiff Container Lines	+353 1 895 1015
UK	Liverpool	2 sailings weekly 2 sailings weekly	MacAndrews (Ireland) Ltd	BG Freight Line Mac Andrews & Co. Ltd	+353 1 803 8700 +353 1 855 2644
UK	Southampton Greenock	<ul><li>1 sailing weekly</li><li>1 sailing weekly</li></ul>	Burke Shipping Group Burke Shipping Group	X-Press CL X-Press CL	+353 1 819 2600 +353 1 819 2600
UK	Felixstowe	1 sailing weekly		BG Freight Line	+353 1 803 8700

### Non-European

Country	Port	Frequency	Agent	Line	Contact Details
Egypt	Alexandria	1 sailing weekly	Jenkinson Agencies	Borchard Lines	+353 1 816 3500
Israel	Haifa	1 sailing weekly	Jenkinson Agencies	Borchard Lines	+353 1 816 3500
	Ashdod	1 sailing weekly	Jenkinson Agencies	Borchard Lines	+353 1 816 3500



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# Passenger Schedule

#### **Irish Ferries**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Passengers & Freight)	Holyhead	2	05.55	08.05	Terminal 1
<b>Tel:</b> +353 1 607 5700			17.25	20.55	
Fast Ferry (Passengers)	Holyhead	2	13.40	14.30	Terminal 1
<b>Tel:</b> +353 818 300 400			19.15	08.45*	
The Epsilon (Passengers)	Holyhead	2 (Monday	11.20	14.15	Terminal 1
<b>Tel:</b> +353 818 300 400		to Friday)	23.15	01.55*	
The Epsilon (Passengers) Tel: +353 818 300 400	Cherbourg	1 (Saturday to Monday)	11.00	15.30	Terminal 1

#### **Stena Line**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Passengers & Freight)	Holyhead	4	23.45	02.15	Terminal 2
<b>Tel:</b> +353 1 204 7777			05.45	08.20	
			12.10	15.10	
			17.05	20.40	

#### **P&O Ferries**

Ferry	Port	Sailings Per Day	Arrival Times Dublin	Departure Times Dublin	Terminal
Cruise Ferry (Passengers & Freight)	Liverpool	3	05.15	09.15	Terminal 3
<b>Tel:</b> +353 1 407 3434			10.30	15.00	
			17.30	21.30	

### **Isle Of Man Steam Packet Company**

Ferry	Port	Sailings Per Day		Departure Times Dublin	Terminal
Fast Ferry	Douglas		Seasonal	Seasonal	Terminal 1
<b>Tel:</b> 1800 805 055					

#### \* Next Day Sailing

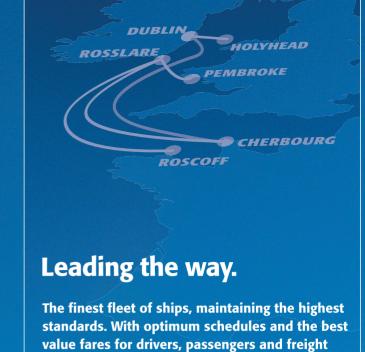
Terminals 1 & 2 Ferryport, Alexandra Road, Dublin 1

Terminal 3 North Wall Extension, East Wall Road, Dublin 1

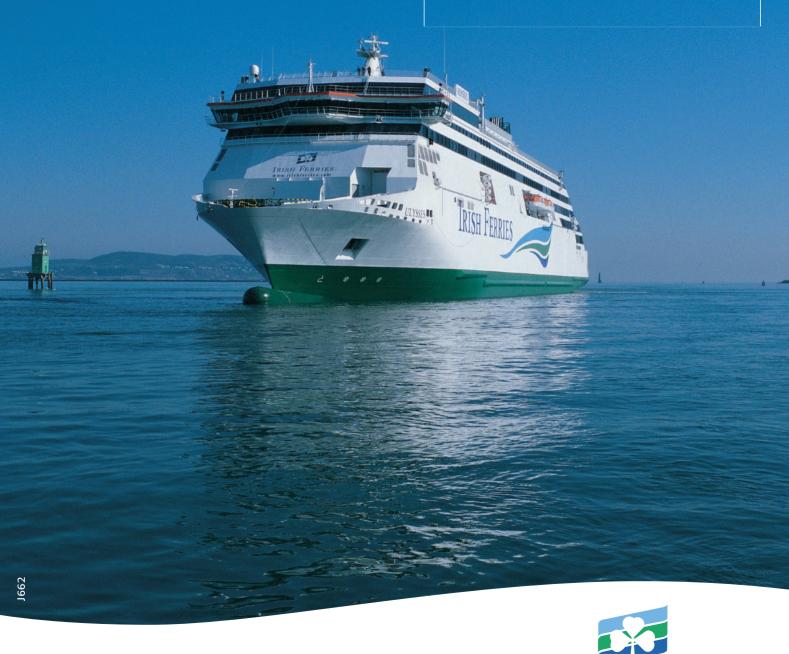
Terminal 4 Alexandra Road, Dublin 1

Terminal 5 Alexandra Road Extension, Dublin 1

Ocean Pier Branch Road North, Alexandra Road, Dublin 1



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IRISH FERRIES

### **Dublin (North Wall)**

#### **JANUARY 2015**

		Ti	de at North	Wall, Dub	lin	Sı	un				Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	ite	High	Water	Low '	Water	AM	PM	Moon's Phases	Da	te	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
Thur	1	08:38 20:57	3.79 3.79	01:48 14:16	1.15 1.26	08:40	16:16		Fri	16	07:55 20:20	3.45 3.46	01:06 13:36	1.40 1.49	08:31	16:37	
Fri	2	09:36 21:57	3.90 3.82	02:51 15:16	1.11 1.13	08:39	16:17		Sat	17	08:50 21:16	3.63 3.63	02:05 14:32	1.27 1.27	08:30	16:39	
Sat	3	10:28 22:48	3.99 3.85	03:43 16:06	1.04 0.99	08:39	16:18		Sun	18	09:38 22:06	3.85 3.82	02:57 15:21	1.07 0.98	08:29	16:41	
Sun	4	11:12 23:29	4.06 3.85	04:27 16:51	0.97 0.87	08:39	16:19		Mon	19	10:22 22:51 11:05	4.07 3.99 4.26	03:43 16:07 04:26	0.84 0.69 0.64	08:28 08:27	16:42	New Moon
Mon	5	11:48	4.08	05:06 17:30	0.93 0.79	08:39	16:21	Full Moon 04:53	Tues	20	23:34 11:48	4.12 4.39	16:51 05:09	0.44 0.49	08:27	16:44	13:14
Tues	6	00:03 12:18	3.83 4.09	05:41 18:08	0.91 0.75	08:38	16:22		Wed	21	00:18	4.18	17:35 05:51	0.27	08:25	16:46	
Wed	7	00:33 12:50	3.81 4.07	06:15 18:44	0.91 0.76	08:38	16:23		Thur	22	12:32 01:04	4.45 4.18	18:21 06:36	0.21 0.44	08:23	16:48	
Thur	8	01:06 13:24	3.78 4.03	06:48 19:20	0.95 0.79	08:37	16:25		Sat	24	13:18 01:52	4.45 4.12	19:09 07:25	0.25 0.54	08:22	16:49	
Fri	9	01:43 14:01	3.74 3.96	07:21 19:57	1.01 0.86	08:37	16:26		Sun	25	14:08 02:44	4.38 4.01	20:00 08:18	0.37	08:21	16:51 16:53	
Sat	10	02:22 14:40	3.68 3.87	07:58 20:36	1.11 0.96	08:36	16:28		Mon	26	15:01 03:39 15:58	4.25 3.87 4.07	20:54 09:15 21:51	0.57 0.89 0.81	08:19	16:55	
Sun	11	03:03 15:22	3.60 3.74	08:38 21:17	1.23 1.08	08:35	16:29		Tues	27	04:42 17:02	3.72 3.86	10:18 22:54	1.09	08:18	16:57	First Quarter 04:48
Mon	12	03:48 16:09	3.50 3.60	09:23 22:03	1.37 1.22	08:35	16:31		Wed	28	05:51 18:14	3.61 3.69	11:26	1.26	08:16	16:59	
Tues	13	04:40 17:00	3.40 3.46	10:16 22:58	1.51 1.35	08:34	16:32	Last Quarter 09:46	Thur	29	07:03 19:28	3.58 3.58	00:03 12:40	1.26 1.36	08:15	17:01	
Wed	14	05:41 18:03	3.33 3.36	11:23	1.61	08:33	16:34		Fri	30	08:12 20:39	3.63 3.57	01:22 13:57	1.36 1.32	08:13	17:03	
Thur	15	06:51 19:14	3.34 3.36	00:02 12:33	1.42 1.61	08:32	16:36		Sat	31	09:16 21:44	3.73 3.62	02:35 15:03	1.32 1.19	08:12	17:05	

All times are given in Local Time

All times are given in Local Time

#### **FEBRUARY 2015**

		Ti	de at North	Wall, Dub	lin	Sı	un				Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	te	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Sun	1	10:11 22:36	3.86 3.67	03:30 15:54	1.21 1.03	08:10	17:07		Mon	16	09:12 21:46	3.74 3.75	02:34 15:02	1.11 0.88	07:42	17:36	
Mon	2	10:57 23:17	3.95 3.71	04:14 16:37	1.08 0.88	08:09	17:08		Tues	17	10:02 22:33	4.00 3.96	03:26 15:51	0.82 0.54	07:40	17:38	
Tues	3	11:33 23:48	3.99 3.72	04:51 17:14	0.97 0.78	08:07	17:10	Full Moon 23:09	Wed	18	10:47 23:18	4.23 4.12	04:11 16:36	0.55 0.26	07:38	17:40	New Moon 23:47
Wed	4	12:01	4.01	05:24 17:48	0.89 0.72	08:05	17:13		Thur	19	11:30	4.39	04:53 17:19	0.34	07:36	17:42	
Thur	5	00:13 12:29	3.73 4.00	05:55 18:21	0.84 0.71	08:03	17:14		Fri	20	00:00 12:14	4.20 4.46	05:35 18:03	0.23	07:33	17:44	
Fri	6	00:41 12:59	3.74	06:24 18:51	0.83	08:01	17:16		Sat	21	00:43	4.20 4.45	06:18 18:48	0.22	07:31	17:46	
Sat	7	01:12 13:32	3.75 3.94	06:52 19:21	0.84 0.76	07:59	17:18		Sun	22	01:28	4.14	07:05	0.31	07:29		
Sun	8	01:47 14:08	3.74	07:22 19:53	0.89	07:58	17:20		Mon	23	13:47 02:16	4.35 4.02	19:36 07:55	0.26 0.48	07:27	17:48	
Mon	9	02:25 14:48	3.70 3.78	07:57 20:29	0.97	07:56	17:22		Tues	24	14:38 03:08	4.19 3.87	20:27 08:50	0.51 0.69	07:25	17:50	
Tues	10	03:07 15:31	3.62 3.65	08:38 21:11	1.08	07:54	17:24		Wed	25	15:33 04:06	3.97 3.69	21:21 09:50	0.80 0.93	07:22	17:52	First Quarte
Wed	11	03:54 16:19	3.50 3.50	09:24 22:00	1.23	07:52	17:26				16:36 05:15	3.73 3.53	22:20 10:55	1.10 1.15	07:20	17:54	17:14
Thur	12	04:46 17:15	3.37	10:20 23:00	1.38	07:50	17:28	Last Quarter 03:50	Thur	26	17:49 06:29	3.52 3.45	23:26	1.36	07:18	17:55	
Fri	13	05:50 18:26	3.29 3.27	11:33	1.47	07:48	17:30		Fri	27	19:04 07:41	3.39	12:10 00:49	1.30 1.50	07:16	17:57	
Sat	14	07:06 19:45	3.32 3.34	00:18 12:55	1.42 1.42	07:46	17:32		Sat	28	20:19	3.38	13:35	1.30	07:16	17:59	
Sun	15	08:15 20:51	3.49 3.52	01:32 14:04	1.33 1.19	07:44	17:34										
			All time	s are give	n in Local T	ime						All time	s are give	n in Local T	ime		

### **Dublin (North Wall)**

#### **MARCH 2015**

		Ti	de at North	Wall, Dub	lin	Sı	ın				Ti	de at North	Wall, Dub	lin	Sı	un	
Da	ıte	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Sun	1	08:51 21:27	3.57 3.46	02:14 14:45	1.45 1.17	07:13	18:01		Mon	16	07:42 20:28	3.44 3.48	01:02 13:39	1.32 1.05	06:38	18:29	
Mon	2	09:49 22:18	3.71 3.55	03:12 15:36	1.30 1.00	07:11	18:03		Tues	17	08:46 21:26	3.68 3.72	02:11 14:42	1.10 0.74	06:36	18:31	
Tues	3	10:35 22:57	3.82 3.62	03:56 16:16	1.12 0.85	07:09	18:05		Wed	18	09:40 22:15	3.95 3.93	03:06 15:33	0.80	06:33	18:33	
Wed	4	11:10 23:25	3.88 3.66	04:32 16:51	0.96 0.74	07:06	18:07		Thur	19	10:27 23:00 11:12	4.18 4.09 4.33	03:54 16:19 04:36	0.50 0.16 0.27	06:31	18:35	New Moon
Thur	5	11:39 23:50	3.91 3.70	05:03 17:23	0.84 0.68	07:04	18:09	Full Moon 18:05	Fri	20	23:41	4.17 4.39	17:02 05:18	0.01 0.14	06:26	18:37	09:36
Fri	6	12:06	3.91	05:33 17:52	0.76 0.65	07:02	18:11		Sat Sun	21	00:22	4.18	17:45 06:01	-0.02 0.12	06:24	18:38	
Sat	7	00:15 12:33	3.74	05:59 18:19	0.72	06:59	18:13		Mon	23	12:41 01:05	4.36 4.12	18:27 06:46	0.08 0.20	06:21	18:40	
Sun	8	00:42 13:03	3.77 3.88	06:23 18:45	0.71 0.67	06:57	18:14		Tues	24	13:27 01:51 14:18	4.25 4.01 4.08	19:13 07:35 20:01	0.28	06:19	18:42 18:44	
Mon	9	01:15	3.79 3.84	06:51 19:17	0.72 0.71	06:55	18:16		Wed	25	02:39 15:12	3.87 3.86	08:29 20:53	0.54 0.57 0.84	06:16	18:46	
Tues	10	01:52 14:19 02:34	3.77 3.78 3.71	07:27 19:54 08:07	0.76 0.79 0.85	06:52	18:18		Thur	26	03:33 16:12	3.69 3.61	09:27 21:49	0.80	06:14	18:48	
Wed	11	15:02 03:19	3.67 3.59	20:37 08:54	0.92 0.99	06:50 06:48	18:20		Fri	27	04:39 17:22	3.51 3.40	10:29 22:51	1.02 1.39	06:12	18:49	First Quarter 07:43
Thur	12	15:50 04:10	3.52 3.45	21:26 09:48	1.09	06:45	18:22	Last Quarter	Sat	28	05:52 18:36	3.40 3.28	11:38	1.19	06:09	18:51	
Fri	13	16:45 05:10	3.37 3.33	22:24 10:59	1.27	06:45	18:24	17:48	Sun	29	08:06 20:49	3.38	00:06 14:00	1.55 1.24	07:07	19:53	
Sat	14	17:54 06:25	3.27 3.30	23:41	1.39		18:26		Mon	30	09:15 21:57	3.46 3.36	02:37 15:13	1.53	07:04	19:55	
Sun	15	19:16	3.30	12:24	1.25	06:41	18:27		Tues	31	10:15 22:48	3.58 3.48	03:42 16:06	1.37 0.99	07:02	19:57	

