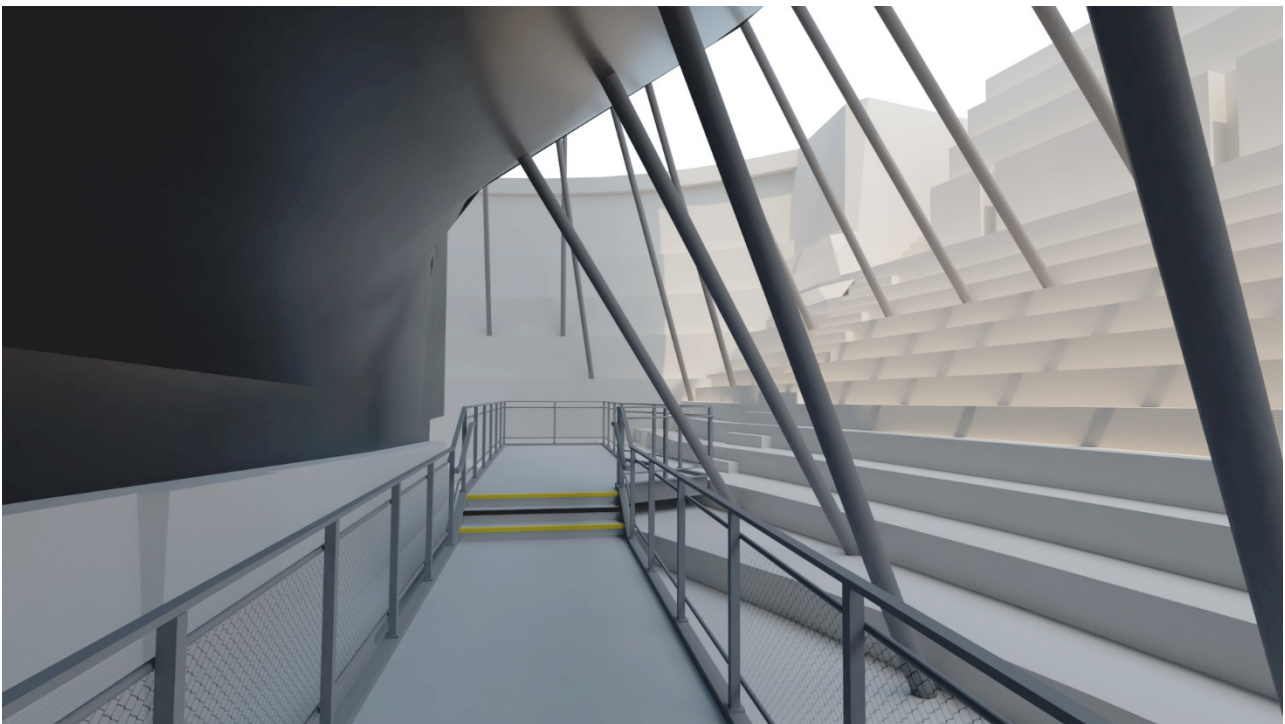


Pre-construction Phase Information

National Museum of the Royal Navy

Dry Dock No. 2, Main Road, HM Naval Base, Portsmouth, PO1 3LJ



Project Description:

To install new walkway, stairs and platforms that provide access into Dry Dock No.2 below HMS Victory.

Date: 24th October 2019

Project No. A1005

Revision: 01

PCI Prepared by:

Bethan Knights BSc, MArch, PG Dip Arch, RIBA CA

The Pre-construction Information has been provided for **information purposes only**. A response from the successful tenderer will be required prior to start of the construction phase, but no response is required with the tender.

This Plan is concerned with **only** the most significant or any unusual hazards which will be encountered during the construction phase of this project. Client approved contractors are expected to manage commonplace hazards encountered frequently on construction sites by standard methods of control familiar to a competent contractor.

We require a copy of the Construction Phase Plan to be issued to us **five working days** before the start of any work on site. This copy **must** include the method statements and other information requested within this plan. The plan **will not** be accepted without this information being included.

Note that this Plan has been prepared on the basis of information available at the time of its issue. Some of the information specified may change as the design develops and this Plan may therefore be amended and re-issued. The Principal Contractor should, however, proceed with the preparation of the Construction Phase Plan on the basis that no revisions to the Pre-Construction Phase Plan will be necessary.

Please contact the following person with any queries relating to this Plan:

Contact: Bethan Knights

Phone number: 07708807961

Email: bethan@pritchardarchitecture.co.uk

Issue and Amendment Record:

Revision	Comment/Amendment	Prepared	Reviewed	Date
T1	Tender Issue	Bethan Knights	Giles Pritchard	25/10/2019

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1.0 The Project

1.1 Description of Works

Installation of walkway over two steps of the broad altar including alterations to existing exit brow, replacement forward staircase, installation of a new walkway along the dock bottom and raised platform to form rudder viewing area and the installation of new handrails to the port aft stairs.

