

## Series Editorial

The fourth volume in the MAT monograph series focuses on the wreck of the *Stirling Castle*, a highly significant vessel that provides evidence of Samuel Pepys' Thirty Ships building programme and life onboard an early eighteenth-century warship, and is representative of the historic event of the Great Storm in 1703. When the ship was discovered in 1979 the levels of preservation were stunning, with the two-decked wooden warship almost complete: it was a true 'time capsule' wreck. For 40 years the site has been recognised as one of Britain's most significant, being designated under the Protection of Wrecks Act (PWA) in 1980. During this time the wreck has been subject to the dynamics of a constantly moving seabed which at times protects the remains, while at others exposing it to threat and ongoing degradation and loss, which continues today.

In chapter three Whitewright examines the history of the investigation of the wreck, stating that it can be seen as representative of the problems and challenges that have characterised maritime archaeology within England and the wider UK since the inception of the PWA in 1973. But, on a more positive note, it can also be viewed as symbolising the efforts of a generation of maritime archaeologists to address and solve some of the problems that they have inherited, while attempting to avoid the creation of similar circumstances in the future.

There have, indeed, been enormous 'efforts' expended on the wreck, most of which have been undertaken by unfunded volunteer groups. The site demonstrates the value and challenges of long-running maritime investigations to which a wide range of individuals, groups, organisations, societies and companies contribute. These investigations, which take place on many Protected Wreck sites, often result in 'open' archives that accumulate over time and can be split over multiple locations and owners. While this has posed challenges for this project, the results demonstrate what it is possible to achieve through the assessment and analysis of these long-term, dispersed archives and how this work is vital for developing access to the data and promoting research, interpretation and reinterpretation as more comparative material becomes available in the future.

The MAT is pleased to publish the results of this work within our monograph series. It is apt that the volume follows 'Analysing Maritime Archaeological Archives', which examined issues related to the lack of analysis and dissemination of shipwreck investigations. The culmination of the work on the *Stirling Castle* archive shows the rich potential within 'back-log' maritime archives and we hope it helps support the case for more such studies, resulting in future publications.

Finally, I would like to include a special mention of our colleague and dear friend Kathryn Dagless, who passed away in 2017 while work on this volume was ongoing. Kathryn was a finds specialist who analysed organic material and stone from the site and her work has enriched this volume. Her passion for artefacts is much missed.

Julie Satchell  
Series editor

## Summary

The *Stirling Castle* was a 70-gun third-rate ship-of-the-line, built in Deptford in 1679, rebuilt at Chatham in 1699 and lost on the Goodwin Sands during the Great Storm of 1703. The ship is highly significant from a historical perspective because it was launched as part of the Thirty Ships building programme overseen by Samuel Pepys and Charles II. The vessel formed part of the Royal Navy fleet in the early years of the War of Spanish Succession, with its operational life spanning a critical period in the development of the Royal Navy not just from the perspective of ship technology but also in terms of Britain's becoming arguably the pre-eminent naval power in northern Europe. Added to this was the loss of the ship and crew in one of the most powerful and destructive storms to have been experienced and recorded in English history.

Following the discovery of the site in 1979 it has been subject to continued archaeological activity and has been designated under the 1973 Protection of Wrecks Act (PWA) since 1980. The wreck lies in a dynamic environment in which the movement of sand causes the site to be covered and uncovered, resulting in significant degradation; however, it is still an exceptional site, being one of the best-preserved shipwrecks from the late seventeenth century in English waters.

Numerous individuals, groups, Trusts and organisations have been involved in the investigation of the site over the past 40 years, which has resulted in the recovery of a significant artefact assemblage in addition to an extensive supporting archive recording the vessel structure and other *in situ* material. Work on the archive generated between 1979 and 2009, which is dispersed across a number of locations, has been funded by Historic England (previously English Heritage) and sought to summarise current understanding as an aid to long-term management and to encourage further research. This resulting publication is split into two parts. Part one considers the history of the *Stirling Castle* as a warship, covering its building, service and loss from both a broad contextual view and a more detailed view of the vessel and crew. A detailed account is then provided of the archaeological investigation of the site and the environmental factors impacting the seabed remains. The review of available geophysical survey data supports the presentation of the movement of sediments surrounding the wreck, analysis that provides the context for the periods of exposure and coverage.

