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The Garrison Defences on St Mary's in the Isles of Scilly in the 17th and 18th Centuries

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In the mid-17th century Scilly was briefly at the heart of the civil wars that engulfed England. To make the islands secure a line of earthwork defences was probably built by Royalist forces around the Garrison on St Mary's, and a length of this survives along the west coast. After the islands were recaptured by the Parliamentary forces these defences were neglected. However, in 1715 the Ordnance engineer Colonel Christian Lilly was sent to Scilly to oversee their repair, and to repair and rebuild a number of key buildings on the Garrison.

Despite Lilly's efforts, a generation later the earthworks were unusable, and some were falling into the sea. Therefore between 1741 and 1746 substantial stone walls and gun batteries were built along the south side of the Garrison. The progress of this brief but substantial building programme can be followed through a series of maps, the financial records of the Board of Ordnance and by examining the fabric of the walls. The construction programme ended abruptly in 1746, but when Britain was again at war with France in 1793, the gun batteries were rearmed. However, once France was defeated in 1815 the fortifications were abandoned and now offer visitors and residents a brisk walk.

Introduction

In 1750 the strength of the Isles of Scilly was described as follows by Robert Heath:

But the Island of St Mary ... is likewise defended by a strong Garrison, situated upon the West part of it, overlooking the Town and Isthmus, and commanding the Country that way and to the Sea about the Batteries, of which there are several strong ones, mounting with sixty-four Pieces of Cannon, some eighteen Pounders. It also contains a Company of Soldiers, a Master Gunner, and six other Gunners. A Store-House, with Arms for arming three hundred Islanders, who are obliged to assist the Military Forces at the Approach of an Enemy. An impregnable Magazine, a Guard House, Barracks, Bridge, and strong Gates: And, upon the Summit of the Hill, above a regular Ascent, going from Hugh-Town, stands his Majesty's Star-Castle, with Ramparts, and a Ditch about it.¹

The Isles of Scilly may lie at the south-west extremity of England, but they were central to England's defences in the 17th and 18th centuries. St Mary's, the largest of the islands in the archipelago, consists of two islands linked by a wide sandbar on which Hugh Town has been built. From the 16th century it was recognised that military defences on top of Hugh Hill, the smaller of the two islands, could command the key waters that attackers would wish to use to seize control of the islands (**Figs. 1 and 2**). Threats from the Spanish and French led to the creation of Star Castle in 1593, the first stretch of the Garrison Walls in c. 1600, and various smaller buildings, including the Powder House, in the early 17th century.² Despite impressive defences being created, no enemy came. However, in the mid-17th century civil conflict prompted the creation of a long circuit of earthworks encompassing the whole of the top of Hugh Hill, which accordingly became known as the Garrison. Once the monarchy was restored these defences were at first neglected, but in the early 18th century were subjected to a major campaign of repairs. Nevertheless, when Britain became embroiled in the War of Austrian Succession the defences were felt to be inadequate, and between 1741 and 1746 a long stretch of stone defences were built from the east side round to the south-west corner where they ended abruptly. Again a military scare had

prompted the creation of substantial defences, but fortunately no shot was fired in anger and the defences were abandoned.

The Garrison's defences in the mid-17th century

In the 1640s and early 1650s the Isles of Scilly were briefly at the heart of the conflict between Parliament and the King. In March 1646 Charles I's son, Prince Charles, retreated to Scilly, the last outpost of the Crown in the south-west, but by September 1646 the Royalists could no longer hold the islands. However, Parliament's hold on Scilly was short-lived, as in September 1648 the soldiers garrisoning the islands revolted and returned the islands to the Crown.³ The determination of Parliament to retake the Isles of Scilly was reflected in the founding aims of the Commonwealth, published on 13 February 1649. The third aim was 'To use means to reduce Ireland, Guernsey, Jersey, and the Isles of Scilly and Man to obedience.'⁴ Parliament feared a Dutch attempt to capture and hold Scilly, and therefore in 1651 dispatched an expedition commanded by Robert Blake, General-at-Sea, to recapture the islands from the Royalist garrison. By 5 May Tresco had been retaken and Parliamentary guns bombarded St Mary's Pool and the Road between St Mary's and Tresco, forcing the Royal forces to surrender.⁵

In 1652 Parliament carried out a survey of the Duchy of Cornwall, which included a brief description of the Garrison ('Hughhill') immediately after its capture:

The residue of the Maryes Island is called the Hughhill and is that part of the said Land where in the New Castle now stand and is fortified round the said hill with a lyne and severall bulworkes and platformes thereon and is the chief strength of all the said llands wherein is the Castle and severall litle tenements and storehouses, all of them used and imployed by and for the use of the garrison.⁶

The survey also included two other military structures within the Garrison:

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An old Fort called the Follye which is onely the old walls and shedderd within for the quartering of soldiers, scituate towards the south end of the Hugh Hill', £1, Another house called the Steeveall on the west of Hugh Hill, now a quarter for the soldiers, 10s.⁷

As well as a written description of the Garrison, a drawn survey was also produced. A map of 1655 shows the extent and form of the defences during the Commonwealth. It indicates that there were stone walls extending from the Well Platform at the north of the Garrison to Lower Broom on the east side, with stone batteries at King Charles, Newman's, Morning Point, Woolpack, Bartholomew and Steval Point (**Fig. 2**). Most of the stone walls had been put in place in about 1600, but a number of the stone batteries probably dated from the mid-17th century, built while the islands were being besieged (**Fig. 3**). The remaining defences around the perimeter consisted of earthwork breastworks linking small semi-circular or triangular gun batteries (**Fig. 4**). Most of this circuit around the southern end of the Garrison was replaced in the mid-18th century by more substantial stone walls, but on the west side, between Steval Point and King Charles' Battery, an almost complete run of earthworks has survived.

The question is when precisely were the earthworks and new stone defences built? The Parliamentary survey stated that the Garrison 'is fortified round the said hill with a lyne and severall bulworkes and platformes', indicating that the earthwork defences predate 1652. Were they built by the Royalist forces between September 1648 and May 1651, or were they earlier, as Parliament had voted £1,000 for the defence of Scilly when it controlled the islands between 1646 and 1648?⁸ The first action of the Commonwealth on capturing the islands was to improve the fortifications and the firepower of the islands. In July 1651 £300 was made available for 'building and other contingencies', and in October an additional £200 was provided by Parliament as well as £50 for 'timber to repair your platforms and boats'.⁹ In December 1652 a further £500 was made available for 'fortifications and for incidents'.¹⁰ Although this amounted to a significant investment, it is likely that the defences mentioned

in the 1652 survey belonged to the time when the islands were at the heart of the conflict during the civil wars.

The Commonwealth's control of the islands ended formally on 30 June 1660, when Sir Francis Godolphin (1605-67) was appointed as 'Commander and Governor of the Isles of Scilly'.¹¹ On 27 December 1660 Edward Sherburne, a poet who had been a faithful commander in Charles I's forces, was commissioned to report on the arms and defences of the main fortifications in the south-west of England.¹² On St Mary's there were five culverins, eighteen demi-culverins, forty-one sakers, twenty-two minions and two 3-pounders that were serviceable, presumably mostly on the Garrison, and seven various guns that were unusable. However, few would have posed any threat to an enemy, as the vast majority of gun carriages, 82 out of 95, were inadequate and probably unusable. Star Castle, the fortification built on the Garrison in 1593-4, needed repairs to its roof, entrance, portcullis and floors and some of the batteries required new timber guardhouses. Substantial repairs were also needed to the storehouse, the smith's forge and The Folly, the soldier's lodgings at the south end of the Garrison. However, Sherburne's largest, and most expensive, recommendation was a repair and reconstruction programme for the earthwork defences around the Garrison, which would cost over £5,000. It is unclear whether any of these works were carried out, as a survey carried out by Colonel Christian Lilly in 1715 also recommended the construction of a new storehouse and a major programme of repairs to the earthworks, while an accompanying map showed The Folly in ruins.

