

Investigating the Coal Question

In 1882, Lord Carnarvon delivered his Commission's third and final report on "the best means ... of providing for the defence and protection of Our Colonial Possessions and commerce ... special attention being given to necessity of providing safe coaling, refitting and repairing stations ... in time of war."¹ These three reports attempted to assess and make recommendations for the permanent security of British interests and shipping. Their influence was such that they are widely seen as the beginnings of a coherent global defence strategy.

This book is, of course, not the first to argue for the importance of the Carnarvon Commission. Indeed, Peter Burroughs has described it as "a turning point in official [imperial defence] policy."² It does, however, argue for a more complex understanding of these reports, framing them within a changing political landscape and placing the Commission within the rapidly changing context of imperial and foreign policy that came to dominate the politics of the late nineteenth century. At the centre of these debates was, necessarily, the Royal Navy, the primary safeguard of British global trading interests. Whilst threats to empire and trade, both real and imagined, help to explain the development of these debates, the

¹ *London Gazette*, 12 September 1879.

² Burroughs, "Defence and Imperial Disunity," Porter, A.N. (ed.), *The Oxford History of the British Empire. Vol. 3, the Nineteenth Century*. (Oxford: Oxford University Press, 1999), 335.

primary causes for alarm were the problems the navy faced in fulfilling its worldwide role in the age of steam.³ Chief amongst these was a need for a safe and regular supply of quality coal wherever a ship may be. Thus, to understand this turning point in imperial defence policy, we must trace the rise of “coal consciousness”—a dawning realisation about the crucial part that the security of coal and coaling infrastructure played in the protection of British interests abroad.

Whilst it may have been a defining moment, the Commission was far from the beginning of debates around the coal question, nor the first time it had been understood in terms of a wider imperial context. An awareness of the strategic importance of coal had existed for some time in commercial and shipping circles, and had been an important issue for the Admiralty from the moment that a steam navy had been pursued by Britain. Yet outside of a small minority of navalists, the linkage between coal supply and strategy had received little attention, and even less concerted investigation. That this issue came to be placed front and centre in imperial defence planning can therefore be explained for two reasons. First was a rapid expansion of seaborne trade on a global scale, which mobilised much stronger commercial and financial backing for a strong navy. Second was a growing uncertainty in Britain more generally about its place as the global hegemon. It was only when this status, and therefore trade, appeared to be under threat that Britain began to seriously consider the importance of coal to imperial defence.

This connection meant that debates around the coaling question necessarily were made in the context of wider understandings of imperial and trade debates, yet the importance of this context, and of coal's importance to other parts of this debate, have largely been ignored by historians. This chapter, therefore, charts the course of coaling debates until the publication of the Carnarvon Commission's reports in 1882, considering how responses to the coal question were both affected by, and crucial to, shifts in political thought about imperial defence. In particular, it considers how the Carnarvon Commission, compared with the earlier Colonial Defence Committee, created an enduring coaling knowledge, achieved through the sheer weight of evidence and data collected,

³Beeler, “Steam Strategy and Schurman,” in Kennedy, Greg, Neilson, Keith and Schurman, Donald M. (eds.), *Far-Flung Lines: Essays on Imperial Defence in Honour of Donald Mackenzie Schurman*. (London: Frank Cass, 1996).

reflecting a wider belief in the power and practical utility of information and knowledge.

UNDERSTANDING THE COAL QUESTION

The Marquess of Salisbury famously remarked in 1877 that “English [foreign] policy is to float lazily downstream, occasionally putting out a diplomatic boat-hook to avoid collisions.”⁴ This statement reflected a general confidence in the political-economic orthodoxy of free trade that had been highly successful in expanding Britain’s merchant marine, whilst driving down defence costs around the empire.⁵ Yet the world was changing. Although things would not come to a head until a year later at the height of the Eastern Crisis, questions were being raised about both Gladstonian foreign policy and attitudes toward empire. Unrest in the formal and informal empires, including major rebellions in Jamaica and New Zealand in the 1860s, undermined a policy based on the low-cost defence of empire, not least because they were widely seen to have been exacerbated by cost-saving troop withdrawals from the colonies. Alongside the growth of other powers, both in a commercial and in a military sense, Gladstone faced the accusation that they were endangering the empire for a foreign policy that appeared to be based on peace at all costs. This led to what have often been seen as defensive annexations, prompted by fear of a rival power taking control of territories and denying Britain access to its trade.⁶

Seizing on this discontent, the Conservative Party under Benjamin Disraeli reinvented itself as the “imperial party.”⁷ Epitomised by Disraeli’s Crystal Palace speech of 1872 where he announced that one of the aims of his party was “for maintaining the greatness of the kingdom and the empire,” Gladstone’s imperial and foreign policies came under attack.⁸ Disraeli suggested that the Liberal leader’s refusal to increase

⁴ Malcolm Pearce and Geoffrey Stewart, *British Political History, 1867–1990: Democracy and Decline*. (London: Routledge, 1992), 143.

⁵ E.H.H. Green, *The Crisis of Conservatism: The Politics, Economics, and Ideology of the Conservative Party, 1880–1914*. (London: Routledge, 1995), 2.

⁶ Green, *The Crisis of Conservatism*, 67.

⁷ Ibid. 67–69.

⁸ Disraeli suggested that the working classes “are for maintaining the greatness of the kingdom and the empire, and they are proud of being subjects of our Sovereign and members of such an Empire. Well, then, as regards the political institutions of this country, the

spending on imperial matters in the face of (largely imagined) French and Russian threats in particular equated to a “strange mania for eating dirt” and to “living in a blaze of apology.”⁹ Disraeli’s ability to exploit a growing unease with Gladstone’s policies in the popular consciousness meant that they soon became synonymous with “penny-pinching commercialism.”¹⁰ This was combined with criticism of the method of “defence by scare” resulting from a lack of a sustained or systematic consideration of the requirements of the empire.¹¹ As a result, empire was once again an electoral issue by the 1870s, and the self-styled imperial party were able to take the initiative, returning to power in the 1874 election with their first absolute majority since the 1840s.

Of course, the threat caused by the growth of Britain’s rivals was not purely a party political issue but one that increasingly caused it geopolitical headaches. Unlike other imperial powers of the time, Britain was not a continentally-minded military power, but rather a state with a maritime culture. As such, the sea was not just a space to project power across, as it was to its rivals, but instead the source of security for both the nation and for its trade. Britain relied on the sea, and, as such, the ability to control it and to defend its trading networks were crucial to its global power and interests. Unsurprisingly, then, threats to its oceanic hegemony could not be taken lightly.

