MAYO
CIVILS

Mayo Civil Engineering Ltd, UNIT D, Rochdale Central Ind. Estate, OL11 4HS

METHOD STATEMENT

Principal Contractor: KIER CONSTRUCTION

MANCHESTER MUSEUM

DEMOLITION AND EXCAVATION WORKS

Incorporating, removal of hard standings, new macadam hardstanding (as required), careful demolition of existing brick and containing walls, locate and expose existing services and removal of link bridge, incremental excavation and blinding.

Contract Number BC192
REV /
10th Oct 2019

Author: Signature _____

STEWART SCOTT
GENERAL MANAGER & CONSTRUCTION HSE ADVISOR

Mayo Civil Engineering Ltd, UNIT D, Rochdale Central Ind. Estate, OL11 4HS

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1. Introduction to site

Mayo Civil Engineering Ltd for Kier Construction @ Manchester Museum (to be accessed off Coupland Street, Manchester).

Mayo Civils Head Office Contact: Gary Mayo – Managing Director (07939 028610), Supported by Stewart Scott – General Manager and Health and Safety Advisor (07854888796). Contract Management to be overseen by Kelvin Mayall.

This method statement records a safe system of work based on the findings of risk and COSHH assessments which have been undertaken to identify associated hazards and as far as reasonably practicable, put in place control measures to either eliminate or reduce the likelihood of potential harm. It is drafted to inform all those working on site of possible hazards, together with the safe systems of work to be adopted to allow all those involved with the planned works to carry out their tasks safely with the minimum of risk to themselves and others.

Working with Kier on their projects there are a range of minimum standards which must be adhered to and these will be regularly reiterated to the Mayo Site Team by the Kier Site Management Team in order to continue to raise awareness and maintain compliance;

These include (list not exhaustive);

a) Attendance by the Mayo Supervisor at Kier Co-ordinated Daily Task Briefings (AM)
b) Use of the Kier – Excavation Inspection Record Sheet (every relevant day excavations are existent)
c) Adherence to Standard Operating Documents i.e. Concrete washout, Avoiding Underground Services (ecat4 and Genny), PPE, Quick Hitches, Excavations, Fwd. Tipping Dumpers over 5T (Spillard System attached), Plant Operators Permits, Pumping Out Excavations, Oil and Fuel Storage and Refuelling

2. Scope of Works covered by this method statement

Demolition and excavation works incorporating;

- services identification/avoidance and exposure (to include known water main),
- take up of existing pavings and following review of the sub base, potential for renewed macadam to form an extended hard standing area.
- CBR testing
- * Incremental excavation of basement , loading wagons for transport off combined with the careful breakout /demolition of exiting concrete and brick retaining walls (ensuring preservation of 'listed' piers),
- removal of installations, ladders, pipe works, fittings, etc. (as confirmed and directed)
- Concrete blinding (75mm)

'* The incremental exposure, breakout and demolition of the brick and concrete retaining walls will utilise a hydraulic processor excavator attachment (alligator crusher). During operation, the effect of vibration will be monitored by others and in the event that works generate levels greater than the maximum tolerances, the Kier representative will cease works and a secondary option will be reviewed and implemented. In this event, a separate RaMS Addendum will be produced which focus on an alternative of diamond will saw cutting.

Any such amendment will re-briefed to the Mayo Site Team and the addendum Sheet signed by each Team Member, acknowledging their understanding and willingness to work in accordance with the documented changes.

3. Access to site for deliveries of equipment, plant and materials and collections of waste/muck off.

Access to site and the work area will be via Coupland Street where, accompanied by a Banksman, plant will be off-loaded and tracked to the point of works. As site works progress and site set up is established, working collaboratively with the Principal Contractors site Gateman, Mayo Civils Supervisor/(s) will regularly liaise informing of planned deliveries as required. The management and direction of vehicular movements will be developed collaboratively in the light of operational experience at the workface.

4. Security, Welfare & Messing facilities.

Responsibility for welfare, mess facilities and the provision of secure working compounds lies with the Principal Contractor, as does, general site security. For tools used by Mayo operatives, these will be made secure by storing in a locked tool store, or removed from site at the end of each working day. For mobile plant used within our works package, vehicles will be parked securely, shuttered where applicable and keys removed/isolated at the end of each working day. All operatives have been instructed that they must not create any situations, which could lead to a breach of security on site. Should operatives become aware of any instance that could lead to a breach of security on site, this must be reported to the Mayo Site Supervisor who in turn, will communicate the issue to the Site Management Team.

5. Programme for main works

As per agreed Mayo Civils/Kier target programme with the instigation of these scheduled to take place during w/c 14th October 2019. Programme will be monitored and reviewed in the light of operational experience and the continued impacts of vibration monitoring to protect the surrounding museum environment.

6. Director (Person responsible for company Health, Safety & Environment matters):
Gary Mayo, Managing Director (07939 028610) supported by;
Stewart Scott, General Manager and HSE Advisor (07854888796).

Mayo Civils Site Management Team/Competent Persons/ Appointed Person Lifting Ops;

Contracts Manager:
Gareth Travis (07989 091393)

Mayo Contract Works Supervisors:
Groundworks Supervisor (to be allocated at the time of writing and RaMS), however, following induction, the name and contact details of the allocated works supervisor will be recorded on the Method Statement/ RaMS Acknowledgement Signature Sheet.