1.1.1 Summary of work activities

The project work activities are described within the specifications and drawings and include amongst others:

- Installation of electrical equipment
- Installation of stairs
- Steelwork erection
- Temporary works - Fencing/hoarding design and erection
- Temporary works - Scaffold/access
- Work near water
- Others

1.1.2 Programme for Construction Phase

Start Date: 13th January
Completion Date: 3rd March
Notifiable to HSE: No

1.1.3 Details of Relevant Parties

See Project Directory in Appendix A.

1.2 Existing Information and Records

1.2.1 Existing Health and Safety File

An existing health and safety file is available on the premises. This will be removed by the Principal Designer prior to work starting on site for updating, but relevant information will be given to the Principal Contractor prior to the start.

1.2.2 Architectural Information

Architectural information is available from Pritchard Architecture Limited .

1.2.3 Other Reports and Information

The following information is attached or available:

- Topographic survey is available upon request.
- Point Cloud Survey with new prop locations is available on request.

2.0 Client's Consideration and Management Requirements

2.1 Structure and Organisation

The project will be under the control of Pritchard Architecture who will be the Contract Administrator.

2.2 Safety Goals for the Project

The Contractor shall provide details of safety goals for this project as part of the Construction Phase Plan.

2.3 Permits and Authorisation Required

Work will not be allowed to proceed until the Client is assured that a suitable and sufficient Construction Phase Plan is in place. The Contractor must provide their Construction Phase Plan to the Principal Designer representative as soon as possible and in good time to enable review and discussion. The Construction Phase Plan should be provided no less than two weeks (10 working days) before the proposed start date.

2.4 Emergency Procedures

The Contractor shall ensure that emergency procedures are established prior to the start of the Construction Phase and are described in the Construction Phase Plan.

The Contractor shall liaise with TBC over all emergency escape requirements for the site and summarise those in the Construction Phase Plan

The nearest local hospital with Accident and Emergency facilities (A&E) is:
Queen Alexandra Hospital
Tel: 02392 286000

2.5 Site Rules

General site rules shall be provided in the Construction Phase Plan.

These shall include requirements for:

- Head Protection
- Safety footwear
- High-visibility vests
- Accident Reporting
- No Smoking
- No Radios/music

These shall be expanded as necessary or appropriate, in the Construction Phase Plan.

2.6 Arrangements for Liaison Between Parties

A schedule for site meetings will be set up at the pre-start meeting.

The Contractor shall specify, in the Construction Phase Plan, the measures to be taken to ensure liaison between all parties on site.

2.7 Security Arrangements

The Principal Contractor is responsible for security of the site. The Principal Contractor must, prevent unauthorised access into the construction site , they will have overall responsibility for security and will secure the premises at the end of the working day.

2.8 Client's Use of the Premises During the Project

2.8.1 Occupation Status During the Construction Phase

The dry dock will not be occupied by other contractors or the client during the work. HMS Victory will remain in operation as a visitor attraction throughout the works.

3.0 Information on Existing Environment

3.1 Historical Information

3.1.1 General Description of Property, Premises or Site

No. 2. Dock forms part of a Scheduled Ancient Monument, and houses HMS Victory an extremely significant historic ship. No. 2 Dock has been the permanent home of HMS Victory since she was berthed there in 1922. When HMS Victory was moved to Dry Dock, No.2, twelve large iron cradles with concrete bases were constructed in the dock to support Victory's hull. These are in the process of being removed and replaced with a new hull support system that better suits the needs of the ship.

3.2 Construction Materials used in existing structure, if known

The dry dock is constructed of mostly stone (granite and portland) with a concrete base with timber strip laid in

3.3 Construction Materials used in new structure, if known

The dry dock will not change. The new structure is constructed of galvanised steelwork.

3.4 Local Environment

3.4.1 Type of Neighbourhood and Notable Features

The site is within the Historic Dockyard, which during the hours of 10am to 5pm is a visitor attraction and from the hours of 5pm to 10am is part of the working naval base.

Adjacent properties include the Mary Rose Museum and HMS M33 within Dry Dock No. 1.

3.4.2 Access Roads and Highways

Contractor vehicle access to the Site will be via HMNB Portsmouth Trafalgar Gate, via the Contractors Reception Centre. Contractors' vehicles will be permitted to enter the HMS Victory port and starboard arenas via security gates controlled by the RN.

