

THE LONDON RIVER

Fifteen members of the Meopham U3A 'How Things Work' Group took part in this visit on May 24th, 2016. The Committee of the **Gravesend Sailing Club** kindly allowed the group members to meet at its clubhouse on the Gordon Promenade, where Chris Hague-Smith gave a brief account over coffee of some of the Club's early history & its formation in 1894 – the same year in which London's Tower Bridge was opened! After a brief tour of the club premises he led the group along the Gordon Promenade, pointing out some of the main features to be seen.

Canal Basin & Gordon Promenade:

First of these was the **Canal Basin**, originally at the western end of The Thames & Medway Canal. The Canal was begun in 1800 & cut across the Hoo Peninsula linking the Thames at Gravesend with the River Medway at Strood. It was 7 miles long, saving a coastal journey of 46 miles, & included a 2½ mile (4.5km) long tunnel that was Britain's largest in diameter at 26½ feet (9.6m) wide (including towpath). After many problems it finally opened in October 1824! However, with toll charges, tidal difficulties, & operational problems it was never really successful. In 1845 the new South Eastern Railway shared the tunnel with the canal, with a single track resting partially on the towpath & partially on wooden stakes in the water! In 1846 the canal company finally sold the tunnel to the railway company, which filled in the canal & laid a double track through it. The rest of the canal was used between Higham & Gravesend until finally abandoned in 1934. Part of the canal was later filled in leaving the Basin, bought by Gravesend Borough Council in 1970 with a view to restoration & now used as a marina.

Gravesend Town Pier with the Gravesend Ferry landing at its new terminal & Tilbury Docks in the background.



Next our attention was drawn to the studs let into the road at the western end of the Canal Basin which mark the site of the original **Milton Tudor Artillery Blockhouse**. This was one of the River Thames' earliest defences, built as part of Henry VIII's 'Device Plan' of 1539 in response to fears of an imminent invasion of England.

The Promenade area was largely saltings up to the New Tavern Fort wall until the late 1880s, but following the sinking of a schooner called the 'Spring', loaded with bags of cement, the damaged cargo was purchased & used to face an embankment, & the ground behind levelled to the required height. From the Promenade there is a good view of many interesting riverside features, including the Rowing Club, the Customs Jetty & the various PLA moorings, & across the river, Tilbury Docks, Tilbury Fort, the old P&O Passenger Terminal & Tilbury Power Station.

HM Custom & Excise House:

We continued west passing the **HM Custom & Excise House**. Gravesend has always been one of the most important shipping towns on the River Thames due to its position - coming upriver from the sea, the Thames narrows here, thus making Gravesend the natural gateway to the Port of London & highly suitable for the monitoring of vessels as they passed.

The Customs & Excise Service at Gravesend dates back to at least the reign of King Edward III when in 1356 John Page of Gravesend was appointed "Chercher of the Thames" - enjoined to control the import & export of currency & check that the correct duties had been paid on imported & exported goods. For many centuries it was the job of the 'Searcher' to instigate controls over shipping at Gravesend. All ships had to stop to be searched & to assess the duties payable on their cargoes. The service is still active in Gravesend in the pursuit of smugglers & control of illegal imports.



An Act of Parliament in 1559 prohibited the landing of cargoes at any wharf on the Thames except at 'legal quays' on the north bank between the Tower & London Bridge. Ships bound upriver were also required to 'hove' at Gravesend for a health check to be carried out. Captains swore on the 'Plague Bible' that there was no sickness amongst the crew or passengers. A customs official known as a Tide Waiter then boarded the ship to make sure that it only stopped at the legal quays. This practice continued until the opening of London's enclosed dock system in the early 1800s. In 1649, a Customs House was proposed to house the Tide Waiters who were using several of Gravesend's inns as offices, but it was not until 1782 that Whitehall Place, the first customs house, was built. It still stands today as the HQ of the salvage company, WE Cox & Co (Recoveries), opposite the present Customs House. From 1812, ships no longer had to stop at Gravesend to pick up a customs official, so the number of officers was reduced & they moved from Whitehall Place to share a building with the Excise Service. This is the present Customs House, built in 1815/16 on the site of the 'Fountain Tavern'. It is a dignified, soft, yellow brick Regency building with many features of note including an unsupported central staircase designed by Robert Adams, Architect of the Kings Works, & a number of elegant & stylish window frames. Under the building is an extensive network of cellars & on the roof a lookout with an unrestricted view of the Thames. It has a small museum that tells the story of the service & its changing operations, opened occasionally for special events.