Appointed Person (Excavator Lifting Operations):
Stewart Scott – CPCS Appointed Person (0161 654 6099)

There may be variation with regards to specified individuals at time of cover etc. with all Managers, Supervisors, Competent persons and Operatives detailed, briefed and signed up to the RaMS Acknowledgement Sheet

7. Labour force

The names of all Operatives will be included on the RaMS acknowledgement sheet, and a copy will be kept in the Site Health and Safety File System, where Operatives will sign their understanding, agreement and willingness to work in accordance with this documented safe system of work and associated COSHH and Risk Assessments.

8. **Emergency Procedures (Site General, Confined Spaces and site welfare/first aid facilities).**

Note: Any variation to the proposed emergency arrangements will be briefed out at the induction delivered by the Principal Contractor. As per Principal Contractor site induction. In the event of an emergency the site manager/supervisor will advise the Principal Contractors Site Management Team immediately and where appropriate and permitted, use his mobile telephone to contact the relevant emergency services. First aid facilities will be confirmed during induction, with all accidents, however minor, to be entered into the Site accident book.

A subsequent review of any accident entered into the Site Accident book (as advised by The Principal Contractor), will take place by Mayo Civils Construction HSE Advisor.

- **First Aid Facilities:**

First-aid facilities are provided via the Principal Contractor utilising their on-site welfare facilities. Details of site first aiders will be communicated at the Principal Contractors induction and displayed on site safety notice boards as the full site set up is established.

Nearest by hospital with A&E Facilities is;

Manchester Royal Infirmary
Oxford Rd, Manchester, M13 9WL Tel: 0161 276 1234

9. C.O.S.H.H.

Substances that are potentially harmful to health will be assessed utilising specific product information and hazards of use will be identified. Training, control measures, health surveillance, PPE requirements will be applied as appropriate.

Predominantly, within groundworks packages and in providing contracted services, Mayo Civil Engineering Operatives will utilise substances in day-today operations to include;

Diesel –variable quantities for the refuelling of plant
Hydraulic Oil – variable quantities for the routine maintenance and inspection of plant
Petrol – up to 0.77 litres generally for the topping up of cut-off saws and generators
2 stroke oil – in 100ml containers to be used in mix (in accordance with manufacturer's instructions).

10. Inductions

Each Operative will be required to attend the Principal Contractors Site Specific Induction/Familiarisation. The Mayo Site Supervisor/(s) will check and inspect each Operative to ensure each has the minimum site standard PPE. Where necessary, re-issue will take place. Minimum PPE will be Safety helmet, hi-visibility vest, safety boots and gloves. Additional task specific PPE will be issued 'as last resort' resulting from control measures identified by risk assessment.

A Kier Minimum Standards PPE Document should be referred to the Mayo Contracts Manager and communicated to works managers.

All Operatives before starting work on site will have the Mayo Civils method statements and risk assessments (RaMS) relevant to their work briefed out to them by the Mayo Civils Supervisor. Following briefing, each will be required to sign a RaMS Acknowledgement Sheet.

In signing this RaMS Acknowledgement Sheet, Mayo Civils Operatives confirm their understanding, acceptance and willingness to work in accordance with the documented safe systems of work which include, Method Statements, Addendums, Lifting Plans, Risk Assessments and COSHH Assessments.

11. Permit to work

Works will be overseen by the Principal Contractors Site Management Team and there will be regular liaison/progress reviews between the Site Management Team and the Mayo Civil Engineering Supervisor/Management Team. During such liaison, programmed works will identify where permit controlled works are to undertaken. By example, works to be governed by permit include excavations (permit to dig) and hot works. (This list is not exhaustive any related query will be clarified with the Principal Contractors Site Management Team by The Mayo Civils Supervisor(s).

Permit to dig- Any work involving breaking the ground will be subject to a Permit to Dig. The Supervisor is required to obtain a permit from the Principal Contractors Site Management Team for all such operations and ensure that a Cable Avoidance Tool and Genny are utilised to assist in the determination of services. A copy of the permit together with any relevant service plans and a copy of the Principal Contractors procedure for service avoidance will be issued

by the Principal Contractor should be kept for reference by the dig team and ideally, kept within the cab by the machine operator (this practice may vary dependent upon site custom and practice communicated by the Principal Contractors Team).

Permit for Hot Works – Any hot works must be carried out and comply with the Principal Contractors Hot Works Permit. Operatives carrying out hot works have his own suitable fire extinguishers for the hot works and location.

Following instigation of any permit controlled works, the written controls required and specified with such permits will be fully complied with by the Mayo Civils workforce. It is emphasised that both the permit issuer (Principal Contractor) and the grantee each have an important role within the permit to work process. Issuers have a responsibility to satisfy themselves that pre-work controls are in place and have been appropriately checked and continue to be monitored whilst works are ongoing on their site. **By example, Supervisors and Engineers are reminded that checking and clearing a work area of combustible materials will include such things as aerosol cans (I.e. spray marking out paint which is a product used across the industry). Remember, check, think and check again!** Grantees have a responsibility to comply with enhanced permit controls and report to the Principal Contractor at the end of the granted permit timescale (or before if appropriate and works/controls are complete), to sign off grantee responsibilities. The final sign off is the responsibility of the Principal Contractor who will formally record that works are completed and the area has been left safe. (This may only be achieved by a thorough review and check of the permit controlled work area).

