As you will see from the report in this issue there was a very successful Conference and AGM held in Norwich in early September, so I would like to take this opportunity to say how grateful the committee and I are to Alistair Graham Kerr for all the work he put in to organising the conference. Some 40 members attended and enjoyed the weekend, and, once again, I would encourage members to attend this event.

At the conference I was able to announce that my successor as chairman will be David Page. David is a long-standing member of the FSG but has only recently been able to find time to join the committee. He has previous experience of the role of chairman in other organisations and I am most grateful to him for agreeing to take on this role. I know that he will bring a new, and more modern, approach to the organisation and direction of the FSG. However, David felt unable to take over the position of chairman until September 2015, so it was agreed at the AGM that I should continue as Acting Chairman until that date.

This year I was invited to speak at the International Conference on Fortified Heritage: Management and Sustainable Development held in Pamplona from 17th to 19th October. Other speakers included Ms Milagros Flores Roman, the President of ICOFORT; Prof. Nicholas Faucherre; and Dr Hans-Rudolph Neumann; while among the papers presented was one given by Jason Bolton, an Irish member of the FSG. In November the FSG provided a representative at the public consultation organised by Capita, in conjunction with Dover Town Council, on the future development of the Western Heights in Dover.

These requests and others that I and the committee have received all indicate that the FSG is now seen in the built heritage world as a respected authority on fortifications. I believe that it is important that we retain that position in order to maintain our charitable status. We must continue to work to further our charitable aim to promote the study and preservation of post-medieval fortifications. We can do this through our publications and by making FORT articles generally available on the FSG web site; by making grants for publications on fortifications; and small grants for conservation work etc. We must not allow the FSG to be seen simply as a ‘hobby’ society for, if that were to become the case, we would be endangering our charitable status and betraying the ideals of our founding members when they set up the FSG 40 years ago.

Bill Clements

This edition contains material from numerous countries; and to make up for a rather short Reviews section in September Casemate, there are reviews of lots of fine books to tempt members; Rudi Rolf’s latest on the Atlantic Wall is really something special.

I am always happy to receive overseas contributions, so articles from Mike Fiorini in the USA and Jeremy Cowell in Canada are very welcome.

Charles Blackwood

Website PASSWORD (case sensitive) is: Raposa.
NEW EDITOR WANTED FOR FORT

I cannot edit FORT for many more editions, age will see to that, and I do not want there to be problems finding a replacement by leaving a handover too late. I want the handover to be smooth and efficient.

I am therefore looking for someone to take over from me in a couple of years’ time, who is prepared to learn what is required on the job, by taking over some of the work from me almost immediately, easing their way into eventually taking over the editorship.

I will not disguise the fact that the job is challenging, requiring both meticulousness and flexibility. Many of our contributors do not have English as their first language, but we publish only in good English. This can be frustrating, and hard work and diplomacy are needed. Ensuring adherence to the house style and the quality of illustrations are other tasks that need attention.

But the job is satisfying and can be a source of justified pride and even a small measure of international notoriety. You will meet, albeit only as electronic pen friends, interesting and talented people. You will be providing a much admired and sought-after international record of research in fortification studies and encouraging these studies to continue. You will of course be providing inspiring reading matter for FSG members too, and continuing one of the original purposes of the Group.

Anyone who thinks they might be interested should contact me and we can discuss things in more detail. John Harris (editor@fsgfort.com)
MEMBERS DAY 2015
will be held on Saturday 7 March at Friends House,
171-173 Euston Road, LONDON, NW1 2Bj; 10:30 for
11:00. £10 each on the day to help defray room and kit
hire. Coffee and biscuits included, but bring your own
lunch or attack the local eateries. The building is
opposite Euston’s rail and tube stations and five minute’s
walk from King’s Cross Station and St Pancras Interna-
tional Terminus. Please let Alastair Fyfe know if you wish
to give a presentation and give him an idea of the
subject, length and kit needed. secretary@fsgfort.com

FUTURE EVENTS

MEMBERS DAY 2015
will be held on Saturday 7 March at Friends House,
171-173 Euston Road, LONDON, NW1 2Bj; 10:30 for
11:00. £10 each on the day to help defray room and kit
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walk from King’s Cross Station and St Pancras Interna-
tional Terminus. Please let Alastair Fyfe know if you wish
to give a presentation and give him an idea of the
subject, length and kit needed. secretary@fsgfort.com

FSG OVERSEAS TOURS:
2015: 30 May - 6 June: Portugal
Lisbon/Elvas/Setubal.
Charles Blackwood, casemate@fsgfort.com
FULLY BOOKED

2016: Mallorca/Menorca (provisional)

2017: Northern Italy, Lake Garda area (provisional)

OTHER GROUPS
2015
Feb 7-19 Punjab/India; Tour/Congress; ICOFORT
Germany; Hans-Rudolf Neumann;
hrv.neumann@t-online.de
Apr 29-May 2 Delaware River; Annual Conference;
CDSG; Chris Zeeman; c_zeeman@hotmail.com
May: New Orleans/Louisiana; Ann Conf; CAMP;
Marylou Gjernes; mgjernes@earthlink.net
June: Panama; Special Tour; CDSG; Terry
McGovern; tcmcgovern@att.net
Aug/Sep: Verona, Italy; Tour; ICOFORT Germany;
Hans-Rudolf Neumann; hrv.neumann@t-online.de

Sep: Nurnberg, Germany; Ann Meeting; DGF;
Andreas Kupka; Akupka@Juelich.de
Sep 11-15: Hamburg; Tour; Assoc St Maurice d’Etudes
Militaires; Marc Girard; president@asmem.ch
Oct 16: Antwerp; Ann Meeting; IFC; Kees Neisingh;
secretariat@internationalfortresscouncil.org

CDSG Conference, Delaware River, April 29-May 2, 2015.
CDSG and FSG share many members and this Conference on
America’s east coast should appeal to many in the FSG. The
Conference moves from Philadelphia to the mouth of the
Delaware River via Fort Mifflin (bastioned), Fort Mott (lots of
batteries), Fort Delaware (batteries and 3rd System masonry
fort), Fort DuPont (loads of stuff), Fort Saulsbury (2 batteries),
Fort Miles (batteries and Fire Control Tower) and as an add-
on, Cape May’s Fire Control Towers. Contact Terry McGovern
for more info; tcmcgovern@att.net.

FSG STUDY WEEKEND, Plymouth, 24th-26th April 2015
A couple of days visiting some of the Plymouth
Defences on the cheap!
This is aimed at those who have tight time budgets
Perhaps for family reasons, those who are new to FSG
events, those who have missed out on the Portugal Tour
which is now full, I believe) but not excluding any one!
The planning is not going to be as disciplined as the
FSG main tour, but there is plenty to see, and with a
small group we can be more flexible.
We will meet on Friday evening at the IBIS Plymouth
Hotel, which has a restaurant, and stay there for 2 nights.
This is very conveniently located at the junction of the
A38 (main road to Exeter or Cornwall) and the Forder
Valley Road (to the forts) so a quick get-away on Sunday
is very possible for anyone with a distance to home.
On Saturday we will visit as many of the north eastern
forts and batteries as we can, including some that are
not normally open to the public - think of Eggbuckland
Keep, Bowden Battery (lunch stop), Woodland Fort, and
others - probably an evening meal in the Royal William
Yard.
Sunday- more forts (Crownhill + ?) and depart as you
need to (or stay another night)
We will travel from fort to fort in as few cars as we can
squeeze into (parking is tight at some venues) but
distances are short.
Costs: getting there and fuel used touring round are
down to you. The Hotel is offering rooms at £34.00 per
night plus £7.95 for breakfast and there are lunches and
evening meals to add. I am also asking for £10.00
towards my planning costs.
In all, a cheap weekend visiting forts and meeting up
with like-minded chaps. If this is successful, the formula
could be used for other weekends by other organisers.
Please let me know if you are interested a.s.a.p. I have
ring-fenced 12 rooms at the hotel but we could get more
if needed. I would like to do most of the organising by e-
mail so contact me at: keith-phillips3@sky.com, tel:
01329 289480, mobile 07762 177955 – preferably by e-
mail with your phone numbers.
I am prepared to run this with just one car-full; more
than 5 cars-full might begin to get a bit cumbersome.
Keith Phillips
[see pp34-37 for Keith’s Report]

FSG CONFERENCE and AGM
2015 Sept: Defences of the Clyde.
International ICOFORT - science conference in Delhi on 5 and 6 February 2015
The inclusion of the six hill forts in Rajasthan on the UNESCO World Heritage List and the further inclusion of India on the Science Committee ICOFORT provide a unique opportunity to realize a worldwide international conference. India currently has just over 3000 fortifications, making it one of the countries in the world with the greatest density of historic fortifications. On April 29, 2014 ICOMOS India decided to realize this conference on 5 and 6 February 2015. For the thematic orientation ICOFORT India will be responsible under the direction of Dr Shikha Jain, supported by UNESCO Delhi and both planning and architectural schools of Delhi and of Bhopal.

For the first time a worldwide international conference can be realized, which deals exclusively with military architecture and fortifications.

The conference will try to provide a general overview of the fortifications landscape of India and secondly identify examples of ‘good practice’.

The conference is open for everybody, as is the Annual ICOFORT meeting. During the 7th till 19th February there will be a post conference tour to the Punjab region (separate application). Special flight conditions by AIR INDIA from Frankfurt/M. More information, detailed programmes and expression of interest: hrv.neumann@t-online.de (Co-ordination Europe).

OBITUARY - GUY STANDRING
My very great friend Guy Standring died peacefully on 17th November at the care home he had been in for nearly two years. An FSG member for nearly twenty years, he suffered with Parkinson’s Disease and had to retire early from his profession as a dentist. With the help of fellow FSG members he was for some time still able to attend Conference weekends which he much enjoyed - the last being the Isle of Wight Conference in 2011. Alan Fyson

UK
Beacon Hill fort, Essex

The Daily Mail online (30 September 2014) carried a curious piece on the least popular visitor sites in the UK from a ‘VisitEngland’ 2013 survey and bottom of the list was Beacon Hill outside Harwich, with its fine collection of WW2 emplacements and radar tower. The photo tells us perhaps why the site was visited by just six visitors!

Several of the properties shown look most attractive and it is a wonder they are so rarely visited.

‘I believe it is all a matter of publicity; and perhaps it would be an idea to advertise these properties under different headings country-wide by counties, such as ‘Military History - Essex’ or ‘World War 2’ for the radar tower, ‘The Indian Raj’ for the museum with an Indian collection and ‘Windmills’ for the Norfolk tower mill. Visitors could then peruse the list of headings and county locations, and choose from their preferred list. From Richard Tomlinson

Grain Martello Tower
The Daily Mail, 14 August 2014, carries an advertisement for the sale of the Grain Martello tower – ‘Britain’s most unusual address’, ‘Number 1, The Thames’ [surely should be No 1, The Medway?] for £500k, with no doubt another £1m or so to spend on it, but certainly it’s easy to see the potential.

Completed in 1855, the tower was modified to take two 4.7-in QFs in 1915 and a twin 6-pdr with its distinctive director tower in 1941 and a substantial barracks block has been added. From Margaret Pinsent

To find out more, visit the BBC website, which includes a video tour of the site. There are some nice shots of the 4.7-in positions – ideal for a swimming pool, the estate agent reckons - and the boom chain wrapped around the tower’s base.
http://www.bbc.co.uk/news/uk-england-london-28776184

From Peter Presford [See FORT 42 for photos. Ed]

Home Front Legacy
As part of the 2014-2018 Centenary, English Heritage initiated a major project to record the colossal ‘footprint’ left by WW1 on the fabric, landscape and coastal waters of England. The aim is to record and preserve vulnerable sites, buildings and structures – camps, drill halls, factories and observation posts for example. Using volunteers to scour towns, villages, countryside and beaches and track down local WW1 places that are just not in the records. Their observations are being uploaded to a specially designed app and their finds will appear on an online map to open up the impact of the war on our landscape for everyone.

The project methodology was trialled by English Heritage with Bristol and York Universities in the Lea Valley (in Essex and Greater London), and Staffordshire. The report of the trial The Home Front (1914-1918) and its Legacies: a pilot study for a national public archaeology recording project of First World War legacies in Britain: 2014-2018 can be downloaded from: http://www.english-heritage.org.uk/publications/home-front-1914-1918-and-its-legacies/

The Council for British Archaeology has a special website supporting community groups researching local places associated with the Great War at: http://www.homefrontlegacy.org.uk/wp/ from which the online toolkit and guidance for recording the remains of surviving sites, structures and buildings around can be downloaded. From Alastair Fyfe

www.fsgfort.com
Isle of Sheppey

BBC News, Kent, 11 October 2014 carried a very timely piece, to fit in nicely with Victor Smith's article in FORT 42. 'Kent archaeologists discover Sheppey WWI trenches’.'It was once known as 'Barbed Wire Island': a flat, marshy area in the Thames Estuary that was heavily fortified and bristled with guns in anticipation of a German invasion that never came. But when archaeologists began excavating the island of Sheppey off the north Kent coast, what they found took them by surprise. They expected to uncover structures from World War Two, but instead discovered 'fantastic' trenches dating back to World War One that they believe to be of national importance. A fine set of photos from the Royal Engineers Museum (REM), happily complements the ones Victor used. From Steve Dent.

Puckpool Battery, Isle of Wight features in the magazine concrete July/August 2014 as an example of... 'an important, if little known, historic use of concrete'. The Mulberry Harbour units are mentioned as one of very few concrete structures which are well known, while the massive concrete works of the 9.2-in battery at Puckpool are described along with some details of the gun and its performance and pointing out that 'The guns typically produced 130 tons... and used a cordite charge of 54.5kg (120lb). Thus very robust gun emplacements structures were required to support the static weight of the guns and the high forces generated on firing...’ From Quentin Spear.

Samphire Hoe - never heard of it? Nor had I, but it is a nature reserve lying below the white cliffs of Dover on land formed by spoil from the Channel Tunnel. 'There is a brand new visitor centre there... a rather neat simple structure of steel frame clad in recycled French railway sleepers. Not apparently remotely related to fortifications, except that in terms of the building’s appearance the architect took his inspiration from the WW2 observation posts which overlook the site from the cliff top above. So, quite a nice symmetry there.’ From Steve Dent. http://www.bbc.co.uk/news/uk-england-kent-29572952

Not often we hear of WW2 concrete providing architectural inspiration! There is a row of OPs along the cliff edge, one of which can just be seen in Steve's photo. Bing Maps shows them nicely in Bird's Eye. Ed.

PLYMOUTH is a main British Naval port and has been for several hundred years, during which numerous defences have been built, in an ever expanding ring as the range of artillery increased. The Plymouth Herald, a local newspaper has been active in featuring the defences as the items below testify, sent by Zita Cliffe.

Fort Picklecombe is on the west side of the harbour entrance and has been converted into upmarket flats but in a feature called 'Back in the Day, Turning the Clock back on Plymouth,' on 8 July, there is a small but nice photo of the fort from inside taken by Annie Smale around 1930.

The Citadel features in a two-page illustrated spread on 30 August, under the banner 'Imposing Feature is a Hidden Gem', celebrating the 350th anniversary (next year) of the commencement of work on the Citadel. A summary of the fort's history is given plus some of the features to be found there.