Whilst a shifting global balance of power alone exerted significant pressure on British maritime hegemony, this was complicated by the fact that the latter part of the nineteenth century saw Britain increasingly reliant on new technologies (such as the telegraph and steamship) to project its power on a global scale more easily. In theory, at least, these multiple

maintenance of which is one of the chief tenets of the Tory Party, so far as I can read public opinion, the feeling of the nation is in accordance with the Tory party.” Speech at banquet of the National Union of Conservative and Constitutional Associations, Crystal Palace, London (24 June 1872), cited in “Mr. Disraeli at Sydenham,” *The Times*, 25 June 1872.

⁹ Pearce and Stewart, *British Political History*, 39.

¹⁰ Anna Gambles, *Protection and Politics: Conservative Economic Discourse, 1815–1852*. (London: Royal Historical Society, 1999), 230; J.P. Parry, *The Politics of Patriotism: English Liberalism, National Identity and Europe, 1830–1886*. (Cambridge: Cambridge University Press, 2006), 3–10.

¹¹ See Richard Cobden, *The Three Panics: An Historical Episode*. (London: Cassell, 1884).

advantages of these advances employed across the empire allowed Britain unprecedented communication and global range, and have often been viewed through the whiggish lens of perpetual progress. However, they also came with inherent flaws and weaknesses should Britain be involved in a global war, particularly if an enemy could disrupt or destroy crucial parts of the infrastructure.¹² The global network of telegraphs, for example, offered both advantages to, and placed burdens upon, British global defence, as Paul Kennedy has shown. Swift communication allowed Britain to defend its empire and other interests more effectively in the face of its rivals, and, furthermore, the ability to deny others the use of its networks. Yet such a huge span of infrastructure inevitably had weaknesses, which, if left undefended, could potentially be exploited even by a much smaller power, causing Britain disruptions in its crucial communication networks, and threatening its ability to protect its oceanic interests.¹³

Whilst the telegraph network has received ample attention from historians, it was not the only infrastructure vulnerable in this way.¹⁴ Possessing a fundamentally maritime empire, with its trade crossing the world's oceans, a global navy was of crucial importance to the British. The advent of a steam navy therefore necessitated the establishment of a chain of coaling stations to service the Royal Navy's needs (see Fig. 2.1). Although this allowed the Royal Navy to maintain a truly global reach, it also made its infrastructure a source of critical vulnerability even to single ships of lesser powers. In this way Britain increasingly considered coaling stations, such as its telegraph network, as crucial, but also particularly exposed, parts of its global infrastructure. As such, they were key drivers of debates and actions on the larger issue of imperial defence.

¹²The breakdown of infrastructure has been explored for the recent past in Stephen Graham, *Disrupted Cities: When Infrastructure Fails*. (London: Taylor & Francis, 2009).

¹³Paul Kennedy, "Imperial Cable Communications and Strategy, 1870–1914," *The English Historical Review*, 86, 341 (1971), 728–752.

¹⁴For example: Peter Putnis, Chandrika Kaul, and Jurgen Wilke (eds.), *International Communication and Global News Networks: Historical Perspectives* (New York: Hampton Press, 2011); Glen O'Hara, "New Histories of British Imperial Communication and the 'Networked World' of the nineteenth and Early twentieth Centuries," *History Compass*, 8, no. 7 (2010), 609–625; Daniel R. Headrick, *The Invisible Weapon: Telecommunications and International Politics, 1851–1945* (Oxford: Oxford University Press, 1991); Iwan Rhys Morus, "The Nervous System of Britain: Space, Time and the Electric Telegraph in the Victorian Age," *The British Journal for the History of Science*, 33, no. 4 (2000), 455–475.



Fig. 2.1 Map of coaling stations, Admiralty, (1874 [corrected to 1887]). Courtesy of the National Museum of the Royal Navy, Portsmouth

The development of concerns about the weaknesses of the infrastructures of steamship and telegraph technologies followed similar trajectories to the rate of their adoption. Thus, just as it was the huge growth of telegraphic networks in the 1870 that precipitated fears about its weaknesses, when the navy became almost fully shackled to the coaling station—with the adoption of mastless steam ships—in the 1870s naval thinkers became increasingly coal conscious.¹⁵ This awareness went beyond solely recognising a need for a global chain of stations, and an efficient and reliable infrastructure with which to supply them, but also emphasised that both needed to be adequately protected in the event of war. Like the telegraph, the very technology that allowed Britain to project its power more effectively, was also its Achilles heel. The disruption, destruction, or loss of coaling stations could hamper or even paralyse British naval operations in those waters. Such fears, John Beeler suggests, led to a “body of doctrine on the connection between Empire, trade, coal and defence” existing by the mid-1870s.¹⁶ These fears may not have been well founded, as none of Britain’s rivals alone were able to match its global reach, but in an era of heightened geopolitical tensions, and an increasing fear that Britain had rested on its laurels for too long, these threats loomed large.

Coaling stations, such as telegraph cables, were potentially easy targets even for weaker rivals. Britain did not need to look back far for proof of how effective even small numbers of cruisers from inferior navies could be, with the devastating activities of the Confederate SS *Alabama* in the American Civil War, less than a decade previous.¹⁷ These fears were accentuated by the lack of protection at the majority of Britain’s coal depots used by the navy. A need to protect strategic naval bases was of

¹⁵The first was introduced in 1871. The introduction of steam engines had been gradual due to concerns about the performance and efficiency of steam engines, see: Quentin Hughes, *Britain in the Mediterranean and the Defence of Her Naval Stations* (Liverpool: Penpaed, 1981), 136. Although needed less regularly, they were also shackled to the dry dock, something that has been discussed in Andrew Lambert, “Economic Power, Technological Advantage, and Imperial Strength: Britain as a Unique Global Power, 1860–1890,” *International Journal of Naval History*, 5, no. 2 (2006).

¹⁶Beeler, “Steam Strategy and Schurman,” in Kennedy, Neilson, and Schurman (eds.), *Far-Flung Lines*, 326.