12. Toolbox Talks/Short Modular Training

The main risks and hazards associated with the work that this method statement (and associated RaMS), refers to is covered in the Mayo Civils induction, which is undertaken in addition to the induction provided by the Principal Contractor. Again Operatives will continue to have access to Method Statements, Annexes, Addendums, COSHH and Risk Assessments as detailed. In doing so, Operatives are always given the opportunity to clarify any points, queries or concerns with the Mayo Supervisor or indeed, any member of the Mayo Site Management Team. **In any instance where an operative may have a query, concern or require clarification regarding a works process or safe methodology of working, the operative should stop work and consult with his/her Supervisor.**

Toolbox talks/(short modular training sessions) will thereafter be held at periodic intervals (normal custom and practice will be weekly), subject being determined by the amount of time Operatives are on site, and the nature of the work activities taking place at that time.

13. Plant and Equipment Certification/Testing and Inspection (LOLER/PUWER)

Mayo Supervisors/Mayo Site Management Teams must monitor and ensure compliance with statutory inspections of plant, equipment and works incorporating;

(a) Excavating Plant – 12 Monthly Annual Thorough Examination Certificates (LOLER)
(b) Lifting Equipment and Accessories – 6 Monthly inspection and certification (LOLER)
(c) Equipment and Tools (work Equipment) – Weekly recorded inspection and pre-use inspection (PUWER)
(d) Excavations - Start of every shift with one written report in a 7 day period (unless something happens to affect strength or stability).
(e) Portable Appliance Testing – Weekly recorded inspection and pre-use inspection (PUWER) with periodic with combined inspection and test (PAT) whenever there is reason to suppose equipment may be defective, after any repair or modification and at periods appropriate to the equipment, the manner and frequency of use and the environment of use.

Plant Certification – all Annual Thorough Examination Certificates (12 monthly) must be issued or made available to the Principal Contractors Site Management Team prior to use on site. PUWER inspections of mobile plant (Pre Hire Inspection Reports) and equipment must be issued prior to 1st use and then on a weekly basis or a copy of inspections kept within the Mayo Civils Site Health and Safety File System.

Lifting Equipment Certification – All 6 monthly inspection certificates must be made available to The Principal Contractors Site Management Team prior to use on site.

On this project and in accordance with the Principal Contractors standard reporting/recording requirements, Principal Contractor PUWER and LOLER inspection registers will be adopted together with the Principal Contractors records of excavation inspection. In the event that these may not be available, the Mayo Civils established site inspection forms will be used which provides the detail to what has been inspected and/or reported.

Additionally, as a matter of standard operator practice, all work equipment will be visually inspected before use on a daily basis (Operator/User pre-use checks).

14. Health Surveillance – vibration, noise and dust

Mayo Civils set our requirements related to Hand Arm Vibration, Whole Body Vibration and Noise monitoring and review within our documented safe system of work Method Statements and HAV/Noise Risk Assessments (RaMS). Additionally, protection measures from Crystalline Silica in respirable airborne dust are documented. All Operatives are briefed on RaMS and sign their understanding and willingness to work in compliance with our safe system of works.

Whole Body Vibration – (WBV)

Our groundworks team (mobile plant operators), operating off-road machinery are susceptible to exposure from WBV, which can have the associated impact of casing back pain. WBV is shaking or jolting of the human body through a supporting surface (in this case of mobile plant operators, predominantly the seat or floor surface). For example, driving or riding on a vehicle such as a roller when 'stoning' up, riding rough and uneven site terrain. The risk from vibration is related to the overall time the Operator or driver is exposed to vibration and the number of shocks or jolts they experience each day.

The Mayo Mobile Plant Team are encouraged and reminded to operate plant in the best possible circumstances and this will include;

- Apply good driving techniques (within the site speed limits) and not driving too fast as this can lead to higher exposures.
- Supervisors selecting the type and sizes of machine most suitable to the task in hand
- Principal Contractor to be encouraged to maintain the site traffic routes in good order and to ensure that surfaces are reasonably free from defect, pot holes, unnecessary defects and bumps/humps. (If such occur, the Mayo Supervisor is to highlight these to the site Team.
- Ensure breaks are taken and ensure that time out or off machines is taken.

Mayo Supervisor on site to observe work tasks and review the physical and geographical environment in which they are undertaken. This produces sufficient information to make broad assessments of risks to Operators and to introduce simple control measures to reduce such risks to a reasonable level. Risk Management Controls are set out in Mayo Risk Assessment RA: 11a – Whole Body Vibration

Hand Arm Vibration (HAV) and Noise

Before use of any hand held "vibrating" tools or noise generating tools and equipment on site, the Mayo Supervisor will review **The Mayo Civils Guide for Hand Arm Vibration & Decibel Rating Chart. ATTENTION OF THE MAYO SITE SUPERVISOR IS BROUGHT TO THE FACT THAT THIE ABOVE GUIDE CAN BE REFERENCED IN THE SITE HEALTH AND SAFETY FILE SYSTEM – FILE 2 RaMS**
This should identify the exposure time assessment using the HSE's Ready Reckoners and controls put in place in accordance with the associated Mayo Civil Engineering risk assessments. In the unlikely event that the existing reference chart does not reference the 'equipment of choice' the Mayo Supervisor will liaise with the relevant suppliers Hire Desk for the information. Prior to undertaking work, Operatives will be verbally advised by the works Supervisor of their daily exposure times and will be limited or designed/controlled out where reasonably practical. Where necessary, additional controls will be in place to ensure that Operatives are not exposed to above the Exposure Limit Value (ELV). Where enhanced controls are necessary and in particular to HAV, such enhanced controls will be recorded on a HAV Control Register by the Mayo Supervisor

