

THE DEVELOPMENT OF MALTA

AS A

FIRST-CLASS NAVAL BASE

since its inclusion in the British Empire.

Lecture delivered at the Aula Magna of the
Malta University by

Rear Admiral G. A. Ballard, C. B.

on Wednesday, 7th November, 1917.

(Reproduced from *The Daily Malta Chronicle*.)

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ON September the 4th, in the year 1800, the French Army which had been driven into Valletta by the population, and besieged for two years, surrendered through famine after a most valiant defence, being cut off from all hope of relief by the British blockading squadron on the watch outside. The Maltese thereupon placed themselves under British protection and the sovereignty of the Island changed hands.

In the long history of Malta changes of ownership had been frequent since very early times, but the change in the year 1800 differed from all others in two noticeable particulars. To begin with, it was the first which had ever been brought about by the action of the inhabitants themselves, all other changes having been forced upon them from outside. Socondly, it brought the Island for the first time into the possession of a State whose territory and seat of Government were outside the Mediterranean altogether. These two facts are not only remarkable in themselves, but obviously related to each other, for only a people free to choose could have placed themselves

under such an allegiance. And as history teaches us that small nations often develop an acute political foresight in their struggle for existence, it is worth while to enquire into the motives which influenced the Maltese people in making that ever memorable choice. Why, we may ask, when for the first time they had a voice in their future destiny, did they turn from all the great Latin States which were their nearer neighbours, and offer their Island to England—a country geographically remote from their own, with which they had no connection in race, language, history, or Church, and no past associations except in so far as England had helped them to get rid of the French ?

Their action may appear strange at first sight, but perhaps their reasons are not far to seek. Certain points of material importance to themselves must have been present in their minds, from a knowledge derived in part from their own history, and in part from the facts which were then before their eyes. They knew from the traditions of their forefathers that for centuries in the past the Island had been coveted by every Mediterranean maritime State in turn, and for sufficiently obvious reasons. It lay at the very centre of a most important area where all main routes converge, and it possessed one of the finest natural harbours in the world, whereby full advantage could be derived from this central situation. With a less central position, or with a poor harbour, the history of Malta might have been as uneventful as that of the Island of Pantalleria, which has an admirable situation, but no harbour, or Milo which has a splendid harbour, but lies too far from important trade routes to be of any use. Malta has both the situation and the harbour, and, in consequence, when the Maltese rose against the French and obtained for the time a complete freedom from foreign control, they knew that a future of permanent independence was hopeless to expect. But it remained for them to select a sovereign in so far as that lay in their power. And they realized from their own history that only a State which was very strong at sea could retain the Island in its possession. They knew that

the galleys of the Knights of St. John had failed to protect it from invasion by the troops conveyed by the superior fleet of the Turks, and that every soul in Malta would have suffered death or slavery, at the hands of the janissaries of the great Sultan Suliman, had it not been for the timely aid available through the still more powerful fleet of King Philip of Spain. Their position was a difficult one. They had compelled the French garrison to surrender. But France was at that time the strongest of the Latin States by sea or by land and it would have been a futile measure to expel the French Troops from the Island, if it remained possible for Napoleon's soldiers to return in overwhelming force and inflict condign punishment for the insurrection. It was no use, therefore, to place themselves and their Island under the protection of the King of Spain or any of the rulers of the Italian States, for France was stronger than any of these and would never have tolerated such a step. Only Great Britain remained to be considered. Of Great Britain they knew very little, but the presence of Sir Alexander Ball's Squadron in Maltese waters afforded evidence that Great Britain had a very long and a very strong arm at sea. The tricolour of France had disappeared beyond the horizon, but the Union Jack flew unchallenged in the Grand Harbour, and they knew that under its protection they need fear no return of Napoleon's troops, even though these troops were then beginning a series of campaigns in which they overran nearly all Europe.

