

# Archives in UK collections which relate to the Telegraph Construction & Maintenance Company (“Telcon”) at Enderby Wharf Greenwich

## 1 Objective

These notes have been prepared as a guide to researchers and concern the origins of Telcon and the latest known locations of the most important parts of what is often referred to rather loosely as “The Telcon Archive”.

There are three important and separate holdings in different UK archives which together tell a significant part of the Telcon story. These are at The National Maritime Museum at Greenwich (NMM), the Maritime Museum of the National Museums Liverpool (MML) and the Porthcurno Telegraph Museum in Cornwall. (PK)

In order to explain which holdings are held where, and how they came to be lodged there, it is helpful to look back over the history of the Company and its relationships with other cable manufacturing companies. This is set out below.

From 1935 up to 1994 the Company was involved in very many mergers and takeovers and as a consequence the preserved archive material is rather a confusing mixture and has become widely dispersed as mentioned above.

## 2. Introduction

Telcon was by far the largest manufacturer of submarine telegraph cables in the UK and under that name traded between 1854 and 1959.

The major part of the combined archives relate to Telcon’s activities at the Enderby Wharf site in Greenwich which was their HQ and main production base for around 100 years. One could even argue that it would be better to refer to the combined collections as “The Enderby Wharf Archive”

The following paragraphs identify no less than twenty Companies who in addition to Telcon feature in the historical evolution of Telcon and the UK submarine cables industry and by consequence appear in archive material. The following notes are in an approximate chronological order.

## 3. The birth & evolution of Telcon and the other Companies involved

### The formation of Telcon

From the end of the 18<sup>th</sup> century Enderby Wharf site was a rope walk, **Enderby’s Hemp & Rope Works**. The site was purchased by **Glass-Elliott** in 1854 primarily for the manufacture of wire rope. For a short time they shared the site with **W T Henley** who later moved to North Woolwich.

Under the chairmanship of John Pender **Glass-Elliott** was merged with the **Gutta Percha Company** to form Telcon in 1864.

### The Gutta Percha Company.

This company was formed in 1845 and was located at Wharf Road, City Road, London just a few miles from Greenwich. After the merger into the Telcon Company this factory continued to manufacture a wide range of goods as well as being the dedicated plant for manufacture of the gutta percha insulated core for almost all submarine cables. This Telcon Wharf Road factory continued manufacturing gutta percha and other plastics products up to 1935 when it was closed.

### Submarine Cables Limited.

The depression of the 1930's hit the submarine cable industry hard and the two main players in the world market, Telcon and **Siemens Brothers Ltd** located at Woolwich agreed a merger of their submarine cables businesses only.

The new Company owned 50:50 by the two was named **Submarine Cables Limited (SCL)** The manufacture of the submarine cables was based on the Telcon factory at Enderby Wharf. It is important to note that Telcon continued to manufacture other types of cable and in fact grew significantly under a product diversification programme.

### Other Telcon Companies and activities.

In parallel with the SCL submarine cables activities Telcon operated the following companies at various periods between 1915 and 1959

- **Selborne Plantation Co Ltd** was formed in 1915 by Telcon to develop gutta percha estates in Malaysia.
- **Telcon Magnetic Cores Ltd (Telcon Metals)** was formed to develop special nickel-iron and steel alloys and was very successful. One special alloy manufactured was Mumetal used to make wire for the continuous loading of 1920's telegraph cables
- **Telcon Power Cables** for the manufacture of electricity distribution cables
- **Telcon High Frequency Cables** specialising in coaxial and other high frequency cables

**Important.** Except for Selborne Plantation most of the above activities took place or at least started out at Enderby Wharf running alongside the SCL business.

### SCL new factory

In order to manufacture the new technology, polyethylene dielectric coaxial cables, SCL invested in a new factory at Erith.

Named "Ocean Works" it opened in 1954. The first Atlantic Telephone cable (TAT-1) was a major contract for Erith.

### British Insulated Callenders Cables Limited (BICC Ltd)

This Lancashire based company was in the mid-1950's by far the largest manufacturer of electrical wires and cables in the world and in 1959 bought Telcon and by consequence acquired a 50% share in SCL.

Two years later they also bought **Thomas Bolton Ltd** who was the major UK drawer of copper wire and were the company who had supplied wire for the first Atlantic Telegraph cables.

