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|---|---|
| Company | London Stone Conservation Ltd. |
| Method Statement Title | Camden Fountain – Princes Circus - Rebuild |
| Method Statement No | 002 |
| Site Location | Intersection of Shaftsbury Ave and A40, Camden W1 |
| Date First Issued | ~~21/ 07/ 2022, 26/07/2022,~~ 29/09/2022 |
| Revision | 3 |

| | Position | Name | Signature | Date |
|---|---|---|---|---|
| Prepared by: | | | | |
| | Technical Director | N Hague | | 28/ 07/ 2022 |
| Reviewed & Approved by: | | | | |
| | Managing Director | F. Kirchertz | | 26/ 07/ 2022 |

| Amendments | | | | |
|---|---|---|---|---|
| Revision | Date | Section | Revised by | Details |
| 3 | 28/09/2022 | 13.1 ; Completion | NH | Workshop Conservation Cleaning and Remedial Repairs; Completion |

1. Description of works to be undertaken:

These RAMS are for the rebuilding of the Grade II, Prince's Circus drinking fountain at a new location on the property:

- Setup & secure site.
- Deliver goods, materials, granite fountain/ masonry units.
- Erect Gantry and Scaffolding.
- Rebuild historic drinking fountain on newly constructed foundations.
- Strike site.

All persons involved in these repair works must read and fully understand and agree to the following methods.

2. Area of Works:

The works are to be undertaken at Intersection of Shaftsbury Ave and A40, Camden W1. The exact location of footprint of the site and technical reconstruction drawings will be issued by Camden council or their agents. - TBC

3. Start Date:

Works to commence in 2022. -TBC

4. Duration of Works:

The works are to commence on { xx- xx-2022] with a duration of approx. 3 weeks. - TBC

5. Working Hours:

Monday – Friday: 0800-1700; as necessary on Saturday: 0800-1300.

6. Restrictions:

Heritage Permit to be issued for the works.
Hoarding licence to be obtained.
Site location and footprint agreements.
Agreement of foundation construction specification/ dimension.
Inclusion/ exclusion of plumbing.
Pre inspection of site and foundation.
Heritage items must always be protected.

Permits to be issued for Hot Works.

## 7. Personnel & Qualifications:

| Role | Contact Name |
|---|---|
| Project Manager | Florian Kirchertz |
| Site Supervisor | TBC |
| Site Operative 1 | TBC |
| Site Operative 2 | TBC |
| Site Operative 3 | TBC |
| Site Operative 4 | TBC |
| Safety Representative | Osprey Health and Safety Ltd. |

| Role/Trade | Minimum Qualifications |
|---|---|
| All Persons | Health and Safety, Manual Handling, Working at Heights, Asbestos Awareness, Relevant CSCS |
| Project Supervisor | IBOSH |
| Safety Representative | NEBOSH |

The named Supervisor has overall responsibility for the safety of the works. He will be responsible organizing the daily works ensuring that they are carried out in accordance with the method statement, conform to the trade's code of best practice and in accordance with health and safety regulations. The supervisors will be responsible for carrying out a safety inspection of their works area, liaising with LSC management for day to day operations.
All supervisors will have read and understood the content of the risk assessment and method statement pertaining to their works. The supervisor will be responsible for ensuring that a safe working environment and safe systems of work are always maintained. Supervisor will monitor the works with respect to the method statement and implement a corrective action as the need arises in order to ensure a safe working environment.

## 8. Description of Training Required / Given to Employee(s) Involved in the Work:

Required:

- CSCS card (Construction Op/Labour).
- Asbestos Awareness Certificate.
- First Aid training (designated First Aiders).

Given:

- LSC site safety induction.
- Full briefing of RAMS and related site documentation.
- Daily Safe Start Briefing.
- Permits.

## 9. PPE Requirements:

The following items are mandatory:

- Hard hats
- Gloves
- Safety Boots
- Safety Glasses
- Hi Vis Clothing

The following items, when required, during the operation:

- RPE
- Hearing Protection

## 10. Required Plant, Tools and Equipment & Materials:

All machinery certification PAT test certs. , lifting equipment with LOLER certification, Scaffolding inspected and commissioned by Licenced Scaffolding Firm.

Plant, Tools & Equipment:

- Wheeled trolleys and barrows, pallet truck.
- Safety signage.
- Barrier fencing.
- Hand held 110v tools.
- Hand tools.
- Mobile access towers / podiums.
- Dust Extraction Equipment.
- Portable workbench.
- Petrol generator.
- Aluminium Gantry, chainblock, trolley
- Lifting straps, shackles
- Scaffolding purpose built
- Citroen Drop side van
- Nissan Electric Van
- 12 Ton HIAB lorry

Materials:

- Plywood, wooden batons, pallets
- Various Sands.
- White cement, pigments
- Lead packers
- Stainless steel dowels
- Injection resin (epoxy).
- DI water / bulk water tank
- Hessian, blankets, foam padding
- Wax/ anti-graffiti -TBC

11. Induction:
    - LSC site-specific induction – performed by F.Kirchertz
    - Briefings of site documentation (RAMS, Manual Handling Assessments, COSHH Assessments, etc.)