Part Two presents the artefact archive by material and type in a series of chapters. Consideration of the ship's construction uses records of structure remaining on the seabed as well as recovered material. The seabed remains consist of the vessel's main deck, which is considered to

be the highest level of coherent archaeological remains, with debris from the upper deck, forecastle and quarter deck collapsed upon it. Beneath this, the orlop deck and hold are assumed to remain, while parts of the transom and stern quarters survive at the eastern end of the site. Within this volume the vessel's framing, planking and fastening components are described with comparative material, both historic and archaeological, being used to contextualise and understand that of the *Stirling Castle*. Chapters considering artefacts by material include a catalogue and offer comparative analysis where possible and practical.

The large assemblage of organic remains demonstrates the preservation potential of the marine environment and includes plant remains, bone artefacts, rope, a range of leather objects including shoes and book covers, and textiles. Wooden objects range from containers, food preparation and consumption equipment and dress and personal accessories through to navigation and measurement equipment, tools and weapons. The organic assemblage is significant owing both to its variety and to the rarity of discovering such large numbers of organic artefacts on one site. It represents many aspects of life on board, from general daily tasks (e.g. scrubbing the desks) and specialist occupations through to leisure-time pursuits. The hierarchy of the crew is represented through the materials from which the artefacts are produced and their elaboration, from the basic, functional, undecorated objects used by the lower crew members through to fragments of expensive silk fabrics from the clothing of the higher ranks.

Glass artefacts consist of bottles (onion, square-sided and cylindrical), drinking glasses, timing glasses and window glass. A number have been subject to scientific analysis, providing detail on their chemical composition. Over 230 metal artefacts range from personal possessions through fighting weaponry to parts of the ship structure. A number of metals are represented within the assemblage, with iron, pewter, copper, brass and lead being most notable. They are presented and analysed by functional category, including eating and drinking (plates, bowls, dishes, porringers, utensils, jugs, tankards, cooking equipment), personal artefacts (clothing, attire, lighting and miscellaneous), ship's equipment and fittings (navigation and measurement, scuppers, fastenings) and arms and armament (swords, small arms, ammunition, cannon and shot).

The collection of 57 pots from the site represents a wide variety of countries and production centres, reflecting the sailing history of the ship, the character of the crew or the pottery types available in the port of origin. They were used for a range of functions – storing foodstuffs, cooking,

eating and drinking, and storing ointments and drugs. Stone and other ceramic artefacts include navigational or deck slates, whetstones, bricks and clay pipes.

A review of the entire archive of material draws out wider trends to present an understanding of the ship, its crew and the archaeological record they have left behind. Interpretation considers two key questions related to the archaeological record:

- How much of the original 1679 ship, in structural or equipment terms, survived its 1699 rebuild to become part of the archaeological remains of the vessel following its loss in 1703?
- What was the impact of the wrecking event on the distribution of artefacts and structural materials on the seabed and how much did it reorganise the relationships of the people, their possessions and the equipment that they used on board the vessel?

Where possible, these questions are addressed alongside further discussion of themes such as the fighting ship, navigation and artefact distribution. Conclusions reiterate how the archaeological remains of the *Stirling Castle* offer a compelling insight from a range of perspectives into the maritime world of the seventeenth and eighteenth centuries.

## Résumé

Le *Stirling Castle* était un navire de combat en ligne de file de 70 canons troisième rang, construit à Deptford en 1679, reconstruit à Chatham en 1699 et perdu sur les sables de Goodwind Sands au cours de la grande tempête de 1703. Le navire est extrêmement important d'un point de vue historique parce qu'il fut mis à l'eau faisant partie du programme de constructions navales des Trente Bateaux sous la supervision de Samuel Pepys et Charles II. Le vaisseau faisait partie de la flotte de la Marine Royale dans les premières années de la Guerre de Succession d'Espagne, sa durée de service actif couvrant une période critique du développement de la Marine Royale. Non seulement du point de vue de la technologie maritime mais aussi durant la période pendant laquelle la Grande-Bretagne est sans doute devenue la puissance navale prédominante en Europe du nord. A cela vint s'ajouter la perte du navire et de son équipage dans une des tempêtes les plus puissantes et les plus destructrices jamais vécues et relatées de l'histoire de l'Angleterre.

Suite à sa découverte en 1979, le site a fait l'objet d'activités archéologiques continues et est désigné sous l'acte de protection des épaves de 1973 (PWA) depuis 1980. L'épave git dans un environnement dynamique avec des mouvements de sables qui font que le site est tantôt couvert, tantôt découvert, ce qui a eu comme résultat une importante dégradation, toutefois, il n'en reste pas moins un site exceptionnel, étant l'une des épaves les mieux conservées de la fin du 17<sup>ième</sup> siècle dans les eaux anglaises.