To Great Britain they accordingly turned, and, in placing themselves under the British Flag, they not only met the requirements of the immediate situation, but secured the welfare of their posterity in a pre-eminent degree, for it is impossible that any impartial witness could deny that no other nation would have bestowed such material benefits on Malta. This assertion is not advanced in any spirit of criticism towards other countries. In the matter of civil and religious liberty, it is, of course, quite possible that the Maltese would have been granted the same privileges under other Flags as they

now enjoy under the Union Jack, although they could not enjoy more. But it is an uncontrovertible fact that no other country could than, or could now, find so much use for Malta as Great Britain, or would have had occasion to spend such great sums of money in the Island. As far as material prosperity is concerned, it is the very fact that England lies outside the Mediterranean which has conferred immense benefits upon Malta. Strange as this may seem, it is nevertheless not difficult to explain. At the close of the French occupation of the Island, and right on till the present day, all the great maritime Powers with interests in the Mediterranean have been in possession of good war bases for their fleets, except Great Britain. Spain has Carthagenia; France has Toulon; Italy has Spezia and Naples; Austria has Pola and Sebenico. To none of these States could Malta offer what they did not already possess, that is to say, a headquarters for their Fleet in the Mediterranean, and at no period from the beginning of the 19th Century would any of them have spent great sums of money in equipping the Island with a first class naval Dockyard. From their standpoint, Malta offered a good commercial port of call and a useful anchorage in a good strategic position for their fleets in time of war, but nothing more. To England, the Island afforded the opportunity of acquiring a permanent Naval base in the Mediterranean for the first time, and hence the importance of Malta as a great centre of Naval activity to the present day. Hence also the expenditure of many millions of money whereby during the past 100 years and more, thousands of Maltese have earned a means of livelihood which would never have been open to them under any other flag. Immense sums have found their way into the Island from the British Imperial Treasury to maintain its position as the Headquarters of a much greater fleet than would ever have been seen here otherwise; and the expenditure in question has by degrees benefited whole districts, so that at the present day the towns of Senglea, Cospicua, and Vittoriosa are almost entirely dependent upon the Dockyard and the Fleet,

while Casal Paola, Hamrun, Zabbar, Zeitun, Curmi and others are all very largely supported in the same way.

Such, therefore, are the reasons why Malta stands to-day as one of the most important and best equipped of Naval bases and arsenals in the whole world. England required a base for her fleet in the Mediterranean, and Malta supplied the want. It is proposed now to trace its rise as such from very small beginnings; but before doing so, it may be well to recall the principal topographical features of the Grand Harbour and its surroundings.

On the west side lies the Valetta peninsula on which stands the modern capital and on the opposite side to Valetta are the series of indentations known as Bighi Bay, Dockyard Creek and French Creek. Between these bays lie a series of promontories projecting into the Harbour towards the North-West. The first of these is Bighi Point which separates Rivella and Calcara bays. Then comes Vittoriosa which formed the capital of Malta in the days of the Great Siege and is the oldest inhabited district facing the Grand Harbour. Next to Vittoriosa comes Dockyard Creek which formed the Galley Harbour in the days of the Knights of St. John. On the opposite side of Dockyard Creek to Vittoriosa lies the Senglea peninsula, which at the time of the siege was a bare unoccupied promontory, but is now one of the most thickly populated districts in Malta. On the west side of Senglea, we come to the French Creek, and then to the Corradino Heights. Further up at the head of the Grand Harbour lies the commercial anchorage known as the Marsa.

When the British Government assented to the request of the Maltese people to add Malta to the British Dominions, Admiral Sir Alexander Ball, was appointed as the first Governor, and all the buildings on shore formerly utilised in connection with the requirements of the Fleet of the Order of St. John, were placed at the disposal of the British Admiralty for such purposes as they might

think fit. These buildings, however, were not adequate for the depôt of a large fleet. They consisted of two store-houses in Valletta, and several others along the sea-front of Vittoriosa, Cospicua and Senglea at detached intervals, all standing in public thoroughfares; also the old Galley Arsenal in Dockyard Creek, and a slipway and magazine in French Creek. They included further the Fort at the east-end of Senglea line of defences, now known as the Sheer Bastion. These formed the original nucleus of the existing Dockyard and Victualling Yard, and, with the exception of the two storehouses on the Valletta side, all are still British Admiralty property.

Those on the Vittoriosa sea-front are among the oldest buildings in Malta still in use as residences. They date back to the sixteenth century, and now fulfil the purpose of store-houses for the provision and clothing of the Fleet and official residences for the Admiral Superintendent and certain other officers. When first handed over to the British Admiralty, the ground on which they stood was an unenclosed public area, and the whole water side in front of them was open to the people of Vittoriosa, just as the east side of Senglea is open at the present day. Access to the town behind these buildings was obtained through narrow lanes of steps between them, which still exist although now walled up at the back. The long double colonnade which exists over the whole length of the Jetty had not then been built, and the Jetty itself formed the general town wharf for Vittoriosa and was known as the "Strada della Marina."