Christian Lilly and Scilly's Defences 1715-17

In 1715 Colonel Christian Lilly was sent to the Isles of Scilly by the Board of Ordnance to evaluate and repair the fortifications.¹³ He was one of the seven engineers dispatched to their allotted regions to complete surveys as part of a reform programme initiated by the Duke of Marlborough.¹⁴ The background to these surveys was the end of the War of Spanish Succession, which had lasted for more than a decade, the accession of George I, the election of a

Whig government and the first Jacobite rebellion in 1715.¹⁵ The reforms initiated by the new monarch and government were a response to failings in the Board of Ordnance's construction projects in the years prior to 1714.¹⁶

Lilly was born in Germany, probably in the 1660s and by 1685 he was working as a military engineer for two German dukes, relatives of the future George I.¹⁷ In 1688 he began to work for William III and in 1700 became a naturalised Englishman. From the 1690s onwards he held a series of military and engineering posts in England and even as far away as Canada and the Caribbean. Following George I's accession to the throne, Lilly was appointed by a Royal Warrant, dated 22 March 1715, with the task of examining the fortifications of Portland, Dartmouth, Plymouth, Falmouth and the Isles of Scilly and repairing and improving their defences.¹⁸ In the papers of the Board of Ordnance it is possible to follow his trip to Scilly through an expenses claim.¹⁹ On 25 July 1715 he paid Captain Chadwick £3 4s. 6d. for his passage from Plymouth and two days later he spent a further £1 9s. 6d. for boat hire to take him to Tresco to inspect the island's defences and its harbour. After a brief visit to Tresco he seems to have remained on St Mary's until 1 September when he spent 5s. for boat hire to visit St Agnes and two days later he spent 16s. 6d. on his voyage to Falmouth.

Lilly's lengthy report of his trip to Scilly consists of a short introduction, a number of architectural drawings of proposed buildings inside the Garrison, a map with an accompanying panorama to illustrate the extent and appearance of the Garrison's defences and a lengthy table detailing the work that would be required to make the fortifications serviceable (**Fig. 5**).²⁰ This involved estimating the cost, as well as the volume of earthwork and sodwork required.

The first issue that Lilly raised was that new houses in Hugh Town had encroached to within 100ft of the wall where the Garrison Gate was located, and he recommended that the closest ones should be removed. He also recorded that the buildings within the Garrison were in a poor state of repair,

for besides what Accommodations and Conveniences are in the Castle, it Self, there has been two large Storehouses, Severall Guard-houses, and many Barracks, with other Offices fitt to receive and accommodate, a Considerable number of men, all of which have been built at great Expençe, but are now so many heaps of Ruines.²¹

Star Castle would require work totalling £121 9s. 9d., while three barrack blocks or 'little lodging rooms' on the ramparts of the castle would have to be rebuilt at a cost of £92 4s. 2½d., and this appears to have taken place.²²

However, there was still insufficient accommodation for soldiers on St Mary's and therefore Lilly suggested converting the buildings flanking the Garrison Gate into barracks to provide 20 beds. This would still be insufficient, and he therefore provided a design for a barrack building to house 120 men about 50m inside the Garrison Gate.²³ Lilly also recognised that the Master Gunner should have his own house within the Garrison.²⁴ He had proposed a three-bay, lobby-entry house containing two rooms on the ground floor with a central stair leading to an attic that probably also contained two rooms **[IT WOULD BE INTERESTING TO ILLUSTRATE LILLY'S DESIGN DRAWING].**

In 1750 Robert Heath described the house: 'Under the hill, towards the North Part of the Garrison, stands a convenient Dwelling, in which resides Mr Abraham Tovey, Master-Gunner'.²⁵ It contained 'good Apartments, Yards, Garden, Out-houses, and Cellars, (well stored) also a little House that stands under the Hill, betwixt his Dwelling-House (next the Sea) and the parade above it.'²⁶ This house is still there, now known as the White House. Lilly also suggested that a new storehouse should also be built at the northern end of the Garrison, where the old one stood.²⁷ This five-bay, stone building was constructed and survives today as Newman House (**Fig. 6**). In style it is similar to buildings flanking the gate of Pendennis Castle (**Fig. 7**). A guardhouse at Steval Point at the south-west corner of the Garrison was beyond repair and he recommended that it should be replaced by a new building.

After addressing the buildings within the Garrison, Lilly turned his attention to the walls and earthworks:

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Beside the aforesaid Estimates for repairing the buildings, there is farther and more considerable charge necessary at St Mary's Island, where the Parapets of the Fortification and other works of Earth being in great measure destroyed, it will require a vast quantity of earth and Sodwork to renew and complete the same.²⁸

To add to his gloomy analysis, parts of the stone walls also required significant repairs; the left flank and most of the face of Newman's Battery at the north of the Garrison near the harbour had disappeared, and the south-west corner of the Lower Benham Bastion beside the Town Beach on the south side of Hugh Town had collapsed, leaving a large breach between 40ft and 50ft long. Today this battery may still bear the evidence of where this major repair took place, though it has certainly been repaired in recent decades, a consequence of its location on the shoreline. The largest expenditure in Lilly's report that seems to have been carried out was for the refurbishment of the earthwork defences. Assessing how much of this circuit was repaired is complicated by the replacement of the earthworks with stone walls from Lower Broom round to Steval Point in the 1740s, but the clarity of the form of the surviving earthworks on the west side of the Garrison suggests that some significant restoration took place (**Fig. 4**).

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The costs of all the repairs itemised by Lilly was:

Repairs and Alterations to Buildings	£400 14s. 3d.
Parapets - Earth and Sodwork	£879 7s. 7d.
Repairs to Newman Battery	£93 12s.
Lower Benham Bastion Repair Breach	£40
New Barracks	£1,304 3s. 2½d.
New Storehouse	£366 15s. 10d.
New Master Gunner's House	£125 8s. 4½d.
101 New Gun Carriages	£620 0s. 9d.
Repair Buildings on Tresco	£83 19s. 3d.

Total £3,914 1s. 3d.

Accompanying his report is a detailed map that shows stone walls in a pink tone, while earthworks are represented by a black line (**Fig. 5**) This reveals that the fortifications were in stone from the ruinous Newman's Battery at the north to the Lower Broom Battery on the east side. Thereafter, there were stone and sodwork bastions at Morning Point, Woolpack Battery, Bartholomew Battery, Steval Battery and King Charles Battery. The major change since the 1655 map was that stone walls had been built between Upper Benham and Lower Broom, and connecting Newman's Battery to the Well Platform.²⁹

Lilly also provided a detailed list of the artillery pieces in Scilly. He recorded 89 guns in the Garrison and 31 elsewhere in the islands, ranging from a handful of 3-pounders to two 12-pounders and three 16-pounders.³⁰ As well as these probably relatively modern guns, Lilly recorded the presence of more archaic weapons, including eight culverins, twenty demi-culverins, twenty-four minions and seven sakers, and some of these may have arrived on the islands as far back as the 16th century. To make the guns serviceable he recommended providing 101 new gun carriages, an indication of the poor state of maintenance of the artillery. On 5 August 1718 Portsmouth dockyard was instructed to provide oak carriages on plank wheels for three 18-pounders, fourteen 9-pounders, eleven 5¼-pounders and eighteen 4-pounders.³¹ The provision of 46 new carriages falls a long way short of the number of guns seen by Lilly, but probably reflects the true number of serviceable pieces of artillery to defend the islands.