De nombreux individus, groupes, trusts, organisations, se sont impliqués dans l'investigation du site au cours des 40 dernières années, ce qui a eu pour résultat la récupération d'un important assemblage d'artefacts, qui, en plus, s'appuie sur de nombreuses archives enregistrant la structure du vaisseau et d'autres matériaux in situ. Des travaux sur les archives générés entre 1979-2009 et qui sont dispersés entre divers endroits ont été financés par Historic England (anciennement English Heritage) et cherchaient à résumer la compréhension actuelle en tant qu'aide à sa gestion à long terme et à encourager de nouvelles recherches. Cette publication qui en est le résultat, est divisée en deux parties. La partie un examine l'histoire du *Stirling Castle* en tant que navire de guerre, couvrant sa construction, ses années de service et sa perte à la fois d'un large point de vue étendu au contexte et d'une vision plus détaillée du vaisseau et de son équipage. On offre ensuite un compte-rendu détaillé de l'investigation archéologique du site et de l'impact des facteurs environnementaux sur les vestiges restés sur le fond marin. Une revue des données des études géophysiques disponibles vient appuyer la présentation du mouvement des sédiments qui entourent l'épave, analyse qui fournit le contexte pour les périodes d'exposition et de couverture.

La partie deux présente les archives des artefacts par matière et type en une série de chapitres. L'étude de la construction du navire utilise les relevés de la structure du navire restée au fond de la mer ainsi que des matériaux recouverts. Les vestiges au fond de la mer sont constitués du pont principal du vaisseau, considéré comme étant le niveau le plus élevé de vestiges archéologiques cohérents. Sur celui-ci, se sont affaissés des débris du pont supérieur, du pont de gaillard d'avant et du quart de pont. Là dessous le faux pont et la soute sont supposés avoir subsisté tandis que des parties de la traverse et des quartiers de poupe ont survécu à l'extrémité est du site. Dans le cadre de ce volume les parties constituantes de la carcasse, du bordage et de l'assemblage du vaisseau sont décrites, du matériel comparable, à la fois historique et archéologique, étant utilisé pour replacer dans son contexte et comprendre celui de *Stirling Castle*. Les chapitres qui examinent les artefacts par matière comprennent un catalogue et offrent une analyse comparative là où elle est possible et pratique.

Le vaste assemblage de vestiges organiques démontre le potentiel de préservation de l'environnement marin et comprend des restes de plantes, des artefacts en os, de la corde, une gamme d'objets en cuir, y compris des chaussures et couvertures de livres et des textiles. Les objets en bois vont des récipients, équipement pour la préparation et consommation de nourriture, habillement et accessoires personnels jusqu'aux instruments de navigation et de mesure, outils et équipement, et armes. L'assemblage organique est important en raison de la rareté de la découverte d'un si grand nombre d'artefacts organiques sur un seul site et est dû à sa variété. L'assemblage représentée de nombreux aspects de la vie à bord du navire depuis les tâches ordinaires quotidiennes, (par exemple frotter les ponts) et des occupations spécialisées en allant jusqu'aux

loisirs. La hiérarchie de l'équipage est représentée à travers les matériaux dont sont fabriqués les artifacts par exemple les objets ordinaires; utiles non décorés utilisés par les membres inférieurs de l'équipage jusqu'aux fragments de riches tissus de soie qui seraient venus des vêtements des rangs les plus élevés.

Les objets en verre consistent en flacons (oignon, à cotés carrés et cylindriques), verres à boire, verres à mesurer le temps, verre à vitre dont un certain nombre a fait l'objet d'une analyse scientifique qui a contribué des détails sur leur composition chimique. Plus de 230 objets en métal incluent des classes de matériaux allant de possessions personnelles en passant par des armes de combat à des parties de la structure du navire. Un certain nombre de métaux sont représentées à l'intérieur d'un assemblage; fer, étain, cuivre, laiton et plomb, étaient les plus remarquables. Ils sont présentés et analysés par fonction y compris manger et boire (assiettes, bols, plats, écuelles, ustensiles, pichets, chopes et batterie de cuisine), artifacts personnels, (vêtements, costumes, éclairages et divers), equipment et appareillages de navires (navigation et mesures, dalots) attaches et armes et armement (épées, petites armes, munitions, canons, et boulets).

La collection de 57 pots provenant du site représente une grande variété de pays et de centres de production reflétant soit l'histoire maritime du navire, le caractère de l'équipage, les types de poteries disponibles dans le port d'origine. Ils étaient utilisés pour une gamme de fonctions, conserver des produits comestibles, cuisiner, manger et boire, pots à onguent, flacons à remèdes. Les objets en pierre comprennent des ardoises de navigation ou de pont, des pierres à guiser, des briques et des pipes en argile.

