



CONSTRUCTION MANAGEMENT PLAN

Ashton Canal Bridge

T24003

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This Document Includes:

CONSTRUCTION PHASE PLAN

ENVIRONMENTAL MANAGEMENT PLAN

QUALITY MANAGEMENT PLAN.

Document Revision History				
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CONSTRUCTION PHASE PLAN

INTRODUCTION

This Contract HSQE Management Plan (CMP) is a compilation of information that used to be provided in separate Health & Safety (CPP), Quality and Environmental Plans. The previous templates have been reviewed, revised and combined in order to avoid duplication and to save paper.

The Company compiles a CMP for all works, whether as Principal Contractor or Contractor to ensure that all associated significant hazards have been suitably identified and the management controls put in place.

Design and Content

The CMP is divided into 10 sections accessible through the Contents Section. It can be viewed by HSQE component if preferred as follows: -

<u>Modular Plan Title</u>	<u>Code</u>	<u>Sections</u>	<u>Appendices</u>
<u>Construction Phase Plan</u>	CPP	1 - 5	1&2
<u>Contract Environmental Management Plan</u>	CEMP	1, 2, 6, 7	1&2
<u>Contract Quality Plan</u>	QPL	1, 2, 8 - 10	1&2

The Construction Phase Plan (CPP) has been prepared in accordance with The Construction (Design and Management) Regulations 2015. The HSE Guidance Document for these Regulations is L153 "Managing Health and Safety in Construction"

This CPP is based on a template designed in line with Appendix 3 of L153. The Appendix states that, in considering what information is included, the emphasis is that it:

- a) is relevant to the project;
- b) Contains sufficient detail to clearly set out the arrangements, site rules and special measures which are required to manage the construction phase; but
- c) is still proportionate to the scale and complexity of the project and the risks involved.

H&S Risks are identified in Sections 2.25 and 2.26

This Contract HSQE Management Plan has been produced as a working document that will remain live and evolve through the course of the project. This leaves it open for review and the addition of further previously unforeseen hazards / aspects and their management control

Throughout this CMP, reference is made to the Company Health and Safety Management Procedures which are part of our IMS. These documents clearly outline our procedures for the management of health, safety and welfare, and for the monitoring and reviewing our performances.

John Burke

AEY Group HSQE Manager

1. Description of Project

1.1 Project Description

Description of Existing Structure

There is an existing lock bridge in this location that is approximately 2m wide. When the lock gates are being operated, passage over the bridge is difficult for pedestrians, and impossible for cyclists. The canal lock has Grade II listed status.

As part of the Victoria Northern Eastern Gateway scheme, a new bridge over the Ashton Canal has been proposed in this location, adjacent to the existing lock bridge.

Description of Proposed Works

Ashton Canal Bridge

The proposed bridge comprises steel members to form the bridge deck. The length of the bridge will be approximately 11.75m long from bearing centre to centre. The height of the parapets will be 1.4m to protect cyclists, and with a clear width between parapets of 3.6m.

The parapet will be a bespoke design with input from architects (Hawkins-Brown). The parapet is proposed to be 1.4m high, formed of 30x15mm vertical steel members connected together with horizontal steel members and with a horizontal timber handrail.

The steel bridge will have a design working life of 120 years, in accordance with CS 350 Table 7.1 and UK National Annex to BS EN 1990:2002 – Basis of Structural Design Table NA.2.1.

The bridge will bear onto two reinforced concrete abutments supported on piled foundations.

Western Ramp

To access the bridge, the towpath alongside the canal will be raised to act as the ramp. Due to the geometric difficulties in this built-up area a separate ramp was not feasible.

The proposed northern ramp will comprise of reinforced concrete slabs spanning between pile caps, with reinforced concrete walls that will support the ramp parapet and handrail. Between the walls will be lightweight expanded clay aggregate to reduce the overall weight of the ramp.

The surfacing over the bridge and the ramp will be a combined resin bonded waterproofing and textured surfacing. The product chosen by the architect is Ronadeck resin bonded surfacing with Ronadeck Chinese Bauxite 1-3mm chippings which have a high slip resistance.

1.2.1 Programme Dates

- Start: 20th June 2024
- Completion: 22nd November 2024

1.2.2 Working Hours

Permitted hours of operation for the construction of the works are as follows:

- Weekdays 07:30 – 22:30
- Saturdays 08:30 – 22:30
- Sundays 09:30 – 18:00

AEY standard hours of operations for the construction of the works are as follows:

- Monday – Friday – 07:30 – 1730

1.3 Contract Conditions & Specifications

The Conditions are the core clauses of the NEC4 Engineering and Construction Contract

1.4 Contract / Site Details

Contract Name: **Ashton Canal Bridge**
Contract No: **T.B.C.**
Tender/Contract Ref No: **T22101**
Site Office Address & Telephone No: **T.B.C.**
'What Three Words' location:
Landline: **N/A**
Staff Mobile:
Contact: **Mick O'Hanlan – Contracts Manager**
Mobile: **07710 389 020**
Email: **Micko@ae Yates.co.uk**
Site Manager: **TBC**

1.5 Details of CDM Duty Holders

Client:

Contact: **Nikoo Nikousokhan – Snr PM - Manchester City Council**
Tel: **N/A**
Mob: **07904 689492**
Email: Nikoo.nikousokhan@manchester.gov.uk

Principal Contractor:

Contact: **Mick O'Hanlan – Contracts Manager – A E Yates Ltd.**
Tel: **01204 696175**
Mob: **07710 389020**
Email: **micko@ae Yates.co.uk**

Principal Designer: **Matt Goble – Director - Wilde Consulting Civil & Structural Engineers**

Tel: **0151 3056213**
Fax: **T.B.C.**
Mob: **T.B.C.**
Email: mgoble@wilde.uk.com

Architect: **John Kilgariff – Associate Director – Hawkins Brown**

Tel: **0161 6425522**

Email **johnkilgariff@hawkinsbrown.com**

1.6 Details of other Interested Parties

Enforcing Authority (H&S) **Health & Safety Executive**
Tel: 0845 300 9923 to report fatal or Major Injuries.
Otherwise contact via HSE website www.hse.gov.uk

Enforcing Authority (Environment) **Environment Agency**
National Customer Contact Centre
PO Box 544
Rotherham S60 1BY
Tel: 03708 506 506
Email: enquiries@environment-agency.gov.uk

Conservation Authority **Natural England**
Enquiries team
Black B, Government Buildings, Whittington Road
Worcester WR5 2LQ
Tel: 0300 060 3900
Email: enquiries@naturalengland.org.uk

Local Authority (Environmental Health) **The Council of the City of Manchester**
Town Hall
Manchester
M60 2LA
Tel: T.B.C.

Canal & River Trust	Canal & River Trust	Contact	Gareth Taylor
	NW Waterway		
	Canal Cottage	Position	Infrastructure Services, Works Engineer (Northwest)
	Lowerhouse Lane		
	Rosegrove	Tel	07484 913064
	Burnley		
	BB12 6HU	Email	Gareth.Taylor@canalrivertrust.org.uk

Landowner

1.7 Details of existing records relevant to H&S on site

Tender Documents: PCI pack Ashton Bridge

1.8 Details of existing records relevant to Environmental issues on site

Tender Documents: PCI pack Ashton Bridge

1.9 Details of existing records relevant to Quality on site

Tender Documents: PCI pack Ashton Bridge

2.0 HSQE Management of the Work

2.1 HSQE Management Certification Status

AEY is currently certificated to the following established standards:

EN ISO 9001:2015 for Quality Management

EN ISO 14001:2015 for Environmental Management

EN ISO 45001:2018 for Health & Safety Management

EN ISO 44001: 2017 Collaborative business relationship management

CHAS Accredited Contractor

Constructionline Gold Member

Achilles UVDB

2.2 HSQE Policy Statements

The Site Manager will ensure that the current A E Yates Policy Statements are posted on the site notice board and are kept up to date.

2.3 Site Management Structure

The AEY Site Management structure for the project is attached as Appendix 1 of this CPP.

2.4 Site Management HSQE Roles and Responsibilities

These are detailed in IMS Document Pro S02 Contract Site Administration and CMP S01a Organogram (Appendix 1 Site Management Structure)

2.5 Project HSQE Goals

The Company has set the following HSQE Goals for this project

- 1) The Project AFR (Accident Frequency Rate) to be lower than the Company AFR for the equivalent period.
- 2) Demonstrate a proactive hazard spotting culture.
- 3) Achieve a high level of employee job-satisfaction on this Project.
- 4) No Major Environmental Incidents.
- 5) No Product Non-conformance.

In addition, AEY has set the following Objectives

- To have no accidents on site or adjacent to the site;
- To have no occupational ill health arising from the project;

- To ensure that no environmental damage occurs;
- To minimise the disruption to the local community and travelling public during construction of the works;
- To exclude unauthorised persons from the site, especially children;
- To provide safe access and egress to and from the site;
- To provide workplaces that are free from risks to the health and safety of persons at work, so far as reasonably practicable.
- To ensure that manual handling tasks are reduced to the lowest level that is reasonably practicable;
- To provide welfare facilities for persons at work in accordance with current legislation;
- To provide operating conditions so that the lowest reasonably practicable noise levels are maintained, and to provide sufficient information within the Health and Safety File for maintenance, new construction or demolition to be carried out safely in the future.
- In preparing the Construction Phase Plan the Principal Contractor shall develop specific safety objectives for the project.

2.6 Arrangements for Monitoring and Review of HSQE Performance

The IMS includes a Site HSQE Inspection Report which is used as the primary tool for monitoring and assessing compliance against the CPP, EMP and Company Procedures. The Inspections are normally carried out at monthly intervals by the AEY Group HSQE Manager or his nominated deputy, with the proviso that the first inspection is undertaken within the first 2 weeks of the works on site. Subsequent surveillance visits will also be carried out without prior notice.

The Inspection process is also applied to Contractors on our sites as well as activities being carried out by our directly employed workforce.

The Inspection Report proforma includes a scored section, an action and a close-out requirement. Together these show a snapshot of the HSQE performance on the day, identify what needs to be done by whom and by when, and records evidence of successful close-out of previous actions raised.

The Inspection Report is based on a categorised scorecard with categories weighted in accordance with perceived risk. The AEY Group HSQE Manager subsequently ensures that the scores are recorded on a database which can be used to generate a variety of reports to allow the AEY Group HSQE Manager to identify trends in site HSQE performance.

In addition to the monthly Inspection Reports, an Audit may be carried out at pre-arranged intervals. This will focus on specific areas and will include a site walk round.

Other inspections will be carried out by other Company Directors and Contract Managers who will report their findings to the Group HSQE Manager.

2.7 Regular Liaison between parties on site

Health and Safety issues including all CDM aspects will be subject to continual liaison as part of the progress meetings between the Site Manager and the Engineer or his representative.

There will be regular liaison between AEY and other Contractors on site. In addition, the following meetings will take place: -

Weekly	AEY Site Manager Client Representative
Monthly Formal	AEY Site Manager AEY Contracts Manager

Client Representative

other parties as required by the contract

2.8 Consultation with the workforce

AEY operates an open management style whereby everyone is empowered to challenge others where it concerns Health and Safety. The Company does not require an H&S Committee in order to engage with its workforce however, a Safety Committee may be introduced on projects where it would prove of benefit i.e. multiple Contractor interface on site. Employees however are approached during Site Safety Walk rounds and Inspections and asked pertinent questions relating to Health and Safety.