¹⁷*Alabama* successfully burned 65 Union vessels, most which were merchant ships. See, for example, Raimondo Luraghi, *A History of the Confederate Navy*. (Annapolis: U.S. Naval Institute Press, 1996).

course something that was not new, and concerns had been raised often in the eighteenth century.¹⁸ Yet the advent of a global steam powered navy gave a new importance to stations and imperial spaces that had previously been seen as unimportant backwaters, and had therefore barely featured at all in British defence thinking. This included those that were “almost exclusively coaling stations and ports-of-call, with little other trade,” as well as “brand-new colonial cities such as Karachi, Mombasa, Singapore, Port Saïd, and Aden,” which grew with the new steamer trade.¹⁹ Of most concern were those regularly used by the navy. Of these, it was only the Imperial Fortresses of Halifax, Bermuda, Gibraltar, and Malta that had any defences at all. Such weakness means it was not entirely implausible that even a few enemy cruisers could cripple the ability of the Royal Navy to refuel in large parts of the world.²⁰

These fears fed into a wider narrative of increasing criticism of what was increasingly seen as Gladstone’s negligence of empire in the 1870s. The potential danger to coaling infrastructure was therefore part of a wider anxiety about Britain’s place in the world, and the safety of its trade and possessions beyond its own shores. Indeed, it is not a coincidence that it was precisely this time when similar concerns about Britain’s telegraph network were aired.²¹

THE EMERGENCE OF COAL CONSCIOUSNESS

Whilst the defence of naval coal supply would become a central issue in imperial defence planning in the 1880s, the coal question was not considered an important issue, even by many of those in the Admiralty, at least for the first half of the 1870s. With mastless steamships still a new phenomenon, the need to protect coal and to ensure a worldwide fuel supply took time to reach wide scale acceptance. This was not least because the majority of ships, particularly those on far-flung stations, still had sails. Thus, it was only a small minority of navalists, led by Sir J.C.R. Colomb and Sir Alexander Milne, who were increasingly vocal

¹⁸See, for example, the work of Daniel Baugh.

¹⁹Daniel R. Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. (Oxford: Oxford University Press, 1981), 168.

²⁰See, for example, ‘Memorandum on Colonial Defences’, TNA, CO 537/208.

²¹Kennedy, *Imperial Cable Communications and Strategy, 1870–1914*.

about what they saw as an impending naval disaster, should Britain find itself at war. Colomb, alongside his brother, was a prolific writer on naval strategy. Perhaps one of the earliest to develop a coal consciousness, he recognised in 1867 that difficulties in war could only be avoided by ensuring the “wartime availability of coal supplies, which would enable the squadron to operate effectively while at the same time denying these coaling facilities to enemy cruisers.”²² That his ideas did not gain traction may be attributed to the fact that although he raised these issues as an MP in the House, he had no official governmental role, and thus his concerns were easily marginalised. Milne, however, was First Naval Lord when the first mastless ship was launched, and had advocated similar ideas to Colomb as early as 1858, warning about the danger of not defending coaling stations during a war scare with France.²³ He further suggested in 1874, whilst still in post, that “coaling stations would be the great problem in a future war and they must be maintained and extended ... We could get no coal except from our own colonies, where new depots would have to be established.”²⁴ Yet even a key man in the Admiralty, albeit one who would soon be retiring from post, failed to substantially develop a wider coal consciousness outside of purely naval circles. The reasons for this are threefold: the Admiralty lacked influence in Government, where the War Office held much more sway. More crucially, with Gladstone in power, funding naval defence in the empire generally attracted little support.²⁵ Finally, coaling station defence was generally seen to be a question of land defence, meaning that it was not the responsibility of the Admiralty, but of the War Office.

Here, the issue found some interest, and several papers on coaling station defence were published. Discussions tended to be led by Royal Engineers and, in particular, perhaps the foremost British military engineer, Sir William Jervois. As such, considerations of global strategy were

²²Quoted in Beeler, ‘Steam Strategy and Schurman’, in Kennedy, Neilson, and Schurman (eds.), *Far-Flung Lines*, 33.

²³He served as First Naval Lord (the professional head of the Royal Navy) in 1866–1868, and again in 1872–1876.

²⁴Milne, quoted in Beeler, ‘Steam Strategy and Schurman’, in Kennedy, Neilson, and Schurman (eds.), *Far-Flung Lines*, 34.

²⁵Beeler, ‘Steam Strategy and Schurman’, in Kennedy, Neilson, and Schurman (eds.), *Far-Flung Lines*, 34.

almost inevitably reduced to questions of bricks and mortar.²⁶ Despite the publication of several reports, enthusiasm for the subject did not extend to its top echelons, once again reflecting a wider mid-Victorian liberal consensus that focused on the defence of Britain, which was based on the belief that Britain's naval supremacy was assured.

Whilst it is perhaps easy to see this as a rather complacent attitude toward the safety of Britain's global commerce and empire, especially if one considers the "imperial crises," arms race, and eventual world war of the subsequent decades, in the early 1870s this standpoint was understandable. Britain had successfully avoided large-scale war on the continent since 1856, and with its battleship fleet unchallenged, trade had flourished, and control of the empire had remained largely secure, despite diminished defence budgets.²⁷ Unsurprisingly, then, this status quo of low spending and growing trade was largely accepted, and this was the greatest obstacle against implementing hugely expensive recommendations for coaling station defence. This in turn explains why even the self-styled "imperial party" under Disraeli did little to address the situation in the early part of his premiership.

TOWARD AN OFFICIAL COAL CONSCIOUSNESS

Although there were growing imperial tensions in the early 1870s, as a wider sense of geopolitical unease developed, it was not enough for even the Conservatives to pursue a radically different imperial agenda. It took the Eastern Crisis, which peaked in 1877–1878, to fully expose cracks within the mid-Victorian liberal consensus over foreign policy. For the first time since 1856, a large-scale war involving Britain appeared a real possibility, and Britain's hegemony of the oceans seemed under threat from rival European navies. The gradual and protracted disintegration of the Ottoman Empire led to a fear of Russian aggression toward Britain in the eastern Mediterranean. This was a particular worry to Britain, which had large amounts of trade travelling through the Suez Canal

²⁶For an excellent history of Jervois and his fortifications, see Timothy Crick, *Ramparts of Empire: The Fortifications of Sir William Jervois, Royal Engineer 1821–1897*. (Exeter: University of Exeter Press, 2012).

²⁷Ibid., 41–44; Andrew Lambert, 'The Royal Navy: 1856–1914', in Keith Neilson and Elizabeth Jane Errington (eds.), *Navies and Global Defense: Theories and Strategy*. (Westport, CT: Praeger, 1995), 209.

(which opened in 1869), increasing the importance of protecting commerce in this region, and the potential danger to India made the issue even more fraught. That the Eastern Crisis became such a watershed was largely because it appeared, both inside and outside Westminster, to have “caught the Empire woefully unprepared.”²⁸ Even if the Russian threat was wholly military, as it had no fleet in the Black Sea or Mediterranean in 1877–1878, the situation in the Eastern Mediterranean was still viewed with some trepidation by the British. This was largely based on the fear, almost certainly imagined, that Franco–Russian collusion would result in the encirclement of the British Mediterranean Fleet. Moreover, the Royal Navy’s impotence—it has appeared “practically useless” during the crisis—was a source of major concern as it was remarked that Britain had been shown to be unable to act unilaterally in the defence of its imperial possessions.²⁹ This perception of British naval weakness in the face of rival aggression allowed navalist agendas to come to the fore, and, as part of this, the issue of coaling station defence was able to gain traction.