Lilly had outlined a very ambitious repair and building programme and it is clear that much, but not all of it was carried out. On 13 March 1716 £1,000 was allocated to Scilly and on 18 May 1716 a separate instruction was given to Colonel Lilly to spend £825 19s 3¼d, followed by a further large request for an imprest to pay a bill of £456 21s [*sic*], dated 23 August 1716.³² This suggests that approximately £2,000 - £2,500 may have been spent. Lilly had

suggested £3,914 1s. 3d. as the full cost of his scheme, but the barrack block, which would have cost £1,304 3s. 2½d., was not built.³³

Lilly only spent a couple of months in Scilly in 1715, meaning that the major works would have been supervised by an engineer from the mainland. A letter dated 11 April 1717 in the papers of the Board of Ordnance briefly mentions this engineer, without naming him:

A letter to the Lords of ye Adm'ty to desire they will Order ye Cap'tn of his Maj'ts Shipe yt attends ye Station of Scilly, to Transport the Engineer & Workmen to & from hence, that are employed upon the works & repairs of that place, this summer, for want of w'ch ye last year not Half what was designed performed.³⁴

As well as the visiting engineer, it seems likely that the Board of Ordnance's resident Storekeeper and Master Gunner, Abraham Tovey, had a significant role in the project. Tovey may have been born in Wiltshire in 1687, and in 1706 he is first mentioned in the artillery train fighting in Spain during the War of Spanish Succession.³⁵ During the next seven years his military career can be followed through the pay and clothing records of the artillery train, as it fought its way across Spain, and during this brief fighting career he rose from the lowly rank of matross to being the first sergeant of the second company, the most senior rank that a non-commissioned officer could have achieved. The Treaty of Utrecht, which was signed on 11 April 1713, marked the official end of the War of Spanish Succession, and by October Tovey had been discharged, presumably to make his way back to Britain.

The earliest reference to Abraham Tovey in Scilly occurs on 2 October 1714:

That Capt'n Abra'm Tovey's Letter, of ye 14th Sep'br last, w'th an Acc't of ye Remains of stores, in his Maj'y's Garrison's at Island of Scilly, be referred to Mr Ayres to make his Report upon, to ye Board, what Number of Guns he thinks ought to be Mounted there, and what Condition those places where in, when he was last there.³⁶

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This suggests that he had arrived recently and was appraising the situation on the islands. A year later Tovey's financial room for manoeuvre was outlined:

that hes not to Exceed 40s in small repairs before he gives the Board an Acct, for wch he must give his reasons by the first post, otherwise 't will not be allowed; Approve his getting 30 small Arm's repaired for the Service of the Invalids, but not to enter into any further Expence till Coll Lilly's report – is made.³⁷

As Storekeeper he managed the everyday needs of the Garrison and carried out minor repairs to buildings. While serving as Master Gunner he normally managed six gunners.³⁸ Each year he drew a salary from the Board of Ordnance and various monies for expenses depending on the work being carried out. Therefore, alongside Lilly's huge claims to fund major works, Tovey continued to draw smaller sums for the regular running of Garrison.

In 1717 Lilly returned to the islands apparently to inspect the completed, or almost complete, works. On 2 September 1717 he had spent £3 4s. 6d. travelling to Scilly from Plymouth and back with 'Artificers'.³⁹ As this was a two-way trip, no date for his return is recorded, but on 15 November 1717 he hired a horse to ride from Plymouth to Falmouth, demonstrating that he was back on the mainland. Contained within the same bill was a £35 14s payment to James Fawcett 'for his Assistance in Surveying & Writing 204 days at 3s 6d', while Isaac Pearson was paid £8 6s 6d for his assistance in carrying the chain between 22 August and 11 December.⁴⁰ Fawcett and Pearson had been surveying the island's defences, and, although it might seem obvious to attribute the beautiful plan and view of the Garrison to them within Lilly's manuscript, it bears the date 1715. It seems very likely that this fine piece of draughtsmanship is by Lilly himself, completed during his 1715 trip

After 1717 Scilly returned to being a minor player in the papers of the Board of Ordnance. Lilly's work was completed by the end of the year, and thereafter Abraham Tovey submitted his bills and imprests to cover minor repairs

annually or twice-annually. In the 1720s and 1730s Tovey normally confined his activities to minor works, but in a bill dated 31 December 1728 he included £44 'To Building 32 Perch & ½ of Masonry Worke on Sadlers Battery' and 'Cutting 909 ft of Moor Stone and Laying 1596ft for ditto'.⁴¹ This was the battery sometimes known as Mount Holles, located in front of the Garrison Gate, and it was described in the **1738/9** survey of the defences as follows: 'Saddlers Battery has 11 Guns serv'ble but on uns'ble Carriages, the Battery is in good Order.'⁴² Despite being 'in good Order' it was not maintained as part of the new defences in the 1740s. The antiquary William Borlase (1696-1772), writing in the 1750s said that 'Just below the Lines are the remains of an old Fort: It is a round hillock and seems to have had a Keep on top of it, ... ; the walls of it have been stripp'd to build the Lines; 'tis call'd Mount Holles.'⁴³ In a panoramic view dated 1752 he shows it just as a small, irregular lump.⁴⁴

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Although over £2,000 had been spent on Lilly's repair programme, 20 years later the inadequacy of the Garrison's earthworks defences would be recognised; and between 1741 and 1746 new and substantial walls would be built around the south end of the Garrison. Abraham Tovey would again be at the heart of this project.

The Garrison Walls in the 1740s

In November 1739 Admiral Vernon seized the Spanish base of Porto Bello in Central America, sparking a war between Britain and Spain, and this bi-lateral conflict soon merged into a wider European conflict, the War of Austrian Succession, which lasted from 1740 until 1748.⁴⁵ Britain seems to have been enthusiastic about the conflict, but was not well prepared, despite Jacobite invasions in 1715 and 1719 and minor conflicts with Spain in 1719 and 1727.⁴⁶ This complex war saw Britain, the Holy Roman Empire, the Dutch Republic and other states ranged against France, Prussia, Spain and their smaller allies. However, while British and French armies might be fighting against each other in support of their allies, the two countries only went to war formally in 1744.⁴⁷ This raised the spectre of an invasion of Britain, but when a

French attack came, it was in the form of supporting the Jacobite Rising of 1745, which ended in defeat at Culloden on 16 April 1746. The War of Austrian Succession formally ended in October 1748 with a peace treaty signed at Aix-la-Chapelle. This Europe-wide conflict, which also extended to America, the Caribbean and India through naval battles, was the background to the reconstruction of a substantial part of the Garrison's defences on St Mary's, though the origins of the construction campaign pre-dated the outbreak of war.

On 26 August 1739 the Lords of the Privy Council, meeting in the Council Chamber at Whitehall, reviewed a memorandum submitted by Sir Francis Godolphin (1678-1766), the Governor of the Isles of Scilly, which included a report prepared by Captain Jeffreyson, Scilly's Commanding Officer..⁴⁸ This damning report, dated 21 February 1739, systematically described the state of the fortifications and included recommendations about what should be done to improve them. Guns were unusable, stone gun batteries were in a poor condition and the earthworks were heavily eroded. The armaments of the islands were assessed at 100 gun positions within the Garrison, with 22 in other locations in the islands, but there were only 34 guns, and 6 of these were unusable. Jeffreyson recommended repairs to the existing stone batteries, but the earthworks around the south end of the Garrison were beyond repair and were threatened by coastal erosion, as he regularly stated that the batteries and intervening breastworks needed to be 'retired', *i.e.* built further inland. For instance,

12th from Morning-point Battery to the Wool-pack Battery has been a Cover'd-Way but wants to be retired, part of the cliff being fallen into the Sea, is now unus'ble.⁴⁹

In the margin of the minutes it says that: 'NB a Copy of this sent to Mr Tho' Armstrong', but no decision was made about what should be done until a later meeting on 22 November 1739.⁵⁰ The Privy Council seems to have doubted the seriousness of the condition of the fortifications, but 'they will give immediate Orders for the whole being Survey'd, Materials provided and such

a disposition made that every thing necessary for the defence of the Garrison may be put into good order and condition as early in the Spring as possible.’ Work does not seem to have begun in 1740, but on 6 March Thomas Armstrong submitted an expenses claim to the Board of Ordnance which included the following item:

10 February [1739/40] 58 Days Charges in going to the Islands of Scilly to view & make a Report of the State of works there £17 12s 10½d.⁵¹

Armstrong was an ‘Engineer in Ordinary’ on the fourth rank within the civil side of the Board of Ordnance, and therefore an officer of some authority.⁵² There is no evidence in the Ordnance papers of his report, but the absence of any reference to Scilly in the financial records for 1740, and the huge increase in activity in 1741 suggest that he returned to London and recommended a major building programme.

