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Construction (Design & Management) Regulations 2015 Pre-Construction Information

Project:

Newport Transporter Bridge Visitor Centre and Associated Bridge Repairs

In conjunction with:



April 2020

Document Information

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SECTION 1: INTRODUCTION

1.1 Use of this document

This document is intended to assist the Client and Principal Designer in demonstrating that they have provided Pre-Construction Information as required by the Construction (Design & Management) Regulations 2015. As further information becomes available at the Pre-Construction Stage the document will be updated. Designers and contractors should make enquiries to ensure they are working from the most recent version.

The document acts as a source of summary information, linking to other information where relevant. The author should be notified if access to any of the links is not available.

In addition to this document and linked sources, the design team have produced drawings, specifications and other tender information. This should also be referred to as pre-construction information.

The Pre-Construction Information is unusual, as it will refer to two separate projects.

- 1) The demolition of existing building and construction of new Visitor Centre.
- 2) The repairs and replacement of specific elements of the listed Newport Transporter Bridge

The approach has been adopted to ensure that the appointed Principal Contractor is fully aware of the required standards for delivery of construction Health and Safety. In addition, there are clear interfaces between the two specific elements of the project which will require an enhanced level of co-ordination and co-operation between the Principal Contractors and their supply chains.

SECTION 2: PROJECT INFORMATION	
2.1 Project Team for New Visitor Centre	
Client	Project Manager
NCC Project Board Civic Centre Newport Gwent NP20 4UR Contact: Mike Lewis Email: Mike.Lewis@newport.gov.uk Tel:	Newport Norse Telford Depot Newport NP19 0ES Contact: Maxine White Email: Maxine.White@newportnorse.co.uk Tel: 01633 240471
Architect and Principal Designer	Structural Engineer
AWW Rivergate House 70 Redcliff Street Bristol BS1 6LS Contact: Chris Mitchell Email: Chris.Mitchell@aww-uk.com Tel: 01173 212241 / 07773 390084	Cambria Cambria House 16-17a Plas St Pol De Leon Penarth Marina Cardiff CF64 1TR Contact: Wynne James Email: w.james@cambria.co.uk Tel: 029 2009 3333 / 07854 584977
Mechanical and Electrical Engineering	
McCann Faraday House, Terra Nova Way Penarth Marina Cardiff CF64 1SA Contact: Geraint Hopkins Email: geraint.hopkins@mccannp.com Tel: 029 2035 2450 / 07919 212602	
CDM Advisor	
MSAFE Risk Management Limited The Old Dairy 154a Seabourne Road Bournemouth Dorset BH5 2JA Contact: Mark Wilson, Director Email: mark.wilson@msafe.co.uk Tel: 0333 8000 700 / 07877 792680	

2.2 Project Team for Bridge Repairs and Refurbishment

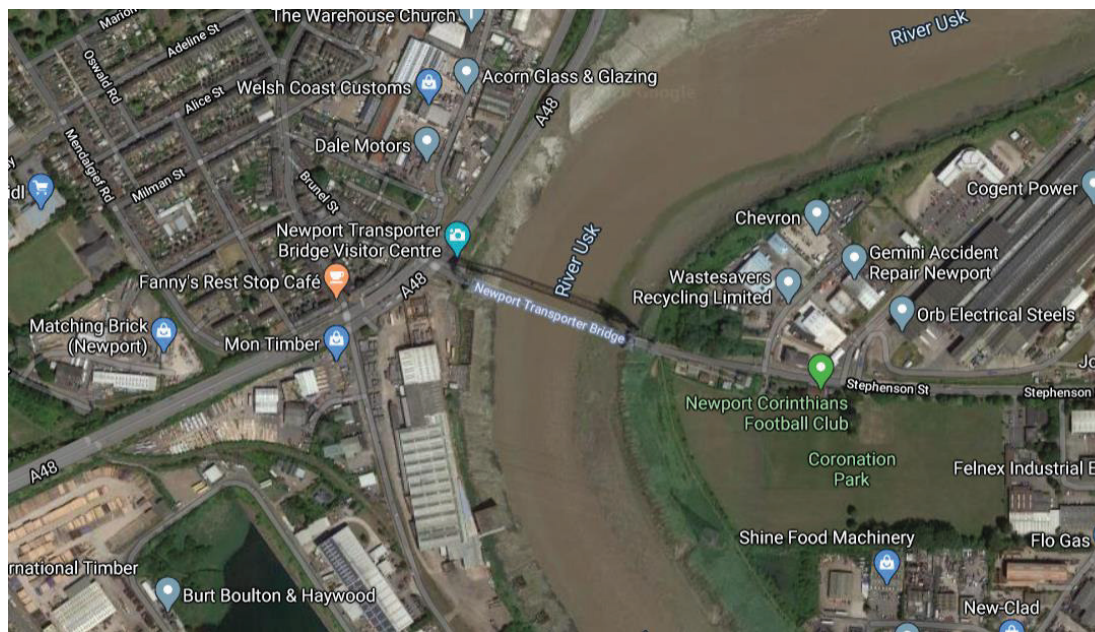
Client		Project Manager	
NCC Project Board Civic Centre Newport Gwent NP20 4UR Contact: Mike Lewis Email: Mike.Lewis@newport.gov.uk		Newport Norse Telford Depot Newport NP19 0ES Contact: Maxine White Email: Maxine.White@newportnorse.co.uk Tel: 01633 240471	
Principal Designer		Project Engineer and Design Lead	
AWW Rivergate House 70 Redcliff Street Bristol BS1 6LS Contact: Chris Mitchell Email: Chris.Mitchell@aww-uk.com Tel: 01173 212241 / 07773 390084		Curtins Consulting Quayside 40-58 Hotwell Road Bristol BS8 4UQ Contact: Stephen Beggs Email: stephen.beggs@curtins.com Tel: 0117 302 7560 / 07734 788 055	
Architect		M&E Designer	
Austin Smith Lord One Dunleavy Drive Cardiff CF11 0SN Contact: Twm Harris-Davies Email: Chris.Mitchell@aww-uk.com Tel: 01173 212241 / 07773 390084		Hoare Lea Atlantic House Greenwood Close Cardiff Gater Business Par Cardiff CF23 8RD Contact: Lee Harrison Email: leeharrison@hoarelea.com Tel: 02920 535 050/ 07387 261 959	
CDM Advisor			
MSAFE Risk Management Limited The Old Dairy 154a Seabourne Road Bournemouth Dorset BH5 2JA Contact: Mark Wilson, Director Email: mark.wilson@msafe.co.uk Tel: 0333 8000 700 / 07877 792680			

2.3 Project location

The site is located on both banks of the River Usk. The Visitor Centre is located on the Southern Distribution Road (SDR) or A48.