For many, this protracted incident showed that a clear threat existed to Britain and its interests. Increasingly, it seemed that it was no longer possible to protect free trade with minimal military and naval intervention, making two core facets of liberal fiscal policy incompatible. The almost ubiquitous policy of imperial indifference seen in the mid-Victorian period was therefore increasingly questioned in the 1870s. The days of those in power, especially Gladstone, “appear[ing] not to have much time for the colonies” at all, except in times of significant crisis, were giving way to the ascendant Disraelian Conservatism built on the issues of “the Empire and social reform.”³⁰ Looking to exploit a heightened imperial anxiety, the Conservative Party developed a progressively more pro-imperial rhetoric, leading to the emergence of an imperial angle to domestic politics. This rhetoric made relying on the “soft power” of

²⁸Beeler, ‘Steam Strategy and Schurman’, in Kennedy, Neilson, and Schurman (eds.), *Far-Flung Lines*, 35; Roger Parkinson suggests that this is the closest Britain came to war in the period 1856–1914: Roger Parkinson, *The Late Victorian Navy: The Pre-Dreadnought Era and the Origins of the First World War*. (Woodbridge: Boydell Press, 2008), 41.

²⁹T.G. Otte, ‘The Foreign Office and Defence of Empire 1856–1914’, in Greg Kennedy (ed.), *Imperial Defence: The Old World Order 1856–1956*. (London: Routledge, 2008), 11.

³⁰Pearce and Stewart, *British Political History*, 74; Stanley R. Steinbridge, *Parliament, the Press, and the Colonies, 1846–1880* (New York: Garland, 1982), 182.

diplomacy as a basis for imperial defence seem inadequate in the face of a growing fear of the expansion of Britain's rivals. Furthermore, it led to a feeling that Britain was losing its prestige by neglecting the empire.³¹

It did not go unnoticed that such threats were made more serious by changes in technology. Advances in naval architecture empowered Britain's rivals as well as the Royal Navy, and could endanger its maritime supremacy. Even if they lacked the infrastructure to operate without the use of facilities in home waters, improvements in warship design and efficiency increased the ability of foreign navies to wage war on an unprecedented scale and at a significant distance away from their home bases, escalating the risk to the British Empire at large.³² Moreover, navalists argued, to leave the very infrastructure that allowed the navy to protect British interests undefended seemed at best careless, but at worse potentially catastrophic. Russia may have posed little threat to Britain's maritime supremacy, but this mattered little as navalists seized upon the crisis—and the resultant pro-imperial political shift—to argue that Britain would have to increase defence spending and make its presence felt in the Mediterranean if it wished to keep its place in the world.³³ To achieve these aims there was a need to invest in new warships, improve docks, and increase naval defences, including those of coaling stations, but all were costly and required an escalation in defence estimates. Increasingly, therefore, naval reform—argued as wholly necessary by navalists—became seen as incompatible with the low defence spending at the core of the mid-Victorian liberal consensus. Thus, the growth of coal consciousness was able to gain traction precisely because of the decline of a liberal attitude to imperial defence.³⁴

³¹Otte, 'The Foreign Office and Defence of Empire 1856–1914', in Kennedy (ed.), *Imperial Defence*, 10.

³²Greg Kennedy, 'The Concept of Imperial Defence 1856–1956', in Kennedy (ed.), *Imperial Defence*, 1.

³³Peter Baldwin, 'The Victorian State in Comparative Perspective', in Peter Mandler (ed.), *Liberty and Authority in Victorian Britain* (Oxford: Oxford University Press, 2006), 65; Simon Gunn and James Vernon, 'Introduction', in Simon Gunn and James Vernon (eds.), *The Peculiarities of Liberal Modernity in Imperial Britain*. (Berkeley, CA: University of California Press, 2011), 8.

³⁴See J.P. Parry, 'Liberalism and Liberty', in Peter Mandler (ed.), *Liberty and Authority in Victorian Britain*, 99; John M. MacKenzie, *Popular Imperialism and the Military, 1850–1950*. (Manchester: Manchester University Press, 1992), 12.

More and more, coal conscious navalists were joined by the vocal support of those involved in commerce. This sector, more than any other, recognised that imperial defence was not predominantly a land based construct designed to protect those areas shaded pink on the world map. Instead, it had to be centred on all British and imperial interests worldwide, and most notably the maritime spaces used by British commercial interests.³⁵ A tenfold increase in trade between 1860 and 1910 gave Britain a huge commercial advantage, owing to its domination of the maritime industries and global shipping, but it was also viewed as particularly vulnerable in a potential war.³⁶ Ship owners were therefore particularly concerned about how an inability to coal warships might remove the Royal Navy's protection of British maritime trade, leaving it vulnerable to the predations of rival powers.³⁷ Particularly prominent amongst these was the ship owner Sir Donald Currie, of the Castle Mail Packet Company, who asked the Disraeli government during the Eastern Crisis: "in the event of war, will not the enemy be able to step in and help themselves with coal, and perhaps destroy the remainder?"³⁸ The involvement of these key business interests in highlighting the coaling question reflected how naval coaling affected both the navy and the merchant marine, and, with strong ties between business and government, they became a key pressure group for change.³⁹

Although the Conservative government had rejected two further attempts by the War Office to address the coal question in 1877, largely because both advocated significant expenditure, the worsening of the Eastern Crisis the next year meant the issue failed to disappear.⁴⁰ Instead,

³⁵Andrew Lambert, 'The Royal Navy and the Defence of Empire 1856–1918', in Kennedy (ed.), *Imperial Defence*, 115.

³⁶Britain's economic power was sustained by secure markets, the empire, and the pre-eminence of the City of London. See Lambert, 'Economic Power, Technological Advantage, and Imperial Strength'.

³⁷A.N. Porter, *Victorian Shipping, Business, and Imperial Policy: Donald Currie, the Castle Line, and Southern Africa*. (Woodbridge: Boydell, 1986), 7–8.

³⁸Donald Currie, *Maritime Warfare: The Importance to the British Empire of a Complete System of Telegraphs, Coaling Stations and Graving Docks. A Lecture*. (London: Harrison and Sons, 1877).

³⁹P.J. Cain and A.G. Hopkins, *British Imperialism: Innovation and Expansion, 1688–1914*. (London: Longman, 1993).