Daily Briefings, Toolbox Talks, Inductions and RAMS Briefings are all used as methods of 2-way workforce communication.

2.9 The Selection and Control of Contractors

All Contractors, designers, and, self-employed specialists working on behalf of AEY, will be selected in accordance with Company Supplier Assessment procedures. Successful Contractors are then placed onto our Supplier Assessment Database.

All suppliers of materials must provide AEY with adequate health and safety information regarding the use and disposal of their products.

All machinery and plant must be properly selected, used, maintained and inspected, and operators trained accordingly.

The following Contractors will be employed by AEY on the project and their work will be quality controlled as indicated:

Note: A = Contractor's Workmanship controlled via AEY Contract Quality Plan

B = Contractor's Workmanship controlled via Contractor's Contract Quality Plan

Contractor Name	Scope of supply	Documented Control Method
T.B.C.	Surfacing	A
T.B.C.	Traffic Signals	A
T.B.C.	Road Markings	A
T.B.C.	Signs	A
Total Steel	Bridge Fabricator and Installer	TBC

All other works will be carried out by AEY in-house labour, using Documented Control Method A.

2.10 Site Security

The Site Manager shall ensure that steps are taken to limit the number of people on site to those directly concerned with the construction work and to ensure that the security of the site as a whole is maintained, and that the security of the Client's undertaking is preserved. The Site Manager shall discuss arrangements with the Client's representative before commencing work.

The Site Manager shall identify by clear signage any safety hazards such as site area, dangerous substances and equipment that is placed out of use. Reliance should not depend entirely on written warning signs where there is a possibility that some people may not read or understand them e.g., foreign nationals, and who may suffer injury as a result.

The site will be hoarded/fenced off and secured in accordance with Temporary Works and any local traffic requirements i.e., to agreed boundary lines.

2.11 Site Induction

The Site Manager shall deliver a site-specific induction incorporating A E Yates site rules (and including any Client site rules) to all employees or visitors exposed to risk on this project. Upon the discretion of the Site Manager, site rules need not be issued to those site visitors who will be escorted whilst on site.

The Site Manager will operate and maintain a site visitor's book. All visitors to site MUST sign IN and OUT.

The induction will also specify environmental and social controls e.g., management of dust and noise.

2.12 Competence & Training

Training is driven via the AEY Core Procedure CO3 Training which requires regular review of AEY workforce competence.

Contractors are to ensure that their employees are adequately trained to carry out their work i.e., having the necessary skills, knowledge, training, and experience. Copies of the relevant training records / certificates must be forwarded to AEY on site. The Company's Policy is a current CSCS, CCNSG or IOSH card and an appropriate skills categorisation achieved through independent assessment i.e., NVQ, copies of which will be required prior to starting work.

The Site Manager will retain copies of the training records as part of the developing Contract HSQE Health and Safety Plan.

The induction training sessions are reinforced by compulsory attendance at Toolbox / Task Health and Safety Talks. Each talk will target specific areas of concern with an aim to raise awareness. Gangs / operatives noted to be lacking in safety related skills will be targeted for additional training.

2.13 Calibration

Any measuring or test equipment used on this project will be calibrated to ensure accuracy. Examples as relevant to this project include: -

- Theodolites, Surveying Levels, Grade Lasers, Cable Avoidance Tools (CAT) and Gas Detectors will have valid calibration certificates less than 1 year old. Instruments will be returned to approved maintainer for checking in the event of any suspected damage or inaccurate performance.
- Levels will receive weekly 2-peg tests during periods of use. The results will be recorded in the Engineers Site Yellow book.
- During periods of use grade lasers will be subject to weekly manual checks using Levels. These results will be recorded by the Site Engineer on an AEY Proforma.

2.14 Welfare facilities

Welfare arrangements for the project shall consist of suitable and sufficient facilities to enable persons to prepare and consume food and drink in a comfortable environment, and where clothing can be dried. Suitable accommodation will also be available for displaying statutory notices, Company policy statements, procedures, and project specific information.

As a minimum, welfare provision will be in accordance with Schedule 2 of CDM 2015. Guidance on welfare provision at company sites is available in SMS document GDN S07 Welfare on Site which is written to ensure compliance with the above Schedule 2.

Details regarding the location of all welfare facilities will be made known to all relevant parties via the Site HSQE Induction.

2.15 The Production and of Risk Assessments and written systems of work

The Site Manager, under the direction of the appropriate Framework Manager is responsible for identifying the need for Risk Assessments and Method Statements, the scope of each individual one, and the timescales pertaining to development, review, approval, and issue of each one.

AEY operate a proforma Method Statement template which will be used unless otherwise agreed with the Client.

In general, each Method Statement will address Health, Safety and Environmental issues. They will be developed from site-specific Risk Assessments. The control measures identified in the Risk Assessments will form part of the system of work detailed in the Method Statement.

2.16 Site Rules and other restrictions on Contractors, suppliers, and others

As Principal Contractor AEY must issue Site Rules and enforce them on this contract. AEY operate Standard Site Rules, which may be amended or appended as appropriate to this contract. The Client may operate Site Rules which must take precedence and be included within the Site Induction.

Canal and River Trust – Weight Restrictions

CRT towpath weight limit – 1.5ton within 1.5mtrs of the canal wall

Canal side path weight limit – 4.5ton

Canal and River Trust – Canal Movement Restrictions

30 mins every 4 hours. More than this is to be reported to CRT.

Any material to be lifted over the canal is to be carried out without any boats wishing to pass the working area. If unavoidable, then the above restrictions apply.

AEY do not foresee any restrictions over 30mins is required throughout the construction phase.

2.17 Emergency Planning and Contact Details

All hazardous operations such as work at height, confined space working, and excavations will be risk assessed and an appropriate and workable plan will be developed. The details of the Emergency Plan will be communicated to the workforce during appropriate briefings e.g., Inductions, RAMS Briefings.

Emergency Contact Details are published separately as Appendix 2. A copy will be displayed on the Site HSQE Notice Boards and elsewhere as required. A copy of emergency evacuation routes and Muster points will also be briefed and displayed

2.18 First Aid / Hospital Details

A Company First Aider will be on site during all construction work. The First Aid kit (which will include eyewash provision) will be located in the main AEY site office. This location will be identified by a First Aid sign, which will also display the names of the Site First Aider(s). Numbers of First Aid provision will reflect the numbers on site. See The Health and Safety (First Aid) Regulations 1981 as amended

The Nearest Minor Injuries A & E Hospital is:

Manchester Royal Infirmary
Oxford Road
Manchester
M13 9WL

For more information call: 0161 276 1234

The Hospital Route Map is published separately as Appendix 2. A copy must be displayed on the Site HSQE noticeboard and elsewhere as required.

A Mental Health Notice Board will also display Mental Health information such as helpful contacts and Company Mental Health First Aiders (John Burke).

2.19 The reporting and investigation of accidents and incidents (including Environmental)

Our approach to reporting and investigating H&S incidents is described in IMS Procedure Pro S04 Accident, Incident and Hazard Reporting. The corresponding document for Environmental management is GDN E08 Environmental Aspects.

The requirement for all accidents deriving from our works to be reported immediately to the Site Management will be included in the Site HS&E Induction. This requirement applies to all AEY site workers including Contractors.

A similar obligation to inform Site Management applies to any Environmental incidents, near misses or hazardous situations.

2.20 Hazard Identification and Reporting (including Near Misses)

The Company encourages the reporting of HSQE hazards from any source. Sites use a Hazard Reporting Noticeboard where anyone may enter details of hazards and remedial action taken.

The Site Supervisors use a weekly hazard reporting form which will include any hazards entered on the Hazard Reporting Noticeboard plus any others that have been brought to their attention.

The Group HSQE Dept. maintains a Hazard Reporting Database which can be interrogated to produce output reports showing hazards by category, or between set dates. This useful analysis tool is used to identify trends and focus HSQE management strategy.

AEY consider a near-miss to be a special category of hazard that was very close to causing an accident or an environmental incident. These are flagged accordingly on the database and in general will be subject to an investigation.

2.21 Fire Prevention and Protection

As the 'Responsible Person' under the Regulatory Reform (Fire Safety) Order, the Site Manager will be responsible for the production of a Site Fire Plan and Risk Assessment, this will be produced before commencement of Permanent Works activities.

Fire Plans will be displayed in site offices at locations, which are accessible to employees, Contractors and visitors. These fire plans will clearly explain the actions to be taken in the event of a fire and the location of the fire assembly area (Muster Point).

A Site Fire Plan will be produced before commencement of Permanent Works activities. Fire Plans will be displayed in site offices at locations, which are accessible to employees, Contractors and visitors. These fire plans will clearly explain the actions to be taken in the event of a fire and the location of the fire assembly area. Fire extinguishers are located next to the office exits; these are to be used to aid escape. Fire alarm air horns are situated next to office exits; these are to be used to alert personnel to the dangers of an outbreak of fire.

Traffic routes are to be serviceable at all times to allow the safe and quick passage of emergency service vehicles in the case of an emergency. Emergencies can and do occur to other premises and private dwellings not affected by our works. However, every effort shall be made to avoid putting the rescue of persons or property at risk due to delaying the emergency services on our part.

2.22 The exchange of Design information between CDM Duty Holders

The Designer has a duty to pass information to the relevant parties, these activities may be co-ordinated by the Principal Designer.

When AEY carry out design they will appoint a Design Co-ordinator who will be responsible for liaising with the 'PD' and ensuring that information is exchanged as required under CDM.

In some cases, Contractors have a Design Brief where relevant information produced by designers will be passed on to the Contractor prior to their subcontract design work commencing (usually during the subcontract tender period). Where hazards have been identified but the complete risk assessment has not been carried out, then the Contractor will be asked to undertake the assessment and incorporate the relevant aspects of the outcome within the subcontract.

2.23 Handling Design changes during the project

In accordance with the CDM Regulations, where the Designer has designed all work within the project, it is essential that no other Contractors working on behalf of AEY should alter a design in any way. Should any design need to be changed, it is essential that AEY be advised accordingly. The Company will then liaise with the Designer/ Principal Designer in order to obtain their approval.

2.24 The exchange of Health & Safety information between Contractors

Each Contractor will be provided with all relevant information from the Client's Pre-Construction Information and from the Construction Phase Plan. The Site Manager will inform all Contractors of the Client's requirements that may affect their activities.

In contrast Contractors are to ensure that they feed relevant information regarding health, safety or environmental back to AEY for subsequent inclusion into the Health & Safety file.

2.25 Identification and Assessment of H&S Risks relating to this Contract

The purpose of this section is to ensure and demonstrate that all foreseeable hazards, and their associated risks **prior to controls being implemented**, have been considered when populating Sections 3.0 and 4.0 of this Plan in relation to this Contract.

Where any such hazards and risks are considered to be applicable and, where the risk level is perceived to be 8 or more (Medium or High), the CPP Reference column will identify the appropriate section of this Plan that requires additional consideration, with regards management or engineering control.