Visitor Centre: Brunel St, Newport NP20 2JY. The Principal Contractor shall use the area provided by the existing Visitor Centre and adjacent car parking area for compound office and welfare provision.

The eastern approach to the bridge is via Stephenson Street, Newport passing the Orb Steel Works. The appointed Principal Contractor following tender process will use verges and tarmac apron leading from Stephenson Street for compound office and welfare provision.



2.4 Summary scope of works

The project comprises of two clearly defined elements with two separate specialist design teams (see Sections 2.1 and 2.2):

1: The asbestos removal and demolition of the existing Visitor Centre and the new Build of the modern Visitor Centre. The design has been led by AWW and the associated design Team.

2: The second element is the repairs and replacement of specific elements of the listed Newport Transporter Bridge. Curtins Structural Engineers are the specialist design lead for the project.

The project will present challenging levels of co-ordination and co-operation between the Principal Contractor;

- The public highway (SDR and Stephenson Street)
- Protection of the public highway / public during the decommission and re-commissioning of tensioned steel wire ropes supporting the bridge
- Potential public highway works to the SDR carriage way and traffic crossing point. Adjacent to the Visitor Centre

- Decommissioning of the gondola. Currently proposed to be completed in the existing approach to the bridge from the SDR
- Refurbishment of the gondola on land adjacent to the site compound and construction area
- Establishment of procedures and protocols for accessing the gondola refurbishment compound
- Reinstatement of the gondola following refurbish and associated bridge repairs
- Co-ordination of the elevated walkway from Visitor Centre to bridge

2.5 Client brief

2.5.1 Main function & operational requirements

To provide a modern multi use space in the form of a three-storey visitor centre and associated elevated walkway to the bridge. Combined with the refurbishment and repair of the listed Newport Transporter Bridge to extend its viable use for future generations.

2.5.2 Motivation for initiating the project

To increase the use and visitor numbers for the Newport Transporter Bridge in conjunction with enhancement of the surrounding areas.

2.5.3 Client point of contact

The client is Newport Norse and the appointed Project Manager for both elements of the project is.

Maxine White
Project Manager
Newport Norse, Telford Depot, Telford Street, Newport NP19 0ES
T: 01633 240471
Maxine.White@newportnorse.co.uk

2.5.4 Designing a Workplace

The designers have considered the requirements of the Building Regulations and Regulatory Reform (Fire Safety) Order 2005 and they have been considered as part of the design process. The design is subject to normal building control acceptance and associated sign off process.

The Regulatory Reform (Fire Safety) Order 2005 will apply during the construction stage and the Principal Contractor will need to assign a “responsible person” under the Regulatory Reform (Fire Safety) Order 2005 and undertake a fire risk assessment for the construction site based on their undertakings in due course.

2.6 Key dates

2.6.1 Proposed commencement on site

The proposed start date is subject to planning approval. Newport Norse, the Design Teams and appointed Principal Contractors will agree programme dates following the planning and appointment process.

2.6.2 Allocated duration on site

TBC subject to acceptance of proposed programmes.

2.6.3 Lead in between contractor appointment and start on site

Minimum of four (4) weeks mobilisation will be provided to the Principal Contractor.

2.7 Existing information

Documents and Reports	Availability of this information?
Asbestos Survey	The existing Visitor Centre will require a Refurbishment & Demolition Asbestos Survey. The Client will afford sufficient programme and resource to allow the Principal Contractor to commission and R&D Survey and remove any identified asbestos in accordance with the Control OF Asbestos Regulations prior to commencement of any strip out or demolition works. Disturbance of building fabric must not commence until a full R&D Survey has been carried out and any asbestos identified has been removed.
Demolition / Site Clearance Reports	Waste consignment notes to be included within the bespoke Health and Safety. All asbestos and Lead paint to be disposed as controlled waste. Supported by disposal documentation. To be recorded in the bespoke Health and Safety File for the project.
Existing Drawings	Existing drawings and reports in regard to the Visitor Centre and Bridge have been provided to inform the design and construction process by AWW and Curtins as part of tender documentation and specifications. All available drawings and information shared with Principal Contractors and tender period and during design developments.
Existing H&S File(s)	Note comments above. Following completion of the demolition the client shall be provided with a copy of the following, together with any other information relevant to a Health and Safety File as required by the CDM Regulations: • A brief description of the works carried out. • Waste consignment notes • Asbestos clearance notes and associated waste transfer notes • Four stage air clearance certificates for asbestos removed under controlled conditions. • Written confirmation of services locations and that known services are disconnected. • WAC tests and consignment notes for any contaminated waste removed from site. • Details of any services, vaults etc. discovered as part of the demolition works.
Existing Welfare Facilities	The Principal Contractor will be required to provided Welfare Facilities. Complying to Schedule 2 of the CDM Regulations 2015 as a minimum standard. The welfare facilities need to reflect the projects programme and variations in number on site at any period in time.