All times are given in Local Time

All times are given in Local Time

#### **APRIL 2015**

		Ti	de at North	Wall, Dub	lin	St	ın				Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
Wed	1	11:03 23:26	3.70 3.57	04:28 16:48	1.17 0.85	07:00	19:58		Thur	16	10:17 22:56	3.93 3.91	03:44 16:14	0.82 0.41	06:24	20:26	
Thur	2	11:40 23:56	3.77 3.65	05:05 17:22	0.99 0.75	06:57	20:00		Fri	17	11:09 23:41	4.11 4.04	04:34 17:01	0.55 0.21	06:22	20:27	
Fri	3	12:12	3.81	05:37 17:53	0.85 0.68	06:55	20:02		Sat	18	11:56	4.23	05:19 17:45	0.35 0.12	06:20	20:29	New Moon 18:57
Sat	4	00:23 12:40	3.70 3.82	06:06 18:21	0.76 0.65	06:52	20:04	Full Moon 12:06	Sun	19	00:23 12:41	4.12 4.27	06:03 18:27	0.22 0.13	06:17	20:31	
Sun	5	00:47 13:07	3.76 3.83	06:30 18:46	0.70 0.64	06:50	20:06		Mon	20	01:04 13:25	4.13 4.23	06:45 19:09	0.19 0.23	06:15	20:33	
Mon	6	01:13 13:38	3.81 3.83	06:55 19:14	0.66 0.64	06:48	20:07		Tues	21	01:45 14:11	4.09 4.13	07:30 19:52	0.25 0.41	06:13	20:35	
Tues	7	01:46 14:14	3.85 3.81	07:25 19:48	0.65 0.67	06:45	20:09		Wed	22	02:29 15:00	4.01 3.97	08:18 20:39	0.37 0.64	06:11	20:36	
Wed	8	02:25 14:55	3.84 3.77	08:02 20:27	0.67 0.75	06:43	20:11		Thur	23	03:15 15:51	3.89 3.77	09:10 21:27	0.54 0.89	06:09	20:38	
Thur	9	03:08 15:40	3.79 3.68	08:45 21:12	0.73 0.87	06:40	20:13		Fri	24	04:07 16:48	3.74 3.56	10:05 22:21	0.74 1.15	06:06	20:40	
Fri	10	03:54 16:29	3.70 3.56	09:34 22:03	0.84 1.04	06:38	20:15		Sat	25	05:06 17:52	3.58 3.37	11:03 23:20	0.94 1.37	06:04	20:42	First Quarter 23:55
Sat	11	04:45 17:26	3.58 3.43	10:33 23:04	0.98 1.21	06:36	20:17		Sun	26	06:15 19:00	3.44 3.25	12:06	1.10	06:02	20:44	
Sun	12	05:45 18:34	3.46 3.35	11:42	1.07	06:33	20:18	Last Quarter 03:44	Mon	27	07:26 20:09	3.38 3.23	00:25 13:15	1.52 1.18	06:00	20:45	
Mon	13	06:56 19:52	3.43 3.37	00:17 13:02	1.31 1.06	06:31	20:20		Tues	28	08:33 21:12	3.41 3.31	01:40 14:27	1.56 1.16	05:58	20:47	
Tues	14	08:12 21:04	3.52 3.52	01:36 14:17	1.27 0.91	06:29	20:22		Wed	29	09:32 22:04	3.49 3.43	02:55 15:25	1.45 1.06	05:56	20:49	
Wed	15	09:19 22:04	3.71 3.72	02:45 15:20	1.08 0.66	06:26	20:24		Thur	30	10:22 22:46	3.59 3.55	03:49 16:10	1.28 0.94	05:54	20:51	
			All time	s are give	n in Local T	Time						All time	s are give	n in Local T	ime		

### **Dublin (North Wall)**

#### **MAY 2015**

		Ti	de at North	Wall, Dub	lin	S	un				Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	ate	High	Water	Low '	Water	AM	PM	Moon's Phases	Da	te	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H: M	Sets H : M	Phases
Fri	1	11:04 23:22	3.68 3.65	04:30 16:48	1.10 0.84	05:51	20:53		Sat	16	10:51 23:25	4.04 3.98	04:14 16:43	0.72 0.43	05:24	21:18	
Sat	2	11:40 23:52	3.73 3.73	05:04 17:19	0.96 0.76	05:49	20:54		Sun	17	11:42	4.11	05:03 17:29	0.55	05:22	21:20	
Sun	3	12:12	3.77	05:34 17:48	0.85 0.71	05:47	20:56		Mon	18	00:09 12:28 00:49	4.05 4.13 4.07	05:49 18:12 06:33	0.44 0.39 0.40	05:21 05:19	21:22	New Moon 04:13
Mon	4	00:18 12:42	3.80 3.80	06:00 18:16	0.76 0.67	05:45	20:58	Full Moon 03:42	Tues	19	13:12 01:29	4.09 4.06	18:53 07:18	0.47 0.42	05:19	21:23	
Tues	5	00:47 13:14	3.87 3.82	06:29 18:47	0.69	05:44	21:00		Wed	20	13:57 02:10	4.00 4.01	19:34 08:04	0.60	05:16	21:25	
Wed	6	01:21 13:53	3.92 3.83	07:03 19:24	0.65 0.68	05:42	21:01		Fri	22	14:42 02:54	3.87 3.93	20:18 08:52	0.76 0.60	05:15	21:26	
Thur	7	02:02 14:36	3.94 3.80	07:43 20:06 08:30	0.65 0.75 0.68	05:40	21:03		Sat	23	15:29 03:42	3.73 3.82	21:03 09:43	0.94	05:14	21:28	
Fri	8	02:47 15:23 03:36	3.91 3.75 3.85	20:54 09:22	0.86 0.76	05:38	21:05		Sun	24	16:20 04:34 17:16	3.56 3.69 3.41	21:54 10:37 22:48	1.13 0.90 1.31	05:12	21:31	
Sat	9	16:15 04:28	3.66 3.77	21:48 10:23	1.00	05:36 05:34	21:07		Mon	25	05:34 18:18	3.55 3.29	11:33 23:46	1.05 1.45	05:11	21:32	First Quarter 17:19
Sun	10	17:12 05:27	3.57 3.69	22:49 11:30	1.13	05:32	21:08	Last Quarter	Tues	26	06:40 19:21	3.44 3.25	12:32	1.16	05:10	21:34	
		18:18 06:34	3.50 3.64	23:57	1.21	05:31	21:10	10:36	Wed	27	07:45 20:22	3.40 3.29	00:49 13:33	1.53 1.20	05:09	21:35	
Tues	12	19:29 07:45	3.51 3.68	12:42 01:09	0.90 1.20	05:29	21:12		Thur	28	08:45 21:17	3.43 3.39	01:54 14:33	1.51	05:07	21:36	
Wed	13	20:39	3.60 3.79	13:53 02:18	0.83	05:27	21:14		Fri	29	09:38 22:04	3.50 3.51	02:55 15:24	1.41	05:06	21:38	
Thur		21:41 09:55	3.73 3.92	14:57 03:19	0.69	05:26	21:15		Sat	30	10:25 22:45 11:06	3.59 3.63 3.67	03:45 16:06 04:25	1.27 1.00 1.12	05:05	21:39	
Fri	15	22:36	3.87	15:53	0.54	05.26	21:17		Sun	31	23:20	3.75	16:42	0.90	05:04	21:40	

All times are given in Local Time

All times are given in Local Time

#### **JUNE 2015**

		Ti	de at North	Wall, Dub	lin	Sı	ın				Ti	ide at North	Wall, Dub	lin	S	un	
Da	ite	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H: M	Sets H:M	Phases
Mon	1	11:42 23:51	3.74 3.85	04:59 17:16	0.98 0.80	05:03	21:41		Tues	16	12:19	3.97	05:38 17:59	0.68 0.68	04:56	21:54	New Moon 14:05
Tues	2	12:17	3.81	05:32 17:49	0.85 0.73	05:02	21:43	Full Moon 16:19	Wed	17	00:38 13:02	4.03 3.94	06:23 18:39	0.61 0.70	04:55	21:55	
Wed	3	00:24 12:54	3.95 3.86	06:06 18:25	0.73 0.68	05:02	21:44		Thur	18	01:15 13:41	4.04 3.88	07:06 19:18	0.59 0.76	04:55	21:55	
Thur	4	01:01 13:34	4.03 3.89	06:45 19:05	0.64	05:01	21:45		Fri	19	01:51 14:21	4.02 3.80	07:48 19:57	0.61	04:55	21:56	
Fri	5	01:43 14:19 02:29	4.07 3.89	07:28 19:48 08:17	0.60	05:00	21:46		Sat	20	02:31 15:02 03:14	3.97 3.71 3.90	08:33 20:38 09:18	0.68 0.95	04:56	21:56	
Sat	6	15:08 03:19	4.07 3.86	20:38 09:11	0.61 0.80 0.65	04:59	21:47		Sun	21	15:46 04:00	3.90 3.60 3.79	21:22 10:06	0.77 1.07 0.89	04:56	21:56	
Sun	7	16:00 04:12	4.05 3.81 3.99	21:32 10:11	0.91 0.71	04:59	21:48		Mon	22	16:34 04:48	3.49 3.66	22:11 10:56	1.22	04:56 04:56	21:57	
Mon	8	16:57 05:10	3.73 3.92	22:31	1.02	04:58	21:49	Last Quarter	Tues	23	17:26 05:44	3.38 3.53	23:04	1.36	04:56	21:57	First Quarter
Tues	9	17:58 06:13	3.66 3.86	23:35	1.11	04:57	21:50	15:42	Wed	24	18:24 06:48	3.30 3.42	00:01	1.47	04:57	21:57	11:03
Wed	10	19:06 07:21	3.63 3.82	12:21 00:42	0.82 1.15	04:57	21:51		Thur	25	19:27 07:53	3.28	12:42 01:01	1.25	04:57	21:57	
Thur	11	20:14 08:31	3.65 3.83	13:27 01:50	0.85 1.14	04:56	21:51		Fri	26	20:27 08:52	3.34 3.41	13:39 02:00	1.29 1.52	04:58	21:57	
Fri	12	21:19 09:37	3.73 3.88	14:33 02:55	0.83 1.06	04:56	21:52		Sat	27	21:21 09:45	3.44 3.49	14:34 02:56	1.26 1.42	04:58	21:57	
Sat	13	22:18 10:38	3.83 3.93	15:33 03:55	0.78 0.93	04:56	21:53		Sun	28	22:07 10:33	3.59 3.60	15:24 03:45	1.17 1.27	04:59	21:56	
Sun	14	23:11 11:32	3.92 3.97	16:27 04:49	0.72 0.80	04:56	21:53		Mon	29	22:48 11:15	3.74 3.72	16:08 04:27	1.04 1.08	04:59	21:56	
Mon	15	23:57	3.99	17:15	0.68	200	21:54		Tues	30	23:25	3.90	16:48	0.90	200	21:56	
			All time	s are giver	n in Local T	Time						All time	s are give	n in Local T	ime		