Crownhill Fort owned by the Landmark Trust merits a two-page spread on 22 September 2014, describing the attractions of the fort at some length - 'City national treasure is a 'living breathing museum', regrets its out-of-the-way position and lack of promotion, but notes the satisfactory position that in 2012... the fort broke even for the first time in years.'

Built in 1863 the fort forms the centrepiece of Plymouth's land side ring of forts and batteries – see Keith Phillips' report on pp34-37.

Declared surplus in 1983 the fort was bought by the Landmark Trust in 1986, restored and opened to the public in 1996, with a holiday apartment opened in 1997 in the Officers' Quarters. In 2008 it ceased to be an everyday visitor attraction and many of the buildings are converted to offices, workshops and stores, though it is open to the public on the last Friday of each month from January to November. From Zita Cliffe.

Bowden Battery is one of the batteries mentioned above, and is the first defence work to the east of Crownhill Fort. The Plymouth Herald of 6 October 2014 reports that 'Homes plan 'gives scant regard to historic fort'’. English Heritage is disappointed that the developer's designs for 111 houses did not take into consideration their advice... that the current landscaping plans would have a detrimental impact on Bowden Battery, a scheduled monument.

The battery is unusual in having its glacis intact and outlook pretty much as it would have been when operational. ‘The application fails to assess the impacts of the development on the setting of the monument and makes no real attempt to mitigate the harmful impact of the development on this setting. The good survival of the fort and its glacis, within its original landscape setting, makes it a highly important survival in a regional and national context.’

From Zita Cliffe.
Sound Mirrors found, buried under tons of infill on the cliffs near Dover. The Independent online 29 October 2014, reports the unearthing of two small sound mirrors, long thought to be demolished. Pre-radar, during WW1 and between the wars, Britain built sixteen sound mirrors, some of which survive, the best-known group of three different designs being at Denge on the gravel beds behind Greatstone. The mirrors were a component of one of the world’s first early-warning systems, the London Air Defence Area. Happily discovered on land bought by the National Trust the two mirrors are to be cleaned and restored.

EUROPE
Charles Fort, Kinsale, Ireland. This wonderful fort was visited by FSG in 2013 during our Annual Study Tour, and in the recent English Heritage is an ‘Advertorial’ [what a horrible word!] for the fort and World War I. After a short history of the fort there is a description of a new exhibition on the role of Charles Fort and the military barracks in Kinsale, which opened in Autumn, with much new material. From Margaret Pinsent

Middelgrund Fort, Copenhagen. This magnificent Danish fort was advertised in the Telegraph Property of 21 June 2014 with a guide price of £12m (c €15m). The fort has been used as a hotel and has 200 rooms with two miles of corridors. It was built in 1890-94 on an entirely artificial island, reputedly the largest island fort in the world and one of three artificial islands that were created to defend the entrance to Copenhagen’s harbour, the other two being Flakfortet and Trekroner Fort. From Quentin Spear

USA
Fort Hancock, NJ
After years of planning, the US National Park Service has put out the first phase of the buildings at the former coast defense site of Ft. Hancock for potential reuse and rehabilitation. Chief among the proposed uses of the former US Army buildings are for non-profit organizations, bed-and-breakfast operations, and residences or offices, the latter using former officer housing. The first phase of six buildings is projected to expand to as many as 33 buildings if successful. Buildings are delivered ‘as with all faults’ (which may be legion - the Army left decades ago) and rehabilitation must be in line with Park Service and National Historical Landmark guidelines. ‘The project is being closely watched by other agencies seeking effective reuse of old military facilities.’ www.forthancock21stcentury.org From Chris Sterling

Fort Hancock is a former United States Army fort at Sandy Hook in Monmouth County New Jersey. The coastal artillery base defended the Atlantic coast and the entrance to New York Harbor. Between 1874 and 1919, Fort Hancock was operated in conjunction with the US Army’s Sandy Hook Proving Ground. It is now part of Fort Hancock Memorial Park. In 1893, Fort Hancock installed the nation’s first disappearing gun battery at Battery Potter [steam driven]. In the late 1950s anti-aircraft missiles from Project Nike were based at the fort. Wikipedia. FSG visited here with the CDG in 1998 and were impressed by the 20-in Rodman gun, and turned a 6-in BL in Battery Peck (ex Battery Gunnison) round to face the sea. Ed.

Washington’s Civil War Defences are under threat from all the usual suspects and local groups have got together to form the Alliance to Preserve the Civil War Defences of Washington. The group has had considerable success in introducing a bill seeking to establish the defenses as an Historic Park, promoting the 150th anniversary of the Battle of Fort Stevens (when Lincoln nearly got himself killed) and encouraging the National Park Service to coordinate the defences as an integrated whole rather than under three separate parks. Both items from the magazine Civil War Trust, from Charles H Bogart.

Fort Pocahontas played a significant part, both politically and emotionally in the Civil War when soldiers of the United States Coloured Troops held it against Confederate States cavalry attack in 1864, on their own without white soldiers, an event celebrated in 2014 with on site re-enactments and medal awards, the latest in a line of Living History events started in 1997. The fort is an earthwork and relatively untouched by time, being under trees until the 1990s. At half a mile long and a quarter mile wide, with 12ft high walls originally, it is a massive structure. A walk round the walls and sight of the remains of the firing steps is still quite possible. The Civil War News July 2014, from Charles H Bogart. ©
As part of our work to further our charitable aim to promote the study and preservation of post-medieval fortifications the Fortress Study Group awards grants towards publication of appropriate books, where that bit extra may help decide whether a book is published or not and deserving causes. We have also started to award plaques to be displayed at sites where exceptional work has been carried out, especially by volunteers, to preserve/restore fortifications.

Already we have awarded grants to help with the publication of two books – *Ramparts of Empire*, by Timothy Crick and John Kenyon’s massive work *Castle, Town defences and Artillery Fortifications in Britain and Ireland: a Bibliography 1945-2006*.

We have awarded grants to *High Knoll Fort* in St Helena to help repair crumbling walls; to the *Old Needles Battery* in the Isle of Wight to help with gun carriage restoration and to help construct a display model of *Fort Cliffe* for the Royal Engineers Library and Museum.

2014 saw the award of the first plaques recognising exceptional work at *Chapel Bay Fort*, with volunteers led by George and Emma Geear, and *Landguard Fort* where an enormous amount has been done, much by volunteers, who are also key to taking parties round – they expertly escorted us round the fort and batteries after FSG Chairman Bill Clements had presented the plaque to Landguard Fort Trust Chairman Tim Clarke.

At Chapel Bay Fort Alistair Graham Kerr presented our plaque to George Geear. Here too an enormous effort has gone into the recovery and restoration of the fort, see Casemate 100, pp16,17.

Emma Geear writes: The Trustees of Chapel Bay Fort & Museum would like to thank the Committee and Members of the Fortress Study Group for the award which was presented to us at our recent AGM. The major restoration works which have been undertaken in the last year include the rebuilding and restoration of the surface buildings, re-installation of many of the railings and the laying of a new tarmac surface in place of the original cinder surface.

This work was carried out by Tree & Sons, a local firm, with grant monies funded by the Welsh Government Community Facilities and Activities Programme and Cadw’s Heritage Tourism Project part-funded by the European Regional Development Fund through the Welsh Government and Pembrokeshire County Council. It was great and pleasant surprise to receive this award from Alistair on behalf of the Fortress Study Group.

In Alderney at *Fort Tourgis, Battery No2/Stattpunkt Türkenburg*, and at *Stattpunkt Biberkopf* FSG has awarded a grant towards the cost of signage to interpret restored works by Trevor Davenport and volunteers of ‘Festung Alderney’.

Do you have a book in you crying to get out, which FSG can help with? Do you know of a site where exceptional work has been carried out? Contact Alastair Fyfe at secretary@fsgfort.com if you do.

Charles Blackwood

See right and opposite for pictures relating to these items.
This volume is a substantial 112pp, all on A4 gloss paper with numerous colour photos and full single or double page coloured plans of forts and batteries – a very appealing feature, as I have previously noted. Ian’s photos of the defences of the Firth of Forth (the largest article at 49pp) are informative but suggest it is many years since they were taken. CHB

Channel Islands Occupation Society. Newsletter No 46 of October, 2014

• Programme of future events.
• Reports of site visits (rambles) in June, July, August and September.
• Trip by Guernsey CIOS members to sites in Jersey
• Safe detonation of 10.5cm shell on Alderney
• Work on Fort Tourgis, Alderney
• Festung Guernsey Project; reports on Batterie Naumannshohe, Fort Hommet Gruppenunterstand, M19
• Mortar Restoration Project.
• Wehrpass of a German soldier.

CDSG. Coast Defence Journal Volume 28, Issue 3, August 2014

Articles
• Coast Artillery Transport Detachments, Part I: The Mainland Ports of Embarkation; Bolling W Smith
• Kawailoa ‘E’ Military Reservation; John D Bennett
• With the New York National Guard Coast Artillery; Francis McDonald, edited by Charles H Bogart
• The Reminiscences of Raymond Bogart; as told to Charles H Bogart

Reviews
• The U.S. Army Barrage Balloon Program, by James R Shock
• Hitler’s Fortresses: German Fortifications and Defences 1939-45, edited by Chris McNab
• A Sound Defense: Military Historical Sites of Puget Sound, by Nancy L McDaniel
• The Americans on D-Day: A Photographic History of the Normandy Invasion by Martin KA Morgan
• US Army Soldiers and their Chevrons: An Illustrated Catalog and History from the Revolutionary War to Present by William K Emerson
REPORT: ARCHAEOLOGIES OF WAR 1618-1918

Three members of the FSG attended part of the conference on Conflict in Context: Archaeologies of War 1618-1918 held in the Museum of Liverpool in conjunction with the Society for Post-Medieval Archaeology on the 27th and 28th of September 2014. Its objective was to provide an archaeological comparative perspective, considering warfare and its impact from the seventeenth century to the First World War.

The conference range was European with topics covering:
• Warfare and armaments, including both artefacts and fortifications
• Warfare and tactics, including battlefields
• Military life, including training, barracks and diet

Specific sites discussed included:
• Fort Saint Isabella, built in 1599 during the Spanish siege of Ostend.
• The battlefields of the Thirty Years’ War in the Czech Republic.
• Fort Saint-Sebastien built at Saint-Germain-en-Laye in 1760 to train Louis XIV’s troops in the techniques of siege warfare.
• The camps of Napoleon’s army for the invasion of England (1803-1805).
• Siege of Burgos in 1812: an archaeological reappraisal of the ‘standard’ map of the siege.
• The supply of Blakely RML artillery to the Confederate forces from Liverpool.
• The Wistoujscie fortress outside Gdansk, 16th to 20th century. A masterpiece and a historical miscalculation.

In each case, the archaeologists brought forward additional (and sometimes completely new) information about the sites. For further information, see the conference abstracts on the FSG Forum at www.fsgfort.com/FSGforum

Alastair Fyfe and Paul Beckmann
VISITS to DOVER SITES

FSG STUDY DAY
10 May 2014
By Alastair Fyfe

Last year’s Study Day concentrated on several sites around Dover, most of which are normally off-limits and for which Bill Clements had been negotiating for months with various authorities to try and gain access permissions.

Dover RN Fuel Depot
Ten aficionados braved the rain, fog and gales to assemble at Dover harbour, where we were met by Antony Greenwood of the Dover Harbour Board (DHB). He ensured that everyone was fitted out with high-vis waistcoats, hard hats and VIP security passes and then led a convoy of cars along to the eastern docks and into the secure side directly under the white cliffs.

A substantial metal door in a discreet arch at the base of the cliff was unlocked by a DHB colleague and the party led up a very long and very dark flight of stairs within the cliffs.

The stair tunnel was concrete lined and sections of 12-in (?) pipe, large valves and other assorted iron-work began to indicate that there might eventually be something at the top.

Finally a horizontal tunnel was reached leading off straight ahead into the gloom, in the left side of which were recesses each exposing part of a very high wall to which was attached a metal ladder disappearing...
vertically upwards. These were the end walls of the fuel storage caverns and the ladders were for access and sampling, with a winch provided for hauling up the samples. Wooden wall boards recorded the contents of each reservoir (e.g. Reservoir No.2, Contents Furnace Fuel Oil).

There were five main reservoirs, each about 200m long and 13m high and capable of holding some 5 million gallons of fuel for the fleet. One of the reservoirs has been broken into through its end wall and can be entered to see the vertical concrete-lined walls and slightly dished floor still with oily puddles. With their immense space, height and domed roof, these structures could be described as Dover’s hidden cathedrals.

The complex was constructed at the beginning of WW2 as one of three bomb-proof fuel stores for the Royal Navy. The work involved the removal of a vast quantity of chalk and it must have been impossible to conceal the enormous volumes of white spoil from enemy eyes.

DHB has had some parties round looking at what use might be made of the reservoirs, but the cost of bringing such huge spaces up to modern rules and regulations must be excessive.

The Dover Turret
Returning down the long stairs to sea level, the car convoy re-formed and was led back along the sea front to the Admiralty Pier, past some puzzled cruise liner crew trying to park passengers’ cars, to reach the famed Dover Turret. The group had been warned that internal access was not possible yet, but were disappointed that neither was access to the level of the turret itself possible for health and safety reasons resulting from the February storms. Viewing was restricted to standing at pier level and trying to peer up over the glacis of the fort to see the rusting cylinder of the turret.

Admiralty Pier Fort was started in 1872, its two 16-in 80-ton RML guns were installed with difficulty in 1881-2, and it was finally handed over in 1886. The guns are the only surviving ones of their type, but were considered to be obsolete by 1899. A few years later in 1909, Pier Turret Battery (2 x 6-in BL MkVII) was erected on top of the fort and was manned through both WW1 and WW2.

DHB has plans to clean up the turret and the adjacent Dover Marine Station in the future and hope to allow some public access.

Archcliffe Fort
Having thanked DHB for their efforts and noting that the sun was finally breaking through, the group made their own way a few hundred yards further west and into Archcliffe Fort. It is now occupied by St Martins Emmaus (the charity for the homeless) and used as a store and warehouse.

The fort has suffered greatly from 20th developments with the south west portion demolished in 1928 by the railway company whose tunnels already ran beneath it, and more recently the outer works of the entrance demolished to make way for the new dual-carriageway just north of the ditch.

The remaining north rampart was examined, with a truncated gun emplacement in the NW bastion. Next was a descent into the ditch to
try and make sense of the much modified defensible flanked entrance. It appears that the two-storied galleries covering the ditch had been converted into accommodation with inserted windows, although the small magazines remain.

The site has been fortified since the late C14th and later had a substantial Henrician bulwark erected on it. In the C17th it acquired a rampart with two bastions, a gatehouse and ditch on the landward side and a demi-bastion to the east. A defensible flanked entrance was built in 1814-15. Much used for Volunteers’ practice, the fort’s armament was regularly modified for training purposes.

**North Entrance of the Western Heights**

After a breezy al fresco lunch on the picnic tables at the fort, it
was back to the cars and up and over the hill to the inner entrance gate of the North Entrance of the Western Heights.

There the party was met by Mandy Whall of the Western Heights Preservation Society who unlocked the defences of the entrance tunnel which curves down and round to the inner side of the main outer entrance with its sliding doors and inner drawbridge. Through the remaining spars of the drawbridge one can see the girders of the outer drawbridge on the outer side of the tenaille.

Openings in the side of the main entrance tunnel led to yet more storage tanks - in this case a row of water cisterns; and to stairs down to musketry galleries covering the inner ditch. The roadway, gun rooms and magazines have suffered from vandalism and by coincidence as the ‘official’ party made its way along the tunnel it met a group of teenage explorers who were coming up from the direction of the main drawbridge which they had assailed. They were invited to leave.