3.4.3 External Services Supplies

The power distribution unit for this Project is located at the starboard aft end of the ship on the dockside.

A freshwater source for use by this Project is located in starboard arena near the Bow and may be accessed via a standpipe. There are also other standpipe locations in the port and starboard arenas.

HMS Victory has data and telecommunication connectors traversing from the dockside onto the ship which need to be considered in any lifting operation in the midships to aft starboard quarter of the ship. Power, data and telecommunications to the ship are routed via ducts under the cobbled dockside around the ship.

3.4.4 Buried Services

No.1 and No.2 Dock are historic monuments and there are no known buried services within these docks. All services (electrical power cables/lighting protection tape and rainwater drains) within the dock are surface mounted.

Power, data and telecommunications to the ships within the No.1 and No.2 Docks are routed via ducts under the cobbled dockside around the ship.

3.5 Site Restrictions and Access

3.5.1 Site Access and Restrictions

Workforce pedestrian access to the Site will be via HMNB Portsmouth Trafalgar Gate, via the Contractors Reception Centre. Contractors are also required to sign in/out at the Victory Conservation Workshop Office daily before starting work. HMS Victory is a commissioned RM Warship and therefore all contractors working in

No.2 Dock are required to sign in/out of the Quartermasters Office on board, where the T Card process is in operation.

The primary access/egress point to/from No.2 Dock will be via the steel staircase situated at the Bow of the ship. A secondary access/egress point will be via the stone steps situated on the starboard aft quarter of the ship.

Contractor vehicle access to the Site will be via HMNB Portsmouth Trafalgar Gate, via the Contractors Reception Centre. Contractors' vehicles will be permitted to enter the HMS Victory port and starboard arenas via security gates controlled by the RN.

Throughout the project, the Historic Dockyard will remain open to the public and therefore physical barriers are required between public areas and the works. The Historic Dockyard is open to the public between 10.00 and 17.00, and all major vehicle movement and operations are to be undertaken outside of the public open hours wherever possible.

3.5.2 Security Arrangements for the Dockyard

Once appointed the contractor will need to arrange for all those who will be working on the project get clearance to work within the Naval base. More detail will be issued on appointment.

4.0 General Construction Considerations

4.1 Fire Precautions

4.1.1 Fire Risk Assessment

The Contractor must ensure that the Responsible Person for the site has undertaken a suitable and sufficient fire risk assessment in accordance with The Regulatory Reform (Fire Safety) Order 2005. This must identify the foreseeable hazards (fuel and ignition sources), the control measures to avoid fire and the emergency procedures in the event of fire including: the means of escape, the means of giving warning and the means of fighting fire to be implemented.

HMS Victory is an extremely important ship and a high level of care needs to be taken when working underneath her.

4.1.2 Fire Exits (means of escape)

Existing means of escape shall be maintained at all times throughout the duration of the project.

Where existing escape routes are to be modified, the Contractor MUST identify alternative access and exit routes to protect the workforce, where relevant. Storage of materials, working operations and plant on site MUST not obstruct access and/or emergency routes.

A fire plan detailing fire access/emergency exits/routes/ fire points and assembly points shall be displayed on site and details shall be included in all site inductions.

4.1.3 Raising the Alarm

The fire alarm system for the site shall be kept operational for the duration of the project.

4.1.4 Means of fighting fire

Fire extinguishers should be located at identified fire points around the site. The extinguishers should be appropriate to the nature of the potential fire:

- wood, paper and cloth – water extinguisher;
- flammable liquids – dry powder or foam extinguisher;
- electrical – carbon dioxide (CO₂) extinguisher.

Nominated people should be trained in how to use extinguishers.

4.1.5 Welding/Hot Works

A hot work permit system will be required to cover any hot works (e.g. welding, asphaltting, working with lead, etc) which are carried out on site. The hot work permit system shall contain provision for allowing checks at least an hour after the hot works have been completed. The hot work permit will also need to comply with the requirements of the

BAE and where the BAE has its/have their own system, the Contractor may also need to complete a separate permit.

The need for on-site welding shall be avoided wherever possible or practicable in favour of other methods (e.g. slip-jointing for pipework).

4.1.6 Safe Storage of Flammable Materials

All flammable materials shall be kept secure in fireproof containers, away from fences and boundaries and areas within the premises, away from flammable materials/construction. Further guidance can be found

<http://www.hse.gov.uk/construction/safetytopics/storage.htm>

No flammable materials should be stored within the dock, these should be removed and stored within the site compound.

4.1.7 Access for Emergency Vehicles

Access to the site and surrounding roads, properties and businesses shall be kept free and open at all times, to allow free access for emergency vehicles.