12. Pre-Commencement of Works:
    - Asbestos: No asbestos is thought to be encountered. If operatives come across any suspect substance they must STOP work immediately and alert LSC management to implement further safety protocol inspection.
    - Isolation of Services: Any services encountered must be considered live; operatives must consult the LSC director when dealing with historical services.
    - Securing Areas of Works: Operatives must secure the immediate area of works and maintain access routes. Barriers and signage must be used to make everyone aware of the work activities. All tools must be kept in storage and secured when unattended. Work areas must always be kept clutter free and tidy.
    - Protection of Heritage items: Operatives are responsible for the integrity of the heritage fabric during works. They must provide protections for the items to avoiding unnecessary bumps and scrapes that will damage the items during works around and on the items. Stone items will always be provided edge / arise protection during lift, shift and move operations. Any items requiring transport will be provided arise protection and strapped to pallets of safe removal to and from the site.
    - Access / Egress: Operatives will respect the established routes of passage and not block access at any time.
    - Power: 110V power will be provided by a portable petrol generator. All fuel will be held in the generator tank ; a spill kit will be provided. Operatives must set up their cables off the floor and provide adequate lighting for their tasks. All equipment must be PAT tested and maintained.
    - Water: Will be sourced from a Thames Water pavement tap locally or via bulk containers from the LSC workshop.
    - Delivery of Materials: LSC will occasionally use the Citroen drop side van for delivering large and bulky items and rely on the Nissan electric van for smaller and more frequent deliveries. All deliveries will be preprogrammed and scheduled for the morning hours to avoid rush hour traffic and high-volume pedestrian movement. Operatives must make a lift plan for offloading goods prior to receiving the delivery. Drivers will report to the pit lane -TBC Traffic Marshall who will control the sequence and delivery operations. Once the truck/ van is guided inside the compound under supervision of the Traffic Marshal, operatives will be instructed to safely unload/ load items. Heavy and bulky items will require the operatives to use wheelbarrow, skates, or pallet trucks to move their items. Masonry units will be offloaded vehicles using the aluminum gantry, with operatives working as a team. At a preprogrammed date, A HIAB lorry will be scheduled to deliver the majority of the granite units to site, in one delivery. -TBC
    - Manual Handling: Operatives will first plan to avoid manual handling where possible and employ the use of mechanical lifting gear, skates, trollies, levers, pallet trucks and sack trucks. When manual handling is unavoidable operatives are required to make and assessment and coordinate a plan that lessens the impact

of the handling on the operatives. Operatives will avoid repetitive lifts and will lift items together as necessary. Heavy and bulky granite units will be raised and lowered into position using an Aluminum Gantry 3000 kg SWL.

- Disposal: Operatives will maintain a clutter free work environment cleaning their area as work proceeds. Debris will be carted to and from the work site to the designated rubbish area using a wheelbarrow. All waste will be stored during operations in bags or in bins and must not be allowed to accumulate. Operatives will separate their rubbish for the different waste streams established on site. Waste will be removed to the appropriate bins using trollies and wheelbarrows as necessary. When removing chemicals or spent glue cartridges ,operatives will bag this material separately and dispose of it according to local laws, please refer to COSHH sheets for understanding the environmental risks of these wastes. All waste will be removed from site and disposed of at the LSC workshop skip and handled according to local waste regulations.
- Dust: Operatives must make every to prevent the release dust during all operations. When cutting stone operatives will use a dust extractor and M-class hoover to minimize the impact to the local site environment. Operatives will clean as they go and wet down areas with a light mist. During potentially dusty operations operatives are required to use their maintained RPE.
- Noise: When cutting and drilling the stone operatives must use hearing protection. Operatives must be alert to the fact that they may need to wear hearing protection while another team is working nearby.
- Welfare: Welfare facilities will be provided in the form of a 6 man self-contained unit, with a sperate compartment for a toilet, sinks, electric, heat, and space for meeting, breaks , storage. Operatives have a responsibility to do their best to maintain cleanliness and hygiene in these places. -TBC
- **Mortar Composition:** LSC conservator will create 6 petri-dish sized mortar samples based on the original mortar material composition. The mortars samples will be composed of graded washed sands of mixed colors, dry pigments, and white cement. The samples will display a range of original color shades for matching. These will be presented to the CA in advance for direction and approval. The CA approved mortar composition and proportions will be recorded for the O&M.
- **Fixings Pins:** Where necessary 304 stainless steel fixing/ orientation pins will be inserted into original fixing holes in the bedding plane where they are encountered. The pins can be held in place with mortar. Additional fixing pins can be drilled into the bedding plane according to prior agreement with the CA, as necessary.