Une revue de l'ensemble du matériel archivé fait ressortir des tendances plus larges pour présenter une compréhension du navire et de son équipage et des témoignages archéologiques qu'ils ont laissés derrière eux. L'interprétation examine deux questions clefs en rapport avec les dossiers archéologiques:

- Combien du navire original de 1679, en terme de structure ou d'équipements, a survécu à sa reconstruction en 1699 pour devenir une partie des vestiges archéologiques du vaisseau à la suite de sa perte en 1703; et
- Quel fut l'impact du naufrage sur la répartition des artifacts et des matériaux de la structure sur les fonds marins et dans quelle mesure il a réorganisé les relations entre les personnes et leurs biens et l'équipement qu'ils utilisaient à bord du vaisseau.

Là où c'est possible, ces questions sont abordées à-côté d'une prolongation de la discussion de thèmes tels que le navire au combat, la navigation et la répartition des artifacts. Les conclusions reitèrent comment les vestiges archéologiques du *Stirling Castle* offrent une vision fascinante du monde maritime au 17<sup>ième</sup> et 18<sup>ième</sup> siècles d'une gamme de points de vue.

## **Zusammenfassung**

Die *Stirling Castle* war ein 70-Kanonen Schiff der 3. Klasse, wurde in 1679 in Deptford gebaut, in 1699 in Chatham renoviert und ist während des Großen Sturms von 1703 auf den Goodwin Sands gesunken. Das Schiff ist aus historischer Sicht von großer Bedeutung, da es im Rahmen eines Bauprogramms von dreissig Schiffen unter der Leitung von Samuel Pepys und Charles II. gebaut wurde. Das Schiff gehört zur Royal Navy Flotte in den ersten Jahren des Spanischen Erbfolgekrieges, dessen Betriebsdauer sich über eine kritische Phase in der Entwicklung der Royal Navy erstreckte, nicht nur aus der Perspektive der Schiffstechnik, sondern auch weil in dieser Zeit Großbritannien wohl zur herausragenden Seemacht in Nordeuropa wurde. Hinzu kam der Verlust des Schiffes und der Besatzung in einem der mächtigsten und zerstörerischsten Stürme, die in der englischen Geschichte erlebt und aufgezeichnet wurden.

Nach der Entdeckung des Fundortes im Jahr 1979 ist es Gegenstand anhaltender archäologischer Aktivitäten und wird seit 1980 unter dem Schutzgesetz für Wracks (Protection of Wrecks Act PWA) von 1973 anerkannt. Das Wrack liegt in einer dynamischen Umgebung und wird wechselseitig vom Sand abgedeckt oder nicht abgedeckt, was zu einer erheblichen Erosion geführt hat. Dennoch ist es immer noch ein außergewöhnlicher Fund, der zu den am besten erhaltenen Schiffswracks aus dem späten 17. Jahrhundert in englischen Gewässern zählt.

Zahlreiche Einzelpersonen, Gruppen und Organisationen waren in den letzten 40 Jahren an der Untersuchung des Fundes beteiligt, was in einer signifikanten Ansammlung von Artefakten resultierte und einem umfangreichen unterstützenden Archiv, das den Schiffbau und sonstige Standortmaterialien enthält. Die Arbeiten an dem Archiv, das zwischen 1979 und 2009 entstanden ist und über eine Reihe von Standorten verteilt ist, wurden von Historic England (früher English Heritage) finanziert und war bestrebt das derzeitige Verständnis zusammenzufassen, um eine langfristige Verwaltung und weitere Forschung zu ermöglichen.

Diese daraus resultierende Veröffentlichung gliedert sich in zwei Teile: Teil 1 betrachtet die Geschichte des *Stirling Castle* als Kriegsschiff, den Schiffsbau, Schiffsdienst und den Verlust des Schiffes sowohl aus der Sicht des weiteren Zusammenhangs als auch aus einer detaillierteren Sicht auf das Schiff und seine Besatzung. Anschließend werden die archäologischen Untersuchungen des Geländes und die Umweltfaktoren, die sich auf den verbleibenden Meeresbodenreste auswirken, ausführlich beschrieben. Die Analyse der verfügbaren geophysikalischen Erhebungsdaten unterstützt die Darstellung, dass sich Sedimente rund um das Wrack bewegen, deren Analyse den Kontext für Zeiten der Expositions- und Abdeckung des Wracks liefern.