	The Bridge appointed Principal Contractor will need to provide welfare facilities for the workers undertaking the repair and refurbishment works to the gondola compound area.
Fire Plan	The two Principal Contractors will need to co-ordinate and align their bespoke Fire Plans for the duration of the project.
Flood Risk Assessment	The River Usk passes under the main bridge structure and is tidal. https://www.tidetimes.org.uk/newport-tide-times The web site provides live tide updates for the River Usk.
Ground Contamination	The site is within a protected area and works must ensure there is no discharge or contamination run off into the adjacent river. See Ecology Report issued with tender documents. See Appendix 1.
Ground Investigation	See Appendix 1 - Site Investigation for Visitor Centre. Curtins have been instructed to commission a ground investigation survey for the Stephenson Road approach and proposed location of hoist for Bridge Repair / Replacement works programme.
Ground Water	Ground water will need to be controlled and managed by the appointed principal Contractors. The Visitor Centre site has surface water drainage within the existing site. There is an outflow into the River Usk to the north of the centre (circa 50m). Vinci the SDR term contractor have verbally confirmed that access to the outflow is required 24/7 during the programmed works. The existing access and egress route are outside of the proposed hoarding line. The Stephenson Street approach is tarmac to camber. There is roadway below ground drainage provided to the left side of the roadway (dog centre side). The right-hand side will displace to grass verge and proposed location of office, welfare facilities etc.
Hazardous material	A full Refurbishment and Demolition Survey has been undertaken on existing Visitor Centre. To be issued by Newport Norse. Due to the age of the Bridge it is envisaged that the base layers of paint will contain Lead Paint. The appointed Principal Contractor is to sample the paint. https://www.hse.gov.uk/pubns/cis79.pdf - HSE Guidance https://www.hse.gov.uk/pubns/priced/l132.pdf - Control of Lead at Work Regulations 2002 Approved Code of Practice and guidance All legal guidance and industry best practice is to be applied as a minimum standard for the duration of the works.

Legionella Risk Assessment	Any redundant pipework and tanks could pose a risk of exposure to Legionella bacteria along with general mould spores. Drain down and removal techniques should address this hazard and prevent exposure. Note: if the wet rising main is commissioned, a Legionella risk assessment will be required to take account of the same and outline the management arrangements to meet with the requirements of L8: http://www.hse.gov.uk/pubns/priced/l8.pdf
Occupier / Third Party Site Rules	The proposed works will be undertaken with the appointed Principal Contractors having 24/7 control of their specific sites. As such the Principal Contractors are to indicate within their Construction Phase Health and Safety Plans how each site will be controlled and managed in line with legislation and industry best practice. The Bridge Repairs to the supporting Steel Wire Cables which oversail the public and public highway will be to be coordinated with the Client and interested third parties. The replacement of the cables over the SDR is likely to require a road closure and out of hours works. The Stephens Street, Steel Wire Cables oversail the dog shelter and will required to be planned and managed by all parties.
Permit to Work System	To be developed by the Principal Contractors and align to legislation and industry best practice
Restricted areas	The Principal Contractor and supply chain are limited to the agreed construction site boundaries. Works required outside of the agreed areas is to be planned, controlled and management by the Principal Contractors following consultation and co-ordination with the Client and any third party.
Services Locations	Note: Design calculations, specification and comments within tender information. See also Appendix 2.
Structural Condition Appraisal	Note: Design, calculations, specification and comments within tender information.
Scaffold / Hoist	Scaffold will be required for projects. External elevations for the Visitor Centre and a rolling encapsulated bird gage for the Bridge works. Any scaffolding required is to be installed by a NASC Contractor or a competent experienced contractor who can confirm that they are working to the prescribed standards of NASC or higher. All scaffolding is to be constructed in accordance with TG20:13 Guide to Good Practice for Scaffolding with Tube and Fittings. Any scaffolding should be erected in accordance with NASC guidance notes in particular SG4. Any scaffold that does not employ a "basic" design as determined in NASC TG20:13 must be accompanied by a design by a suitably qualified scaffold engineer. It is recommended that scaffold contractors are appointed using the NASC Scaffold Specification:

	https://www.nasc.org.uk/?smd_process_download=1&download_id=4663 Newport Norse have sought guidance from Case in the development of a strategy for the proposed bridge works programme. Part of the proposal is to use a hoist for the vertical movement of plant, equipment, materials and personnel. Curtains are reviewing the proposal in terms of structural implications. ALL elements will need to be reviewed following appointment of the Bridge Works Principal Contractor to confirm assumptions made align with the Principal Contractors planned safe method of operation.
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2.7 Summary of hazards associated with the project

In addition to those typical of most construction work, the following CDM hazards and hazardous activities are relevant to the project:

- Work above and adjacent the River Usk (tidal). Risk of drowning, subsidence of mud banks and overturning of construction plant.
- Work at significant height and exposure to adverse weather conditions.
- Uncontrolled de-tensioning of cables associated with the bridge and suspension gondola. Working above public highway and neighbouring properties – risk of falls and falling materials.
- Working overhead / falling materials – bridge works being carried out above Visitor Centre works.
- Overloading / collapse of existing retaining structures.
- Contact / damage to existing foundations or ground anchors associated with adjacent structures.
- Discovery / exposure to asbestos fibres within existing building or excavated ground.
- Work in close proximity to public highway and areas occupied by the public.
- Contact with utilities within the site boundary.
- Exposure to lead contained within painted surfaces of the bridge.
- Management of risks associated with COVID-19 outbreak.

SECTION 3: CLIENT CONSIDERATIONS & MANAGEMENT REQUIREMENTS

3.1 Health & Safety Goals

It is the intention of Newport Norse to take all reasonably practicable precautions for the prevention of accidents and dangerous occurrences associated with this project. They will be assisted by the project team in pursuit of this requirement.

In addition to compliance with their obligations under relevant legislation, the following requirements should be met by the project team during the execution of the project:

- Clear, efficient communication between all parties.
- Designers to identify hazards and discuss options for eliminating or where not possible reducing the risk.
- Designers work to the HSE's red, amber and green list where reviewing design options.
- Designers to consider maintenance access requirements and incorporate safe access into their design or coordinate with others to achieve the same.
- Ensure health hazards are not overlooked.
- Principal Contractor to comply with any Construction Phase Health and Safety Plan issued to the client prior to commencement of works.
- Zero RIDDOR reportable incidents during the construction stage.

3.2 Planning and managing the work

3.2.1 Pre-construction

Both design teams and AWW as the appointed Principal Designer have been coordinating the design work to date with the Project Manager, Client and others. The design teams have made assumptions based on their experience as to the resources required and likely timescales for the design phase and construction of the project. The overall project presents clear and foreseeable risks associated with the works, interfaces and the public.

The Bridge element of the works is repair and refurbishment which will be subject to adaption of the proposed programme and delivery. There are clear interfaces between the projects which will require co-ordination, co-operation and adaptation of programmes.