## 13. Method of Works:

### 13.1. Workshop Conservation Cleaning and Remedial Repairs

While the fountain units are at the London Stone Conservation workshop in Tottenham the LSC conservation team will thoroughly clean each unit and perform remedial repairs prior to packing the units away. As each unit is unloaded to the workshop, it will receive a general steam clean using the Doff system. Once the steam clean has been completed and the surfaces have dried out, the units will be examined for a further cleaning opportunity. A second stage of cleaning will target any residual soiling that was not removed by the Doff. During this phase of cleaning, conservators will prepare and apply a mild solution of Vulpex conservation soap, white spirit, and deionized water. They will apply the solution to the soiled masonry surfaces and gently scrub the areas with soft bristle brushes to soften and remove built up soling. The solution will be rinsed away with DI water. After the fountain units have been thoroughly cleaned the team will undertake any repairs that have been highlighted in the initial scoping document, and any emergency repairs that have been discovered during the dismantle phase. The documented repairs will be communicated to Camden Council and be inserted into the O&M manual as a means of record.

### 13.2. Survey of Area:

Before works begin operatives will document the historical features in photographs, diagrams, and notes as necessary and these will be passed to Camden Council in due course.

### 13.3. Protection of Heritage Features:

Camden Council will issue a Heritage Permit for the works once the method has been agreed.
Operatives have a responsibility to maintain the integrity of all heritage objects during ALL work activities. Operatives will take great care when handling, moving, and working on heritage objects. Operatives will constantly assess the need for protections as the various work sequences proceed. Barrier materials such as plywood and foam softening will be applied to at-risk items as necessary. Edge and arise protection must

be maintained during all moving operations and works on the bench.

13.4. Set up Works Area:

Prior to commencing works the work area will be set up to ensure that works can be carried out in a safe environment. The site team will use Herras fencing, barriers and signs and set up an exclusion zone around the working area. Operatives will establish discrete areas for: welfare, unloading, tool storage, masonry storage, material storage, active working area. Create exclusion zone for deliveries on the site, lay spreader boards on soft ground as necessary. Deliver welfare unit and locate on site. Oversee erection of specialist scaffold for access; ; employ spreader boards/ pads to spread loads of scaffold were necessary. Erect certified and tested aluminum lifting gantry SWL 3000 kgs. Electrical cables and hoses will be placed off the floor out of the way, at all times.

13.5. <u>Rebuild Fountain Method and Sequence:</u>

Deliver granite units:

Before loading fountain objects, Supervisors will consult the Shaftesbury fountain reference chart for weights. The Citroen drop side will be loaded with masonry units at the LSC workshop using the forklift. The Citroen vehicle can accept SWL of 1500kgs. including the driver. All materials to be adequately secured to the bed and covered during transit. Deliveries will be preprogramed for the early hours to avoid rush hour reducing conflict with high traffic of vehicles and pedestrians. A minimum of material will be held at site due to the small footprint of the site.

*The delivery point at the site, onto the pavement, be decided at a later date by the LSC director, when the site footprint has been identified by the CA. The delivery route location will be chosen to provide the maximum safety from incident with vehicles / cyclists/ and pedestrians. -TBC*

The driver will contact the site manager in advance of arrival, in order for the team to get organized for a delivery. The team will assist the vehicle onto the site, from the road with minimal disruption to traffic. When the vehicle arrives the entire team under the direction of the designated traffic marshal (wearing orange Hi-Viz) will direct the van to the unloading area. The site compound will be altered and extended using Heras fencing/ traffic cones/ barriers towards the flatbed vehicle at the road side. During deliveries all operatives will be coordinated by the site marshal to assist any nearby pedestrians/cyclists to safety. Spreader boards may be required to support the weight of the deliveries/ scaffolding / aluminium gantry. -TBC Once the truck is on the pavement, the exclusion zone will be closed around the truck.

**Unloading:**

All operatives have been trained in manual handling. With the vehicle secure the operatives will shift the aluminium gantry to the truck bed and unload heavy items with the lifting device. All site operatives will work together unloading. Any lifting will be led by an experienced operative with appropriate lift training and experience. All the loads will be slung and with soft straps, and the masonry units will be protected with soft material. First, a safety lift will be performed; if the lift is unbalanced the unit will be lowered to the truck bed, slings readjusted, and another safety lift performed. When the lift is deemed safe the stone will be lifted off the bed of the truck and slowly shifted using the chainblock trolly. The load will be shifted free from the back of the truck, then slowly lowered to the ground using the chainblock, and unslung. The lifting chain will be retracted and secured and the trolly shifted to a safe position. Two operatives with then use a pallet truck to shift the unit to the designated storage area. The gantry will be returned to its storage by a minimum of three operatives. Any smaller items can be offloaded by hand if the weight is less than 25 kgs. Operatives may offload items over 25 kgs if they can successfully divide the weight among more people.

The empty vehicle will be removed from site in the same way that it was marshalled onto the site. The entire team under the direction of the site supervisor and the traffic marshal will extend the exclusion zone, traffic

cones, and direct pedestrians/cyclists/ vehicles to safety while the van is maneuvered off of site. The exclusion zone footprint will be retracted and closed.

Lift Plan:

Once an appropriate number of granite blocks have been delivered to site the site supervisor will perform a safety check of the drawings, dimensions, scaffolding and lifting equipment prior to reassembly. The team will keep the site tidy at all times and actively manage the number of masonry units at site, since we expect the site footprint to be small.

