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| **Business Unit:** | C2V+ | **Contract No. & Name:** | Macclesfield C14998 |

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| ACTIVITY: | Chamber 3 Investigation Works | | RAMS Ref.: | [RAMS ##] | | Rev: | 0 |
| Location and scope of Works: | This document details the following procedures;   * Access constraints * Permit to dig and excavation   Chamber 3 is to be excavated and a pipe installed to the West face. Upon investigation works carried out on the 14th December it was deemed that before the pipe install, a trial hole should be carried out to determine what the pipe detail is coming out of the chamber. It may be a concrete thrust block or a blanking plate. | | | | | | |
| Start date: | 18th December 2023 | Anticipated completion date: | | | 22nd December 2023 | | |

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| APPROVAL & AMENDMENT RECORD | | | | | | | |
| Rev | Prepared by | | Date | Reviewed / Approved by | | Date | Amendment Details |
|  | Name | Jonathan Jackson |  | Name |  |  | First issue |
| Signature |  | Signature |  |

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| REVIEW / CHANGE LOG | | | |
| Date | Reviewer | Comments | Rev No. |
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| Personnel consulted during preparation of this document: |  |

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| Distribution List: | | |
| Name | Company | Position |
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| **RISK ASSESSMENT for:** | | Chamber 3 Investigation Works | | | RAMS Ref.: | [RAMS ##] | | Rev: | 0 |
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| No. | Hazard | Person(s) at Risk | Undesired event | Control Measures  *(List control measures that are required)* | | | Actioned by | | Date |
| 1 | Machine Lifting | Operatives | Chains failing causing plant/ materials to fall onto operatives | * Ensure that all machine lifting is controlled by a single slinger and that people stand out of the zone where objects could fall. * Refer to schedule of common lifts | | |  | |  |
| 2 | Slips trips and falls | All involved in the operation | Broken bones/ sprained muscles | * Maintain good levels of housekeeping at all times in the work area and access routes * Adopt the ‘Don’t walk by’ attitude and remove any potential hazards if safe to do so. | | |  | |  |
| 3 | Working at height | Operatives | Falls from height into excavations etc | * Edge protection to be in place along all leading edges * Edge Protection to be installed and inspected daily. * Regular inspections to be undertaken and recorded in line with the C2V+ safety management system. * Excavation support to be assessed by supervisor daily * Safe access into excavation to be in place before any access into excavation | | |  | |  |
| 4 | Service strike | Operatives | Death  Loss of services/ disruption for client | * Permit to dig to be in place for ALL excavation works | | |  | |  |
| 5 | Unauthorised personnel entering working area | All personnel  entering area | Personnel being struck by load | * Exclusion areas maintained and marshalled. Supervisor to enforce the situation. * Stop work should any persons enter radius of excavator. * Particular vigilance required in cases where the possibility of members of the public or client entering the area exists. | | |  | |  |
| 6 | Manual Handling | Operatives | Musculoskeletal disorder | * Manual handling will be second to mechanical means. * Use mechanical means wherever possible * Operatives are to lift within their capability not to over strain. Share the load with another operative if possible. * Assess the load before lifting * Materials are to be landed as close to the working area as possible to reduce distance. * All operatives are to be instructed in the lifting of objects. | | |  | |  |
| 7 | Working near to United Utilities operations | Operatives / UU staff | Death by contact with UU loader / forks / Excavator | * Work under UU permit / induction. * Barrier to separate from UU operatives. * Keep to designated routes avoiding UU working areas. Liaise with UU to inform loaders / forks etc of movement of personnel, plant and deliveries. * United Utilities must be notified when accessing their working areas. | | |  | |  |
| 8 | Working in public areas / traffic routes | Operatives & public | Death or serious injury | * Barrier off / cone off works from public. * If work cuts down road width to one lane ensure stop / go boards or traffic lights are used. Avoid plant / materials falling onto or reversing into road. * Heras fencing to be double clipped to avoid falling into road. | | |  | |  |
| 9 | Working in excavations | Operatives | Collapse/ movement of excavations | * All excavations are to be inspected at the start of every shift and after any event likely to affect stability e.g heavy rain. * Store materials away from excavation, the distance away should be at least the depth of the excavation * Temporary Works to be checked before any works commences. | | |  | |  |
| 10 | Lighting | All involved in operation | Slips, trips and falls | * Task lighting to be provided within the work area and background lighting along access route * Operations to cease if inadequate lighting is provided. | | |  | |  |
| 11 | Water ingress | Entrants | Flooding of excavation | * Excavations to be closely monitored for presence of water especially after periods of heavy rainfall. | | |  | |  |
| 12 | Using temporary works | Operatives and close trades | Failure of temporary works | * Shoring to be designed through C2V+ TW procedure * TWS to inspect before works commence * Approved permit to load issued by TWC | | |  | |  |
| 13 | Existing treatment works | Treatment Plant | Flooding of the site caused by dislodging the existing outlet pipe of the chamber | * Care to be taken when excavating. * Hand dig once we are within 500mm of the pipe (engineers will give a level) * Operatives are aware that the pipe is old and may be fragile or brittle. | | |  | |  |

