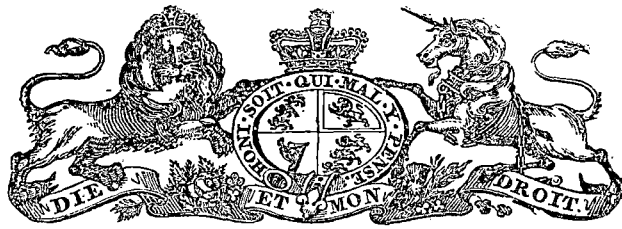


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1861.

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T A S M A N I A.

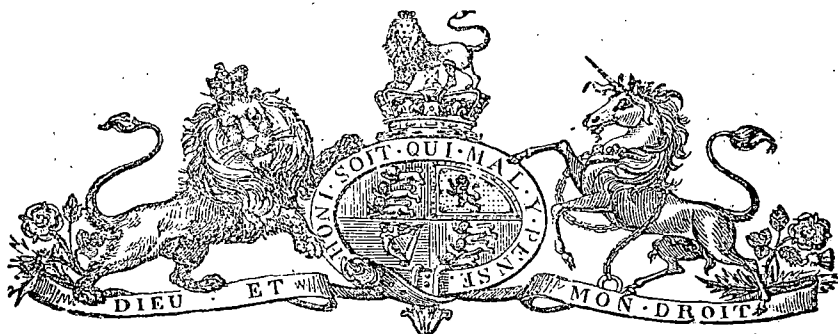
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N A V A L S U R V E Y.

DESPATCH, No. 30, 1861.

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Laid upon the Table by Mr. Innes, and ordered by the House to be printed,  
26 September, 1861.



TASMANIA.—(No. 30.)

*Downing-street, 21st April, 1861.*

SIR,

WITH reference to previous correspondence on the subject of the Survey of the Australian Continent, I have the honor to transmit to you the accompanying Report from the Hydrographer to the Admiralty, suggesting the manner in which the expense of that Survey should be apportioned amongst the several Colonies concerned.

Although I have not received any intimation from you as to the willingness of your Government to contribute towards this object; I have felt that I should not be justified in withholding my assent from the suggestions made by Captain Washington; and I have therefore requested the Lords Commissioners of the Admiralty to take the necessary steps for carrying into immediate execution, the proposed arrangements in connexion with this Survey.

I have &c.,

NEWCASTLE.

Governor Sir H. E. F. YOUNG, C.B.

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*Mr. ROMAINE to SIR FREDERIC ROGERS.*

*Admiralty, 26th March, 1861.*

SIR,

IN reply to your letter of the 23rd instant, enclosing a Copy of a Despatch from Sir W. Denison, in which is stated the willingness of the Colonies of New South Wales, Victoria, South Australia, and Queensland to contribute to the expense of the proposed Survey of the Australian Continent, and requesting to be furnished with the opinion of the Hydrographer of my Lords Commissioners of the Admiralty, as to the principles on which the Colonial moiety of the expense should be apportioned among the said Colonies, I am commanded to send you herewith, for the information of His Grace the Duke of Newcastle, a Copy of the Report of their Lordships' Hydrographer on the subject.

I am, &c.,

W. G. ROMAINE.

SIR FREDERIC ROGERS.

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*ON the proposed SURVEY of the AUSTRALIAN COLONIES.*

WITH reference to the Despatch of Sir William Denison to the Secretary of State for the Colonies of the 19th September last, it is gratifying to find how promptly the several Australian Colonies have acceded to the proposal of the Admiralty, to bear half the cost of a Nautical Survey of their respective Coasts, and it is highly honorable to the several Legislatures that they should have so readily sanctioned the necessary vote of money for the purpose.

2. On the part of the Admiralty, no time will be lost in fulfilling its share of the undertaking. In the Colony of Victoria, Commander Cox and his party are already at work, having left England in September last; and if no political changes have occurred, or other obstacle intervened, they will by this time have made some sensible progress in what was proposed as their first work, namely the Survey of Port Phillip and its approaches.