### **Dublin (North Wall)**

#### **JULY 2015**

		Ti	ide at North	Wall, Dub	lin	Sı	un				Ti	ide at North	Wall, Dub	olin	Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	ite	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Wed	1	11:55	3.84	05:06 17:27	0.88 0.76	05:00	21:56		Thur	16	00:27 12:51	4.01 3.82	06:12 18:24	0.74 0.85	05:15	21:44	New Moon 01:24
Thur	2	00:03 12:35	4.04 3.94	05:46 18:06	0.69 0.65	05:01	21:55	Full Moon 02:20	Fri	17	01:00 13:24	4.03 3.79	06:51 19:00	0.69 0.84	05:17	21:43	
Fri	3	00:42 13:17	4.16 3.99	06:28 18:47	0.55 0.60	05:02	21:55		Sat	18	01:31 13:56	4.02 3.75	07:30 19:34	0.68	05:18	21:42	
Sat	4	01:25 14:02	4.23 4.01	07:13 19:31	0.47 0.60	05:02	21:54		Sun	19	02:06 14:32 02:43	4.00 3.71 3.95	08:08 20:09 08:47	0.72 0.91 0.78	05:19	21:41	
Sun	5	02:11 14:50	4.26 4.00	08:01 20:19	0.45 0.66	05:03	21:54			20	15:10 03:23	3.66 3.86	20:47 09:27	0.78 0.99 0.88	05:21	21:40	
Mon	6	03:00 15:41	4.24 3.94	08:54 21:12	0.49 0.76	05:04	21:53		Tues	21	15:51 04:05	3.59 3.75	21:27	1.10	05:24	21:38	
Tues	7	03:53 16:36	4.18 3.86	09:52 22:09	0.58 0.89	05:05	21:53		Wed	22	16:34 04:51	3.51 3.61	22:11 10:57	1.23 1.13	05:25	21:37	
Wed	8	04:49 17:34	4.08 3.76	10:52 23:10	0.70 1.02	05:06	21:52	Last Quarter 20:24	Fri	23	17:22 05:43	3.41 3.46	23:02 11:50	1.38 1.26	05:27	21:35	First Quarte
Thur	9	05:51 18:40	3.96 3.68	11:55	0.83	05:07	21:51		Sat	25	18:18 06:47	3.32 3.34	00:02	1.51	05:28	21:34	04:04
Fri	10	07:00 19:50	3.85 3.65	00:15 13:01	1.14 0.96	05:08	21:50		Sun	26	19:25 08:01 20:33	3.30 3.31 3.36	12:48 01:08 13:48	1.36 1.56 1.38	05:30	21:32	
Sat	11	08:12 20:57	3.78 3.68	01:24 14:09	1.21 1.04	05:09	21:50		Mon	27	09:07 21:30	3.38 3.52	02:12 14:45	1.50 1.50	05:31	21:29	
Sun	12	09:23 22:01	3.76 3.77	02:35 15:15	1.20 1.05	05:10	21:48		Tues	28	10:03 22:18	3.53 3.72	03:10 15:38	1.33	05:33	21:28	
Mon	13	10:27 22:57	3.79 3.87	03:41 16:13	1.11 1.00	05:12	21:48		Wed	29	10:51 23:02	3.71 3.93	04:01 16:24	1.09 0.95	05:34	21:26	
Tues	14	11:24 23:46	3.83 3.96	04:39 17:03	0.98 0.94	05:13	21:47		Thur	30	11:35 23:43	3.88 4.13	04:46 17:06	0.81 0.74	05:36	21:24	
Wed	15	12:12	3.84	05:28 17:46	0.84 0.88	05:14	21:46		Fri	31	12:17	4.01	05:29 17:48	0.56 0.56	05:38	21:23	Full Moon 10:43

#### All times are given in Local Time

All times are given in Local Time

#### **AUGUST 2015**

		Ti	de at North	Wall, Dub	olin	Sı	un				Ti	de at North	Wall, Dub	lin	Sı	un	
Da	te	High	Water	Low '	Water	AM	РМ	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Sat	1	00:24 12:59	4.28 4.10	06:12 18:29	0.36 0.45	05:39	21:21		Sun	16	01:09 13:30	4.02 3.75	07:06 19:10	0.69 0.83	06:05	20:52	
Sun	2	01:06 13:42	4.38 4.13	06:56 19:12	0.26 0.42	05:41	21:19		Mon	17	01:39 14:01	4.00 3.75	07:39 19:40	0.71 0.84	06:06	20:49	
Mon	3	01:50 14:28	4.41 4.11	07:42 19:59	0.25 0.48	05:43	21:17		Tues	18	02:12 14:36	3.97 3.74	08:11 20:11	0.77	06:08	20:47	
Tues	4	02:38 15:18	4.38 4.04	08:33 20:49	0.34 0.60	05:44	21:16		Wed	19	02:48 15:12	3.90 3.70	08:44 20:45	0.84	06:10	20:45	
Wed	5	03:30 16:09	4.28 3.93	09:27 21:45	0.50 0.77	05:46	21:14		Thur	20	03:28 15:53	3.80	09:20 21:24	0.95 1.10	06:12	20:43	
Thur	6	04:24 17:07	4.13 3.80	10:25 22:45	0.70 0.96	05:48	21:12		Fri	21	04:12 16:38	3.67 3.54	10:02 22:09	1.08	06:13	20:41	F: . O
Fri	7	05:27 18:12	3.94 3.68	11:27 23:50	0.92 1.14	05:49	21:10	Last Quarter 02:03	Sat	22	05:00 17:28 05:57	3.51 3.41 3.35	10:51 23:03 11:51	1.24 1.41 1.40	06:15	20:38	First Quarter 19:31
Sat	8	06:39 19:24	3.76 3.61	12:33	1.12	05:51	21:08	02.00	Sun	23	18:28 07:10	3.32 3.25	00:13	1.52	06:17	20:36	
Sun	9	07:57	3.64	01:01	1.27	05:53	21:06		Mon	24	19:42 08:32	3.32 3.30	13:03 01:33	1.47	06:18	20:34	
Mon	10	20:36	3.62 3.62	13:45 02:18	1.26	05:54			Tues	25	20:54 09:36	3.46 3.47	14:12 02:41	1.41 1.32	06:20 06:22	20:32	
Tues	11	21:43 10:18	3.71 3.66	14:58 03:30	1.28 1.20	05:56	21:04		Wed	26	21:51 10:30	3.69 3.70	15:12 03:39	1.23	06:24	20:29	
Wed	12	22:43 11:15	3.83 3.72	16:00 04:30	1.21 1.04	05:58	21:02		Thur	27	22:39 11:15	3.95 3.92	16:03 04:27	0.97	06:25	20:27	
Thur	13	23:33	3.94	16:50 05:16	1.09 0.89	05:59	21:00		Fri	28	23:22	4.19 4.09	16:48 05:12	0.70 0.39	06:27	20:25	Full Moon
		12:01 00:12	3.76 4.00	17:31 05:57	0.98 0.77	06:01	20:58	New Moon	Sat	29	00:04	4.38	17:30 05:54	0.47 0.18	06:29	20:23	18:35
Fri	14	12:37 00:42	3.76 4.02	18:06 06:33	0.90 0.71	06:03	20:56	14:53	Sun	30	12:39 00:45	4.19 4.49	18:10 06:36	0.32	06:31	20:20	
Sat	15	13:04	3.75	18:39	0.85	50.00	20:54		Mon	31	13:21	4.23	18:53	0.27	00.51	20:18	
			All time	s are give	n in Local T	ime						All time	s are give	n in Local T	ime		

### **Dublin (North Wall)**

#### **SEPTEMBER 2015**

		Ti	de at North	Wall, Dub	lin	Sı					Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	ate	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
Tues	1	01:28 14:05	4.50 4.20	07:21 19:38	0.11 0.33	06:32	20:15		Wed	16	01:45 14:04	3.96 3.83	07:34 19:39	0.75 0.84	06:58	19:39	
Wed	2	02:15 14:52	4.43 4.11	08:09 20:27	0.26 0.47	06:34	20:13		Thur	17	02:19 14:40	3.91 3.81	08:04 20:12	0.82	07:00	19:37	
Thur	3	03:05 15:42	4.29 3.98	09:00 21:21	0.48	06:36	20:11		Fri	18	02:58 15:21	3.83	08:39 20:51	1.00	07:02	19:34	
Fri	4	04:00 16:39	4.08 3.83	09:57 22:20	0.75 0.91	06:38	20:08	L t O	Sat	19	03:41 16:05	3.70 3.65	09:21 21:36	1.05	07:04	19:32	
Sat	5	05:03 17:43 06:19	3.85 3.67 3.63	10:57 23:25	1.04 1.13	06:39	20:06	Last Quarter 09:54	Sun	20	04:29 16:54 05:24	3.55 3.53 3.38	10:09 22:29 11:09	1.23 1.30 1.41	07:05	19:30	First Quarter
Sun	6	18:57 07:39	3.58 3.51	12:03 00:37	1.28 1.29	06:41	20:04		Mon	21	17:51 06:34	3.41 3.27	23:36	1.43	07:07 07:09	19:27	08:59
Mon	7	20:11 08:54	3.58 3.50	13:18 02:00	1.44	06:45	20:01		Tues	22	19:00 07:59	3.37 3.30	12:24 01:00	1.51 1.43	07:10	19:25	
Tues	8	21:21	3.67 3.57	14:39 03:16	1.45	06:46	19:59		Wed	23	20:17	3.47 3.48	13:42 02:15	1.47	07:12	19:22	
Wed	9	22:24 11:00	3.80 3.67	15:43 04:13	1.34 1.04	06:48	19:56		Thur	24	21:21 10:07	3.70 3.72	14:47 03:18	1.27 0.94	07:14	19:20	
Thur	10	23:13 11:43	3.92 3.74	16:31 04:57	1.19 0.88	06:50	19:54		Fri Sat	25 26	22:14 10:54	3.98 3.96	15:42 04:09	0.99 0.60	07:16	19:17	
Sat	12	23:51	3.99	17:11 05:35	1.04 0.77	06:51	19:52		Sun	27	23:00 11:38	4.23 4.14	16:28 04:54	0.69 0.31	07:17	19:15	
Sun	13	12:16 00:21	3.77 4.01	17:45 06:09	0.92 0.70	06:53	19:49	New Moon	Mon	28	23:44	4.41	17:11 05:36	0.44 0.11	07:19	19:13	Full Moon
Mon	14	12:41 00:47	3.78 4.01	18:17 06:39	0.84 0.69	06:55	19:47	06:41	Tues	29	12:19 00:26	4.26 4.51	17:52 06:18	0.28 0.05	07:21	19:10	02:50
Tues	15	13:06 01:14 13:33	3.80 3.99 3.82	18:45 07:08 19:12	0.81 0.71 0.81	06:57	19:44 19:42		Wed	30	13:00 01:09 13:42	4.29 4.51 4.26	18:34 07:00 19:19	0.23 0.11 0.28	07:23	19:08 19:05	

All times are given in Local Time

All times are given in Local Time

#### **OCTOBER 2015**

		Ti	ide at North	Wall, Dub	lin	Sı	un				Ti	ide at North	Wall, Dub	lin	Sı	un	
Da	te	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Thur	1	01:55 14:28	4.41 4.17	07:46 20:07	0.29 0.42	07:24	19:03		Fri	16	01:54 14:13	3.90 3.91	07:32 19:47	0.84 0.89	07:52	18:28	
Fri	2	02:45 15:18	4.24 4.04	08:35 21:00	0.55 0.63	07:26	19:01		Sat	17	02:33 14:54	3.84 3.87	08:09 20:27	0.93 0.96	07:53	18:25	
Sat	3	03:40 16:12	4.01 3.88	09:29 21:59	0.85 0.87	07:28	18:58		Sun	18	03:17 15:39	3.74 3.78	08:51 21:13	1.06 1.07	07:55	18:23	
Sun	4	04:43 17:15	3.76 3.72	10:28 23:02	1.15 1.09	07:30	18:56	Last Quarter 21:06	Mon	19	04:06 16:27	3.61 3.67	09:42 22:07	1.23 1.19	07:57	18:21	
Mon	5	05:57 18:27	3.55 3.60	11:32	1.40	07:32	18:53		Tues	20	05:02 17:23	3.47 3.57	10:41 23:12	1.40 1.29	07:59	18:19	First Quarter 20:31
Tues	6	07:15 19:40	3.43 3.57	00:12 12:45	1.26 1.57	07:33	18:51		Wed	21	06:09 18:28	3.38 3.52	11:54	1.50	08:01	18:16	
Wed	7	08:30 20:51	3.43 3.64	01:33 14:09	1.32	07:35	18:49		Thur	22	07:28 19:41	3.40 3.59	00:31 13:11	1.30 1.48	08:03	18:14	
Thur	8	09:40	3.53	02:51	1.23	07:37	18:46		Fri	23	08:41 20:48	3.55 3.77	01:48 14:19	1.15	08:05	18:12	
Fri	9	21:54 10:35	3.76 3.65	15:16 03:48	1.45 1.07	07:39			Sat	24	09:41 21:47	3.77 4.00	02:53 15:17	0.90 1.05	08:06	18:10	
Sat	10	22:44 11:16	3.87 3.74	16:06 04:32	1.28 0.92	07:41	18:44		Sun	25	09:32 21:38 10:18	3.99 4.21 4.16	02:48 15:07	0.61	07:08	17:08	
Sun	11	23:23 11:48	3.94 3.81	16:46 05:09	1.11 0.81	07:42	18:41		Mon	26	22:25 11:00	4.37 4.27	03:35 15:53 04:18	0.37 0.54 0.22	07:10	17:06	Full Moon
		23:55	3.97	17:21 05:41	0.98 0.75	07:44	18:39		Tues	27	23:10 11:42	4.44 4.31	16:36 05:01	0.38	07:12	17:04	12:05
Mon	12	12:15 00:24	3.85 3.97	17:53 06:10	0.90 0.73	07:46	18:37	New Moon	Wed	28	23:54	4.43	17:20 05:43	0.19	07:14	17:02	
Tues	13	12:41 00:51	3.88 3.96	18:21 06:37	0.85 0.75	07:48	18:35	00:06	Thur	29	12:24 00:41	4.29 4.33	18:05 06:27	0.34	07:16	17:00	
Wed	14	13:07 01:20	3.90 3.94	18:46 07:02	0.85 0.78	07:50	18:32		Fri	30	13:09	4.33 4.22 4.16	18:52 07:13	0.43 0.45	07:18	16:58	
Thur	15	13:36	3.94	19:14	0.78	07:50	18:30		Sat	31	01:30 13:57	4.16 4.11	19:43	0.67 0.62	07:20	16:56	
			All times are given in Lo									All time	s are give	n in Local 1	Гime		