Next adjacent to these buildings stood the old Galley Arsenal which had done service since the very yearly days of the Knights. This arsenal was enclosed on three sides by high walls and fronted the water on the fourth. Old plans show the greater part to have been covered with a flat roof. The side facing the water was formed of three slipways on which the galleys were hauled up for repairs.

Next to the old arsenal on the other side was the

public Marina of Cospicua, on which stood about a dozen buildings used as store-houses for the galleys' equipments. These were taken over by the British Admiralty. From that point there were no more Naval buildings on the water front till the other side of Dockyard Creek was reached. Here stood an enclosed area known as the New Arsenal in the latter days of the Knights, in distinction to the Old Arsenal in Vittoriosa. The New Arsenal had been used in connection with the larger vessels which were added to the fleet of the Order during the 18th Century and to this day the names of several of their frigates remain cut in the stone above the entrances to the store-houses in which their spare equipment was kept.

Next again to this so-called New Arsenal came the historical St. Michael's Bastion which in the days of the Great Siege had formed the chief defence of the neck of the Senglea peninsula. This is one of the old 16th Century works which at the time of the first British occupation had already ceased to be of importance for defence purposes, owing to the construction of the more advanced circle of fortifications known as the Cottonera Lines. But affording as it did, a lofty and very solid structure right on the water's edge, it was selected by the Knights as a foundation for the Sheers used in masting their vessels, and, owing to its obvious suitability for the purpose, it remained in use as such by the British Admiralty. Hence its present name of "The Sheer Bastion." To this day the sheers remain in position and, rising as they do to a height of 160 feet above water, form a very conspicuous object in Dockyard Creek, although now seldom used except for hoisting signals on. There is in the outer hall of Admiralty House, Vittoriosa, an interesting old picture showing a ship with the Red Flag and White Cross of the Knights of St. John, lying alongside the Sheer Bastion, and a very interesting relic of the Great Siege days is still to be seen on the lower part of the Bastion walls in the shape of the large iron rings to which was shackled the end of one of the booms which formed so important a feature in the defence of the fortress against the Turks.

The interior of the Sheer Bastion was allocated by the Admiralty as Offices to which use it is still applied. Next the Sheer Bastion on the Senglea side came three large dwelling-houses on the Senglea Marina which formed to the first part of Dockyard Terrace as it now stands, and were appropriated as official residences for officers of the Dockyard.

This completes the list of buildings handed over to the Admiralty when Malta first came under the British Flag. A Captain in the Royal Navy was appointed as Resident Commissioner for Naval affairs which was the title in use for an officer in charge of a Naval base on shore before the title of Admiral Superintendent was introduced. As his responsibilities at Malta were on a small scale in the early days of British possession, he was put in charge of the Naval Depot at Gibraltar as well. Another relic hanging in the entrance of Admiralty House, Vittoriosa, is the original letter appointing Rear Admiral Briggs as Naval Commissioner for Malta and Gibraltar.

For the first few years, British Naval Administration at Malta remained on unsettled and temporary footing, the reason being that the British occupation of the Island was not then considered necessarily permanent. England was feeling the long strain of war when the peace of Amiens was signed in 1802, and the British Government were not at all anxious to add to their responsibilities in regions distant from Home waters. Malta had a value as a potential base for Naval operations in the Eastern Mediterranean, should war again break out requiring naval activity in that sea. But British interests in those regions at the time were small, and war was not considered probable. Moreover, no local State was in a position to seriously threaten them. The great Black Sea wheat trade had not yet sprung into existence and the road to India still lay by the Cape of Good Hope. The Sultan of Turkey was friendly and, even had he been otherwise, he was no longer a possibly serious menace, for Turkish

Maritime power was already far on the wane. After deliberate consideration, therefore, England agreed by the Treaty of Amiens to withdraw from Malta, although in so doing the British Government stipulated that the Order of St. John should be re-instated in possession and that the Island should not be transferred to any other maritime power.

But this decision caused the greatest consternation in Malta, where the benefits of British rule had been thoroughly appreciated by the Maltese. The populace tore down the official Proclamations announcing the intending British evacuation of the Island and despatched a petition to England begging that the decision might be rescinded. The withdrawal was thereupon postponed pending further consideration; and, while still in abeyance, war with France broke out once more. This decided the British Government to remain in Malta, the British possession of the Island being finally confirmed by the Treaty of Paris which ended the ten further years of hostilities which followed.