From 1741 until 1746 it is possible to track the progress of the construction programme, at least in general terms, by the amount of money being spent.⁵³ Work was paid for by the submission of bills, but some works were paid by the official in charge, who drew an imprest and later reconciled the amount by submitting bills and receipts for the work carried out. Making sense of these transactions is straightforward in years when the date of the reconciliation was recorded as taking place on the same day that the imprest was issued, but in later years this breaks down and the sums of money being drawn and reconciled do not always match. Nevertheless with some judgement it is possible to use these records to demonstrate the level of activity, as well as identifying the men responsible for managing the finances of the project. There are also occasional bills that provide more detail and greater precision about the pace of development.

A series of maps that show the Garrison’s defences before, during and after the major construction programme also exist. In 1806 an index was compiled of plans in the drawing office of the Board of Ordnance office and amongst these were two of the defences of the Isles of Scilly.⁵⁴ The index included

'entry no 11 Hugh Garrison by Captain Horneck 1741 flat 37'. A map of the existing defences, apparently surveyed in 1741, survives as a copy made in 1780 in the National Archives, and while it appears rather freehand in style it seems to be accurate.⁵⁵ William Horneck had been an engineer in Minorca, but by 1741 he was being paid £72 10s for lodging and coach travel while he was based in Plymouth.⁵⁶ On 1 July 1742 he was appointed Director of Engineers, the second highest rank within the civil branch within the Board of Ordnance.⁵⁷

A map of 1742, more precisely drawn than the 1741 map, shows the existing walls and earthworks, including the defences along the south side of the Garrison, fragments of which have survived outside the later walls (**Fig. 8**).⁵⁸ Unlike the 1741 map, which was simply a record, the 1742 map also includes the line of proposed stone defences. These are shown in broadly the form that they were built, but with some differences in the detail of the position and form of batteries.

In 1744 William Horneck's illegitimate son Kane William Horneck was sent to Scilly to prepare a plan to show how far work had progressed.⁵⁹ In his expenses, logged on 31 December 1744, he claimed £1 5s. 6d. 'For Expence of Labourers assisting in the Survey of the Fort at Scilly' and 12s. 'For Boat Hire to visit Grimsby Castle the Blockhouse and other Places for Compleating the Survey of Scilly'.⁶⁰ The first claim was for surveying the Garrison on St Mary's, while Grimsby Castle is Cromwell's Castle on the west side of Tresco while the Old Blockhouse was on the other side of the island. Otherwise seemingly accurate, the 1744 plan which he prepared erroneously labelled all the walls from King Charles Battery to Morning Point as a 'New Line', but the new piece of construction from Morning Point to Woolpack is not labelled as new. However, unlike the 1742 map, it shows this stretch of wall with three redans, the arrangement that was built. Tantalisingly, to the west of Woolpack Battery the map shows the first redan and a short section of wall to the west of it, where the wall ends abruptly. The existence of a joint to the west of Redan B beside Woolpack, where the map shows a break in the wall, demonstrates the accuracy of this plan. **WOULD IT BE USEFUL TO**

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ILLUSTRATE THE 1741 AND 1744 PLANS AS WELL AS THE 1742 AND 1746?

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A map surveyed in 1746 exists only as a copy of 1810 (**Fig. 9**).⁶¹ The original may be the plan filed in 1806 as 'entry no 20 Plan and sections of part of the line of St Mary's Island in Scilly by Mr Hardesty 1745 flat 43', or as 'entry 29 plan with a design for a Redan & Curtains at Hugh Fort Scilly by Mr Hardesty flat 54'.⁶² The 1810 copy of this map, which apparently accompanied 'Mr KW Horneck's Letter', is labelled as dating from 1746, but KW Horneck did not visit Scilly in 1746. His name may therefore have been linked with the plan as it appeared in the accompanying letter. It is possible that this map was produced in 1745 while John Hardesty was serving as an engineer in Scilly. |

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This was the last map produced as part of the building campaign, but a map surveyed in 1750, which is in Star Castle, shows the extent of the walls as they exist today, including the abrupt break at Steval Point (**Fig. 10**). It also shows the proposed walls along the west side of the island, which would have replaced the surviving earthworks.

The evidence derived from financial records and maps can be refined by examination of the walls. The stonework varies in a number of ways. The size of the blocks and the quality of their finish changed, joints became finer, and the use of coursed fabric replaced more irregular stonework during the campaign (**Figs. 11 and 12**). A slight change in architectural detail also took place. In the later phases of the 1740s campaign the drainage holes allowing water to run off from the batteries and the covered way were provided with projecting spouts to throw water clear of the foundations. The most marked changes in the quality of the work on the south side of the Garrison seems to coincide with the arrival of professional financial administrators and overseers, though perhaps the true reason was the employment of Abel Croad to provide the stonework in 1745-6.⁶³ By combining all these sources it is possible to divide the six-year campaign into five distinct phases.

The Building Campaigns 1741-6

Phase 1 1741-2

The 1741 map shows that the fortifications had not changed significantly since 1715, except for the reconstruction of Newman's Platform. Walls ran from Newman's Platform in the north to Lower Broom on the east side of the Garrison, with most of the rest of the circuit still being defended by earthworks. More substantial batteries, probably stone, are shown at Morning Point, Woolpack, Bartholomew, Steval Point and King Charles around the south and west sides of the Garrison. On the 1741 map a long stretch of the earthworks south of Lower Broom on the east side are absent, as if these had fallen into the sea since 1715.

Comparing the 1741 and 1742 maps reveals that the first phase of work was the construction in stone of the stretch of wall between King Charles Battery and Newman's Battery, along the north side of the Garrison. The report of February 1739 suggests that this part of the defences was still earthwork, as it was depicted on the 1715 map.⁶⁴ The appearance of this wall is similar in form to the wall extending southwards from Upper Broom. In these walls the stones are fairly small, but regular-sized, although there is no consistent, neat coursing. These stretches of wall include regular firing positions, but elsewhere these are normally only included in batteries.

The first estimate of the costs of work, a wildly optimistic £1,542 6s. 6d., appeared in an undated entry in 1741.⁶⁵ In 1741 Tovey drew and reconciled imprests worth £746, and reconciled a further £60 perhaps missing from the ledgers; but he also submitted other major bills. On 30 September a ledger entry stated that:

To Ditto [Abraham Tovey] the Sum of One thousand two hundred & thirty one pounds two shillings & 1d being so much by him disbursed for Materials, and Pay to Artificers and labourers in carrying on the several Works at St Marys

Island at Scilly, pursuant to the Honble Boards Orders & Mr Thomas
Armstrongs Estimate between 1st of March 1741-2 and the date above ...⁶⁶

On the same day another bill for £167 4s. 2d. was paid to Tovey, though rather frustratingly there is confusion within the entries about the date of the works covered; the ledger entries seem to cover work taking place after the date the bill was paid. To add to the confusion, Tovey's bill for £843 17s. 10d., which was considered on 30 September 1741, is scored out, and a few days later, on 5 October, a bill for the same amount was dealt with. Regardless of any confusion over the detailed costs, it is clear that Tovey was spending hundreds of pounds in 1741, compared to between £20 and £100 in the years before major works began. In 1742 Tovey drew and reconciled imprests worth £1,195, though some of the large bills entered in the register as being from 1741 could belong to this year.