Rebuild:

The fountains will be rebuilt in the reverse order to which it was taken down. Stainless steel alignment- fixing pins will be reinstated to stone's bed joints where they were initially found, these can be held in place with mortar. Using a bed of pre-approved color matched mortar. Samples will be presented to the CA prior to rebuild for approval. Lead packers can be placed in bed joints to maintain joint thickness (4mm.) until the mortar has fully cured. Any lead packers will be left in the bed and kept a minimum of (15 mm.) behind the face of the masonry.

**Phases of Rebuilding:**

Phase I :

Before LSC take possession of the site, ARCADIS construction will have created a reinforced concrete foundation where the fountain will be fixed. The LSC team will deliver the drinking fountain [ step units] to site, using the Citroen drop side van. The LSC team will assemble the step units as per the architect's drawings and fix them to the ARCADIS structural foundation pad. The assembled steps will create a central void on top of the fountain, in the shape of a cube. The LSC team will fill this void, flush to the top of the fixed steps with [ engineering blocks/ reinforced concrete -TBC ] so that the upper granite sections have a solid contact and support with the foundation pad.

Phase II:

Once the fountain steps have been assembled in place on the foundation, and the central masonry infill has cured, LSC will contract a HIAB to deliver the rest of the granite fountain units to site.. This delivery will likely take place on an early Saturday morning to avoid traffic issues. The delivery will be overseen by the managing director who will coordinate the safe unloading with the entire site team. When all the of the fountain units have been safely delivered to site the team can progress with the fixing of the next stone in the rebuilding sequence.

Dry Fix & Lifting Operations

The team will begin to mount the units to the preconstructed, level, foundation. The Lifting gantry will be shifted over the foundation by at least three operatives. A masonry unit will be shifted to the gantry loading area, by two operatives using a pallet truck. The slinger will sling the masonry unit and apply soft protection to the fountain masonry for the lifting operation. A safety lift will be performed and reperformed until the lift is regarded as level and safe. Once the lift has been approved it will be assisted by at least three operatives. The unit will be lifted to an appropriate height where it will be slowly shifted over the fixing point, once in place the unit will be lowered down onto wooden batons, packers, wedges. The slings will remain under slight tension to keep them in place, otherwise all the weight is taken by the foundation. Operatives will check the rebuild map to ensure the orientation of the fountain is in line with the architect's design. Operatives will place datum/ reference marks on the foundation below to record the placement of the lowered unit in order to orient the masonry on the wet mortar. Any issues will be notified to the LSC project manager. Each fix will be documented with an image.

Wet Fix

The site team will mix an appropriate amount of mortar. The team will re-lift the stone from the dry bed to an appropriate height for mortar to be laid, under the supervision of the slinger. Once the stone is lifted an operative will wet the bedding planes and allow time for the water to be absorbed; water will be reapplied as necessary depending on atmospheric conditions. Lead packers can be strategically placed. The wet mortar mix will be applied to the bed plane. Once operatives have finished preparing the bedding, and have safely cleared the area below the stone, the stone will be lowered down with the weight being fully taken by the support below. The stone will be gently manually shifted into the correct position according to the datum recordings. When the stone is settles in the correct place, the slings will be removed. The stone may require further adjustments and can be tapped lightly into place using a rubber hammer, the stone will be checked again for plumbness and

against the datum/ reference markings. The gantry will be retracted and made ready for the next lift. The bedding joints will be filled flush and protected/ wetted for curing, no packers will be visible on the surface. The slings will be cleaned, excess mortar trimmed. The site will be made safe any tidy for the next operation. The fixing operation will be repeated until all the units have been reassembled.

### Scaffolding

Once the site team has constructed the fountain to where it is no longer possible to bed the fountain stones from the ground, a purpose-built scaffolding will be erected by a competent scaffolding team. The LSC director will supervise and oversee the scaffolding erecting. The scaffolding will be erected out of hours for efficiency and safety, possibly on a Saturday morning. The scaffolding will be appropriately designed for the loading required; it will be signed off by the scaffolders. The scaffolding will provide a working platform for the masons to access the upper levels and provide a temporary loading position for the fountain units, one at a time. The site supervisor will perform daily checks on the scaffolding as part of the LSC safety plan. All adjustments will be provided by the scaffolding firm ; LSC is not authorized to adapt the as built scaffolding.

### Completion

Once all units have been reassembled the site team will wash down and dry the fountain with water from a hose pipe. At this stage the conservation team may decide to employ the mild cleaning solution (Vulpex soap, DI Water, white spirit) as a final clean, as necessary. Once the clean has been completed. The team will perform the final checks of the mortar joints, completed repairs, matching colors, surface finish and apply any remediations to the as necessary. The team will apply an anti-graffiti coating or microcrystalline wax as directed by the CA. -TBC
The CA and clients will attend a final meeting with LSC director to accept/approve the fountain project's completion.