The counter-balanced drawbridge has lost its planks, but the spars remain, with the bridge in the raised position and the counterweights down in the pit.

On the inner side of the pit are the sliding main doors. To one side is access down to a postern below the bridge and more musketry loops.

The North Entrance was built in 1804-16 as the northern access to the Western heights complex; then remodelled in 1858-67. In 1967 a new section of road was cut through the North Lines to bypass the North Entrance, and since then it has been unused and closed off.

A few of the more energetic members decided to abseil into the ditch to view the entrance from the outside, and were rewarded with a detailed view of the superb structures and stonework that compose the entrance and adjacent ramparts.

Photographs by Alastair Fyfe unless otherwise indicated.
The Conference got under way with welcomes from the Mayor of Pamplona, Enrique Maya Miranda, and the Deputy Mayor of Bayonne, Ives Hugalde. The former introduced the Fortius Project which is a cooperation of the fortifications of the Western Pyrenees, led by Bayonne and Pamplona. Milagros Flores Román, President of ICOFORT gave an overview of preserving the fortified heritage.

The Conference itself consisted of a series of ‘Masterclasses’, a series of ‘Round Table’ discussions, and sessions of presentation of submitted papers.

Bill Clements (FSG Chairman), John Harris (Editor of FORT) attended on behalf of the FSG, Keith Phillips and Miriam Harris to renew friendships and enjoy the Conference. The FSG’s representation was very well received.

Bill gave a Master Class entitled ‘Fortifications at Risk: the restoration and re-use of fortified built heritage in Britain and Ireland’ which was well-received. In his presentation he emphasised that sustainable development of any fortification requires an effective financial plan, and he used Crownhill and Golden Hill Forts as successful examples.

Nicolas Faucherre’s Master Class contrasting the past (forts were to defend borders and to keep the others out) with the present (forts are a matter for common cause, friendship and cooperation) was encouraging to the Fortius Project and others. Hans-Rudolf Neumann is busy with Forte Cultura, a project to encourage fort tourism Europe-wide. The write-up of this will be worth seeing.

The biggest surprise was the submission of an Algerian academic who told us of a town, Bejaia, c 200 kms east of Algiers, which has a long history of fortified defences, built by several nations (‘occupiers of the day’ as it were). In fact, the fortifications of occupying nations and reactions to them was a recurring subtext of the conference. We await eagerly the publication of this paper when the proceedings of the Conference appear in print.

Another little known site is Intramuros, a fortified town with a bastioned enceinte, now surrounded by Manila and swamped by encroaching shacks and industrial buildings and about which there were two submissions.

The presenters of the two submissions on the fortifications of Belgrade met for the first time at the conference, look forward to progressing together and are very keen to welcome the FSG.

John served as Moderator and his handling of the three presentation sessions of submitted papers (the English and French ones) was much appreciated and was considered diplomatic in his dealing with politically edgy questions from the floor. As a member of the Scientific Committee of the conference he had previously read and reported on most of these papers.

Submissions ranged from Othello’s tower on Cyprus to Guidelines for the Preservation of Fort Monroe; from Fortified Settlements of the Order of Malta in Lombardy to the Fortified System of the Venetian Lagoon.

The FSG propose to publish a list of titles and authors of papers submitted at this and other English-language conferences held in 2014 in Casemate as soon as practicable and in FORT 43 in due course.

There were 17 different nationalities present and the language divide in the Masterclasses and Round Table sessions, mainly Spanish and English, with some French, was well handled by the instantaneous translation service, which coped remarkably well with the technicalities of fortress terms and phraseology. But we were as always impressed by the English language skills of so many people with an interest in this field.

The hospitality, given with typical Pamplona generosity, was excellent, with buffet coffee breaks and lunches; the evening meals at local restaurants raised the bar even higher. Anyone who was defeated by the Spanish idea of the proper time to eat will have missed out badly. The administration, led by Dr Esther Elizalde Marquina, was exemplary, with computer experts arriving to check that all was well at the beginning of each session and the translators well up to their task.

The organisation and welcome from José Vicente Valdenebro and his team were both excellent.
In September I attended two conferences at which I spoke about the Austro-Hungarian forts surrounding the port of Pula in Croatia. This report is not the place to re-iterate the content of either of my addresses. The first was in Pula itself, on the 15th, a conference organised by AdriaFort and Juraj Dobrila University of Pula, with the title ‘Models [sic] Revaluation of Pula’s Fortification System.’ AdriaFort (www.adrifort-ipa.eu) is a project linking forts in a number of locations around the Adriatic, including six in Pula and nine in Venice, amongst others; the Juraj Dobrila University is the Croatian partner in the project.

My involvement dates from two years ago when I attended a workshop looking for possible futures for these forts which were then being relinquished by the army into civilian hands. This year I was asked to give the keynote speech.

There are, according to Stjepan Lončarić, no fewer than 55 forts and 600 support buildings, all designed to protect the naval port of Pula. The whole system demonstrates the development of fortifications to cope with the increasing range and effectiveness of artillery and also defence against both land attack and attack from the sea and I believe it to be unique as a model for understanding
19th century fortifications and indeed for understanding the K (u) K empire. There appears to be, however, more enthusiasm for demolishing the majority of these forts and replacing them with hotels and other tourist facilities. My address set out a model of selective re-use, based loosely on what was proposed for the New Dutch Waterline, allowing cross subsidies from profitable forts to less profitable ones, so that at least enough of the forts could be preserved and interpreted to show the overall importance of the system. This idea is perhaps both idealistic and quixotic, but I believe that there is no point in aiming for anything but the best.

There did seem to be a feeling, perhaps purist, that no fort should be given a new commercial use but that an English Heritage-like restoration and opening to the public of selected forts was all that should be aimed for, at the cost of the demolition of the others.

On the positive side, some of the forts now appear on the free tourist map as sites of interest, even though they cannot actually all be visited; this was not the case two years ago, and the involvement of AdriFort is a step in the right direction, although the project comes to an end in March next year and it may be little more than a talking shop.

Uses ancient and modern
The other principal speaker, Stjepan Lončarić, spoke fascinatingly about the continuation of use of the fort sites, mostly on hills, from pre-Roman times and offered further imaginative re-uses for the forts. He also spoke about the interest ICOFORT (www.icofort.org) is beginning to take in the Pula forts.

There was some discussion about the public’s reaction to the use of one of the forts for rave music festivals, but sadly, no-one from the city authorities felt the need to attend.

On the 16th September, we went on to Venice (by the 5.00 am bus!) for a three-day (well, two-and-a-half days’) conference, the ‘Second International Conference on Defence Sites Heritage and Future’, organised by the Wessex Institute of Technology, the Arsenale di Venezia and University IUAV, Italy.

My contribution there, much shorter than my address in Pula, was the last presentation on the last day, at midday, with the caretakers rather anxious to lock up, so it was not easy to assess the reaction of the conference.

Other presentations over the three days ranged from a description of the assessment of the strength of masonry at the fortress of Terezin, to the controversy between Jacobo Fratín and Vespasiano Gonzaga on the project for the citadel of Pamplona, from corrosion preservation techniques in reinforced concrete defence structures to urbanisation of former city fortifications in the Netherlands between 1805 and 2013.

There was a great deal of importance and interest for the understanding of the design of fortifications and the potential for their re-use. Most of these presentations (though not mine!) will be included in a Conference Proceedings publication in due course. The published proceedings of the first of these WIT conferences is available now, by the way – it includes a similarly various collection of subjects.

Photos by Charles Blackwood unless otherwise stated.
FSG Conference 2014
The Group pictured at Martello Tower U, visited by kind invitation of Richard and Elizabeth Setchirm

Charles and Erik Blackwood

‘Les penseurs’ – your Committee in action at the AGM; Chairman Bill Clements addresses the meeting, left to right Charles Blackwood, John Harris, Alan Fyson (lurking) and Alastair Fyfe

Troglodytes at Landguard Fort Left Battery
The FSG last visited East Anglia in 1998, staying at Shotley and before that in 1983, but many of the sites we saw this time were new to us.

The bulge of East Anglia, sticking out into the North Sea, with its long sandy beaches has been a target for invaders from Norway, Denmark and Rome for thousands of years; Spain, France and Holland later with the last potential invader being Germany, in two World Wars, so most of the later defences are to be found along the coast, whilst mediaeval ones can be found inland in the form of feudal castles dominating their own patch.

The sites on the official itinerary were provided by the coastal defences, while our own ex-officio tour saw three castles of very different design and style.

**Framlingham Castle**

With all day ahead for Erik and me to drive the 180 miles to the University of East Anglia (UEA) at Norwich, our base for the 2014 AGM and Conference, we drove the extra 35 miles to reach Framlingham Castle in good time for a comfortable lunch outside at the Castle Inn (recommended) with the castle gate adjacent – what could be better? The weather for a start – warm but with a very flat grey sky, a condition which held until the end of Sunday, when the coach took us back from Bawdsey on a glorious evening.

We had never been to Framlingham before and though I know it well enough from photos and plans and have photographed it from the air, I had no real conception of its size and the very impressive height of its pretty well intact walls and towers. The difference between theoretical knowledge and actually seeing a structure could not have been more evident - you do need to be there.

From the castle books of my youth I have always known Framlingham (late C12th) as the castle that broke the mould – a circuit wall beset by twelve high flanking towers - and no keep. The original lean-to buildings have long gone but a fine 17th/18th century building remains with shop, cafe, exhibition and a splendid fire place, chimney and oven. Outside,
English Heritage have done well to reconstruct the wooden bridges across the open-back towers to ensure there is an excellent complete wall-top circuit, where you get close up to wonderfully ornamented Tudor brick chimneys and wider views across the countryside; the walk round the outside, in the ditch, is pretty impressive too. There are substantial earthwork baileys surrounding the castle.

On to UEA to find our rooms, then the bar, then dinner.

The campus of the University is quite spread out, with our lecture room some distance from the dining room, though the dry weather made the walk less challenging than it might have been; the accommodation was very typical university, a bit worn, but perfectly adequate.

Our first lecture, after dinner, was by Dr Robert Liddiard of the UEA who gave us a very entertaining and absorbing lecture on the subject of The use of Computer Technology in Defining Defences in East Anglia, concentrating on the Walberswick area but spreading his net wider to include Leeds and Rochester Castles where we saw the buildings develop brick by brick in digital fast forward – great stuff, and covering the modern and emerging methods of presentation as to how sites might have looked at different periods. He mentioned Alan Sorrell as an early interpreter (I bought my copy of his much-loved British Castles (1973) in 1975. New to me was Sorrell’s use of smoke (and rain clouds) as cover for areas where he wasn’t really sure what was there!).

I asked Rob for a brief summary of his lecture but what he has kindly sent is more than that and follows this report as a separate piece.

Saturday
Saturday Day 1 was intended to include Baconsthorpe Castle, (mid 15–early 16th centuries) a fortified manor house with a wide moat on three sides and the gatehouse now the only substantial remains on site. In WW2 the castle contained an Auxiliary Unit Operational Base (AUs consisted of local men, well versed in the surrounding countryside, who were to operate clandestinely in the aftermath of a German invasion). Sadly, road works prevented us getting anywhere near the site so we went straight to the Muckleburgh Military Collection.

At Weybourne the beach shelves rapidly into deep water, deemed ideal
for a landing, hence the C16th saying ‘He who would Old England win must at Weybourne Hope begin’ and defended by moated ‘Waborne Fort’ on a map of 1588, where entrenchments and cannon are also shown. Planned measures in the event of a successful lodgement on the beaches bear remarkable similarities to the plans of 1939-43: withdraw with a scorched earth policy and flood the land. When The North Norfolk coastline was once more threatened with invasion in 1914 the area became a front-line defence zone with the billeting of troops and building of pill-boxes and trenches along the cliffs and gun emplacements and defensive positions inland.

The NAAFI remains from WW2 and contains a shop and a fine exhibition of military documents, uniforms, artefacts and models, leading into several large halls containing a most impressive collection of artillery, tanks, AFVs and related vehicles. No Panthers and Tigers but an excellent Comet, the story of whose acquisition was recounted to us by Sir Michael when we bumped into him en passant. His tales of how some of the exhibits were acquired were highly entertaining and full of craft and guile; they would make a very entertaining book.

A walk across fields and the airstrip took us to a selection of MG and AT...
pillboxes and AA gun positions, now mounting once more a British 3.7-in and Bofors 40mm L70 gun, their original armament, in positions modified for two 5.25-in dual purpose guns.

Our next stop was the RAF Air Defence Radar Museum established in the 1942 Operations Block of RAF Neatishead, which is still an operational station today. Established in 1941 it was a Ground Control Intercept Station, designed to direct fighters to intercept incoming German aircraft. A hardened control room was built, which today forms part of the Museum. In 1945 when one war finished and the Cold War started the station acquired a more significant role in National Air Defence, becoming a Sector Operations Centre, one of only two in Great Britain and retaining that function until 2004. In 1954 the main Operations Centre was re-established deep underground in a huge two-storey hardened R3 ROTOR bunker designed to withstand attack by nuclear bombs.

The centres were responsible to NATO for the Air Defence of the UK, the Western North Sea and the Eastern North Atlantic. Today the aim of RAF Neatishead is to provide radar, ground-to-air radio and data links.
...coverage as part of the UK Air Surveillance and Control System (ASACS) in support of National and NATO air defence..."

Outside we found a somewhat run down example of a Bloodhound Mk2 SAM and in the distance a huge oval radar dish capped by a smaller one. We were greeted by Chris Morshed who introduced the Museum and led us in for the first of three presentations on different aspects of the stations work.

Firstly came the early radar plotting room where the systems were assessed and checked, a fascinating story, followed by a presentation in the WW2 Plotting Room (the boards presided over by slender and elegant mannequins) thirdly deep in the low lighting, monitors and wall screens of the Cold War Operations room; presenters were Pete Mabbits and Jim Dorman.

A most interesting and rewarding day ended and we headed back to the University for dinner followed by the AGM (Minutes are available on our website or hard copy from the Secretary.)

**Sunday**

**Sunday Day 2** saw us heading for Landguard Fort and Batteries on a spit of land on the north side of the entrance to Harwich Harbour and Felixstowe (now a monstrous container port whose gantries dominate the landward aspect). Over the years the defences spread around and outwards from the harbour with five Martello towers and the Harwich Redoubt (1807-10) in the Napoleonic Wars, a battery at Shotley Point in 1862 and the Beacon Hill site in WWs1 and 2.

Harwich Harbour at the mouth of the River Orwell is the only English harbour of any size facing the North Sea between the Rivers Thames and Humber and as such has been fortified since 1543 when Henry VIII had two blockhouses built on the spit. Since then several forts have come and gone with the current structure (No 3) a much modified version of the...
1744 fort, which was heavily criticised and modified. New batteries were built in the 1750s and 1780 but in 1870/78 radical changes were made. The interior was replaced by a semi-circular defensible barracks for officers and men, the main SW face overlooking the harbour entrance, and the centre bastion were replaced by a granite casemated front for seven RMLs fronted at ditch level by a very unusual caponier with a quarter sphere bomb-proof nose. The remaining bastions and walls were rebuilt for RML guns and howitzers and a mock ravelin block constructed to house a Submarine Mining Establishment. In 1901 new batteries were built in front of the fort facing the sea and river - Left, Right and Darrell’s battery. We visited them all.