Shortly after the recommencement of the war, Captain Otway, R.N., arrived in Malta as Resident Commissioner for Naval affairs, and, foreseeing that the British possession was now likely to be prolonged and probably permanent, he set to work to put the Naval Establishments on a properly defined footing as regards strength of personnel and general administration. It is interesting to see what he considered an adequate staff of employees in those days. After providing for all necessary work in hand and in prospect, he fixed the number of men required collectively for the Dockyard, the Victualling Yard, and the Naval Hospital, at 170. Nowadays, the number of men drawing Admiralty wages in these Establishments stands at over 10,000.

It is interesting further to note the change in the nature of the work carried out, for whereas at the present day the majority of the thousands of artisans employed are using their tools on steel, iron, brass or copper, in

1804 the only metal artisans in the Dockyard were a pair of blacksmiths. Of the remaining workmen, more than half were sail-makers and rope-makers, for the constant repairs to machinery which are necessary at the present day were represented in the sailing area by equally constant repairs to sails, masts and rigging. Nelson himself at that period was engaged in his long memorable watch off Toulon, using Malta as his refitting base; and every time one of his line-of-battleships underwent a refit at Malta, miles of new rope were required and immense quantities of canvas, for the sail area of a ship of the line was 28,000 square feet, and, in the wear and tear of war, a new suit of sail was necessary about once a year.

The remaining Dockyard artisans were all shipwrights, sawyers and caulkers, skilled in working in wood. These trades still exist in the Dockyard in small numbers and also a certain number of sail-makers, although, except for ships' boats, they never actually make a sail, and their work lies instead in the manufacture of awnings, gun-covers and other canvas fittings still required in the Navy. Rope-makers are also still necessary in the Yard, but in reduced numbers. The associated trade of hemp combers who prepared the hemp for the rope-makers has long since disappeared. The unskilled workmen in 1804 consisted of 24 labourers who also acted as boatmen and lightermen. The labourers now employed by the Admiralty are a hundred times more numerous than these original figures.

Three officers exercised authority in the Dockyard besides the Commissioner. These were: the Master Attendant, the Master Shipwright, and the Store-keeper, who were the predecessors, respectively, of the Captain Attendant, the Chief Constructor, and the Naval Store Officer of the present day. There was also a Surgeon for the Naval Sick Quarters, and an Agent Victualler, who are now represented by the Deputy Surgeon General at Bigli Hospital and the Superintendent of the Victualling Yard.

Such was the complete Staff of officers and men in the Naval Establishments on shore when Malta was first placed on permanent footing as the Headquarters and repairing base of the British Fleet in the Mediterranean during a period of strenuous maritime war 113 years ago. It may be asked : What material benefit has Malta derived from British Admiralty requirements ? That question can be answered by reference to the records in the Dockyard Offices. In 1804, the period which we are now considering, the total average weekly pay of the workmen in Admiralty employ in Malta was about £ 95. At present, the sum required for the payment of one week's wages is over £14,000, nearly every penny of which is spent and circulated in Malta.

Let us now pass on at one step over a long interval of peace to the second period of war with a European adversary in which England was engaged after Malta became a British possession. This takes us over an interval of just 50 years to the time when Great Britain became involved in hostilities with Russia, but with France as an ally instead of an enemy. Once again Malta was immune from direct attack or invasion in virtue of British maritime supremacy, and the Maltese of that day saw no more of the legions of the Tzar than they have seen of those of the Kaiser in the present war. But Malta nevertheless filled an important rôle as a naval base. British and French war vessels and transports and store-ships were constantly calling in for coal supplies and repairs en route to the seat of war, and returning. Large stocks of naval and military stores were deposited in the Island, and it is said that handsome fortunes were made by local contractors. The Dockyard and other Naval Establishments were busy day and night to an extent they had never been before and the whole period was one of great prosperity for the Island.

Some expansion of the Naval Establishments had taken place in the 50 years interval. Bighi Villa and grounds had been acquired by the Admiralty and enlarg-

ed to the size of a first class hospital not indeed of its present dimensions, but adequate for the requirements of the period and superior to any other Naval Hospital abroad in those days. In Dockyard Creek the original Admiralty property had been extended, re-arranged and consolidated. In the first place, the public jetty of Vittoriosa, known as the Marina, on which stood the official residences and the provision houses for the Fleet, had been closed to the public by a wall running from house to house and was now entirely reserved for Naval use as a Government wharf. The long double colonnade, which is a familiar object to those who have occasion to visit that side of the harbour, had been built over this jetty, and the Admiral Superintendent had been installed in the house which has ever since been the official residence of his long line of successors.

