



Yello

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Yello Submarine Cable

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& More

Section 1: General Information



Picture 1 | GTT Communications Southport CLS

Site Location

GTT Communications – Cable Landing Station
International Exchange Centre
Wight Moss Way
Southport Business Park
Southport PR8 4HQ
United Kingdom

General Information

The GTT Cable Landing Station is situated in the North West of England connects the UK to Ireland and Canada. The landing station was purpose built in 1999 / 2000 as part of the 360 Networks Project to receive diverse submarine and terrestrial systems.

Diversity is achieved in Southport in several ways. The submarine and terrestrial networks have truly diverse, separate landing points.

The two terrestrial cable feeds enter at opposite sides of the East side of the building and are fed into the facility using diversely routed conduit systems.

The site is gated to control vehicular access. There is a main entranceway situated on Wight Moss Way. There is also a pedestrian access on Wight Moss Way.

The site is cleared around the building to maintain a firebreak from the surrounding terrain. The building and site itself is designed and situated in such a manner as to effectively eliminate any potential threats from flooding

Network Operations Team

GTT UK Operations Manager:	Martin Wildman
GTT Senior Systems Support Engineer:	Tim Dickenson
GTT Systems Support Engineer:	Mark Cox, Ian Andrews. Steve Bugg

Section 2: Fibre Connectivity

Submarine Cable Infrastructure

Southport GTT Classic CLS is the landing point for the Segment A, Segment C GTT Atlantic cables.

Segment A routes directly to the front of the CLS, left along Wight Moss way and right routing along Town Lane Kew onwards towards the beach at Southport toward Halifax, NS, with a spur into Coleraine, NI.

Segment C routes via separate chamber to the rear of the CLS, exits left, turns right across common nature reserve land and then left along Town Lane Kew towards the beach approx. 5 Km from Segment A at the southern end of Southport toward Halifax via Dublin.

Terrestrial Cable Infrastructure

GTT's Southport CLS has the following connections onto the terrestrial network;

UK East terrestrial fibre routing from left hand side of building chamber routing in underground duct right along Wight Moss Way and then North across Town Lane and Folkestone Road towards Bracewell. 72 pair fibre owned by SSE Telecommunications to Bracewell Data Centre.

UK West terrestrial fibre routing from right hand side of building chamber routing in underground duct left along Wight Moss Way and then North across Town Lane Kew towards Manchester Kilburn Data Centre. 72 pair fibre owned by SSE Telecommunications to Manchester Data Centre. Secondary 72 pair fibre routed along same route to separate chamber entering to Manchester Williams Data Centre.

Building Tie Cable Infrastructure

There are the following tie cables installed between the Submarine Room & Terrestrial Room buildings;

- 2x96F cable fed between Submarine North Room and Terrestrial North Room via overhead cable ladder.
- 2x96F cable fed between Submarine South Room and Terrestrial South Room via overhead cable ladder.

There are the following tie cables installed between the North & South buildings;

- 2x96F cable fed between Terrestrial North Room and Terrestrial South Room via overhead cable ladder.
- 8x96F cable fed between Submarine North Room and Submarine South Room via overhead cable ladder.

Section 3: Network Diversity

Submarine Cable Diversity

The two classic subsea cables, Segment A and Segment C exit the Southport CLS building via separate chambers and differing corners of the building.

Segment A routes directly to the front of the CLS, left along Wight Moss way and right routing along Town Lane Kew onwards towards the beach at Southport. The cable is powered by dual convertor PFE equipment and routed in ducting for its whole length.

Consists of 4 Line Pairs routed to Halifax. (Branching unit has spur to Belfast).

Segment C routes via separate chamber to the rear of the CLS, exits left, turns right across common nature reserve land and then left along Town Lane Kew towards the beach approx. 5 Km from Segment A at the southern end of Southport. The cable is powered by dual convertor PFE equipment and routed in ducting for its whole length.

Consists of 4 Line Pairs towards Dublin and on to Halifax.

Terrestrial Network Diversity

The two UK terrestrial fibres, East and West are routed from separate rooms via separate buried ducts in diverse directions to two different data centres.

