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Landerdale

## **OBSERVATIONS**

ON THE

LETTERS

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LORD MELVILLE,

AND

THE RIGHT HON. GEORGE ROSE,

RELATING TO A

## NAVAL ARSENAL,

At Northfleet,

ADDRESSED TO THE FIRST LORD

AND

THE LORDS OF THE ADMIRALTY.

BY A NAVAL OFFICER.

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## OBSERVATIONS, &c.

WHEN gentlemen so emimently qualified as the Commissioners of Naval Revision have given their opinion, on a subject of great national importance, to which has been added the strong suggestions of the Right Honourable Lord Viscount Melville, and the temperate observations of the Right Honourable George Rose, it may be presumed that the matter has been fully investigated; yet, as it appears to me, that some points have escaped notice, and others been slightly touched upon, I cannot refrain from addressing your Lordships on the subject of a Naval Arsenal, at Northfleet; and, with the utmost deference, to the high authorities who have gone before, I shall endeavour briefly to point out several objections, which occur to me against the construction of the proposed Arsenal.

On the necessity of making provision for laying up the navy in security on the arrival of peace, and at stations where it can readily be brought into action on the approach of war, there can be but one opinion; but on the means of affecting this most desirable Object, whether the present Naval Arsenals can be made competent at a moderate expense; or whether it is absolutely necessary that an Arsenal be constructed in other situations, at an expense, including fortifications, that can scarcely be foreseen. A difference of opinion has arisen, from which, if the subject be dispasionately considered, His Ma-

jesty's Government may have the opportu-

nity of obtaining the fullest information, and

adopting the most eligible plan.

And here I would observe on the estimate for creeting the proposed works at Northfleet, which is stated by Lord Melvillve at six millions, and by Mr. Rose at ten, that neither his Lordship or Mr. Rose appear to have noticed the time when the estimate was made; the great advance since that time on workmen's wages, the enhanced value of materials, and the progressive increase that may be looked forward to therein.

I would

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I would likewise ask, will the utility of such an immense work as that projected, justify its being carried into effect in the present state of the country? supposing it to answer, in its full extent, every purpose which the Board of Revision propose? I apprehend not; it is with difficulty now, that a sufficient number of artificers can be procured to man the existing yards; how then would it be possible to secure Shipwrights, and other workmen, for an additional yard of such magnitude as that under consideration, particularly so near the capital, and in a neighbourhood where the number and extent of private building yards, find ample employment for the greater part of the shipwrights, &c. than can be procured; of which no stronger testimony need be adduced, than the high wages now paid by merchant builders to the artificers in their employ.

It may appear desirable to many persons, that most of the articles for the consumption of the navy should be manufactured in the Royal Dock Yards; but when we reflect on the resources which the country derives from the income and establishments of the peo-

ple who are employed by contractors, in different parts of the kingdom; it may be impolitic to divest them of the means of contributing, and the country of receiving, at the very time you stand in need of additional pecuniary aid. Mr. Rose states, that for this work alone, taxes must be found for nearly £600,000 a year!! And although the Commissioners of revision point out that in fifteen years, by the adoption of the plan, a sum equal to £5,900,000 would be saved. I must beg with deference here to express my doubt on this head, as I conceive many things may have escaped the Commissioner's attention, in making the calculation; among others, the sums of money it will require to keep the works of such an Arsenal in repair; and as a large portion of the saving is computed to arise from building all the ships that would be required to keep up the navy in the King's Yards, it is not improbable the calculation is founded on the high rate per ton, at that time demanded and contracted to be paid to the merchant builder: but this should be considered in a great measure as accidental, arising from the number of ships required to be launched within a short

limited time, the consequent rise in wages, and price of materials, as well as the advance occasioned by the war.

In the time of peace, when the benefits would be expected to be derived from the projected Arsenal, the difference between the real (not nominal) expense of building ships in the King's Dock Yards, and contracting with the merchant (should it be absolutely necessary) I presume could not possibly amount to the sum stated; but as I am unacquainted with the contents of the 15th report of the Commissioners of Revision, I trust I shall be pardoned if I err on this head.