3. Preliminary arrangements have also been made for despatching parties to the other Colonies so soon as H.M.S. *Herald*, Capt. Denham, (who may be expected in the course of the next month,) shall reach England. As that Officer has been for the last nine years in charge of the Coast Survey of Australia and the adjacent seas, it seems most desirable to delay a short time, in order to have the advantage of his experience in deciding upon the

portions of the Coast it is advisable to break ground upon, for general benefit. I may mention so far that as at present arranged, Commander Sidney and party will proceed to New South Wales; Lieutenant Chimms and party to South Australia; Lieut. Brooker and party to Tasmania; and Mr. J. W. Smith, *R.N.*, (already favorably known as the Explorer of the Burdekin and Port Denison,) will go to Queensland. I see no reason why these several parties should not leave England in May next.

4. With respect to the apportionment of the expense of the Survey, especially referred to in the Despatch of the Governor of Queensland, it appears to me that the just principle to act upon would be that, each Colony should bear half the expense of the Surveying party employed on its own Coast. When, however, a Survey of a portion of the neighbouring Straits or Seas, or outlying dangers common to all the Colonies, may become necessary,—as Torres Straits, the Barrier Reefs, Bass's Straits, &c.,—then I am of opinion that the expense should be shared in proportion to the amount of Shipping trading to each Colony.

5. To enter into a little more detail on this head, I may mention that, as already stated in my Report of 25th June last, the Admiralty propose to pay the salaries of the several Surveying Officers, to furnish Chronometers, Instruments, &c., and to engrave the Charts directly the Surveys are received; leaving it to the Colony to provide for the lodging and subsistence of the Officers, and to find the means of locomotion, whether by land or by boats, sailing vessels, or small steamers, as may be found requisite.

The Officer in charge of the Survey will be instructed to furnish the Colonial Government quarterly with a copy of his accounts, such as he transmits to the Admiralty; and it is hoped that the Colonial Treasurer will make arrangements for the accounts being settled on the spot, as the Admiralty cannot undertake to pay the whole cost of the Survey, leaving one-half to be afterwards reclaimed of the Colony.

6. As far as can be judged at present the annual charge on the several Colonies will be as follows:—New South Wales, £2500; Victoria, £2500; South Australia, £2000; Tasmania, £1500; Queensland, £1500. It may be a few hundred pounds more or less, but it will always be in proportion to the work done. And, as before stated, the Lord's Commissioners of the Admiralty have sanctioned a similar sum of £10,000 a year to meet the contribution of the several Colonies.

7. In paragraph 2, I have alluded to the possibility of political changes in the Colonies placing obstacles in the way of the Coast Survey. Such, I trust, may not arise. But it may be as well to explain, at once, that the Admiralty can only treat with the Colonial Government. After being at the expense of sending out to Australia a party of Surveying Officers, to find that, owing to a change of Ministry, there was no one ready to receive them and to co-operate with them,—and thereby to incur a great loss of time and a heavy expense,—would be a very serious inconvenience; and I trust that some arrangement may be made, so that, as at Home, in the United States and elsewhere, the Coast Survey should be provided for irrespective of all political changes.

8. In my former Report I have said that the Officer in charge of the Survey would be instructed to communicate with the Colonial Government, and to consult its wishes as to the portions of the Coast to be first undertaken. This, I repeat, will be his duty to do. But this instruction is not intended to relieve the Officer of the responsibility which attaches to him, to survey first those parts which are most required for the public interests of the Colony. He is not to undertake the examination of a Port, or Bay, or Creek, with the object of furthering any purely local interest; but he is on all occasions to consult the general interests of the Colony, and to give them precedence for the common benefit of Navigation; and, should there be any difference of opinion on the point, he is to refer the question to England for the decision of the Admiralty. He is also to place himself in communication with the Surveyor-General of the Colony, and to act in concert with that Officer, from whom, no doubt, he will derive the greatest assistance; but he is not to be under his orders, as he can only take directions from the Admiralty, to whom he is responsible for his proceedings.