Where the risks are considered non-applicable, they will be in RED text and the CPP Reference box will state n/a. The CPP will still contain information on n/a risks as these may well become applicable during the course of the works and will be updated during regular CPP reviews.

	Likelihood
5	Certain
4	Likely
3	Possible
2	Unlikely
1	Very unlikely

	Severity
5	Fatality
4	Major injury / damage
3	Over 7 day injury, substantial damage
2	Minor injury , minor damage
1	Delay only

	Score	Likelihood				
		1	2	3	4	5
Severity	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

	Risk level	Action required
	1-6	Acceptable risk rating. The activity should be monitored to ensure the control measures are followed and are effective.
	8-15	Acceptable only where it is not reasonably practicable to lower the risk rating (i.e. likelihood) further. Try re-evaluating the activity or look at for further controls or consider alternative methods or substances.
	16-25	Not acceptable. Activities must not commence until alternative methods are found- with an appropriate risk assessment.

L = Likelihood, S = Severity, R = Assessed Risk Level.

Hazard	Risk (and identity of those a risk)	L	S	R	CPP Section Ref:
Traffic Routes and Segregation of vehicles and pedestrians	All on site. Unplanned or unsupervised activities. Death or serious injury through collision with plant and vehicles.	3	5	15	3.1
Delivery and Removal of Materials (including Waste) and Equipment	All on site. Unplanned or unsupervised activities. Death or serious injury through	3	5	15	3.2

	collision with plant and vehicles.				
Temporary Electrical Installations	Users of untested equipment. Death or serious injury through electrocution or fire.	3	5	15	3.3
Maintenance of Plant and Equipment	Operatives. Death or serious injury through poorly maintained plant and equipment. Not checked prior to use by operator.	3	5	15	3.4
Storage of Hazardous Materials	Those coming into contact with HAZCHEM/HAZMAT. Fire, oxygen depletion, fume/vapour through poor ventilation. Falling containers through incorrect stacking. Contamination through uncontrolled spillage.	3	5	15	3.5
Dealing with Services	All on site. Unplanned or unsupervised activities. Death or serious injury through contact with underground and overhead services.	3	5	15	3.6
Control of Lifting Operations	Those in the vicinity of the lift. Fatality or serious injury resulting from falling or moving loads due to unplanned lifting operations.	3	5	15	3.7
Preventing Falls / Work at Height	Operatives. Death or serious injury through poorly planned WaH operations, failure of fall prevention or protection equipment due to poor or lack of inspections, lack of training.	4	5	20	3.8
Confined Space Entry	Operatives, Fatality or serious injury due to oxygen depletion, trench collapse, lack of effective emergency rescue procedures, explosion due to oxygen enrichment, presence of toxic/explosive atmospheres.	3	5	15	3.9
Excavations / Poor Ground Conditions	Operatives. Fatality or serious injury due to collapse as a result of unplanned and unsuitable Temporary Works installation or procedures, contact with underground services, ingress of water causing flooding and entrapment, unsuitable or lack of fall prevention around the excavation, falling spoil due to incorrect storage distances and angle of repose with reference to ground conditions and traffic vibration.	3	5	15	3.10

Work exposing workers to the risk of drowning	Operatives. Fatality or serious injury due to inhalation of and contact with cold water leading to shock and hypothermia, lack of emergency response and rescue equipment and trained operatives. Unplanned or lack of supervision during tasks, entrapment in plant due to overturning.	2	5	10	3.11
Stability of structures whilst carrying out construction work	Operatives and others. Fatality or serious injury due to collapse of unsupported structure and inappropriate or lack of Temporary Works supports. Collapse by undermining of structures through lack of surveys, investigation and risk assessment and information. CRT towpath weight limit – 1.5ton within 1.5mtrs of the canal wall Canal side path weight limit – 4.5ton	3	5	15	3.12
Demolition or dismantling	Operatives and others. Unplanned collapse due to lack of Temporary Works planning and pre-construction information regarding history i.e. previous use. Lack of work area exclusions and control. No Demolition Plan from the contractor.	4	5	20	3.13
Temporary Works	All associated operatives and those not employed e.g. general public. Fatality or serious injuries due to lack of planning and management. Lack of competent person appointments to supervise and plan works. Failure of TW installations due to lack of adherence to the design information. Unsuitable competence level of the Designer. Lack of TW knowledge, training and understanding of BS5975.	4	5	20	3.14
Lone Working	Operative. Fatality or serious conditions as a result of lack of immediate medical attention and supervision. LONE WORKING NOT PERMITTED	N/A	N/A	N/A	3.15
Use of hazardous substances	Operatives. Death or serious injury through unsupervised use of hazardous chemicals and	4	5	20	4.2

	exposure to vapour, fume or unprotected skin contact. Unsuitable personal protection to prevent skin, eye or inhalation of chemical properties resulting in burns, dermatitis, blindness and lung diseases e.g. cancers.				
Manual Handling	Operative. Serious musculoskeletal conditions and strains to the pulmonary and cardiac systems due to poor planning of manual handling operations with possible slips, trips and falls and incorrect storage of the item being carried.	4	3	12	4.3
Reducing Noise and Vibration	All on site and operatives from immediate exposure. HAVS, WBV, are specific to vibration. Noise induced hearing loss. Vibration Monitoring – Peak Particle Velocity (PPV) - ppv level of not greater than 15mm/s is desirable. To avoid damage if piling is being carried out as a continuous action, ppv levels should be below 7.5mm/s.	3	3	9	4.4
Exposure to Asbestos	Risk of chronic lung diseases and death. Exposure can be through secondary exposure to fibres on contaminated clothing and equipment.	3	5	15	4.5
Dealing with contaminated land	All on site are at risk from occupational health diseases such as Leptospirosis and Lyme's disease. Contamination also includes e.g. Asbestos, toxic hydrocarbons and Arsenic.	3	4	12	4.6
Exposure to UV Radiation from the sun	All on site. Unprotected over exposure can cause skin cancers or chronic skin conditions.	3	4	12	4.7
Leptospirosis	Operatives. Fatal if not treated immediately. Contracted in the main from vermin urine and dairy cattle but can be from cross contamination from other animals.	3	5	15	4.8
Sharps (Discarded hypodermic needles)	Operatives. Fatal if exposure is not treated immediately. Risk of cross contamination of diseases such as HIV, Hepatitis B & C	2	5	10	4.9
Work which puts workers at risk from chemical or biological substances constituting a particular danger to	Operatives. See Vibration, noise and contact with	3	4	12	4.10

the safety or health of workers or involving a legal requirement for health monitoring - (e.g. exposure to Lead)	hazardous chemicals. Significant exposure to physical and chemical agents can cause significant occupational health conditions.				
Other significant health and safety risks					4.11

3.0 **H&S Management: Arrangements for controlling significant site Safety Hazards**

3.1 **Traffic Routes and Segregation of Vehicles and Pedestrians**

A traffic management plan will be implemented after consultation with the Site Manager.

All works connected with the site access shall be in accordance with Chapter 8 and the New Roads and Street Works Act. Facilities are to be made to ensure that there is no mud on the roads as a result from site traffic entering and exiting the construction site.

Where Road Closures are in place a fully signed and maintained diversion route will be provided and maintained.

Segregation of pedestrians and vehicles on site will be in accordance with our SMS Guidance document GDN S17 Site Vehicle Management.

A Traffic Management Plan will be displayed in the welfare and, where appropriate, on site. The traffic direction and management of deliveries will be briefed to all suppliers and to responsible persons on site. The TMP will also identify all emergency routes to places of refuge and access for emergency vehicles.

A Banksman will be providing for the safe movement of plant and reversing of vehicles, existing surfaces, drains and utility covers will be marked and protected.

3.2 **Delivery and Removal of Materials (including Waste) and Equipment**

The Site Manager will create and manage unloading and storage areas within the working areas on site. These areas will be barriered off where they will not interfere with other site/highway users. These unloading and loading areas may alter during each phase of construction, the Site Manager will advise the Client and Project Engineer accordingly if required.

All material deliveries and waste removal will be by prior arrangement at times of minimal disruption to the local area. A member of the site team shall be on site to meet and direct delivery vehicles and drivers.

Traffic routes will be defined and maintained to separate pedestrians from construction and delivery traffic.

3.3 **Electrical Installations**

All electrical equipment and installations shall be constructed, installed and maintained by a competent person in accordance with BS 7375: 1991 'Distribution of Electricity on Construction and Building Sites' to guard against danger. Removal of the same will be carried out under the same requirements i.e. streetlighting, installations etc.

Temporary Electrical Installations require certification by a responsible electrical engineer. Electrical installation certificates and periodic reports shall be accompanied by a schedule of test results and an inspection schedule for them to be valid.

All electrical installations will follow the IEE Code of Practice and the Electricity at Work Regs 1989 and the associated ACoP HSG85 Electricity at Work: Safe Practices.

Installations and supplies must always be considered 'live' and will be subject to a Permit to Work and Lock Off procedures to ensure the safety of those working on or near electric supplies.

Site supplies will be 110v and Portable Appliance Tested, a current PAT sticker, label or cert must be evidenced. PAT will be in accordance with HSG85 Electricity at Work: Safe Working Practices.

3.4 Plant and Equipment

The Site Manager shall ensure that work equipment used on the project, and coordinated through the AEY Procedure Pro C05 Plant: -

- is properly maintained in an efficient state, in efficient working order and in good repair.
- has maintenance logs maintained and kept up to date.
- has any on-site maintenance undertaken without exposing people to risk.
- will be taken out of service when damaged or in need of repair, has a "Do not Use" tag attached and placed in quarantine. The Site Manager shall be informed immediately equipment is placed in quarantine.

Equipment shall be checked at a predetermined frequency to ensure that safety related features are functioning correctly. The frequency at which maintenance activities are carried out shall also take into account the:

- intensity of use - frequency and maximum working limits.
- operating environment.
- variety of operations.
- risk to health and safety from malfunction or failure.

The Site Manager shall ensure daily checks and weekly recorded inspections are carried out and make records available for inspection on request.

All plant MUST hold a current Statutory Test and Thorough Inspection / Examination Certificate and be operated by suitably competent operatives.

Note: A Certificate of Conformity is an assumption of safety in accordance with the EU Machinery Directive and only lasts for the first year, or 6 months if appropriate, of test. Arrangements for Statutory Test and Thorough Inspection shall be made as soon as is practicable by the hire company to ensure compliance with Regulatory requirements under the Provision and Use of Work Equipment and /or Lifting Operations Lifting Equipment Regulations.

Compressed Air and Cartridge Tools

These tools must only be operated by trained persons. A suitable Risk Assessment must be carried out and a Permit to Work provided.

Note: These tools carry a high level of risk and must be used with caution.

Wood Working Machinery

Where machinery is being used on site there shall be a suitable exclusion or work area in place. Suitable signage must be displayed warning of hazardous machine operation.

Operatives shall be fully trained and competent to operate the machinery and wear specific PPE as per the Risk Assessment i.e. light eye protection or goggles, FFP3 respirator and dust extraction will be fitted, working and checked for efficiency.

Measures must be in place for the control of dust which may affect the surrounding environment and public places.