The next subject that presents itself for consideration, is the building of all the large ships, and so many frigates, and other vessels, as may be thought necessary to work up the smaller timber supplied, or arising from conversions, which cannot be otherwise applied to uses equally beneficial. On this I would observe, that the navy is at present increased to an extent before unknown, and I trust, fully equal to cope with the enemy, notwithstanding his resources; all therefore that

limited

The manufacturing anchors, and other articles of smith's work, essential to the

\* The building slips at the respective yards are as follow, viz.

			THE	ERA	TES		
Plymouth	Fir	stSeco	37771	. 177			Sixth
Plymouth	•••					1	
Portsmouth	2		2	• •			1
Chathain	••• 3	• •	• •			2	
oneerness		• •		1			
Woolwich	4			•			
Deptford	3	• 0	•		2		

welfare

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welfare of the navy, such as knees and standards, mooring chains, and binding blocks, within the dock yards would be a desirable object; and there is sufficient room in the present yards for erecting the buildings necessary for that purpose; but some difficulty might occur in obtaining workmen, as the lads in the neighbourhood of dock yards are not disposed, or have not sufficient encouragement to become apprentices to the biacksmiths.

When, as at present, the whole of these articles cannot be made within the limits of the dock yards, it might be well if the manufacture was performed under the constant inspection of persons appointed by government: although some anchors, and other material articles made by contract, have now and then proved defective; the instances have been few, yet enough to call forth the vigilance of government. An experiment is now making, how far it may be practicable to have the palms of anchors wrought in the north of England, where coals are cheap and workmen nu-

merous,

merous, reserving the shutting up the anchor to be performed in the Kings dock yards.

With respect to the space in the present yards for erecting engines, especially those worked by steam, for the abridgment of manual labour, particularly in the manufacture of cordage, it will be admitted, that in the present Rope Yards, sufficient room may be found for constructing the proposed machinery; but on the propriety of applying it to every part of the manufacture, there may be doubts. The machinery applicable to complete the work, after the yarns are spun and the strand manufactured, will most probably do its work better than if performed by hand; but on the previous process there may be some who, without prejudice, maintain an opinion that the thread has never yet been so well spun as by hand. The spinning jenny will save labor, expedite the work, and enable the manufacturer to vend his article cheaper, and thence to obtain a preference at market; the consumption of the article is the primary object with the vender, but with respect to cordage, on which the

the safety of your ships and seamen depend, I trust no narrow principle of œconomy ever will have weight; let then the rope-makers in His Majesty's yards pursue their present practice, in which their unrivalled superority, to the best workmanship of the contractor, is admitted and acknowledged; and let machinery be introduced, only where it cannot put the strength of the manufacture to hazard. The labor and expense of winding, wheelturning, laying cables, &c. may be abridged by machinery, without interfering with the essentials of rope-making.

The procuring canvas of a good quality, being of great consequence, has claimed the particular attention of government: experiments on the different methods of preparation and manufacture have been made, and some are now on trial. An inspector, bred to the business, examines all the canvas delivered at the principal depôts of Deptford and Woolwich; but if it should be deemed necessary that the manufacture of canvas should be carried on by government, it would be highly inconvenient within the walls of a dock yard, as it would

would be the means of introducing a horde of persons of all descriptions, men, women, and children, who must necessarily be employed in such a manufactory, and thereby open a wide field for embezzlement, and which could not easily be detected, unless an establishment of officers was formed, nearly equal to one third of the persons employed in the works. I would therefore strenuously recommend the adoption of the plan, pointed out by Mr. Rose for carrying on the work, but I would have the establishment formed near the places where flax is cultivated; for instance, one in the neighborhood of Bridport, and others in Scotland, or any other part where the culture of flax is promoted.

Railways may be constructed in most, if not all the present dock yards, at a comparatively trifling expense; and so far as reducing the enormous sums paid for the hire of horses (one half of the number of teams now employed, would then be sufficient) it is a measure deserving the attention of government. I am credibly informed, that the position of most of the yards is favourable to the convenient construction

struction thereof, without making any, or little alteration in the buildings.

But reflecting on the consequence which may attend the introduction of machinery to the utmost extent, for the abridgment of manual labour, the benevolent mind may pause; and taking into view the thousands that may be reduced from His Majesty's dock yards, the thousands and tens of thousands from the navy and army, who, after hazarding their lives in the service of their country, may, on the approach of peace, be thrown into its bosom to seek for subsistence and find it not, may lament the necessity, which from want of workmen during the war, engeniously devised other means as a substitute; and the government itself, notwithstanding the calls of economy, may find it sound policy, to retain in their service as many workmen as possibly can be employed, to prevent the evils of a decreasing population, and the consequent diminution of revenue.