- UK East terminating at SSE Telecommunications Bracewell, Skipton, BD23 3JX
- UK West Equinix owned Manchester Kilburn colocation.

MA4- Manchester IBX Data Centre
Unit 4 Synergy House Manchester
Science Park
Guildhall Close Manchester M15 6SY
United Kingdom

There is a separate fibre along the UK West route terminating at Equinix owned Manchester Williams colocation.

MA1- Manchester IBX Data Centre
Unit 3 Williams House Manchester
Science Park Lloyd Street North
Manchester M15 6SE
United Kingdom

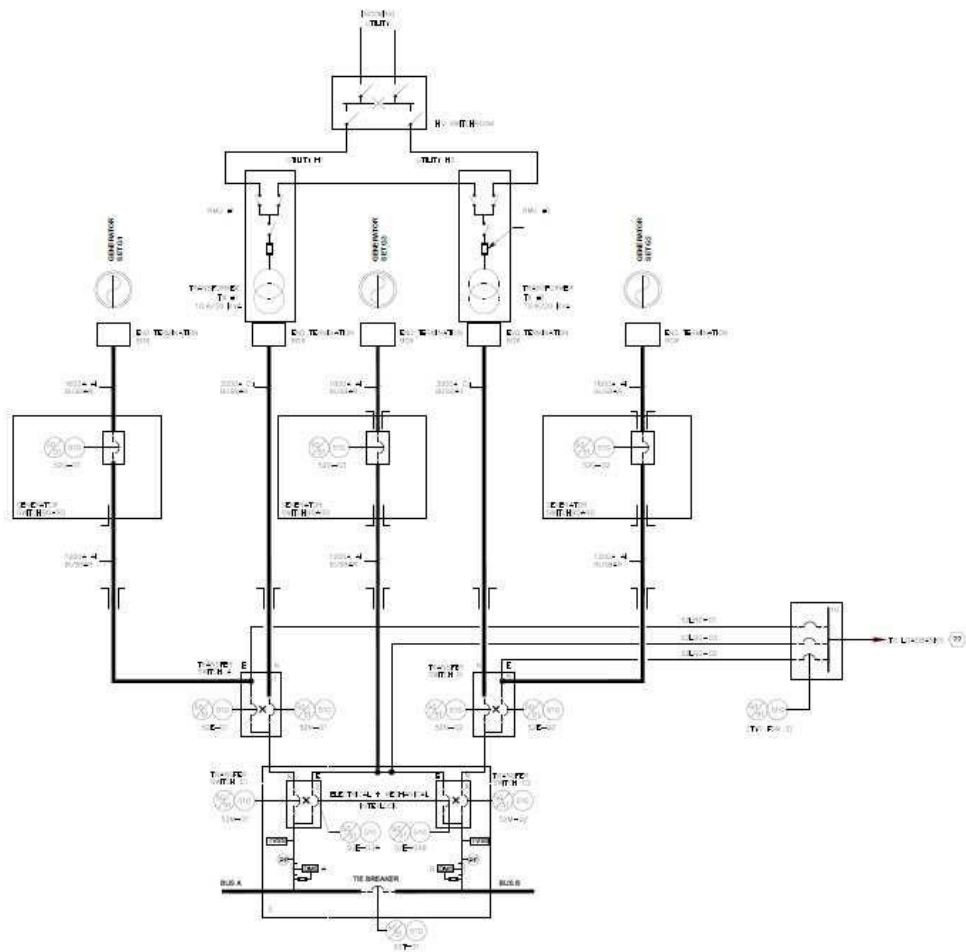
Both fibres are owned by SSE and are leased as dark fibre by GTT.

Section 4: GTT Communications Classic CLS Building Information

Electrical Services

AC Power

The facility is supplied through a regional electricity supplier substation that feeds into 2 separate 2MVA, 400v/3Ph/50Hz supplies. These supply the main transfer board, which in turn supply the LV distribution boards located around the facility.