Phase 2 1742-3

The next phase of construction stretched from Morning Point to the Woolpack Battery along the south side of the Garrison. There is a joint in the east side of the outside face of this battery, where there is a marked change in the quality of the stonework (**Fig. 13**). The stone used in these walls is medium-sized, but it is more regular in shape than the earlier phase and is laid in courses. It shows a progression towards the very regular, large stone courses of the later phases. The dates framing this phase are the 1742 map and a detailed bill submitted by Abraham Tovey at the end of 1743. In 1743 Tovey had drawn and reconciled imprests worth £1,600, but at the end of 1743 he submitted a detailed bill for the works done to that date, amounting to £1,269 10s. 7½d.⁶⁷ Tovey's bill reveals that since the campaign began, work had been undertaken from Lower Broom on the east side of the Garrison to Woolpack at the southern tip, as well as from King Charles to Newman's Platform along the north side. The bill is also instructive as it reveals that the stone for the building work had been quarried on the island. It also demonstrates that work had reached Woolpack Battery and suggests that a lot of work had been

carried out on the battery, but the joint in the east wall suggests that at least the outside face of it may date from a later phase of work. The reason for the sudden appearance of this detailed account may have been due to the return to Scilly of William Horneck during the second half of the year. In his expenses claim logged on 6 December 1743 he included £3 5s. 'To Boat Hire & some other Contingent Charges in Visiting the Several Islands att Scilly'.⁶⁸

Phase 3 1744

This phase of work stretches from the joint in the wall on the east side of Woolpack Battery westwards to the west side of Redan B near the south-western end of the defences. The joint in the east wall coincides with a change in wall thickness and the character of the stone changes from regular, small, neat stones of the previous phase to monumental blocks with finer jointing. The joint marking the western extremity of this phase is the one depicted on the 1744 map **[BUT THIS IS ONE THAT YOU DON'T ILLUSTRATE]**. It occurs 16.7m west of Redan B on the outside face and 17.4m along the inside face. There are no drainage holes with projecting spouts in this stretch of wall, but to the west of this line most examples of projecting spouts occur. To the west of the joint the 1744 plan shows the rough outline of a battery, approximately where Bartholomew or Boscawen are situated, but its form indicates that it was little more than a sketched-in idea at this time. The rest of the circuit is still shown as earthworks.

Tovey's 1743 bill demonstrates that work was proceeding on the south side of the Garrison, in and around Woolpack Battery. During 1744 Tovey did not draw any imprests, but at the end of the year he submitted a bill for £1,474 16s. 0d..⁶⁹ He itemised it according to the type of workmen and by the part of the year in which the expenses were accrued, but unfortunately he does not specify it in the same detail as in the previous year.

Phase 4 1744-5/6

During this phase work proceeded westwards along the south-west face of the Garrison from the west side of Redan B to Colonel George Boscawen's Battery. The extent to which work had proceeded during this period is shown in the 1746 map where walls that had been built are shown in red, while the short phase of work undertaken during 1746 is shown in yellow. **(Fig. 9)**

Until 1744 Abraham Tovey seems to have been only distantly supervised in his management of the building programme. Robert Heath in his *A Natural and Historical Account of the Islands of Scilly*, published in 1750 but based on his time in Scilly in the mid-1740s, praised Tovey, for his contribution to the improvement of the Garrison:

He has greatly improved the Garrison-Roads, as well as the Batteries, by making them convenient for removing Cannon upon, which before was done with the utmost Difficulty. One of which Roads he has almost compleated round the Line, next the several Batteries of Cannon, and has caused Part of it to be hewn thro' a vast Rock, or Quarry-Substance, where before it was impassable.⁷⁰

The presence over the rebuilt Garrison Gate of his initials, alongside those of Sir Francis Godolphin and George II, indicates his leading role in 1742, or at least his own opinion of his leading role **(Fig. 14)**.⁷¹ However, from 1745-6 a number of new names appear in the Ordnance accounts—overseers, an engineer, a contractor supplying stone and two men who seem to have been drafted in to deal with the finances. William Redstone was described as the 'Assistant Storekeeper at Plymouth & Paymaster to the Works at Scilly Island', while Nicholas Mercator was the 'Pay Master to the Works at Islands of Scilly'.⁷² Redstone first appeared in the accounts in April 1745, when he began to draw imprests. After 1745 he only reconciled earlier imprests while his successor Mercator drew money to fund works in Scilly, and by 31 March 1746 Redstone was described as the storekeeper at Kinsale.⁷³ In addition to men with financial responsibilities, overseers of work were appointed, taking over this function from Abraham Tovey. Isaac Tovey, Abraham's son, took on

this duty in 1745 and later he would become the Master Gunner after his father, while in 1746 John Hargrave took over his role as overseer.⁷⁴

In 1745 Redstone was managing the finances while Isaac Tovey was overseeing the works, but during the summer 'John Hardesty Practioner [*sic*] [Practitioner] Engineer' was paid £18 16s. 'for his Encouragement and in Consideration of his Trouble in carrying on the Works at the Island of Scilly, from the 26th Day of March 1745 to the 30th of September following, being 188 days which at 2d per day as by Order of the Board dated the 26th March 1745 amounts to the said Sum ...'.⁷⁵ According to one entry Hardesty seems to have remained in Scilly over the winter supervising the works, but in another he claimed for his passage back to Penzance from where he went to Southwold and Yarmouth to carry out work.⁷⁶ The latter, more detailed bill included £9 19s. 'To 28 Weeks and three days Lodging at Scilly and on the Road to that Place at 7 Shillings per week from the 6th of April to the 21st of October 1745 Inclusive', suggesting that he returned to the mainland during the winter. This seems more plausible, as work would probably have been scaled back or suspended during the winter and therefore a supervising engineer would have been largely redundant. It is possible that Hardesty prepared the plan that was copied in 1810, when it was dated as being drawn originally in 1746 and recorded as by Kane William Horneck who was elsewhere during that year (**Fig. 9**).

During 1745 Redstone seems to have drawn at least £1,000, or more, if the later entries for reconciliation are included, and Abraham Tovey also drew £500. Redstone also submitted a bill for £1,098 17s. 0½*d.* covering work carried out between 30 June and 23 October 1745.⁷⁷ The most striking entry is the £946 9s. 8*d.* paid to 'Mr Abel Croad Contractors as per bill of Measuremt'. The identity of Abel Croad is clarified a little in a bill submitted by Mercator on 31 October 1746 in which he is described as a 'Mason'.⁷⁸ Croad was being paid for his 'Bill of Measurement & for Day Labourers', suggesting he provided the labour for construction as well as perhaps being a supplier of stone. Perhaps most of the good stone on the island had already been used, and Croad was importing stone for the finer outer faces of the walls. This

interpretation seems to fit with the improved quality of the masonry of the walls in the latest phases of construction, from Woolpack to Steval Point.

Phase 5 1746

In 1746 Redstone appears in the entries for Scilly, but only reconciling imprests that had already been drawn. His successor, Nicholas Mercator, drew imprests of £1,050, and on 31 October 1746 he submitted a large bill for £826 9s. 1d., a transaction that marked the end of substantial works.⁷⁹ During 1746 John Hargrave had succeeded Isaac Tovey as Overseer of the Works, and his last payment for this role ended on 5 May 1747, although the presence of travelling claims within it suggests that he had left Scilly before this.⁸⁰ On the 1746 plan the short section of wall from what is wrongly labelled as Bartholomew's Battery (actually Colonel George Boscawen's Battery) to Steval Point, which was shown in yellow, was built. **(Fig. 4)** Its detailing, including the spouts, is indistinguishable from the previous phase and abruptly at Steval Point the wall ends **(Fig. 15)**.

Commented [a11]: It was the picture I meant

The maps also reveal that two of the batteries that had existed in 1715 were rebuilt during the course of the 1741-6 campaign. Higher Bastion to the south of the Garrison Gate and Jefferson's Battery immediately to the north both have stonework characteristic of the 1744-6 phases. Both appeared on Lilly's survey of 1715, though Jefferson's is just shown as a simple line, as if it was incomplete, or just an idea being considered. In 1742 it was labelled as a repaired platform, and it appears on the 1744 and 1750 maps, although it was omitted from the 1746 survey.

The 1746 map reveals that the decision had been made to terminate this phase of construction abruptly at Steval Point. Here there would be practical difficulties overcoming a steep slope down to the 17th century earthworks, but the strategic situation of Britain was probably of greater significance. The War of Austrian Succession would continue until 1748, but it had not impinged on Scilly despite the worldwide conflicts between navies. The defeat of the Jacobites at Culloden in 1746, which marked the end of the French-

sponsored threat to the north, probably led to the cessation of work in Scilly at the end of same year.

AFTER 1746

The financial records and maps indicate that building work ceased during 1746, but between 1746 and 1748 William Redstone appears on a number of occasions reconciling monies he had drawn previously. Apart from Redstone's substantial entries, the only ones that relate specifically to Scilly are the quarterly salary for Mercator (£9 4s. 0d.) and small amounts submitted by Abraham Tovey for maintenance, much as had happened throughout the 1720s and 1730s. Tovey's relative independence from the centralised administration of the Board of Ordnance seems to have been tempered after 1746. In April 1750 a storm damaged two buildings and Tovey estimated that 20,000 slates would be needed.⁸¹ A letter to the Board of Ordnance, obviously not written by Tovey, also noted:

And that the Parapet has been falling ever since Tovey built it, being mostly stone laid in Earth without Lime and so close to the Edge of the Cliff that as that is undermined it must fall in Course, but that it would be cheaper to build a new Parapet more retired upon the Land than to secure this by building against the Sea.