- Decommissioning of the gondola. Currently proposed to be completed in the existing approach to the bridge from the SDR
- Refurbishment of the gondola on land adjacent to the site compound and construction area. Appendix 3 contains the initial proposed Gondola Lift Concept and Crane Study
- Proposed traffic light adaptation on SDR adjacent to Visitor Centre
- Protection of the public highway / public during the decommission and re-commissioning of tensioned steel wire ropes supporting the bridge
- Establishment of procedures and protocols for accessing the gondola refurbishment compound
- Reinstatement of the gondola following refurbish and associated bridge repairs
- Co-ordination of the elevated walkway from Visitor Centre to bridge

Both Principal Contractors are to advise in their Construction Phase Health and Safety Plan how the co-ordination will be delivered in practical terms. Following the appointment of the Bridge works Principal Contractor. A dedicated meeting should be arranged to discuss individual project requirements and agree a methodology for proactive delivery.

All Principal Contractors are recommended to attend site to allow a full understanding of the site, limitations and opportunities.

3.2.2 Construction stage

The proposed contract requires that the appointment of Principal Designer will hand over to the Principal Contractor upon their appointment. They will be required to undertake the role or nominated a suitable party with the skills, knowledge and experience to take on the role during construction to handover.

The Principal Contractors will be required to develop their proposals that demonstrate the construction work is properly planned, managed and co-ordinated during the construction phase. The Principal Contractor shall devote sufficient effort to planning and managing health and safety in proportion to the risks and complexity associated with the project. Using the information provided the Principal Contractor shall work with the designers and contractors to identify any further hazards and assess the risks related to the works on site. Using this information, the Principal Contractor along with other Contractors involved, shall plan, manage and co-ordinate the construction phase.

3.3 Communication & liaison

3.3.1 Pre-construction

Arrangements will need to be agreed and in place, with the appointed Principal Contractor and associated design teams to undertake design team meetings at frequencies dictated by the nature and pace of design development and progress on site.

3.3.2 Construction stage

It is proposed that health and safety matters will be discussed as part of the agenda at the regular project meetings. In addition, the co-ordination of the projects will be a separate agenda item to ensure arrangements are working well. Allow for review and adjust elements that are not working well.

It is proposed that meetings will be held monthly or as required during the construction stage. This will form the formal basis for recording communication and liaison however informal communication will also take place outside of these meetings to progress issues.

Where there is ongoing design development that may have health and safety implications further CDM Review meetings should be undertaken with the team or individual contractors/designers to review the implications of the design development or changes.

3.4 Arrangements for monitoring & review

3.4.1 Pre-Construction

As 3.3.1

In addition to this, Client has developed a master Risk Register which contains commercial, design and use risks. The risk register identifies hazards and further action that can be taken to eliminate and or reduce risks. Any hazard that cannot be eliminated is assigned as a residual risk for action by a designated member of the team or future team.

Following the appointment of the Bridge Principal Contractor a full Risk Workshop will be held to incorporate the principal Contractors associated Risk's. Risks that have an interface will need to be reviewed in particular detail to ensure no new risks are introduced. Removed or mitigated risks are not re-introduced to the project.

3.4.2 Expectations for contractor arrangements

The Principal Contractors must establish clear arrangements for the monitoring and review of site safety for the duration of the works.

As a minimum it is expected that this will comprise a site manager who has undertaken the CITB SMSTS Course (or equivalent) together with additional monitoring undertaken by a party who has undertaken the NEBOSH Construction Certificate or equivalent with relevant experience.

The Client will expect to see evidence of regular inspections of health and safety performance on site by the Principal Contractor.

The project team will informally monitor health and safety on site during construction. The client may also request that MSAFE Risk Management undertakes formal health and safety inspections on their behalf. The contractor should afford reasonable access to undertake these inspections.

3.5 Managing design development & changes

3.5.1 Pre-Construction

The design development from a CDM perspective will be coordinated by AWW Architects and Curtins as the Design Leads, up until appointment of the Principal Contractor. Following on from this, if further development or changes are required this will be coordinated by the Principal Contractor or their appointed party acting as Principal Designer. TBC by Newport Norse.

3.5.2 Construction stage

From a CDM perspective, design changes, additions or developments will be managed through appointed Principal Designer. The relevant designers must assist and provide relevant information to allow the health and safety implications of design changes to be assessed and coordinated.

Consideration must be given to eliminate or at least reduce the risks associated with design changes to the same standards as were applied at the pre-construction stage. The Principal Contractors and where applicable any works contractors, must reassess the health and safety implications of any substantial design changes and introduce control measures accordingly.

3.5.3 Contractor design

Where there are contractor design elements the duties of designers under the Construction (Design & Management) Regulations 2015 will apply to the Principal Contractors and their appointees as designers. The Principal Contractors are responsible to ensure their appointment have the required skills, knowledge, experience and suitable time to develop design. The Principal Contractor is also responsible to ensure co-ordination between the projects and associated interfaces.

SECTION 4: SITE SET UP CONSIDERATIONS

4.1 Site Security

4.1.1 Existing measures, restrictions and considerations

The current site boundary's information is provided within the tender information and indicates the following.

- Visitor Centre – an area will be provided on the West Bank to allow sufficient working space adjacent the proposed Visitor Centre site. In addition, Newport Norse will allow the car park area off Mill Parade, Newport to be used as a compound area (indicated in photo below). The Principal Contractor will need to include within their security arrangements the protection of the additional area.



- The Bridge Repair project currently have two proposed areas of operation. Stephenson Street for welfare facilities, offices and storage location. There will need to be a separated dedicated zone for the repair and refurbishment of the gondola following the decommissioning.



The appointed Principal Contractor will be solely responsible for the security of the site under their control. This will be from commencement of site works to practical completion and include all periods of time not in attendance.

The site is in a high-profile area of the City of Newport and has a high volume of traffic and public interface.

Other considerations:

- Ensuring access points are secured or supervised at all times.
- Ensuring lifting operations are undertaken within the confines of the site and the public are not at risk from falling materials.
- Ensuring the provisions are configured so that vulnerable persons (children, elderly, partially sighted/blind, disabled) are not put at risk due to the operations and site protection/hoarding.

4.1.2 Minimum expectations for security

Comply with HSG151 Protecting the Public – Your Next Move

<http://www.hse.gov.uk/pubns/priced/hsg151.pdf>

Hoarding / protection and signage to third floor.