### Site Strike

The LSC team will strike all LSC tools and materials from the site and leaving only the exclusion zone around the scaffolding. The scaffolding team will be scheduled to remove their structure out of hours, possibly on a Saturday morning to provide maximum safety and minimum disruption to the local area. The scaffolding will be struck under the supervision of the LSC director. The remainder of exclusion zone will be removed at the direction of the council for a public unveiling ceremony.- TBC

### 13.6. Potential Hazards Identified:

1. Abrasive wheels
2. Contact with live services
3. COSHH
4. Safe Lifting Operations
5. Fire & Emergency
6. Hand Tools
7. Manual Handling
8. Working at Heights
9. Noise
10. Safe Access & Egress to Work Areas
11. Slips, Trips & Falls
12. Unstable Ground Conditions
13. Waste Removal
14. Biological Diseases

### 14. Safety Controls Applied to Eliminate or Minimize the Identified Hazards:

The risk assessment in the last section of this document dictates the control measures that must be adhered to for each potential hazard that has been identified above. Should any new hazards arise then works must cease with immediate effect and the supervisor informed so that the required risk assessment can be produced to remove the potential risk.

LSC standard procedures:

- Permission to be issued by site manager as required.
- Full PPE to be worn.
- RPE to be worn where required.
- Task-specific gloves to be worn where required.
- Task specific eye protection to be worn, where required.
- Only trained authorised personnel to operate plant and machinery.
- All lifting equipment/accessories certified in good order and free from defects.
- Good housekeeping, clean as you go policy.
- Designated walkways to be kept clear and tidy to prevent slips, trips and falls.

- Always ensure good access/egress.
- All electrical equipment PAT tested and inspected in good order and free from defects.
- All tools to be inspected in good order and free from defects.
- HAVs assessment and suitable controls in place.
- Noise assessments in place, personnel trained in the use of ear protection.
- COSHH assessments in place and communicated to relevant site personnel.
- Personnel aware of biological diseases.
- Good welfare facilities.
- Manual handling will be kept to a minimum by mechanical equipment, breaking down the weight of load to a more manageable load or team lifts. Personnel trained in manual handling.
- Dampening down of dust with water mist.
- Ensure fitness to work, report any concerns immediately to supervision.
- Awareness of vehicles and machinery always.
- Always follow safe systems of work .
- Ensure work area is secure from unauthorised personnel entering work area with suitable barriers/signage/screening where required.
- Liaise with any other Site Manager and other trades at site.
- Awareness of environmental hazards.
- Report any defects/concerns immediately to site supervision.

## 15. Environmental Risk Assessment:

We have identified the following items that are likely to have an environmental impact:

| Hazard | Risk | Controls Measures | Risk Rating |
|---|---|---|---|
| Dust | Air Pollution | Continuous Monitoring / Water Suppression | Low |
| Noise | Nuisance | Equipment switched off when not in use.<br>The use of the most modern silenced equipment – this reduces the amount of noise emissions from machinery. | Low |
| Mortars | waste stream / storm drains | Operatives to cure all mortars before placing in bin / allow waste waters to set and remove silts from water before disposing. / dilute waste waters before discarding / use minimal amounts of water when cleaning mortar from stone surface / scrape buckets clean before washing. | Low |

## 16. COSHH Items (see Site CoSHH Pack):

Mortars / White Cement / Dry Pigments / Resin stone glue / (Microcrystalline wax- sealer- anti-graffiti)-TBC / Petrol / Dusts – silica -add when site is scheduled

## 17. Manual Handling Assessment.- TBC - Later when site is scheduled

| | |
|---|---|
| Task | |
| Site Address | |
| Job No. | |
| Site Manager | |
| Operating Company | London Stone Conservation Ltd |
| Person Undertaking the Assessment | |
| Position | |

| Questions to Consider | Yes | No | Control Measures Required |
|---|---|---|---|
| **The tasks – Do they involve:** | | | |
| - Holding loads away from the trunk? | | | |
| - Twisting? | | | |

| | | | |
|---|---|---|---|
| - Stooping? | | | |
| - Reaching upwards? | | | |
| - Large vertical movement? | | | |
| - Long carrying distance? | | | |
| - Strenuous pushing or pulling? | | | |
| - Unpredictable movement of loads? | | | |
| - Repetitive handling? | | | |
| - Insufficient rest or recovery? | | | |
| - A work rate imposed by a process? | | | |
| **The loads – are they:** | | | |
| - Heavy? | | | |
| - Bulky or unwieldy? | | | |
| - Difficult to grasp? | | | |
| - Unsuitable or unpredictable? | | | |
| - Intrinsically harmful (e.g., sharp or hot)? | | | |
| **The working environment – are there:** | | | |
| - Constraints on posture? | | | |
| - Poor floors? | | | |
| - Variations in levels? | | | |
| - Hot/cold/humid conditions? | | | |
| - Strong air movements? | | | |
| **Individual capability – Does the job:** | | | |
| - Require unusual capability? | | | |
| - Hazard those with a health problem? | | | |
| - Hazard those who are pregnant? | | | |
| - Call for special information or training? | | | |
| - Is movement hindered or posture hindered by clothing or PPE? | | | |
| **Other Factors** | | | |