Teil 2 unterteilt das Artefaktarchiv in Kapiteln nach Material und Typ. Für die Beschreibung des Schiffsbau



werden Aufzeichnungen über die auf dem Meeresboden verbleibende Schiffsstruktur sowie gefundenes Material verwendet. Die Überreste am Meeresbodens bestehen aus dem Hauptdeck des Schiffes, welches die höchste Stufe zusammenhängender archäologischer Überreste bietet, mit Trümmern des Oberdecks, des Vorderdecks und des Achterdecks.

Unter diesem sind vermutlich das Orlopdeck und der Laderaum verblieben, während Teile des Heckbalken und Hecks am östlichen Ende des Fundortes erhalten sind. Hier werden auch Rahmen, Schiffsblaken und Verbindungsteile mit Hilfe von historischen und archäologischen Vergleichsmaterialien beschrieben, die zur Kontextualisierung und zum Verständnis des Stirling Castle beitragen. Kapitel, die Artefakte nach Materialtyp betrachten, enthalten einen Katalog und bieten soweit möglich und praktisch, vergleichende Analysen an.

Die große Ansammlung von organischen Überresten zeigt das Erhaltungspotenzial der Meeresumwelt und umfasst Pflanzenreste, Knochenartefakte, Seile, eine Reihe von Ledergegenständen, darunter Schuhe und Buchbezüge sowie Textilien. Holzobjekte reichen von Behältern, Lebensmittelzubereitungs- und Lebensmittelverzehr, Kleidung und persönlichen Gegenständen bis hin zu Navigations- und Messgeräten, Werkzeugen und Geräten und Waffen.

Die organische Ansammlung ist bedeutend aufgrund der Seltenheit, eine so große Anzahl und Vielfalt organischer Artefakte auf einem Gelände zu entdecken. Die Sammlung stellt viele Aspekte des Lebens an Bord des Schiffes dar, von allgemeinen täglichen Aufgaben (z.B. Schrubben des Decks) und Facharbeiten bis hin zur Freizeit. Die Hierarchie der Besatzung wird durch die Materialien dargestellt, aus denen die Artefakte hergestellt wurden, zum Beispiel die grundlegenden, funktionalen und undekorierten Objekte, die von den unteren Besatzungsmitgliedern verwendet wurden, bis hin zu Fragmenten teurer Seidenstoffe, die von Kleidungsstücken der höheren Ränge stammen.

Glasartefakte bestehen aus Flaschen (in verschiedenen Formen: Zwiebel, quadratisch und zylindrisch), Trinkgläsern, Zeitgläsern und Fensterglas, von denen einige einer wissenschaftlichen Analyse unterzogen wurden, die Details über ihre chemische Zusammensetzung lieferten. Über 230 Metallartefakte umfassen Beispiele aus persönlichem Besitz, Kampfaffen und Teile der Schiffsstruktur. Eine Reihe von Metallen sind innerhalb der Assemblage vertreten: Eisen, Zinn, Kupfer, Messing und Blei sind am bemerkenswertesten. Sie werden vorgestellt und analysiert nach deren Funktionen, wie Essen und Trinken (Teller, Schüsseln, Geschirr, Besteck, Krüge, Drinkgefäße, Kochutensilien), persönliche Artefakte (Kleidung, Uniformen, Lampen und anderes), Schiffsausrüstung und Armaturen (Navigation und Messung, Speigatt, Befestigungen) und Waffen Ausrüstung (Schwerter, Kleinwaffen, Munition, Kanonen und Kanonenmunition).

Die Sammlung von 57 Töpfen aus dem Gelände repräsentiert eine Vielzahl von Ländern und Produktionszentren, die entweder die Segelgeschichte des Schiffes, den Charakter der Besatzung oder die Keramikarten, die im Ursprungshafen erhältlich sind, widerspiegeln. Diese wurden für eine Reihe von Funktionen verwendet – Lagerung von Lebensmitteln, Kochen, Essen und Trinken, Salbentöpfe und Gläser für Medizin. Steinartefakte umfassen Navigations- oder Deckschiefer, Wetzsteine, Ziegel und Tonrohre.