On the competency of the Harbours and Creeks adjoining to the present dockyards to receive the navy in this country in time of peace,

peace, I have to remark, that the necessity of the case, and the positive orders of the superior boards, to take every opportunity of laying down additional moorings, do not seem to have made adue impression, and the efforts which have been made during almost half a century, have been very inadequate to produce the desired effect: indeed it has so happened that the other avocations of the Masters Attendant. and the slender means of men and materials within their power to appropriate to this service during war, have prevented the requisite improvements; if, therefore, the attention of one of these officers at each port (where there are two) should be directed solely to this important business---a sufficient number of workmen be placed under his direction---(convicts in some cases might be employed) --- the necessary materials be promptly supplied to effect a new disposition of the present moorings, I have little doubt but that sufficient room, would be found for laying up the line of battle ships, at least in the harbours and creeks contiguous to the principal dock yards; and the minor situations of Deptford and Woolwich, be capable of receiving many

many of the numerous frigates and smaller vessels, of which the navy is composed; and from the number of building slips in each\*, would likewise be found particularly useful for keeping up the navy.

Another objection to the present dock yards, is strongly enforced by Lord Melville, "The necessity of sending stores to ships when commissioned, or refitted, in boats, lighters, &c." the stores are supposed to be liable to great embezzlement, and the amount of depredation again brought for. ward from Mr. Coulquhoun's treatise. On this I must observe, that if a total neglect of dutypervaded every department, stores could be as effectually embezzled from an arsenal, as during their transit to and from the ship. The instructions to the navy, which, if I mistake not, were fully revised during the time Lord Melville presided at the board of admiralty, (but were not re-printed and issued until the Hon. T. Grenville came to the head of that department) particularly enjoint, that no

<sup>\*</sup> See page 8.
† Vide naval instructions, sec. 5th, chap. 1st. art. 2rd.

stores shall be received on board any ship in commission, without due account being taken thereof by the captain's clerk, the officer having charge of the watch, as well as the officer charged with such stores; and further, to prevent depredation during their transit, an account, sealed up, is sent with each conveyance, addressed to the commanding officer; and for the still greater security, at some of the ports a clerk, or some other trusty person, is sent in the vessel, to witness the delivery of the stores correctly. If these regulations are diligently attended to, embezzlement to any great amount during the passage, of the stores must be prevented; and punishment should follow the neglect of these precautions.

It must likwise be remembered, that although the first equipment of ships in a basin adjoining the storehouses, the possiblity of embezzlement might be further prevented; yet, in subsequent equipments, the present mode of conveyance would probaly be resorted to; as the taking of a

ship

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ship into a basin, merely to complete her stores, must be attended with inconvenience and expence.

And here I cannot omit an observation on the amount of the annual embezzlement of naval stores, as stated by Mr. Coulquhoun, it is very easy to assert, and for a prejudiced mind to believe; but an appeal to facts is the criterion by which to form a judgement: If Mr. Coulquhoun had taken the trouble to enquire, he would have found that the value of the whole of the stores delivered at one dock yard, independent of hemp, say at Chatham as a vard of an intermediate size, did not amount within the year to one fourth of the sum he has stated as the annual loss by embezzlement; hence it will scarcely obtain credit, that the depredation committed could possibly exceed the amount of the value of the whole of the stores delivered in the time, as represented.

From the frequent detection of embezzlement of naval stores, it may be enforced by some that the depredation is even now carried on to a great extent; but when the distinMy Lord Melville appears to have discovered the great inconvenience which attends the royal dock yards, being on a lee shore! and therefore advocates the recommendation of the Commissioners of Revision, of forming one at Northfleet to do away this evil; but let us suppose the wind westerly, as it is stated to be eight or nine months in the year, why then Portsmoth is certainly to windward of Northfleet, if ships are going to the Eastward; but if they are wanted to the westward, they will then be to leeward at Northfleet, and from the prevalence of

these winds, would be liable to detention,

probably for several weeks in the Downs.