⁴⁰C.H. Nugent, 'Memorandum on the Relative Importance of Coaling Stations', TNA, PRO 30/6/122.

coal consciousness found a new and more influential champion in the Colonial Secretary, Lord Carnarvon, who would take a lasting interest in the issue.⁴¹ As the Eastern Crisis worsened, Carnarvon was able to use the deepening sense of urgency to push for interdepartmental consideration. Although a disagreement with Disraeli forced Carnarvon's resignation, his influence ensured that the Colonial Defence Committee was formed soon after, in early 1878.⁴²

THE COLONIAL DEFENCE COMMITTEE

The key navalist agitator, Milne, led the Committee. He was joined by Sir John Simmons, a senior and experienced representative of the War Office with huge military and diplomatic experience, who had published papers on the defence of coaling stations.⁴³ The final member was a veteran of the Colonial Office, Henry Barkly, "one of the most experienced of imperial officials in handling responsibly governed colonies."⁴⁴ The committee was thus well versed in the magnitude of the problem they faced. Simmons warned:

In the absence of such positions being provided with adequate means of defence, the operations of H.M.'s fleets for the protection of the vast interests of Great Britain, commercial as well as political, all over the world, might possibly have been greatly embarrassed, if not crippled, even by a few cruisers handled with activity and energy.⁴⁵

First meeting on 5 March 1878, it submitted four short reports less than 1 month later. Despite totalling only thirty pages, they were geographically wide-ranging, although it did not include the Imperial Fortresses

⁴¹Donald M. Schurman and John F. Beeler, *Imperial Defence, 1868–1887*. (London: Frank Cass, 2000), 55–56.

⁴²*Ibid.*, 61–63.

⁴³R.H. Vetch, 'Simmons, Sir John Lintorn Arabin (1821–1903)', rev. James Lunt, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, January 2008. (<http://www.oxforddnb.com/view/article/36094>. Accessed 3 July 2012).

⁴⁴John Benyon, 'Barkly, Sir Henry (1815–1898)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, January 2008. (<http://www.oxforddnb.com/view/article/1424>. Accessed 25 Oct 2011).

⁴⁵'Memorandum of Inspector General of Fortifications', TNA, CO 537/208.

of Halifax, Bermuda, Gibraltar, and Malta, which were viewed as adequately defended.⁴⁶ The first report covered the defences of the Indian Ocean stations of Cape of Good Hope, Mauritius, Ceylon, Singapore, and Hong Kong. The second concentrated on the Australian colonies, Tasmania, and New Zealand. The third made recommendations for Esquimalt and Victoria, British Columbia. The fourth reported about the defences of Heligoland, St. Helena, Sierra Leone, Barbados, Jamaica, and Newfoundland. A further report, totalling five pages, was published separately in May, and made recommendations for the defences of the principal Canadian Atlantic ports.⁴⁷ With such a huge scope, producing these reports in such a short time required the Committee to utilise a great deal of existing knowledge. This included Colonial Office figures and telegraphic replies from colonial governors, which established the numbers of militia, armaments, and defensive works already at each station.⁴⁸ In addition, many of the Committee's recommendations were taken from existing reports on the defence of naval stations, in particular those produced for various colonies by Major-General Sir William Jervois and Lieutenant-Colonel Peter Scratchley.⁴⁹

Although it was largely collating existing data, the Colonial Defence Committee marked something of a watershed: the first real concerted effort at providing recommendations for a complete system of coaling station defence or, indeed, imperial defence. The costs were equally as ambitious: even without accounting for the provision of garrisons, the estimation of the Committee for the temporary defence of the twelve most important coaling stations came to £2300,000. This amount was considerable, considering total annual naval estimates were approximately £11,000,000.⁵⁰

The report may have been ambitious, but it had little lasting impact, instead reinforcing the precedent of defence by crisis. The perceived immediacy of the Russian threat gave the Committee inadequate time to fully consider the implications of the coal question, and thus provide

⁴⁶ 'Reports and Correspondence of the Colonial Defence Committee', TNA, CAB 7/1.

⁴⁷ Ibid.

⁴⁸ 'Correspondence Respecting the Defences of the Colonies', TNA, CAB 7/1.

⁴⁹ Peter Dennis, *The Oxford Companion to Australian Military History*. (Oxford: Oxford University Press, 1995), 163.

⁵⁰ British Parliamentary Papers, 1878 (26) *Navy estimates for the year 1878–79, with appendix. (Account of naval old store moneys and extra receipts in 1876–77)*.

much more than a synthesis of previous reports. The members may have been distinguished, with ample experience and expertise, but just three men could do little to provide solutions to such a large problem, particularly in less than a month. Furthermore, whilst Simmons' presence was crucial, due to the central place of the War Office in instigating change, his presence did little to advance a global naval strategy, instead guaranteeing that the recommendations would largely be based on physical fortifications. As a result of these factors, the Committee did not present a long-term approach to an empire-wide system of defence but instead short-term and limited measures. Many were, in fact, farcical, with years of financial neglect for defence meaning there were few armaments actually to send to defend stations. These factors, combined with the huge cost implications suggested, made the reports easy to dismiss, particularly as they were written by a committee led by a prominent navalist. As a result, it did not have a decisive effect in terms of imperial policy and was far from marking a tide change.

Instead, its greatest legacy was a result of its own inadequacy, showing that imperial defence was not a problem that could be adequately solved with the stop-gap measures and low spending, which Gladstone had implemented as policy in the mid-Victorian period. Indeed, the Committee suggested "the question of Colonial defence should be considered as a whole with reference not only to the works and their armaments but also to the forces necessary for manning them."⁵¹ Although the Colonial Defence Committee did little to advance solutions, it did lay the foundations for how such a problem might be approached. Indeed, the interdepartmental nature of the Committee and the recognition of the need for a wider integrated vision of imperial defence anticipated the committees for imperial defence from the late 1880s onwards.⁵² Furthermore, the co-operation between departments of the British Government and those of its self-governing colonies exhibited in the Committee could be seen as the beginnings of the movement toward a more integrated empire manifested through defence policy.⁵³

⁵¹Ibid.

⁵²For example, the permanent (and unconnected) Colonial Defence Committee founded in 1885.

⁵³'Memorandum of Inspector General of Fortifications', TNA, CO 537/208; Brian P. Farrell, 'The Dominions and Imperial Defence 1856–1919', in Kennedy (ed.), *Imperial Defence*, 263. See also John Edward Kendle, *The Colonial and Imperial Conferences. 1887–1911. A Study in Imperial Organization*. (London: Longmans, 1967).

Crucially, by placing coal at the centre of its investigation, it also showed how the advent of the steam navy, and its coal hungry warships, had altered perceptions of imperial defence. Places previously seen as of little intrinsic value had now become highly important, and often highly vulnerable, and were crucial to ensuring the safety of British trade and interests overseas. Furthermore, the Committee had highlighted that careful consideration had to be given to how best to instigate a global strategy that could defend Britain's global interests and that Britain's chain of coaling stations had to be a central concern in this. Perhaps most importantly, it emphasised how the navy, and therefore the infrastructure that supported it, was central to the global power and trade of Britain, and to the survival of the empire and Britain itself.