The old Galley Arsenal which had adjoined this Marina had been demolished and a large bakery built on the site. Naval baking in 1854 had nothing to do with the production of what is generally known to us as bread, but consisted entirely in the manufacture of the old type of Naval biscuits, known to sailors as "hard tack." The ordinary soft bread sold by bakers was not provided as an article of Naval diet until many years later, and the official ration for officers and men was always biscuit. But it was officially designated as bread, and the building where it was manufactured and issued in hundreds of tons was officially styled the "Bakery." Next to the Bakery on the east side stood a public jetty which was known as the "Garden Reach" and in 1854 was still Civil Government property. By this jetty, the people of Vittoriosa had access to the water side in Dockyard Creek even after the old Marina had been enclosed by the Admiralty. On the east side of Garden Reach lay the moat of the old Vittoriosa line of fortifications which the Admiralty at one time proposed to convert into a Dry Dock but that scheme was abandoned. To the eastward of the moat the land surrounding the Admiralty Store-houses on that part of the water front had been acquired by the Admiralty

in the interval, and the public wharf at Cospicua also, the whole having been enclosed and reserved for naval use. The land at the head of Dockyard Creek, on which the Burmola Market had once stood, had also been acquired, and the acquisition extended along the water front in both directions, so as to meet the Admiralty Jetty in Cospicua on one hand and the so-called New Arsenal on the other. Admiralty property, therefore, in 1854 reached from Cospicua along the water side round the head of Dockyard Creek to the Sheer Bastion in Senglea. A most important development in the equipment of the Dockyard as a Naval base had taken place in this newly acquired area, by the construction of a Dry Dock at the head of the Creek. This, the first Dry Dock built in Malta, was opened in 1848, six years before the Crimean War. It met an urgent naval need of long standing, and the same dock in a slightly extended form remains in constant use to the present day. It was capable of receiving any vessel afloat at that time, and a photograph is extant of the old three-decker "Hibernia" in that dock, one of the largest vessels in the British Navy in the early part of the nineteenth Century, which afterwards lay in Malta harbour as depôt ship for many years. At the present time, ships are so much longer in design that the first dock in Malta is too short for anything larger than destroyers and small craft.

It will be seen, that by 1854 the Admiralty had acquired about three-fourths of the entire shores of Dockyard Creek. Only the Senglea Marina from the Sheer Bastion to Isola Point and the jetty on the Vittoriosa side known as Garden Reach remained Civil property open for general public use. But, as yet, the immense extensions to the westwards which followed in successive years had not even been thought of. In the first half century of the British sovereignty of Malta, the development of the Naval Establishments had been chiefly in the direction of consolidation and equipment. Extensions there had been, but not on a large scale as compared with the original area. It was left to the next half century

to witness the acquisition of enormous additional space for Admiralty purposes.

In 1854 the staff consisted of 360 officers and men, that is to say, it had more than doubled in the 50 years since first organized. The workmen, however, were precisely of the same trade as at the first. Ships were still built of wood and, although the steam engine had been turned to practical use, its application to maritime propulsion was on a very small scale and all ships in the Navy were fully rigged for sailing. The only steam battleship in the whole British Fleet in the Mediterranean was the 90.-gun ship "Agamemnon" whose namesake of the present day has often been seen in Malta Harbour. The Dockyard workmen, therefore, were still nearly all either shipwrights or sawyers, whose tools were the axe, the adze, the augur, and the saw, or sail-makers and ropemakers who worked with the marlinespike, the sail-needle and the rope-jack. The officers of the Naval Establishments were the Admiral Superintendent, the Master Attendant, the Master Shipwright, the Agent Victualler and the Civil Engineer. The title of Commissioner for Naval Affairs had been abolished and that of Admiral Superintendent substituted. The wages of the Dockyard Staff at this period averaged about £260 per week, or nearly three times as much as when Malta first became a Naval base. This was an appreciable addition to the material benefits conferred on Malta, but very small indeed in comparison with what was to follow in the period which succeeded.

Such was the general scale to which Naval Establishments on shore at Malta had been developed when Great Britain was engaged for the second time in war with a European enemy since the day when the British Flag was first hoisted over the Island. Sixty years of peace were to elapse before the next. Then on August the 4th, 1914, at midnight the Admiralty telegram announcing the declaration of war against Germany was despatched to the British Admirals serving in all the seas of the world, and Malta once more became destined to fill the part of

a first class Naval base in a great European conflict, the greatest indeed in history. As before, however, the Island itself remains immune from direct attack by virtue of our supremacy in the surrounding waters.