Tour of The New Tavern Fort & Magazines:

At **New Tavern Fort**, we met Sandra Soder, a local historian, for a guided tour. She started at the top of the emplacements & gave us a history of the local coastal defences & fort & we went round the extensive weaponry on show. The fort was constructed from 1780 - 83 after a Government Survey of coastal defences, on a site occupied by the New Tavern Inn, from which it took its name. It was an irregularly shaped earthwork with two batteries linked by a rampart. The ancient **Milton Chantry** was incorporated into its perimeter & converted into an artillery barracks. By the 1790s, more quarters & magazines had been constructed. The rear of the fort was originally open, but by the end of the century a defence wall had been built to close it off. In the 19th century, New Tavern Fort underwent several revisions. In 1859 it was re armed, with further weapon upgrades in 1862 & 1865. On major reconstruction in 1868, new brick emplacements (mostly iron shielded) were built, on which even heavier guns were mounted. The ramparts were extensively remodelled, with new magazines connected via lift shafts to serving rooms adjoining the emplacements. From 1865-71, Colonel (later General) Charles George Gordon lived in the grounds in Fort House whilst overseeing the project. Sandra then took us through the warren of underground magazines & explained how the complex was operated.

The Riverside West of the Promenade:

The group moved on along the riverside, past the PLA HQ which we were to visit later, & stopped by the grounds of the **Clarendon Hotel** where Sandra told us about the remains of the **Gravesend Tudor Blockhouse**, another of Henry VIII's defences, before concluding her tour. After thanking her & taking our leave, we passed **Bawley Bay**, the **Mission House**, **St. Andrews Church** (1871), & through **St Andrews Gardens** where we admired the statue erected in 2017 of local WWII hero Squadron Leader **Mahinder Singh Pujji DFC**, before arriving at Gravesend's famous riverside Inn '**The Three Daws**' for an excellent lunch.

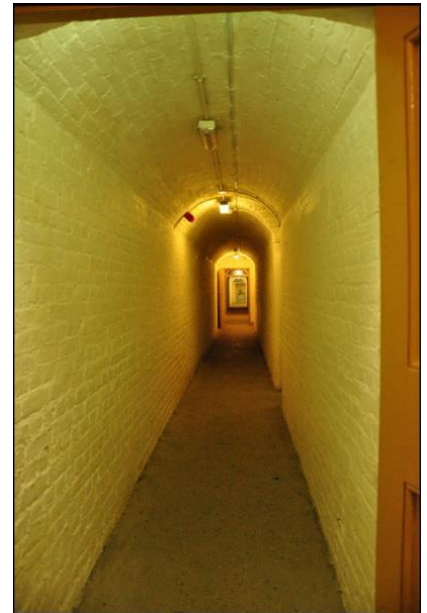
New Tavern Fort:



Welcomed by a tug!



Inside the fort.



Inside the magazine tunnels

Port of London Authority (PLA) Visit:

After lunch we walked back to the PLA Building, built in 1959, for our organised visit, where we were welcomed by our host for the afternoon, the PLA VTS Manager Kevin Gregory, & his administrative assistant, Priscilla Webster. Kevin gave us an interesting, informative & comprehensive presentation on the work of the PLA, followed by questions & answers.