Within the Mayo Civils 'Guide to Hand Arm Vibration & Decibel Rating Chart' guide levels to noise db (A) utilising an amalgam of manufacturers and Off-highway Plant and Equipment Research Centre (OPERC) data is exemplified. As

with Hand Arm Vibration, Mayo Civils Supervisors will utilise this information as the first point of reference when reviewing exposure levels. Our preferred supplier, Ashtons Tools and Fasteners will ensure that all our ear protection PPE complies with the EN352 Standard.

Crystalline Silica / Soft Wood Dust – in respirable airborne dust – Operatives are to work in accordance with our risk management controls to protect from exposure to crystalline silica and wood dust in respirable airborne dust.

Operatives who may be exposed to residual dust from work activities will be issued 'as last resort' RPE. The adopted minimum Standard protection afforded by the JSP "press to check" type RPE. The Mayo Team being familiar with this product, having worked with our Tier 1 Contractor Clients with the exacting standard.

For those Operatives utilising RPE in this form, they MUST be clean shaven and a face-fit certificate will be available to support they have been correctly fitted and trained in the RPE. To support this process, a member of the on-site Mayo Team will be booked onto and trained as a face fit tester and will act as 'champion' for the management and care of RPE, carrying out tool box talks, observations and reminders to the workforce that once masks are allocated, they need to be correctly used stored properly when not in use. Particular to storage, upon Issue, Operatives will be reminded to be vigilant about protecting masks from contamination.

15. Temporary Amended Systems

Should it be necessary to re-route persons working on site to enable Mayo Civils Operations to be carried out safely, this will only be done after discussion and agreement with the Principal Contractor. The Principal Contractor is responsible for the operation and management of the Active Construction Zone.

16. Environmental Considerations

Noise: Monitor & assess. Mayo Supervisors are to ensure that work activities involving exposure to noise are reviewed on a daily basis with consideration given to the range of tasks and tools involved. (Identify where there is a risk from noise and who may be affected).

Dust: Monitor and assess. Dampen down if required to control dust. Dust suppression kits are to be used with cut-off saws when cutting aggregate based materials.

Waste/spoil: Inert surplus excavated material will be disposed by Mayo Civils via a licensed waster contractor.

General waste will be disposed of by Mayo Civils, utilising the waste skips provided. (Where practical and agreed, the re-use materials may take place). The Mayo Civils team will collaborate and adhere to the site waste management plan, providing necessary input which will be maintained and updated by the Principal Contractor.

Spillage - Mayo Civils will mitigate the potential for damaged caused by chemical spillage through the utilisation of a spill kit to be kept adjacent to any double bunded site bowser. Additionally, when small plant items are being refuelled, this must take place in the refuelling area. On site, generators, petrol cut-off saws will be placed in drip trays and/or enviropads to prevent potential ground contamination.

Plant refuelling – mobile plant will be driven carefully to the refuelling area. Plant will be reversed to side of the bunded site bowser. Ignitions will be turned off and the operator will exit or dismount appropriately. Fuel cap off and pump nozzle inserted, refuel will take place utilising and amalgam of the manual hand pump or the auto pump from the excavator (whichever is applicable). The nozzle will be returned to the bowser and the bowser lid secured and locked (padlocked). A check will be made of the area of refuelling and when satisfied that all is clear of the potential for spillage, plant will return to operations.

17. Monitoring & Compliance

The Site Supervisor will be in attendance ensuring works are progressing safely and in compliance with the Method Statements in place for the activities.

Where determined and held by the Principal Contractor, on a daily basis the Mayo Supervisor (or member of the Mayo Site Management Team), will attend a Safe Start meeting (or equivalent description), and contribute to weekly/ad-hoc safety forum meetings as required. Periodic monitoring, (monthly), will be undertaken by our Internal Health and Safety Advisor

	METHOD STATEMENT		
PROJECT	**Manchester Museum**	SERIAL NO/REFERENCE.	**Excav/Demo1**
LOCATION	**Accessed via Coupland Street, Manchester**	METHOD STATMENT PREPARED BY / DATE	**ORIGINAL SS / 11th Oct 19**
TASK START DATE	**Works to be instigated during w/c 14th Oct 19**	DURATION OF TASK	**In accordance with agreed Mayo/Kiers programme of works which will be monitored and reviewed**

INTRODUCTION TO THE TASK:

This method statement formalises safe systems and procedures which will be adopted to deliver the scope of works referenced in (2 Scope), above.

Works will involve mobile plant operating within the vicinity of groundworkers, concreters, engineers and banksmen. ALL are reminded of their need for upmost awareness and heightened vigilance when working in areas adjacent to others and sharing work areas.

Mayo Supervisors are to ensure that they are familiarised with this safe system of work and associated risk assessments. Plant Operators are to utilise their skills, knowledge and training to ensure safe working distances and care are maintained appropriate to the task being undertaken when working in the vicinity of co-workers. Co-workers have a reciprocal duty to be aware and vigilant of plant operating.