It has been explained that some expansion of the Naval Establishments at Malta had taken place between the first and second periods of war. But it was as nothing compared with the expansion which took place between the second and the third. Many reasons exist for this, the chief of which were: the renewed growth of the maritime power of France; the building of great fleets by Germany and Italy; the opening of the Suez Canal; the rise of the Black Sea wheat trade; and the change from wood to steel as material for shipbuilding, and from sail to steam as a method of propulsion. The increasing fleets of the Powers and the increasing volume of British Mediterranean trade necessitated a corresponding increase in the fleet required to protect it. The changes in ship construction and methods of propulsion increased the individual ships to five times their previous tonnage and fifteen times their previous cost. At the period of the Crimean War three quarters of the foreshores of Dockyard Creek and one Dry Dock therein situated, afforded sufficient space for all naval requirements on shore. But in the succeeding 50 years, they increased so much that the area occupied by the Admiralty extended by degrees not only in Dockyard Creek itself, but overflowed into French Creek and spread at intervals right up to the head of the Grand Harbour and even round it. Moreover, the Admiralty acquired property in many parts of the Island away from the Grand Harbour altogether, as for instance on the shores of Marsamuscetto and Marsa Scirocco, at Calafra, Ghain Tuffieha, Ricasoli, and other points in the Island for the various Signal Stations and Wireless Telegraph Stations.

Taking these extensions in succession as they now stand, although not in the order in which they were acquired, and beginning at the eastward, the first consi-

derable plot of land which we now find as Admiralty property is at the head of Rinella Bay. Here has been established a high-power wireless telegraph station by means of which Malta can communicate direct with England, or, if necessary, with other distant stations in the British Empire. Next, in Dockyard Creek, the area required for naval use begins right out at Fort St. Angelo, which is now the Naval Depôt where officers and men permanently stationed at Malta are quartered. Then the Garden Reach Jetty in Vittoriosa which in 1854 remained unenclosed as a gap in the Admiralty line of wharfage has been added to it and closed to the public, whose only right of way to the water on that side of Dockyard Creek is now by the San Lorenzo, Santa Teresa and Santa Caterina Steps, the first two of which were constructed by the Admiralty as substitutes for the former public Marinas. These steps pass over tunnels connecting the Admiralty property on either hand, and it is possible now to walk on Admiralty ground round Dockyard Creek from the extremity of St. Angelo on one side to the Sheer Bastion Jetty and Dockyard Terrace on the other. But this extension was not sufficient for the ever-growing needs of the British Mediterranean Fleet in the second half of the 19th Century. The increase in the length of ships rendered a new Dry Dock an absolute necessity soon after the Crimean War, and there was no possible site for the construction of such a Dock in Dockyard Creek. The Admiralty Engineers, therefore, had to look elsewhere, and eventually selected a position on the opposite side of the neck of Senglea peninsula, just outside the old line of defence known as St. Michael's Bastion, facing that part of the Harbour known as the French Creek. Here a new Dock was begun which was completed in 1871. It was named The "Somerset Dock" after the Duke of Somerset, who was then First Lord of the Admiralty. Two tunnels were driven under the elevated public thoroughfare which gives Senglea access to Cospicua and these connected the old Admiralty property on Dockyard Creek with the new extension on French

Creek. When first constructed and for a few years afterwards, the Somerset Dock, which was a great advance in size over the old dock built in 1848, was large enough to take any ship in the Navy. It still remains in constant use, but, like its predecessor, is now only long enough to take the smaller classes of vessels.

It was while the Somerset Dock was actually in course of construction that the opening of the Suez Canal took place, which affected the whole strategic and commercial situation in the Mediterranean. The immense development in the volume of British commercial shipping passing through Mediterranean waters necessitated a corresponding increase at once in the strength of the Fleet required to protect it, and Malta became more important year by year as the headquarters of that Fleet. A third and still larger dock was, therefore, found to be necessary before many years passed, and a still further extension of Admiralty property had to be sought in some direction to provide a site. This eventually was secured by acquiring the foreshore on the west side of the Senglea peninsula below the old fortification walls. Up to then it had been chiefly used for hauling boats and for spreading nets and sails, and on this area a new dock was commenced larger than either of the other two. After some delays it was completed in 1892, and named The "Hamilton Dock," after the First Lord of the Admiralty of that day.