Materials and equipment to be in proprietary lockable containers.

Plant / equipment to be left secure, keys removed and otherwise immobilised.

https://www.twforum.org.uk/media/42844/hoarding_guide_april_14_revision_final.pdf

The Principal Contractors shall include in their Construction Phase Plan their proposals for preventing unauthorised access to the site for the duration of the planned works. The arrangements are to cover extended periods of non-attendance. By example Christmas, New Year or interface works.

4.2 Welfare

4.2.1 Existing measures, restrictions and considerations

The Principal Contractors will have to allocate resources to supply welfare facilities to site suitable for the expected number of operatives on site. Schedule 2 of the CDM Regulations 2015 clearly identifies the requirements for welfare facilities on a construction site.

Current proposals are to repair the Gondola on land adjacent (subject to agreement) to the Visitor Centre. The appointed Principal Contractor for the Bridge Works is to establish welfare facilities at both the Stephenson Street and Gondola repair location adjacent to the Visitor Centre.

The appointed Principal Contractors will need to agree policy and procedure for accessing and egressing the Visitor Centre site for the duration of the works.

Works will not be permitted to commence on site until adequate welfare arrangements are in place. Facilities must be maintained throughout the works although the location can change.

The site footprint is restricted limiting options for locating welfare and offices whilst maintaining suitable wider logistics.

4.2.2 Minimum expectations for welfare

Comply with Schedule 2 of the Construction (Design & Management) Regulations 2015 & L153 Managing Health and Safety in Construction: <http://www.hse.gov.uk/pubns/ priced/L153.pdf>

4.3 Fire & emergency procedures

4.3.2 Existing measures, restrictions and considerations

The existing Visitor Centre is to be isolated from all services to agreed locations prior to demolition. The bridge programme of works is to agree required services with the appointed Principal Contractor.

The Principal Contractors will need to develop fire and emergency procedures for the site during the construction works. The developed plans are to include for the ALL interface works. As a minimum this should take account of:

- Fire
- Service strike
- Structural collapse
- Work over and or adjacent to water
- Failure of the ground / retaining structures
- Recovery of injured person from the Bridge
- Overturning of lifting equipment
- Road traffic incident
- Works over public highway

Considerations:

- Managing the fire risk associated with multi storey construction
- Removal of waste on a daily basis
- All Hot Works conclude One hour in advance of working day ending. To be check prior to end of day by Site Manager
- Difficult site access due to city centre location and high-rise building

4.3.3 Minimum expectations for fire & emergency

Comply with:

- [Fire Prevention on Construction Sites: The Joint Code of Practice 9th Edition](#)
- HSG158 Fire Safety in Construction; <http://www.hse.gov.uk/pubns/ priced/hsg168.pdf>

The Principal Contractor will be required to comply with the Regulatory Reform (Fire Safety) Order 2005 when they take possession of the site, a representative of the Principal Contractor will need to be assigned as the Responsible Person under the Order for the duration of the works. They will be required to undertake a fire risk assessment in accordance with the order and install control

measures to comply with the same updating the assessment as the building is constructed and conditions change on site.

Due to fire protection often being incomplete during the construction process, the fire and rescue service may not be able to access parts of the building. Therefore, controls must be identified in the risk assessment to enable all site personnel to exit the building in an emergency without external assistance. These controls should be in place as soon as needed (whatever the height) because the site should not rely on the fire service to provide mechanical rescue. It is therefore important to liaise with the fire and rescue service at regular intervals as the build progresses to be sure that fire fighters are familiar with the risks on the site and the controls that are in place.

Outlined below are areas where significant consideration and resources are likely to be required during the construction stage outside of normal fire safety measures during construction (e.g. appointment of fire wardens, fire points and extinguishers, control of hot works etc).

The Bridge works programme is limited to two clearly defined exit points from the bridge in case of a fire. The bespoke fire plan will need to clearly define how the dedicated routes will be operated and protected for the duration of the works. Combined with the bridge repair programme believed to be delivered within an encapsulated wrapping (i.e. protected Birds Cage for environmental control).

Alarm – Sounders – Flashing Lights

The Principal Contractors Fire Alarm Systems need to provide warning to individual and both projects alike due to the foreseeable interfaces building fire alarm will be in place for ground to second floor and roof plant room. As the building is constructed and conditions change, it is essential that the fire alarm extends with it so that it is audible (and, where necessary, visible) in all areas of the build at all times. The fire alarm should be an electrically operated system throughout the height of the building, comprising:

- manual activation points
- call points and sounders on appropriate levels
- a link to each individual project

Emergency lighting

Emergency lighting is to be provided to site compound areas, operational areas, welfare facilities, offices, hoarding etc.

Liaison with the local fire authority

As above liaison with the local authority should take place when planning the works on site and at regular intervals (e.g. the floors progress and the building is enclosed).

The fire authority would normally expect to be given the following information:

- Key holders and specialist information holders.
- Utilities areas, gas, water and hydrant locations if private, electricity, possible drainage plans foul and storm receptors etc.
- Basic plan of site and access routes completed areas partial in progress and so on.
- Areas of storage for any high-risk materials, LPG, bulk fuel storage etc possible data or MSDS sheets for any such materials, any significant COSHH, HACCAP, ATEX, DSEAR.
- As the works progress update all of the above and when nearer completion includes any partial fire protection systems that may be in use wholly or partially, dry risers, foam inlets, sprinkler/ suppression systems and smoke extraction.
- Arrange for information to be available via the on-site security staff updated on a regular basis for out of hours requirements.

4.4 Permit to work systems

4.4.1 Minimum expectations for permits to work

Newport Norse will not have a site presence; accordingly, it is expected the Principal Contractors will operate a permit to work systems on site. In line with industry best practice to control high risk activities including but not limited to;

- Permit to excavate/break ground
- Hot works
- Work on services
- Work in electrical intake room
- Work at height
- Work on roofs
- Use of ladders
- Permit to load/strike
- Work in confined spaces (none have been noted through design stage)

The Principal Contractors are to co-ordinate and confirm within their respective Construction Phase Health and Safety Plans.

Each Principal Contractor needs to be fully aware of “LIVE” Permit to Work which have a direct interface with each other.