### **Dublin (North Wall)**

#### **NOVEMBER 2015**

		Ti	de at North	Wall, Dub	lin	Sı	ın				Ti	ide at North	Wall, Dub	lin	Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low	Water	AM	РМ	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Sun	1	02:24 14:49	3.96 3.97	08:04 20:39	0.94 0.83	07:22	16:54		Mon	16	01:58 14:18	3.81 3.94	07:29 19:57	1.05 0.96	07:50	16:28	
Mon	2	03:23 15:48	3.74 3.81	09:00 21:39	1.21 1.03	07:23	16:52		Tues	17	02:48 15:07	3.72 3.87	08:20 20:51	1.18 1.04	07:52	16:26	
Tues	3	04:30 16:54	3.54 3.68	10:00 22:42	1.44 1.20	07:25	16:50	Last Quarter 12:24	Wed	18	03:43 16:02	3.62 3.79	09:18 21:54	1.32 1.11	07:54	16:25	
Wed	4	05:41 18:03	3.42 3.60	11:06 23:54	1.61 1.30	07:27	16:48		Thur	19	04:46 17:03	3.55 3.74	10:26 23:04	1.42 1.13	07:55	16:23	First Quarter 06:27
Thur	5	06:52 19:11	3.40 3.61	12:21	1.66	07:29	16:46		Fri	20	05:57 18:09	3.55 3.76	11:39	1.43	07:57	16:22	
Fri	6	07:58 20:12	3.48 3.67	01:09 13:36	1.28 1.58	07:31	16:44		Sat	21	07:09 19:17	3.64 3.84	00:18 12:49	1.06 1.32	07:59	16:21	
Sat	7	08:54 21:06	3.61 3.76	02:12 14:33	1.18 1.42	07:33	16:42		Sun	22	08:13 20:20	3.80 3.98	01:24 13:51	0.92 1.14	08:01	16:20	
Sun	8	09:37 21:49	3.73 3.84	03:00 15:17	1.05 1.26	07:35	16:41		Mon	23	09:09 21:18	3.97 4.13	02:24 14:47	0.74 0.93	08:02	16:18	
Mon	9	10:13 22:27	3.83 3.89	03:39 15:54	0.95 1.12	07:37	16:39		Tues	24	10:00 22:10	4.13 4.24	03:16 15:37	0.57 0.73	08:04	16:17	
Tues	10	10:46 22:59	3.90 3.91	04:12 16:26	0.88 1.02	07:39	16:37		Wed	25	10:46 22:59	4.23 4.29	04:03 16:24	0.47 0.57	08:06	16:16	Full Moon 22:44
Wed	11	11:15 23:29	3.95 3.91	04:42 16:56	0.85 0.95	07:41	16:35	New Moon 17:47	Thur	26	11:30 23:45	4.29 4.28	04:48 17:09	0.44 0.48	08:07	16:15	
Thur	12	11:43 23:58	3.99 3.91	05:09 17:23	0.84	07:42	16:34		Fri	27	12:12	4.29	05:30 17:54	0.49	08:09	16:14	
Fri	13	12:13	4.01	05:36 17:52	0.84	07:44	16:32		Sat	28	00:30 12:54	4.20 4.25	06:12 18:40	0.61 0.52	08:11	16:13	
Sat	14	00:33 12:50	3.90 4.02	06:07 18:28	0.87	07:46	16:31		Sun	29	01:17	4.08 4.17	06:55 19:28	0.78 0.63	08:12	16:12	
Sun	15	01:13 13:32	3.87 4.00	06:45 19:09	0.94 0.90	07:48	16:29		Mon	30	02:06 14:27	3.92 4.05	07:42 20:18	0.97 0.78	08:14	16:11	

All times are given in Local Time

All times are given in Local Time

#### **DECEMBER 2015**

		Ti	de at North	Wall, Dub	lin	Sı	un				Ti	de at North	Wall, Dub	lin	Sı	ın	
Da	ıte	High	Water	Low '	Water	AM	PM	Moon's	Dat	e	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
Tues	1	02:58 15:18	3.74 3.91	08:32 21:12	1.19 0.95	08:15	16:11		Wed	16	02:30 14:48	3.86 4.08	08:01 20:35	1.03 0.81	08:34	16:06	
Wed	2	03:56 16:15	3.57 3.76	09:27 22:09	1.39 1.12	08:17	16:10		Thur	17	03:24 15:40	3.79 4.02	08:57 21:33	1.14 0.89	08:34	16:06	
Thur	3	04:59 17:18	3.44 3.64	10:27 23:09	1.55 1.26	08:18	16:09	Last Quarter 07:40	Fri	18	04:22 16:38	3.72 3.94	09:59 22:36	1.25 0.96	08:35	16:06	First Quarter 15:14
Fri	4	06:04 18:23	3.39 3.56	11:31	1.65	08:20	16:09		Sat	19	05:27 17:40	3.67 3.88	11:06 23:45	1.31 1.01	08:36	16:07	
Sat	5	07:06 19:24	3.42 3.55	00:13 12:40	1.34 1.66	08:21	16:08		Sun	20	06:37 18:48	3.69 3.86	12:17	1.32	08:36	16:07	
Sun	6	08:03	3.52 3.60	01:20 13:46	1.33	08:23	16:08		Mon	21	07:46 19:57	3.77 3.89	00:56 13:25	1.01 1.24	08:37	16:07	
Mon	7	20:21 08:54	3.64	02:17	1.26	08:24	16:07		Tues	22	08:48 21:01	3.89 3.96	02:01 14:28	0.94 1.09	08:38	16:08	
Tues	8	21:11 09:37	3.67 3.77	14:40 03:03	1.44 1.16	08:25			Wed	23	09:45 22:00	4.02 4.03	03:00 15:25	0.84 0.92	08:38	16:08	
Wed	9	21:54 10:15	3.74 3.88	15:22 03:39	1.30 1.07	08:26	16:07		Thur	24	10:36 22:52	4.14 4.08	03:52 16:16	0.75 0.76	08:38	16:09	
Thur	10	22:33 10:49	3.80 3.96	15:58 04:12	1.17 0.99	08:28	16:06		Fri	25	11:21 23:39	4.21 4.09	04:38 17:03	0.70 0.63	08:39	16:10	Full Moon 11:11
		23:07 11:20	3.85 4.03	16:30 04:42	1.05 0.92	08:29	16:06	New Moon	Sat	26	12:02	4.24	05:20 17:46	0.69	08:39	16:10	
Fri	11	23:39 11:52	3.89 4.09	17:01 05:13	0.94 0.87	08:30	16:06	10:29	Sun	27	00:21 12:40	4.04 4.22	05:59 18:29	0.73 0.56	08:39	16:11	
Sat	12	00:15	3.92	17:34 05:48	0.85	08:31	16:06		Mon	28	01:01 13:20	3.97 4.17	06:38 19:12	0.81 0.62	08:40	16:12	
Sun	13	12:30 00:56	4.13 3.93	18:12 06:27	0.78 0.87		16:06		Tues	29	01:43 14:01	3.86 4.09	07:19 19:55	0.92 0.72	08:40	16:13	
Mon	14	13:12	4.14	18:54	0.75	08:32	16:06		Wed	30	02:27 14:45	3.74 3.97	08:03 20:42	1.07 0.86	08:40	16:14	
Tues	15	01:41 13:58	3.91 4.12	07:11 19:42	0.93 0.77	08:33	16:06		Thur	31	03:15 15:33	3.62 3.82	08:51 21:30	1.23 1.02	08:40	16:15	
			All time	s are give	n in Local T	ime						All time	s are give	n in Local 1	Time		

### **Soldiers Point (Dundalk)**

#### **JANUARY 2015**

			Tide at I	Dundalk		Sı	ın					Tide at [	Dundalk		Sı	ın	
Da	te	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
Thur	1	08:29 20:48	4.71 4.70	02:01 14:35	1.16 1.30	08:44	16:13		Fri	16	07:46 20:11	4.26 4.27	01:11 13:46	1.47 1.59	08:35	16:35	
Fri	2	09:27 21:48	4.84 4.74	03:18 15:49	1.11 1.14	08:44	16:14		Sat	17	08:41 21:07	4.50 4.49	02:22 14:55	1.31	08:34	16:36	
Sat	3	10:19 22:39	4.96 4.78	04:21 16:47	1.02 0.96	08:43	16:15		Sun	18	09:29 21:57 10:13	4.78 4.74 5.06	03:26 15:55 04:21	1.06 0.95 0.78	08:33	16:38	
Sun	4	11:03 23:20	5.04 4.78	05:11 17:36	0.94 0.81	08:43	16:16			19	22:42 10:56	4.96 5.30	16:49 05:10	0.78 0.59 0.52	08:32 08:31	16:40	New Moon
Mon	5	11:39 23:54	5.08 4.76	05:51 18:14	0.88 0.71	08:43	16:18	Full Moon 04:53	Tues	20	23:25 11:39	5.13 5.47	17:36 05:54	0.28	08:29	16:42	13:14
Tues	6	12:09	5.08	06:25 18:50	0.86	08:42	16:19		Wed	21	00:09	5.21	18:19 06:34	0.07 0.25	08:28	16:44	
Wed	7	00:24 12:41	4.72 5.06	06:57 19:23	0.87	08:42	16:20		Fri	23	12:23 00:55	5.55 5.20	19:02 07:15	-0.02 0.28	08:27	16:45 16:47	
Thur	8	00:57 13:15	4.69 5.01	07:26 19:54	0.91 0.72	08:41	16:22		Sat	24	13:09 01:43 13:59	5.55 5.12 5.45	19:44 07:58 20:28	0.03 0.40 0.19	08:25	16:49	
Fri	9	01:34 13:52	4.63 4.92	07:55 20:25	0.99	08:41	16:23		Sun	25	02:35 14:52	4.98 5.29	08:43 21:12	0.60 0.44	08:24	16:51	
Sat	10	02:13 14:31	4.56 4.80	08:26 20:57	1.11 0.93	08:40	16:25		Mon	26	03:30	4.80 5.06	09:30 22:01	0.84 0.73	08:22	16:53	
Sun	11	02:54 15:13	4.45 4.64	08:59 21:32	1.26	08:39	16:26		Tues	27	04:33 16:53	4.62 4.80	10:24 22:57	1.09 1.04	08:21	16:55	First Quarter 04:48
Mon	12	03:39 16:00	4.32 4.46	09:37 22:11	1.44	08:39	16:28	1 0	Wed	28	05:42 18:05	4.48 4.57	11:27	1.31	08:19	16:57	
Tues	13	04:31 16:51	4.19 4.28	10:22 23:00	1.62	08:38	16:30	Last Quarter 09:46	Thur	29	06:54 19:19	4.43 4.44	00:03 12:42	1.30 1.42	08:18	16:59	
Wed	14	05:32 17:54	4.11 4.15	11:24	1.74	08:37	16:31		Fri	30	08:03 20:30	4.49 4.42	01:30 14:12	1.42	08:16	17:01	
Thur	15	06:42 19:05	4.12 4.14	00:02 12:34	1.50 1.74	08:36	16:33		Sat	31	09:07 21:35	4.63 4.48	02:59 15:33	1.38 1.21	08:15	17:03	

All times are given in Local Time

All times are given in Local Time

#### **FEBRUARY 2015**

			Tide at I	Dundalk		Sı	un					Tide at I	Dundalk		S	un	
Da	te	High	Water	Low '	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Sun	1	10:02 22:27	4.79 4.55	04:06 16:34	1.24 1.01	08:13	17:05		Mon	16	09:03 21:37	4.64 4.65	02:57 15:32	1.11 0.82	07:44	17:35	
Mon	2	10:48 23:08	4.90 4.60	04:56 17:21	1.08 0.83	08:11	17:06		Tues	17	09:53 22:24	4.97 4.92	04:01 16:30	0.75 0.40	07:42	17:37	
Tues	3	11:24 23:39	4.96 4.61	05:36 17:59	0.94 0.70	08:10	17:08	Full Moon 23:09	Wed	18	10:38 23:09	5.27 5.12	04:53 17:20	0.41 0.05	07:40	17:39	New Moon 23:47
Wed	4	11:52	4.98	06:09 18:32	0.84 0.63	08:07	17:11		Thur	19	11:21 23:51	5.47 5.23	05:38 18:04	0.15	07:37	17:41	
Thur	5	00:04 12:20	4.63 4.97	06:38 19:02	0.78 0.61	08:06	17:13		Fri	20	12:05	5.56	06:19 18:46	0.01 -0.25	07:35	17:43	
Fri	6	00:32 12:50	4.64 4.94	07:05 19:29	0.76 0.62	08:04	17:15		Sat	21	00:34 12:50	5.23 5.55	06:59 19:26	0.00	07:33	17:45	
Sat	7	01:03	4.65 4.89	07:30 19:55	0.78	08:02	17:17		Sun	22	01:19 13:38	5.15 5.43	07:41 20:07	0.11 0.05	07:31	17:47	
Sun	8	01:38 13:59 02:16	4.64 4.81 4.58	07:55 20:22 08:25	0.83 0.75 0.93	08:00	17:19		Mon	23	02:07 14:29	5.00 5.22	08:23 20:50	0.32	07:29	17:49	
Mon	9	14:39 02:58	4.69 4.48	20:52 08:59	0.86 1.08	07:58 07:56	17:21		Tues	24	02:59	4.80	09:09	0.36	07:26		
Tues	10	15:22 03:45	4.52 4.33	21:27 09:38	1.03	07:54	17:23		Wed	25	15:24 03:57	4.94 4.57	21:35 10:00	0.72	07:24	17:51	First Quarte
Wed	11	16:10 04:37	4.32 4.16	22:08 10:26	1.23	07:52	17:25	Last Quarter	Thur	26	16:27 05:06	4.63 4.37	22:26 10:58	1.10 1.16	07:22	17:53	17:14
Thur	12	17:06 05:41	4.14 4.06	23:02	1.42	07:50	17:27	03:50	Fri	27	17:40 06:20	4.35 4.26	23:27	1.42	07:19	17:55	
Fri	13	18:17 06:57	4.04 4.10	00:18	1.51	07:48	17:29				18:55 07:32	4.19 4.29	12:10 00:52	1.34 1.60	07:17	17:57	
Sat	14	19:36 08:06	4.12 4.32	12:59 01:42	1.50	07:46	17:31		Sat	28	20:10	4.18	13:45	1.34		17:59	
Sun	15	20:42	4.36	14:20	1.22	07.46	17:33										
			All time	s are give	n in Local T	ime						All time	s are give	n in Local T	Γime		