### AEI (Allied Electrical Industries Ltd)

In 1954 the giant AEI Group bought Siemens Brothers and under a restructuring programme it was re-named **Siemens Edison Swan**. This included the 50% share which Siemens had held in SCL. AEI then went on to acquire **W T Henley** in 1959 and later in 1965/6 they bought the BICC 50% holding in SCL and thus became the **sole owner of SCL**.

### Standard Telephones & Cables Ltd (ST&C)

ST&C Started out in the UK as **Western Electric Company (WEC)** and were renamed ST&C when WEC was sold to **ITT (International Telephone & Telegraph Corporation)** of the USA in 1925 and became seriously involved in the submarine cables business utilising repeaters in the 1950's.

ST&C built a large factory at Southampton (Factory No1) in 1956 to manufacture coaxial type cable to British GPO specifications. This was followed in 1962 with another factory (Factory No2) to make WEC designed coaxial cable including TAT-3.

**ST&C bought SCL from AEI in 1970 thereby leaving ST&C as the sole manufacturer of submarine cables in the UK**

Manufacturing of ST&C repeaters was transferred to Enderby Wharf Greenwich in the early 1970's and in **1975 cable manufacture at Enderby Wharf ceased completely.**

#### **STC Submarine Systems Limited (SSL)**

ITT eventually gave up control of all STC companies and in 1982 a new company STC Submarine Systems Limited was floated on the UK stock exchange. It became a management company within STC Communication Systems Ltd. SSL gained fame as the supplier in 1986 of the world's first international optical fibre submarine cable. This was between UK and Belgium.

#### **Northern Telecom (NT)**

In 1991 the Canadian company Northern Telecom bought STC Communications Systems Ltd and it then became part of Northern Telecom Europe Limited (NTEL)

In 1994 NT / NTEL decided that submarine cables systems was no longer a part of their core business activity and sold STC Submarine Systems Limited to **Alcatel Cable SA of France.**

#### **Alcatel Cable**

In 1996 Alcatel closed the cable manufacturing plant in Southampton and production was transferred to their Calais factory.

This was the end of submarine cable manufacturing in the UK.

All manufacturing of submarine repeaters was then centred on Enderby Wharf together with the production of power feed equipment

Over the past few years the Alcatel site at Enderby Wharf has been run down and today manufactures only terminal equipment for submarine systems. It is now called **Alcatel Submarine Systems Ltd.**

#### **4. The "Telcon Archive" at the National Maritime Museum Greenwich (NMM)**

In around 1985 the STC Greenwich, PR Department (Ms Laurie Dennett) carried out an audit of heritage documents, books, charts and other manuscript information held at Enderby Wharf site. From this list many items were offered to NMM located just a few hundred yards down the road. They were accepted and were accessioned there in 1988.

The collection is known as the **TCM Archive** and comprises more than 700 files in 28 sections which are referenced **TCM/1 to TCM/28**

The period covered is from 1836 to 1968

The TCM archive listing is available on-line at <http://www.nmm.ac.uk>

The archivists responsible for the collection are **Andrew Davies** and **Mike Bevan** on 020 8312 6669

The TCM archive at NMM is held at a reserve store at Kidbrook some distance from the main Greenwich site. This site is not normally open to the general public and 2 weeks must be allowed from request for the transfer of documents to Greenwich (Caird Library) for study.

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**NOTE:**

Several comprehensive lists relating to the NMM archive are also held at Porthcurno Telegraph Museum in **Office File Ref 6.**

- A photocopy of the 1985 “Laurie Dennett” list. This comprises 55 pages and is marked **“Original STC Archive Audit”**
- A photocopy of the original NMM hand list of accessioned items together with a summary sheet (TCM/1 to TCM/28). This is marked **“Ex-STC Archive Current”**
- A photocopy of an NMM hand-list detailing 177 large chart books from the Telcon cables operations between 1854 & 1932 and which form part of their TCM collection.
- A photocopy of a 21 page Excel spreadsheet titled **“Ex STC Library Books”**. So far as I am aware these have never been accessioned by NMM and part of the collection was being proposed for disposal/dispersal.

**5. The “Telcon Archive” at the Maritime Museum Liverpool (MML)**

The BICC archive at MML is very large comprising more than 600 boxes. As well as records of the founding companies Callenders and British Insulated Wire it holds some of the records of around 20 subsidiary companies including Telcon.

