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## CASE STUDY

# Peel Ports

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*Resilient Point to Point Wireless Bridges*



## Siklu gigabit link deployments deliver mission-critical resilience with 99.999% availability

As one of the leading infrastructure, transport, and real estate companies in the UK, The Peel Group has a rich history in business which spans more than 300 years.

Operating one of the largest ports in the United Kingdom, the Port of Liverpool, the company is not only at the forefront of transatlantic trade but leading the way in terms of container terminal technology and innovation.

### 'Liverpool 2'

Most recently, Peel Ports have embarked upon an ambitious £400 million project dubbed 'Liverpool2', with the aim of providing a state-of-the-art alternative to UK's Southern shipping terminals and re-establishing Liverpool as a leading cargo destination.

Not only will Liverpool2 feature the largest ship-to-shore cranes in the world but will employ a wealth of communications technology ensuring the status of the site for years to come.

Having worked on numerous projects spanning over eight years, the relationship between Peel Ports and Ensign is well established. Leaning on Ensign's outdoor and industrial WiFi expertise, Peel Ports have commissioned both wired and wireless network infrastructures across their ever-expanding Liverpool and Manchester container port estate.

### Dynamic Frequency Selection

Work began with the design and installation of a 5GHz wireless network (since supplemented with older hardware) at the Strand Gate container terminal.

Once complete it became apparent that a number of existing legacy 5GHz links, deployed to connect the terminal with the network hub, were becoming unreliable due to their vulnerability to Dynamic Frequency Selection (DFS) radar events.

In this particular case, WiFi usage frequency transmission came secondary to the detection of radar, resulting in unpredictable and potentially damaging network outages.

The 1Gb full duplex Siklu 1200FX link, operating in the 70-80GHz band, offered Peel Ports a reliable solution with which to mitigate any existing dynamic frequency selection (DFS) events.

### Mission-Critical Resilience

Once these aging and ineffective links had been replaced Peel Ports required a number of additional links to be placed across the Mersey dock estate which would add a high degree of resilience to the burgeoning network.

The new Siklu links would need to provide predicted performance with 99.99% availability (equivalent to only 52 minutes of downtime a year) to ensure that port communications remained unaffected by any unplanned network downtime. Covering distances of up to 3km, the planned links would provide connectivity from key information points around the port in order to facilitate effective and timely data transfer.



## The Solution

Ensign installed a Siklu EtherHaul- 1200TX on the roof of the Grain Tower at Seaforth Dock, a strategic location due to its considerable elevation, linking the network to the Gladstone Dock Mariner's Office. This link is of high importance to the continued efficiency of the port as, due to the large tidal range of the River Mersey - rising and falling by nearly 10 metres, large ships are at risk of grounding without it.

The second link installed at this stage of the project provides resiliency for operations at Canada Dock, located at the Southern end of the port relative to link position, with the main office via the Grain Tower. Covering a distance of 3 km, the Siklu EtherHaul-1200FX provides the port with full-duplex gigabit throughput for vital and robust data transfer, ensuring mission-critical operation are maintained

## Radar Stations at Liverpool & Manchester

With the success of the Ensign's Siklu bridge deployments at the Port's main office and at Canada Dock, a further two links were commissioned to add communications resilience at the river radar stations at Crosby, the main entrance for ships entering from Liverpool bay, and the at the entrance to the Manchester Ship Canal located at Easthan.

Peel Ports realised that without network resilience to these crucial locations any fault or disruption to the single fibre connection could have grave implications for the ships navigating in and out of either waterway.

A Siklu EtherHaul 1200FX was installed at the Crosby site and an EtherHaul 1200TX at Easthan, providing essential resilience to remote gateways triggered for approaching container ships.

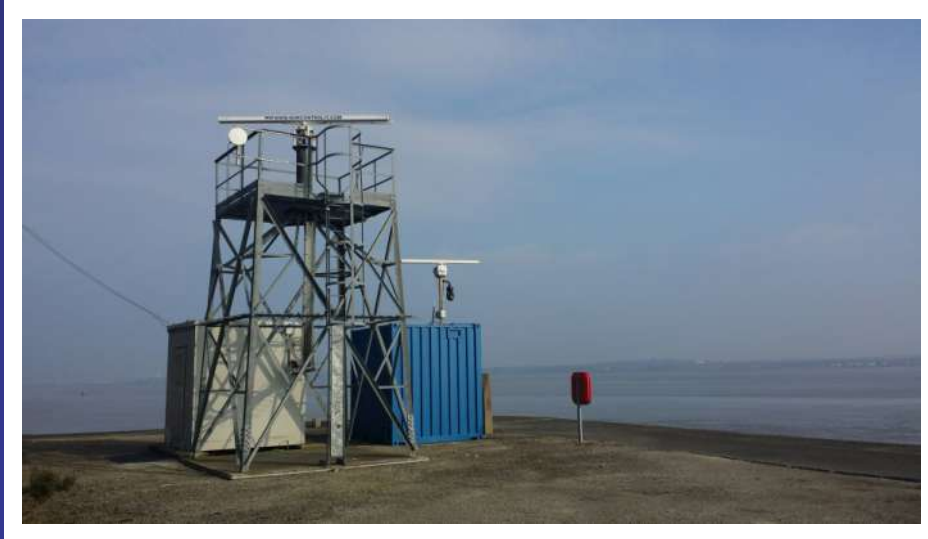
## Deployment Challenges

As with any heavily industrialised wired or wireless infrastructure deployment, Ensign's work at Mersey Docks was not without its tests and challenges. Subject to extreme and changeable weather conditions, work at the site was often carried out in high winds and with varying visibility.

## Outcomes and Achievements

To date, the Siklu link deployments at the Port of Liverpool have performed to expectation and beyond. Providing fully dependable business connectivity and resilience the port operators can be assured that their mission-critical data transfers are safeguarded against any unfavourable or unplanned network scenarios.

As the £400 million, in-river, Liverpool 2 development begins welcoming some of the maritime industry's largest container vessels the potential for additional link deployment and the requirement for further fibre backups is set to grow.



*Fig 1. A Siklu gigabit bridge link installed at the Crosby radio station, Port of Liverpool.*



*Fig 2. Ensign engineer, Patrick Murray, braves the weather during the Siklu link installation.*



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## ABOUT ENSIGN COMMUNICATIONS

Ensign Communications is a UK-based provider of secure, business-grade wired and wireless network infrastructure solutions and professional services.

For more than 30 years we have delivered bespoke, secure business-grade network infrastructure solutions from the world's leading technology manufacturers.

Our strategically located offices, Poole in the South and Manchester in the North, enable our team of highly-accredited network engineers to cover the entire United Kingdom.

This nationwide footprint enables Ensign Communications to meet the varied needs and requirements of our broad customer base.