4.2 Emergency Arrangements

4.2.1 First Aid

The Health and Safety (First Aid) Regulations 1981 require all construction sites to have:

- a first aid box with enough equipment to cope with the number of workers on site
- an appointed person to take charge of first-aid arrangements
- information telling workers the name of the appointed person or first aider and where to find them. A notice in the site hut is a good way of doing this.

The Contractor must detail their first aid arrangements in the Construction Phase Plan.

4.3 Site Set-up

4.3.1 Welfare Facilities Available During the Project

Refer to site setup drawing. (Appendix B)

Welfare facilities (washroom, toilets) for the workforce can be found at the end of the Mary Rose Building, Port Arena and within the HMS Victory Conservation Workshop (washroom, toilets, showers, catering and restroom facilities).

4.3.2 Waste Management

The Principal Contractor shall ensure that an effective waste management system is implemented. Waste must not be stored outside the confines of the site boundary unless with specific agreement with the client and relevant permits from the local authority.

Waste should be sorted out into separate skips for recycling and minimal waste should be sent to the landfill sites. Any hazardous material should be sent to the appropriate disposal sites with the correct associated documentation.

4.3.3 Site Compound
Refer to site setup drawing. (Appendix B)

4.3.4 Site Security
The Contractor must ensure that the site is secured in line with, or exceeding the guidance set out in HSE Document HSG151- Protecting the Public -your next move.
<http://www.hse.gov.uk/pubns/books/hsg151.htm>

4.3.5 Scaffold/Access Arrangements (temporary works)
All scaffold must be erected and inspected by a competent person. Scaffold that does not comply with TG20:13 must be designed by a competent person giving consideration to the location, the required use and foreseeable loadings and environmental factors. The Contractor must ensure that measures are implemented to prevent unauthorised adaption of scaffold and over loading. All places of work where a person may fall over 2 meters must be inspected within the previous 7 days prior to use and a record kept. The contractor must set out their management arrangements for scaffold design, erection and inspection in the Construction Phase Plan.

If scaffold is required, it must be freestanding, and all ends be capped.

4.3.6 Temporary Works
Temporary works are defined as the parts of a construction project that are needed to enable the permanent works to be built. Temporary works include access scaffolds, props, shoring, façade retention, excavation support, falsework and formwork, etc.

Where temporary works are required the contractor must ensure the principals of BS5975 are followed and that appropriate arrangements are in place for the design, checks and co-ordination of the temporary works. Further details on the temporary works requirements can be found here: <http://www.hse.gov.uk/construction/faq-temporary-works.htm>

The contractor must provide a schedule of the temporary works required and detail their procedures for managing these in the Construction Phase Plan.

4.3.7 Work at height
Work at height should be avoided where possible. Where access at height is required collective protection must be considered (fixed guarding) or location of items away from a fall risk area to ensure that the working zone is in a place of safety. If this cannot be achieved then measures to mitigate to consequences of a fall must be considered (personal protection).

Where ladders, podium steps, tower scaffold or mobile elevating work platforms are to be used the contractor must ensure that suitable and appropriately maintained equipment is provided and that operatives are appropriately trained, informed and supervised.

The contractor must set out their arrangements for work at height in their construction phase plan.

4.4 Arrangements for Coordinating On-going Design Work and Handling Design Changes

4.4.1 Design Carried Out by Contractors

The contractor will carry out design on their aspects of the work during the construction phase. Evidence demonstrating their compliance with Regulation 9 will need to be provided to the Principal Designer, e.g. designers' risk assessments.

4.4.2 Design Changes

The health and safety implications of any design change needs to be considered by the party instigating the change and relevant information passed to the Principal Designer.

5.0 Information on Significant Risks Identified During Design

5.1 Health Hazards

5.1.1 Asbestos

There are Asbestos containing materials at the aft end sluice area of the dock. This demarcated by signage. The contractor must make arrangements to ensure that all relevant site operatives are aware of the locations of asbestos containing material, and do not disturb them. There are no works proposed in this area as part of these works.

5.1.2 Manual Handling

The following items pose a risk of hazardous manual handling:
Steelwork

Manual handling assessment to be undertaken in accordance with the Manual Handling Operations Regulations 1992 and approved code of practice L23 - <http://www.hse.gov.uk/pubns/books/l23.htm>. Details of controls measures, in particular mechanical handling, should be provided in the contractor's Construction Phase Plan. Avoid hazardous MH where possible. Use of lifting aids considered. Ensure operatives have appropriate training and PPE.

HMS Victory is an extremely important ship and a high level of care needs to be taken when working in the vicinity. Consideration needs to be given to the protection of the ship and dock, to prevent any damage.