The committee could not achieve an integrated system of imperial defence despite establishing these principles, however. This would require permanent, dedicated, and well-funded bodies that could manage a structure that was expensive and complex to implement and maintain. Indeed, without rejecting the liberal philosophy of low imperial defence spending, the issue of a permanent defensive system would remain unresolved.

THE INSTIGATION OF THE CARNARVON COMMISSION

Whilst its recommendations could be easily dismissed as lacking depth, ill thought out, and expensive, in a climate of imperial anxiety the Committee made enough of an impression on the Conservative government that the issue was not abandoned. Instead, the Colonial Office suggested that "that a new Committee or Commission should be appointed to take up the questions left unsettled by the old Committee." Despite the passing of the Eastern Crisis, the coal question and its importance to trade and imperial defence continued to concern the government.⁵⁴ Consequently, a new investigation, entitled "The Commission on the Defence of British Possessions and Commerce Abroad," was announced in early September 1879, and is usually referred to as the Carnarvon Commission after its chairman: Lord Carnarvon. Although

⁵⁴"Carnarvon Commission Correspondence", TNA, CO 323/356; Hugh M. Clokie and J. William Robinson, *Royal Commissions of Inquiry: The Significance of Investigations in British Politics*. (London: Octagon Press, 1969), 75, 123.

he had recently resigned from his post as Colonial Secretary, Carnarvon remained a leading member of the governing Conservative Party, and his leadership is therefore significant in itself, showing how the coaling question had become a pressing concern even in the government's upper echelons.

That a Royal Commission was chosen seems to suggest lessons had been learnt from the Colonial Defence Committee, which had shown that such an ambitious enquiry required substantial resources. This allowed the government to assess the coal question properly, i.e., using expert opinion through a dedicated, independent body.⁵⁵ As well as being a more appropriate size for the magnitude of the task, with eight members, it also allowed the Commission to contain a wider range of experience and expertise. The importance of Carnarvon himself went beyond his political clout—he was also an able and experienced politician and imperial administrator.⁵⁶ Carnarvon's experience of dealing with colonial representatives, having been heavily involved in the federation of Canada and an unsuccessful attempt to federate South Africa, was undeniably crucial to a Royal Commission that would have to gather such a large amount of colonial data.⁵⁷ Furthermore, his political stance and imperial outlook made him ideal to lead such a Commission—as “more of an aristocratic Whig than a party man” known “for his independence of thought,” he was able to garner cross-party influence and support.⁵⁸ Moreover, he recognised that the strength of Britain lay in its maritime power, and was therefore a critic of Disraeli's “false imperialism,” which he deemed militaristic and continental. This not only allied him with some Liberals, but also helped him to appreciate that the unique

⁵⁵Clokie and Robinson, *Royal Commissions of Inquiry*, 123.

⁵⁶Although he may have not always toed the party line, he had performed well enough during his two terms as Colonial Secretary for Disraeli to feel sufficiently comfortable to leave colonial policy largely to him.

⁵⁷Peter Gordon, ‘Herbert, Henry Howard Molyneux, fourth earl of Carnarvon (1831–1890)’, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, January 2008. (<http://www.oxforddnb.com/view/article/13035>. Accessed 3 July 2012).

⁵⁸P.J. Cain, ‘Radicalism, Gladstone, and the Liberal Critique of Disraelian “Imperialism”’, in Duncan Bell (ed.), *Victorian Visions of Global Order: Empire and International Relations in Nineteenth-Century Political Thought*. (Cambridge: Cambridge University Press, 2007).

maritime culture of Britain necessitated that imperial defence was not a continental, but a naval issue. As a result, he was quick to realise the importance of coal, and the need to make naval fuel infrastructure central to an integrated and empire-wide defence policy.

Continuity from the Colonial Defence Committee was assured by the presence of Milne, Simmons, and Barkly. Once again, Captain Jekyll served as Secretary, showing the significance of a growing number of experts. Whilst these appointments may seem obvious, they had the potential to prove disruptive to the work of the Commission. Milne was aggrieved not to be chairing the enquiry, and Barkly and Carnarvon had previously shared a fairly hostile relationship when they had worked closely together as High Commissioner of South Africa and Colonial Secretary.⁵⁹ To take such risks with these selections suggests that Carnarvon was more concerned about expertise than personal relationships between those on the Commission.

That the Commission contained those with experience of the three most relevant offices of government—the Admiralty, War Office, and Colonial Office—provided important expertise and, furthermore, reflects a more general enthusiasm for imperial defence measures across departments. Furthermore, colonial expertise was provided by Henry Holland, a Conservative MP who had served as a legal adviser at the Colonial Office, and as Assistant Under-Secretary for the Colonies while Carnarvon was in office.

The Commission also included two Liberals, Hugh Childers and Thomas Brassey, both of whom had a keen interest in the modernisation and reform of the Admiralty and Royal Navy. Childers had used his time as First Lord of the Admiralty (1868–1871) to improve both the administration and the economy of the Admiralty, and to implement a new programme of ironclad production.⁶⁰ Brassey was instrumental in the transformation from a sail to a steam navy and had written widely on the navy, especially over his concern about its size and strength.⁶¹ While

⁵⁹Gordon, 'Herbert, Henry Howard Molyneux'; Benyon, 'Barkly, Sir Henry'.

⁶⁰'Carnarvon Commission Correspondence', TNA, CO 323/356; William Carr, 'Childers, Hugh Culling Eardley (1827–1896)', rev. H.C.G. Matthew, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, January 2008. (<http://www.oxforddnb.com/view/article/5296>. Accessed 13 March 2012).

⁶¹V.W. Baddeley, 'Brassey, Thomas, first Earl Brassey (1836–1918)', rev. H. C. G. Matthew, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2006. (<http://www.oxforddnb.com/view/article/32047>. Accessed 13 March 2012).

both were members of the Liberal Party, neither had much time for party politics, and rarely involved themselves in anything but naval matters in Parliament. Both men highlight the fact that not all Liberals adhered to the orthodoxy of the mid-Victorian liberal foreign policy, based on decreasing naval budgets and a concentration on home waters, while keeping foreign intervention to a minimum. Indeed, growing worries about Britain's naval strength and the emerging threat of Britain's maritime rivals led increasing numbers of Liberals to question Gladstone's stance on foreign policy and imperial defence.