9. I have considered it better at once to be explicit on these few points, in order that there may be no mistake as to the position of the Admiralty Surveyors. They will be specially charged to consult the best interests of the several Colonies to which they may be respectively attached, while at the same time they are to keep in view the general benefit of Navigation in those Seas; and the Colonial Government may rest assured of the co-operation and support of the Lords Commissioners of the Admiralty, who have directed the several Surveys shall be engraved as they are received, and immediately transmitted back for the use of the Australian Colonies.

J. WASHINGTON, *Hydrographer.*

*Admiralty, 25 March, 1861.*

*Admiralty, 18th July, 1861.*

SIR,

THE Secretary of State for the Colonies having acquainted the Lords Commissioners of the Admiralty that, the several Colonies of Australia and Tasmania had agreed to the proposal that a Nautical Survey of the Coasts of those Countries should be made at the joint expense of the Admiralty and the respective Colonies, their Lordships have been pleased to appoint you additional Lieutenant to the *Pelorus*, in order that you may take charge of the Coast Survey of Tasmania, and I now transmit to you such brief hydrographic and other instructions as may be necessary for your guidance in the conduct of that Survey.

2. You are aware that the Survey is undertaken, as are those of New South Wales and Victoria, upon the understanding that the Colony will pay one-half the expense attending it, the Admiralty paying the other half; and

that while confined to boat parties working from the shore, the whole cost will not exceed £3000 a year, or £1500 a year to the Colony.

3. Your party, in addition to yourself as Surveyor, will for the present only consist of Mr. Michael S. Guy R.N. your assistant, and such other draughtsmen, boat's crews, tide watchers, &c., as you may find requisite, and can be procured in the Colony, and they are all hereby required and directed to obey your orders as their Commanding Officer and Chief.

4. You are amply supplied with chronometers, astronomical, meteorologic, and surveying instruments, and all such charts and books as are necessary. A boat has already been ordered to be built for you in the Colony, and you can either purchase or build another for your work, as you may see fit. Yourself and Assistant have been found a passage in the Mail Steamer of the 20th instant, and if all be well you will be landed at Hobart Town by the middle of September, and probably will have made your arrangements, got your tide scales placed, and be ready to break ground on the survey by the 1st October.

5. Immediately on your arrival in Tasmania you will report yourself to His Excellency the Governor, and should he require it, you will show him your instructions. You will request to be placed in communication with the Surveyor-General of the Colony, who will no doubt acquaint you with the present state of the land survey of the Island and furnish you with a copy of its triangulation, if such has been carried out, and with the positions of points and stations along the coasts. You will also of course comply with the General Printed Naval instructions and report your arrival by letter to the Senior Naval Officer in Australia.

6. You are aware generally of the unexamined state of the Coast of Tasmania. Flinders, King, Stokes, Burnett, with D'Entrecasteaux and the French Navigators, at the beginning of the century, have determined the position of the principal headlands and outlying dangers of the Island, but no detailed Survey of the Coast, or plans of the harbours on a sufficiently large scale exist. You will, of course, consult with the Colonial Authorities where to begin to work; but, as far as our present information extends, it will be desirable that Storin Bay and D'Entrecasteaux Channel should be one of your early labours, and this portion should be mapped on a scale of not less than 3 inches to a mile.

7. The approaches to Hobart Town and the Derwent have recently been partly surveyed by Mr. J. W. Smith, of H.M.S. *Herald*, and laid down on the scale of 6 inches. You are supplied with a Copy of his work, by which you will see that the soundings are irregular and far from complete. The scale also is much too small to do justice to the approach to the Capital of the Colony, and to the rapidly growing interests around its shores. I should recommend that, for about a mile below Hobart Town to a mile to the northward of the City, the Coast should be laid down on at least double the above, if not on a still larger scale, and the Port carefully sounded out, in sections, at right angles to the stream of tide, taking great care to ascertain the exact *datum* to which the former soundings were reduced, and which should be cut into the rocks in several places in order that any change of level, by the rising and falling of the land, may be detected. It is not improbable that it will be satisfactory to the Colony that this Survey should be your very first work, and I recommend that it be at once begun.