5.1.3 Noise

Where possible noise should be reduced at source and control measures included in the contractors Construction Phase Plan. Design - Eliminate noise during design. Where possible select quiet equipment. For example, compare noise levels from power tools when buying or hiring equipment. Consider acoustic barriers where necessary. Noisy operations are to be carried out with due consideration of the adjacent areas and in accordance with the general guidelines and noise limits for working on construction sites. All compressors, drills, breaking equipment etc. shall be fitted with suitable silencers. No operations to exceed 80 db. without protective measures put into place.

5.1.4 Vibration

Where possible material should be specified in suitable lengths to prevent the need for cutting on site. Where use of vibrating tools is required the contractor must make appropriate arrangements to ensure that operatives using vibrating tools are aware and implement appropriate controls to prevent risk of Hand Arm Vibration Syndrome (HAVS). The Contractor should undertake a risk assessment for the use of vibrating tools in accordance with The Control of Vibration at work Regulations 2005 -

<http://www.hse.gov.uk/pubns/books/l140.htm> and HSE guidance - INDG175 - Hard arm vibration at work: a brief guide. Download free via <http://www.hse.gov.uk/pubns/indg175.htm>

Use of vibrating tools should be kept to an absolute minimum and if required agreed with the CA first, so as to prevent any damaged to the dry dock or ship. Details of the control measures to be adopted should be included in the Construction Phase Plan.

5.2 Safety Hazards

5.2.1 Confined Space

Work in confined space must identified in the Construction Phase Plan and be undertaken in accordance with The Confined Space Regulations 1997 Approved Code of Practice - free to down load via this link - <http://www.hse.gov.uk/pubns/books/l101.htm>. Details of the control measures should be included in the Construction Phase Plan.

5.2.2 Electrical safety (including overhead power lines):

All temporary power supplies must be designed and installed by a competent person and be appropriately maintained. Details and links to further guidance on systems of work and the specific requirements for electrical safety can be found via this link: <http://www.hse.gov.uk/construction/safetytopics/systems.htm>

The Contractor should have appropriate inspection regime in place to ensure plant and equipment are maintained in a safe state. Where damage to plant or equipment is noted this should be taken out of use until replaced or repaired by a competent electrician.

Details of the electrical installations, inspection and test regime and competency checks should be included in the contractors Construction Phase Plan.

5.2.3 Installation of Electrical Equipment:

Work on electrical systems must meet the requirements of BS7671 - 17th Edition. All works should be undertaken when the system is effectively isolated and in accordance with HSE guidance HSG85 - Electricity at work: Safe working practices <http://www.hse.gov.uk/pubns/priced/hsg85.pdf>.

Procedures must be implemented to coordinate multiple contactors where there is a risk of an isolated system being re-energised whilst being worked on - i.e. lock out procedures (padlock or similar).

5.2.4 Lifting operations (Cranes):

Lifting operations will be required. All work to be carried out in accordance with HSE guidance L113 (Safe Use of Lifting Equipment - Approved code of practice) - <http://www.hse.gov.uk/pubns/books/l113.htm>.

Contractor must include H&S arrangements for use of cranes Including, provision of lifting plan, competent operators, overhead hazards, crane pad provision, stability of lifting

equipment and safe working loads in their risk and method statements and Construction Phase Plan. No over sailing of adjacent sites allowed.

HMS Victory is an extremely important ship and a high level of care needs to be taken when working in the vicinity. Where lifting operations are required consideration needs to be given to the protection of the ship and dock, to prevent any damage.

5.2.5 Protection of the public:

There should be no significant hazards to the general public. It is likely lifting operations will need to be undertaken from the side of the dock which is used by the general public. These operations are to be undertaken outside of the public open hours wherever possible.

5.2.6 Temporary works:

Temporary work including access scaffolds, props, shoring, excavation support, falsework and formwork must be planned and managed to ensure the same degree of care is taken as with the permanent work. Where necessary design of temporary work must be undertaken and checked by a competent person in line with BS5975 and the HSE guidance:

<http://www.hse.gov.uk/construction/faq-temporary-works.htm>

Formwork used to support the permanent structure should be erected, used and dismantles in accordance with HSE guidance note CIS56 -

<http://www.hse.gov.uk/pubns/cis56.pdf>.

5.2.7 Transport:

There are a number of areas around the site where pedestrians and vehicles will share access. The Contractor must develop a traffic management plan to ensure pedestrians and vehicles are safe. The traffic management should cover issues associated with shared access. Signage, pedestrian segregation, one-way systems and designated parking areas to be detailed in the Construction Phase Plan. Any road layout changes proposed will need to be appropriately coordinated and agree with the Client.