4.5 Confined spaces

4.5.1 Potential confined spaces

The designers have not identified any areas to date that will be considered confined spaces. Depending on the nature of the works being undertaken in or adjacent to the same there is a potential for confined spaces to be created including but not limited to:

- Work in the basement or other enclosed/restricted areas
- Forming sewer connections and similar excavations

4.5.2 Management expectations

Undertake a risk assessment prior to any works adjacent to these areas to identify if confined space conditions are likely to be created. Allocate resources for managing access to confined spaces where confirmed. Ensure that competent, suitable qualified persons are employed to undertake the works. Ensure a robust bespoke recovery plan is in place in the case of an emergency.

SECTION 5: EXISTING SITE

5.1 Surrounding environment

5.1.1 Nature of surrounding area, adjacent activities and other considerations

The site is located within the City of Newport.

East Approach (SDR)

The SDR / A48 is a dual carriage way that passes the main entrance to the Visitors Centre. The surrounding land users are both commercial and residential. The main entrance to Newport Docks is in close proximity to the existing Visitor Centre entrance. The existing bridge support cables pass over both residential and commercial properties. The River Usk is used for both commercial uses and pleasure and will remain operational during the planned works.



West Approach (Stephen Street)

Stephenson Street is less dense in population and associated interfaces. Beyond Esplanade Way, which leads to industry commercial properties. The remaining property is the Newport City Dogs Home.



5.1.2 Management considerations

Comply with HSG151 Protecting the Public – Your Next Move:
<http://www.hse.gov.uk/pubns/priced/hsg151.pdf>

Liaising with the adjacent occupiers at all times to keep them informed of the work progress and changes that may impact them in particular increased noise levels/vibration and changes to access routes in the local area. The following local businesses are likely to require engagement:

Other users of the QMB Building are indicated below.

5.2 Boundaries, access deliveries and traffic

5.2.1 Boundaries

The works should be managed from within the prescribed boundary and areas. Use of any area outside the indicated boundary should not be assumed without agreement from Newport Norse and the local authority or if relevant adjacent occupants/landowners.

5.2.2 Access

Both sites are accessed and egressed directly from public highways as indicated above under Section 5.1.1.

5.2.3 Deliveries

All deliveries are to be planned and managed by the appointed Principal Contractors. All traffic movements onto or around site are to be supported by competent Banksman. The Visitor Site is within the hoarding provide suitable space to allow all vehicles to pull into site and not block the SDR / A48 at any time of the day. The SDR / A48 is a major roadway in the Newport and as such is subject to high volumes of traffic particuler at the start of and end of the working day.

5.2.4 Traffic management

The works should be managed such that traffic operations, unloading, lifting and similar operations as far as practical take place within the prescribed site delivery area.

Comply with HSG144 The safe use of vehicles on construction sites;
<http://www.hse.gov.uk/pubns/priced/hsg144.pdf>

Segregated pedestrian and vehicle access routes should be formed into and around the site with crossing points created as necessary. In the event that the project is separated into two separate work projects, a dedicated “Green Route” will need to be considered and implemented if segregation cannot be achieved between the two projects. In this scenario the Principal Contractor for each element of the works shall allow for regular coordination meetings and daily briefings for the purpose of ensuring site safety.

5.2.5 Parking

The Principal Contractors will need to establish parking provision within their respective hoarded areas. Parking outside of hoarded areas on the public highway within the local area would be subject to compliance to local restrictions and arrangement.

5.4 Existing services

5.4.1 Known existing services

A utilities survey has been included with the tender information – see Appendix 2. The current proposal for the lighting of the Bridge is to be feed from the new Visitor Centre. As such both Principal Contractors will need to align their respective programmes. Supported by co-ordinated arrangements and procedures to discharge the work under permit.

5.4.2 Management considerations

Newport Norse is clearly aware that the project presents several interfaces within hoarded works and the project for the Bridge refurbishment and repair needs to oversail the public highway, commercial properties and residential dwellings.

The appointment for the Bridge works Principal Contractor has not been made by Newport Norse, with no current confirmed appointment date.

Newport Norse are being proactive in the consideration and planning of the foreseeable risks. There is a planned meeting on the 1st April 2020 to commence the consideration of interface. Followed by the development of a detailed proposal and strategy for the safe delivery of the programme. Once a Principal Contractor is appointed, they will input their skills, knowledge and experience to the process.

5.5 Hazardous substances

5.5.1 Hazardous substances

The design and project team are aware of hazardous substances within the proposed working areas.

- The full Refurbishment and Demolition Survey to HSG 264 standard. Once issued will be included as an Appendix to a later revision of this document ahead of commencement of works.
- Lead Paint was noted within Coatings Surfaces Report, dated 24.07.2019. Also noted in the Curtins Stage 3 Report under section 4.3.2 (issued with tender documents). Noted findings are indicated below, which are limited to the specific tested areas of the bridge.

5: Coating Identification							
Test Area	# of Coats	Identified		Solvent Testing		Type	
		Metal Spray	Hazardous Material	Using Xylene	Using White Spirit	Coating Polymer	Coating
T1 Gondola suspension cables	5	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T2 Gondola Above Deck Primary steelwork	5	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T3 Anchor cables	2	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T4 Motor House primary steelwork	4	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T5 Eastern Approach primary steelwork	5	No	Yes - Lead 7%	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T6 Gondola Below deck primary steelwork	19	No	Yes - Lead 3.3%	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T7 Saddle primary steelwork	4	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T8 Stay cables	1	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T9 Traveller primary steelwork	5	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T10 Main boom vertical primary steelwork	5	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							
T11 Main boom plan primary steelwork	5	No	No	No Reaction	No Reaction	Convertible	Unknown
Notes:							

5.5.2 Management considerations

The Principal Contractors shall ensure that adequate measures are in place to ensure operatives are protected against the hazards associated with the proposed works work, these may include:

- Adequate training and supervision
- Good hygiene practices and adequate welfare facilities
- No smoking, eating or drinking near the work areas

5.6 Asbestos

5.6.1 Asbestos

A full Refurbishment and Demolition Survey to HSG264 standards has been completed for the existing Visitor Centre.