On entry we made our way into the Inner Parade for the presentation by our Chairman Bill Clements to Tim Clarke, Chairman of the Landguard Fort Trust, of our plaque, the first, recognising exceptional work in a fortification (see pp8,9). We then split into three parties for guided tours of the separate parts of the fort followed by tours of Darell’s and Left and Right Batteries. Since we last visited much work has been done in presenting and interpreting the fort to the public. As usual we are not an easy bunch to control and I rather think I was with all three groups at different times, the danger being of missing out on restricted access areas by delaying and diverting into tempting asides, of which there were many.

After 1956 when Coast Defence was disbanded the fort was sealed up and left to moulder until the 1980s. English Heritage structurally consolidated it in 1997/78 and now it is maintained and opened to the public by the Landguard Fort Trust with its numerous dedicated volunteers and guides, supported by English Heritage, who do an excellent job and kept us well entertained and informed.

An early visit was to the Fire Commander’s Post (1902/3, enlarged 1915) constructed on the roof of the fort, which was the control centre for all coast guns in the Harwich

Below: Magazine with racks for cartridges and gunpowder barrels
Command and contained a Port War Signal Station. There a followed walk through passages and magazines (with racking, cartridges and shells very nicely presented) to the casemated battery which mounted seven RMLs - 4 x 12.5-in 38-tons and 3 x 10-in of 18 tons. The SE curtain mounted one 12.5-in (there is a replica 12.5-in RML, mantlet and equipment which might not be the real thing but does give an excellent impression of the size of the brute) and two 10-in RMLs in casemates with two 9-in RMLs mounted on barbette facing NW. Some shell lifting winches remain and, a great rarity, a split hatch flap above the winch can be found in the eastern corner. Leaving by a postern into the ditch we crossed to Darell’s Battery (1940s) of two twin 6-pdrs with their tall director towers, named after Captain Nathaniel Darell who in 1667, shortly after the disaster of the Medway raid, heroically held the fort against two attacks from the beaches by the Dutch. Originally named Minefield Battery when built in 1900-01 it mounted two 4.7-in QFs for protection of the minefield and against fast torpedo boats. A display outside gives information about the battery; the windows have been glazed to help preserve the towers, and the battery looks very well. We didn’t see it in detail on our last visit, nor did we see Left and Right batteries but this time we were guided through both. First Left Battery, established in 1889-90 and mounting 10-in and 6-in BL HP guns with a 3-pdr QF for flank defence and another 6-in BL added in 1898. Between 1906-14 the two 6-in HP guns from Left battery and 10-in HPs from both batteries were removed, though one 10-in was remounted in Left Battery in 1911. Thereafter until
WW2 the battery mounted two experimental HA 6-in guns. The 10-in pit was roofed over and used as an ammunition store for the 6-in Mk XXIV guns of Right Battery – the inside is a substantial size and the shapes and angles of the original pit are clear to see. The batteries have been cleared of infill which revealed a rare Tressider's Cartridge Store under No 2 position, complete with winch and cartridge trolley – our more intrepid members disappeared down the trapdoor to investigate and photograph. Right Battery has a complex history, the southern three positions (for two 6-in and one 10-in BL, 1898-1902) being entirely separate from the two northern positions for two 6-in BLs in WW2. By 1910 the 10-in BL had gone, the pit became a BCP and now serves as a hide – very cosy it looked too. In WW2 the two 6-in guns acquired concrete gun houses (shuttered in corrugated iron with wavy wings in an attempt at camouflage) and anti-splinter covers. In 1942 the battery was modified to take two 6-in guns with 45° elevation which involved the destruction of part of the gun houses and covers. The battery is very impressive at the rear, a multi-storey wall face of rooms and catwalks, with original stairs in excellent condition. It would be good to see some of the trees and shrubs removed from the back but both batteries are enclosed in fencing and constitute a nature reserve with much bird-watching activity.

I missed a visit to the Mining Museum but did walk out towards the point, passing below the three dispersed beam searchlight emplacements and Darell's battery to see the Mine Control Post, a strange building with loopholed buildings hugging its flanks, almost a small fort. The area has numerous pillboxes and AT blocks.

Martello towers are spread along the south and east coasts of England, built in the early C 19th against the threat of French invasion and spaced at regular intervals to match the range of 24-pdr guns, with intervisability.
between them. On the east coast 17 of the original 29 survive; unlike the south coast towers which were numbered, the east coast towers are later and are designated by letters, doubling up when letters ran out; they are also multi-gun towers whereas the southern ones mounted single guns. Many have been modernised and converted to modern living, the earlier interventions often being much more brutal before English Heritage got to grips with planning consent, and are now much more restrained with as little alteration as possible and with the ability to restore the buildings to pretty much what they were. It is now by no means certain that planning permission will be given to make any major alterations to a tower, as so few are left in their natural state. The east coast towers are cam-shaped and of three stories within the tower, an open gun deck on the roof and with the entrance on the first floor. The armament was one 24-pdr SB and two 5½-in SB howitzers. **Tower U** is within the hamlet of Felixstowe Ferry by the sea wall at the mouth of the River Deben, about 700m north of Tower T.
which we saw on our right en route, unrestored and in the middle of a golf course. We were very kindly shown round the tower by the present owners Richard and Elizabeth Setchirn, taking us separately in two groups to the three levels and gun deck. The internal layout has been very nicely considered, restrained, with much bare brickwork, making the most of the existing features and original plan, with a small inconspicuous room built over the stairs entrances on the gun deck. English Heritage have permitted the drilling of round portholes through the depths of the wall to bring light deep inside, displaying a fine curved section of multi-coloured bricks. The access stairs proved a nice stage for a group photo with everyone just about squeezed in.

The visit was so engaging that time flew by and we were late to leave; originally intending to make the short crossing by ferry to Bawdsey Manor, secret heart of Britain's RADAR development, with a short walk to our next stop, we ended up by going a much longer route by coach way up the river to cross it and come back down so that we sadly had time only for a 15-20 minute stop at the Transmitter Block Museum, protected by traverses and just one part of the extensive RADAR structures developed before and during WW2, when Chain Home stations, gun laying radar and the IFF system were developed. There were four 350 ft transmitter masts and Bawdsey grew into the only site in the UK with Chain Home, Chain Home Low and Coastal Defence radar. The site was well defended by AA and at least ten Type 24 pillboxes, slit trenches and sandbag emplacements. In the 50s the Chain Home system was stood down and radar arrays removed from the towers. The station was reactivated from 1979-1990 as a Bloodhound Mk2 SAM site. In the following years the old towers were removed and buildings closed down. Today Bawdsey Manor is occupied by a school and many RAF buildings have been demolished but both transmitter blocks and their underground reserves remain. The main transmitter building is a single storey A type protected block, 77x27ft of brick and concrete construction with traverses round the building and 5½ ft of shingle on the roof. In here is the Museum, supported by dedicated volunteers and telling the story of Bawdsey Manor in a fine series of explanatory panels. It was good of the people to deal kindly with us when we arrived so late and were able to stop for such a short time, nowhere near enough to do their work justice. Today there remain the concrete bases of the four towers and just one small modern tower stands outside, with a pillbox across the adjacent field.

After dinner that night we heard our second talk of the Conference by Dr Mike Osborne, known to many personally and through his County Defence series of books to thousands. He gave us an overview of the Defence of East Anglia between Essex and the Humber 1640-1918. He covered The defence of the region in the Civil Wars, War with the Dutch, the French Wars: Martellos, Forts and Depots; Invasion threats – Panics and the Royal Commission; Expectation of Invasions: policy and practice, Owen Report, the Blue-water School and Jackie Fisher’s cunning plans; Preparations on the eve of war; The Royal Navy on the east coast; The Army’s role in Home Defences; Improving the defences 1914-18; Air War: airships/seaplanes/flying-boats/kite-ballos, defence against air attack: aerodromes, landing-fields and AA artillery. A comprehensive list indeed, comprehensively covered in an engaging and highly entertaining way, fully illustrated with maps, plans, photos from several periods and drawings, during which everybody (that I saw anyway) had no problem staying awake – quite an achievement
immediately after dinner. I noted in particular his list, much longer than generally known, of actual, averted and threatened invasions between 1066-1945. The pre-war scare stories drummed up by the press, with imagined invasions, and a rush of spy stories including *The Riddle of the Sands* provided an entertaining note. The sheer number of aerodromes in the region was quite impressive too.

**Monday**

**Monday Day 3** dawned fine and warm, a glorious day. The official visit was to the walls of Great Yarmouth (a report by Alastair Fyfe follows) but Erik and I decided that was a bit far in the wrong direction as we needed to get home at a good hour, so we visited Castle Acre and Castle Rising which were pretty well en route.

Both castles have mighty impressive earthworks surrounding them; I hadn’t visited since 1964, and I’d forgotten just how big they were. **Castle Acre** is a fine example of a Norman motte and bailey castle, with motte adorned by the remains of a massive keep from around 1160, a much larger outer bailey, three gates and a small earthwork, usually referred to as the ‘barbican’ fronting the east gate.

Excavations in the 1970s and 80s revealed much new information relative to the keep and the house it replaced. The earthworks are gigantic – you need to be there to appreciate their scale.

**Castle Rising** too has massive earthworks; two large outer baileys form wings either side of a large oval centre bailey – no motte here – containing a grand rectangular Norman keep, its height its smallest dimension, two chambers wide with a cross wall, a much more common layout than at Castle Acre where the single chamber keep is reckoned to be unfinished. It is a decorative and...
elaborate structure with fine moulding to the fore building – the entrance landing is confusing, presenting a very small access door; the original entrance is found exactly where you would expect it, but has been blocked by a later fireplace. There is fine tracery and arch work here too.

Here our Conference concluded and we headed for home.

Much of the text above has been derived from our Guide Book and a selection of guide books, information leaflets and websites.

Our thanks are due to numerous people, most of whom are mentioned in the text, but particularly to Alistair Graham Kerr who did all the groundwork, made the contacts and arranged accommodation, travel and visits. With Alastair Fyfe he also produced our 50 page Conference Booklet.

Illustrations by the author unless otherwise attributed.
The programme for the Conference Monday offered delegates the choice of a Roman fort or of mediaeval town walls. Several members chose to visit the seaside at Great Yarmouth on a day which was lovely and sunny after a couple of dull ones.

Nowadays Great Yarmouth has one of the best preserved and most complete mediaeval town walls in England, which stands comparison, for completeness, with those of York and Chester. The Grade II listed wall runs along modern streets, down back lanes, and through modern-day buildings.

In the 13th century Yarmouth was one of the major seaports of England and its citizens decided that as protection against enemy raids and, no doubt, for reasons of prestige, they would build themselves a town wall. Raising the money and building the wall took about a century from 1285. The north, east and south sides of the town were originally enclosed by a wall and ditch, while the River Yare protected the west side. Incorporating 16 towers and 10 gates the wall stretched for about a mile and a quarter. The last gate was taken down by 1812, but 11 of the towers still survive. The wall is built of cut flint, incorporating some later brick, and still stands 23ft high to parapet level in places. Substantial remains of the wall-walk arches on the inner side of the wall still exist.

In the middle of the 14th century, several small gunports were inserted around the South-East tower, and subsequently the upper parts of the wall and the tops of the towers were rebuilt in the 15th or early 16th century, probably to take cannon.

The work of this date incorporates very attractive panelling in flint and brick. From 1545 onwards the wall was rampired with banks of earth to strengthen it against artillery fire. During the Civil War the wall was manned and buildings against it cleared, and guns placed on it. A ditch was dug round the most exposed part - the north and east wall as far south as Pudding Gate. After the Civil War the wall was allowed to decay and people again began to put up buildings against it and most of the rampires were removed.

Some time ago the wall was tidied up and name plaques installed on the towers and positions of the gates. However walking the wall requires some navigation and perseverance as there is no signposted trail and the information leaflet prepared in 2006 does not seem be available any longer.

Photographs by the author.
Reconstruction, either in the form of drawings or physical scale models, is a familiar method of illustrating the original appearance of fortifications. Most people with an interest in the subject will almost certainly be able to recall a visit to a museum or site where some kind of visual reconstruction left them imagining ‘maybe that’s what it really looked like’.

The advent of digital technology offers new opportunities for visualisation, most obviously the development of virtual reality. It is now possible to create highly convincing photo realistic digital models that move beyond the single frame of the artist’s reconstruction and which show the development of buildings over time and from a variety of physical viewpoints. Depending on the technology, the viewer can ‘fly through’ the historic environment, use a handheld device to reveal lost interiors and in the not too distant future travel in a virtual world by putting on a pair of glasses.

The rise of virtual reality has brought back into focus several issues surrounding the nature of objectivity, historical accuracy and the philosophy of reconstruction. Given that photo realism is now easily achievable, an empirically well-researched computer reconstruction is perhaps inevitably open to the charge that it represents some kind of definitive statement and, albeit unwittingly, implies a set way of ‘seeing’ a historical building. How does such a digital model show uncertainties of evidence? What is it actually showing? Can, for example, an interior model of a castle show or accurately reflect emotions, relationships or hierarchies? In other words, many of the things fundamental to reality?

These kinds of issues are at the heart of the work of Virtual Past, a UEA company which produces digital reconstructions for the heritage sector. One of the initial portfolio pieces was the ‘Walberswick’ project, the centrepiece of which is a series of flythroughs of the 1940 defences built on the Suffolk coast as part of General Ironside’s ‘Coastal Crust’.

Each animation concentrates on a different part of the defences: the Emergency Coastal Defence Battery, the infantry positions, field artillery and the village itself. The concern throughout was to accurately depict the military archaeology as it would have appeared in 1940, with the emphasis on its regional character.

The research undertaken for each animation was considerable but had the advantage of revealing much about how the coastal crust in this part of Suffolk was created. The village and the surrounding countryside were held by ‘C’ Company of the 2nd/4th South Lancashire Regiment, a territorial unit with little previous experience. Archaeological excavation showed that their section positions closely followed the pre-war Manual of Field Engineering (these men were doing it by the book) to which characteristic ‘Suffolk Square’ pillboxes were added six weeks after the section positions were originally started.

An unexpected part of the project was realising the importance of field artillery to the overall defensive scheme. It has sometimes been assumed that artillery leaves little archaeological trace, but the existence
of concrete observation posts as well as the remains of gun pits and troop command posts as earthworks show that this is not the case. Documentary sources confirm that the ability to shell the coastline and especially vulnerable landing beaches were crucial to the defensive strategy.

The Walberswick defences were modelled as they would have appeared in September 1940, a time when each of the individual elements are known to have been in place on the ground and working together as part of a unified scheme. But even by this date criticisms of Ironside's broad strategy were already widespread and in the spring of 1941 Britain's coastal defences were re-organised. At Walberswick, some two-thirds of the defensive line of 1940 was abandoned, something which in part explains why they survive so well today, and were replaced with forward defended localities arranged in depth.

The creation of the flythroughs was undoubtedly worthwhile, but it should be remembered what was, and what was not, digitally re-created. While a certain amount of confidence can be placed in most of the ‘empirical’ evidence – the size of the pillboxes and trenches for example, it is clear from other sources that such flythrough cannot show other aspects of the human experience. Residents of Suffolk were so affected by the fortification of their coastline that they were moved to write and paint about the dislocation that the construction of the defences entailed. Virtual Past's digital models cannot easily show emotions, be it fear, excitement, boredom or the other more human experiences of the summer of 1940.