Access to site is via public highway. Contractor to indicate control measures to control dust and debris transgressing to access road and public highway e.g. Wheel wash and regular sweeping of access road. <http://www.hse.gov.uk/construction/faq-publicnuisance.htm>

There is a specific planning condition relating to the prevention of contamination (mud etc.) on the highway. There is a requirement for wheel wash facilities to be incorporated by Contractor into the Construction Phase Plan. Further guidance should be followed: <http://www.hse.gov.uk/pUbns/priced/hsg144.pdf>

5.2.8 Stairs:

Stairs must be designed and installed to meet the requirements of Buildings Regulations Part K and should:

- be well lit;
- have handrails at an appropriate height that contrasts with the surroundings;
- have good slip resistance properties, particularly at the leading edge;
- have clearly marked edges;
- be free from trip hazards or obstacles

The Contractor should detail the arrangements for the safe installation of stairs in the Construction Phase Plan.

5.2.9 Work near water:

There is a very low risk of drowning during the delivery of this Project. Water up to 1m deep has been known to accidentally accumulate in No.2 dock when the water pumps fail. In the event of the dock flooding work would not continue until all of the water has been drained and the site has been declared to be safe. The Site Compound is also adjacent to No.1 Basin which is full of sea water.

6.0 The Health and Safety File

6.1 Preparation and Format for the File:

The File will be prepared by the Principal Designer to the standard format used for all Files in accordance with their specification.

The file will contain information about the project likely to be needed to ensure health and safety during any subsequent work, such as maintenance, cleaning, refurbishment or demolition. When preparing the health and safety file, information on the following should be considered for inclusion:

- a) a brief description of the work carried out;
- b) any hazards that have not been eliminated through the design and construction processes, and how they have been addressed (e.g. surveys or other information concerning asbestos or contaminated land);
- c) key structural principles (e.g. bracing, sources of substantial stored energy – including pre- or post-tensioned members) and safe working loads for floors and roofs;
- d) hazardous materials used (e.g. lead paints and special coatings);
- e) information regarding the removal or dismantling of installed plant and equipment (e.g. any special arrangements for lifting such equipment);
- f) health and safety information about equipment provided for cleaning or maintaining the structure;
- g) the nature, location and markings of significant services, including underground cables; gas supply equipment; fire-fighting services etc;
- h) information and as-built drawings of the building, its plant and equipment (e.g. the means of safe access to and from service voids and fire doors).

Handwritten electrical and mechanical certificates are acceptable, as are hand annotated drawings.

6.2 Programme for the File:

Designers, The Principal Contractor and contractors are required to retain all relevant certificates and information including details of materials used, record drawings and commissioning, inspection and statutory certificates and provide this information to the Principal Designer in a timely manner on request and within seven days of Practical Completion.