What was notable about those commissioners with political ties was that none appeared to have much interest in toeing the party line but held their own, largely similar, colonial and naval vision for Britain, which was one of increased naval spending and a worldwide defence strategy. This may have reduced potential tensions, but it was also problematic, as it ensured the Commission's reports would oppose the liberal orthodoxy of minimal spending on naval and imperial defence.⁶² The Commission's outlook changed little even when both Brassey and Childers returned as part of the newly elected Liberal government in 1880 as Civil Lord of the Admiralty and Secretary of State for War respectively. Their replacements—the Earl of Camperdown and Samuel Whitbread—were again Liberals, and had both served as Civil Lord of the Admiralty. Although perhaps less high profile, they were both men with considerable experience in naval matters, and thus the dynamic of the Commission was changed little. The final member, Sir Robert Hamilton, represented the Treasury as a financial expert, largely tasked with limiting spending estimates as much as possible. Although widely seen as one of the most able civil servants of his era, with considerable experience in naval financial matters, his close connection with the Admiralty (having served as Accountant-General of the navy), may still have given him some sympathy to views of the other commissioners.⁶³

⁶²P.J. Cain, 'Radicalism, Gladstone, and the Liberal Critique of Disraelian "Imperialism"', in Duncan Bell (ed.), *Victorian Visions of Global Order: Empire and International Relations in Nineteenth-Century Political Thought* (Cambridge: Cambridge University Press, 2007); Peter Gordon, 'Herbert, Henry Howard Molyneux, fourth earl of Carnarvon (1831–1890)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004.

⁶³He also would return as Permanent Secretary after the Commission. A.F. Pollard, 'Hamilton, Sir Robert George Crookshank (1836–1895)', rev. David Huddleston, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, October 2005. (<http://www.oxforddnb.com/view/article/12124>. Accessed 18 May 2011).

Despite its focus, the Commission did not include, at Carnarvon's insistence, any representatives from the colonies.⁶⁴ Although colonial delegates were consulted and colonial sources used, this does not alter the fact that the Commission lacked any colonial representative actually involved in assessing the evidence and compiling the reports.⁶⁵ Thus, while it can be accurately described as "the first comprehensive study of Imperial defence," it is important to recognise it was not an imperial body as, for instance, the Colonial Conferences were from 1887.⁶⁶

THE WORK OF THE COMMISSION

The Commission sat from 1879 to 1882 and allowed its three reports to make recommendations that were both well informed and long term. Like the Colonial Defence Committee, it made use of existing figures from the War Office and Colonial Office, but, crucially, it also gathered new data from the colonies.⁶⁷ The bulk of the Commission's evidence, however, came from interviews with 39 witnesses with 5749 questions producing 255 pages of evidence.⁶⁸ As well as interviews, the Commission used a broad range of empire-wide statistical data—such as trade figures, the positioning of telegraph networks, fleet locations, and

⁶⁴Schurman and Beeler, *Imperial Defence*, 85–87.

⁶⁵TNA, CO 323/356.

⁶⁶Burroughs, 'Defence and Imperial Disunity', in Porter (ed.), *The Oxford History of the British Empire*, Vol. 3: *The Nineteenth Century*, 334.

⁶⁷'No. 8, Appendix 1, First Report of the Carnarvon Commission', TNA, CAB 7/2; W.T. Stead, 'The Truth About the Navy and Its Coaling Stations by One Who Knows the Facts', *The Pall Mall Gazette*, 16–17 October 1884.

⁶⁸'Minutes of Evidence, First Report of the Carnarvon Commission', TNA, CAB 7/2; 'Minutes of Evidence, Third Report of the Carnarvon Commission', TNA, CAB 7/4. Prominent figures among those giving evidence were shipping interests such as Donald Currie (Castle Mail Packets Company), Alfred Holt (Blue Funnel Line), Charles McIver (Cunard), and T.H. Ismay (White Star), colonial representatives such as Thomas George Baring (politician and Viceroy of India), Henry Bartle Frere (High Commissioner for Southern Africa), and Sir John Alexander Macdonald (Prime Minister of Canada), and high-ranking members of the armed forces such as the Duke of Cambridge (Commander-in-Chief of the British Army) and Admiral Sir Astley Cooper Key (First Naval Lord). Just as important was the evidence of technical experts such as Thomas Gallwey (Inspector General of Fortifications), Sir Charles Tilston Bright (telegraph engineer), Sir Peter Scratchley (military engineer and colonial administrator), and the chief engineers of various colonial ports.

warship numbers—to give an overall picture of the global implications of the coaling problem. The depth of these considerations is remarkable: The reports consider the relative strengths and locations of all rival foreign stations, including those of Argentina, Brazil, China, Denmark, France, Honduras, Italy, Japan, the Netherlands, Portugal, Russia, Spain, the United States, and Uruguay.⁶⁹ In addition to strategic importance, the distinctive nature of each station—its climate, the size of the surrounding settlements and colony, the geography of the station, and especially what already existed at the site—also had implications for the costs and scale of the recommendations. The reports were thus a recognition of the fact that in order to create a worldwide system of imperial defence, the local had to be considered along with the global.

Although it built on the work of the Colonial Defence Committee, the Carnarvon Commission represented a comprehensive change in approach for imperial defence policy. In complete contrast to the earlier Committee, its importance lay in the fact it was able to make long-term recommendations that could cope with most future eventualities, facilitated by its length, make-up, and depth of research. Most importantly, the Commission recognised imperial defence as a global oceanic construct, rather than a collection of local defences.⁷⁰ The crucial importance of trade routes, both inside and outside the empire, necessitated that imperial defence was less about land and people but rather markets.⁷¹ Thus, the Commission extended the idea of imperial defence beyond those areas under direct British rule and even in the “informal empire,” to include the vast maritime spaces used by British commercial interests. It was the navy, therefore, on which imperial security rested. As such, rather than increasing garrisons and fixed defences, the Commission suggested that “looking to the action of other countries,

⁶⁹‘Appendix 1 of Second Carnarvon Report’, TNA, PRO 30/6/131; ‘Appendix 9, Third Report of the Carnarvon Commission’, TNA, CAB 7/4. These figures were most likely taken from the Admiralty Foreign Intelligence Committee.

⁷⁰*Ibid.*, 115.