The tidal Thames is home to the Port Of London, the UK's second largest port (by tonnage of goods handled). It is Britain's busiest inland waterway for freight, & becoming increasingly important for passenger travel, tourism, sport, leisure & recreation. The PLA was first established by Act of Parliament in 1908. It is a self-financing statutory authority, operating for the benefit of 'stakeholders' rather than shareholders & thus able to generate a substantial financial benefit to the wider community. Its main activities are:

- Overseeing river navigation & safety
- Sharing its planning consultation & technical expertise
- Bringing people together & promoting the river
- Looking after the Thames environment

There are over 70 independently run terminals & wharves along 95 miles of shoreline, with major operations including the Port of Tilbury, DP World London Gateway container port, Ford at Dagenham, building materials operations such as Tarmac & Cemex, & the Tate & Lyle Sugars refinery at Silvertown. Also, around 10 million passenger trips are taken on the Thames every year, & London is now an increasingly important destination for cruise ships, whilst leisure use is thriving.

Vessel Traffic Services (VTS) Room:

We were divided into two groups to visit the **Vessel Traffic Services (VTS) Room**. Ships passing up & down the Thames today are monitored by radar from the VTS Room at the Port Control Centre of the PLA. Every year there are thousands of shipping movements & the Port of London handles millions of tonnes of cargo. With a network of radar stations, radio communications & remote readings of tidal gauges, the PLA ensures safe navigation from the tidal limit of the Thames at Teddington Lock all the way down river to the North Sea.

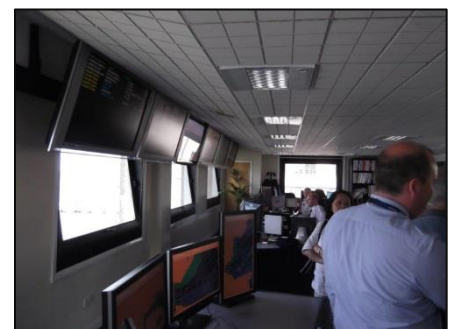
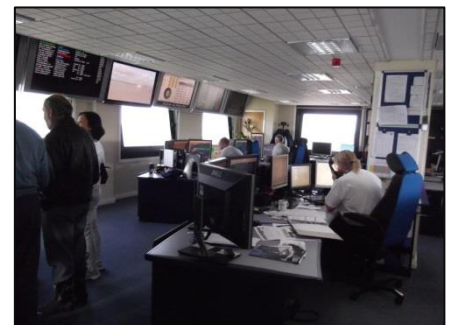
The aims & objectives of London VTS are:

- to ensure safety of life at sea, safety & efficiency of navigation
- to protect the marine environment, adjacent shore areas, work sites & offshore installations from the possible adverse effects of maritime traffic.

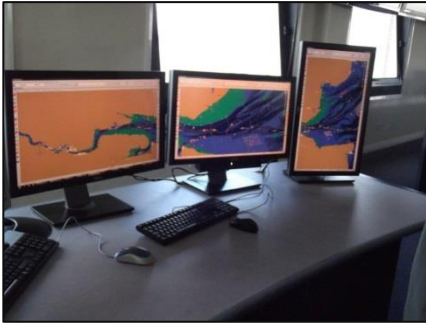
London VTS operates from two state of the art VTS Centres located at the Port Control Centre in Gravesend & the Thames Barrier Navigation Centre in Woolwich. A team of 44 VTS personnel oversee the Port of London's VTS area on a 24/7 basis 365 days a year. Each VTS Centre is led by a VTS Supervisor with the delegated powers of the Harbour Master & has a team of VTS Officers & Shipping Coordinators. All VTS personnel are fully trained to the International Association of Lighthouse Authorities (IALA) & Maritime & Coastguard Agency (MCA) standards using the PLA's in house MCA accredited training programmes.

London VTS provides three types of service to vessels navigating in the port:

- Traffic Information Service - to provide essential & timely information to assist on-board decision making
- Traffic Organisation Service - to prevent the occurrence of dangerous maritime situations
- Navigation Assistance Service - to assist in the on-board decision making process



Inside the VTS Room



All of the VTS surveillance data is combined into several highly sophisticated computerized displays at each work station to provide VTS personnel with comprehensive traffic images & data which can be interrogated in numerous ways, in real or historic time, or statistically. VTS personnel are also in constant communication with traffic & operate a port VHS radio service.

(Picture on right courtesy of PLA)



Other Services:

During the course of the day we were also told about other PLA services of note based at Gravesend - the PLA Hydrographic Service, based in the main building, & the PLA Pilotage Service based at the adjoining Royal Terrace Pier; the latter also houses the RNLI Lifeboat Station.