3.5 Storage of Hazardous Materials

All hazardous materials shall be stored in a suitable bunded and vented security Cage/Container prior to use. Used containers shall be controlled and disposed of safely as set down in the relevant COSHH assessment and with reference to the current DSEAR Regs. Small amounts will be brought on a 'when required' basis to reduce the need for storage and removed daily.

Fuel will be mainly diesel; however, some small amounts of petrol may be required for items of small plant e.g. Stihl saws. Diesel fuel will be stored away from welfare in a double bunded bowser and mounted on a drip tray capable of

containing 110% of the bowser contents. Spill kits will be local to the bowser together with firefighting equipment. All refuelling will be carried out in a specific area, again with adequate spill control in place away from the welfare area.

All users will be instructed at Induction to maintain good hygiene, particularly when using hazardous product

3.6 Dealing with Services including Overhead Services

The Site Staff are responsible for confirming that the details remain current prior to any work starting on site. Ground Penetrating Radar, Cable Avoidance Tools along with Permits and safe digging practices must be employed on site where required, as directed within HSG 47.

Services are below ground, and are typically electricity cables, gas and water pipes, foul and surface water sewers, overhead telephone cables.

Where required, hand dug pilot holes will be excavated to locate existing plant and the locations marked. Due diligence will be paid to all service drawings which must be in full colour to clearly identify the type of service.

Isolated hand tools will be used and will be inspected for cracks and damage prior to use by the user.

Permits to Dig will be issued for all excavation work and due diligence will be paid to service drawings and all preconstruction information provided by the Client.

Where risk is present from plant movement where overhead services are present, goal post type bunting, in accordance with HSE Guidance GS6, shall be erected prior to any large plant entering the site.

Work areas adjacent to overhead services will be Permit controlled areas and will be demarcated using Blue cones before and after the zones.

Plant operations will be strictly controlled by a Banksman.

All excavator and work at height movements will be managed and slew and height restrictors will be in operation at all times.

3.7 Control of Lifting Operations

Lifting Operations will be carried out in accordance with Lifting Operations Lifting Equipment Regs. 98, BS7121 Safe Use of Cranes and Company Procedure SSOW10 Use of Lifting Equipment.

Lifting operations will only be carried out by competent persons, this includes the use of cranes, Genie type fork-lift equipment, hoists, MEWPS, forklift trucks, telehandlers and scissor lifts. The use of lifting equipment must be suitably risk assessed, planned and supervised, this will be through the appointment of a competent Appointed Person for Lifting Operations who holds a Blue CPCS Card (Competent Operator). The AP will produce a suitable and sufficient Lift Plan detailing the lifting equipment i.e. crane and tackle, schedule of loads, operating area and those whose duty it is to manage and control the activities.

Exclusion zones will be established and controlled during lifting operations by the Slinger Signaller or Lift Supervisor.

FLTs and Telehandlers

All loads that are under slung from the forks must be adequately planned and managed. These activities place additional duties on the machine as underslung loads fall outside of the machines standard operating duties. All lifting strops and slings shall have a current 6 monthly Certificate of Test and be inspected before use by a competent person i.e., Lift Supervisor or Slinger Signaller.

FLTs and telehandlers are categorised as lifting equipment and therefore require an annual Thorough Examination or 6 monthly if lifting personal.

During carrying operations will be as low to the ground as possible and accompanied by a Banksman. Stability whilst lifting loads with a telehandler will be ensured by the setting out of outriggers as set out in the machines operating procedures or a Lift Plan.

Lifting with Excavators

It is not recommended that excavators are used as cranes however, they may be used for the movement of materials providing a suitable plan has been put in place and where it is not reasonably practicable to engage additional plant.

Certification

All lifting equipment must be accompanied by a current Certificate of Thorough Examination, this being an annual examination or six monthly, where the lifting of persons is carried out.

All lifting tackle i.e., that which attaches the load to the lifting equipment e.g. slings, chains or ropes must be visually inspected every 6 months by a competent person and be accompanied by that certificate. A colour code may be used to ensure all tackle is in date before issue to site, this also applies to man riding equipment.

Lifting attachments must be tested and certificated or its limitations be proved by design.

As the Working Load Limit (WWL) remains constant the competent person will revise the Safe Working Load (SWL) where necessary.

3.8 Work at Height

Fall prevention measures will be in accordance with the hierarchy of risk control Ref: Work at Height Regulations 2005.

Work at height relates to all heights where a person could fall a distance liable to cause personal injury if measures are not taken. It refers to falls from above ground, or to falls below ground. Where practicable collective prevention measures (e.g. handrails) will be chosen rather than individual measures (e.g. harness).

Hierarchy of control measures should be applied, whereby prevention from falling should be considered before making arrangements to mitigate injury after the fall has occurred. Control measures will be detailed in the Method Statement for this activity.

Ground conditions, access and proximity hazards must all be assessed prior to the use of any work at height equipment as ground stability failure is a common cause of failure and injury or death.

Ladders

The use of ladders, step ladders, podiums and hop up platforms may be used but must be suitably risk assessed to show that other forms of access are not reasonably practicable.

Ladders will not form a 'safe working platform' and are for access only. Ladders will be visually inspected daily pre use and thoroughly on a weekly basis and recorded; scaffold access ladders may be included within the Statutory 7-day requirement for scaffold inspections.

Placed at an angle of 75°, their use must be on firm and level ground and tied or footed. Ladders must also be placed in the correct orientation i.e. correct way up.

Alloy Towers

Alloy Towers may be used, and their assembly and use must be risk assessed and supervised by a PASMA trained person, again they will be inspected before use and recorded weekly. Erection height must not exceed 3 x smallest base dimension, wheels will be locked, and the tower will not be moved whilst occupied.

All trestle assemblies shall be fitted with handrails and toe boards and a suitable method of access and must not be overloaded.

Scaffold

All tube and fitting scaffold must be accompanied by a NASC TG20 Compliance Sheet OR a design carried out by a qualified structural engineer.

Erection Method Statements and Risk Assessments will be in place. This must also detail an effective emergency rescue from height procedure.

Copies of all CISRS competencies, including an Advanced Scaffolder who will supervise the erection.

The scaffold will be handed over on completion to the Site Manager who also will regularly visually inspect the structure before use.

Statutory Inspections will be arranged and carried out by a competent person; this will be of a frequency not exceeding 7 days. Records of the inspection will be made and will be evidenced in the site Temporary Works file.

All scaffolds will comply with the requirements of BS EN 11281-1 and all relevant component standards.

System Scaffold

Erection and inspection of a system scaffold must be carried out by those persons who are trained to do so. A design is still required although a Compliance Sheet is not presented, and it must be erected in accordance with the manufacturer's instructions by suitably trained scaffolders.

Mobile Elevating Work Platforms and Scissor Lifts.

MEWPS and scissor lift machines will only be operated by trained operatives within a controlled exclusion zone. No person must walk close to or under the basket whilst it is at height.

Ground conditions and sub structure must be assessed before placing a machine on it.

Harness and a restraint lanyard will be required by each operative using a boom MEWP and will clip onto the proprietary anchor point within the basket. The operative will not climb onto or access a structure from the mid or top rail, the lanyard shall be adjusted to prevent climbing out of the basket.

Note, the latter will not apply when operating a boom MEWP over water however, a suitable and sufficient Risk Assessment and Rescue Plan must be in place for these activities.

Although a harness is not required whilst operating or working from a scissor lift type MEWP, a harness must be available for rescue purposes from a scissor.

3.9 Confined Space Entry

Confined Space Operations will be carried out in accordance with the Confined Space Regs and Company SMS Procedure Pro S09 Confined Spaces.

Control measures will be detailed in the site-specific activity RAMS for each location. These will be submitted to the Client's PM for approval.

The following areas of the works will be classified as Confined Spaces:

- Manholes

3.10 Excavations

All excavations fall within the provision of Temporary Works and shall be suitably designed, planned and managed taking into account, but not limited to the following points:

- Contaminated Land
- Ground conditions
- Stability of adjacent structures
- Electrical utility services, both underground and overheads
- Water utilities
- Drainage, sewer/culvert locations and depth.
- Unexploded ordinance
- Mines and shafts

Due diligence will be paid to all Pre-Construction Information provided e.g. service drawings, building plans, building Operational Manuals, previous surveys, and ordnance surveys.

Excavations will be regularly inspected and sufficiently protected i.e. fenced or barriered. Where practicable, two points of access and egress will be established, and rescue arrangements be in place.

Excavations must be risk assessed to identify as to whether it falls under the Confined Space Regs if so appropriate Permits, competencies and access controls will be put in place.

3.11 Work exposing workers to the risk of drowning

The works are taking place in a minor watercourse where the risk of drowning is relatively minor. Works to be reviewed and measures implemented if circumstances change.

Where this is not seen as a major risk, due to typically shallow water levels, the Site Manager shall however, carry out an onsite risk assessment at each location, and control measures will be detailed in the site-specific activity RAMS for each location.

Where it is not possible to avoid working next to water suitable provision of controls e.g. edge protection, shall be in place where practicable with clear signage warning of the hazard and risk of drowning.

Throwbags, safety lines and rescue ropes will be provided at any workplace where risk of drowning is assessed as significant. Life rings will not be used.

Personal Protection Equipment

All operatives will be provided with PPE i.e. a life jacket classified under BS EN 396 which is appropriate for the person's body weight and has been inspected by a competent person. Buoyancy aids with a minimum 8.2 kg buoyancy will also be provided.

All operatives will be required to wear a hard hat with a chin strap attached and carry a whistle or other means of raising the alarm.

Where there is an assessed risk of surge or overtopping, AEY will use the EA Floodline and will warn AEY of such an event.

Plant operation in close proximity to or working in water.

A suitable assessment of the ground conditions for operating plant, access and egress and stability must be provided by a suitably qualified Temporary Works Engineer/Designer. This assessment must consider the maximum load allowed for the type of plant e.g. wheeled or tracked.

This may require all ride on plant to operate on mats however these must be placed at least one machine width away from the water body, stream or river to prevent the risk of slippage.

Plant operators will not wear seatbelts whilst operating on or near water due to the risk of entrapment and subsequent drowning. They will, however, be required to wear life jackets and to check it prior to use.

Plant must be fit for purpose and will be fitted with rubber tracks where practicable, will be inspected for leaks and must operate using biodegradable oils. The use of plant and machinery in or near water must be approved by the Environment Agency, local council Environmental department or waterways.

Pontoons or other working platforms must be suitably buoyant and stable and fitted with edge protection including protection for any chemicals, tools or other items falling into the water course. The pontoon must be of a suitable size to ensure no crush zones are present and to ensure the safe operation of plant and equipment, where appropriate. If not reasonably practicable then, exclusion zones must be put in place.

RAMS

All operations will be fully risk assessed, this will include an assessment of and survey of water course beds and the routes for access, work zones and egress, tidal fluctuations and weather impact. RAMS will be briefed at Pre-Start Briefings and Permit to Access Work Area will be issued.

Emergency Planning

A suitable and sufficient Emergency Plan will be compiled, practiced and briefed out to the operatives. This will be based around the Risk Assessment findings with emergency contacts identified. Should there be a foreseeable risk of plant being marooned mid operation, contingency plans for recovery must be in place i.e. rescue boat with trained operative.