## 18. Names and Signatures of Persons who will be involved in the Work:

To be signed prior to any works being carried out. By signing this document, the operative is confirming that they have read, understood and will abide by the contents of this method statement. If changes occur partway through the work that present additional hazards, works are to cease, and the Site Manager or Supervisor is to be informed.

| Print Name | Signature | Comments | Date |
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| Risk Assessment | Hazard | Risk | Persons at Risk | Control Measures | Action by who: Site Manager/Foreman |
|---|---|---|---|---|---|
| 1. Abrasive Wheels | Projectiles. | Injuries from incorrectly fitted wheel as well as loose particles airborne from cutting. | Operatives, Other trades, Visitors. | Competent trained operatives.<br>Operatives trained in use of abrasive wheels to change wheel.<br>Use of PPE including B rated safety goggles, gloves and boots.<br>Use of exclusion zone for work area. | Supervisor |
| | Hand-Arm Vibration. | Long term health problems Such as "Musculo-Skeletal disorders". | Operatives. | See detailed "HAVS" Risk assessment. Minimise use of equipment where possible. Use of staff rotation to reduce exposure. Adhere to manufacturers guidelines. | Supervisor |
| | Sparks or combustible materials. | Risk of fire and burns from hot sparks from cutting metals. Also risk of fire from refueling. | Operatives, Other trades, Visitors. | Works under "Hot Work Permit" system.<br>Adequate fire extinguishers available.<br>Use of "Fire Wardens".<br>Remove flammable materials from work area.<br>Correct hot works PPE including gloves, overalls, safety glasses and boots.<br>. | Supervisor |
| | Noise. | Possible long-term hearing problems. | Operatives, Other trades, Visitors. | Use of ear defenders.<br>Set up hearing protection zones if required. | Supervisor |
| 2. Contact with Live Services | Live electricity cables. | Cutting into live electric cables can lead to serious burns or death. | Operatives, Other trades, Visitors. | All services in moat to be treated as live. | Supervisor |
| 3. Contaminated Materials / COSHH | Contaminated materials/ COSHH / Hazardous substances. | Contaminated material that may be toxic, infected, or diseased that may be found on site and could cause health problems by ingestion, inhalation or through open wounds. Also, pollution to the environment. | Operatives, Other trades, Visitors. | Before works commence the site must be checked for any hazardous materials so that a COSHH assessment can be carried out.<br>Operatives to wear correct PPE when dealing with substances.<br>Materials must be disposed of in correct manor. | Supervisor |
| 4. Dust | Inhalation of dust - Silica Dust, Wood Dust, Low Toxicity Dusts. | Lung cancer, Silicosis, Chronic obstructive pulmonary disease- COPD,<br>Asthma. | Operatives, Other trades, Visitors. | Dust levels must be monitored at all times.<br>Use of handheld water sprayers.<br>Use of face fitted RPE (FFP3)<br>Use of correct tools for job.<br>Trained competent operatives.<br>Use of screens segregate areas to encapsulate the dust.<br>Use of dust extraction equipment. | Supervisor |
| | Dust contact with eyes. | Long term damage to eyes. | Operatives. | Operatives to wear safety glasses when required. | Supervisor |

| Risk Assessment | Hazard | Risk | Persons at Risk | Control Measures | Action by who: Site Manager/Foreman |
|---|---|---|---|---|---|
| 5.<br>Falling Materials | Debris, materials, tools and objects falling from height. | Possible serious injury to operatives and public. | Operatives, Other trades, Visitors. | Works to be carried out in accordance with method statement.<br>Exclusion zones set up with adequate warning signage.<br>Operatives to wear hard hats.<br>Good housekeeping when working from scaffolds or platforms.<br>Use of trained competent operatives.<br>Use of tethers for tools when working near the landing edge.<br>Disposal chute to be controlled by designated operative with only 1 deposit point at any one time with other points locked off. | Supervisor |
| 6.<br>Fire & Emergency | Onsite fire or emergency, | Possible death or serious injuries to operatives on site as well as neighbouring public. Damage to site and neighbouring properties. | Operatives, Other trades, Visitors, Public. | All hot works undertaken under hot work permit system.<br>Correct storage of flammable materials. Correct signage.<br>Minimise use of hot works where possible.<br>Smoking only in designated areas. | Supervisor |
| 7.<br>Hand Tools | Manual use of handheld tools in demolition. | Noise | Operatives, Other trades, Visitors. | See detailed "Noise" risk assessment. Establish hearing protection zones if required. | Supervisor |
| | | Hand Arm Vibration Syndrome – HAVS. | Operatives. | See detailed HAVS ("Hand-Arm Vibration Syndrome") risk assessment. | Supervisor |
| | | Injury to operative including cuts and abrasions, back injury, eye injuries, | Operatives. | Correct PPE including hard hat, gloves, boots and glasses as required. Use of correct tool for job. Keep tools well maintained. Trained competent operatives. Adhere to manufacturers guidelines. Electrical equipment must be PAT tested and 110V only.<br>See also detailed "Manual Handling" risk assessment. Cutting edged kept sharp.<br>Self-retracting knives to be used only.<br>Tools to be checked to ensure no defects prior to each use. | Supervisor |
| 8.<br>HAVS | Vibration to operatives using handheld plant and equipment.<br>. | Long term permanent health problems.<br>. | Operatives. | Under the "Control of Vibration at Work Regulations 2005" we control this risk by:<br>• Avoid the use of handheld vibratory equipment where possible.<br>• Reduce how vibration is transmitted to the hand.<br>• Avoid the use of vibratory equipment where possible.<br>• Reduce the time spent holding the vibrating equipment.<br>• All equipment will be used in accordance with manufacturer's guidelines so to reduce exposure level.<br>• Maintain all equipment to avoid excess vibration.<br>• Use correct gloves to reduce vibration.<br>• All operatives to be aware of vibration exposure levels.<br>• Record of operative's duration of exposure to be held on site.<br>• Operatives not to exceed 100 points without permit. | Supervisor |