Die Analyse des gesamte Materialarchiv zeigt breite Trends auf, die ein Verständnis des Schiffes, seiner Besatzung und der archäologischen Aufzeichnungen, die sie hinterlassen haben, vermitteln. Die Interpretation berücksichtigt zwei Schlüsselfragen im Zusammenhang mit der archäologischen Aufzeichnung:

- Wie viel von dem ursprünglichen Schiff von 1679, in Fragen der Struktur oder der Ausrüstung, überlebte den Wiederaufbau von 1699, wurde Teil der archäologischen Überreste des Schiffes nach seinem Verlust im Jahre 1703; und
- Welche Auswirkungen hatte die Senkung auf die Verteilung von Artefakten und Baumaterialien auf dem Meeresboden und wie sehr hat es die Beziehungen von Menschen und ihrem Besitz und die Ausrüstung, die sie an Bord des Schiffes verwendet haben, verschoben

Soweit wie möglich, werden diese Fragen neben der weiteren Diskussion von Themen wie das Kampfschiff, Navigation und Artefaktverteilung behandelt. Schlussfolgerungen bekräftigen, wie die archäologischen Überreste des Stirling Castle einen überzeugenden Einblick in die maritime Welt des 17. und 18. Jahrhunderts aus einer Reihe von Perspektiven bieten.

## Introduction

*Julian Whitewright*

In 1979 a group of sports divers from British Sub-Aqua Club 106, working with a local fisherman out of Ramsgate, began the underwater investigation of net fastening locations on the Goodwin Sands, off the coast of Kent (Figure 1.1). The second site that the team identified and investigated produced a remarkable discovery: the apparently almost complete remains of a two-decked wooden warship. The ship had seemingly appeared from the Goodwin Sands, where it had been wrecked and was now sitting upright on the seabed, with its bow facing to the west. A large sandbank obscured much of the starboard side, but the port side was clear of sand, the bow of the vessel was unobscured and the vessel's rudder was still in place at its stern. Artefacts were visible scattered among the wreckage of the uppermost surviving deck and some of the stairways and hatches could be clearly seen, and entered. Only the masts and rigging were missing. Wreck II, as it was simply labelled at the time, was the type of site that most wreck divers and maritime archaeologists can only dream of finding and working on, but few ever do.

The finding of Wreck II came at a time when the profile and awareness of maritime archaeology within the UK was increasing with ongoing work on the Tudor warship the *Mary Rose* in the eastern Solent. The local archaeology unit in Thanet, Kent, was contacted, along with the then archaeological unit at the National Maritime Museum. Early recoveries from the site of Wreck II included the vessel's bell, dated 1701, two large copper kettles and numerous smaller artefacts. The date of the bell and a set of recurring initials on a series of pewter plates allowed the identification of the wreck to be confirmed as the *Stirling Castle*, a third-rate 70-gun ship that was lost on the Goodwin Sands in the Great Storm of 1703 along with two other Royal Navy third-rates, the *Northumberland* and the *Restoration*, and the fourth-rate *Mary*. Subsequent survey work by the same team located the remains of the *Northumberland* and another vessel thought to be either the *Restoration* or the *Mary*. Further investigation of the site of Wreck II/*Stirling Castle* was halted in 1980, when the dive team returned to the wreck only to find it reburied beneath the sandbank from which it had first emerged. The focus of work turned to the other Great Storm wrecks, with work on the *Stirling Castle* sporadic and dependent on the level of the seabed and the resultant exposure of the ship. Then, in the late 1990s, the vessel became re-exposed and work on the site was resumed, with the objective of recording as much of the exposed structural remains as possible, rather than the mass recovery of artefacts that characterised the 1979 season.

At the time of its discovery the *Stirling Castle* was dubbed a '*Mary Rose*' for the seventeenth/eighteenth century because of the high levels of preservation of the ship itself and the artefacts still surviving on the site. With hindsight, such comparisons were certainly not unfounded, and, if anything, the *Stirling Castle* had a greater percentage of coherent surviving hull structure and associated artefacts. The ship is also highly significant from an historical perspective because it was launched in 1679 as part of the Thirty Ships building programme overseen by Samuel Pepys and Charles II. The vessel was rebuilt in 1699 and formed part of the Royal Navy fleet in the early years of the War of Spanish Succession. As a result, the operational life of the *Stirling Castle* spanned a period in the development of the Royal Navy that was critical not just from the perspective of ship technology but also because it was at this time that Britain became arguably the pre-eminent naval power in northern Europe. Added to this was the loss of the ship and crew in one of the most powerful and destructive storms to have been experienced and recorded in English history.