PLA Hydrographic Service: Continuous monitoring of the river & estuary are essential to the safe navigation of the Thames. Regular surveys of the tidal Thames are completed from Teddington to the Outer Estuary. Many types of survey are carried out – conservancy surveys covering the whole riverbed from bank to bank, navigational safety surveys covering critical areas, engineering & berth surveys, all now produced digitally to high efficiency & accuracy. Tide & current information is also obtainable, both as live & historical data.

The service operates 3 survey craft. All vessels are fitted with multibeam sonar systems & positioning & inertial reference units. 'Verifier' is used predominantly in the Estuary; 'Yantlet' conducted navigation & structural surveys mainly in the river, & 'Galloper' is predominately used for surveying the shallows or shore ends in the river. In 2016 the 20 year old Yantlet was due to be replaced by 'Maplin', a new 18m catamaran modified to cater for the additional geophysical survey equipment that the service is increasingly involved with. The whole chart production operation is now digital, using the latest GIS technology, & the PLA Hydrographic Service is in the forefront of the ports which produce IHO S57 electronic charts.

PLA Pilotage Service: The PLA's team of 90 Thames pilots board & guide more than 10,000 ships through the port every year, from cruise ships to aircraft carriers, super yachts to tall ships. The Port has four main approach channels & the Pilots must be expert on all of these areas. When boarding vessels heading into or out of the Port they take with them the very latest information on local conditions, weather, Vessel Traffic operations & movements, reporting requirements & potential hazards. Twelve specialist River Pilots work in the stretch of the Thames between Gravesend & London Bridge. Three of these are Bridge Pilots who work from London Bridge to Putney Bridge, where expertise on the shallower water & low air draughts is vital, particularly for awkward one-off project type cargoes. These manoeuvres have been studied, developed & practised using the PLA's Ship Bridge Simulator, installed at Gravesend in 2003 & upgraded in 2006.

Boarding & landing of Pilots takes place from Sheerness, Ramsgate, Harwich & Gravesend. The pilot cutters at Sheerness & Ramsgate are purpose-built craft operated by Estuary Services Ltd (ESL) which is a joint partnership between the PLA & Medway Ports. Boarding & landing services at Harwich are provided by the Harwich Haven Authority & for operations at Gravesend the PLA uses its own cutter 'Patrol' or the multi-purpose harbour service launch/pilot cutter 'Benfleet'. All PLA Pilots are equipped with personal locator beacons, so if a Pilot fell into the water while attempting to board or leave a ship, the beacon's signal would be activated & the Pilot could be quickly located & rescued by the pilot cutter or other rescue vessel. A system of Pilotage Exemption Certificates (PEC) is operated by the PLA for ships' senior officers who are regular callers at the Port. The process of issuing these Certificates involves intensive assessment of each case. About 250 PECs were in force at the end of 2006.

Gravesend RNLI Lifeboat Station. Following the Marchioness tragedy in 1989, the Thames Safety Inquiry conducted by Lord Justice Clarke recommended amongst other things a dedicated search & rescue service on the tidal reaches of the River Thames. The RNLI was invited to provide this & four new lifeboat stations were opened from 2002. Those at Chiswick, Tower Pier & Gravesend are manned 24 hours a day, using a mix of full-time & volunteer crew, whilst the fourth, at Teddington, has a volunteer crew summoned by pagers. Initially, the Gravesend station was based in portcabins in the PLA car park at Royal Terrace Pier before moving into its new station at the end of the pier. The station is only yards away from the lifeboat moorings, greatly reducing the time it takes to launch to an incident.

The End Of The Visit

Following our group VTS Room visits, we gathered for a final question & answer session before thanking the PLA staff & taking our leave, along with some free literature from the PLA. All in all this was a full & most interesting day during which we learned an enormous amount about Gravesend's Riverside, its rich & fascinating history, & the scale & complexity of its modern operations, much of which was a complete surprise to quite a number of our group, particularly some of its lesser known aspects.