7.0 APPENDICES

Appendix A. PROJECT DIRECTORY

Appendix B. SITE SETUP PLAN

Appendix C. DESIGNERS RISK ASSESSMENTS

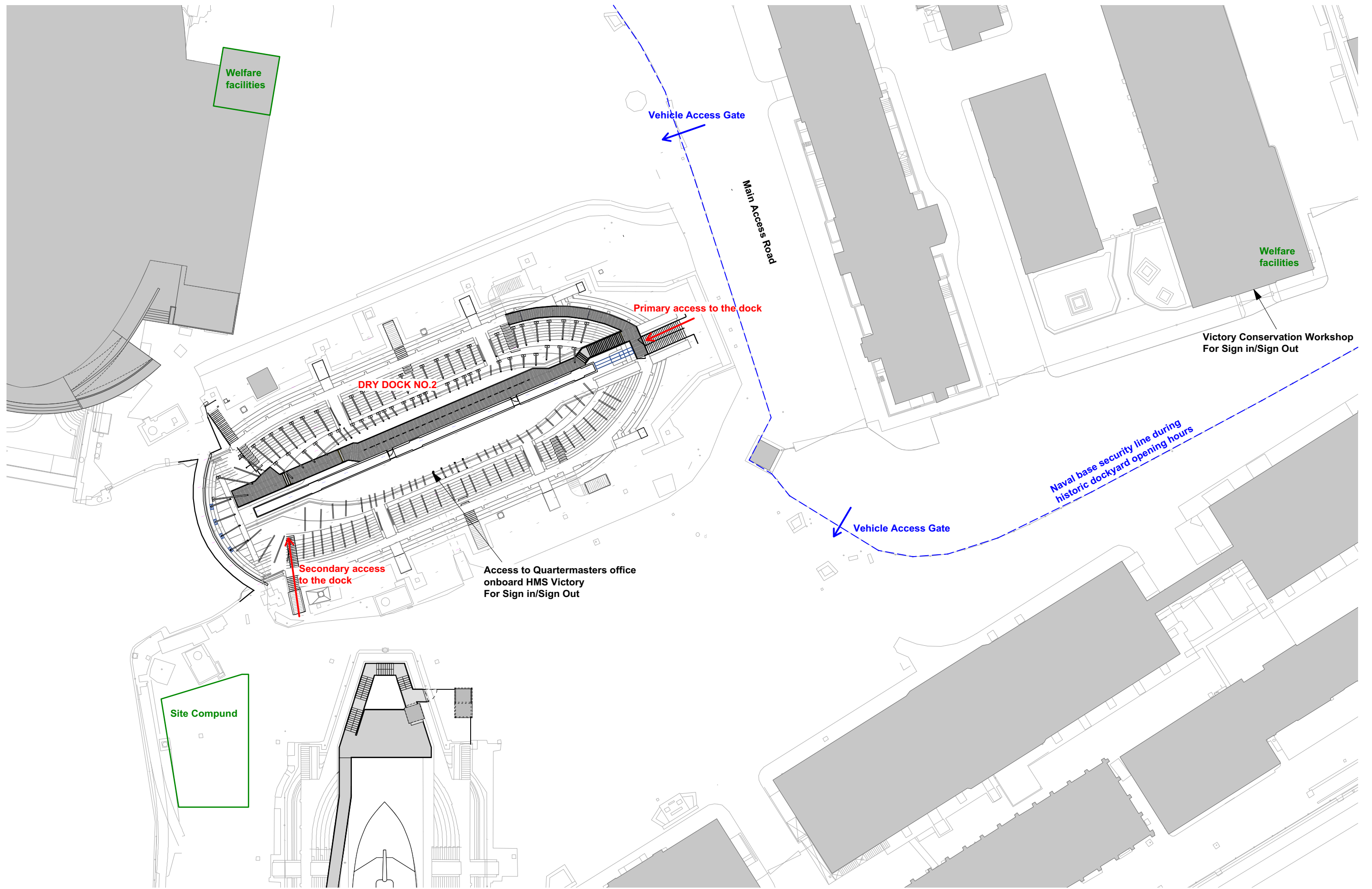
Appendix A

Project Directory

Role	Company Address	Contact Details
CLIENT	National Museum of the Royal Navy	CONTACT Rosemary Thornber TEL: 02392 891370 E-MAIL Rosemary.thornber@nrmn.org.uk
CONTRACT ADMINISTRATOR, ARCHITECT and PRINCIPAL DESIGNER	Pritchard Architecture Limited Porter's Lodge Portsmouth Historic Dockyard Victory Gate, HM Naval Base Portsmouth Hampshire PO1 3LJ	CONTACT Giles Pritchard TEL: 07775 906815 E-MAIL giles@pritchardarchitecture.co.uk
PRINCIPAL CONTRACTOR	Tbc TBC	CONTACT TBC TEL: TBC E-MAIL TBC
QUANTITY SURVEYOR	MEA 15 Milsom Street, Bath, BA1 1DE	CONTACT Andy Allsopp-Jones TEL: 07791 981433 E-MAIL andy@meaconsult.co.uk

Appendix B

Appendix C



FOR TENDER

Revisions: T1 Tender Issue

25/10/2019



PROJECT: Dry Dock No.2 Access

SHEET: Site Setup Plan

This drawing is ©copyright Pritchard Architecture 2018. No dimensions to be scaled from this drawing except for planning purposes

DRAWING NO: A1005 220

SCALE: 1:500

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REV: T1

DATE: Oct 19

PRITCHARD
 ARCHITECTURE
 Porters Lodge, College Road
 HM Naval Base, Portsmouth, P01 3LJ
 email: studio@pritchardarchitecture.co.uk

Prepared By	Date	Reviewed By	Date	Issued By	Date	Job No	Rev
Bethan Knights	October 2019	Giles Pritchard	25/10/19	Bethan Knights	25/10/19	A1005	T1