The BICC archive was held at their factory at Prescott in Lancashire under the stewardship of Mr R Morgan until 1986 when it was offered to Manchester Museum of Science & Industry who turned it down. It was offered to MML who accepted it and it was accessioned there in 1987.

The Index to the BICC archive is large and comprehensive and is held at the Archives of the Maritime Museum, Albert Dock, Liverpool L3 4AQ.

Of particular interest are the following Minute Books (1):-

- |  |              |
|--|--------------|
| ➤ <b>(1/18) Telcon</b>                         | 1864 to 1967 |
| ➤ <b>(1/16) Selborne Plantation</b>            | 1915 to 1954 |
| ➤ <b>(1/2) Atlantic Telegraph Company Ltd.</b> | 1856 to 1858 |

There is a great deal more information in the following categories: **Papers & Documents (V)**, **Publications (VI)** and **Mr R Morgan papers (IX)**. In these sections are to be found records of Thomas Bolton Ltd and Submarine Cables Limited (SCL) as well as the companies mentioned above.

**NOTE:**

The archive is held at a reserve store located at North Street in central Liverpool. Access to this store and the BICC archive is not easy. At the last time of checking it was open only one day/month (10-30am to 4-30pm) or “as staffing levels allow”. In addition to that there is a mandatory closure of one hour for lunch.

The Curator of Archives is **Dawn Littler** on Tel No: 0151 478 4407 or by email [dawn.littler@liverpoolmuseums.org.uk](mailto:dawn.littler@liverpoolmuseums.org.uk)

In addition to the archive material a very large collection of **BICC cable samples** (mainly power distribution types) was transferred to the MML and held at another more remote store and as far as I am aware has yet to be sorted and accessioned.

## **6. The “Telcon Archive” at the Porthcurno Telegraph Museum**

Initially named by the museum, the “Alcatel Archive” this material arrived at Porthcurno in 2003. The collection comprises manuscript documents, catalogues, drawings, cables ship operations reports and house magazines. These relate to Telcon, Selborne Plantation, Telcon Metals, SCL, ST&C and Alcatel and cover the period 1858 to 1996.

This material was due to be removed from storage at Enderby Wharf and destroyed. Removal of documents from the site to safe storage by PK commenced mid 2003 and over the next 6 month period more and more material was uncovered. In addition to manuscript material and a worthwhile technical library a large quantity of **cable samples** of all types was discovered together with film and video items and a collection of photographs.

It would appear that much of the material transferred to PK was overlooked in the ST&C transfer of archives to NMM probably due to the size of the Enderby Wharf site and the possible reluctance of some departments to release the material at that time. There is also a good proportion of material which is post-1988.

An index titled “Summary of Telcon Archive Material held at Porthcurno Museum” is attached to these notes. Reference is made in this index to the “Schedule”. This is a detailed listing of the material held at PK but excluding artefacts (cable samples) and the film and video items.

The Schedule, partially hand-written was prepared by Allan Green as the material was transferred out of Alcatel. It is held together with the archive material in store at PK.

Requests for visits and reference to the PK collection must be made through the Curator & Archivist **Alan Renton** at Porthcurno Telegraph Museum, Porthcurno, Penzance, Cornwall TR19 6XJ.

Alan may be contacted on 01736 810811 or email at [alan.renton@porthcurno.org](mailto:alan.renton@porthcurno.org)

## **7. The archive of W T Henley’s Telegraph Works Company**

Although this is not part of the Telcon archive it has been included in these notes because of the very strong relationship between the two companies.

In addition to this Henley started his submarine cable manufacturing business at Enderby Wharf in the mid-1850’s. He soon moved on, however to set up business at North Woolwich. He worked as a sub-contractor for Telcon and supplied them with iron wire. Henley also armoured the very large shore-end cables for the first Atlantic cables made by Telcon.

Having salvaged the Telcon archive material at Alcatel Greenwich it was decided in 2004 to investigate whether Henley archive material existed such that it might be preserved alongside the Telcon material at PK.

This enquiry was again timely since a large part of the Henley material which was found to be stored at their Gravesend factory was very badly conserved and destined to be scrapped prior to factory closure.