Digital reconstruction is now commonplace in the heritage sector and fortifications are undoubtedly set to be well-served by what technology can offer. But case studies such as Walberswick offer a reminder that no matter how ‘realistic’ something can look, we need always to be mindful of what is being reconstructed and why.
So, armed with my camera and Andrew Pye and Freddie Woodward’s *The Historic Defences of Plymouth* (now apparently and regrettably out of print), I set off to visit some of the north-eastern Palmerston forts and batteries. I’ll deal with them from east to west, although my visits were not so well organised as that.

**Laira Battery** commands the eastern end and the tidal inlet at Laira. Although called a Battery, it has accommodation for its own garrison and probably for those of a couple of open gun battery positions nearby. Unusually, it has no close defence for the gorge, relying on enfilading fire from its neighbours and a precipitous position. There is a barbette position for four (?) guns firing across the River Plym towards Staddon Heights, and three Haxo casemates firing southwest along the face of the escarpment. There is a magazine between two of the Haxos with the marks of a small shifting lobby in the vestibule walls.

Presently, the battery is occupied by various motor businesses (cars from £295) but the chaps were very friendly and quite happy for me to wander around with my camera.

**Efford Fort** is above and north of the Laira Battery it covers part of Laira’s gorge.

Presently it is occupied by the Showmen’s Guild, with mobile homes and fairground trucks. I could find no-one to get approval from and a welcome would have taken time to negotiate so I moved on – actually this was the last fort I visited on that day (2 Apr ’14) and dinner was calling!

**Austin Fort** was the next along the ridge; it is an irregular four-sided trace with a guardhouse (entry and gorge defence - now bypassed by a vehicle gate) and single- and double-counterscarp casemates, both accessed by
the same tunnel. There is no accommodation for the garrison (see Eggbuckland Keep below), so should it be Austin Battery? There is (or was) a long covered way linking Austin, Forder and Bowden Batteries with the accommodation at Eggbuckland Keep. It was designed (by Capt Du Cane, as were they all) for 15 guns in barbette emplacements.

Presently, it is used as a depot for a landscape gardening company. The secretary and her young dog were pleased to see me (it must be a lonely job when the chaps are all out working!) and readily allowed me to wander round. Although much covered by loading bays and redundant tree stumps, there is enough of interest to warrant a visit.

At Forder Battery, in advance of the Keep and linked to it by a tunnel, there seems to have been little or no ‘hard’ architecture, relying on the Keep for these facilities.

Presently, it is much as Andrew and Freddy found it: ramparts overgrown and the parade occupied by BT buildings and a large pylon. I didn’t go in.

Eggbuckland Keep was designed to provide defensible barrack accommodation for Austin, Forder and Bowden; it was the only one (of four proposed) to be built. It has three single and one double caponier. The main block comprised a five-sided barrack on two floors, for 230 men and stores for powder, shell and all the supplies needed for the three batteries.

Presently, it seems to be occupied by various businesses, but although the lights were on, I was unable to find anyone at all! I got inside but internal doors were locked. Apparently, the owner lives in the house which has been constructed on the roof.

Bowden Battery is a little further west along the escarpment overlooking the Forder Valley. It was designed for 12 guns and a battery of three mortars. The defensible guard house-cum-magazine, accommodated 16 men (presumably watch-keepers with the rest of the gunners in the Keep).

Presently, it houses a garden centre and the gorge ditch has been in-filled to provide car parking. The guardhouse is largely buried but I was told that the interior is empty (the floor has collapsed!). The entry had (has?) a drawbridge and the upper parts of the mechanism are tantalisingly visible. The gun emplacements are in the Staff Only area, but Paul Newton, the Director of the Garden Centre, happily took me round. He is a member of the Palmerston Forts Society and is keen to make a visitor
attraction of his battery; he has all of Freddy’s books signed by the author! We discussed the drawbridge and wondered if much/all of the rest is below the tarmac, awaiting rescue!

I missed out Crownhill Fort, having visited recently. It is in the hands of The Landmark Trust, so arranging a visit should be no problem. [But as the jewel in the crown I had to include a photo. Ed]

Woodland Fort is a proper fort, with bomb-proof barracks for 100 men. There is a large magazine and a guard-/gate-house covering the loop-
holed gorge walls either side. The other three-and-a-bit ditches are covered by a double caponier and a double counter-scarp casemate, both accessed by tunnels.

There is a large parade (now tarmac for car parking). Unlike most of the others forts and batteries, there has been little encroachment onto the glacis and the very deep ditch is rather wet but otherwise in good condition except along the gorge, which is filled in.

Presently, it is used as a youth facility and library, although I could find no evidence of any activity. I walked round the parade, round the ramparts (into both Haxos) and found WW2 (?) trenches on them, and then round the top of the glacis, where I found a single pressed-steel Victorian fence post. There is much to see for the enthusiast.

Knowle Battery: this battery for nine 7-in RBL guns and three SB flanking guns is positioned to enfilade the front of Woodland Fort and occupies a knoll (knowle) between Woodland and Agaton Forts. The gorge was a 30-ft high wall and, unsurprisingly, had no ditch!

Presently, the battery is occupied by a primary school, which was full of lively children so I limited my visit to the exterior of the gorge and the defended guard house. A visit might be arranged at the weekend perhaps.

Agaton Fort: not quite the end of the line (I left out Ernesettle Battery as Barrie Eden tells me he may have a friendly key-holder for another time), Freddy said 'this is a small fort'. It may be but it is big enough to hold a generous HGV MoT facility! It was designed for 20 guns in open battery plus another in a Haxo casemate. There are two mortar batteries. It has deep ditches, except at the gorge, which relies on enfilade from a caponier.

For the rest, there is a mixture of caponiers and counterscarp casemates (below).

Presently, it is used for Lorry MoTs; most of the Victorian buildings are blocked except for a few casemates used for storage. The ramparts are well strimmed (they were at it when I visited) and looked superb until I found the three inches of moss that the strimmers were riding on top of! Agaton also has trenches cut into the parapets of the ramparts. The organisation was happy for me to wander around and even supplied a phone number should FSG wish to visit en masse.

After nine forts/batteries and nearly 200 photographs in one day, I felt I had earned my dinner (see Efford above)!

There's an FSG Away Weekend waiting in Plymouth [see page 4 in Future Events].
The military usage and history of the Île-aux-Noix, located in the Canadian province of Quebec, is based entirely on the location of the island within an important 17th through 19th century waterway into the interior of Canada and the United States, consisting of the Richelieu River in Canada and Lake Champlain in the United States. This island has been a military focal point and battlefield during the Seven Years War (French and Indian War), the American Revolution, and the British-American War of 1812.

The Île-aux-Noix is a long and narrow island within the center of the Richelieu River which flows south to north from the river’s source of Lake Champlain to the St. Lawrence River. The island is around 1.6 km (1 mile) in length running north to south, with a width of 366 meters (400 yards) and features mostly swampy lowlands. All three of the nations that have fought over this island recognized its strategic importance, both as a base of defense against an invasion or as one from which to launch an invasion. To the north of the island, down the Richelieu River, lay the heart of French Canada, notably the main cities of Quebec and Montreal on the St Lawrence River. To the south of the island, lay the entrance to Lake Champlain a few kilometers upriver, with the ability to travel deep into the heart of the territories which currently comprise the states of New York and Vermont and would bring any invader close to the Hudson River Valley which provides a direct waterway route to New York City.

The French first recognized the importance of Île-Aux-Noix to the protection of their colonies in New France. They understood that the three main routes of invasion into French Canada would be from the Gulf of St Lawrence, which was covered by the fortifications of Quebec City, down the St Lawrence River which was covered by Fort de la Presentation at current day Ogdensburg, NY, and finally from the waterway of Lake Champlain and the Richelieu River.

Despite the importance of the location, the French did not fortify the island as they expanded their territory.
south into the Lake Champlain region prior to the start of the Seven Years War, and protected this route of travel with Fort Carillon (Fort Ticonderoga) and Fort St Frederic (Crown Point, NY) located on Lake Champlain approximately 120 kilometers (75 miles) to the south of Île-aux-Noix.

The fortification of Île-aux-Noix did not take place until the late summer of 1759 as French military fortunes began to crumble. From July to August 1759, the French commander for the Lake Champlain region, General François-Charles de Bourlamaque, abandoned Fort Carillon and Fort St Frederic and retreated with the French garrisons to Île-aux-Noix to create what would be known as Fort d’Île-Aux-Noix in an attempt to halt British General Amherst’s offensive up Lake Champlain to attack Montreal\(^i\). General Bourlamaque and the 3,500 French soldiers worked continuously on the fortifications on the island. A primary fort, Fort de l’Île-aux-Noix, was created and ringed with three outer redoubts, all of which were constructed of earth and timber and each surrounded by a 5.5 meter (18 feet) wide ditch. Multiple blockhouses were built to protect the paths between the fort and redoubts. The entire island was encircled by chevaux-de-frise and covered by approximately 77 cannon of various sizes, including three 16-pdr heavy cannon.

Heavy chains were laid across the east and west channels around the island to prevent any British vessel from bypassing the French fortifications\(^ii\) and a dam was built down-river across the Richelieu River to flood the shoreline to prevent the establishment of British siege batteries along both riverbanks. The island was reinforced with a French schooner and the construction of a floating radeau battery (an armed scow, variously rigged, used as a floating battery)\(^iv\).

With the construction of these fortifications on the Île-aux-Noix, General Bourlamaque wrote ‘I wait his [Amherst] coming with impatience, though I doubt if he will venture to attack a post where we are entrenched to the teeth and armed with a hundred pieces of cannon’\(^v\). General Bourlamaque was correct, as British General Amherst did not continue the British advance up Lake Champlain after securing Fort Carillon and Fort St Frederic to establish supply bases for what he saw as an upcoming lengthy siege of Île-aux-Noix, and the deteriorating weather that came into the region during the autumn and fall of 1759.

During the start of the campaign season in 1760, both the French and British forces repositioned themselves throughout the region for the final assault on Montreal. For the French, General Bourlamaque was sent to Montreal to take defense of the city and was replaced by General Louis-Antoine Bougainville. The French garrison on Île-aux-Noix was reduced to approximately 1,700 troops and a few cannon, with the remainder of the troops and cannon being distributed between the remaining forts down on the Richelieu River and Montreal.

For the British, General Amherst was moved to take command of the main British assault of over 10,000 men down the St Lawrence River toward Forts De La Presentation and Levis, with the final objective being Montreal. General Amherst was replaced by General Haviland, who took command of the roughly 3,400 British regulars, American Colonialists, and allied native warriors assigned to attack down the Richelieu River toward Montreal in the second of
downriver of the island. At this development, General Bougainville decided to withdraw his forces to Fort St John where Colonel Roquemaure was entrenched with 1,500 men approximately 20 kilometers downriver. Bougainville was able to successfully withdraw his force on the night of August 27-28, downriver to Fort St John which in turn was abandoned and destroyed by the combined force in order to withdraw to reinforce the French defenses at Montreal as the two larger British invasion forces down the St Lawrence and from Quebec had achieved greater success in their advances toward Montreal.

With the fall of New France shortly after the withdraw of General Bougainville and his forces, the Île-aux-Noix remained unused militarily until the American Revolutionary War when in late 1775 American forces used the island as a staging base for their failed assaults on Montreal and Quebec.

With the failure of the assault on Quebec and the resulting abandonment of Montreal after its capture, American forces retreated up the Richelieu River to Île-aux-Noix and arrived back on the island in May 1776 where they attempted to regroup. Their situation was worsened with the spread of smallpox and malaria through their force as it recuperated on the island's swampy lowlands, resulting in an estimated daily death rate of 20 to 40 men.

American forces continued to occupy the island until their departure on
June 25, 1776 and withdrew down Lake Champlain to Fort Ticonderoga. With the abandonment of Île-aux-Noix, Canadian Governor Carleton ordered the establishment of a military supply post on the island in December 1776 for the upcoming and fateful offensive by General Burgoyne in 1777.

Île-aux-Noix remained militarily inactive until the second war between Great Britain and the United States, the War of 1812. Early in the war, British forces reconstructed the previous French fortifications on the island with the addition of a naval dockyard to allow the island to be an important construction point for the British navy in their attempt to gain control over Lake Champlain and to block any invasion by the United States down the Richelieu River as they had done during the American Revolution roughly 37 years previous.

On June 2, 1813, two American sloops-of-war, the USS Eagle and the USS Growler of 11 cannon each, patrolled up to Île-aux-Noix in search of several British gunboats that they had observed previously in the day and which had fled past the British fortifications of the island. Both American vessels attempted to bombard the British artillery positions on the island but became grounded in the Richelieu River in front of the British batteries which opened fire on the vessels and caused their surrender about 3½ hours later. The British forces were able to refloat the captured sloops and renamed them the HMS Chub and the HMS Finch.

The capture of the two sloops gave the British Navy based out of Île-aux-Noix naval supremacy on Lake Champlain for the rest of 1813 and a portion of 1814. With the naval arms race occurring between British naval builders on Île-aux-Noix and the American shipyards on the lake proper, the British authorized the construction at Île-aux-Noix of HMS Confiace, a fifth-rate frigate with 36 cannon, which was launched in late August 1814 for the ill-fated British invasion south into Lake Champlain in September 1814.

With the defeat of the British naval force at the Battle of Plattsburgh in early September and the capture of the HMS Confiace, HMS Chub and HMS Finch by the American Navy, the remaining British naval and land invasion force retreated to Île-aux-Noix and remained on the defensive until the Treaty of Ghent ended the war within a few months.

The British military engineers quickly realized the difficulty of establishing a heavy fortification on the swampy lowland island. Engineers found that the bedrock required to anchor the fortification foundations was 16 meters below a soil comprised of a high percentage of clay. The engineers originally planned to lay the normal pile foundations, but found that the soil was too unstable to support the projected buildings. To overcome this they switched to wooden foundation-rafts which covered the entire foundation of the buildings and fortifications, allowing Fort Lennox to float upon the soil. To ensure the swampy soil would not affect the soldiers stationed at Fort Lennox, engineers created a series of satellite drainage wells which then flowed to a main drainage well and then into the moat which surrounds the fort.

The fortifications of Fort Lennox consisted of a gradually increasing glacis on the northern approaches to the fort which ends at the water-filled ditch, or fosse, with an average width of 20-30 meters. The main rampart of the fort consisted of heavy earthen works complete with banquettes and terreplein running the top length of the fortress ramparts. Within the interior slopes of the ramparts, stone
casemates were constructed to provide bombproof shelters, storage, and a support base for the fort’s cannons emplaced upon the banquette.

Within the ramparts of Fort Lennox lay the parade square with the primary buildings of the fortress built of stone; the Guardhouse; Officers Barracks; Soldier Barracks; Powder magazine; Ordnance store; and Commissariat store. There are stone gatehouses in the middle of the NE and SW curtains, the northeast gatehouse being the primary entrance into the fort, with the south gate opening to a bridge to the southern battery, the whole surrounded on all sides by the moat. The southern battery was the primary emplacement of the fort’s cannon to cover the upriver approaches of naval forces coming from the United States on Lake Champlain.

Fort Lennox was completed in 1828 after a nine-year construction and was continuously garrisoned by British soldiers until Canadian independence in 1870, and was then used by Canadian forces for the annual training of its militia and reserve forces until 1921. Île-aux-Noix and Fort Lennox saw service during the Second World War as a camp for Jewish refugees fleeing from a Hitler-dominated Europe from 1940 to 1943.