DESIGN RISK ASSESSMENT

Ref. No	Activity/Element	Hazard	Persons at risk	Risk Rating			Action at Design Stage (Eliminate, Substitute, Reduce, inform/isolate and control)	Remaining Hazard	Designer's Perceived Control Options By Contractor
				L <small>LIKELIHOOD</small>	S <small>SEVERITY</small>	R <small>RISK</small>			
1	Manual Handling	Handling large steel sections	Construction Operatives	2	2	4	Steelwork designed so it can be installed in small sections.	Some manual handling of steelwork still required.	Manual handling assessment to be undertaken in accordance with the Manual Handling Operations Regulations 1992 and approved code of practice L23 - http://www.hse.gov.uk/pubns/books/l23.htm .Details of controls to be provided in the contractor's construction phase plan. Avoid hazardous MH where possible. Use of lifting aids considered. Ensure operatives have appropriate training and PPE.
2	Site transport/cranage/material movement outside site boundary	Site transport, Movement of materials etc where pedestrians are present	Operatives, Members of the Public, Staff	2	3	6	It has been identified within the PCI.	Some movement of materials outside the site compound to be undertaken.	Transport and craneage of materials to be undertaken out of opening hours. Prepare a traffic management plan.
3	Segregation of the works from members of the general public and other users of the dockyard	Non site operatives entering the working site, and coming into contact with site operations.	Members of the Public, Staff	2	3	6	It has been identified within the PCI. Site setup plan shows area for site compound that should be contained.	Some works outside site compound still to be undertaken.	Provide detail within the CPP how the works will be accessed and the provision of secure protective fencing, and signage

4	Hazardous materials	Working lime mortar. Lime is an irritant	Construction Operatives	2	1	3	Product specification is for lime:sand mortar, rather than cement based mortar	Works with lime mortar.	Provide COSHH assessment for product and identify use of PPE within the contractors' task specific RA's and MS's are required.
5	Work at height During Construction	Dock steps are irregular and very large. No protection to dock step edges. Considerable fall to bottom of dock.	Construction Operatives	3	2	6	The design limits the amount of h/l steelwork. It has been identified within the PCI.	As previously stated.	The contractor must detail their arrangements for the management of work at height in the construction phase plan.
6	Work at height Maintenance	Dock steps are irregular and very large. No protection to dock step edges. Considerable fall to bottom of dock.	Maintenance staff	3	2	6	NMRN are due to install a latchway system for use during the maintenance of the dock.		N/A
7	Fire and/or emergency in dock bottom In use	Providing means of escape for members of the public from the dock bottom.	Members of the public	2	3	6	The design includes for two routes out of the dock at either end. These routes utilise existing stone stairs, which will have handrails added but do not meet the standards set out within Parts K/M of the building regs. This is to form part of the NMRN evacuation management plan for visitors to HMS Victory. Emergency lighting is included in the design.	Means of escape not meeting the provisions set out within Parts K/M of the building regs. There is an electrical cable on the port aft stairs that causes a trip hazard. It is recommended this is moved, but should be included in the management plan.	N/A
8	Slips trips and falls During construction	Dock steps are irregular and have little slip resistance. Dock surfaces can be very slippery when wet.	Construction operatives	3	1	3	It has been identified within the PCI. Care should be taken by operatives and appropriate PPE be worn.	As previously stated.	The contractor must detail their arrangements for the management of slips trips and falls in the construction phase plan.
9	Slips trips and falls Maintenance	Dock steps are irregular and have little slip resistance. Dock surfaces can be very slippery when wet.	Maintenance Staff	3	1	3	NMRN are due to install a latchway system for use during the maintenance of the dock. Care should be taken by maintenance operatives and appropriate PPE be worn.	As previously stated.	N/A

10	Slips trips and falls In Use	Dock steps are irregular and have little slip resistance. Dock surfaces can be very slippery when wet.	Members of the Public	3	1	3	The design removes the need for visitors to walk in the dock surfaces. The new walkway will have a slip resistant surface. New stairs/steps will comply with Part M and K where possible.	New staircase pitch does not meet Part K requirements.	N/A
11	Falls and falling objects Construction	Possibility for items to fall down onto operatives from high level.	Construction operatives	2	2	4	It has been identified within the PCI.	As previously stated.	The contractor must detail their arrangements for the management falling objects in the construction phase plan.
12	Falls and falling objects In use	Possibility for items to fall down onto visitors from high level during maintenance works.	Members of the public	2	2	4	The walkway structures under Victory will be closed when any maintenance of works are being undertaken above.	Nil	N/A

L and S are measured like so (with likelihood as an example); high score 3 (likely to happen), medium score 2 (unlikely to happen) and low score 1 (highly unlikely). Designers must consider the 'principles of prevention' when considering what controls are required – THINK ERIC – E = Eliminate, R = Reduce, I = Inform/Isolate, C = Control.

Risk Rating Matrix

HSE risk matrix - <http://www.hse.gov.uk/risk/faq.htm>

		Potential severity of harm		
		Slightly Harmful 1	Harmful 2	Extremely Harmful 3
Likelihood of harm occurring	Highly unlikely 1	Trivial 1	Tolerable 2	Moderate 3
	Unlikely 2	Tolerable 2	Moderate 4	Substantial 6
	Likely 3	Moderate 3	Substantial 6	Intolerable 9