It would appear that from around the mid 1950's AEI had assembled archive material at Gravesend relating, not only to Henley's (Minute Books from 1880 to 1948 and much more) but also Siemens Brothers and some of the smaller UK Companies which had been absorbed into the AEI Group. These included, Siemens Dynamo Works & Electric Lamps, Swan United Electric Lamps, Edison Swan Cables and others.

All this material is now in the archive at Porthcurno together with 72 volumes of Henley Research Reports dated between 1920 and 1950.

Access to this material is as for the Telcon Archive. See Section 6 above.

## **8. Other "Telcon Archive" Material**

There are two other UK archive holdings worthy of mention:

➤ **The Institute of Engineering & Technology (IET) (formerly The Institution of Electrical Engineers (IEE))**

There is one (possibly) interesting manuscript in the archive of the IET:

**Ref: UK0108 SC (MSS 145). The Malcolm C Timms Manuscript**

The Manuscript written by Malcolm Timms in 1949 is purported to have been used as the basis for the 1950 book, "The Telcon Story" (See Section 9 below).

It comprises 166 pages of handwritten text and covers the history of submarine telegraph cables and the Telegraph Construction and Maintenance Company Ltd of Greenwich and is divided into the following sections: The Early History of Submarine Cables; Proposed Chapters; the First Atlantic Cables; Untitled Section; the Second Atlantic Cables; Cables to India, Australia and the Far East; Further Atlantic Cables; Extensions and Duplications; The Anglo American Company's Cables; 1881-1889; Ships/Personnel; 1890-1898; A Girdle Round the Earth I; A Girdle Round the Earth II; 1904-1908; 1909-1912; 1913-; 1915-1919; 1920-; 1924-1926 Loaded Cables; Untitled Section to 1935.

IET, The Institute of Engineering & Technology, Savoy Place, London WC2R 0BL.

The archivist is Anne Locker. Email: [archives@theiet.org](mailto:archives@theiet.org)

Tel No: 0207 344 8407 and 8436

- **The Science Museum Library (SML)** A collection of 15 albums compiled and written by **F.R.Lucas** Engineer at Telcon and covering various cable laying operations on which he sailed and which he managed. They cover the 22 year period 1883 to 1905 and comprise printed contracts and programmes re cable laying, press cuttings, details of officers, crew and cable staff of cables, journals of ships' voyages, ships' loadings, abstracts of Engineer's logs, soundings, photos, copy telegrams, correspondence and reports from Lucas to **William Shuter and Admiral Sir G H Richards** who were joint Managing Directors of Telcon. Lucas made considerable contributions to cable laying during his time there and grapnels and other tools carry his name to this day. He went on to become Managing Director of Telcon and held the title from 1906 to 1925.

Note that these albums are now held as Manuscript ref MS 426/6 at the **Science Museum Library & Archive at Wroughton. Viewing is by appointment only.**

The Science Museum Swindon, Hackpen Lane, Wroughton Swindon SN4 9NS.

Tel No: 01793 846211

The above is a particularly rich and interesting collection.

### **9. Other literature relating to Telcon**

As well as the archive material outlined above researchers into the history of Telcon will find the following published literature relevant and interesting:

1. “The Telcon Story”. A book published by Telcon to commemorate their 100th anniversary in 1950.
2. “Greenwich (Centre for Global Telecommunications from 1850)” Booklet written by **Steve Hill & Alan Jeal** and published by Alcatel Submarine Networks in 1999
3. “From Elektron to e-Commerce. (150 years of laying submarine cables)” Booklet compiled and edited by **Stewart Ash**.
4. “Cableships & Submarine Cables”. A book written by **K R Haigh** and published by ST&C 1968 with 2<sup>nd</sup> edition 1978
5. “Thomas Bolton & Sons Limited”. A book by John Morton and published by Morland Press in 1983
6. “The Iron Masters of Penns” A book by **John Horsfall** and published by The Roundwood Press in 1971
7. “Greenwich Marsh (The 300 years before the Dome)” A book by **Mary Mills** published in Greenwich in 1999
8. “One Hundred Years of Submarine Cables” A book by **G R M Garratt** and published by HMSO in 1950
9. “Enderby Wharf (Whaling, Rope Making and the Atlantic Telegraph)”. A booklet written by **Sally Jenkinson** and published as Part 2 of a Greenwich Local History programme.
10. “Power of Speech (A history of ST&C 1883 -1983)” A book by **Peter Young** and published by Allen & Unwin in 1983

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