The roof repairs were accepted, and on 31 July 1750 Kane William Horneck agreed to the purchase of the slates, but the repair to 'the Parapet', a stretch of the defences probably on the east side of the Garrison, was put on hold until he had inspected the proposed work later in the year.⁸² In his bill submitted on 31 December 1750 Horneck claimed for

Hire of a Vessel to carry me to Scilly and Back	£6 6s 0d
Boat Hire at Scilly and Penzance	17s 6d ⁸³

Repairs to the Master Gunner's House and Barracks were also carried out in 1750, with £55 15s. 7d. being paid to 'James Murch Hellier, his bill for helling [slating or tiling], and days work performed on the repairs'.⁸⁴ No record seems to survive of Horneck's approval for the rebuilding of 'the Parapet', but in 1751 £185 1s. 8d. was submitted as the estimate for maintenance, much higher than in a regular year.⁸⁵

Commented [a12]: Helling does mean burnishing etc – so I assumed that was wrong, but found that Hellier was a west country variation for a slater and that was the kind of work taking place at that time.

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William Borlase's study of the Isles of Scilly contains only brief mentions of the Garrison Walls and other fortifications.⁸⁶ Though his book was published in 1756, his wonderful panoramic view of Hugh Town, the Garrison and the islands to the north of St Mary's is dated 1752, and in 1753 a letter about the islands was published by the Royal Society.⁸⁷ Therefore, although his visit was perhaps only five to six years after work had ceased on the Garrison Walls, he does not talk about them in detail, only lamenting their poor design and the fact that they were incomplete:

I shall not particularly point out to you some improprieties which occur'd to me in the disposition of these Lines: Doubtless they might have been better designed at first, but as it is the proper department of another profession to rectify mistakes in military architecture, I shall not hazard my little skill that way, to find fault with what perhaps it is too late to blame, and for me too difficult to say how it might be amended. 'Tis to be hop'd the Government will take care that the Fortifications of SCILLY may be completed upon the best plan that the works are now capable of, and, that what is completed may be kept in proper repair.⁸⁸

War with France (1793-1815)

In 1793 Britain went to war with France. To protect Scilly the force of 24 Invalids manning the Garrison was bolstered by islanders recruited into the Corps of Land Fencibles, and by 1795 75 regular NCOs and men had been brought from the mainland.⁸⁹ In 1796 the population of Hugh Town was only

around 800 inhabitants, and therefore if required to resist an enemy attack, it could not have mustered a major force.⁹⁰

Scilly was again felt to be at risk but unlike previous conflicts no new defences were built. Britain's substantial naval forces would be expected to deter any attacks on the islands, as Henry Spry recognised in 1800:

The Gun Briggs often Visitting those Seas to Keep off the Privateers, is of much more infinite Consequence than so many Soldiers paradeing every day in Idleness; For most Certainly, those dangerous rocks and Small Islands; within as well as without, all the Sounds and Harbours are a Sufficient Safeguard to deter an enemys Ship from daring and Ventureing in; And so many large Cannon planted on the Garrison Ground, Commanding all the Sounds and Harbours must effectually prevent any danger of any Enemies attempting this place, they can Sink any Ship immediately.⁹¹

Nevertheless, the existing substantial stone fortifications of fifty years earlier were rearmed. In 1792 Graeme Spence described the potential strength of the Garrison: 'the Bastions, and Curtains round the Peninsula of the Hugh, are very extensive and have Embrasures to mount about 90 Pieces of Cannon.'⁹² The existence of firing positions did not mean that there were sufficient guns to occupy them, but John Troutbeck found the defences apparently fully armed in 1796. He noted that the Garrison 'contains a company of soldiers, a master gunner, and six other gunners.'⁹³ His description continued by itemising the guns in each battery, information that might have been of use to the enemy, if it proved accurate. Each of the bastions had guns, with the entire circuit armed with twenty-five 4-pounders, six 6-pounders, nineteen 9-pounders, four 18-pounders and four 24-pounders. Troutbeck described the particular arrangement at King Charles's Battery:

One of the guns, a twenty-four pounder, is mounted upon a traversing platform, of the same construction as that at the W point of the garrison near the Steval Rock. This platform has a stone wall built under it, about three-quarters of a circle, about two feet thick and four feet high, with the top row of

stones cut flat, and very smooth; the circumference of the circle, from the outside, is about twenty-three feet diameter; in the centre of this circle of masonry, a wall is built, about four feet high and five feet square, over the top, upon which stands a strong square frame of oak timber, with a middle piece in it. The wooden frame which the gun-carriage stands upon, is an oblong square, fourteen feet long and three feet wide within.⁹⁴

In this battery a traversing platform survives, though it has been substantially rebuilt, and according to Troutbeck there was another at the western end of the Garrison Walls, probably in Boscawen Battery (**Fig. 16**). A 1793 drawing of this type of arrangement appears in a manuscript in the Royal Artillery library, although it was designed to be installed on gun towers.⁹⁵

Commented [a14]: I don't have a copy of it and I'm not sure how I'd get one easily.

In 1803 Major Daniel Lyman proposed the construction of three gun towers in Scilly, each armed with a 32-pound carronade on top.⁹⁶ The presence of three towers on St Mary, in the heart of the Garrison, on Buzza Hill and at Newford Down, has led some people to link them to Lyman's proposal, but Lyman's proposal was never enacted and the three towers have different origins.⁹⁷ The tower in the Garrison was one of a pair of windmills, the site of the other being located in bushes nearby.⁹⁸ Buzza Tower was a new windmill built in 1820, while Telegraph Tower on Newford Down was built in 1814 to serve as an Admiralty Telegraph Station; but it had closed by 1816.⁹⁹

The End and the Rebirth of the Garrison Defences in the 19th century

The Garrison's defences were never required to fire a shot in anger, and with Napoleon's defeat the islands again became a quiet military backwater. George Woodley, writing in 1822, recorded the neglected state of the defences, less than a decade after the threat from France had ceased:

At present, the Western end of St. Mary's Roads is unprotected; most of the guns are dismantled, yet left to lie exposed to the injuries of the weather; and these circumstances, coupled with the absence of all "the pomp and

circumstance” of military parade, and the recollection of unrepaired roads, and a dilapidated castle, necessarily beget feelings of dreariness and desolation.¹⁰⁰

This suggests that although the Garrison had been reinforced during the war with France, probably little was done to improve, or even maintain the defences. After the Battle of Trafalgar on 21 October 1805 the threat from the French fleet had waned, probably along with any appetite to spend money on the defences of Scilly.

In 1834 ‘Emperor’ Augustus Smith took a 99-year lease as Lord Proprietor of the Isles of Scilly.¹⁰¹ He found the islands neglected and the Garrison’s gun emplacements were half ruinous. During Smith’s tenure, until his death in 1872, there were no immediate threats to the islands, but the repair of the Garrison’s gun emplacements may have formed part of his programme to reinvigorate the islands. Walter White visiting in 1855 described the quiet life of the soldiery on the island:

Then up to Star Castle, past the guard-house at the gate, where you may have a chat with the half-dozen invalids who constitute the garrison. Their duties do not appear to be onerous; among them are hauling the Union Jack up and down, and ringing the bell every three hours, from six in the morning till nine at night.¹⁰²

The garrison was disbanded in 1863, leaving a single elderly caretaker to look after the defences.¹⁰³ No one could have predicted that by the end of the 19th century this sleepy backwater would again be considered to be in the front line of Britain’s defences. In the mid-1890s there was growing tension between Britain and France; both powers were trying to strengthen their position in Africa.¹⁰⁴ The rivalry came to a head in 1898 when a small French force arrived at Fashoda in Sudan after travelling across the continent from Gabon to seize and hold this strategic position on the Nile. After a couple of months this force was confronted by a flotilla of British gunboats and was forced to withdraw. This confrontation, which ended diplomatically, rather than

militarily, would prove to be the end of significant military rivalry between the two countries, the *Entente Cordiale* of 1904 cementing peace.