Within six years of the completion of the Hamilton Dock, however, it became evident that even that dock would not suffice to meet the ever-growing requirements of the Fleet. Every new type of ship was larger than her predecessor and every year the number of ships on the Station increased. The great competition in Naval armaments, which lasted for more than 25 years before the outbreak of the present war, had in fact begun, and no man could foretell to what development it might reach. One fact alone was certain; Great Britain could, under no circumstances, afford to be left behind. An entirely

new scheme of Dockyard extension was, therefore, planned at Malta on a still vaster scale than any which had preceded it. This comprised the addition of all the land along the water's edge round the head of French Creek right back for some distance from the foreshore to the foot of the western bastion of the Cottonera Lines. Most of this area had been open public ground, and here two new and much larger docks were constructed with all the necessary factories and workshops. The execution of this immense work provided 10 years employment for a very large army of labourers, and at the same time the building of the St. Elmo and Ricasoli breakwaters was carried out, giving work to many more. During those ten years, a sum exceeding £3,000,000 was expended in Malta in carrying out extensions for Naval requirements on shore, the whole of which expenditure was additional to the ordinary wages of the Dockyard, the Victualling Yard, and the other Establishments already employing Maltese workmen.

Moreover, the Admiralty extensions during the second half of the 19th Century were not confined to Dockyard and French Creeks. Soon after the Crimean War, two questions in connection with the Naval administration arose which required attention on an ever increasing scale. The introduction of steam made it necessary to establish supplies of coal in thousands of tons, and, at a later day, of large quantities of fresh water for the modern type of boilers. Space for the storage of all this coal and water had to be found somewhere, and the demand constantly grew from year to year. The Admiralty began therefore to acquire land on the west side of French Creek as well as on the east, at first only on a small scale, but by degrees spreading along the side of the harbour in both directions, and ultimately all over the Corradino Heights. This extension was devoted chiefly to the storage of coal and oil fuel, as far as the waterside was concerned. But as regards the Corradino Heights the system of utilization was what might be described as a double-storied arrange-

ment. The ground surface on the top of the hill was converted into a rain-catching area to help to fill tanks containing 40,000 tons of water, and the inside of the hill was excavated to form underground magazines for storage of explosives. The expansion of the Corradino water frontage in Admiralty hands reached by degrees to the point at which it now stands on the north side of the head of the Grand Harbour. In the opposite direction Admiralty property increased by degrees till it was met by the extra area required for the most recently constructed docks at the head of the French Creek. This completed a continuous stretch of foreshore of a length of more than four miles, from St. Angelo at one end to the Coal Stores at the other, all of which is now in use for Naval requirements, except a few gaps at the Marsa end of the Grand Harbour.

Such then marks the expansion of Malta as a Naval base in the period between the second and the third European War in which England has found herself engaged since the day when Malta joined the Empire. That epoch, as we have already seen, marked the transition from sail to steam in the propulsion of ships and from wood to steel in their construction. From the remotest antiquity till the middle of the 19th Century, ships had been built of wood and propelled by the wind or oars. Since then wind and wood have alike been dispensed with, as far as ships of war are concerned. But Malta Dockyard has been fully equal to the change, and the quality of the steel workmanship produced at the Yard to-day is in every respect equal to that of the wood workmanship in the former epoch.

Of course, the immense extension of Admiralty Establishments necessitated a corresponding increase in the number of men in Admiralty employment. That number to-day stands at over 10,000. In other words, whereas the Staff of the Naval Establishments was doubled between the first and second of the Wars to which reference has been made, it was increased thirty-fold

between the second and the third. Whole new departments and branches of Naval construction and repair had to be created to meet the introduction of steam and electricity, and all the original departments had to be extended in proportion. A Post-Captain was appointed in succession to the former Master Attendant, whose duties comprise the entire charge of the berthing and movements of all vessels in Admiralty waters at Malta, and the Civil Staff was increased by the appointment of officers to the charge of the Victualling Yard and Ordnance Depôt. Other new officers included a Chief Edgineer and his Assistants for the repair of ships' machinery and gun-mounting, and an Electrical Engineer in charge of the large electrical department of the Dockyard. The wages of the workmen now reach an average total of about £14,000 a week, and, as on an average each workman has four dependents on him, we may say that about 50,000 Maltese, men, women, and children, receive their daily bread from Admiralty money. Almost as many more are affected in some degree by this great disbursement from the pocket of the British taxpayer, for the Dockyard workmen and their families are a source of profit to whole classes of tradesmen and others, even to the farmers and countrymen, besides to the professional classes in those parts of the Island where the workmen reside. To that extent, therefore, does Malta benefit directly by its status as a first class Naval base. But apart altogether from the money earned by the Maltese working classes in the Naval Establishments, there is the large sum expended every year in Malta by the Fleet of which it is the headquarters. For more than 25 years past, the crews of the Mediterranean Fleet have numbered 10,000 officers and men, a large part of whose pay is spent in the Island and who are chiefly fed on Maltese produce as regards certain articles of their rations. In fact, as already remarked, no other country would have made the same use of Malta as England; and only because the Island is under the British Flag does all this money find its way into Maltese