Training

All plant operatives will be CPC trained and trained in working on or near water and how to use the life jacket and buoyancy aids and to implement an emergency rescue.

The use of a harness and any lanyard will also be subject to suitable harness training.

3.12 Stability of structures whilst carrying out construction work

AEY will pay due diligence to all Engineering Drawings and will ensure that suitable arrangements are put in place to ensure all local structures are secure and will remain stable throughout the works.

Temporary Works will be installed in accordance with BS5975 and relevant engineer's surveys. Any propping or underpinning of structures will be designed as per the Standard by competent Structural Engineers who will be engaged by the Principal Contractor.

AEY will ensure compliance throughout its works to Regulation 19 of CDM which states that a 'temporary structure must be designed, not become unstable or bend and must only be used for the purpose for which it is intended.

3.13 Demolition or dismantling

Demolition shall be carried out by a competent specialist Contractor in accordance with an approved written safe system of work. This will include segregation of working areas and exclusion of non-essential personnel.

Dismantling will be planned and managed paying due regard to existing plans etc. to establish a sequence and ensuring the work is carried out in a controlled manner.

3.14 Temporary Works

All installations that enable the construction of the Project that will be removed at the close, will be considered to be Temporary Works (TWs). All TWs are categorised under BS5975:2019 and require the following appointments to be put in place:

- TW Designated Individual
- TW Co coordinator:
- TW Supervisor: Site Manager
- TW Designs and Brief or Scope of Work: To be developed throughout the works
- TW Register: To be developed throughout the works.

Example installations include but are not limited to:

- Site perimeter set up i.e. Fencing or hoarding. Hoarding already exists and will be adopted and developed by the Principal Contractor.
- Site Cabins and welfare
- Pedestrian route demarcation e.g. barriers, gates etc.
- Site signage, including Client's banners etc.
- Excavations
- Scaffolds
- Trench support
- Falsework

Regulation 19 CDM 15 Stability of Structures outlines the Regulatory requirements for all Temporary Works.

The BS5975:2019 Standard requires that the TWC assesses the risks associated with the works, this includes the implementation risk and Design risk and records his findings on the TW Register. Where Design risk has been identified and quantified, the TWC must communicate his findings to the Principal Designer / Designer.

Implementation and design risk associated with 'specialist works' must be assessed by the specialist Contractor's TWC in collaboration with the PC's TWC, again the findings must be recorded on the TW Register and communicated to the PD/Designer.

3.15 Lone Working

Not Permitted on this scheme. Information remains in CPP for reference if circumstances change.

~~Avoid the Need for Lone Working through adequate resource planning and design therefore, eliminating the need for 'Lone Working'.~~

Procedure in Operation

Safe System of Work

~~A Safe System of Work shall be implemented. This will be appropriate to Lone Working and will be based on:-~~

- ~~● Site Specific Risk Assessment for the activity identifying control measures~~
- ~~● Method Statement detailing the control measures~~
- ~~● Permit to Work~~
- ~~● Sufficient competent personnel trained in 'Lone Working' awareness~~
- ~~● Suitable and sufficient equipment for self-rescue~~
- ~~● An appropriate means of communication between the operative and a known contact i.e. Supervision.~~
- ~~● A Responsible Person must be made aware of any 'Lone Working' and make regular contact to ensure the continued safety of the employee.~~
- ~~● Appropriate access and egress arrangements including fall prevention, arrest and rescue equipment~~
- ~~● Measures to negate falls through height, and prevent unauthorised entry to the work area~~
- ~~● A Rescue Plan and provision of sufficient resources to carry it out~~

~~Where it is practicable to isolate any physical hazards (e.g. isolating power feeds) this should be incorporated into the Safe System of Work and applied before any Lone Working activity.~~

~~Regardless of the scenario, 'Lone Working' must always be adequately planned and be accessible by Emergency Services. In the event of a Major Incident occurring, PRO S03 Major Incident Response should be followed.~~

3.16 Other identified significant safety hazards

TBC. Where other significant safety hazards become apparent during the project then this Plan will be revised accordingly.

4.0 H&S Management: Arrangements for controlling significant site Health Hazards

4.1 Health Hazards in general

The Company recognises and acknowledges its statutory duties prevent ill health from its activities and to provide health surveillance and its duty to enforce this requirement under various legislation e.g. COSHH, Control of Asbestos, Control of Vibration, Noise at Work etc.

Where it has been identified through Risk Assessment that the workforce is at risk of significant levels of exposure, the Company will make the appropriate arrangements for health surveillance to be carried out.

Any negative findings will be managed appropriately, involving referrals to the OH professional for further investigation. During this time exposure will be removed and alternative employment will be provided until the employee has been declared fit for work with or without restrictions.

Smoking and Vaping

Although AEY do not permit smoking whilst on site, the Company recognises the requirement not to discriminate against smokers/vaping and will provide separate areas for both parties. This will be included within the Site Fire Risk Assessment and appropriate fire controls will be provided i.e. extinguisher and sand bucket.

Vaping chargers will not be permitted and are not compatible with the power supplied to site through generators.

4.2 Use of hazardous substances (particularly those that require Health Monitoring)

Standard construction materials and specialist materials will be used. All materials are to be handled in accordance with COSHH regulations.

AEY hold a COSHH assessment library which is continually updated. Assessments will be used in conjunction with the site-specific risk assessment produced in accordance with the Management of Health and Safety at Work Regulations 1999

Where required under the Conditions of Contract, the Site Manager shall obtain permission from the Client's PM before using any substance on site, COSHH assessments shall be presented with any such request.

4.3 Manual Handling

AEY SMS procedure Pro S14 Manual Handling describes the Company approach to combatting this risk. A suitable and sufficient Manual Handling Assessment will be carried out and will be suitably planned and resourced.

4.4 Reducing Noise and Vibration

AEY SMS Procedure Pro S06 Noise, Dust and Vibration describes the Company approach to combatting these risks.

CONTROL OF NOISE AND VIBRATION

Canal and Rivers Trust Vibration Requirements

Any construction activities which cause vibration shall adhere to the limitations below: a. Ground vibration is usually measured in terms of Peak Particle Velocity (PPV) with units in mm/s. The PPV refers to the movement within the ground of molecular particles and not surface movement. Primary guidance is given in three British Standards. These are BS:7385 Parts 1 and 2, BS:5228- 2:2009+A1:2014 and BS:6472 Evaluation of Human Exposure to Vibration in Buildings. The first two focus on potential damage to structures with BS6472 being used for assessing the nuisance impact. b. Vibration monitoring is usually measured in three axes: lateral, transverse and vertical. The sum of the three axes is known as the resultant level although the British Standards as detailed above make use of the maximum single reading in one of the planes rather than the resultant level in an assessment process. The potential for damage to be caused will depend on both the PPV and the frequency at which it occurs. For intermittent vibration, to prevent possible damage, a ppv level of not greater than 15mm/s is desirable. To avoid damage if piling is being carried out as a continuous action, ppv levels should be below 7.5mm/s. Vibration output to be requested from piling machinery and vibration monitoring is to be used throughout the construction phase.

4.5 Exposure to Asbestos

All operatives employed must be suitably trained to an Asbestos Awareness UKATA standard and Asbestos related works will be carried out in accordance with the current Control of Asbestos Regulations.

Where asbestos is known or suspected, the relevant working areas will be barriered off and access restricted to competent personnel only. A competent Contractor will be engaged to remove any such contamination in accordance with the CAR 2012 and the ACoP L143 2012.

Asbestos waste will be removed as Hazardous Waste and will be disposed of in compliance with these Regulations. The relevant Contractor will also comply with their Duty of Care in ensuring all waste is delivered to the correct Waste receiver.

An Air Test and/or Clearance Certificate is required before entry into any area.

4.6 Exposure to UV Radiation from the sun

Where the Construction programme length means that some works will be carried out particularly in the summer months, exposure to UV radiation may be as a hazard on this project. If so, appropriate measures will be taken included long sleeved clothing and sun cream.

4.7 Leptospirosis (Weil's Disease)

Leptospirosis (Weil's Disease) is a risk associated with WwT works however, it is considered a hazard on all construction sites. All operatives and visitors shall receive an induction (or be issued the necessary cards) which must identify the risks of Weils Disease. Suitable protective equipment will be provided and worn by site operatives. Where there is a risk of Leptospirosis, good personal and general hygiene practices will be promoted.

Welfare facilities will be in place in accordance with the CDM Regulations 2015 provided by AEY as Principal Contractor.

4.8 Sharps (Discarded hypodermic needles)

Discarded hypodermic needles are a foreseeable health risk. Any operatives undertaking activities where this hazard may be present will be instructed to wear protective clothing and remain vigilant. Any needles encountered will be collected and the Council will be called to collect on an "as-and-when" basis.

4.9 General Construction and Fugitive Dust

Exposure to construction dust has widely ben recognised as being a major contributor to the mortality rates of construction workers, particularly those exposed to Silica dust, a main constituent of cementitious materials.

AEY recognise this is an occupational health issue and require that anyone exposed to construction dust is to be Face Fit trained and is provided with a half face respirator of a FFP 3 standard (Face Fit Protection), this is the highest level of personal dust protection and must be worn at all times when in dusty environments and when cutting cementitious materials.

Where dust is a hazard, through for example sweeping up, cutting or demolition activities suitable dust extraction will be installed to mitigate the exposure to dust however, these systems may not be 100% effective and therefore RPE must still be worn.

Dust sampling may be required to assess the level of exposure to workers and to enable SSoW to be developed in controlling dust levels.

4.10 Work which puts workers at risk from chemical or biological substances

Any activity which puts the operatives or others at risk through exposure to chemical or biological agents will be fully reviewed and risk assessed with the Client & Principal Designer and advice sought from any other relevant bodies e.g. HSE before starting.

Personal Protection Equipment E.g. Type 5 full disposable suits and RPE will be required and suitable training given to those carrying out the activity.

Those who are considered at risk of significant levels of exposure will be subject to health surveillance and monitored for a recommended period as per Occupational Health Practitioner guidance.

4.11 Other identified significant health risks

TBC. If any such health hazards become evident, this Plan shall be revised accordingly.

5.0 The Health and Safety File

The CDM Duty to compile the H&S File belongs to the Principal Designer, although this can be reassigned to the Principal Contractor by agreement. As Principal Contractor under CDM, AEY have an obligation to provide relevant input to the Principal Designer.

In a similar manner AEY's Contractors are responsible for submitting all appropriate information to AEY for eventual inclusion within the Health and Safety File.

In both cases, either receiving information from Contractors or submitting to the Principal Designer, AEY will agree the format of the information to be supplied, and the relevant timescales. This should include information such as those listed below. (Note this suggested list is not exhaustive).

- Marked up drawings to indicate as built details.
- Position of any services encountered i.e. depths, dimensions, location next to other services, any photographs if taken.
- Diagrams of plant and the details of plant used for further reference (Method Statement).
- Details of any materials used that may have significance for the future detrimental effect of the health and safety of maintenance workers and end users.
- Information regarding any ancillary equipment installed such as electrical apparatus.
- Records of ground conditions during the construction phase.
- The results of concrete cube test.
- Instructions and information for the operation and maintenance of any safety features fitted to the structure.
- Means of safe access to all parts of the structure (as per the design).
- Description of the construction method and sequence of operations (Method Statements) where relevant to future use.
- Feedback of any high-risk work that evolved through the construction phase that was not allowed for by design and unexpected events that caused deviations from design plans.
- Suggestions as to how designs could be improved to aid safety in construction and the associated maintenance operations that are inherent with the structure.