Picture 2/ Southport CLS Electrical Line Diagram

Backup Generating Plant

The power supply is protected by 3 X 1000kVA generators located in the Generator room in an N+1 configuration. Normally, Generator 1 supplies Bus A and Generator 2 supplies Bus B. Generator 3 can supply either bus and automatically comes on line if Gen 1 or Gen 2 fails. Additionally, a tie breaker in the switchgear will enable a single generator to supply the entire building load as long as the load does not exceed the capacity of the generator.

Fuel Storage

The generators are backed up by 2 above ground 35,000 litre tanks that are designed to support the full site load for 24 hours' full site load, 48 hours at half load, and 96 hours at ¼ load. These tanks supply fuel to 3X 1975-liter day tanks located below each generator plant. There are 2 fuel pumps configured in a duty & standby configuration

DC Power

There are 2 X DC power rooms (DC North and DC South) within the facility.

The DC system is supplied by diverse 1200A Rectifier panel boards supplied at 400VAC. This is rectified through the system giving -54VDC. This is then sub distributed in 200/400/600A steps to the equipment room battery distribution fuse boards (BDFB's). Each DC power room contains battery banks that will supply DC power for a minimum of 4 hours until the batteries reach the low voltage disconnect threshold.

Security Systems, Fire Systems & Building Monitoring Information

Security Alarm System

The station is secured by a Honeywell Galaxy Security Alarm with panels located in the main entry lobby and the customer entry corridor. The alarm is armed and disarmed using a personal access card which is issued on induction and can be removed at any time. The alarm system is remotely monitored by the building management system.

Access Control System

Access and movement around the station is managed via a key pad and card system which can be modified to restrict access as deemed necessary. It also provides an archive for movement around the station.

CCTV System

This site is monitored continuously by CCTV from GTT Communications Network Operation Centre in Dublin. All recorded videos are stored exclusively at Network Operation Centre in Dublin and will be erased if no longer needed.

Fire Alarm and Suppression Systems

The main fire alarm system is of the analogue addressable type and consists of a main control panel combined with automatic detectors, sounders, beacons, and manual call points. This system is remotely monitored by the local central station.

The FM200 panel monitors systems located in the Terrestrial, Submarine, and DC Plant & Electrical Rooms and is interfaced to the main fire alarm system.