SEQUENCE / TASK STEPS

GENERAL INTRODUCTION
(The standard Mayo Civils operating procedures and controls applicable to related works involving excavations for services, substructure foundations, drainage or investigation works where ground is broken).

1. Principal Contractor will have a Site Management Team in place to inspect/oversee all works.
2. A member of the Mayo Civils Engineering Team will mark out line and levels as appropriate, including known services.
3. As appropriate, Principal Contractor to issue permit/(s) as required, .e. permit to break ground (excavations).
4. Works will be segregated as appropriate
5. Breaking ground will be undertaken, taking into consideration the potential for redundant, live and potentially unknown services.
6. Identified services will be marked up on site. Where hand digging can be avoided by introducing the use of air soil picks around services, these shall be utilised as an alternative to hand tools. This will reduce the risk to Operatives and potential damage to services. Although not limited to, a typical mode would be the MBW SP125, commonly available from our preferred hire partner, Speedy Services. This safe alternative to traditional tools, reduces the potential to damage pipes and cables during excavation work and reduces the risk of injury to backs and shoulders from manual digging. The soil pick is lightweight and can be used for extended periods without fatigue. The soil pick has a non-conductive, non-sparking barrel to enable it to be used in all environments.
7. Where 'traditional' hand digging needs to be undertaken, excavate by hand, (utilising insulated tools), with every effort being made to excavate alongside any potential service, rather than directly above it with final exposure of the service by horizontal digging, (In accordance with the principles set out in HSG47, Avoiding Danger from Underground Services). In the event that uncharted services are identified, through collaboration with the Principal Contractor, these will be reviewed and marked up on a record drawing by the Principal Contractor for

future Client reference. The control of trial-hole excavations and hand digging / air picks will be utilised in any event that uncharted services may be suspected or identified.

8. During excavations near, around or under services where ground conditions may prevent hand digging/safe digging, cease work and consult with the Site Engineer and Mayo Civils Contracts Manager. Do not proceed directly with the use of mechanical hand breakers, excavator breaker (pecker) or excavator bucket.
9. Where advice and agreement is reached, avoid services by digging deeper and where deemed necessary, wider, for example, to accommodate pipes under services.
10. Pumping and de-watering of excavations may only discharged into manhole chambers/soakaways/other as authorised/agreed by the Principal Contractor in advance. The Mayo Engineer / Supervisor(s) will collaborate with the Site Management Team to determine the agreed solution for dewatering.
11. Exploratory excavations, foundations, drainage/service trenches/excavations are always to be backfilled as soon as reasonably practicable. Where needed to be left open, they will continue to be segregated as specified, with appropriate warning signage affixed. Segregation barriers are to remain in place during excavation and concreting operations. Once an excavation has started and the required formation level has been achieved the works Supervisor will assess the ground conditions and other factors (weather, proximity to other works etc.) and determine if, and to what extent the ground requires battering back, stepped excavation (normal expectation will be 300/500mm steps), or additional proprietary earthwork support, as may be required. Where standard proprietary earthwork support is to be utilised, it will normally be procured from our preferred earthwork support supply chain partner, MGF.
12. The utilisation of proprietary earthwork support will incorporate, trench boxes, manhole boxes, sheet piles and brace systems. In any utilisation, use and installation will be in accordance with the associated technical installation notes. As stated, the preferred supply partner of Mayo Civils for proprietary earthwork support is MGF Ltd and there equipment is supported by a range of technical and safety information which is readily and easily accessible on-line and within the suite of site health and safety files.
13. The monitoring process of excavations by the Mayo Supervisor in collaboration with the Engineer will be on-going, supplemented by The Principal Contractors permit to excavate procedure and inspection of excavations. The Mayo Supervisor, as the responsible person will determine which, if any, excavations are safe to enter.
14. Acccess and egress to genral work areas will work collaboratively with the Principal Contractors Site Traffic and Pedestrian Management Plan. The Principal Contractor will have arrangements in place for access and egress to work areas that are suitably segregated by marked out pedestrian routes and marked out/segregated plant routes.
15. For access and egress to excavation areas, (the work-face), excavations will be battered to a suitable angle of repose. This will be the subject of dynamic review and assessment as excavations progressand are inspected and continue to be monitored
16. In the unforeseen event of a live cable/mains strike, the emergency utilities services will be contacted by the Mayo Supervisor;

GAS: 0800 111 999. ELECTRICITY: 0800 195 4141 WATER: 0345 6723 723

Stage 1 – Take up of existing slate paving and disposal (circa. 180m2)



17. Within the existing courtyard area, existing pavings will be lifted through an amalgam of excavator bucket and residual manual handling, loaded into a dumper and transported to a designated stock pile area for subsequent collection and transport off. Where residual manual handling takes place, Mayo Operatives will work in accordance with the associated Manual Handling Risk Assessment, paying particular attention to Task, Individual capabilities, Location and Environment.