**Figure 1.1. Location of the Goodwin Sands and the site of the *Stirling Castle* (base map created using ArcGIS).**

Despite its excellent preservation and obvious wealth of material culture, the site, like most maritime archaeological sites in British waters, did not benefit from centrally allocated resources to facilitate archaeological investigation and dissemination. The protection afforded the site through designation in 1980 under the 1973 Protection of Wrecks Act (PWA) meant the involvement of the government-funded Archaeological Diving Unit (ADU) from its formation in 1986, but the ADU were able to spend only a few days a year at the site, every few years, and carried a remit only to monitor the overall condition of the site itself, rather than to undertake proactive investigation. Meanwhile, although many of the recovered artefacts were on public display in Ramsgate Maritime Museum, the dissemination of the archaeological work on the *Stirling Castle* lacked a cohesive strategy and overall aim to take it towards a more publicly accessible state. Although a fundamental criticism of the wider archaeological process, the nature of the situation with regard to the *Stirling Castle* was by no means unique within British maritime archaeology in the 1980s, 1990s and 2000s. By the mid-2000s - despite the ongoing investment of time, effort and financial resources in the monitoring of the *in situ* remains by Bob Peacock, the site licensee - potentially one of the best-preserved maritime archaeological sites in UK waters was apparently in a state of rapid decline, with minimal public dissemination of the extensive archaeological and historical archive relating to the site having occurred.

It was against this background that a project to address the archaeological archive of the *Stirling Castle* was developed by Historic England (formerly English Heritage) and the Maritime Archaeology Trust (formerly the Hampshire and Wight Trust for Maritime Archaeology). That proposal built upon a desk-based assessment of the site conducted in 2003 by Wessex Archaeology in their capacity as the diving contractor for the PWA and a site management plan drawn up by Historic England. These reports highlighted the critical need for an evaluation of the recovered artefacts and a formal process to audit the archaeological archive, in all its forms, with the ultimate aim of bringing it to publication. The initial project design submitted to English Heritage by the HWTMA in January 2008 was developed by Julie Satchell and Douglas McElvogue and proposed four stages of work:

- Stage 1 – Archaeological archive audit and appraisal
- Stage 2 – Archival assessment and analysis
- Stage 3 – Targeted archaeological recording
- Stage 4 – Publication and dissemination

The intention of the initial project design was that successful completion of each stage would facilitate the subsequent undertaking of the next phase. Stage One (HWTMA, 2009a) involved locating, visiting and appraising site archive material, including site records, surveys, images, videos and artefacts. This work provided an archive audit and appraisal as an initial step to help

enable public access to an archive of material that had already been identified as being of local, regional, national and international importance. A wide range of public bodies and organisations (from local to national) and several private individuals were consulted during that process. Building upon that, Stage Two (HWTMA, 2012) involved a detailed assessment of all archive material and the creation of an updated archive database. Critically, the results of that stage of the project demonstrated the wide variety and dispersal of the *Stirling Castle* archive, which is composed of the documentary (paper and graphic records, and digital archive including survey data) and the material archives (artefact assemblage and samples) of the site. The archive itself, in its broadest sense, now rests in a range of locations with a number of different owners, including the Isle of Thanet Archaeological Society (IOTAS), Ramsgate Maritime Museum, Hastings Shipwreck Museum, the National Maritime Museum in Greenwich, the National Record of the Historic Environment (NRHE) in Swindon, Wessex Archaeology (WA) and Historic England (HE), as well as in private ownership. At that juncture, the wider project process was revised slightly, with stages Three and Four being combined into a single Stage Three to address the analysis and publication of the archaeological archive.

Stage Three of the project has resulted in this monograph, which aims to present the breadth and wealth of the archaeological archive of the site. The structure, scope and inevitable limitations of such a process are returned to below, but it is clear that such a publication is ostensibly an academic one. In that sense, it is clearly targeted towards the maritime archaeological and historical community in the first instance and then more widely to scholars, students and enthusiasts of the period. As such, there is more to be done to develop the wider educational potential of the site and to further increase public access to the material from the site.

Some explanation is needed regarding the scope of this monograph and what is included and omitted here. Likewise, an overview of the subsequent structure and general aims of each element of the monograph will be useful. Perhaps most importantly, it is necessary to reaffirm that the *Stirling Castle* is very much a live archaeological site. Work by the licensee and monitoring by the PWA contractor are therefore ongoing, with the potential to produce further material, artefactual or otherwise, in the future. It is clearly impossible to produce a volume of the type presented here, through the methodology just described, if additional material must be accounted; simply for practical reasons a stopping point has to be established somewhere. Therefore, this volume, and the project that it forms part of, has chosen to cover the period from 1979 to 2009. This embraces the initial work on the site, when the majority of the artefacts were recovered, the exposure of the site and related work in the late 1990s and the work involved in beginning to empirically monitor the site in the 2000s. The end date is a compromise between the start of the present project, the last significant piece of diver survey on the site by Wessex Archaeology for which a report was



available and a geophysical survey of the site undertaken by the UK Hydrographic Office (UKHO) that provides the most recent coverage of the site morphology within that time period. There is, therefore, a clear responsibility on the part of Historic England, in conjunction with the site licensee, to ensure that work conducted from 2010 onwards, in whatever form, is eventually afforded the same level of dissemination as this project has given to the 1979-2009 material. This includes further geophysical survey work commissioned by Historic England and undertaken in July 2015, which, it is hoped, will be able to build upon the wider geophysical analysis presented here within chapter four.