Between 1898 and 1901 two large gun batteries, each containing pairs of 6-inch guns, were built on top of the Garrison to counter a perceived threat from large French ships, while a smaller, quick-firing battery was built above Steval Point to deal with smaller, faster boats (**Fig. 17**).¹⁰⁵ However, with the signing of the *Entente Cordiale* in 1904 France ceased to be seen as the enemy and Germany became the immediate threat.¹⁰⁶ Thereafter investment in defences was concentrated on the eastern side of Britain, and Scilly's newest defences were stripped of their guns.¹⁰⁷

Between the 16th and the 18th centuries the recurring theme in Scilly's military history is that roughly every generation new defences were needed to resist the latest threat to Britain. Large sums were invested in grandiose schemes, but within a short time, sometimes even before the schemes were completed, the threat had passed and Scilly returned to military obscurity. This has left the islands with a unique collection of defences that reflect the changing technology of warfare and the enemies that have threatened the country. When shots were fired in anger it was not an external enemy, but civil war that brought war to the peaceful, beautiful Isles of Scilly.

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CAPTIONS

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Fig. 1. Reconnaissance photograph from a dossier of otherwise commonly-available images showing major landmarks compiled by the Luftwaffe as an aid to locating targets in Scilly. Hugh Town marked 'f' with the Garrison beneath it.

Fig. 2. Map of the Garrison. English Heritage Archive NMR 649/47.

Fig. 3. View of the Garrison in 1669 prepared following a visit to the islands by Grand Duke Cosmo III of Tuscany. It shows the state of the stone defences on the east side of the Garrison in the mid-17th century. Courtesy of the Isles of Scilly Museum.

Fig. 4. A mid-17th century stretch of breastwork excavated by English Heritage following removal of vegetation by Isles of Scilly Wildlife Trust. English Heritage Archive DP022627.

Fig. 5. This map in Colonel Christian Lilly's manuscript shows the walls around the Garrison (shown with a red outer line) with earthworks shown in black. Above is a view of the Garrison from approximately where Harry's Walls was built in the 16th century.

British Library, King's Topographical Collection, XLV. © British Library Board.

Fig. 6. The Storehouse, now Newman House, designed by Christian Lilly in 1715. English Heritage Archive DP116095.

Fig. 7. Lilly also surveyed Pendennis Castle and provided designs for buildings similar in style to the Storehouse on St Mary's. English Heritage Archive DP023924.

Fig. 8. Map of the Garrison in 1742 English Heritage Archive NMR 31/1148.

Fig. 9. Map of the Garrison in 1746 English Heritage Archive NMR 31/1149.

Fig. 10. Map of the Garrison in 1750 in Star Castle Hotel.

Fig. 11. Wall to the east of Morning Point, with the early form of stonework. English Heritage Archive DP022527.

Fig. 12. Bartholomew Battery with the 1745-6 type of monumental stone and projecting spouts. English Heritage Archive DP022489.

Fig. 13. East face of Woolpack Battery, showing joint between 1743 and 1744 phases. English Heritage Archive DP022595.

Fig. 14. The initials of Abraham Tovey above the Garrison Gate. English Heritage Archive DP116030.

Fig. 15. The last part of the Garrison Walls, with redan A and the abrupt termination of building work at Steval Point in 1746. English Heritage Archive NMR 23938/02.

Fig. 16. The traversing platform in King Charles Battery. English Heritage Archive DP085363.

Fig. 17. The late 19th-century Woolpack Battery on the hillside above the mid-18th century battery. English Heritage Archive NMR 23939/017.

¹ Robert Heath, *A Natural and Historical Account of the Islands of Scilly*, London, 1750, 69-70.

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³ F and P Adams, *Star Castle and Its Garrison*, St Mary's, 1984, 22-3; *Calendar of State Papers Domestic* [hereafter CSPD], 1648-9, London 1893, 276-7, 280, 12-13 September 1648.

⁴ CSPD, 1649-50, London 1875, 6, 13 February 1649.

⁵ Adams, *op. cit.*, 33; CSPD, 1651, London 1877, 214-7, 23 May 1651. This is the agreement to surrender the islands on 2 June at 10am, weather permitting. The surrender is discussed in JR Powell, 'Blake's reduction of the Scilly Isles in 1651.' *Mariners Mirror* 17:3, 1931 205-222..

⁶ NJ Pounds (ed.), *The Parliamentary Survey of the Duchy of Cornwall*, part ii, Torquay, 1984, 146.

⁷ Pounds, *op. cit.*, 147.

⁸ CSPD, 1651, 243, 17 June 1651.

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- ⁹ CSPD, 1651, 286-7, 12 July 1651; 502, 28 October 1651.
- ¹⁰ CSPD, 1652-3, London 1878, 29, 15 December 1652.
- ¹¹ CSPD, 1660-1, London, 1860, 71, 30 June 1660.
- ¹² The National Archives [hereafter TNA], WO 55/1697; Hugh de Quehen, 'Sherburne, Sir Edward (bap. 1616, d. 1702)', *Oxford Dictionary of National Biography*, Oxford, 2004 [<http://www.oxforddnb.com/view/article/25359>, accessed 27 Sept 2012]
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- ¹⁴ Whitworth Porter, *History of the Corps of Royal Engineers*, Chatham, 1951 reprint, I, 145; N Barker, 'The Building Practice of the English Board of Ordnance, 1680-1720' in John Bold and Edward Chaney (eds), *English Architecture Public and Private*, London, 1993, 199-214, 199.
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- ¹⁸ TNA, WO 47/428, 77.
- ¹⁹ TNA, WO 51/96, fol. 72v.
- ²⁰ British Library King's Manuscript 45 [hereafter Lilly].
- ²¹ *Ibid.*, fol. 5r.
- ²² *Ibid.*, fol. 5v.
- ²³ *Ibid.*, fol. 5v, fol. 9r.
- ²⁴ *Ibid.*, fol. 16r, plan and elevation of Master Gunner's house.
- ²⁵ Heath, *op. cit.*, 72.
- ²⁶ *Ibid.*, 73.
- ²⁷ Lilly, fol. 14r, plan and elevation of storehouse.
- ²⁸ *Ibid.*, fol. 5v.
- ²⁹ Truro, Cornwall Record Office, GO575.
- ³⁰ Lilly, fol. 13r – 15r.
- ³¹ TNA, WO 47/31, 214.
- ³² TNA, WO 47/29, 62; WO47/29, 119; WO48/56 [no pagination].
- ³³ Lilly, fol. 12r, plan and elevation of proposed barracks.
- ³⁴ TNA, WO 47/30, 100.
- ³⁵ TNA, WO 54/678; a detailed discussion of Tovey's military career appears in Allan Brodie, 'Abraham Tovey (1687-1759) – matross, master gunner and mastermind of Scilly's defences' *Georgian Group Journal*, XIX, 2011, 50-65.
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- ³⁷ TNA, WO 47/28, 365, 20 December 1715.
- ³⁸ TNA, WO 47/27, 63; WO 47/28, 302; WO 55/509, 36, 1 October 1727; WO 54/204 [no pagination], 4 April 1735.
- ³⁹ TNA, WO 51/100, 191.
- ⁴⁰ *Ibid.*
- ⁴¹ TNA, WO 51/124, 11v.
- ⁴² TNA, WO 55/350, 45.
- ⁴³ William Borlase, *Observations on the Islands of Scilly*, Oxford, 1756, facsimile edition Newcastle upon Tyne, 1966, 10.
- ⁴⁴ *Ibid.*, pl. III.
- ⁴⁵ Charles Chevenix Trench, *George II*, London, 1973, 209-10. Andrew C Thompson *George II*, New Haven And London, 2011, 131, 141ff
- ⁴⁶ Basil Williams, *The Whig Supremacy 1714-1760*, Oxford, 1992, 213. Paul Langford, *The Eighteenth Century 1688-1815*, London, 1975, 115-8; A lengthy discussion of this period is provided in Brendan Sims, *Three Victories and a Defeat*, London, 2007, 79ff.
- ⁴⁷ Williams, *op. cit.*, 241, 269; Thompson, *op. cit.*, 157.
- ⁴⁸ TNA, WO 55/350, 44-6.
- ⁴⁹ TNA, WO 55/350, 45.
- ⁵⁰ TNA, WO 55/350, 79-80.
- ⁵¹ TNA, WO 51/144, 105.