pockets. If there are any people, therefore, who choose to believe that the Maltese would have been happier and more prosperous under some other Power, they are embracing a doctrine of political madness, for, if by any turn in the events of the future, this Island again changed hands, one of the first results would be the closing of all the Naval Establishments, the withdrawal of all but a small Naval force, and the reduction of 50,000 industrious and deserving people to destitution and ruin.

In conclusion, it is perhaps permissible to venture on a few speculations as to the future, although attempts to forecast industrial events are at all times liable to miscarry, and never more so than at such a time as the present when the whole economic condition of the world is in a state of utter confusion. There does happen to be, however, one branch of industry in regard to which it seems safe to predict great activity after the war. The British Mercantile Marine has suffered gigantic losses and these losses are not yet at an end. When hostilities are over one of the most urgent requirements of the British Empire will be ships of all sizes and classes, from Ocean liners to tugs and trawlers, and every ship-yard in England and Scotland will be busy for years in meeting this want. There seems to be no good reason why Malta should not bear a part in the work. The Island possesses certain great advantages for shipbuilding by private enterprise if the necessary capital can be attracted or raised by loan. Four special requisites are necessary for a shipbuilding yard, and Malta possesses three of these in an eminent degree. Firstly, a good harbour is required. Secondly, a sufficient supply of labour. Thirdly, a good site near deep water with firm foundations for the building slips and adequate accommodation near by for the factories and workshops. Fourthly, a position within fair reach of supplies of steel, coal and other raw materials. As regards the first three of these, Malta is very well provided, and, even as regards the fourth, the position is not bad. An excellent harbour in every respect is available, that is to say, **Masamuscetto**.

A plentiful supply of labour is at hand, unskilled at present, but capable of training. Admirable sites for a shipbuilding yard exist on Ta Xbiex and Gzira Island with all the necessary special features, such as firm foundations, deep waters and an ample area for shops and factories. As regards coal and iron, there is no local supply, it is true, but the distance from all sources of supply is not by any means so great as to be a financially insuperable objection. Italy has no native supply of these raw materials, but yet maintains several large shipbuilding establishments which are financially profitable and successful concerns. It is no more expensive to convey coal and iron to Malta than to Italy. With all these natural advantages, therefore, and the absolutely certain demand for ships which must arise after the war, capital should find a profitable investment in shipbuilding as a private industry in Malta. This, if developed on a sufficient scale, might bring a long era of prosperity to the Island. It is not easy to see what other form of industry could take its place under such conditions of advantage, and, failing some such outlet for the labour of the large and increasing population, some difficult social problems may very possibly arise in the years of peace which all must hope are before us.

In addition to shipbuilding it seems not improbable that aircraft building will be an active industry after the war, and one in which Malta might bear a very useful and profitable share. The navigation of the air has made immense strides in the last three years, and aviators are confident that vastly greater developments will be reached in the future. The climate of Malta is favourable for flying on most days in the winter as well as in the summer in marked contrast of that of Great Britain, and this is a great advantage in carrying out all kinds of tests, trials and experiments in the air such as are a necessary part of the work of every air craft factory. In the seaplane construction which has already been carried out in Malta Dockyard the Maltese artisans have displayed a degree of skill that suggests that the work is of a

kind to which they are peculiarly adapted. If that proves to be the case on further trial it should be of very hopeful augury for the working classes in the island.

The above are matters which deserve the serious attention of all those who are interested in the future welfare of Malta and the Maltese, and it is much to be hoped that some such projects may materialize. For more than a century British maritime requirements have heaped benefits on the Island. There is every reason to suppose that these are not yet at an end, and that the position of Malta in the British Empire may rise still further in importance in the years which lie before us if full use is made of its natural advantages.