Let us further suppose, that the enemy's

ships to sail from the Scheldt with an eas-

terly wind, they must in that case proceed

to the westward (as with a N. E. wind they

could

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could not sail to the N. E.) the ships at Spithead would then be most likely to fall in with them.

In touching upon the late expedition to the Scheldt, his Lordship continues thus: " The attempt having failed, I do not " mean to dwell upon it, in any other view, " than to enforce the additional necessity " of an immediate attention being paid to " the completion of an object, which of " all others, is best calculated to counter-" act any pernicious consequences which " may be supposed to attach to our ene-" mies being in the unrivalled possession " of the Scheldt; all these considerations " concur to prove the necessity of the for-" mation of an extensive and powerful Na-" val Arsenal at Northfleet!!!" I must confess, I cannot comprehend the remedy in its full extent, which my Lord Melville seems here to have in view, to counteract the evil tendency which may arise from the enemy's being in the possession of the Schedlt; it is unnecessary to point out to you, my Lords, that the rendezvous of ships watching the enemy in the north sea must be at Yarmouth, this being the

Docks capable of taking in ships of the classes against each yard expressed.

	THE RATES. First Second Third Fourth Fifth								
Deptford									
Woolwich	1	• • •	1		1				
Sheerness			1		1				
Chatham	. 4				. 1				

His Lordship goes on to state that "he "cannot exemplify the serious conse"quences, attendant upon the necessity
"of waiting for certain winds, in order to
"move down the river from Deptford
"and Woolwich."\* He also states, "it is
"computed that in this country, the wes"terly winds usually prevail eight or nine
"months out of the twelve." Does not
his Lordship know that this is the most
favourable wind to take a ship down from
Deptford or Woolwich; and with this prevailing wind, it is of little consequence

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whether a ship sails from Deptford or Northfleet, the detention would arise in the Downs, and not in the River, as most of the ships which are fitted at the eastern yards, say, on an average, eight out of ten are sent to the westward.\*

Reflecting on another position, taken by his Lordship to strengthen his reasons, in favour of the construction of ayard in the River Thames, and that at Northfleet, as no other place in the kingdom, in his opinion, can be found so eligible; I cannot help deploring that his Lordship, impelled, as Iam persuaded he is, by the purest motives, for the welfare of thenavy and of the country, should not withstanding beled so far by the representation of persons whose zeal no doubt, and I may add of others, whose interest, for the improvement of this identical spot, has induced them to urge the impossibility of the work being carried into effect on any other part of the island. "Many reasons" continues his lordship, "combine to ren-" der a new dock yard more necessary on

<sup>\*</sup> Vide, page 33, in his letter to Mr. Perceval.

<sup>\*</sup> Thirteen new 74 gun ships have sailed from Deptford and Woolwich since the beginning of 1807, and not one of them met with the least accident in going down the river.

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" the eastern side of the kingdom than on " the western; Portsmouth and Plymouth " or the western yards have not only a " greater depth of water; are not only, " in their present state, much more com-" plete dock yards than those in the Rivers " Thames and Medway, but they are more " capable of improvement; whereas two " of the eastern yards, namely, Deptford " and Woolwich, must of necessity be " given up in a few years, even if no sub-" stitute should be provided, on account " of the water becoming daily more shal-· low; for although between forty and " fifty thousand pounds have lately been " expended in removing mud, I under-" stand little advantage has been gained. " as it accumulates nearly as fast as it is " taken up." Now it is an incontrovertible fact that the channel of the river as high up as Deptford, is as deep at this time as it was twenty years ago! It is true that a sum of money has been laid out in removing soil which had accumulated off Woolwich dock yard; but as this accumulation arose from artificial and not from natural causes, the effect is not again to be dreaded, when the clearance of the harbour

harbour is completed, as I learn by enquiry, that it is most likely it will in the course of this summer. The original cause of this accumulation, is to be attributed to the improvements which were begun in that yard in the year 1788, when 20 acres of ground was added thereto, and a wharf wall was built, so far into the river as to divert the current from its regular course,\* and thereby leaving the side next the dock yard in a comparative still water: the soil also which was excavated for carrying on this work, except such as was used for filling in, being thrown into the stream, and of course, being of a heavy nature, remained precisely at that part of the river into which it was thrown; these combining circumstances consequently encouraged the accumulation of any floating matter brought up or down with the tide, but which would not otherwise have lodged there: this is manifest from the observations made, from time to time, by professional men at the