Excavation and demolition of perimeter/retaining wall and protection of 'listed ' piers

18. Once pavings are lifted and transported to stockpile, a review of the base make up will determine if an existing macadam hardstanding is evident and sufficient. Where not evident or whereby the sub base is not suitable or sufficient to act as a transport/plant hardstanding, a new macadam hardstanding will be laid.
19. In this instance, excavation to level, stone up and careful compaction will take place, with macadam transported in and laid in accordance with the associated Mayo Civils risk and COSH assessments for macadam laying.
20. Following satisfactory formation of a suitable hardstanding the incremental excavation of the basement area will take place, utilising the services location and avoidance controls set out in 'general introduction'.
    - **Excavate 1st phase down by approx.1m**
    - **Break top of wall to approx. 1m**
    - **Excavate 2nd phase by approx. 1m**
    - **Break wall by approx. 1m**
    - **Excavate 3rd / final phase by approx. 1m**
    - **Break residual wall – [ensuring that 'listed' piers remain protected and intact exemplified below]**



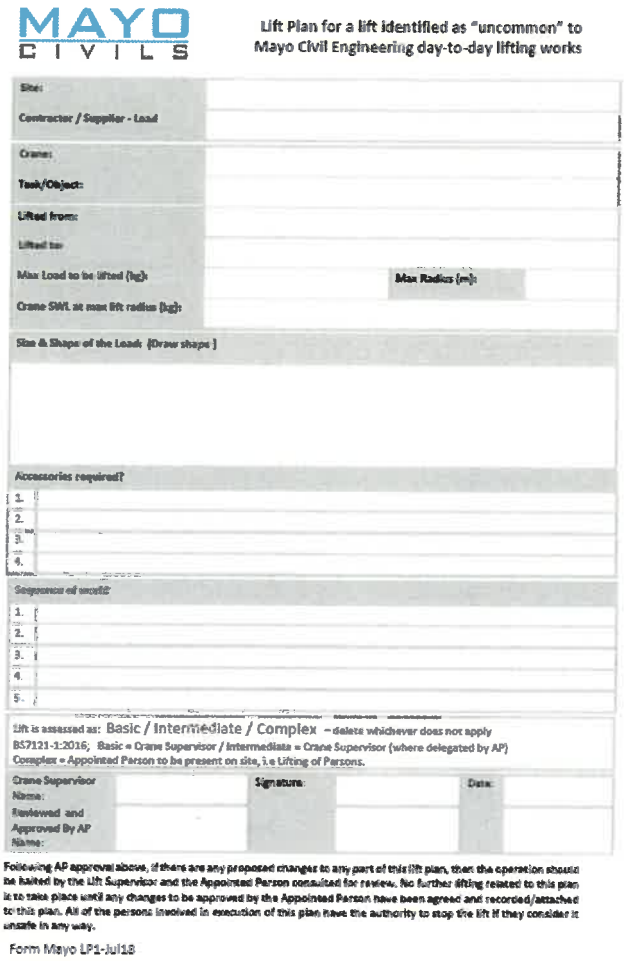
21. Incremental excavation and demolition will continue with the excavator and hydraulic processing attachment to level will continue, carting excavated materials and debris to stock pile or loaded directly for cart-off by licensed waste contractor into 8 wheeler wagons. Upon first collection, a waste transfer note will be issued and signed with a copy made available to the Client Site Management Team.
22. During the process, heightened vigilance and services location and avoidance strategies will continue to be employed, with located services exposed, protected as necessary and the known water main located and exposed.
23. The control measures set out in the associated permit to dig will be adhered to and monitored by the Kier Site Team as works progress.

Removal of the link bridge

24. Members of the groundworks/labouring team will incrementally unbolt and carefully dismantle the link bridge and this may be achieved via access from an alloy tower. In the event that an alloy tower us utilised, this will be erected by a PASMA trained operative working in accordance with training and the manufacturer instructions.
25. Minor and non-structural components will be carefully handled into a dumper and transported to stockpile until such time as what remains is the structural element.

Hold Point – Member of the Mayo Civils Appointed Person Team to visit and prepare a Link Bridge structural section lift plan and brief the Excavator Driver on the planned lift protocol prior to final lifting

26. Once briefed and prepared, the bridge will be slung with suitable webbing slings (determined by lift plan) and supported by machine as the final securing bolts are released, the frame will be lifted and set down on skids. Once set down the remaining frame will be dismantled and components transported to stock pile for cart-off and disposal.



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Lift Plan for a lift identified as "uncommon" to Mayo Civil Engineering day-to-day lifting works

Site:	
Contractor / Supplier - Load	
Crane:	
Task/Object:	
Lifted from:	
Lifted to:	
Max Load to be lifted (kg):	Max Radius (m):
Crane SWL at max lift radius (kg):	

Size & Shape of the Load: (Draw shape)

Accessories required?

1.
2.
3.
4.

Sequence of work:

1.
2.
3.
4.
5.

Lift is assessed as: Basic / Intermediate / Complex – delete whichever does not apply
BS7121-1:2016; Basic = Crane Supervisor / Intermediate = Crane Supervisor (where delegated by AP)
Complex = Appointed Person to be present on site, i.e Lifting of Persons.

Crane Supervisor Name:		Signature:		Date:	
Reviewed and Approved By AP Name:					

Following AP approval above, if there are any proposed changes to any part of this lift plan, then the operation should be halted by the Lift Supervisor and the Appointed Person consulted for review. No further lifting related to this plan is to take place until any changes to be approved by the Appointed Person have been agreed and recorded/attached to this plan. All of the persons involved in execution of this plan have the authority to stop the lift if they consider it unsafe in any way.

Form Mayo LP1-Jul18

Hold Point to prepare, document and brief the link bridge structural frame lift plan.