At the commissioning / hand-over stage, or at other agreed dates, the Site Manager must ensure delivery of the Health and Safety File input information to the Principal Designer (or in his absence, the Client). Delivery tickets and receipts may form part of the handover package.

End of CPP Document

ENVIRONMENTAL MANAGEMENT PLAN

6.0 Environmental Management: Arrangements for controlling significant hazards on site

6.1 Accommodating adjacent land use

Contact to be made with adjacent land owners regarding land use and maintaining access on Contract Award

6.2 Waste

AEY will endeavour to minimise disposal to land fill, and will instead promote re-use, recycle and recovery techniques.

All waste will be dealt with in accordance with the Waste Duty of Care in Section 34 of the Environmental Protection Act 1990, and with the Waste (England and Wales) Regulations 2011.

The Site Manager will ensure that copies of EA Waste Registrations and Licences are filed along with a Waste Transfer Season Ticket for AEY as the waste producer. Waste Transfer Notes will be collected from the waste carrier and must contain the EWC and SIC codes.

Waste will be segregated on site to assist in recycling materials and skips will be signed according to their waste category or stream.

6.3 Fuel and Oil Storage

Tank checks will be carried out on all tanks and bowsers used on site using the PUWER weekly check register, and where appropriate, the Site Manager's daily check sheets. The AEY 10m rule guidance will be applied as appropriate.

6.4 Other Material Storage

All hazardous material shall be stored in a suitable security Cage / Container prior to use. Used containers shall be controlled and disposed of safely as set down in the relevant COSHH assessment.

6.5 Water

6.5.1 Water Consents

Not Applicable.

6.5.2 Water Pollution Prevention Controls

AEY 10m rule guidance will be applied as appropriate to mitigate accidental release of hazardous chemicals. Spill kits will also be made available for emergency incidents.

All plant will operate with biodegradable oils.

6.5.3 Working in Watercourses and Flood Plains

Ref: Section 3.11.

6.5.4 Restricted Operations: Prevention of Contamination of Water Supplies

N/A

6.6 Air

No burning of waste will be allowed on site.

Fugitive dust mitigation measures will be managed by water spray directed at source.

All Contractor plant will be suitably maintained, and appropriate diesel fume controls installed.

6.7 Noise & Vibration Environmental Pollution

6.7.1 Noise & Vibration Consents

None required

6.7.2 Noise & Vibration Control Measures

Ref: Section 4.4.

6.7.3 Noise & Vibration Monitoring

To be carried out during operations post initial onsite assessment.

6.8 Ground Contamination / Pollution

6.8.1 Contaminated Land Control Measures

6.8.2 Contaminated Land Testing & Monitoring

6.9 Ecological and Bio Security Wildlife and Habitat Protection

6.9.1 Wildlife and Habitat Consents

6.9.2 Wildlife and Habitat Protection Measures

6.9.3 Invasive Plants

6.10 Archaeology and Heritage

Archaeological watching brief will be in place for the excavation works at the south abutment.

6.10.1 Archaeology and Heritage Protection Measures, Consents etc.

Archaeological watching brief will be in place for the excavation works at the south abutment.

6.10.2 Archaeology and Heritage

Archaeological watching brief will be in place for the excavation works at the south abutment.

6.11 Wastewater from Concrete Wagons

Concrete mixer trucks will only be allowed to wash out in a designated area with an appropriate facility, e.g. visqueen lagoon, dedicated washout skip etc.

6.12 Other significant risks identified on this project.

7.0 Environmental Management: Emergency and Contingency Arrangements.

7.1 Emergency Planning

Potential environmental problems and emergencies are considered as part of the project planning, and the appropriate prevention and control measures are put into place by the Site Management team. These measures are communicated to all people working on the project including Contractors through the CEMP briefing.

In the event of an environmental emergency, contact with the Client's representative will be made by the most senior AEY person available at the time.

7.2 Incident Categorisation and Contingency Scenarios

A guideline list of major or minor environmental incidents is listed in the following table (note: these are not exhaustive)

Category

Minor Incident

Major Incident

Traffic	- Waste, dust or mud on the roads - Using unauthorised roads	Waste, dust or mud on road resulting in a complaint or accident.
Waste	- Waste not properly contained - Hazardous Waste not correctly segregated from non-hazardous waste on site - Hazardous waste types not segregated from each other on site	- Waste taken to landfill site that will not take that type of waste - Waste Transfer Note/ Hazardous Waste Consignment Note not completed - Waste carrier's registration certificate not checked - Waste Management Site licence/ exemption not checked
Storage	Less than 200 litres of oil/ diesel/ chemical incorrectly stored i.e. not stored in bund/ drip tray/ inside building	More than 200 litres of oil/ diesel/ chemical incorrectly stored i.e. not stored in bund/ drip tray/ inside building
Spill	- Oil/ diesel/ chemical spill that contaminates a small area of ground that can be cleaned up manually - Oil/ diesel/ chemical spill that is contained & easily cleaned up but was caused by lack of controls	- Oil/ diesel/ chemical spill that cannot be controlled - Oil/ diesel/ chemical spill that is not contained & not easily cleaned up - Oil/ diesel/ chemical spill that contaminates a large area of ground that needs to be cleaned up with an excavator - Oil/ diesel/ chemical spill into Groundwater Source Protection Zone
Note – a small spill on concrete hardstanding that is quickly & easily mopped up is not an incident		
Watercourse	Plant & equipment/ oil/ diesel/ chemicals/ soil stockpile within 10 metres of a watercourse	- Silty water getting into a watercourse - Oil/ diesel/ chemical/ waste spill into a watercourse - Wastewater from vehicle wash getting into a watercourse - Failure to obtain consent (e.g. discharge consent) - Failure to comply with consent conditions
Air	- Excessive dust on site that could cause a nuisance to the local community - Excessive smoke from vehicles/ plant	- Excessive dust leaving the site causing a nuisance to the local community - Burning waste materials on site
Noise / Vibration	Not implementing required noise / vibration controls	- Working outside permitted hours - Excessive noise or vibration emissions causing a nuisance to the local community
Contaminated Land	Failure of containment measures	Failure of containment measures resulting

that has not yet resulted in pollution

in pollution

Wildlife

- Damage to a tree or hedge that should have been protected
- Removal of a tree or hedge that should not have been removed
- Works encroaching on a wildlife site which could cause damage
- Damage to an undesignated wildlife site

- Removal of, or damage to, a tree/ hedge protected by a Tree Preservation Order or “important” hedgerow
- Damage to protected species or designated site e.g. Site of Special Scientific Interest

Archaeology & Heritage

- Damage to an undesignated area of archaeological interest

- Damage to a designated site e.g. Schedule Ancient Monument, Listed Building or Conservation Area

Contingency Plans will be produced, covering the following scenarios:

Traffic:

Mud / dust on the roads – road sweeper to be employed as required to clean the roads. A jet wash will be available to clean down all tires and tracks to prevent mud from being spread to the roads. The site compound will have a number of tarmac roads and the storage / delivery area shall be stoned up with clean stone to minimise mud creation on site.

Waste:

Waste will be properly categorised in the waste storage area and signage will identify each skip / container’s usage. A covered skip will be used for office / canteen waste to prevent attracting vermin. Timber will be segregated in a separate skip.

Hazardous waste will be separated in clearly identified covered skips or drums and must not be disposed of with the non-hazardous waste, and each type of hazardous waste is to be identified and segregated.

All waste is to be taken from site by a licensed waste carrier to a licensed landfill / transfer.

Station, ensuring that an appropriate waste transfer note is issued. All licenses are to be checked and ensure that they are in date.

Storage:

The fuel for the site is to be stored in a double bunded static bowser, which is also to have a bunded area beneath for any spillages. A spill kit must be available at this location.

A COSHH stores will house all other hazardous materials and will remain locked and isolated from any sources of potential damage, ignition or heat.

Spills:

The fuel storage area is to be located a minimum of 10m from any watercourse, or, more applicable to this site, a drainage system.

Spills on to the ground will be cleaned up using a spill kit, to be disposed of in an appropriate impervious bag and disposed of as above.

All spills will follow a “stop – contain – notify” procedure – Stop the spill, contain the spilled liquid and notify site management. Spills are to be diverted from entering the watercourse by available methods, such as spill socks, granules, pads, or even diverting the flows by placing spoil, sand or digging a sump / channel.

Watercourse:

Fuel and other liquids are to be stored outside of the 10m exclusion zone from any watercourse or drainage system. Refuelling is also to be carried out with the same restrictions.

Where groundwater is required to be pumped from an excavation, the volume will dictate if a silt buster tank is required, or if the discharge can be pumped on to a grassed area to allow settlement of sediment.

Under no circumstances must a silty discharge be pumped into a watercourse or drainage system.

Should pumping be required into a drainage system, consent must be applied for and granted, and the conditions of the consent adhered to.

Air:

Dust is to be minimised on the scheme by means of dust suppression and the regular use of road sweepers. The site will be doused with water to prevent dust from lifting into the air. Dust suppression will be used for cutting activities, using a water bottle attached to the circular saws when cutting cementitious materials or tarmac.

There will be no burning of waste materials on site under any circumstances.

Plant will be turned off when not in use to prevent unnecessary fumes and emissions from being created.

Noise / Vibration:

Working will be limited to the site hours to prevent any disturbance to the neighbours.

Contaminated Land:

Soil samples are to be taken to check the suitability of the spoil from the site if reused. The spoil is to be sent to an appropriate landfill if found to be contaminated. Waste transfer notes are to be produced for each of these.

Imported material is to have certification before being delivered to site to prove that the material is not contaminated.