### **Soldiers Point (Dundalk)**

#### **MARCH 2015**

			Tide at [	Dundalk		Sı	ın					Tide at I	Dundalk		Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H: M	Sets H:M	Phases
Sun	1	08:42 21:18	4.42 4.27	02:33 15:11	1.54 1.18	07:15	18:01		Mon	16	07:33 20:19	4.25 4.31	01:07 13:50	1.38 1.04	06:39	18:30	
Mon	2	09:40 22:09	4.60 4.39	03:44 16:13	1.35 0.97	07:12	18:03		Tues	17	08:37 21:17	4.56 4.61	02:29 15:07	1.10 0.65	06:36	18:32	
Tues	3	10:26 22:48	4.74 4.48	04:36 16:59	1.13 0.79	07:10	18:05		Wed	18	09:31 22:06	4.90 4.89	03:37 16:09	0.72	06:34	18:33	
Wed	4	11:01 23:16	4.82 4.54	05:16 17:36	0.93 0.65	07:08	18:07		Thur	19	10:18 22:51 11:03	5.20 5.09 5.40	04:34 17:02 05:20	0.35 -0.08 0.07	06:31	18:35	New Moon
Thur	5	11:30 23:41	4.85 4.58	05:48 18:08	0.78 0.57	07:05	18:09	Full Moon 18:05	Fri	20	23:32 11:47	5.19 5.48	17:47 06:03	-0.27 -0.10	06:29	18:37	09:36
Fri	6	11:57	4.85	06:17 18:35	0.68 0.54	07:03	18:11		Sat	21	00:13	5.20	18:29 06:44	-0.29 -0.13	06:24	18:39	
Sat	7	00:06 12:24	4.63 4.84	06:42 19:00	0.63 0.54	07:01	18:13		Sun	22	12:32 00:56	5.44 5.13	19:07 07:24	-0.17 -0.03	06:22	18:41	
Sun	8	00:33 12:54	4.68 4.82	07:04 19:23	0.61 0.56	06:58	18:14		Tues	24	13:18 01:42	5.30 4.99	19:48 08:06	0.07	06:19	18:43	
Mon	9	01:06 13:30	4.71 4.77	07:29 19:51	0.62 0.61	06:56	18:16		Wed	25	14:09 02:30 15:03	5.07 4.80 4.79	20:28 08:52 21:12	0.40 0.43 0.77	06:17	18:45 18:47	
Tues	10	01:43 14:10	4.68 4.68	08:00 20:22	0.68 0.71	06:53	18:18		Thur	26	03:24 16:03	4.79 4.57 4.47	09:40 21:59	0.77 0.73 1.14	06:14	18:48	
Wed	11	02:25 14:53	4.59 4.54	08:33 20:58	0.79 0.87	06:51	18:20		Fri	27	04:30 17:13	4.35 4.20	10:34 22:54	1.01	06:12	18:50	First Quarter 07:43
Thur	12	03:10 15:41	4.45 4.35	09:12 21:39	0.96 1.09	06:49	18:22		Sat	28	05:43 18:27	4.19 4.04	11:38	1.22	06:09	18:52	
Fri	13	04:01 16:36	4.26 4.16	09:58 22:30	1.15	06:46	18:24	Last Quarter 17:48	Sun	29	07:57 20:40	4.17 4.03	00:06 14:04	1.66 1.27	07:07	19:54	
Sat	14	05:01 17:45	4.11	11:01 23:41	1.31 1.46	06:44	18:26		Mon	30	09:06 21:48	4.27 4.15	02:48 15:32	1.64 1.15	07:04	19:56	
Sun	15	06:16 19:07	4.08 4.08	12:25	1.29	06:41	18:28		Tues	31	10:06 22:39	4.44 4.30	04:07 16:37	1.43 0.97	07:02	19:58	

All times are given in Local Time

All times are given in Local Time

#### **APRIL 2015**

			Tide at I	Dundalk		St	ın					Tide at I	Dundalk		St	ın	
Da	te	High	Water	Low	Water	AM	PM	Moon's Phases	Da	te	High	Water	Low	Water	AM	PM	Moon's Phases
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H : M	Sets H : M	Phases
Wed	1	10:54 23:17	4.58 4.42	05:03 17:27	1.19 0.79	06:59	20:00		Thur	16	10:08 22:47	4.88 4.85	04:10 16:47	0.74 0.23	06:23	20:28	
Thur	2	11:31 23:47	4.68 4.52	05:46 18:05	0.96 0.66	06:57	20:02		Fri	17	11:00 23:32	5.12 5.03	05:10 17:42	0.42 -0.01	06:21	20:29	
Fri	3	12:03	4.73	06:21 18:38	0.79 0.58	06:54	20:03		Sat	18	11:47	5.27	06:02 18:30	0.16 -0.13	06:19	20:31	New Moon 18:57
Sat	4	00:14 12:31	4.59 4.74	06:51 19:06	0.67 0.54	06:52	20:05	Full Moon 12:06	Sun	19	00:14 12:32	5.12 5.32	06:48 19:12	0.01 -0.12	06:16	20:33	
Sun	5	00:38 12:58	4.66 4.75	07:14 19:30	0.60 0.52	06:50	20:07		Mon	20	00:55 13:16	5.14 5.27	07:29 19:51	-0.03 0.02	06:14	20:35	
Mon	6	01:04 13:29	4.73 4.75	07:38 19:56	0.55 0.52	06:47	20:09		Tues	21	01:36 14:02	5.09 5.13	08:10 20:30	0.04	06:12	20:37	
Tues	7	01:37 14:05 02:16	4.77 4.73 4.77	08:06 20:26 08:38	0.53 0.56 0.56	06:45	20:11		Wed	22	02:20 14:51 03:06	4.98 4.93 4.83	08:52 21:10 09:36	0.19 0.53 0.41	06:09	20:39	
Wed	8	14:46 02:59	4.77 4.67 4.71	21:00 09:15	0.66 0.64	06:42	20:13		Thur	23	15:42 03:58	4.68 4.64	21:50 10:22	0.84	06:07	20:41	
Thur	9	15:31 03:45	4.57 4.59	21:38 09:56	0.82	06:37	20:15		Fri	24	16:39 04:57	4.40 4.43	22:35 11:11	1.16	06:05 06:03	20:42	First Quarter
Fri	10	16:20 04:36	4.41 4.43	22:20 10:45	1.03	06:35	20:16		Sat	25	17:43 06:06	4.16 4.25	23:26	1.44	06:01	20:44	23:55
Sat	11	17:17 05:36	4.24 4.28	23:12	1.24	06:33	20:18	Last Quarter	Sun	26	18:51 07:17	4.01 4.18	12:08 00:26	1.10 1.63	05:58	20:46	
Sun	12	18:25 06:47	4.13 4.23	00:18	1.36	06:30	20:20	03:44	Mon	27	20:00 08:24	3.99 4.21	13:15 01:42	1.21	05:56	20:48	
Mon	13	19:43 08:03	4.17 4.35	13:02 01:38	1.05	06:28	20:22		Tues	28	21:03 09:23	4.08 4.32	14:36 03:09	1.17	05:54	20:50	
	14	20:55 09:10	4.35 4.60	14:24 02:57	0.86	06:26	20:24		Wed	29	21:55 10:13	4.23 4.45	15:46 04:16	1.05		20:52	
Wed	15	21:55	4.61	15:40	0.55	06:26	20:26		Thur	30	22:37	4.39	16:42	0.90	05:52	20:54	
			All time	s are give	n in Local 1	Time						All time	s are give	n in Local 1	Time		

### **Soldiers Point (Dundalk)**

#### **MAY 2015**

			Tide at I	Dundalk		Sı	ın					Tide at I	Dundalk		Sı	ın	
Da	ite	High	Water	Low	Water	AM	PM	Moon's Phases	Da	te	High	Water	Low	Water	AM	PM	Moon's Phases
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H: M	Sets H : M	Priases
Fri	1	10:55 23:13	4.56 4.52	05:06 17:27	1.10 0.77	05:50	20:55		Sat	16	10:42 23:16	5.02 4.95	04:47 17:21	0.62 0.26	05:21	21:22	
Sat	2	11:31 23:43	4.63 4.62	05:45 18:02	0.92 0.68	05:48	20:57		Sun	17	11:33	5.12	05:44 18:13	0.41	05:20	21:24	
Sun	3	12:03	4.67	06:18 18:33	0.79 0.61	05:46	20:59		Mon		00:00 12:19 00:40	5.04 5.13 5.07	06:34 18:57 07:17	0.28 0.22 0.22	05:18 05:17	21:25	New Moon 04:13
Mon	4	00:09 12:33	4.72 4.71	06:45 19:01	0.68 0.57	05:44	21:01	Full Moon 03:42	Tues	19	13:03 01:20	5.08 5.05	19:36 07:59	0.32	05:17	21:27	
Tues	5	00:38 13:05	4.81 4.74	07:13 19:31	0.59	05:42	21:03		Wed	20	13:48 02:01	4.97 4.99	20:14 08:40	0.48 0.33	05:14	21:29	
Wed	6	01:12 13:44 01:53	4.87 4.75 4.89	07:46 20:05 08:22	0.54 0.58 0.53	05:40	21:05		Fri	22	14:33 02:45	4.81 4.88	20:52 09:21	0.68	05:12	21:30	
Thur	7	14:27 02:38	4.72 4.86	20:42 09:02	0.66 0.58	05:38 05:36	21:06		Sat	23	15:20 03:33 16:11	4.62 4.74 4.41	21:30 10:03 22:12	0.90 0.65 1.14	05:11	21:32	
Fri	8	15:14 03:27	4.65 4.78	21:22 09:46	0.80 0.67	05:34	21:08		Sun	24	04:25 17:07	4.57 4.21	10:49 22:58	0.85	05:09	21:35	
Sat	9	16:06 04:19	4.54 4.68	22:07 10:37	0.97	05:32	21:10		Mon	25	05:25 18:09	4.39 4.06	11:38 23:49	1.03 1.54	05:08	21:36	First Quarter 17:19
Sun	10	17:03 05:18	4.42 4.57	22:59 11:35	1.13 0.85	05:30	21:12	Last Quarter	Tues	26	06:31 19:12	4.25 4.01	12:32	1.17	05:07	21:38	
Mon		18:09 06:25	4.33 4.51	23:59	1.24	05:28	21:13	10:36	Wed	27	07:36 20:13 08:36	4.21 4.06 4.24	00:49 13:34 01:58	1.64 1.23 1.62	05:06	21:39	
Wed		19:20 07:36	4.34 4.56	12:42 01:09	0.86 1.22	05:27	21:15		Thur	28	21:08 09:29	4.18 4.33	14:43 03:09	1.19	05:04 05:03	21:41	
		20:30 08:45	4.45 4.70	13:56 02:25	0.76 1.09	05:25	21:17		Fri	29	21:55 10:16	4.34 4.44	15:45 04:11	1.10	05:03	21:42	
Thur		21:32 09:46	4.63 4.87	15:12 03:39	0.59 0.86	05:23	21:19		Sat	30	22:36 10:57	4.50 4.55	16:37 05:00	0.97	05:01	21:43	
Fri	15	22:27	4.81	16:21	0.40		21:20		Sun	31	23:11	4.65	17:20	0.85	30.01	21:45	