CBR Testing and 75mm Concrete Blinding

27. Excavation will receive compaction and additional excavation of any flat spots which may be encountered,
28. Through the Mayo Civils approved supplier network, CBR testing will be commissioned (up to 8 tests in the visit
29. With satisfactory results, concrete blinding (to 75mm) will be undertaken through an amalgam of wagon chute discharge into excavator bucket and residual pour utilising a concrete skip with tremmie pipe discharge. Lifting of the skip will be in accordance with the Mayo Excavator Lift Plan and Schedule of Common Lifts.

General labouring operations, to facilitate site and works progress.

30. As work phase's progress, an amalgam of continual general operations will be undertaken by members of the Mayo workforce. Duties and responsibilities may well be rotational dependent upon availability, timings, HAV management controls and work sequence programming. In each instance, works will be undertaken in accordance with the general management controls identified with through associated risk assessments .and COSHH assessments i.e., use of hand tools, hydraulic tools, cut-off saws, hand held vibration and noise, working with wet concrete. etc.
31. Operations will be reviewed and monitored by the Mayo Supervisory team on site. In any event where a review of risk management controls or enhancement to existing controls is prescribed, these will be documented and implemented.

Excavator Lifting – General Operating Procedures Undertaken in Conjunction with Associated Lifting plans

32. Operator to have pre-use checked the excavator prior to use, (checks to include 'Thumbs Up' campaign)
33. Operator, with advice and guidance from the Mayo Supervisor to assess item of plant/material to be lifted.
34. Assess machine to be used in the lifting operation i.e. lifting points, capacity etc.
35. Ensure ALL personnel involved in the lifting operation are suitably qualified.
36. Remember, works will involve mobile plant operating within the vicinity of groundworkers, engineer, banksmen and other site Operatives. ALL should be reminded of their need for upmost awareness and heightened vigilance to ensure that they are familiarised with safe system of work, site Traffic Management Plan and associated risk assessments. Plant Operators must undertake safe working practices during transporting and materials placement. Plant Operators are to utilise their skills, knowledge and training to ensure Safe Working Distances and care are maintained appropriate to the task being undertaken when working in the vicinity of co-workers and being directed by banksmen
37. All deliveries are to be directed to and unloaded in the pre- agreed designated area.
38. Ensure where access to a delivery vehicle is required to facilitate the unloading a safe method of work is in place (i.e. fall arrest/restraint equipment).
39. The load should be pre-slung where possible and loaded in a way that the slings/chains can be attached without moving the load.
40. Plant/materials once unloaded will then be transported to the specific working area.
41. Identify transport routes to and from area of work
42. Items are to be transported at a height no higher than 1m above the ground.
43. Items where required, to have tag ropes when being transported.
44. When lifting loads suspected to be greater than the SWL for the excavator (i.e. the SWL at the excavators maximum reach) the operator must first, **IN ALL INSTANCES** take the following additional precautions;
45. Use the lifting warning device to confirm if the lift exceeds the SWL at maximum reach.
46. Make reference to the lifting chart in the cab (and included in this safe system of works).
47. Assess the ground conditions
48. Take account of effects of lifting with buckets and quick hitches attached in relation to visibility and weights/radius distances
49. Perform a test lift and make any necessary adjustments prior to commencing the lifting operation
    Thumbs up, good to go.

THE SAFE METHODS TO BE USED:

1. Prior to commencement, all existing service drawings will be requested and provided by the Principal Contractor. These will be used to identify any existing services, acting as a guide only and the Mayo Team will proceed with caution and work on the basis that uncharted services may be present.
2. Permit to dig to be issued by The Principal Contractor as required with all specified management controls adhered to (which will include known/charted services info).
3. Any live services identified from the drawings will be located prior to any mechanical excavation by the excavation of trial holes. Similarly, any suspicion or encounter with uncharted services.
4. The working area will be eCAT4+ scanned and any services identified marked up prior to any mechanical excavation.
5. Work area to be segregated using suitably agreed fencing and the Mayo Supervisor will pay particular attention to the management of barrier segregation.
6. Excavations within 0.5M of a service will be conducted by an amalgam of hand (with non-powered insulated hand tools) and air pick.

7. The Principal Contractors Site Management Team will inspect/oversee all works and advice of Kier Standards to be maintained.
8. ALL lifting equipment is to be LOLER certified (i.e. excavator, chains, slings, etc.).
9. Consult excavator information prior to lifting to determine specific height/weight ratios.
10. ALL items are to be individually assessed for weight prior to lifting
11. ALL work equipment is to be inspected on a regular weekly basis and recorded within the relevant schedule. Additionally all equipment will be visually inspected before use on a daily basis.

DETAIL THE ON-SITE RESOURCES REQUIRED

MAIN COMPONENTS - PLANT, EQUIPMENT, TOOLS AND MATERIALS:

Excavator / 22t (or as deemed suitable and sufficient for the task in hand by the Mayo Civils Supervisor).
Excavator hydraulic processing attachment / alligator crusher
Rollers / Ramax / Excavator plate attachment.
Dumper (as deemed suitable and sufficient for the task in hand by the Mayo Civils Supervisor.
Spillard anti-collision kits will be fitted to those 5t and above.
eCAT4+ detector/Genny
Additional general hand tools & equipment as deemed necessary both insulated and non-insulated
Marker/warning tapes
Barriers and fencing
Warning Signage (for excavations)
Aggregates and Sands
Concrete /blinding
Concrete skip with tremmie pipe
Chains, shackles, webbing slings as required (LOLER certs to be issued)