| Risk Assessment | Hazard | Risk | Persons at Risk | Control Measures | Action by who: Site Manager/Foreman |
|---|---|---|---|---|---|
| 9. Manual Handling | Manual work including lifting, lowering, pushing, pulling or carrying items on site. | Cuts and abrasions, sprains and strains, back injury's, | Operatives. | Under the "Manual Handling Operations Regulations 2002" we control these operations by –<br>Avoid the need for manual handling wherever possible.<br>When not possible to avoid the operation then the use or trained competent operatives.<br>Correct PPE including boots, gloves and hard hat. The PPE selected for the task should be appropriate.<br>Good housekeeping to keep walkways and work areas clear to avoid slips, trips and falls.<br>Use of mechanical lifting methods where possible.<br>Reduce carrying distances.<br>Avoid repetitive handling.<br>Divide the item into lighter/ smaller loads.<br>Ensure SWL of manual handling aids is sufficient for load being carried / lifted. | Supervisor |
| 10. Mobile Access Towers & podiums | Working at Height. | Serious injury to operatives. | Operatives. | Use of trained competent operatives.<br>Make sure tower is of correct size for works.<br>Never overload tower.<br>Working at height permit to be issued for use of tower.<br>Operatives to wear body harness and tool tethers when working on platform near landing edge.<br>Works carried out in accordance with method. Exclusion zones and adequate signage. | Supervisor |
| 11. Mobile Access Towers & podiums | Falling Materials | Possible serious injury to operatives and public. | Operatives, Other trades, Visitors. | Works carried out in accordance with method. Exclusion zones and adequate signage.<br>Operatives to wear hard hats.<br>Trained competent operatives.<br>Care to be taken when lowering items from height of platform as to not overload or damage tower.<br>Toe boards to be in place. | Supervisor |
| | Erection of Tower, Stability & Use | Serious injury to operatives. | Operatives, Other trades. | Erect in accordance with manufacturers guidelines.<br>Use trained operatives. Erect on firm ground.<br>Use stabilizers and out riggers. Check for overhead obstructions. | Supervisor |

| Risk Assessment | Hazard | Risk | Persons at Risk | Control Measures | Action by who: Site Manager/Foreman |
|---|---|---|---|---|---|
| **12. Noise** | Noise from machinery, tools and plant. Noise from demolition. | Exposure to loud noise can cause long term hearing problems and even deafness. | Operatives, Other trades, Visitors. | Under the "Control of Noise at Work Regulation's 2005" noise will be controlled by –<br>• Taking action to reduce noise exposure.<br>• Provide employees with hearing protection.<br>• Make sure legal noise limits are not exceeded.<br>• Maintain plant and tools to control noise risks.<br>• Using trained competent operatives.<br>Provide hearing protection and hearing protection zones is at 85 decibels (daily or weekly average exposure. | Supervisor |
| **13..<br>Safe Access & Egress to Work Areas** | Access and egress for operatives and contractors to and from work areas. | Death or major injury. Slips trips and falls, safe access to above and below groundwork areas. | Operatives, Other trades, Visitors. | Access and egress routes to be marked clearly.<br>Good housekeeping. Safe secure access to work on different levels.<br>Avoid use of ladders. Keep walkways clear. When accessing unknown areas trained operatives using extreme caution will be used.<br>Corridors and walkways must not be obstructed unless clear concise signage is installed to direct persons to their destination. | Supervisor |
| **16.<br>Slips, Trips & Falls** | Slips trips and falls to all persons on site. | Injuries from unstable ground, trip hazard, bad lighting. | Operatives, Other trades, Visitors. | Access and egress routs to be kept clear from obstructions. Good housekeeping. Adequate lighting. Keep walkways clear. Good signage. Remove arising materials as soon as reasonably practicable. | Supervisor |
| **17.<br>Unstable Ground Conditions.** | Stability of Plant and machinery. | Serious injury or possible death from machine overturning or becoming unstable. | Operatives, Other trades, Visitors. | LSC Director to confirm ground & scaffolding loadings prior to using mobile plant.<br>Use of competent trained operatives.<br>Use of exclusion zones around unstable areas | Supervisor |
| **18.<br>Waste Removal.** | Loading of waste using mechanical plant. | Risk of injury from falling debris as well as injury from contact with moving machinery. | Operatives. | Trained competent operators and operatives.<br>Use of exclusion zones to keep operatives out of work area. | Supervisor |
| **19.<br>Biological Diseases** | Ingestion of infected water / materials | Possible fatal infection who for anyone who ingests material / fluids which have been exposed to rates, rodents urine. | Operatives. | Keep welfare facilities clean and dispose of litter properly so as to not encourage on site.<br>Suitable bins provided for food waste.<br>Pest control in place where required. | Supervisor |
| **20.<br>Working at Height** | Working at any height above or below ground where an injury could be caused by falling. | Serious injury to operatives and others. | Operatives, Other trades, Visitors. | Under the "Work at Height Regulations 2005" we control this hazard by:<br>• Avoid working at height wherever possible.<br>• When work at height is not avoidable we prevent falls by using the correct equipment.<br>• Minimise the distance and consequences of any fall<br>Always use alternate methods wherever possible such as scaffolding, scaffold towers and working platforms.<br>Make sure machinery/plant is suitable for application and correctly maintained and inspected.<br>Competent trained operatives.<br>Never overreach from a working platform, scaffold or tower. Never overload a working platform, scaffold or tower.<br>Stop materials from falling and use exclusion zones below areas of work at height.<br>Permit to work on scaffolding must be issued by Scaffolders prior to use. | Supervisor |