All times are given in Local Time

All times are given in Local Time

#### **JUNE 2015**

		Tide at I	Dundalk		Sı						Tide at [	Dundalk		Sı	un	
е	High '	Water	Low	Water			Moon's	Da	te	High	Water	Low \	Vater			Moon's
	Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases
1	11:33 23:42	4.64 4.78	05:40 17:59	0.95 0.73	05:00	21:46		Tues	16	12:10	4.94	06:22 18:44	0.58 0.57	04:52	21:59	New Moon 14:05
2	12:08	4.73	06:16 18:34	0.78 0.64	04:59	21:47	Full Moon 16:19	Wed	17	00:29 12:53	5.01 4.90	07:08 19:23	0.49 0.60	04:52	22:00	
3	00:15 12:45	4.91 4.79	06:51 19:10	0.64 0.58	04:58	21:48		Thur	18	01:06 13:32	5.02 4.82	07:48 19:59	0.46 0.68	04:52	22:00	
4	00:52 13:25	5.00 4.83	07:29 19:47	0.53 0.57	04:58	21:49		Fri	19	01:42 14:12	5.00 4.72	08:26 20:34	0.49 0.78	04:52	22:00	
5	01:34 14:10	5.06 4.83	08:08 20:26	0.48	04:57	21:50		Sat	20	02:22 14:53	4.94 4.60	09:05 21:09	0.57 0.91	04:52	22:01	
6	02:20	5.07	08:51	0.48	04:56	21:51		Sun	21	03:05	4.84	09:43	0.69	04:52	22:01	
7	03:10	5.03	09:37	0.53	04:55			Mon	22	03:51	4.70	10:23	0.84	04:52		
8	04:03	4.96	10:27	0.61	04:55			Tues	23	04:39	4.53	11:05	1.00	04:52		
9	05:01	4.87	11:21	0.69	04:54		Last Quarter	Wed	24	05:35	4.36	11:51	1.16	04:53		First Quarter 11:03
10	06:04	4.79			04:54		10.42	Thur	25	06:39	4.23	00:03	1.57	04:53		11.00
11	07:12	4.74	00:42	1.17	04:53			Fri	26	07:44	4.17	01:01	1.65	04:53		
12	08:22	4.75	01:53	1.15	04:53			Sat	27	08:43	4.21	02:04	1.62	04:54		
13	09:28	4.81	03:09	1.05	04:53			Sun	28	09:36	4.32	03:11	1.50	04:54		
14	10:29	4.88	04:23	0.89	04:52			Mon	29	10:24	4.46	04:11	1.31	04:55		
15	11:23	4.93	05:28	0.72	04:52			Tues	30	11:06	4.62	05:02	1.07	04:56		
	23:48				ïme	21.09				23:16				Time	22.01	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14	Time H: M  1 11:33 23:42 2 12:08 3 00:15 12:45 4 00:52 13:25 5 01:34 14:10 6 02:20 14:59 7 03:10 8 04:03 16:48 9 07:11 20:05 10 06:04 18:57 11 07:12 20:05 12 21:10 13 22:209 14 10:29 23:02 11:23	High Water  Time Height Metres  1 11:33 4.64 23:42 4.78  2 12:08 4.73 3 00:15 4.91 12:45 4.79 4 00:52 5.00 13:25 4.83 5 11:32 4.83 6 01:34 5.06 14:10 4.83 6 02:20 5.07 14:59 4.79 7 03:10 5.03 8 16:48 4.63 9 05:01 4.87 17:49 4.54 10 06:04 4.79 11 20:05 4.52 12 21:10 4.62 13 09:28 4.81 122:09 4.88 13 23:02 4.87 15 11:23 4.93 15 11:23 4.93 15 11:23 4.93	High Water Low  Time Height Time H: M Metres H: M  1 11:33 4.64 05:40 23:42 4.78 17:59 2 12:08 4.73 18:34 3 00:15 4.91 06:51 12:45 4.79 19:10 4 00:52 5.00 07:29 13:25 4.83 19:47 5 14:10 4.83 20:26 6 02:20 5.07 08:51 14:59 4.79 21:09 7 03:10 5.03 09:37 7 15:51 4.72 21:54 8 04:03 4.96 10:27 16:48 4.63 22:44 9 05:01 4.87 11:21 17:49 4.54 23:39 10 18:57 4.49 12:22 11 07:12 4.74 00:42 12 20:05 4.52 13:28 12 21:10 4.62 14:43 13 09:28 4.81 03:09 14 23:02 4.87 17:02 15 11:23 4.93 05:28 15 23:48 4.96 17:58	High Water Low Water  H: M Metres H: M Metres  1 11:33 4.64 05:40 0.95 23:42 4.78 17:59 0.73 06:16 0.78 2 12:08 4.73 18:34 0.64 3 00:15 4.91 06:51 0.64 12:45 4.79 19:10 0.58 4 00:52 5.00 07:29 0.53 13:25 4.83 19:47 0.57 5 14:10 4.83 20:26 0.62 6 02:20 5.07 08:51 0.48 14:10 4.83 20:26 0.62 6 14:59 4.79 21:09 0.72 7 03:10 5.03 09:37 0.53 15:51 4.72 21:54 0.86 8 04:03 4.96 10:27 0.61 16:48 4.63 22:44 0.99 9 05:01 4.87 11:21 0.69 17:49 4.54 23:39 1.11 10 06:04 4.79 11 20:05 4.52 13:28 0.78 12 21:10 4.62 14:43 0.76 13 09:28 4.81 03:09 1.05 14 10:29 4.88 04:23 0.89 11:23 4.93 05:28 0.72 11:23 4.93 05:28 0.72 11:23 4.93 05:28 0.72 11:23:48 4.96 17:58 0.58	High Water Low Water  H: M Metres H: M Metres  1 11:33	High Water Low Water  H: M Metres H: M Metres H: M Metres H: M Metres  1 11:33 4.64 05:40 0.95 05:00 2 12:08 4.78 17:59 0.73 04:59 3 00:15 4.91 06:51 0.64 04:58 4 00:52 5.00 07:29 0.53 04:58 13:25 4.83 19:47 0.57 21:48 4 00:52 5.00 07:29 0.53 04:58 13:25 4.83 19:47 0.57 21:49 5 14:10 4.83 20:26 0.62 21:50 6 02:20 5.07 08:51 0.48 04:57 7 03:10 5.03 09:37 0.53 04:55 14:10 4.83 20:26 0.62 21:50 8 10:34 4.66 10:27 0.61 04:55 16:48 4.63 22:44 0.99 21:59 9 05:01 4.87 11:21 0.69 04:54 17:49 4.54 23:39 1.11 0.53 18:57 4.49 12:22 0.75 10:06:04 4.79 12:22 0.75 10:06:04 4.79 12:22 0.75 10:06:04 4.79 12:22 0.75 11 07:12 4.74 00:42 1.17 04:53 12 21:10 4.62 14:43 0.76 21:57 13 09:28 4.81 03:09 1.05 04:53 13 09:28 4.81 03:09 1.05 04:53 14 23:02 4.87 17:02 0.63 04:52 15 11:23 4.93 05:28 0.72 04:52 11:23 13:28 0.78 04:52 11:23 4.93 05:28 0.72 04:52 11:23 4.93 05:28 0.72 04:52 11:23 13:28 0.78 04:53 11:23 4.93 05:28 0.72 04:52 11:23 13:28 0.76 21:57	High Water	High Water Low Water H: M Height H: M Metres H: M Metres H: M Metres H: M High H: M H: M High H: M High Metres H: M Metres H: M H: M High H: M H: M High Metres H: M Metres H: M H: M H: M H: M High H: M H:	High Water Low Water H; M Height H; M Metres H; M Metres H; M Metres H; M H;	High Water Low Water H: M Height H: M Metres H: M Metres H: M Metres H: M Metres H: M H:	High Water   Low Water   Time   Height   H: M   Metres   H: M   Height   H: M   Metres   M: M: Metres   M: Metres   M: Metres   M: Metres   M: Metres   M: M: Metres   M: Metres   M: Metres   M: Metres   M: Metres   M: M: Metres   M: Metres   M: Metres   M: Metres   M: Metres   M:	High Water	High Water	High Water   Low Water   Time   Height   H: M   Metres   H:	High Water   Low Water   Time   Height   High   Metres   High   High   Metres   High   High

### **Soldiers Point (Dundalk)**

#### **JULY 2015**

			Tide at	Dundalk		Sı	un					Tide at I	Dundalk		Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	ıte	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Wed	1	11:46 23:54	4.77 5.02	05:47 18:11	0.82 0.67	04:57	22:00		Thur	16	00:18 12:42	4.98 4.75	06:57 19:09	0.65 0.78	05:12	21:49	New Moon 01:24
Thur	2	12:26	4.89	06:31 18:51	0.59 0.54	04:57	22:00	Full Moon 02:20	Fri	17	00:51 13:15	5.01 4.70	07:34 19:43	0.59 0.77	05:14	21:47	
Fri	3	00:33 13:08	5.17 4.96	07:13 19:31	0.41 0.47	04:58	21:59		Sat	18	01:22 13:47	5.00 4.65	08:10 20:14	0.58 0.80	05:15	21:46	
Sat	4	01:16 13:53	5.27 4.99	07:55 20:11	0.31 0.47	04:59	21:59		Sun	19	01:57 14:23	4.97 4.60	08:43 20:44	0.62 0.86	05:16	21:45	
Sun	5	02:02 14:41	5.30 4.97	08:37 20:53	0.29 0.55	05:00	21:58		Mon	20	02:34 15:01	4.90 4.54	09:17 21:17	0.70 0.96	05:18	21:44	
Mon	6	02:51 15:32	5.28 4.90	09:22 21:38	0.34 0.68	05:01	21:58		Tues	21	03:14 15:42 03:56	4.80 4.45 4.65	09:50 21:50 10:27	0.82 1.10 0.97	05:19	21:42	
Tues	7	03:44 16:27	5.20 4.79	10:11 22:25	0.45	05:02	21:57		Wed	22	16:25 04:42	4.34 4.47	22:27 11:06	1.27 1.14	05:21	21:41	
Wed	8	04:40 17:25	5.08 4.67	11:02 23:17	0.60	05:03	21:56	Last Quarter 20:24	Thur	23	17:13 05:34	4.21 4.28	23:10 11:53	1.45	05:24	21:39	First Quarte
Thur	9	05:42 18:31	4.92 4.56	11:58	0.77	05:04	21:56	20:21	Fri	24	18:09 06:38	4.10 4.13	00:04	1.61	05:25	21:38	04:04
Fri	10	06:51 19:41	4.77 4.52	00:16 13:01	1.15 0.92	05:05	21:55		Sat	25 26	19:16 07:52	4.07 4.09	12:48 01:08	1.43 1.67	05:27	21:36	
Sat	11	08:03 20:48	4.69 4.57	01:25 14:15	1.24	05:06	21:54		Sun		20:24 08:58	4.15 4.18	13:51 02:18	1.46 1.60	05:29	21:35	
Sun	12	09:14 21:52	4.67 4.67	02:45 15:34	1.23	05:07	21:53			28	21:21 09:54	4.35 4.37	14:57 03:28	1.36 1.39	05:30	21:33	
Mon	13	10:18 22:48	4.70 4.80	04:06	1.11	05:08	21:52		Wed	29	22:09 10:42	4.61 4.59	16:02 04:31	1.16 1.08	05:32	21:31	
Tues	14	11:15	4.75	16:45 05:16	0.94	05:10	21:51		Thur	30	22:53 11:26	4.88 4.81	16:59 05:25	0.91 0.74	05:34	21:30	
Wed	15	23:37	4.91	17:44 06:12 18:31	0.89 0.78 0.82	05:11	21:51		Fri	31	23:34	5.13 4.99	17:47 06:13 18:33	0.65 0.42 0.43	05:35	21:28	Full Moon 10:43

All times are given in Local Time

All times are given in Local Time

#### **AUGUST 2015**

			Tide at I	Dundalk		Sı	un					Tide at I	Dundalk		Sı	ın	
Da	ıte	High	Water	Low	Water	AM	PM	Moon's Phases	Da	te	High	Water	Low '	Water	AM	PM	Moon's Phases
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H : M	Sets H : M	Phases
Sat	1	00:15 12:50	5.34 5.10	06:57 19:13	0.18 0.29	05:37	21:24		Sun	16	01:00 13:21	5.00 4.65	07:48 19:52	0.59 0.76	06:03	20:54	
Sun	2	00:57 13:33	5.46 5.14	07:39 19:54	0.05 0.25	05:39	21:23		Mon	17	01:30 13:52	4.97 4.65	08:18 20:19	0.62 0.78	06:05	20:52	
Mon	3	01:41 14:19	5.50 5.11	08:21 20:36	0.04 0.32	05:40	21:21		Tues	18	02:03 14:27	4.93 4.63	08:46 20:46	0.68	06:07	20:50	
Tues	4	02:29 15:09	5.46 5.02	09:05 21:18	0.15 0.48	05:42	21:19		Wed	19	02:39 15:03	4.84 4.59	09:14 21:15	0.78	06:08	20:48	
Wed	5	03:21 16:00	5.33 4.89	09:50 22:05	0.35 0.69	05:44	21:17		Thur	20	03:19 15:44 04:03	4.72 4.51 4.55	09:44 21:48 10:19	0.91 1.10	06:10	20:45	
Thur	6	04:15 16:58	5.13 4.72	10:39 22:56	0.60 0.93	05:45	21:15		Fri	21	16:29 04:51	4.55 4.37 4.34	22:25 11:01	1.08 1.28 1.28	06:12	20:43	First Quarter
Fri	7	05:18 18:03	4.89 4.56	11:32 23:53	0.87 1.15	05:47	21:13	Last Quarter 02:03	Sat	22	17:19 05:48	4.22 4.13	23:11 11:54	1.48 1.47	06:14	20:41	19:31
Sat	8	06:30 19:15	4.66 4.47	12:33	1.13	05:49	21:11	02.00	Sun	23	18:19 07:01	4.10 4.01	00:14	1.63	06:16 06:17	20:38	
Sun	9	07:48 20:27	4.51 4.48	01:01 13:47	1.32	05:51	21:09		Mon	24	19:33 08:23	4.10 4.07	13:03 01:34	1.56 1.60	06:17	20:36	
Mon	10	09:00	4.48	02:25	1.30	05:52	21:07		Tues	25	20:45 09:27	4.27 4.30	14:18 02:52	1.49	06:21	20:34	
Tues	11	21:34 10:09	4.60 4.53	15:13 03:53	1.32 1.23	05:54			Wed	26	21:42 10:21	4.57 4.58	15:30 04:04	1.26 1.01	06:23	20:31	
Wed	12	22:34 11:06	4.76 4.61	16:29 05:06	1.23 1.03	05:56	21:05		Thur	27	22:30 11:06	4.91 4.86	16:33 05:02	0.93	06:25	20:29	
Thur	13	23:24 11:52	4.89 4.66	17:29 05:59	1.09 0.83	05:58	21:03		Fri	28	23:13 11:48	5.22	17:27 05:54	0.59	06:26	20:27	Full Moon
Fri	14	00:03	4.97	18:15 06:42	0.95 0.69	06:00	21:01	New Moon	Sat	29	23:55	5.46	18:14 06:39	0.31	06:28	20:24	18:35
		12:28 00:33	4.67 5.00	18:51 07:17	0.85 0.61	06:01	20:58	14:53	Sun	30	12:30 00:36	5.22 5.60	18:55 07:20	0.12 -0.17	06:30	20:22	
Sat	15	12:55	4.65	19:23	0.78		20:56		Mon	31	13:12	5.27	19:36	0.06	30.00	20:20	
			All time	s are give	n in Local T	Time						All time	s are give	n in Local T	ime		

### **Soldiers Point (Dundalk)**

#### **SEPTEMBER 2015**

			Tide at I	Dundalk		Sı	un					Tide at I	Dundalk		Sı	un	
Da	te	High	Water	Low '	Water	AM	PM	Moon's	Da	ate	High	Water	Low	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Tues	1	01:19 13:56	5.62 5.22	08:02 20:17	-0.13 0.14	06:32	20:17		Wed	16	01:36 13:55	4.92 4.75	08:14 20:18	0.67 0.78	06:58	19:40	
Wed	2	02:06 14:43	5.53 5.11	08:44 21:00	0.05 0.32	06:33	20:15		Thur	17	02:10 14:31	4.85 4.73	08:40 20:47	0.75 0.86	07:00	19:38	
Thur	3	02:56 15:33	5.34 4.95	09:28 21:45	0.33 0.58	06:35	20:12		Fri	18	02:49 15:12	4.75 4.65	09:10 21:20	0.87 0.98	07:02	19:35	
Fri	4	03:51 16:30	5.08 4.75	10:15 22:34	0.67	06:37	20:10		Sat	19	03:32 15:56	4.59 4.53	09:45 21:57	1.04	07:04	19:33	
Sat	5	04:54 17:34	4.77 4.55	11:06 23:30	1.02 1.14	06:39	20:07	Last Quarter 09:54	Sun	20	04:20 16:45	4.39 4.36	10:25 22:42	1.26	07:06	19:30	
Sun	6	06:10 18:48 07:30	4.50 4.43 4.34	12:05 00:37	1.33 1.34	06:41	20:05		Mon	21	05:15 17:42 06:25	4.18 4.21 4.03	11:16 23:40	1.48 1.51	07:07	19:28	First Quarter 08:59
Mon	7	20:02 08:45	4.43 4.33	13:18 02:04	1.53	06:42	20:03		Tues	22	18:51 07:50	4.03 4.16 4.07	12:25 01:00	1.62 1.51	07:09	19:25	
Tues	8	21:12 09:55	4.54 4.42	14:50 03:35	1.54	06:44	20:00		Wed	23	20:08 09:01	4.30 4.30	13:44 02:22	1.56	07:11	19:23	
Wed	9	22:15 10:51	4.72 4.55	16:09 04:45	1.40	06:48	19:58		Thur	24	21:12 09:58	4.59 4.62	15:00 03:38	1.32	07:14	19:20	
	10	23:04	4.87 4.63	17:07 05:37	1.21	06:50	19:55		Fri	25	22:05 10:45	4.94 4.92	16:07 04:40	0.96 0.48	07:14	19:18	
	11	23:42	4.95	17:53 06:19	1.02	06:51	19:53		Sat	26	22:51 11:29	5.26 5.16	17:03 05:34	0.59	07:18	19:16	
	12	12:07 00:12	4.67 4.98	18:30 06:54	0.87	06:53	19:50	New Moon	Sun	27	23:35	5.50	17:53 06:20	0.28	07:20	19:13	Full Moon
Sun		12:32 00:38	4.69 4.98	19:02 07:23	0.78	06:55	19:48	06:41	Mon		12:10 00:17	5.30 5.63	18:37 07:03	0.08	07:22	19:11	02:50
Mon	14	12:57 01:05	4.71 4.96	19:29 07:50	0.74 0.61	06:57	19:45		Tues	29	12:51 01:00	5.35 5.62	19:18 07:43	0.01	07:24	19:08	
Tues	15	13:24	4.73	19:54	0.74	30.37	19:43		Wed	30	13:33	5.30	20:00	0.07	37.24	19:06	