Today the Île-aux-Noix with Fort Lennox is a Canadian registered historical place that is popular with recreational boaters, hikers and picnickers who continually visit the island during the summer.

Footnotes

i. Parkman, Francis; Montcalm & Wolfe: France & England in North America. 18.
ii. Parkman, 80.
iii. Kaufmann, J.E.; Fortress America: The Forts That Defended America 1600 to Present. 84.
v. Anderson, Fred. The Crucible of War: The Seven Years War and the Fate of Empire in British North America. 401.
vi. Parkman, 92.
In the last two years my wife Pam and I have been lucky to be able to travel to Turkey and explore the Dardanelles area. In 2013 we explored the European side of the Gallipoli battlefield area with a guide; in April of 2014 we were in the Canakkale area on the Asian side.

After reading *The Defence of the Dardanelles* by Michael Forrest, I was determined to see the Turgut Reis Battery so we contacted our guide from 2013 and he arranged a car and driver to pick us up where our ship docked in Canakkale. We had four hours to devote to this endeavor and tried to make the most of it.

The Turgut Reis battery consists of a forward and amidships turret of the main armament removed 1914/15 from the German SMS Weissenburg, a Brandenburg class pre-dreadnought, commissioned in 1894 with a major modernization in 1902-04, and sold to Turkey in 1910.

The fore and aft twin turrets carried Krupp 280mm SK L/40 guns, while the centre turret carried two SK L/35 guns, to fit into the more limited space. In 1936 the centre and aft turrets were moved to their current location, a park area with open access and picnic tables near both gun turrets. The guns and turrets are well painted and access to the turrets is completely open but the magazines below the turrets are locked.

This site is a 10 mile drive south from Canakkale.

Three miles north of Turgut Reis battery is the Dardanos Battery, Fort No 8 displaying five Krupp 150mm SK L/40 guns which are not in their original barbette emplacements but displayed in a line near a large radar navigation tower.

After the gun battery we spent time

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in the open-air Naval Museum in Canakkale. It displays British, German, French and US weapons from both World Wars, including field artillery, mines, torpedo launchers and remains of the sunken XB46 U-boat; adjacent is Cimenlik Castle but it was closed for restoration work.

Kilitbahir Castle and adjacent batteries lie across the channel on the European side of the Strait. Photographs by the Author

Notes:
SMS Weissenberg The ship was unusual for its time in that it possessed a broadside of six heavy guns in three twin gun turrets, rather than the four guns typical of contemporary battleships. The forward and after turrets carried 28 cm (11 inch) SK L/40 guns, while the amidships turret mounted a pair of 28 cm (11 inch) with shorter L/35 barrels. Wikipedia.

The ship and battery derived their name from the famous Ottoman admiral (Dragut) who was killed in Malta in the attack on Fort St Elmo during the Great Siege of 1565. By the start of WW1 the ship was near obsolete and the two turrets were landed to augment the Dardanelles defences.

Dardanos Battery, also known as Fort 18, was officially renamed the Hasan Meşrut Battery after its commander, who was killed in 1915, but it continues to be known as Dardanos. The five Krupp guns are on the original site and are also all former ship-mounted guns, three from the Asar-I Tevfik and two from the Muin-I Zafer. After WW1 the battery, like many others, was partly demolished by Britain, the job being completed by Turkey when the site was cleared to mount a radar tower. Editor and Norman Clark.
Above: The Brandenberg class of battleship.
Right: Krupp 150mm SK L/40 gun barrels at Dardanos Battery

Above: Naval Museum and Cimenlik Castle
Left: Radar tower and Krupp 150mm SK L/40

Below: Kilitbahir Castle with battery, and Mecidiye Battery

Left: Kilitbahir Castle

Above: The Brandenberg class of battleship.
Right: Krupp 150mm SK L/40 gun barrels at Dardanos Battery

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Following upon earlier volumes dealing with European fortifications of WW2, the authors have now widened the scope of their studies to include the earlier fortifications of the Central States. In addition, there is information by way of appendices on the fortifications built in the post-Hapsburg regions of Northern Italy, Romania and Hungary. Although a quantity of the material has been used from earlier books i.e. Fortress Third Reich, Maginot Imitations, Fortress Europe and Fortress France there is much new information and this and future volumes will put the fortification of Europe into a wider territorial and historical context.

The authors in their Introduction analyse the post-Napoleonic situation of central Europe, the threat of multi-front wars, the impact of the spread of railway systems and improvements in artillery. One result of the latter would lead to the most modern forts having armoured cupolas to protect fortress emplacements in artillery. Those countries or empires with modern steel plants and efficient railways would clearly be at an advantage. In the C19th the German company of Gruson led the way, their turrets and efficient railways will put the fortification of Europe into a wider territorial and historical context.

There is much new information and this and future volumes will put the fortification of Europe into a wider territorial and historical context.

The growth of the vast Skoda complex in Pilsen endowed the Austro-Hungarian Empire with efficient siege artillery. This vast empire with its long borders and restive populations had to employ unique designs influenced by its great range of topographies.

Its immense size meant that the empire's borders were often inadequately protected, apart from areas such as the Italian and parts of the Russian border. Too late (just before the advent of WW1) were designs for 'standard' forts introduced. Along the Italian border in WW1 Austro-Hungarian and Italian forts faced each other.

The break-up of the Second Reich and the Austro-Hungarian Empire after WW1 prepared the way for a new conflict 21 years later. The new countries, as well as Germany, had borders to protect and fortify but there was limited time and resources to achieve satisfactory results. The revolutionary weapon, the tank, greatly influenced the design of the new between-the-wars fortifications.

Although the dictator Mussolini does not appear to have interfered in the design of the weak Vallo Alpino, this was not the case in Germany where Hitler, influenced it seems by his experience of gas warfare in WW1, took a close interest in the fortifications under construction along the Third Reich's eastern and western borders. In addition, he was conscious of the economics of the conflicting demands for steel (apparently the steel for one cloche equalled the quantity of armoured steel for four Pz Mk IV tanks).

The Munich Agreement emasculated the new country of Czechoslovakia. The authors cite evidence that the efficient Czech army, aided by Soviet forces entering the country via Romania, might have stopped Hitler if the West had held firm. The partially completed Czech fortifications together with their Pilsen-designed weapons fell into Germany's lap. These and the fortifications' anti-tank obstacles would all serve the occupier well when work began on the Atlantic Wall.

In an interesting Appendix note What Makes an Effective Fortification the authors list 16 European defence lines. Of these, it is concluded that only one quarter prevented a war. Others, such as the Maginot Line, forced the enemy to adjust his tactics. But in respect of the German East and West Walls their value was only realised when the war was already lost.

In a short review it is difficult to fully describe the wide-ranging nature of this heavily illustrated work. Putting so much information into the book has lead inevitably to the maps being at times a little difficult to read, and many of the photographs are rather small. But these are minor points set against such a comprehensive work and fascinating read.

Bernard Lowry


If Rudi Rolf’s book (see opposite), with its size and weight, is unashamedly for work in your study then this small – but fat – book is equally decidedly for the field.

Following an original publication in Dutch in 1978 dealing with German standard design bunkers on Dutch soil, and two more typologies over the next twenty years, covering the full length of the Atlantic Wall from Finland to Spain, this volume adds yet more, including not only standard heavy bunkers but also thinner ones (1m of concrete) and non-official standard designs. Here the typology comprises all standard constructions of the whole coastline, erected 1940-45.

An 18pp introduction, valuable and concise sets the scene, followed by sections covering 17 categories of structure, from Personnel Shelters and Ammunition Bunkers to Observations Posts and Open gun Emplacements. Included are permanent (Ständig) and semi-permanent (VF) bunkers with function description, technical data and numbers constructed. The typology is a compilation of different bunker catalogues by the German Army, Navy and Air Force, augmented by drawings of special construction types not depicted in any booklet. Nothing is omitted.

Over 356pp all the types within each category are shown in plan and/or elevation (usually both); with this book in hand you will never be at a loss to understand what is in front of you when you travel the Atlantic Wall – an indispensable pocket guide.

Charles Blackwood
Two Book Reviews by kind permission of Bolling Smith, Editor, Coast Defence Journal


For many years, Washington State Parks have included coastal defense forts, though their funding and operations have recently fallen on hard times. This illustrated history, focused on Forts Casey, Flagler, and Worden, provides an excellent and accessible introduction to three forts that are now parks. Especially valuable is how well Hansen places the Puget Sound forts in the larger context of changing coast artillery technology and policy.

Drawing on a wide variety of primary and secondary sources, he begins in the 1860s when ubiquitous trees and water rather than people defined the region. He notes that the 1886 Endicott Report makes no mention of Puget Sound among its recommendations. However, the region developed in the late 19th century, and Washington achieved statehood in 1889, a year after the Northern Pacific Railway reached Puget Sound and two years before the establishment of the naval station at Bremerton. The need to defend the extensive waterway grew - as did pressure for the military to take action. Chapters describe the forts’ design and construction and the science of finding targets as then understood. We read of change and improvement up to 1914, and slow decline thereafter. Hansen has selected wonderful photos from these forts, most of them period shots showing guns and personnel in action. Some appear not to have been published before. An appendix lists the armament of each fort.

My chief complaint (not a minor one) with this otherwise admirable book is the lack of any fort or battery maps, or diagrams of any of the facilities discussed. For example, Hansen goes into considerable detail to describe how batteries, plotting rooms, and base end stations operated (and changed over time). Those who have clambered over these or similar Endicott/Taft facilities can readily picture what is described, but the general reader - for whom Hansen professes to be writing - are left at sea. More’s the pity given the free and wide availability of such graphic material from many sources.

Still - and especially for the price - this is an insightful book, authoritative and well written, which places the Puget Sound forts into the larger context of coast defense history. I learned a lot from Hansen’s effort (even though, like many of us, I have collected and read coast defense history for a long time). This is a solid addition to coast defense literature. Chris Sterling


Rudi Rolf is a noted expert on the German Atlantic Wall, and this massive new study not only offers a comprehensive look at it, but also places it in the overall context of the history of German fortifications.

This means Rolf includes chapters on German pre-WW1 and WW1 fortifications, including bunkers on the Western Front as well as WW1 coast artillery installations on the German and Belgian coasts. Post-WW1, he looks at the development of new bunker types for the Eastwall and the Westwall. For WW2 he looks at air-raid bunkers, command posts, flak towers, U-Boat and S-Boat bunkers, and even fuel and ammunition bunkers.

For the Atlantic Wall itself, he includes all the standard army, navy, and air force bunker types plus non-standard types and bunkers that were planned but never built. He includes maps and tables of coastal batteries from Norway to France, but he does not stop there. He also has maps and tables for German coast defenses on the Südwall (the French Mediterranean Coast), in Italy and Greece, and on the Black Sea!

This is the most extensive coverage of this topic available in English, which makes it particularly welcome. Although Rolf is not a native English speaker, he is entirely fluent in the language; in addition, the book is beautifully illustrated, with large numbers of bunker plans, maps, tables, and photos, both b/w and color. The sample book pages on the author’s website provide a good idea of what the book is like and the table of contents shown there gives an idea of the book’s organization.

This book is a must for any CDSG or FSG member with any interest in the Atlantic Wall. Lee R Unterborn


The Organisation Todt (OT) a name apparently coined by Hitler, became a pan-European construction enterprise during WW2, building fortifications, factories, roads, water and power supplies, bridges and, as the war deteriorated for Germany, repairing bomb damage. Dr Fritz Todt, an engineer who gave his name to the organisation, died in somewhat mysterious circumstances in 1942 and was replaced by Professor Albert Speer, an architect; both men came from the same region of Germany.

Speer took over at a time when fraudulent practices were
becoming endemic amongst the contactors employed by the OT, due to a lack of centralised control.

The man who gave his name to the organization began his working life masterminding the construction of autobahnen in the shrunken Germany of post-1918, a building scheme that, like the Olympiastadion in Berlin, began life under the short-lived Weimar Republic. His efficiency was noted and in 1938, with the road network almost complete, he took over the construction of the West Wall (the Siegfried Line) from the struggling Wehrmacht.

With his drive, the West Wall was substantially complete by the time of war with France in 1940. As the war developed and the extent of occupied territories increased, so too did the tasks allotted to the OT. War damage had to be repaired and transport systems made good and brought up to German standards. A complex fortification system, the Atlantic Wall was begun using standard (regelbau) designs to speed up the work. Other fortification systems were built in Italy and the East. With bombing came the need for dispersed underground factories.

This book is not a modern study, but rather a reprint of a secret, detailed report mainly on the structure of OT, published in London in March 1945. It would be interesting to know where the detail came from at that point of the war. The explanation for the need for such a report is that it was believed (erroneously as it turned out), that

a) OT had prepared extensive defences and resistance networks at a time when the Allies were entering Germany (the ‘Alpine Redoubt’)
b) OT, whose ranks were believed to be full of Nazi Party members (it was not a Nazi Party organisation but rather a government agency), was believed to present, post war, a potential political challenge. It had also extensive connections with collaborationist elements across occupied Europe, and
c) On the other hand, OT might represent a useful resource of skilled technicians who could be used in post war reconstruction work.

Predictably, as a report it is rather a dry read, although giving a valuable and historic account of a subject otherwise little written about, but nonetheless a significant force. Information on the issue of fortifications is however, limited. Perhaps a more modern study of this huge organization is required?

Such a study would highlight inter alia, the sociological aspects of OT and its insatiable demand for labour, much of it forced. Readers who wish to know more about this aspect of OT are recommended to get hold of The Organisation Todt and the Fortress Engineers in the Channel Isles, by Michael Ginns (CIOS Archive Book No 8), a valuable insight into one small part of the OT empire.

The original report had few illustrations, but the publisher has added more, mainly in colour. Whoever chose these has little knowledge of the West Wall, a work with modest defensive structures compared with say, the Maginot Line, as the book includes a pre-war cutaway view of a ‘fort’ which is wholly fanciful. And the book would greatly benefit from the inclusion of an index.

\[\text{Bernard Lowry}\]

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**Pillboxes and Tank Traps** by Bernard Lowry, PB, 64pp. 42 colour photographs, 15 b/w, 2 maps. ISBN 978.0.74781.356.9. £7.95. Published by Shire Publications, 2014.

Shire Publications are renowned for their handy and detailed guidebooks on just about everything that can be collected, participated in, visited, looked at and enjoyed. **Pillboxes and Tank Traps** is an excellent addition to the series. It is well worthy of the notice of any aficionado of concrete, living in for example, Suffolk or Somerset. For anyone with minimal knowledge of anti-invasion defences, or anyone just starting out to learn more, there could not be a better choice.

The book is divided into six chapters, corresponding to successive phases in construction and tactical doctrine. These are: An Island Fortress; Britain Alone; A Pause for Breath; 1942, A New Defence Policy; Britain Becomes a Fortified Island; 1944, Tidying Up and Aftermath. An interesting fact to emerge from chapter two is that Malta had pillboxes and other anti-invasion defences before 1939 because of Mussolini’s aggressive policies. Britain Alone covers in detail the sitting and construction of the immediate defences in 1940, and makes the point that many Stop Lines were in fact unfit for purpose and were consequently abandoned. The pillboxes of 1940 were intended for regular troops; the Home Guard was to deal with the expected para-troopers.