| Risk Assessment | Hazard | Risk | Persons at Risk | Control Measures | Action by who: Site Manager/Foreman |
|---|---|---|---|---|---|
| 21.<br>Other Trades | Working alongside other trades | Lack of communication leading to incidents / accidents. | Operatives, Other trades, Visitors. | Safe Start briefings carried out every morning.<br>All operatives are briefed on all other operatives' movements for the day.<br>Management meetings to schedule and programme works with other contractors. | Supervisor |
| 22.<br>Language Barriers | Working alongside operatives whom English is not their first language. | Lack of communication leading to incidents / accidents. | Operatives. | Pictorial warning signs /translate warning signs in place where required.<br>Bilingual employees to interpret / translate information.<br>Adequate supervision. | Supervisor |
| 23.<br>Handling Lime Mortar | Contact with the eyes, skin and lungs. | Dry power fine dust when mixing.<br>Splashing of slurry and lime water when mixing or washing down. | Operatives | Correct PPE at all times.<br>Avoid creating dust clouds when mixing.<br>Avoid contact with eyes and skin.<br>Wear RPE when mixing in dry form. | Supervisor |

# Appendix

A - Fountain Measures and Weights Reference:

| ***Shaftsbury Fountain Measures*** *Recorded 12_06_2021_JW* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **item** | **description** | **units** | **length** | **breadth** | **height** | **m3** | **kg/ unit** | **total kg** |
| **1** | Pinnacle | 1 | 0.280 | 0.280 | 0.960 | 0.075 | 203 | 203 |
| **2** | Dome | 1 | 0.950 | 0.950 | 0.520 | 0.469 | 1,263 | 1,263 |
| **3** | Tympanum | 1 | 1.160 | 0.620 | 1.160 | 0.834 | 2,245 | 2,245 |
| **4** | Gray Block/ Fountain | 1 | 0.610 | 0.610 | 0.950 | 0.353 | 951 | 951 |
| **5** | Column | 4 | 0.200 | 0.200 | 0.950 | 0.038 | 102 | 409 |
| **6** | Column Base Moulded | 1 | 0.300 | 0.300 | 0.300 | 0.027 | 73 | 73 |
| **7** | Block w/ Lettering | 1 | 0.580 | 0.580 | 0.295 | 0.099 | 267 | 267 |
| **8** | Block with decorative Chamfers | 1 | 1.120 | 1.120 | 0.290 | 0.364 | 979 | 979 |
| **9** | Block Base w/ top moulding | 1 | 1.270 | 1.270 | 0.350 | 0.565 | 1,519 | 1,519 |
| **10** | Block Step | 4 | 0.620 | 0.290 | 0.190 | 0.034 | 92 | 368 |
| **11** | Top Step Lg. | 2 | 1.030 | 0.405 | 0.200 | 0.083 | 225 | 449 |
| **12** | Top Step Sm. | 4 | 0.980 | 0.420 | 0.200 | 0.082 | 222 | 886 |
| **13** | Bottom Step Lg | 2 | 1.820 | 0.380 | 0.170 | 0.118 | 316 | 633 |
| **14** | Bottom Step Sm. | 4 | 1.295 | 0.405 | 0.170 | 0.089 | 240 | 960 |
| | | | reference weight | 2691 | ** *Treat all masonry as as solid cubes* | | | 11,204 |

B – COSHH sheets (to be added later)