All times are given in Local Time

All times are given in Local Time

#### **OCTOBER 2015**

			Tide at I	Dundalk		Si	un					Tide at I	Dundalk		Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low '	Water	AM	PM	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases
Thur	1	01:46 14:19	5.50 5.19	08:24 20:43	0.09 0.26	07:25	19:03		Fri	16	01:45 14:04	4.85 4.86	08:12 20:25	0.77 0.84	07:53	18:27	
Fri	2	02:36 15:09	5.28 5.02	09:06 21:28	0.41 0.52	07:27	19:01		Sat	17	02:24 14:45	4.76 4.80	08:44 21:00	0.88 0.93	07:55	18:25	
Sat	3	03:31 16:03	4.99 4.82	09:52 22:17	0.79 0.81	07:29	18:58		Sun	18	03:08 15:30	4.64 4.69	09:20 21:38	1.05 1.06	07:57	18:23	
Sun	4	04:34 17:06	4.67 4.61	10:41 23:10	1.16 1.09	07:31	18:56	Last Quarter 21:06	Mon	19	03:57 16:18	4.47 4.55	10:02 22:23	1.26	07:59	18:20	F: . O .
Mon	5	05:48 18:18	4.39 4.46	11:37	1.48	07:33	18:53		Tues	20	04:53 17:14 06:00	4.29 4.42 4.17	10:52 23:19 11:57	1.47 1.34 1.60	08:01	18:18	First Quarter 20:31
Tues	6	07:06 19:31	4.23 4.42	00:13 12:45	1.31 1.69	07:34	18:51		Wed	21	18:19 07:19	4.17 4.36 4.20	00:32	1.35	08:03 08:05	18:16	
Wed	7	08:21 20:42	4.24 4.50	01:34 14:15	1.37 1.70	07:36	18:48		Thur	22	19:32 08:32	4.44 4.39	13:11 01:51	1.57	08:07	18:13	
Thur	8	09:31 21:45	4.36 4.66	03:05 15:35	1.26 1.54	07:38	18:46		Fri	23	20:39 09:32	4.67 4.68	14:26 03:07	1.36	08:08	18:11	
Fri	9	10:26 22:35	4.52 4.80	04:15 16:37	1.07 1.33	07:40	18:44		Sat	24	21:38 09:23	4.97 4.96	15:36 03:15	1.04 0.49	07:10	18:09	
Sat	10	11:07 23:14	4.64 4.90	05:08 17:25	0.88 1.12	07:42	18:41		Mon	26	21:29 10:09	5.24 5.18	15:38 04:12	0.69 0.19	07:12	17:07	
Sun	11	11:39 23:46	4.72 4.94	05:51 18:04	0.74 0.95	07:44	18:39		Tues	27	22:16 10:51	5.44 5.32	16:33 05:01	0.40	07:14	17:05	Full Moon
Mon	12	12:06	4.78	06:26 18:38	0.66 0.84	07:46	18:36		Wed	28	23:01 11:33	5.54 5.38	17:20 05:46	0.20 -0.04	07:16	17:03 17:00	12:05
Tues	13	00:15 12:32	4.94 4.81	06:55 19:06	0.64	07:47	18:34	New Moon 00:06	Thur	29	23:45	5.52 5.35	18:05 06:27 18:47	0.12 0.05 0.15	07:18	16:58	
Wed	14	00:42 12:58	4.92 4.85	07:21 19:30	0.66 0.78	07:49	18:32		Fri	30	00:32 13:00	5.35 5.39 5.26	07:07 19:30	0.15 0.27 0.29	07:20	16:56	
Thur	15	01:11 13:27	4.89 4.87	07:45 19:56	0.70 0.79	07:51	18:29		Sat	31	01:21 13:48	5.18 5.11	07:48 20:13	0.56 0.50	07:22	16:54	
					n in Local T	ime								n in Local T	ime		

### **Soldiers Point (Dundalk)**

#### **NOVEMBER 2015**

			Tide at I	Dundalk		Sı	un					Tide at [	Dundalk		Sı	un	
Da	te	High	Water	Low	Water	AM	PM	Moon's	Da	te	High	Water	Low	Water	AM	РМ	Moon's
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H:M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H: M	Sets H:M	Phases
Sun	1	02:15 14:40	4.92 4.93	08:31 21:00	0.90 0.76	07:24	16:52		Mon	16	01:49 14:09	4.72 4.90	08:01 20:25	1.03 0.92	07:53	16:26	
Mon	2	03:14 15:39	4.63 4.73	09:17 21:50	1.23 1.01	07:26	16:50		Tues	17	02:39 14:58	4.61 4.81	08:44 21:10	1.20 1.02	07:55	16:24	
Tues	3	04:21 16:45	4.38 4.55	10:08 22:46	1.53 1.23	07:28	16:48	Last Quarter 12:24	Wed	18	03:34 15:53	4.49 4.71	09:33 22:03	1.38 1.11	07:57	16:23	
Wed	4	05:32 17:54	4.22 4.46	11:08 23:54	1.74 1.35	07:30	16:46		Thur	19	04:37 16:54	4.39 4.64	10:31 23:06	1.50 1.13	07:59	16:21	First Quarter 06:27
Thur	5	06:43 19:02	4.20 4.46	12:22	1.80	07:32	16:44		Fri	20	05:48 18:00	4.39 4.66	11:39	1.51	08:01	16:20	
Fri	6	07:49 20:03	4.30 4.55	01:15 13:46	1.33 1.69	07:34	16:43		Sat	21	07:00 19:08	4.51 4.77	00:18 12:52	1.05 1.38	08:02	16:18	
Sat	7	08:45 20:57	4.46 4.67	02:30 14:56	1.20 1.50	07:36	16:41		Sun	22	08:04 20:11	4.71 4.95	01:32 14:05	0.87 1.15	08:04	16:17	
Sun	8	09:28 21:40	4.62 4.76	03:29 15:50	1.04 1.29	07:38	16:39		Mon	23	09:00 21:09	4.94 5.13	02:45 15:13	0.65 0.89	08:06	16:16	
Mon	9	10:04 22:18	4.75 4.82	04:16 16:34	0.91 1.12	07:40	16:37		Tues	24	09:51 22:01	5.13 5.27	03:49 16:14	0.44 0.63	08:08	16:15	
Tues	10	10:37 22:50	4.84 4.85	04:54 17:10	0.83 1.00	07:42	16:35		Wed	25	10:37 22:50	5.27 5.34	04:44 17:07	0.31 0.44	08:09	16:14	Full Moon 22:44
Wed	11	11:06 23:20	4.91 4.86	05:27 17:41	0.78 0.92	07:44	16:34	New Moon 17:47	Thur	26	11:21 23:36	5.34 5.33	05:33 17:54	0.28 0.33	08:11	16:12	
Thur	12	11:34 23:49	4.95 4.86	05:54 18:08	0.77 0.87	07:45	16:32		Fri	27	12:03	5.34	06:14 18:37	0.34 0.31	08:13	16:11	
Fri	13	12:04	4.99	06:20 18:35	0.78 0.83	07:47	16:30		Sat	28	00:21 12:45	5.23 5.29	06:54 19:19	0.48 0.38	08:15	16:11	
Sat	14	00:24 12:41	4.85 5.00	06:49 19:08	0.82 0.82	07:49	16:29		Sun	29	01:08 13:30	5.07 5.19	07:32 20:01	0.69 0.51	08:16	16:10	
Sun	15	01:04 13:23	4.80 4.97	07:23 19:44	0.90 0.85	07:51	16:27		Mon	30	01:57 14:18	4.86 5.04	08:12 20:43	0.94 0.70	08:18	16:09	

All times are given in Local Time

All times are given in Local Time

#### **DECEMBER 2015**

		Tide at Dundalk		Sun					Tide at I	Dundalk		Sun					
Da	ıte	High Water		Low Water		AM	PM	Moon's	Da	te	High	Water	Low	Water	AM	PM	Moon's Phases
		Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Phases			Time H : M	Height Metres	Time H : M	Height Metres	Rises H:M	Sets H : M	Pnases
Tues	1	02:49 15:09	4.64 4.86	08:54 21:28	1.21 0.91	08:19	16:08		Wed	16	02:21 14:39	4.79 5.08	08:28 20:57	1.01 0.74	08:38	16:03	
Wed	2	03:47 16:06	4.42 4.67	09:40 22:16	1.46 1.13	08:21	16:07		Thur	17	03:15 15:31	4.70 4.99	09:15 21:45	1.15 0.83	08:39	16:03	
Thur	3	04:50 17:09	4.25 4.50	10:32 23:11	1.67 1.30	08:22	16:06	Last Quarter 07:40	Fri	18	04:13 16:29	4.61 4.90	10:08 22:40	1.28 0.93	08:40	16:03	First Quarter 15:14
Fri	4	05:55 18:14	4.18 4.41	11:32	1.79	08:24	16:06		Sat	19	05:18 17:31 06:28	4.55 4.82 4.57	11:08 23:45	1.37 0.99	08:40	16:03	
Sat	5	06:57 19:15	4.23 4.40	00:13 12:42	1.40 1.80	08:25	16:05		Sun	20	18:39 07:37	4.79 4.67	12:17 01:00	1.37 0.98	08:41 08:42	16:04	
Sun	6	07:54 20:12	4.35 4.45	01:27 13:58	1.39 1.69	08:27	16:05			21	19:48 08:39	4.83 4.83	13:33 02:17	1.27 0.90	08:42	16:04	
Mon	7	08:45 21:02	4.51 4.54	02:36 15:05	1.29 1.52	08:28	16:04		Tues	22	20:52 09:36	4.92 5.00	14:50 03:29	1.09	08:43	16:05	
Tues	8	09:28 21:45	4.67 4.63	03:33 15:56	1.17 1.35	08:29	16:04		Wed	23	21:51 10:27	5.01 5.15	16:00 04:32	0.87 0.67	08:43	16:05	
Wed	9	10:06 22:24	4.81 4.71	04:16 16:38	1.06 1.18	08:30	16:03		Fri	25	22:43 11:12	5.08 5.24	16:59 05:22	0.67 0.60	08:43	16:06	Full Moon
Thur	10	10:40 22:58	4.92 4.78	04:54 17:14	0.96 1.04	08:32	16:03		Sat	26	23:30 11:53	5.08 5.28	17:48 06:05	0.51 0.59	08:44	16:07	11:11
Fri	11	11:11 23:30	5.01 4.83	05:27 17:46	0.88	08:33	16:03	New Moon 10:29	Sun	27	00:12	5.03	18:30 06:42	0.43 0.64	08:44	16:07 16:08	
Sat	12	11:43	5.09	05:58 18:18	0.81 0.79	08:34	16:03		Mon	28	12:31 00:52 13:11	5.26 4.93 5.19	19:09 07:17 19:47	0.43 0.74 0.50	08:44	16:09	
Sun	13	00:06 12:21	4.87 5.14	06:32 18:54	0.79 0.70	08:35	16:03		Tues	29	01:34 13:52	4.80 5.08	07:53 20:23	0.88 0.62	08:44	16:10	
Mon	14	00:47 13:03	4.88 5.15	07:07 19:31	0.81 0.67	08:36	16:03		Wed	30	02:18 14:36	4.64 4.93	08:30 21:02	1.06	08:44	16:11	
Tues	15	01:32 13:49	4.86 5.13	07:46 20:12	0.89	08:37	16:03		Thur	31	03:06 15:24	4.48 4.74	09:10 21:43	1.26 1.00	08:44	16:12	
		All times are given in Local Time												n in Local 1	Гіте		

# 3 Year Calendar

January 2									
Week	1	2	3	4	5				
M T W T F S	1 2 3 4 5	6 7 8 9 10 11 12	14 15 16 17 18		28 29 30				

May					2014
Week	18	19	20	21	22
M T		5	12	19 20	26
W		7	14	21	28
T F	1	8		22 23	
S S	3 4	10 11		24 25	31

Septe	2014				
Week	36	37	38	39	40
М	1	8	15	22	29
T	2	9	16	23	30
W	3	10	17	24	
T	4	11	18	25	
F	5	12	19	26	
S	6	13	20	27	
S	7	14	21	28	

Febru	February								
Week	5	6	7	8	9				
M T W T F S	1 2	3 4 5 6 7 8	10 11 12 13 14 15	17 18 19 20 21 22 23	24 25 26 27 28				