In 1941, although the danger of invasion had decreased, it had not disappeared altogether and a new C in C Home Forces (Alanbrooke) decreed that pillboxes were unsuitable. Field defences, Nodal Points and mobility were the new doctrine. (This reviewer’s opinion is that fighting from inside a concrete box is quite contrary to the mindset of the British soldier.) Strongpoints of varying degrees of importance were established nationwide, to force the enemy to confront the defences and channel his armour into killing zones. Where pillboxes occupied an especially good defensive position in the defensive set-up, they were retained.

In late 1944, the Home Guard was stood down and fixed defences (where feasible and/or desirable, reverting to agriculture for example) were demolished, filled in and generally removed. So the survivors lay dormant until Henry Wills began their rehabilitation with his book Pillboxes in 1985 and the subsequent launch of the Defence of Britain Project (in which the author played a leading part).

This book is a mine of information and is a publication of quality. Of particular value is the selection of photographs; too often the same ones appear in different publications, but here it is refreshingly different with many not seen before. High marks for a strikingly attractive cover photo. There is a very comprehensive Further Reading list. My only quibble would be that there is no mention of the Pillbox Study Group which does much valuable work in the field of recording and conserving these often melancholy relics of our military history.

\[\text{Gil Dowdall-Brown}\]

For two thousand years or so, Essex has stood on the front line of the nation’s defence. As a result, the county has a rich military heritage: from Colchester’s Roman walls to Kelvedon’s ‘secret’ nuclear bunker, there are traces of its military structures throughout the county. Many of those that have not survived to the 21st century have been drawn or photographed, so the concept of a book telling the story of Essex at War from Old Photographs, is an appealing one, and one which could be a useful addition to the library of anyone interested in the military heritage of this part of the country.

Despite the author’s obvious passion for his subject, unfortunately the book fails to live up to expectations. Out of the book’s 99 illustrations, 37 are distinctly modern, some are oddly captioned whilst there are several more whose inclusion is of little obvious value. The text is sometimes clumsy, sometimes repetitive and occasionally inaccurate (for example, Parliament met Fairfax at Saffron Walden church in March 1747. This was actually in 1647. A public promenade from the Land’s End Inn to the gatehouse of the fort (at Tilbury). The pub is actually the World’s End Inn (and anyone who has been there knows why!). Finally In August 1910 during Clacton air show… The air show was in 2010.

There are highlights however; the story of Warley barracks (although there is no mention of the capture of a French eagle at Salamanca in 1812, remembered to this day in the name of Eagle Way which runs close to the site of the barracks); the large-scale Salamanca in 1812, remembered to this day in the name of Eagle (although there is no mention of the capture of a French eagle at Salamanca in 1812, remembered to this day in the name of Eagle Way which runs close to the site of the barracks); the large-scale army manoeuvres in September, 1904 which included a major landing on Clacton beach, and most interesting of all, that a tiny corner of north-east Essex was home to no fewer than four winners of the Victoria Cross.

But overall this is a disappointing book and one with only limited appeal to the fortress historian (although Tilbury Fort, the winners of the Victoria Cross. landing on Clacton beach, and most interesting of all, that a tiny Way which runs close to the site of the barracks); the large-scale Salamanca in 1812, remembered to this day in the name of Eagle (although there is no mention of the capture of a French eagle at Salamanca in 1812, remembered to this day in the name of Eagle Way which runs close to the site of the barracks); the large-scale army manoeuvres in September, 1904 which included a major landing on Clacton beach, and most interesting of all, that a tiny corner of north-east Essex was home to no fewer than four winners of the Victoria Cross.


Historic Scotland has decided to trial a new format for souvenir guidebooks to their most prestigious properties. No better place to start than Edinburgh Castle, in icon of Scotland’s identity.

So much of Scotland’s history is bound up in Edinburgh Castle, that the guidebook lists no fewer than twenty seven places in the castle that are essential for the visitor to see. Considering that the castle contains the Honours of Scotland, the Stone of Scone, the National War Memorial, the National War Museum and three regimental museums that still leaves twenty more to visit. All the sites are fully described and illustrated and there is a numbered link to the isometric drawing of the castle inside the front cover. This section – Explore the Castle leads the visitor along an easily followed sequence of important locations around the castle. An unusual and welcome innovation is a camera icon which is a guide to where the most advantageous photographic ‘hot spots’ are to be found.

The second section of the guide is The History of Edinburgh Castle and moves from the earliest times to the present day. Scottish history over the centuries has been turbulent to say the least, sometimes extremely so, with recalcitrant clan chiefs at war with the monarchy, family feuds, great noble houses competing for power and not least the Auld Enemy of England.

Edinburgh Castle was always involved at some level – a strategic objective of the highest importance and its history reflects this. It claims to be the most besieged castle in Britain having changed hands many times. James V (1513-42) decided that Holyrood was a more agreeable place to live, so (apart from exceptional circumstances), the castle has not been a royal residence since then. It has never lost its military function however. There are thirteen historical sections and the narrative throughout is well researched and concisely written, the illustrations are carefully chosen and it all captures the imagination.

This is a guidebook of great style and it makes a strong statement of what Historic Scotland means to project about the country’s heritage. It is a product of new research, allied to a portfolio of illustrations, many of which were specially commissioned. Particularly to be commended are the reconstruction drawings, the fruit of six different artists and they are first class. The colour photographs are pin-sharp and overall the presentation is of very high quality. This reviewer’s opinion is that Historic Scotland has succeeded to admiration in their aim, and it is to be hoped they will stay with this format. Congratulations to all concerned.

Gil Dowdall-Brown


Previous books on Martello Towers have dealt with these fortifications as found all over the world, whereas Foley’s book is quite specific as to location. The Introduction carries a sub-title The Napoleonic Martello Towers of the South and South-East Coast though a chapter on The Historical Background does allude to towers in other countries. Foley’s book covers The Mainland, Sussex, Kent, Essex and Suffolk and it does so in great detail. In the county chapters, there is an entry for every surviving tower and the author has visited them too, where humanly possible. Most of the colour photographs were
as are AT cubes; rarer and less easy to find and identify are
some idea of the historical background’. The Guides start with text
Aldeburgh
to explore, understand and enjoy the physical remains... and... give
principally in 1940-41, while the fourth examines the stop lines
‘Three guides examine anti-invasion coastal defences, built
Conference and fitted very well with some of the locations seen.
These fine books were presented to members attending the
you need to go and tell you what is there to be seen.
interested visitor/enthusiast/expert the guides will take you where
colour, while the maps show the layout of the defences. For the
illustrated with both b/w war-time photos and current ones in
description of the circumstances which created these features, well
has now gone, much remains, and these Guides give us a very good
This is a part of England at the forefront of WW2 and while much
signal towers was set up by the Admiralty, and the tower at Start
An interesting parallel exists between 1803 and 1944 in
France. In 1803, Sir John Moore commanded the Southern
district as Rommel commanded the Normandy coastline in
both planned to smash any invasion on the beaches. In
both cases, their immediate superiors thought differently. We
We know what happened in 1944, but can only speculate as to 1803.
Each of the county chapters has a preamble outlining the
general scheme of things in that county, followed by a tower-
by-tower tour; each tower having its history and present
condition described.

The book concludes with three appendices: Surviving Towers;
Lost Towers and Signal Towers. There is also a very good bibli-
ography.

An intriguing note on which to end is that in 1759 a chain of
signal towers was set up by the Admiralty, and the tower at Start
Point in Devon was commanded by one William Clements. He
was a half-pay naval lieutenant with an allowance of 7/6d per day.
Gil Dowdall-Brown

A Guide to Second World War Archaeology in Suffolk:
by Robert Liddiard and David Sims. In four books, Guides
1-4. PB; 60, 67, 71 and 71pp. Fully illustrated with colour,
b/w photos and full colour maps. Published 2014 by the
University of East Anglia as part of the ‘World War II
Heritage’ project funded by the EU.
www.worldwar2heritage.com
Available direct from Rob: rob.liddiard@uea.ac.uk

This is a part of England at the forefront of WW2 and while much
has now gone, much remains, and these Guides give us a very good
idea of what was there, why it was there and the philosophy behind
it. For the general reader the series will provide an excellent
description of the circumstances which created these features, well
illustrated with both b/w war-time photos and current ones in
colour, while the maps show the layout of the defences. For the
interested visitor/enthusiast/expert the guides will take you where
you need to go and tell you what is there to be seen.

Guide 1 covers Lowestoft to Southwold, Guide 2 Walberswick to
Aldeburgh, Guide 3 Orford to Felixstowe and Guide 4 Stop Lines.
These fine books were presented to members attending the
Conference and fitted very well with some of the locations seen.
‘Three guides examine anti-invasion coastal defences, built
principally in 1940-41, while the fourth examines the stop lines
constructed during the same period. The aim is to help readers
to explore, understand and enjoy the physical remains... and... give
some idea of the historical background.’ The Guides start with text
listing the different aspects of the area followed by a series of walks
very well mapped in colour with all the different features depicted
and described by Stop Numbers. Type 22 pillboxes are plentiful,
as are AT cubes; rarer and less easy to find and identify are
positions for field guns, which were expected to play a vital part
by shelling the beaches in the event of invasion. An excellent and
informative series, well illustrated with particularly clear maps.
Charles Blackwood

FESTUNG GUERNSEY PROJECT (PARTS 8,9,10)
These three latest parts of the Project have been added to
the library and are briefly reviewed below. Any
colleague planning to visit Guernsey is strongly
recommended to obtain a copy of the Part relevant to
his/her interests either by loan from the library, or from
the publishers who are Clear Vue Publishing
(www.clearvuepublishing.com) or from a retail or online
outlet. The series is excellent; better information of its
kind is not to be found.

Part 8: chapters 1.3 and 1.4. Tactical Review of the
Fortified Areas and Fortified Structures. PB, 114pp. 19
maps, 25 drawings, 3 b/w photographs. ISBN
978.0.9926671.2.2.

These chapters show the general geographic and tactical
information about the fortified areas of Guernsey, Jersey and
Alderney as at September 1944, detailing the garrisons and
bunker/emplacement designs. The drawings are excellent as are
the original map reproductions. As always a translation of the
German text appears on the opposite page.

Part 9: chapters 2.1 and 2.2. Weapons Deployed in
Fortress Guernsey and Mirus Battery. PB, 102pp. 171 b/w
photographs, 3 drawings, 1 map. ISBN 978.0.9926671.3.9.

This is a comprehensive inventory of the artillery and flak
weaponry and all their accoutrements as installed on Guernsey
in 1944. It includes technical specifications of the artillery
pieces and their ammunition. There is one section wholly
devoted to the iconic Mirus Battery.

Part 10: chapters 2.3 and 2.4. Deployment of Artillery
and Anti-Aircraft Artillery. PB, 144pp. 125 b/w
photographs, 17 maps, 1 drawing. ISBN 978.0.9926671.4.6.

An explanation of the combat mission of every battery on
Guernsey with maps showing the target areas of each one and
an overview of the flak resources available to the defence.
Gil Dowdall-Brown

TP 443: New Guns versus Old Fortifications. On Modern
Projectiles and Armour Plating: Anon. 18pp. £10.
(Published by USJ 1862)

The date tells the story; this paper comes out in the middle of
a revolution in armaments, the resulting changes in the

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principles and design of fortifications and the great debate between The Blue Water School and the advocates of fortification. Of particular concern at the time was the ability of new walls to resist the more powerful weapons, Spittbank Fort being a case quoted as exemplifying the debate. It is accepted that solid walls will no longer encompass a town and that a ring of detached works is required, able to stand alone, at least for a period. Badajoz, San Sebastian and The Crimea are quoted as supporting evidence. Iron or granite, floating or stationary, cupola or open? The success of the iron-sided vessels in the Battle of Hampton Roads is quoted too.

Construction of Spittbank Fort had paused while the argument raged, though The Royal Commission Report of 1860, frequently referred to, considers that forts should be the eventual winners over ships as they are fixed, can be armoured as much as necessary and carry the heaviest guns whereas ships have limits and fire from a moving platform. The author however, believes that forts should be as low as possible in the water with no vertical face and a heavily sloped parapet, and that floating batteries are a better bet than forts. The usual arguments are made that an invasion force would land on one of the numerous fine beaches, much easier for the Navy to deal with, therefore money should be spent on ships and not forts. The defences of Plymouth (very sarcastic here), Gibraltar and Malta are likewise condemned, though Tigné is approved of. The second part of the paper discusses Modern Projectiles and Armour Plating, along with the task of deciding which of three makes of gun is best – Armstrong, Blakely or Whitworth. The competition is rather fancifully compared with Paris and the Three Graces (really!).

There are fascinating extracts from reports of test firing several designs of guns at which Whitworth's octagonal section bores come out on top. The penetrating and destructive power of 120-pdr and even 70-pdrs is dramatic, but all is brought to earth by a true prophet of the times, a Mr Reed, regarded as an authority, that 'It is ...absurd to propose that because a shell has been driven by Mr Whitworth through three or four inch iron, therefore the ship-builder must give in to the gun-maker. It is my firm conviction that we shall go on to plate ships with six inch, nine inch, and even twelve inch iron armour before we think of yielding up our hope of impregnability'. Quite so. The guns and shells prove equally destructive against much heavier armour plate in later experiments.

**TP 445; French Fortresses and Prussian Bombardments:** Anon. 12pp. £5. (Published by USJ 1872)

Translated from a French paper on French Fortresses during the War of 1870-71, the commonly held belief that the Prussians took fortress towns simply by blasting the town and all it contained to bits, instead of demolishing ramparts and losing thousands in costly assaults, is questioned by evidence to the contrary. Paris and Belfort are just two examples where thousands of shells were expended on the citadels and ramparts; Belfort did not surrender. There was a general feeling that fortresses had failed in their purpose, but the point is made that the army was in poor shape and rapidly destroyed in the field leaving the fortresses isolated, undermanned and lacking support. Equally there was a strong belief in France at the time that war was out of the question, peace was the natural state of things between nations, therefore fortification was unnecessary. In fact numerous examples are given for the success of fortresses, not only in resisting, but delaying the Prussians and forcing them to turn back to deal with them after their armies had advanced well beyond. They also acted with considerable success in their second role as points d'appui. The paper also contends that the tactic of gross bombardment of civilian areas did not lead to inevitable surrender, indeed ... 'the bombardments had little success against places which were in a condition to cope seriously with the besieger' and civilian casualties were remarkably light in such heavily bombarded towns such as Strasbourg.

An interesting paper, where the provision of facts undermines the common perception.

**TP 447; The Intrenched Camp of Florisdorff:** by Lt JP Nolan RA. 7pp, 1 fold-out map, 4 illustrations in text. £10. (Published by RAI 1868)

Florisdorff, '..a suburb of insignificant size on the left bank..' was an intrenched (sic) camp established by the Austrians for the protection of Vienna before the Austro-Prussian War of 1866 (the Seven Weeks' War) where Austria was comprehensively defeated at the Battle of Konigratz in Bohemia. Florisdorff was connected to Vienna by two substantial bridges, which had played key roles in the early war against Napoleonic France, and would do so again, obliging the enemy to seek far up or downstream for another crossing, while maintaining the ability to cross rapidly with a complete army from one bank to the other. The camp is described in some detail and gives us an excellent example of what an entrenched camp actually consisted of; in this case an outer chain of 31 large detached redoubts, 500 yards apart, never less than 4500 yards from the bridges or 6000 yards from Vienna, and an inner line of redoubts and two separate têtes de pont. There are detailed descriptions of the works, several small plans of elevations and sections; a fold-out map sets the scene nicely. A brief comparison is made between the Florisdorff camp and one seen at Wibourg in Finland, noting similarities and differences.