⁷¹Lambert, ‘The Royal Navy and the Defence of Empire 1856–1918’, in Kennedy (ed.), *Imperial Defence*, 112.

the strength of the navy should be increased with as little delay as possible.”⁷² A subsequent caveat, however, shows how the coal question now stood at the centre of understandings of imperial defence. After the recommendation to increase the size of the navy, the report warned that “no addition to the number [of] ships will make up for the want of coaling-stations.” This point was so fundamental, in fact, that “the Commission state[d] their belief that the command of the sea resolves itself very much into a question of coal supply—how to deprive an enemy of supplies, while securing ample supplies for our own ships.”⁷³

The Commission faced a huge task to achieve this. Of the 21 foreign stations in British territories, just 4 were defended (and all of these Imperial Fortresses were outside its remit), five were inadequately protected, and the remainder were undefended entirely. Furthermore, there was a need to understand how each fitted within a larger system. To do so, an enormous quantity and range of data were used in making comprehensive recommendations. Charts were produced that illustrated every aspect of the nature of naval coaling infrastructure, in global, regional, and local scopes, allowing the Commission to “reduce the world to order.”⁷⁴ Global charts allowed the Commission to substantiate why they considered certain sites invaluable, and to illustrate how recommendations for each station translated into a global strategy.⁷⁵ Smaller-scale regional charts of oceans, naval patrol areas, and other discrete maritime spaces allowed the Commissioners to examine and illustrate these connections and strategies clearly and in more detail, and to connect the global and local more easily. Local charts not only show the environs of the coaling station, but also include details of the proposed armaments and defensive works, thus showing the level of protection that implementation would bring to coaling infrastructure.

It was this breadth and depth of data and analysis that allowed the Commission to make considered decisions as to how best to implement a policy for imperial defence. These considerations were profoundly

⁷²‘Summary of Carnarvon Reports’, TNA, PRO 30/6/131.

⁷³Ibid.

⁷⁴Lambert, ‘The Royal Navy and the Defence of Empire 1856–1918’, in Kennedy (ed.), *Imperial Defence*, 126.

⁷⁵Of course, such charts benefitted enormously from Admiralty expertise as well as a long history of surveying, exploration, and hydrography.

influenced by the arrival of the steam-powered ship. Some stations, of course, retained the same strategic importance as they had in the age of sail, especially those that were commercial centres or proximate to rival naval stations; yet, with steamships growing ever larger, some stations with deep harbours, such as St. Lucia, gained strategic importance. With trade increasingly carried by steamships in “sea-lanes,” stations that could form a chain to allow naval ships to defend commercial shipping were also hugely important. Stations, of course, also needed to be within a load of coal’s distance away from each other, wherever in the world they were found, or else Britain could not maintain a truly global presence. These considerations were at the forefront of commissioners’ minds when they divided stations into two discrete categories. Primary stations—which kept large coal stores, had the means for the swift coaling of vessels, and often possessed dry docks—were assigned the bulk of the funds recommended.⁷⁶ Even so, the navy would be “crippled in its operations” without secondary stations and “if undefended [they] might be used or destroyed by any enemy,” and thus were also assigned limited funding.⁷⁷

The cost estimate for such a wide scope of recommendations was more than £2000,000. That this was to fund imperial, rather than home defence is particularly important, and suggests a change of direction in defence thinking. Crucially, rather than merely improving local defences, the recommendations were for places of a wider imperial importance, which together would form an integrated imperial defence scheme. These stations formed a chain that ensured that Royal Navy ships would be able to secure fuel, and therefore protect British interests, almost anywhere in the world. Many of the costs for poorer colonies were therefore to be covered by the British government, thus reflecting an awareness that there was a need to protect coaling stations as soon as possible.⁷⁸ However, where the colony was rich enough, costs would be divided, showing an understanding that in order to compete with the burgeoning economic, industrial, and military power of its rivals, Britain would have

⁷⁶‘Report by Sir L. Simmons 21 June 1882’, TNA, PRO 30/6/125; Third Report Appendix’, TNA, PRO 30/6/125.

⁷⁷‘Third Report Appendix’, TNA, PRO 30/6/125; ‘Report by Sir L. Simmons, 21 June 1882’, TNA, PRO 30/6/125.

⁷⁸‘Summary of Carnarvon Reports’, TNA, PRO 30/6/131.

to involve the self-governing colonies more in imperial defence. This represented a shift away from the detached attitude of mid-Victorian governments toward the empire, instead reflecting the ideas of the less radical elements of the “imperial federation” movement.⁷⁹

CONCLUSIONS

The advent of a navy fuelled only by coal changed the dynamics of maritime defence. Places previously seen as being of little intrinsic value became highly important places to defend due to their place as part of a chain of coaling stations. The ability to coal overseas became crucial to ensuring the safety of British trade and interests.

By the late 1870s, a coal consciousness had emerged to the extent that two investigations were conducted into how best to ensure the safety of coaling infrastructure. Whilst the Colonial Defence Committee marked a continuation of a “defence by scare” policy, the Carnarvon Commission precipitated reports of far more importance. The detailed nature of the reports says much about the Commission’s worries about the defence of naval coaling stations and, moreover, how far attitudes toward the coal question, and indeed imperial defence in general, had changed in less than a decade.⁸⁰ The depth of data analysed, organised, and legitimised by a government authority meant the knowledge it created was pervasive and enduring.⁸¹ We can, therefore, see the Carnarvon Commission as an attempt to create coaling knowledge in order to ensure British power over naval fuelling and mobility. Despite being clearly influenced by those who sat on the Commission, the reports were still widely seen as the authoritative coaling knowledge, especially after 1884. As a consequence, it has been argued that the recommendations were “of special importance because they lay down the general principles

⁷⁹See Duncan Bell, ‘The Victorian Idea of a Global State’, in Bell (ed.), *Victorian Visions of Global Order: Empire and International Relations in Nineteenth-Century Political Thought* (Cambridge: Cambridge University Press, 2007), 159–185; Charles Wentworth Dilke, *Greater Britain: A Record of Travel in English-Speaking Countries During 1866 and 1867* (London: Macmillan, 1868); Duncan Bell, *The Idea of Greater Britain: Empire and the Future of World Order, 1860–1900*. (Princeton, NJ: Princeton University Press, 2007).

⁸⁰‘Third Carnarvon Report’, TNA, PRO 30/6/131.

⁸¹Thomas Richards, *The Imperial Archive: Knowledge and the Fantasy of Empire*. (London: Verso, 1993), 3–5.

of imperial defence,” and central to these principles was coal and coaling infrastructure.⁸² Indeed, the reports might well be described as a blueprint for an imperial defence policy, and it was testament to the importance of coal that this simple fuel had instigated the first comprehensive assessment of and recommendations for a complete system of imperial defence.⁸³

⁸²W.C.B. Tunstall, ‘Imperial Defence, 1870–1897’, in J.H. Rose, A.P. Newton, E.A. Benians, and H. Dodwell (eds.), *The Cambridge History of the British Empire. Vol. 3: The Empire–Commonwealth*. (Cambridge: Cambridge University Press, 1959), 232–234.

⁸³Schurman and Beeler, *Imperial Defence*, 86.

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