Project Environmental Risk Assessment (ERA)

Sub-Activity / Process	Environmental Hazard	Risk, and part of Environment affected	L	S	R	Control Measures to be applied	L	S	R	Action by who / by when
All activities. Use of heavy machinery for construction:	Noise emissions Dust produced Vibration	Nuisance to local communities	3	4	12	Specific control measures will be detailed in Method Statements	2	4	8	Site Supervisors - throughout contract
Access and egress to site: Delivery of plant / materials, personnel, parking of vehicles	Traffic congestion, dust, noise, odour	Nuisance to local community Disturbance to wildlife	3	3	9	Plan access and egress points to: - minimise impact ensure availability of access for plant, materials, personnel, emergency vehicles Notify residents and neighbours where there is potential for significant impact	3	2	6	Site Manager - at site set up, and throughout contract
Concrete mixing / ready-mix lorries:	Discharge of wastewater	Pollution of surface water and groundwater resources. Contamination of land	5	4	20	Not applicable to this project	1	5	5	
Dewatering & Pumping	Discharge of silty water	Pollution of water resources	3	5	15	Specific control measures will be detailed in Method Statements	1	5	5	Site Manager - before initial dewatering / pumping activity Site Supervisors - throughout activities
Diesel storage Abnormal:	Accidental or deliberate discharge from static fuel tank, causing major	Diesel contamination of ground and / or watercourses via drainage system	2	5	10	All fuel distribution or replenishment operations will be controlled by Work Instruction. Operation will be restricted to designated operatives	1	5	5	Site Manager - during site setup

	uncontrolled diesel spillage	and eventually public storm sewer				The Contract Drainage Plan will identify possible waterpaths. The Drainage Emergency Plan will be followed at all times				
Maintenance of vehicles & plant	Accidental spills or leaks of fuel / hydraulic oil / coolant	Pollution of water resources. Contamination of land	2	5	10	Apply AEY 10m rule Apply relevant Work Instruction	1	5	5	Site Supervisors - throughout activities
Storage and use of pollutant liquids	Accidental spills or leaks	Pollution of surface water and groundwater resources, Contamination of land	2	5	10	Apply the AEY 10m rule, all fuel storage areas to be supplied with fuel and oil spill kits.	1	5	5	Site Supervisors - throughout contract
Works in or near watercourses / waterpaths	Accidental spills or leaks Discharge of wastewater Discharge of rainwater run-off Change in water level or flow	Pollution of water course	2	5	10	Apply the AEY 10m rule. All plant operatives must carry oil and fuel spill kits with them whilst operating plant.	1	5	5	Site Supervisors - throughout contract
Soil handling & storage	Uncontrolled activities	Damage to soil structure and fertility. Water pollution if soil washed into	4	4	16	separate the different types of ground into separate piles. Etc topsoil, peat, clay	1	4	4	Site Manager - before initial soil handling activity Site Supervisors - throughout activities

		drainage system by rain								
Activities producing Non- Hazardous Waste	Improper disposal, Wastage of materials	Pollution of water resources, Contamination of land, Air pollution, Use of resources	3	4	12	Follow GDN E09 Management of Waste to ensure correct disposal, efficient use of waste resources. A SWMP may be a contractual requirement	1	4	4	Site Manager - during site setup Site Supervisors - throughout activities
Combustible fire of hazardous materials (e.g. chemicals) caused either accidentally or deliberately (arson)	Toxic smoke, ash and fumes	Air pollution, contamination of land when ash settles	2	4	8	Controlled by good housekeeping and waste management. Combustible materials to be kept apart from potential sources of ignition. Hazardous materials to be securely stored. Hazardous waste quantities to be controlled on site, with regular removal	1	4	4	Site Supervisors - throughout contract
Combustible fire of non-hazardous materials (e.g. waste) caused either accidentally or deliberately(arson)	Non-Toxic smoke, ash and fumes	Air pollution	2	3	6	Controlled by good housekeeping and waste management. Combustible materials to be kept apart from potential sources of ignition. Waste quantities to be controlled on site, with regular removal	1	3	3	Site Supervisors - throughout contract
Activities producing Hazardous Waste, e.g. waste from painting	Improper disposal, Wastage of materials	Pollution of water resources. Contamination of land Air pollution Use of resources	0	0	0	Not applicable to this project	0	0	0	

Cleaning of vehicles & plant	Discharge of wastewater	Pollution of water resources.	2	3	6	Apply the AEY 10m rule. Washwater to be collected in bunds and tinkered off site	1	3	6	Site Manager - during site setup Site Supervisors - throughout activities
Removal of underground tanks or pipes	Accidental spills or leaks	Pollution of water resources, Contamination of land, Air pollution	2	4	8	Silt prevention measures to be installed downstream of the works Spill kits to be available wit operatives trained	1	4	4	Site Manager - during site setup Site Supervisors - throughout activities
Works in or near ecological areas	Accidental spills or leaks Uncontrolled activities	Damage to ecology	2	3	6	Erect fencing around protected trees and state with signs, Heras fencing to be erected near habitat of hogs to prevent damage to the enclosure.	1	3	6	Site Manager - during site setup Site Supervisors - throughout activities
Works in or near areas of contaminated land	Discharge of pre-existing contamination	Pollution of water resources Contamination of land Air pollution	0	0	0	Not applicable to this project	0	0	0	
Works near invasive plants	Cutting or removal of invasive plants	Spreading invasive plants	0	0	0	Not applicable to this project	0	0	0	
Works near Listed Buildings	Accidents, Uncontrolled activities	Damage to architectural heritage	2	4	8	The canal lock has Grade II listed status. Extra care is to be taken when working near the lock. Photographic survey is to be taken before works commence and on completion.	1	4	4	Site Manager - during site setup Site Supervisors - throughout activities
Works near protected species	Uncontrolled activities	Damage to ecology	0	0	0	Not applicable to this project	0	0	0	

Works near trees / hedges	Cutting or removal of trees or hedges that are to be protected	Damage to ecology	2	4	8	Pre-entry ecological survey and report. Ecological supervision during works.	1	4	4	Site Manager - during site setup Site Supervisors - throughout activities
Works on flood plain	Uncontrolled activities	Pollution of surface waters Changes in water levels	0	0	0	Not applicable to this project	0	0	0	

	Likelihood		Severity	Likelihood					
5	Certain / inevitable	5	Environmental Disaster / Certain Prosecution	Score	1	2	3	4	5
4	Regular / Near certainty	4	Major Environmental Incident / Likely Prosecution	1	1	2	3	4	5
3	Likely / Irregular	3	Medium Environmental Incident / Possible Prosecution	2	2	4	6	8	10
2	Possible / Occasional	2	Minor Environmental Incident	3	3	6	9	12	15
1	Very unlikely	1	Trivial Environmental Incident	4	4	8	12	16	20
				5	5	10	15	20	25

	Risk Level	Actions Required
	10 – 25	Totally unacceptable. Work must not commence until alternative methods are found, with appropriate re-assessment
	6- 9	Acceptable only where it is not reasonably practicable to lower the risk. First try re-evaluating the task / look to impose further control measures / consider alternative methods or substances
	1-5	Acceptable. The task should be monitored to ensure the stated control measures are being followed

End of EMP Document

QUALITY MANAGEMENT PLAN

8.0 Quality Management (General)

8.1 Content & Use of this Plan

This Plan is a Contract-specific Quality Plan for the Contract denoted in the Construction Phase Plan. The Plan covers the work of A E Yates Ltd (hereafter known as AEY, or The Company) and our Contractors.

It will be reviewed at regular intervals and updated as necessary.

This Plan describes the way we will manage our work at all stages of the contract and provide assurance that our work meets the agreed requirements.

8.2 Design Management

8.2.1 Design Responsibilities of the Contractor

The Client has carried out the design, however the Contractor shall be responsible for the design of the following permanent work items as Clause 21.1.

1. The Contractor shall undertake the design of the permanent piles supporting the ramp and abutment structures. Refer to contract specific drawings listed in appendix 3 – Part 2 Scope Specification Appendix 0/4.
2. The Contractor shall be responsible for the design of the transverse beams to longitudinal steel beam connections on the steel deck.
3. The Contractor shall be responsible for the bearing fixing connection design.
4. The Contractor shall be responsible for the design of the deck plate welds.

The procedures which the Contractor is to follow in carrying out his design shall be.

- The Contractor must submit design and check certificates and a full set of drawings for acceptance by the Project Manager, in accordance with the Review and Certification Procedure defined on the drawings in Appendix 4 – Scope Drawings and in Appendix 3 – Part 2 Scope Specification and before the Contractor commences fabrication.
- The design check certificate must be signed by an appropriately qualified and experienced engineer other than the engineer who prepared the design.

The procedures for the submission of design for acceptance by the Project Manager and Others shall be

- In advance of Project Manager acceptance, each design submission shall be issued to the Principal Designer. The Project Manager will not accept any design packages until the Principal Designer is satisfied that the requirements of the CDM Regulations have been complied with.
- The final design shall be submitted to the Project Manager for acceptance prior to the commencement of any manufacture. The review period shall be two weeks with a final two weeks for the Contractor to amend deliverables based on feedback.

The following Contractor design items are required to be submitted to the Project Manager for acceptance as Clause 21.2.

Drawings, Specifications, and calculations for the following

1. Design of the permanent piles supporting the ramp and abutment structures. Refer to contract specific drawings listed in Appendix 0/4.
2. Design of the transverse beams to longitudinal steel beam connections on the steel deck.
3. Bearing fixing connection design.
4. Design of the deck plate welds.

8.2.2 Design Inputs & Outputs

The design inputs (Client requirements) and the design outputs (what has actually been designed) will be compared in the following manner:

- ~~Completed designs will be submitted to the PM for approval~~

~~The Project Manager will return these marked as follows:~~

- ~~Approved – The Contractor can complete those elements of the works.~~
- ~~Approved with comments – Elements of work can be completed providing details are adjusted to reflect the PM's comments~~
- ~~Rejected – No work can commence until the drawings are revised and re-submitted taking into account the comments made by the PM~~

8.2.3 Design Interfaces

~~Where appropriate, design review meetings will be held between AEY, the Designer and the Project Manager's team.~~

8.2.4 Design Reviews

~~Review and acceptance by the PM as detailed in 8.2.2~~

8.3 Document Control

To ensure that we are only working to the latest revision of any document (Specification, Drawings, Schedules and other relevant documentation) the Project Manager will implement this document control system as described in the AEY Document Control Procedure. When Construction documents are received, they will be recorded as follows:

- Drawings will be entered on the site Drawing Register (based on the AEY proforma).
 - All documents will be recorded in the site Document Register (based on the AEY proforma).
- Superseded drawings will be:
- Marked "Superseded" or "S/S" and stored on site"

8.4 Inspection & Test Plan

AEY will compile one or more contract specific ITPs before commencement of any activities covered by the plan(s).

The Contract specific ITP sets out an agreement of:

- what is to be checked
- who is to be involved
- against what criteria
- when and how often
- how inspection will be recorded (i.e. what Checklist(s) to be used)

The Site Manager will prepare site-specific ITP(s) based on the AEY proforma

8.5 Records

8.5.1 Retention of Quality Records

All Quality Records on this project and any other documents controlled under this Contract Quality Plan will be retained for a period of 12 years from practical completion of the whole project.

The following records will be handed to the Client in accordance with the contract requirements:

8.5.2 Operation and Maintenance Manuals

On completion of the works

8.5.3 As Built Drawings

On completion of the works

8.6 Traceability & Certificates of Compliance

Traceability is the procedure that is carried out to provide documentary evidence to prove that materials come from a specific source or what they or their constituent parts contain.

On this project traceability is required on the following items and Certificates of Compliance will be provided: -

Reinforcement

Ready Mixed Concrete

Aggregates

Surfacing materials

Drainage materials

Kerbs and paving

Others TBC

9.0 Quality Management: Handling, Storage & Protection

These handling, storage and protection procedures have been planned to ensure that all products, materials and work will remain in perfect condition through to handover or practical completion of the project as a whole. They will also ensure that waste generation is minimised.

9.1 Handling

The following methods will be used to handle the items in such a way as to ensure that it is carried out safely and without any damage to the item, other works or the environment (e.g. by creating waste or pollution):

- No personnel on wagons without fall protection measures; e.g. Inertia Reels and harnesses or air bags.
- Mechanical handling mainly by excavator using forks or chains.
- Ready-mixed concrete will be either placed by excavator bucket, craned skip, or concrete pump depending on location and pour quantity.