The structure of this monograph is relatively straightforward and traditional. It falls very much into two parts, the content of which is dictated to by the story of the ship and its crew, their loss, their archaeological discovery and the subsequent work carried out on the site. This account therefore begins in chapter two with the history of the *Stirling Castle* as a warship, covering its building, service and loss and taking both a broad contextual view and a more detailed view of the vessel and crew. In effect, this takes us from Deptford Dockyard in 1679 to the Goodwin Sands on 26–28 November 1703. Attention then shifts in chapter three to the provision of a detailed account of the archaeological investigation of the site from 1979 to 2009. This is based largely on the documents, in all their forms, included in the site archive as well as interviews with those who have worked on the site. On reading this chapter it should become readily apparent that the archaeological archive of material from the site cannot be understood without such a developed appreciation of the people and processes behind its creation across a 30-year period. The history of the archaeology is critical to our interpretation of the archaeology itself.

Having reviewed the archaeological history of the site, chapter four then addresses the environmental context of the *Stirling Castle* and the Goodwin Sands, drawing upon the extensive study of the sands and the substantial archive of geophysical surveys that have been conducted on the site, including the 2009 UKHO survey. This is the first time that such a dedicated, comprehensive, geophysically based overview of the site, its location and its morphology has been undertaken and published. With the foundations in place, attention turns more directly to the archaeological material, with an overview in chapter five of the extent of material that has been recorded *in situ*, material that potentially remains *in situ* and material that is assumed to have been lost. In a sense this can be categorised as the seabed archive and the analysis of that element of the site completes part one of the volume.

Part two has the simple aim of presenting the artefact archive in the fullest possible manner. As such, a series of chapters addresses the recovered artefacts by material and type. Chapter six discusses the understanding of ship construction and remains that can be gained from the recorded and recovered material as well as the seabed

archive outlined in chapter five. Subsequent chapters then move through organic remains, glass, metal, pottery and stone materials. In each of these - chapters seven to eleven respectively - a catalogue of the material is set out and comparative analysis offered where possible, practical and appropriate. Following this, chapter twelve attempts to look across the entire archive of material in order to draw out wider trends and concerns, and to present an understanding of the ship, its crew and the archaeological record they have left behind that cuts across the material classes imposed in the preceding chapters. Attention is also given to how we can view the historical archaeology of vessels of this type in a general sense and in a specific sense in relation to the *Stirling Castle*.

Throughout, two key questions can be identified and borne in mind, if not necessarily answered. The first of these revolves around the extent to which the original 1679 ship, in structural or equipment terms, survived its 1699 rebuild to become part of the archaeological remains of the vessel following its loss in 1703. The second perhaps echoes this, but on a smaller scale, and requires us to continually bear in mind the contribution of the drawn-out, but certainly cataclysmic, wrecking event to the subsequent distribution of artefacts and structural materials on the seabed. It is clear that the vessel underwent a less damaging process than others within its class (*Northumberland* and *Restoration*) that were also lost on the Goodwin Sands in 1703, but we must still consider the extent to which that process reorganised the relationships of the people, their possessions and the equipment they used on board the vessel. On the face of it, such consideration assumes a perfectly preserved, recovered and archived archaeological record upon which to base such an interpretation. The very existence of this project, to address the archive of the *Stirling Castle* so long after the initial period of work on the site perhaps indicates some of the challenges to such a process.

Finally, from the perspective of introducing this volume and the three decades of archaeological work that it represents, a final caveat must be observed: namely, that only material that was identified, included and recorded within Stages One and Two of the project has been included within this volume. It is likely that material has been omitted, not through deliberate selection on the part of staff involved in this project but because such material is not currently part of the wider archaeological process. In this regard such omission simply highlights the wider failings of maritime archaeology as a broad discipline within the UK since 1979. This project makes no excuse for that, but it is hoped that bringing a corpus of material such as the 1979-2009 *Stirling Castle* archive to publication will highlight the potential wealth of material, information and enjoyment that may be found within the archives of material from other English maritime archaeological sites. Many such sites still await a similar process in order to begin to reach their undoubted potential through a full process of public dissemination.