8. For the Coasts generally, that is the South, East, and North Coasts, a drawing on the scale of 2 inches, to be published on that of  $\frac{1}{2}$  an inch, would appear to be sufficient, and the whole of the Coasts of Tasmania would then be comprised in Seven Sheets. The Plans of Harbours will, of course, be in much greater detail, as Port Dalrymple, George Town, and the River Tamar up to Launceston. Great and Little Swan Ports should both be examined, with St. Helen's Inlet on the East Coast; also Ports Sorell, Frederick, and Fenton on the North; and Macquarie Harbour, Port Davey, and possibly some intermediate small harbours on the West Coast.

9. At the same time, if the safety of Navigation, or any special requirement of the Colony, appears to demand more immediate attention, that, of course, will be your first care. Every point, too, connected with Lights, Buoys, and Beacons, should be carefully attended to. If new Buoys are to be laid down see that they are coloured according to a system, black on one side of a channel on entering, and red on the other, with chequered or striped Buoys to mark middle grounds according to the usual practice in the neighbouring Colonies. You are supplied with the recent Report of the Royal Commission in England on the above subject, which may be an useful guide to you in the Colony.

10. On the lighting of a new light, or any material change in a light, or the discovery of a new danger, or on obtaining any other useful hydrographic information you should prepare a notice of it and request the Colonial Secretary to cause it to be immediately published in the local newspapers, adopting as far as possible the same form for such Light or Hydrographic Notices as those issued by the Admiralty (some copies of which are enclosed) and accompanying the notice, if necessary, with a small plan, or in case of a new light house, with a wood cut. The courses and bearings in such notices are always to be magnetic, so as to be immediately available to the mariner.

11. Should an opportunity occur of carrying your soundings well off shore, either by the occasional visit of a ship of war or by the use of a small colonial steamer in fair weather, you should be prepared to take advantage of it and have a rough sheet of points plotted for the purpose. To obtain an uninterrupted line of soundings run directly off shore to the 100 fathoms edge of the bank on which the main land rests, and to ascertain carefully the nature of the bottom, would throw great light on the geological formation; it would also be valuable in case of laying a submarine Electric Telegraph Cable, a point to be carefully borne in mind in the present day by all nautical surveyors. A line of soundings of great interest too would be to connect the Eddystone and other outlying rocks, which rise abruptly about 15 miles off shore, with the South Coast. For this purpose you are amply supplied with Massey's deep sea sounding leads, and thousands of fathoms of sounding line, which you should freely use; also with

a valuable comparative table of the principle deep sea soundings yet made, compiled by Mr. Frederick J. Evans, R.N., and a copy of Commander Dayman's Report of Deep Sea Soundings in the Atlantic, both of which will be very useful.

12. Sailing directions drawn up in a clear and distinct form, will, of course, accompany your charts; those for Tasmania already published are very imperfect. As it is of importance that your charts and plans should be engraved as soon as possible for the benefit of navigation, let me urge on you not to expend time in making fair copies on a large scale of your work. Reduced at once from the original rough to the scale on which the chart should be published (remembering that without some very special reason the Admiralty never exceeds the size of a double elephant sheet of paper) and transmit the reduction to England. Indeed it would considerably forward the engraving if when you have completed your triangulation and are *quite certain* of your position, you could reduce to the publishing scale, say three or six months work, and send home a tracing of the drawing for the engraver to begin, forwarding the details afterwards. In all cases mention the names of all persons employed in the survey and its reduction, stating what share each took in it. The Colonial Government and yourself may rest assured that no time shall be lost in England, that the charts shall be prepared in the best style of chart engraving, and shall be returned for use in the Colony with the least possible delay.