9.2 Storage

The items will be stored in the following way to ensure that they remain undamaged (and therefore creating waste), without deterioration, and avoid potential adverse environmental; effects (e.g. storage near sensitive water course):

- Cementitious materials will generally be delivered in bags, shrink wrapped on pallets. Small quantities of bags will be kept in a dedicated store container.
- Rebar shall be stored in bundles separated by shape code.
- In general materials subject to COSHH will be kept in dedicated COSHH stores. Bulk fuel will be stored in double bunded tanks.
- The AEY 10m Rule will be applied to ensure that no potentially polluting materials are stored within 10m of a water path.

9.3 Protection

The materials and final works will be protected as follows to prevent any damage or deterioration, or environmental impact, prior to handover of the project as a whole:

- Protection will be provided by Heras fencing erected around the footprint of the work.
- Freshly poured reinforced concrete structures will be protected by visqueen or similar during the curing process, as appropriate.

9.4 Client Supplied Product

The following items belonging to the Client are being stored by us and will be protected as described below:

- N/A for this contract

10.0 Quality Management: Control of Non-Conformities

10.1 Non-Conforming Product

Non-Conforming product will be processed using the AEY QMS Procedure Pro Q05 Product Non-conformance.

The purpose of this Procedure is to ensure that any Product, which has not reached an acceptable standard, is brought up to standard and accepted by the Client. This may be by replacing or repairing the Product, or by persuading the Client to relax the specification to encompass the existing Product. The Site Manager shall identify and propose remedial action that achieves Client approval.

When remedial action has been completed the product shall be re-inspected and if satisfactory shall be signed and dated by the inspection authority. If unsatisfactory the product shall be reworked until it meets defined requirements.

The paperwork serves as a record of initial failure, action taken, and final acceptance by the Client. Records of Non-Conforming products shall be entered on to Proforma PFM Q12 Non-conforming Product / Remedial Action Record. The completed form shall be logged into the Site Quality Plan forming a full auditable record that shall be maintained by the Site Manager.

10.2 System Non-conformance

Any System Non-conformance discovered through Internal Audit, External Audit, or as a result of an incidence of Non-Conforming Product (see Section 16.1) will be subjected to a Corrective Action Record. CARs will identify whether a Non-conformance is Major or Minor.

The CAR will also identify the necessary result to be achieved, a timescale to achieve it, and the person charged with achieving it. Records of evidence will be required before the CAR can be closed. Records will be maintained with the Contract Quality Records after the contract is complete.

10.3 Investigation of Non-Conformance

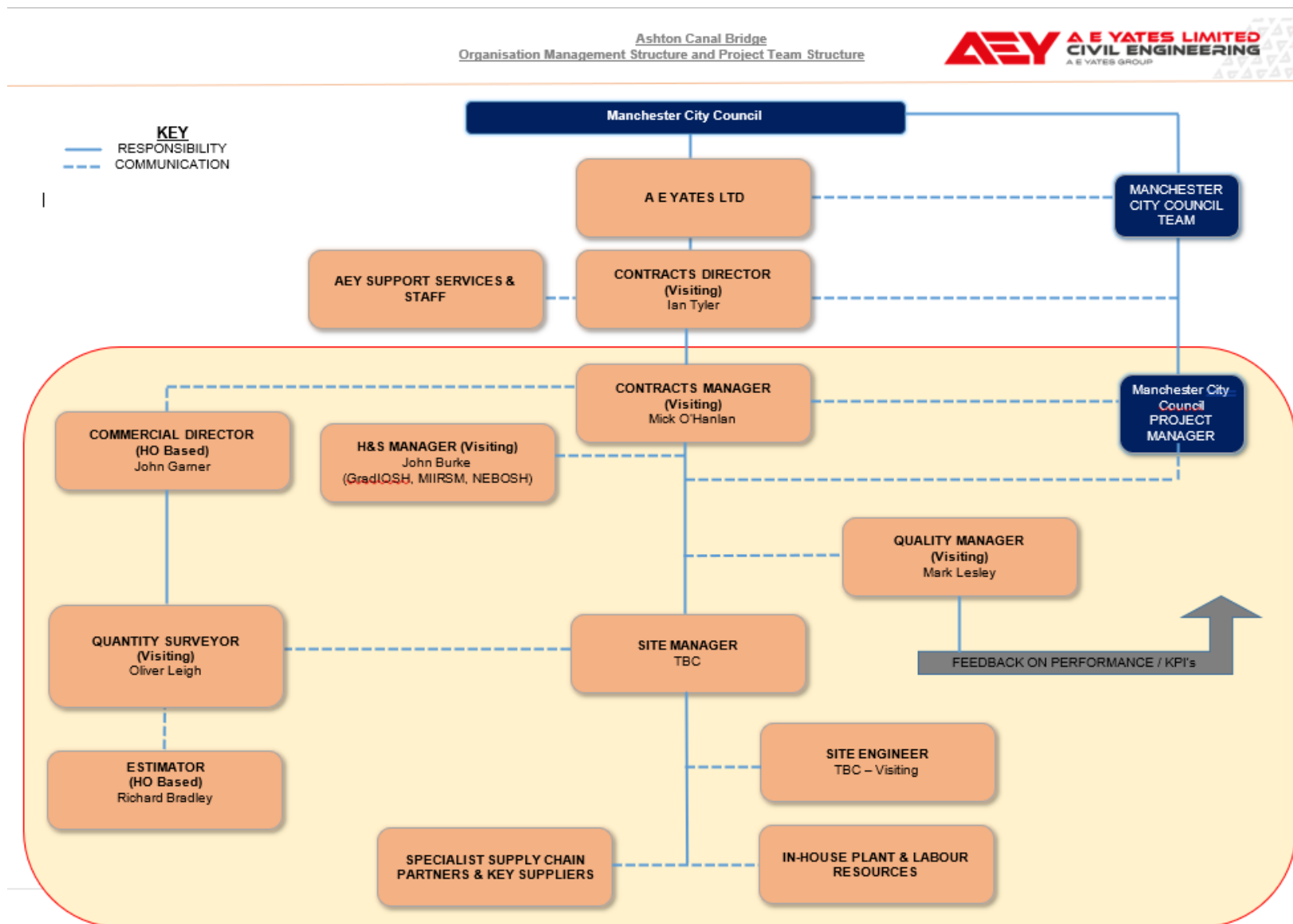
Non-conforming Product and any Major System Non-Conformances will be subject to investigation, as described in AEY Core Procedure Pro C13 System Non-conformance.

AEY consider that Non-conformances can only have 2 causes: either the Procedure is not being followed correctly, or the Procedure itself is not good enough. The purpose of Pro C13 is to investigate each applicable non-conformance, to determine the cause, to initiate corrective actions, and to monitor their effectiveness.

Pro C13 also aims to detect potential sources of non-conformance, from Internal Audits or Customer complaints. Where such potential sources are identified, Preventative action will be taken to ensure that this potential does not come to fruition.

End of QMP Document

Appendix 1 Organogram (Site Management Structure)



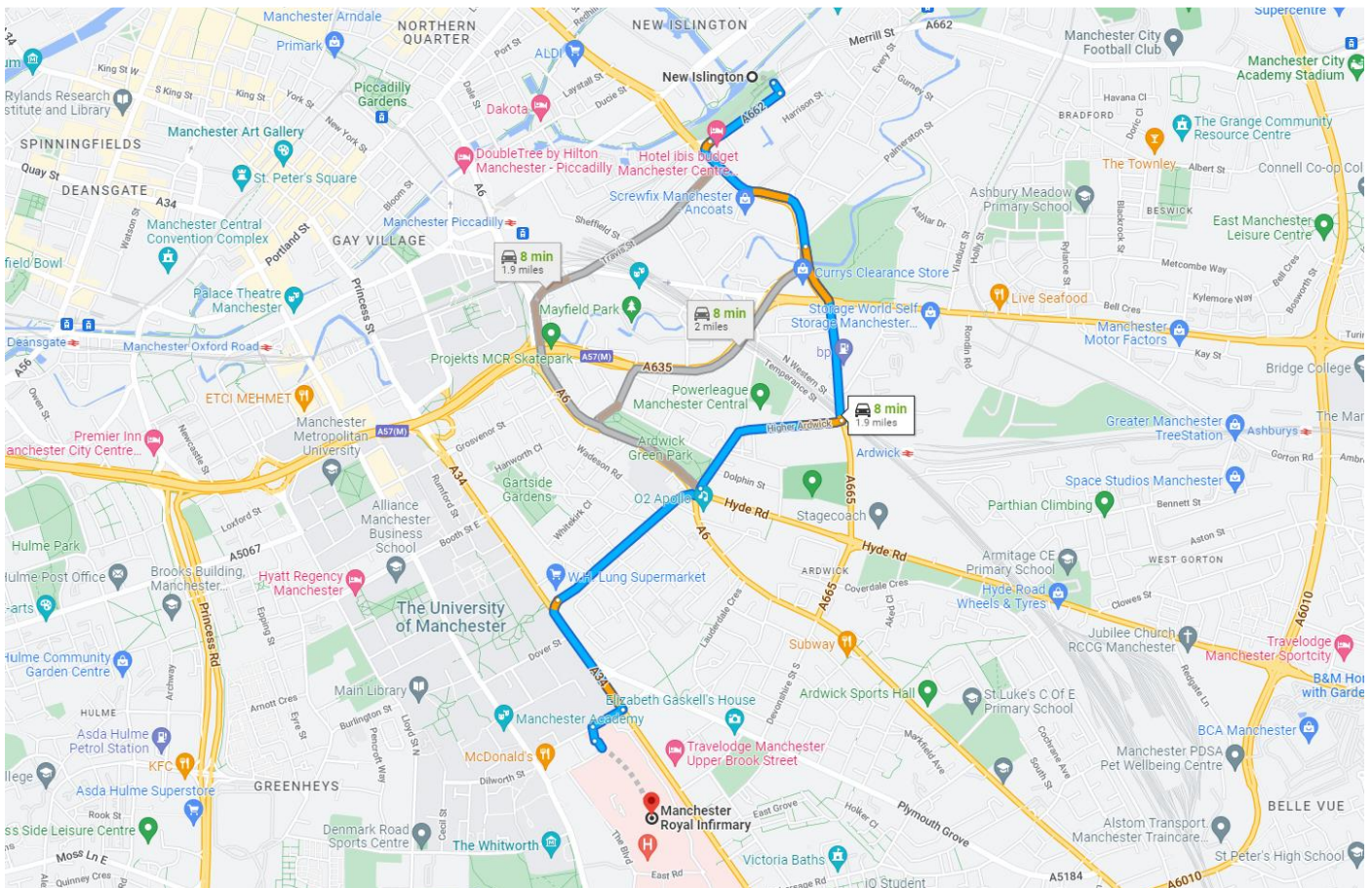
Appendix 2

Emergency Contact List and Hospital Route Map(s)

Emergency Contacts

1.	AEY Site Manager	TBC	TBC
2.	AEY Contracts Manager	Mick O'Hanlan	07710 389020
3.	AEY Contracts Director	Ian Tyler	07831 140563

Manchester Royal Infirmary
Oxford Road
Manchester
M13 9WL



Appendix 3 Compound Plan