Standards of General PPE – (as detailed in task associated risk assessments)
Eye Protection and Goggles – BS EN 166
Dust Masks - EN143:2000+A1:2006
Ear Defenders – EN352
Gloves – EN388
Hard Hats – BSEN 50365: 2002
Safety glasses (Kier standard)

KEY ITEMS WHICH REQUIRE SPECIAL CONSIDERATION, KNOWLEDGE REQUIREMENT, INFORMATION, TRAINING AND/OR COMMENT FOR THE ACTIVITIES COVERED. OPERATIVES WHO ARE BRIEFED AND SIGN THIS SAFE SYSTEM OF WORK ARE TO REVIEW AND FAMILIARISE THEMSELVES WITH THE ASSOCIATED RISK AND COSHH ASSESSMENT INFORMATION SHEETS. TEAM MEMBERS SHOULD RAISE ANY QUERIES OR POINTS FOR CLARIFICATION WITH THEIR SITE SUPERVISOR. AT ANY TIME, THIS INFORMATION IS AVAILABE TO ALL SITE OPERATIVES FOR REFERENCE/ REFRESHMENT.

RA Code	Risk Assessment Document Title	Brief YES	RA Code	Risk/COSHH Assessment Document Title	Brief YES
001	HAND TOOLS		C001	HYDRAULIC OIL	
002	GENERAL AND CONCRETE LABOURING		C003	DIESEL	
003	EXCAVATOR OPERATOR/EXCAVATOR LIFTING		C004	CONCRETE – READY MIXED	
004	EXCAVATORS / EXCAVATIONS		C005	PETROL	
005	DUMPER/ROLLER OPERATORS/OPERATIONS		C007	AGGREGATES CONTAINING QUARTZ L/STONE	
006	QUICK HITCH/CHANGING ATTACHMENTS		C009	RESPIRABLE CRYSTALLINE SILICA PRODUCTS	
007	BURIED SERVICES – LOCATION & AVOIDANCE		C012	BITUMEN COATED MATERIALS, MACADAM, ASHHALT AND RELATED PRODUCTS	
009	HAND HELD DISC CUTTING / FLOOR SAWS		C022	LINEMARKER SPRAY	
010	VIBRATION PLATE USE (WACKER)		C027	2 STROKE OIL	
011	HAND ARM VIBRATION (HAV)				
011a	WHOLE BODY VIRBATION (WBV)				
017	MANUAL HANDLING OF MATERIALS/EQUIPENT				
018	REFULLING PLANT				
020	TRIAL HOLE INVESTIGATIONS				
031	NOISE ASSESSMENT/CONTROLS				
039	TARMAC AND BITUMEN				

GENERAL CONTROL MEASURES TO BE USED TO ENSURE A SAFE METHOD OF WORKING	
All personnel will be made aware of the risks of the task involved and briefed on activities. **All personnel will wear the site specified minimum PPE at all times (hard hats, boots, hi-viz and gloves)** **All personnel will only use plant that they have been trained to use and hold valid certification for.** **All plant and lifting accessories to be used to hold necessary certification, be well maintained and certificates of thorough examination will be made available to site.**	
SPECIAL TRAINING WHICH MAY BE REQUIRED	
Mobile Plant Operators	
DESCRIBE ANY TEMPORARY SYSTEMS IN OPERATION	
Barriers/ Segregation zones to exclude unauthorised visitors and protect open excavation areas.	
THIS SAFETY METHOD STATEMENT IS TO BE SUBMITTED TO THE FOLLOWING STAFF/PERSONNEL	
Kier Project Management Team - Thomas Roberts Mayo Contracts Manager – Gareth Travis Mayo Site Supervisor – Site Health and Safety File System.	
ACCEPTED BY: Gary Mayo	REVIEW CYCLE: Timely Review As Work Phases Progress

APPENDIX 1 – MS ADDENDUM (Minor Works)

MAYO CIVILS

ADDENDUM TO SEQUENCE OF WORKS - (MINOR)

METHOD STATEMENT TITLE:	
DATE OF ADDENDUM:	COMPLETED BY:

TASK/TITLE OF WORKS

SEQUENCE TO BE UNDERTAKEN:-

ADDITIONAL PLANT, EQUIPMENT, TOOLS AND MATERIALS TO BE USED:

Contracts Managers are to ensure that relevant Operatives are briefed, have read and continue to have access to Method Statements, Addendums, COSHH and Risk Assessments as detailed. In doing so, Operatives are always given the opportunity to clarify any points, queries or concerns with the Mayo Contracts Manager

APPENDIX 2 – LAST MINUTE RISK ASSESSMENT

MAYO CIVILS

LAST MINUTE RISK ASSESSMENT (MINOR)

Project:		Date:	
Task:		Work Supervisor:	

Hazard Identification – Indicate which applies by either a tick or cross

Work at Height		Hand Tools		Hot Works	
Confined Space		3rd Party Interface		Hydraulic Systems	
Lifting Operations		Housekeeping		Edge Protection	
Plant Movements		Buried Services		Temporary Works	
Manual Handling		Flammable Substances		Excavation	
Electrical Systems		Hazardous Substances		Labouring Task	
Other (what)?					

Hazard (What might cause harm/injury)	Control Measure

Give Details of the Control Measure Methodology

Person Communicating This Information	PRINT	Signature

Names of Attendees (PRINT)	Signatures