June					2	014
Week	22	23	24	25	26	27
М		2	9	16	23	30
T		3	10	17	24	
W		4	11	18	25	
T		5	12	19	26	
F		6	13	20	27	
S		7	14	21	28	
S	1	8	15	22	29	

October 2014										
Week 40 41 42 43 44										
M 6 13 20 27 T 7 14 21 28										
<b>W</b> 1 8 15 22 29										
T 2 9 16 23 30										
F 3 10 17 24 31										
<b>S</b> 4 11 18 25 <b>S</b> 5 12 19 26										

March	1				2	014
Week	9	10	11	12	13	14
M		3	10	17	24	31
T		4	11	18	25	
W		5	12	19	26	
T		6	13	20	27	
F		7	14	21	28	
S	1	8	15			
S	2	9	16	23	30	

July					2014
Week	27	28	29	30	31
M		7	14	21	28
T	1	8	15	22	29
W	2	9	16	23	30
T	3	10	17	24	31
F	4	11	18	25	
S	5	12	19	26	
S	6	13	20	27	

Nove	November							
Week	44	45	46	47	48			
M		3	10	17	24			
T		4	11	18	25			
W		5	12	19	26			
T		6	13	20	27			
F		7	14	21	28			
S	1	8	15	22	29			
S	2	9	16	23	30			

April					2014
Week	14	15	16	17	18
M T W T F S	1 2 3 4 5	77 8 9 10 11 12	15 16 17 18 19	21 22 23 24 25 26 27	29

August 201										
Week	31	32	33	34	35					
М		4	11	18	25					
T		5	12	19	26					
W		6	13	20	27					
T		7	14	21	28					
F	1	8	15	22	29					
S	2	9	16	23	30					
S	3	10	17	24	31					

Dece	2014	4				
Week	49	50	51	52		
М	1	8	15	22	29	
T	2	9	16	23	30	
W	3	10	17	24	31	
T	4	11	18	25		
F	5	12	19	26		
S	6	13	20	27		
S	7	14	21	28		

January 201								
Week	1	2	3	4	5			
М		5	12	19	26			
T		6	13	20	27			
W		7	14	21	28			
T	1	8	15	22	29			
F	2	9	16	23	30			
S S	3	10	17	24	31			
S	4	11	18	25				

May					2	015
Week	18	19	20	21	22	
M T W T F S	1 2 3	4 5 6 7 8 9	16	19 20		

Septe	September								
Week	36	37	38	39	40				
М		7		21					
T	1	8	15	22	29				
W	2	9	16	23	30				
T	3	10	17	24					
F	4	11	18	25					
S	5	12	19	26					
S	6	13	20	27					

February 20								
Week	5	6	7	8	9			
M		2	9	16	23			
T		3	10	17	24			
W		4	11	18	25			
T		5	12	19	26			
F		6	13	20	27			
S		7	14	21	28			
S	1	8	15	22				

June					2	015
Week	23	24	25	26	27	
M	1	8	15	22	29	
T	2	9	16	23	30	
W	3	10	17	24		
T	4	11	18	25		
F	5	12	19	26		
S	6	13	20	27		
S	7	14	21	28		

Octo	ber				2	015
Week	40	41	42	43	44	
М		5	12	19	26	
T		6	13	20	27	
W		7	14	21	28	
T	1	8	15	22	29	
F	2	9	16	23	30	
S	3	10	17	24	31	
c	- 1	11	10	2 E		

March				2	015
Week 9	10	11	12	13	14
M T W T F S	2 3 4 5 6 7 8	9 10 11 12 13 14 15	17 18 19	23 24 25 26 27 28 29	30 31

July					2	015
Week	27	28	29	30	31	
M T W T F S	1 2 3 4 5	6 7 8 9 10 11	14 15 16 17 18	20 21 22 23 24 25 26	28 29 30	

Nove	November						
Week	44	45	46	47	48	49	
М		2	9	16	23	30	
T		3	10	17	24		
W		4	11	18	25		
T		5	12	19	26		
F		6	13	20	27		
S		7	14	21	28		
S	1	8	15	22	29		

April					2015
Week	14	15	16	17	18
M T		6 7		20 21	
W T	1 2	8 9		22 23	
F S S	3 4 5	10 11 12		24 25 26	
>	0	12	19	20	

August				2	015
Week 31	32	33	34	35	36
M	3	10	17	24	31
T	4	11	18	25	
W	5	12	19	26	
T	6	13	20	27	
F	7	14	21	28	
<b>S</b> 1	8	15	22	29	
<b>S</b> 2	9	16	23	30	

Decemb	2	015			
Week	49	50	51	52	
M		7	14	21	28
T	1	8	15	22	29
W	2	9	16	23	30
T	3	10	17	24	31
F	4	11	18	25	
S	5	12	19	26	
S	6	13	20	27	

Janua	ıı y				_	٠.
Week	1	2	3	4	5	
M		4	11		25	
T		5	12	19	26	
W		6	13	20	27	
T		7	14	21	28	
F	1	8	15	22	29	
S	2	9	16	23	30	
S	3	10	17	24	31	

May	2	016			
Week 18	19	20	21	22	23
M T W T F S	2 3 4 5 6 7 8	11 12 13 14	17 18 19	27 28	

Septe	2016				
Week	36	37	38	39	40
M T W T F S	1 2 3 4	5 6 7 8 9 10	13 14 15 16 17	19 20 21 22 23 24 25	28 29

= Public Holiday

February	2016			
Week 6	7	8	9	10
T 4 F 5 S 6	8 9 10 11 12 13	16 17 18 19	24	29

June					2016
Week	23	24	25	26	27
M T W T F	1 2 3 4	6 7 8 9 10 11	14 15 16 17 18		28 29
5	5	12	19	26	

Octob	2	016				
Week	40	41	42	43	44	45
M		3	10	17	24	31
T		4	11	18	25	
W		5	12	19	26	
T		6	13	20	27	
F		7	14	21	28	
S	1	8	15	22	29	
S	2	9	16	23	30	

Marc	h				2016
Week	10	11	12	13	14
М		7	14	21	28
Т	1	8		22	29
W	2	9	16	23	30
Т	3	10	17	24	31
F	4	11	18	25	
S	5	12	19	26	
S	6	13	20	27	

July					2016
Week	27	28	29	30	31
M		4	11	18	25
T		5	12	19	26
W		6	13	20	27
T		7	14	21	28
F	1	8	15	22	29
S S	2	9	16	23	30
5	3	10	17	24	31

Nove	2016				
Week	45	46	47	48	49
М		7	14	21	28
T	1	8	15	22	29
W	2	9	16	23	30
T	3	10	17	24	
F	4	11	18	25	
S	5	12	19	26	
S	6	13	20	27	

April					2016
Week	14	15	16	17	18
M T W T F S	1 2 3	4 5 6 7 8 9	13 14 15 16	18 19 20 21 22 23 24	26 27 28 29

Augu	2016				
Week	32	33	34	35	36
М	1	8	15	22	29
T	2	9	16	23	30
W	3	10	17	24	31
T	4	11	18	25	
F	5	12	19	26	
S S	6	13	20	27	
S	7	14	21	28	

Decei	2016				
Week	49	50	51	52	
М		5			26
T		6		20	
w		7	14	21	28
T	1	8	15	22	29
F	2	9	16	23	30
S	3	10	17	24	31
S	4	11	18	25	

# Dublin Port Company Services Guide 2015



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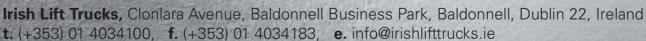


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- \*\* Based on H2.5FT equipped with Yanmar 2.0litre diesel engine, load sensing hydraulics and PSS tyres, when tested on the industry standard VDI 2198 fuel consumption cycle. HYSTER, the Hyster logo and STRONG-PARTNERS, TOUGH TRUCKS.<sup>TM</sup> are registered trademarks, service marks or registered marks in the United States and certain other jurisdictions



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GMC carries out projects throughout Ireland and across the UK. The Group has constructed major projects such as the non-domestic water metering project for the greater Dublin area, water leak detection and management services, road and infrastructural projects, railway station platform extensions, water supply and sewerage schemes, gas network and distribution projects, water network and distribution and rehabilitation projects, electricity network enhancements, renewable energy projects and solutions, telecoms and broadband network projects.

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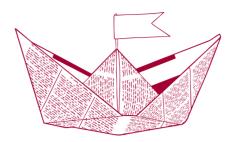
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# BRIDGES OF DUBLIN

#### - everything you ever wanted to know about Dublin's bridges

Have you ever wondered how many bridges cross the River Liffey or which one is the oldest? Well, wonder no more, answers to these questions and many more can be found on Dublin City Council's website: <a href="https://www.bridgesofdublin.ie">www.bridgesofdublin.ie</a>.

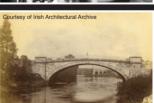
Bridges of Dublin was designed to showcase Dublin's unique bridge infrastructure. The site provides a range of information running to over 90,000 words covering the history, design, engineering and interesting facts for each of the current 23 bridges. A spectacular digital archive contains more than 900 photos from the historic to the modern, some of which have never be seen on public display. Sources include the Dublin City Library & Archive, National Gallery, National Library of Ireland, Dublin Port, Fáilte Ireland and the Guinness Archive.

The new website provides an opportunity for all to learn about our rich bridge heritage. From the oldest, Mellows Bridge built in 1688, to the more recently constructed Samuel Beckett, built in 2009.



Comhairle Cathrach Bhaile Átha Cliath Dublin City Council The website won the Best Government and Local Government category at the Irish Web Awards 2013.









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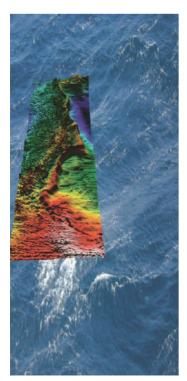
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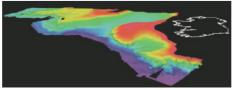


### Mapping Ireland Offshore Resources

Integrated Mapping for the Sustainable Development of Irelands Marine Resources (INFOMAR) is Irelands National Marine Mapping Programme, the follow-on project to the Irish National Seabed Survey (INSS), and is a joint venture of the Geological Survey of Ireland (GSI), Dept, of Communications, Energy and Natural Resources (DCENR) and the Marine Institute (Dept. of Agriculture, Food and Marine).

Following a successful Memo to Government in Q4 of 2013, approval has been given to the programme for continued funding for the period (2014 - 2018) at c.€3m per annum, to be met from within the DCENR Departments agreed multi-annual capital envelope.

This project is currently scheduled to run for a twenty year period (2006 - 2026) with priority in the first years being given to mapping 26 Bays and 3 Marine Areas.



For further information log onto: www.infomar.ie www.gsi.ie



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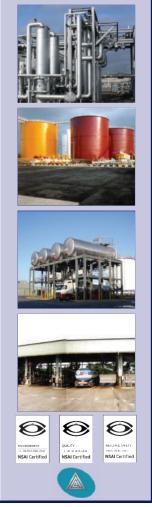
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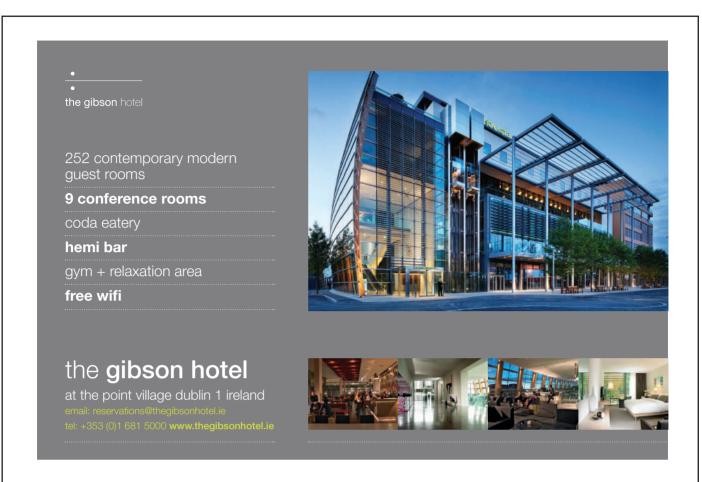
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	 SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED
J A N					New Year's Day Public Holiday	2	3	4	5	6	7	8	9	10	II	12	13	14
F E B								I	2	3	4	5	6	7	8	9	10	11
M A R	I	2	3	4	5	6	7	8	9	10	П	12	13	14	Mother's Day	16	St. Patrick's Day Public Holiday	18
A P R				I	2	Good Friday	4	<b>5</b> Easter Sunday	Easter Monday  Public Holiday	7	8	9	10	11	12	13	14	15
M A Y						I	2	3	4 Public Holiday	5	6	7	8	9	10	11	12	13
J U N		Public Holiday	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
J U L				I	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A U G							I	2	Public Holiday	4	5	6	7	8	9	10	11	12
S E P			I	2	3	4	5	6	7	8	9	10	П	12	13	14	15	16
0 C T					I	2	3	4	5	6	7	8	9	10	11	12	13	14
N 0 V	ı	2	3	4	5	6	7	8	9	10	П	12	13	14	15	16	17	18
D E C			I	2	3	4	5	6	7	8	9	10	П	12	13	14	15	16
	CIIN	MON	THE	WED	<b>T</b> 1111	EDI	CAT	CHM	MON	THE	WED	<b>T</b> 11111	EDI	CAT	CHM		THE	

THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			J A N
12	13	I 4 St. Valentine's Day	15	16	17	I 8 Ash Wednesday	19	20	21	22	23	24	25	26	27	28			F E B
19	20	21	22	23	24	25	26	27	28	29 Summer Time Begins	30	31							M A R
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					A P R
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		M A Y
18	19	20	2 I Father's Day	22	23	24	25	26	27	28	29	30							J U N
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				J U L
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	A U G
17	18	19	20	21	22	23	24	25	26	27	28	29	30						S E P
15	16	17	18	19	20	21	22	23	24	25 Summer Time Ends	26 Public Holiday	27	28	29	30	3 I Halloween			0 C T
19	20	21	22	23	24	25	26	27	28	29	30								N 0 V
17	18	19	20	21	22	23	24	25 Christmas Day	26 St.Stephen's Day	27	28	29	30	31					D E C
THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	

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