The Bridge and associated buildings and distribution boards are to be completed prior to commencing work on site. All completed reports and findings will be shared with both Principal Contractors. Note: As with any suspect item / materials they are to be treated as asbestos until confirmed by testing. Operations in the specific location are to be suspended until confirmation is provided.

5.6.2 Management considerations

The appointed Principal Contractors are to discharge ALL work in line with legislation, industry best practice and HSE guidance as a minimum standard at all times.

5.7 Work above and adjacent River Usk

Ensure compliance with CDM 2015 Reg 26 - Prevention of drowning:

"26.—(1) Where, in the course of construction work, a person is at risk of falling into water or other liquid with a risk of drowning, suitable and sufficient steps must be taken to—

(a) prevent, so far as is reasonably practicable, the person falling;

(b) minimise the risk of drowning in the event of a fall; and

(c) ensure that suitable rescue equipment is provided, maintained and, when necessary, used so that a person may be promptly rescued in the event of a fall.

(2) Suitable and sufficient steps must be taken to ensure the safe transport of any person conveyed by water to or from a place of work.

(3) Any vessel used to convey any person by water to or from a place of work must not be overcrowded or overloaded."

Works adjacent to the water will need to be planned to ensure that operatives are not at risk of drowning. This will need to include planning the works to eliminate work adjacent to unprotected edges and where this is unavoidable ensuring that a suitable rescue strategy is in place.

Principal Contractor to detail measures put in place to prevent drowning and for rescue following falls into tidal water. Due to the tidal ranges in the location and the exposed nature to the elements, the Principal Contractor must consider the following:

- Wearing of life jackets must be adhered to at all times when working on banks, breakwater or adjacent to tidal water;
- No lone working permitted in the vicinity of tidal waters;

- Provision of rescue boat and trained operator for work adjacent to tidal water and limited range that a rescue / life line can offer;
- In addition to the above, the Principal Contractor must provide competent supervisor on site who has understanding of tide tables and who is capable of making assessments of the weather conditions and whether it is safe to work in prevailing conditions.

SECTION 6: SIGNIFICANT DESIGN & CONSTRUCTION HAZARDS

6.1 Site preparation, piling and groundwork

6.1.1 Nature of hazard

Access to the site/work areas
Adjacent and or over, lowering water
Environmental condition of soil and spoil
Environmental contamination entering the River Usk
Interface with the public and public highway

6.1.2 Management considerations construction stage

Site preparation

The site will be passed to the appointed Principal Contractors in its current condition. The appointed Principal Contractors will prepare and manage the site in line with their bespoke Construction Phase Health and Safety Plans.

6.2 Work at height

6.2.1 Nature of hazard

The project will require extensive work at height by operatives including:

- All bridge works over or above the River Usk
- Upper levels of the Visitor Centre
- Void space and high-level work within Visitor centre
- Work on open plant roof areas (potential exposure to elements)

6.2.2 Management consideration design stage

Comply with BS8560:2012 code of practice for the design of buildings incorporating safe work at Height.

The designers have considered how they can eliminate work at height where possible. Where work at height cannot be eliminated, the design has been reviewed. All designers have prepared CDM hazard / risk registers to cover design work carried out to date.

Further development of the maintenance access strategy is required.

6.2.3 Management considerations construction stage

Refer to industry best practice and comply with or improve upon:

HSG33 Health and Safety in Roof Work <http://www.hse.gov.uk/pubns/priced/hsg33.pdf>
<http://www.hse.gov.uk/work-at-height/index.htm>

Work at height a brief guide <http://www.hse.gov.uk/pubns/indg401.pdf>

All work at height will be subject to a site-specific assessment in accordance with the Work at Height Regulations 2005 considering the hierarchy of risk control:

- 1 Avoid work at height where possible;
- 2 Use work equipment or other measures to prevent falls where they cannot avoid working at height; and

3 Where the risk of the fall cannot be eliminated, use work equipment or other measures to minimise the distance and consequences of a fall should one occur.

The Principal Contractor and their appointees shall develop their proposals for the protection of operatives from falls from height in particular:

Scaffold

It is strongly recommended any scaffolding is to be installed by a NASC Contractor or that they can demonstrate that they are working to the prescribed standards of NASC or higher. All scaffolding is to be constructed in accordance with TG20:13 Guide to Good Practice for Scaffolding with Tube and Fittings. Any scaffolding should be erected in accordance with NASC guidance notes particularly SG4. Any scaffold that does not employ a “basic” design as determined in NASC TG20:13 must be accompanied by a bespoke design or demonstrate it is constructed to NASC specification sheets.

It is recommended that the [NASC Scaffold Specification Template](#) or similar is used to assist with procuring scaffold.

Internal works at height

The Principal Contractors shall detail their proposals for the protection of operatives from falls from height during the internal fit out works. This should be in accordance with the Work at Height Regulations 2005 and as far as practicable from a safe working platform such as a scaffold tower or podium step rather than ladders. Where items such as step ladders are used there should be a clear assessment demonstrating that they can be used safely, the work is of short duration and three points of contact can be maintained.

Installation and work around staircase apertures risers and lift shafts

The installation of staircases and similar apertures will need to be carefully planned to ensure that safe access is available for installation of the same and all leading edges around the staircase and risers are protected until the permanent installations are completed.

Review potential solutions in line with design best practice including incorporating casting in mesh to assist with fall prevention in the temporary state:

<http://www.dbp.org.uk/cs/DBP00185.pdf>

Roofs

The building is open at the upper level with the top deck forming the roof. The permanent structure will be surrounded with the steel frame and cladding to prevent falls. In the temporary state measures will be required to prevent falls and falling materials from the leading edge and through any apertures.

6.3 Manual handling

6.3.1 Nature of hazard

Injury to operatives due to difficult or repetitive manual handling of construction materials.

6.3.2 Management considerations design stage

The designers have designed the structure to minimise manual handling so long as mechanical assistance is used to transport materials into position.

Adequate allowances should be made to remove and transport components to and from work areas using mechanical means as far as possible. The Design Team are reviewing the potential to use a vertical hoist with a swl of 2 Tonne. To be installed at the Stephenson Street approach. Thus, removing the use of the existing stairs for vertical movement of personnel, equipment and materials.