**TP 448; Remarks on Casemated Batteries and their application to Sea Defence. On Coast Defences:** by Capt Wilford and Capt Wilson. 17pp, 5 illustrations in text. £10. (Published RAI 1845)

One need always be aware of the dates of these papers; there was much debate as to the way forward in 1845, when pre-Royal Commission forts and sea defences were underway in Britain. Here the question is if casemated batteries, much touted as the answer for low-lying batteries (up to 50 feet asl elevation) really have the advantages claimed for them. The Germans had built numerous works, fully casemated, of two and even three stories, in following the principles of Montalembert. Apart from the great cost of casemated works, the fear is reiterated here that casemate embrasures simply channel very dangerous splinters and debris into the work; that their field of
fire is very limited, while the cheeks are vulnerable to fire outwith the arc of the casemate; there is little space within and the guns are more difficult to control than in an open battery, and the smoke can be a problem.

The devastating internal effect of fire against the cheeks of embrasures is described by Jones at the Castle of Scylla, in his *Journals of the Sieges in Spain*. The use of covered flanking batteries (Haxos later on) is endorsed. The point is equally well made as to the inaccuracy of ships firing in any condition other than a flat calm, so a spread-out battery with good traverses and open gun positions would serve just as well. There is some discussion on how the various guns/howitzers and mortars can work well in embrasured sea coast batteries.

TP 455; *Home Defence*: by Capt RF Sorsbie RE. 17pp. £10. (Published USJ 1901)

The notion that the Navy can protect Britain entirely on its own is rapidly dismissed in this paper, as it is appreciated that the ever expanding empire is simply outgrowing the Navy’s ability to defend Britain, her Empire and all the associated bases. The Navy, the Army and local defences are alike necessary and interdependent. The needs of Home Defence are seen to be Attacks on Naval Bases, and other ports, Raids and Attempted Invasion; events which are to prevented by local naval defence, immobile defences and mobile land forces. The first envisions swarms of small fast torpedo boats, the second coast batteries (note that it is no longer forts), submarine mines and torpedoes and the third speaks for itself, though how to fulfil the need fills several pages. Part II goes into yet more detail of the proposed Mobile Forces, concentrating on the potential for volunteers.

TP 457; *The Rhine and its Fortresses*: Anon. 16pp. £10. (Published USJ 1864)

In 1864 Europe was a turbulent place, with particular friction between Germany and France and especially over the state of Alsace; just six years later we have the Franco-Prussian War. The country and the states through which the Rhine flows are briefly described along with a mention for several of the major fortresses, at Landau and Nijmegen for example. There follows a survey of the fortifications, starting with Cologne (where the ‘...outer envelope is connected with the interior enceinte by caponières and loopholed contrivances of all kinds...’) Germersheim (helps link Landau to the Rhine), and then Coblenz and Ehrenbreitstein (‘... viewed individually as a master-piece of military science...’).

The author contends that contrary to the belief of many that fortresses are useless, ‘... we will only say that a good fortress, well defended, may often be the means of saving a state...’ Fort Alexander follows, then Fort Francis at the confluence of the Rhine and Moselle, then Mayence, but ‘... every fort, battery and fortress will require to be revised and remodelled , at vast expense, as far as its parapets and embrasures are concerned, or they will not be able to withstand the superior artillery that will be used in besieging them.’

The paper is crying out for a map and ground plans but sadly there are none.

TP 458; *The Application of Rifled Cannon to the Operation of Breeching Unseen Defences by High Angled Firing*: by Col Lefroy RA. 19pp, 9 illustrations in text. £10. (Published RAI 1863)

‘What is the greatest amount of curve that can be given to the Armstrong projectile, still preserving its power of penetration, and limited to what range?’ was the question to which this paper responds. The text goes on to refer to trials carried out in 1822 and 1823 using 10- and 8-in howitzers and a 68-pdr carronade against a Carnot wall built of brick, 21-ft high and 7-ft thick in the bottom of a ditch.

The report goes into some detail, but essentially the wall was breached by 491 rounds (fired at low velocities) out of 3436 rounds (202 shells and 289 shot) 0.143 % of the total fired. There is some discussion on pointed shells versus round shot, the former clearly better, and discussion too of the weight of gun and charge needed to attack a hidden wall, concluding that lighter, simpler guns are quite adequate. German experiments in 1860 are discussed and the paper concludes that rifled ordnance is just as successful as smoothbore ordnance at breeaching unseen defences. The illustrations of the Carnot wall after, one, two and three days of firing are certainly expressive.
An Appendix contains the Report of the Ordnance Select Committee on the Efficiency of Armstrong Guns employed in Ricochet Fire, December 2 1861, concluding that shells are less effective than round shot at ricochet fire but still useful fired with reduced charges for lower velocity and steeper angled drop off at the end of their trajectory.

TP 459: Military Engineering in the Sixteenth Century: by Geo Mouchet. 18pp. £10. (Published USJ 1848)

In 1584 during the siege and blockade of Antwerp the Spanish Generalissimo Alexander Duke of Parma constructed an astonishing fortified bridge to block the passage of ships on the River Scheldt, which was fast flowing, had a tidal movement of 12-ft and in winter was full of ice floes. Nobody in Antwerp believed it could be done, until far too late - except the Engineer Frederico Gianibelli of Mantua, employed by the City, who planned to attack the bridge with fire and explosive vessels as soon as he realised that Parma was determined to construct it.

It is these two events that the author describes, citing both as exemplars of remarkable men demonstrating the imagination, persistence and self belief required to conceive and carry forward remarkable operations in the face of the perfectly reasonable opposition from one’s fellows and in the second case the complacency, parsimony and total lack of understanding of their own long term interests of one’s employers.

Parma was a highly successful general who had invested Antwerp against all advice from his officers, took the two forts guarding the river and also the dam which Antwerp needed to control in order to flood the fields and enable flat-bottomed boats to supply the city. Here vested interest had won the day, refusing to allow the floodgates to be opened. Such internal strife, petty bickering and total inability to agree any large action, let alone carry it out, was to continue to undermine the efforts to defend the city. Parma was determined to block the river traffic so he decided to build a bridge, initially constructing a pier, strongly piled, from each bank, cutting the useable width of the river from 1200 yds to 600 yds and mounting numerous guns at the end of each. Ships were still able to run past the guns, so after pausing over winter while the ice flowed down, in spring the Duke had 32 flat-bottomed boats, each 66 ft long by 20 ft abeam, anchored in the stream and supporting in specially constructed stone ‘coffers’, the whole surrounded by shrapnel items - iron chains, spikes, nails, metal and stone balls. Ahead would sail numerous small ships, spread out and sending up fireworks to create a diversion, surprise and confusion. Expecting an attack on land by soldiers the Spanish were prepared, but not for the bigger boat to crash into the bridge and explode, causing devastation to the bridge and the troops. Sadly there was a total failure by the City to exploit the carnage, no fleet sailed through, no advantage was taken and the bridge was rapidly restored. As for Gianibelli, he was first vilified after some returning soldiers declared the bridge undamaged, and ‘...his inventive genius squandered...’ then celebrated for his success, and prevailed a second time, with more explosive boats, and yet a third. The tale ends as the Government of Antwerp ‘...had it in contemplation to seek their deliverance in quite another direction’.


This extremely handsomely presented volume, in a dark green hard slipcase with gold lettering, on gloss parchment-effect paper is an essential topographical guide to the Peninsular War, ... ‘one of the defining campaigns of the British Army which sealed its reputation for supreme professionalism, heroic obstinacy and sheer perseverance’. It is not just the British Army whose achievements are recorded (15 field actions and four bloody sieges) but also the 25 field actions and 15 sieges as the indigenous population fought the French in a series of savage encounters. The Preface and Introduction emphasise the part played in the war, often ignored or belittled, by the Portuguese and Spanish, particularly the former who performed extremely well as part of the Anglo-Portuguese Army, and endured disproportionate losses. Also emphasised is the extraordinary outcome of what was a coalition of disparate peoples, joined by a common struggle with a common cause to be seen in a wide Iberian context.

Produced with the cooperation of Spanish and Portuguese authorities, the 164 original maps are all full-page and depict these encounters, in chronological order, often with several maps to follow a developing confrontation, in full detail, accompanied by several pages of explanatory text. Chapter 38, for instance, entitled ‘Capturing the Keys to Spain: January to April 1812’, has four pages of text and four maps – the Siege of Ciudad Rodrigo, The Allied Deception, and two of the Third
Allyed Siege of Badajoz.

The maps, the heart of the Atlas, are generally clear, sharp and readily understood, though there is a small problem distinguishing the different nationalities’ Corps symbols, and I cannot like the representation of gun batteries by a cannon icon – too fussy, much better to have had standard battery representations.

Overall, an extremely valuable resource for the Peninsular War student, very well presented.

_Y Charles Blackwood_

**Historic Scotland Guidebooks:** various authors. PB, 31pp. All illustrations in colour. £2.50.

**Tolquhon Castle:** by Chris Tabraham and Kirsty Owen. ISBN 978.1.84917.111.3. Published 2014

This is an updated version of Chris Tabraham’s 1984 edition. The castle, in north-east Scotland was extensively remodelled in the 16th century in common with many Scottish castles and tower houses. It began as a simple tower house and was expanded at a time when security gave way to some extent, to comfort, even luxury.

**Newark Castle:** by Adrian Cox and Chris Tabraham. ISBN 978.1.84917.139.7. Published 2014

A new addition to the list of Historic Scotland’s guidebooks opens the doors of a castle which has led a modest, retiring existence for many years, due to its position concealed among the buildings and tall cranes of the Clyde shipyards. With all but one closed down and the surrounding area cleared, the castle is unveiled. It is both a medieval castle and a mansion and is a wonderful example of an aristocratic residence of the Scottish Renaissance. There survives a very rare example of a bedchamber panelled in its original wood, with en suite and a press bed which folded out of a press (cupboard).

**Cardoness Castle and Carsluith Castle:** by Adrian Cox and Doreen Grove. ISBN 978.1.84917.126.7. Published 2014

Adrian Cox has updated Doreen Grove’s text of 2001. Both castles are fine examples of a gentleman’s house with the emphasis on defence. Cardoness is the larger and more elaborate reflecting the greater wealth of the McCullochs compared to that of the Brouns of Carsluith (my ancestors). Both castles are now well clear of the estuary of the River Cree, whereas in their heyday it would have been close to the walls thus improving the defensive qualities of both.


Rothesay occupies a prime strategic position, both to confront an invasion by the Kings of Norway (frequent in early times), and later in the 13th century to play a crucial part in the struggle for dominance in the area between the Scottish Crown and the powerful and intransigent Lords of the Isles. It has been captured and resisted sieges many times and must be, along with Edinburgh, one of the most fought-over castles in Scotland. It has, unusually for Scotland, a circular plan with an elaborate gatehouse and four round towers around the curtain. Rothesay is of course the Dukedom of the Prince of Wales while in Scotland.

Historic Scotland guidebooks have a common format as do English Heritage and CADW. The front cover will show a part of the castle and the back cover a few lines of introduction to the site. Inside, it begins with a guided tour emphasizing the important features to be seen. Photographs, original prints and reconstruction drawings accompany the text. The second section describes the history of the castle and particularly the personalities who lived there, or visited it socially or in arms. This history is continued until the castle is abandoned and falls into disuse, or is still inhabited.

The quality of the photographs, drawings and plans is excellent. The guides contain suggestions for further reading and a map of the immediate area showing other Historic Scotland properties. The guides are, like their sister publications in England and Wales, exemplars of what a souvenir guidebook intended for the enlightenment of the general public, ought to be.

_Gil Dowdall-Brown_

**After The Battle; issue 165 of August 2014:** £5.00. Published by Battle of Britain International Ltd

This magazine visits WW2 locations and events and compares them to the site today, using current research.

The topic in this issue which is of concern to FSG is Britain’s First World War Defences. This is slightly misleading as the article actually deals in depth with the defences of the south-east corner of England, notably Kent. These were the obvious landing places for an invader coming from occupied Belgium, though there was also concern over an invasion from the Baltic and aimed at East Anglia. The Isle of Sheppey is the focus of the article. A research project entitled Defence of the Swale Project has been set up, coordinated by Kent County Council and supported by English Heritage. It is looking at the numerous defence systems around the River Swale. It will be no surprise to FSG members to learn that FSG member Victor Smith is a co-author of the article.

There exists a large collection of contemporary photos of the defences (including aerial prints) which is accompanied by contemporary documentation at the National Archives and elsewhere. Nevertheless, it is clear that the D of S Project has a monumental task on its hands.

Early defence planning centred on the Navy’s ability to destroy any invasion attempts in the Channel or the North Sea, but when Imperial Germany matched the Royal Navy battleship for battleship, things changed and planning for the defence of the homeland began to prosper. Army plans had postulated a British Expeditionary Force crossing to Europe, so home defence consisted of coastal batteries mostly defending the ring of ports from Dover to Harwich. In 1914, extensive fieldworks were constructed to defend possible landing places, block strategic roads and protect vulnerable points. Concrete
soldiers earned a dearly bought reputation as highly professional, committed and brave soldiers who along with their likewise effective French brothers-in-arms were instrumental to the success in driving out the Spanish, after several major engagements and sieges, the Army being led by the charismatic French Marshal Frederick Herman, Duke of Schomberg. The Portuguese government and aristocracy proved to be totally unreliable, indecisive and ineffective (by 1668 the English were 11 months in arrears of pay). Several fierce battles and sieges are described, the first being the complete rout of the Spanish at the Battle of Ameixial (1663) followed by the short sharp siege to regain Evora.

The siege of Valencia de Alcantara by the Portuguese was the opening gambit of the following year, where again the English distinguished themselves at huge cost storming a well-defended breach – the shape of things to come 148 years later at Badajoz. In 1664 the Allies went on the offensive and took the Spanish town of Valencia de Alcantara and followed up with a crushing victory at Montes Claros in 1665 after the Allies had demonstrated the great value of a well defended fortress, Vila Viçosa buying time for a relief force to gather. This time the victory was followed up by two incursions into Spain and in 1666 by another. With the Treaty of Lisbon in 1668 Portugal’s independ-ence was accepted, by which time of the original 3,500 soldiers just 1,000 were left standing – and 400 of those were sent to Tangier, essentially a death sentence. It’s a riveting story, very well told and eminently readable.

The immense logistical problems of moving and sustaining an army in battle, at siege and in quarters are sharply detailed giving a clear impression of the difficulties of large scale military operations at the time – the quantity of food (particularly horse fodder) and gunpowder required to provision an army is enormous, especially with regard to the means of moving them on the available roads. The climate confined military campaigns to the spring and autumn, such short seasons often preventing a decisive follow-up to a victorious battle or siege.

The book is well illustrated with maps, plans, contemporary prints and present-day photos.

Charles Blackwood ●

NOTICES


A Box of Sand. The Italo-Ottoman War 1911-1912: by Charles Stephenson. PB, 296pp. Maps, contemporary photos. ISBN 978.0.9576892.2.0. £14.99. Tattered Flag Press, 2014. ‘The first land, sea and air war’. While there is not a lot on fortification in this book, it was a precursor to WW1 in many of its aspects and will appeal strongly to those with wider military interests. Ed. ●