Building Management Systems

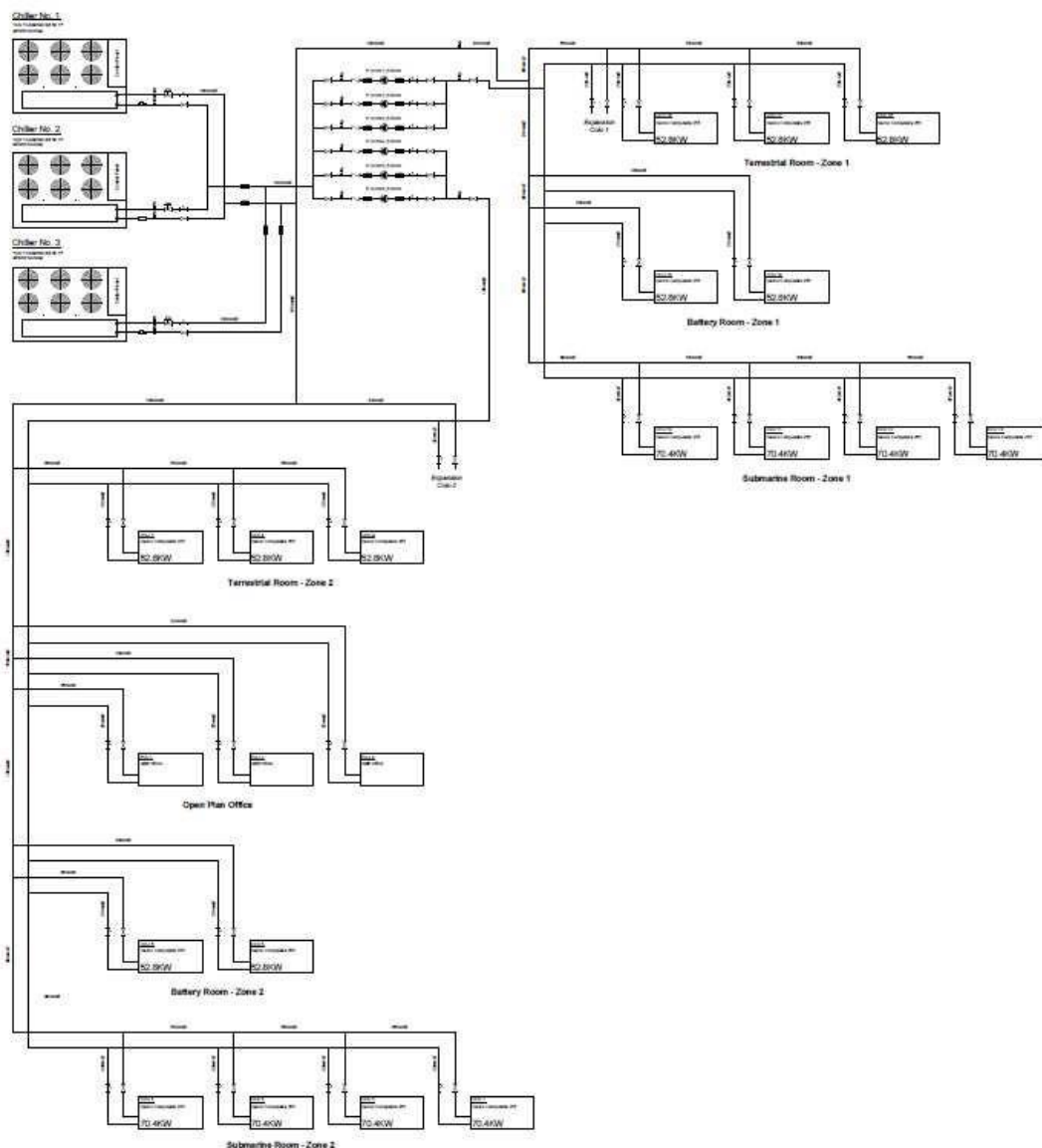
There is a JCI building management system installed to manage and monitor electrical and mechanical plant. This is controlled by a front end server and will send out notifications in the event of an alarm. There is also a Trend Controls IQ3 system installed which supplements the alarm reporting system by monitoring and reporting the alarm status of all electrical and mechanical infrastructure. This is controlled by a front end server located in GTT Communications Network Operation Centre in Dublin.

Mechanical Services

Chilled Water System

The facility has 1 York International air cooled liquid chillers and 2 Daiken air cooled liquid chillers (Installed in 2015 & 2016) located in the chiller compound with a maximum rated capacity of 485KW each. These are configured in an N+1 configuration.

Each technical room in the facility has Denco Computair 255 rated at 50 and 70KW CHWS air handling units (AHUs) set to maintain the equipment rooms at required temperature and humidity configured in an N+1 configuration.



Picture 3/ Chilled Water System Schematic

TRAVEL DIRECTIONS

By Car

From Birkenhead

Take Hemingford St to Conway St/A553 - 3 min (0.3 mi)

Take Birkenhead Tunnel/Queensway Tunnel, A5038, Dunnings Bridge Rd/A5036, A59 and A5147 to Renacres Lane in Halsall - 43 min (16.8 mi)

Continue on Renacres Lane to Heathey Lane/B5243 - 4 min (2.1 mi)

Slight left onto Heathey Lane/B5243 Continue to follow B5243 - 2 min (1.0 mi)

Drive to Wight Moss Way in Southport

From Wigan

Head south-west on Wallgate towards King St W - 3 min (0.3 mi)

Follow A577, M58 and A570 to Jacksmere Lane/B5243 in Scarisbrick - 34 min (16.5 mi)

Continue on B5243. Drive to Wight Moss Way in Southport

By Rail

Take a Train to Liverpool

Transfer to the Northern Line and take a train from Liverpool to Southport.

By Taxi

Take a taxi from alighting from either Birkdale Train Station or Southport Train Station to Wight Moss Way, Southport Business Park.