13. As already mentioned, the Coast Survey of Tasmania is to be carried out at the joint expense of the Imperial and Colonial Governments, you will therefore keep an exact account of every outlay connected with it, beginning from the date of your appointment, say the 1st July, in order that you may lay the same before the Colonial Government from time to time as they may require. In this account you will include the whole pay and allowances of yourself and assistant, and your passage out; boats, stores, &c., but not the cost of chronometers, astronomical, meteorologic or surveying instruments, or charts, or books, nor is the engraving or publication of charts to be charged as the Admiralty takes this expense upon itself.

14. The best mode of arranging accounts would seem to be that as far as respects personal and surveying pay of yourself and assistant, *that* should be paid by the Admiralty, the Colonial Government might contribute as their share the lodging money and extra allowances consequent upon the increased cost of living in Tasmania; this should not be less than 20s. a day for yourself and 10s. a day for your assistant. They might also pay the boats crews or the hire of any small steamer that you may require, and should provide the means of locomotion along the coast. As far as possible regulate your payments so that there may be no balance on the part of the Colony to be remitted home, for as you probably are aware, by Treasury Minute under an Act of the Imperial Parliament, such balance could not be received by the Admiralty, but must go to the general national receipts, and the Admiralty would then be the loser, which must not be. An arrangement such as the above works well in the Colony of Victoria, and I trust no difficulty will be found in Tasmania. As already mentioned the whole joint expense is not to exceed £3000 a year. I have reason to believe that, for the first two years it will not exceed £2000 per annum for the whole cost, or £1000 a year on the part of the Colony.

15. In paragraph 5, I have desired that you will immediately on arrival place yourself in communication with the Surveyor-General of the Colony. I feel assured that this officer will readily afford you every assistance in his power to enable you to erect and fix the positions of the coast stations you may require, and you will in return supply him with any information you may obtain, in fact you should endeavour to work in concert, as do the Ordnance and Admiralty Surveyors in England, between whom the mutual agreement is complete. You are, however, distinctly to understand that as an Admiralty Surveyor you cannot be under the orders of the Surveyor-General of the Colony. You are responsible to the Admiralty alone for your proceedings, and can alone receive orders from the Admiralty, I mention this point explicitly so that there may be no doubt on the subject, and there would be so much loss of time in referring the question to England when the answer could only be as I have here stated, and which has already been given on a reference from Melbourne.

16. For all surveying details you will refer to the general printed surveying instructions as your guide. You will keep the usual journal of proceedings, and you will report to me once a month the progress of the survey, sending the usual annual report at the close of the year. Think well beforehand of any thing you are likely to want, and write for it in time *via Marseilles* in order that what is wanted may be sent out by the return mail from Southampton.

*Lastly.* I have only to add that as you have had great experience in surveying in the North Sea, on the Coasts of Australia and New Guinea, with the late Captain Owen Stanley in the Black Sea, and on the Coasts of Egypt and Syria, I place this survey under your charge in entire confidence that you and your staff will conduct it in a manner that shall be creditable to the Naval Service to which you belong, and to the Colony of Tasmania, who have had the foresight and liberality to undertake a work that too often has been left unattended to by a nation, until disasters and wrecks have forced the necessity of a proper Coast Survey upon the attention of its rulers.

I am,

Sir

Your obedient Servant,

JOHN WASHINGTON, *Hydrographer.*

Lieutenant BROOKER, R.N.,  
in charge of Coast Survey of Tasmania.

P.S.—You will observe that I have omitted any mention of observations on the variation of the compass and on magnetism generally. As Hobart Town has been the site of one of the chief magnetic observations in the Southern Hemisphere, nothing more is required than to determine the variation carefully from time to time on different parts of the Coast, as directed in the general surveying instructions, and ascertain its annual increase.

J. W.