6.3.3 Management considerations construction stage

The majority of construction materials should be familiar to a competent contractor and they will be able to plan use of mechanical assistance during installation. Use of mechanical handling at the final point of installation is likely to be required for a number of construction materials and services and so a degree of manual handling is likely to be necessary and the following could be considered:

- Ensuring the crane or hoists / lifts are coordinated to allow transport as close as possible to the point of installation (loading bay to PL1 or PL2)
- Planning coordinated team lifts and ensuring workforce rotation to minimise individual manual handling exposure.

Further solutions for consideration on site can be found at:

[Sheet materials movement](#)
[Plasterboard handling](#)

6.4 Temporary works

6.4.1 Nature of hazard

Inadequate resources allocated to the management of temporary works that results in failure of structures and injury.

6.4.2 Management considerations design stage

Design team to identify where temporary works are likely to be required and the nature of the same to allow the Principal Contractor to plan and resource the same.

6.5 Health – Noise, dust & vibration

6.5.1 Nature of hazard

Exposure to noise, dust and vibration as a result of construction / demolition / refurbishment activities. On this project this will be relevant to;

- Removal and replacement of bridge elements
- Use of pneumatic tools
- Horizontal and vertical movement of plant, equipment and materials
- Demolition
- Piling
- Erection and movement of environmental enclosure for Bridge works

Comply with;

Noise at work, a brief guide to controlling the risks <http://www.hse.gov.uk/pubns/indg362.pdf>

<http://www.hse.gov.uk/vibration/hav/campaign/construction.htm>

L140 Hand arm vibration The Control of Vibration at Work Regulations 2005

<http://www.hse.gov.uk/pubns/ priced/l140.pdf>

Noise: An assessment should be conducted of the expected noise levels and techniques used that reduce noise levels to as low as practicable considering the potential for the public and unprotected operatives to be adjacent to the works. The use of PPE should only be considered as the last and/or additional control technique.

Vibration: Hand arm vibration should be eliminated through the use of alternatives methods including machine mounted equipment as far as practicable. Where handheld equipment is required an assessment should be conducted of the expected vibration levels and subsequent trigger time that each operative can operate this equipment for. The tenderers should make adequate allowances in the tender for rotational working of operatives where machine mounted equipment

cannot be used and the exposure limit to hand arm vibration is likely to be exceeded during the works.

Dust: Dust during construction should be controlled through extraction at source and where this is not possible suppressant. Operatives exposed to dust will require face fit tested RPE.

6.6 Lifting operations

6.6.1 Nature of hazard

Collapse or other failure of lifting equipment and load. All lifting equipment to have current LOLER certification.

Comply with;

Safe use of lifting equipment

Lifting Operations and Lifting Equipment Regulations 1998. Approved Code of Practice and guidance

<http://www.hse.gov.uk/pubns/ priced/ l113.pdf>

[BCSA Guide to the management of site lifting operations](#)

There is insufficient information to offer confirmation on the loadings that can be made on the existing grounds suitability for lifting operations. The Principal Contractor or through their appointed contractors will need to arrange for plate bearing tests or the equivalent to be undertaken to prove the ground before using lifting equipment or design temporary bases for installation of lifting equipment.

The design requires various activities that will rely on components being into position as part of the structure or that will require significant vertical transport. The Principal Contractor shall ensure that all lifting on site is undertaken in accordance with a formal lifting plan. Lifting Plans should be produced by a competent "appointed" person under LOLER 1998. All lifts should be supervised by a competent lift supervisor to ensure that the lifting plan is being adhered to. On site adaptations or changes should not be undertaken unless approved by the appointed person.

All lifting should be planned to avoid lifting over occupied areas unless measures are taken to mitigate the risk of falling materials.

Review CAA Guidance on aviation lighting and notification:

<https://publicapps.caa.co.uk/docs/33/CAP%201096%20In%20Focus%20-%20Crane%20Ops.pdf>

6.7 Exposure to Silica

6.7.1 Nature of hazard

Occupational ill health due to exposure to Silica containing materials.

6.7.2 Management considerations design stage

Review and eliminate or reduce the need to cut and prepare Silica containing materials on site.

6.7.3 Management considerations construction stage

There are areas of work that could result in significant exposure to Silica if not adequately controlled. The Principal Contractors will be required to plan and resource limiting exposure to Silica this is envisaged to include:

- Use of modern proprietary plant with functioning water suppressant/localised extract systems
- Training of operatives in exposure to Silica and risk reduction control techniques
- Formation of screened areas to minimise spread and create a controlled environment
- Face fit test respiratory equipment for those undertaking operations and those in the local vicinity who will also be exposed

SECTION 7:

HEALTH & SAFETY FILE

The Principal Contractor will be required to provide information for inclusion in the Health and Safety File, and this will need to be in accordance with the proposed Construction (Design and Management) Regulations 2015. The health and Safety File will be a combined project Health and Safety File. The Principal Contractors will need to agree their specific elements for inclusion within the document.

All information required for the Health and Safety File must be received in order for practical completion to be certified.

The Principal Designer deals only with the statutory Health and Safety File information. Building and Services Operation and Maintenance Manuals are a contractual requirement and should be checked by the relevant consultants.

The Principal Contractor shall provide the following information for inclusion in the Health and Safety File:

- A brief description of the works
- Drawings – Copies of all “As-built” drawings to include:
 - Services, mechanical and electrical layout drawings
- Statement of any unusual access detail/areas, both internal and external e.g. for window cleaning, maintenance, access to roof areas.
- List of any residual hazards and how they have been dealt with.
- Construction methods, structural details and accompanying information.
- Diagrammatic drawings of each service system, indicating principle items of plant, equipment etc.
- Information for the safe removal or dismantling of installed service systems and their plant and equipment.
- Schedule of materials and equipment used, including any hazardous materials used and their COSHH MSDS's.
- The nature, location, depth and markings of all services and utilities crossing the site.
- Statement of buried services, where they enter the building and their isolation points, cross referencing to the “As-built” drawings.
- Information including maintenance manuals to specifically identify health and safety arrangements for the use, cleaning and maintenance of the structures and fittings. Including health and safety information provided for equipment provided for cleaning or maintenance.

The Principal Designer shall be provided with a digital copy of the information requested in PDF/Microsoft Word format.

The Health and Safety File shall be developed as a standalone document and not be confused with the Operation and Maintenance Manuals.