<sup>\*</sup> The Trinity Lighters were during this work, raising immense quantities of ballast, on the north side of Ham Shelf, which consequently encouraged the strongest flow of the tide along the opposite shore.

king's yard, and by some respectable pilots who are in the habit of taking large ships to the moorings to wait for the tide; from this source I also learn, that the accumulation does not take place nearly as fast as the mud is removed, as set forth by the information which his Lordship has obtained on the subject, but that on the contrary, the same depth of water exists at this day, where the king's engines have been employed to clear the channel, as did six months ago; and that even at such of the moorings as have been cleared in this way, the precise depth of water is retained, although it might be supposed that the chains would encourage an accretion.

I would here further press upon your Lordship's time, by remarking, that if we are to be reduced, in so short a time, to the dreadful alternative of being obliged, from necessity, to give up Deptford and Woolwich yards, what is to become of the port of the great City of London, to which ships of all classes so abundantly resort. The Last India Ships drawing 20-ft. 6-in water, are navigated with safety up to Blackwall; if this prediction of his Lordship

ship is to be realized, of which, I must confess, I have many doubts, it certainly behoves the commercial part of the country to seek a remedy; and I know of none better than that adverted to by Mr. Rose, namely of making a cut from Purfleet to Blackwall sufficiently deep for ships of the largest draft of water to pass through; this, if at all necessary, being effected, would do away all fears for Deptford, and Woolwich dock yards.

The doubt of improving either of these yards, which appears to pervade his Lordship's mind, is groundless; for if I am rightly informed, the Navy Board are at this time in treaty (in fact I believe the agreement has already been closed) for a considerable portion of land at Woolwich, in order to enlarge that yard; and this ground extending in part along the bank of the river, gives ample means of making a wet dock, if really necessary, capable of receiving a considerable number of ships.

The saving anticipated by my Lord Melville, in laying ships up in a state of ordinary in a basin, to avoid the necessity

of paying and victualling men to look after them, is, I conceive, erroneous; whether ships are at moorings or in a basin, the same care is required for their preservation by wetting the decks in the summer, and keeping them clean, &c. &c. without which they will soon fall into decay; and for this purpose, a constant attention is necessary; it therefore follows, that proper persons must be retained to perform it; but with all this care, it is a well known fact that ships decay\* much faster when laid up close together in a basin in still water, than when moored in a stream, the agitation of which naturally causes a current of air to be constantly passing between them; surely then it would be bad policy to lay up a hundred sail of ships in a basin, subject, almost at a certainty, to the dry rot; in27

dependent of the risk of destruction by incendiaries or accident.

Besides the necessity of having our ships of war so distributed in a peace, as to be enabled with facility to collect a force at any point required, to meet the enemy, should a sudden rupture take place, ought to be the first consideration; if we contemplate the vast extent of coast at present possessed by the ruler of France, and the means he would have of annoying us, should we be lulted into a peace with him for a time, it will no doubt operate forcibly on our minds, that Northfleet is the most improper place on this island to lay up the whole, or a great portion of the fleet; especially from the difficulty, delay and danger which would probably arise in moving a large fleet from thence to the westward, owing to the prevalence of westerly winds in the channel, and the intricacy of the navigation between the Nore and Portsmouth; in this case should a sudden breach be made with France, the enemy would be enabled to get a squadron to sea from any of his ports in the channel, and do considerable mischief before a single

<sup>\*</sup> A Danish sloop of war, the Little Belt, which was taken at Copenhagen, is a striking instance of the bad effects of keeping ships in still water, and excluding thereby a free circulation of air; it had been the case with this ship before taken, and when she came to be repaired for our service, one side was found to be completely decayed with the dry rot, whilst the other, which had probably been exposed to the air, was perfectly sound.

ship could be moved round to oppose him; whereas if the ships of war, were, in such an event, regularly distributed at Portsmouth, Plymouth, and even at Falmouth, a force could be easily collected at any point of rendezvous required, on a short notice, and the hazards before alluded to would be thereby avoided.