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- ⁵² TNA, WO 48/81, 46. The civil side of the Board of Ordnance supplied weapons and was responsible for defence works and buildings.
- ⁵³ A table summarising full financial records can be found in Allan Brodie, *The Defences of the Garrison, The Garrison, St Mary's, Isles of Scilly*, Research Report 39-2011, English Heritage.
- ⁵⁴ TNA, WO 55/2281, part 2.
- ⁵⁵ TNA, MPH 1/14.
- ⁵⁶ TNA, WO 51/146, 130. William Horneck was the son of Anthony Horneck (1641–1697), a prominent Church of England clergyman. WR Ward, 'Horneck, Anthony (1641–1697)', *Oxford Dictionary of National Biography*, Oxford, 2004; online edn, Oct 2008 [<http://www.oxforddnb.com/view/article/13801>, accessed 27 Sept 2012]
- ⁵⁷ TNA, WO 55/508, 108.
- ⁵⁸ English Heritage Archive, NMR Works 31/1148. **IS THIS AN NMR REF? IT LOOKS LIKE A PRO ONE. YES – it seems like we got them from the PRO.**
- ⁵⁹ TNA, MPH 1/413 (1). His portrait was painted by Sir Joshua Reynolds, and his widow Hannah Horneck, nicknamed the 'Plymouth Beauty', was celebrated in verse by Oliver Goldsmith. <http://www.npg.org.uk/collections/search/portrait/mw194048/Kane-William-Horneck?LinkID=mp54021&role=sit&rNo=0> accessed 27 September 2012; Oliver Goldsmith, *Verses in Reply to an Invitation to Dinner at Dr. Baker's and Letter in Prose and Verse to Mrs. Bunbury*.
- ⁶⁰ TNA, WO 51/155, 235.
- ⁶¹ English Heritage Archive, NMR Works 31/1149.
- ⁶² TNA, MPH 1/14.
- ⁶³ TNA WO 51/161, 132. In 1755 Abel Croad, who lived in Plymouth, subscribed to John Barnes, *The Tradesman's Assistant: containing useful and exact tables, shewing the amount or value of any number or quantity of goods*, London 1755. <http://www.ancestry.co.uk/> accessed 27 September 2012. The ordnance contractor at Plymouth in the 1780s was Susannah Croad, presumably Abel's widow, daughter or daughter-in-law. David Evans, 'The Redoubts on Maker Heights, Cornwall 1770-1859', *Georgian Group Journal*, IX, 1999, 44-68, 47, 51.
- ⁶⁴ TNA, WO 55/350, 44-5.
- ⁶⁵ TNA, WO 49/122, 100.
- ⁶⁶ TNA, WO 51/151, 189.
- ⁶⁷ TNA, WO 51/154, 61.
- ⁶⁸ TNA, WO 51/150, 293.
- ⁶⁹ TNA, WO 51/159, 54.
- ⁷⁰ Heath, *op. cit.*, 73-4. Robert Heath (d. 1779) was a celebrated mathematician, who served as an army officer. Ruth Wallis, 'Heath, Robert (d. 1779)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Jan 2008 [<http://www.oxforddnb.com/view/article/12844>, accessed 26 Feb 2013]. Interestingly, the rock that he had apparently managed to cut through is a short distance to the north of Morning Point Battery.
- ⁷¹ Heath, *op. cit.*, 72-3.
- ⁷² TNA, WO 51/157, 123; WO51/161, 132.
- ⁷³ TNA, WO 51/160, 76, 82.
- ⁷⁴ TNA, WO 51/158, 108; WO 51/164 135, 137. Proof of Abraham and Isaac relationship is: 'That the Master Gunner at Scilly Island get the necessary Repairs done to the Star Castle House, the Charge of which will be allowed in his Disbursements, and that his son Isaac have Leave to live in the house until the Governour's Return.' WO47/34, fol. 149r, 18 April 1749 Order. On 30 June 1760 'Isaac Tovey Master Gunner' drew £64 6s. 10d. for small repairs [WO51/182, 66].
- ⁷⁵ TNA, WO 51/156, 218.
- ⁷⁶ TNA, WO 51/160, 82; WO 51/157, 234.
- ⁷⁷ TNA, WO 51/158, 108.
- ⁷⁸ TNA, WO 51/161, 132.
- ⁷⁹ TNA, WO 51/161, 132.
- ⁸⁰ TNA, WO 51/164 135, 137.
- ⁸¹ TNA, WO 47/35, 315, 377.
- ⁸² TNA, WO 47/35, 378; WO 47/36, 69.

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- ⁸³ TNA, WO 51/177, 99.
- ⁸⁴ TNA, WO 51/176, 148.
- ⁸⁵ TNA, WO 49/123, 7.
- ⁸⁶ Borlase, *loc. cit.*
- ⁸⁷ William Borlase, 'An Account of the great Alterations which the Islands of Sylley have undergone since the Time of the Antients, ...' *Philosophical Transactions of the Royal Society of London*, XLVIII, 1753-4, 55-69.
- ⁸⁸ Borlase, *Observations... cit.*, 9-10.
- ⁸⁹ Adams and Adams, *op. cit.*, 68.
- ⁹⁰ John Troutbeck, *A Survey of the ancient and present state of the Scilly Isles*, Sherborne, 1796, 37.
- ⁹¹ Charles Thomas (ed), *Three Accounts of the Isles of Scilly*, Redruth, 1979, 14.
- ⁹² *Ibid.*, 5.
- ⁹³ Troutbeck, *op. cit.*, 41.
- ⁹⁴ *Ibid.*, 48.
- ⁹⁵ Woolwich, Royal Artillery Institution, James Clavell Library, RA/20/214, MS book of collected military papers on artillery matters, II, 1780-1800. It contains 'sketch details of a traversing platform mounting for towers erected for the defence of the Scilly Islands in 1793, invented and deposited in the Royal Military Repository by Lieutenant John Rutherford RE. 15 July 1793'; Austin S Carpenter, *Cannon*, Exeter, 1993, 100.
- ⁹⁶ TNA, WO 1/626.
- ⁹⁷ John Goodwin, 'Granite Towers on St Mary's, Isles of Scilly', *Cornish Archaeology*, XXXII, 1993, 128-139.
- ⁹⁸ TNA, MPH 1/162, no. 3.
- ⁹⁹ Geoffrey Wilson, *The Old Telegraphs*, London, 1976, 66; Goodwin, *op. cit.*, 128-32, 136.
- ¹⁰⁰ George Woodley, *A view of the present state of the Scilly Islands...*, London, 1822, 226.
- ¹⁰¹ Sam Llewellyn, *Emperor Smith the Man Who Built Scilly*, Wimborne Minster, 2005, 11, 18, 24; Elisabeth Inglis-Jones, *Augustus Smith of Scilly*, London, 1969, 34, 38, 53; Adams and Adams, *op. cit.*, 74ff.
- ¹⁰² Walter White, *A Londoner's Walk ...*, London, 1855, 260.
- ¹⁰³ Adams and Adams, *op. cit.*, 83.
- ¹⁰⁴ Patricia Wright, *Conflict on the Nile*, London, 1972; Darrell Bates, *The Fashoda Incident of 1898*, Oxford, 1984; David Levering Lewis, *The Race to Fashoda*, London, 1988.
- ¹⁰⁵ Mark Bowden and Allan Brodie, *Defending Scilly*, Swindon, 2011, 55-63. A second quick-firing battery was built at the north side of St Mary's at Bants Carn.
- ¹⁰⁶ Norman Longmate, *Island Fortress The Defence of Great Britain 1603-1945*. London, 1993, 405-6.
- ¹⁰⁷ TNA, WO 78/5100.