To shew the danger of the navigation before hinted at, and that ships could not avoid it by being fitted out at Northfleet, although on a weather shore, I need only mention, that in the winter of 1806-7 a line of battle ship, a frigate, and a sloop,\* all of which had been docked and fitted for foreign service at Sheerness, sailed from thence and each of them got ashore, the line of battle ship before she reached the Downs, and the other two between that and Portsmouth, and each of them was obliged to be again docked before they could proceed on their voyage. Hence it is evident that the greatest danger does not exist in our dock yards, being situated on a lee shore, but chiefly in the intricacy and danger of the navigation

of the channel, &c. these risks would be increased of course, by re-fitting the major part of the navy in the River Thames, which I understand is intended, if the Northfleet plan is carried into effect.

Having obtruded myself on your Lordships' time, with these few hasty remarks, I must further beg a little more of your attention before I conclude; I could wish to impress upon your Lordships mind the possibility of enlarging the present dock yards, as I cannot conceive, from the observations I have from time to time been enabled to make, of the works carrying on, and the ships re-fitting at the respective yards from Deptford round to Plymouth, that there can possibly be the detention of ships, nor embezzlement of stores so strongly insisted on by the Noble Lord and his informants.

The case he refers to, of ships fitted in the river and supplied with all their sea stores to an eight month's proportion, and to have stood in need of fresh supplies on their arrival at the Nore, the whole of their first stock having been made away with, certainly reflects great disgrace on the commanders

<sup>\*</sup> Ruby, Seahorse, and Hermes.

manders of those ships, as they must have been privy to the expenditure of the stores whether they were wantonly made away with, or expended for the use of the ship; this evil, however, I trust cannot exist now, particularly as far as respects ships fitting in the River Thames; for, I understand, no ship is permitted to draw stores now, except in lieu of such as are damaged, unless she has been at sea, and comes in for the purpose of refitting; this could not be the case with the ships in question, as it seems they had only passed from the river to the Nore; therefore I am ready to conclude it must have occurred at some period long past, and not since the good regulations, at present in force, have been adopted.

By the recent acts of parliament, respecting the possession of king's stores, &c. embezzlement has, from the ease of detection, been much prevented; and the establishment of the Thames Police has been exceedingly useful, not only from the facility with which they detect the offenders, but by their vigilance they deter the "River Pirates" from committing thefts on public as well as private property.

If after the survey recommended by Mr. Rose, it should be decided on, that another dock yard is indispensably necessary, I should hope it will not be on a larger scale than any of the present yards, being well persuaded, from practical knowledge, that the more compact a public work is, the better the works are carried on, and the more effectually frauds and embezzlements are detected or prevented.

Having these objects in view--if it should be determined to have another yard formed--may I venture to draw your Lordships' attention to Purfleet; where, it is probable, every requisite will be found, formed by nature, for completing such a work; there are other parts which I would prefer for a plan of this kind to the westward, particularly in the neighbourhood of Portsmouth, but as my Lord Melville appears to press the necessity of having it to the eastward, I have presumed to point out this place in preference to Nothfleet, it appearing to me to afford a better prospect in every point of view: first, it would not be necessary to take so much ground for the completion of the yard, as I understand you are bound to do

at the latter place; and secondly, the bottom being chalk is more favourable to the construction of docks, slips, &c. without piling, or any other artificial means;\* the water too, approaching the shore, is nearly, if not quite as deep as at Northfleet, and the river wider, it is situated on the shore of the plentiful and fertile county of Essex, and being detached from the Kent side, where there already a considerable number of public works and military establishments, renders it, in the estimation of many persons, a more desirable spot for an Arsenal than the other; and I have no doubt but that your Lordships will concur with me in opinion, that if it should be decided to carry such a work into execution, this place will be found more eligible than Northfleet, taking into consideration, that this is meant on a reduced scale, to that proposed by the Commissioners of Revision.

If any of the foregoing hints should have the least tendency to promote the welfare 33

of my country, I shall consider it the highest gratification that could arise to

My Lords,

Your Lordships'

Most obedient humble Servant,

A NAVAL OFFICER.

<sup>\*</sup> The marshes at Northfleet, which have been surveyed for this work, I am informed are two feet under water in some parts, in spring tides.

DREW and Co. Printers, Bishopsgate Without, London,