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| METHOD STATEMENT | | | | | | | |
| Personnel REQUIRED  *Give the number and role of personnel required to carry out activity - including any specific skills, fitness levels, training or qualifications required.* | | | | | | | |
| No. of | Role | | Qualifications / Experience required | | | | |
| 1 | Excavator Operator | | CPCS with lifting operations | | | | |
| 2 | Appointed person | | CPCS and appointment letter | | | | |
| 3 | Site Supervisor | | SSSTS and CSCS card | | | | |
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| Associated Documents: | | | | | | | | | | |
|  | | | Required | | | Location of document if not attached to this RAMS | | | | |
| Yes | | No |
| COSHH Assessment Ref. (ensure those carrying out activity have signed on to COSHH assessment) | | |  | |  |  | | | | |
| Lift Plan (Non-routine) H55-03 / R07 | | |  | |  | Lifting file in office, copy with Supervisor | | | | |
| Rescue Plan *(for working at height)*: | | |  | |  | Each activity to be checked individually | | | | |
| Other Documents: *(such as drawings, sketches, consents, licenses, etc.)* | | |  | |  |  | | | | |
| Permits / PLANS Required *Indicate those that apply or add other contract specific permits* | | | | | | | | | | |
| Permit to Break Ground  H14-01 / H14-01R | Hot Works Permit  HSE-27 | Confined Space Permit  HSE-21 | | Routine Lift Plan  H55-03 /  R07 | | | Permit to Operate Plant  H09-09 | Work Near Power Lines  H14-08 | Temporary Works  Q25\* | Permit to Pump  EMS-29 |
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\* Business unit specific

| ACTIVITY: | Chamber 3 Investigation Works | RAMS Ref.: | [RAMS ##] | Rev: | 0 |
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| RESOURCES REQUIRED | | | | | |
| Operated Plant | | | | | |
| * Excavator, various sizes * Dumper | | | | | |
| Non-Operated Plant / Small Tools / Equipment | | | | | |
| * Chains and slings of various sizes and type * Lighting tower as required * Trench box * Rigging * Pedestrian and/or Heras fencing | | | | | |
| Materials | | | | | |
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| ACTIVITY: | | Chamber 3 Investigation Works | RAMS Ref.: | [RAMS ##] | Rev: | 0 |
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| Programme of Operations and Potential Interface with Others: | | | | | | |
| Sequence of Activities / Safe System of Work  *(to include access / egress, plant & pedestrian segregation, limitations & constraints and state any HOLD POINTS)* | | | | | | **Hold Point** |
|  | **Access Constraints**  • All personnel to receive a C2V and UU site-safety induction before starting work.  • If working in a United Utilities area must get a UU permit to work.  • The work is to be carried out within the fenced area of the site boundary (where possible).  • United Utilities traffic and the traffic of the general public must be given right of way. | | | | |  |
| |  |  | | --- | --- | | **A yellow triangle sign  Description automatically generated with medium confidence** | **The Supervisor must ensure that CAT scans are undertaken at regular intervals (minimum of every 300mm) as the excavation proceeds by a suitably trained and competent operative** | | **A yellow triangle sign  Description automatically generated with medium confidence** | **Excavations MUST NOT START until the team has been briefed on and issued with a PERMIT TO DIG** | | **A yellow triangle sign  Description automatically generated with medium confidence** | **If at any time the service is suspected of being encased in concrete, cease work immediately and inform Engineer. Do not attempt to break or undermine the concrete** | | | | | | | |
|  | **Permit to dig and excavation**   * **The site engineer will issue a Permit to dig with an attached drawing of services.** * The area will be C.A.T. scanned and any services marked up.      * If additional services are discovered that are not on the service drawings accompanying the Permit to Dig, then do not commence operations. Report findings to the Permit Issuer. * Engineer shall set out the position of the excavation * With the excavator, excavate down to agreed depth loading the excavated material into dumpers. Where services are known or have been identified the excavation must be progressively excavated by hand digging the first 500mm, then excavate the top 300mm and repeat the process until the services have been located or the formation level has been reached. * For shallow excavations and areas that have many services in, the trench can be open cut or stepped. However, the deeper excavations will be supported using trench boxes. * The trench box will be lifted using the excavator, only slinger to attach and detach loads. The trench box should be installed as per the manufacturer’s guidance and inspected by a TWS. * Prefabricated barriers should be erected at the top of the trench box. * Access into the trench box should be via scaffold ladder or a site made gentle slope. * **Ensure the excavation is completely fenced off when unattended & is safe at all times.** * **Only Slinger/signallers to attach/detach loads** * **An approved lift plan to be in place** * Excavated material should be stored in the designated stockpiles in the field i.e. top soil in one and clay in the other. * Multiple trench boxes will be used, all of which should be installed using the dig and push method. * If a trench box or similar shoring method is used, this should be designed, inspected and a permit to load issued by TWC. * **Temporary works/shoring to be designed by C2V+ temporary works procedure. TWS to inspect and TWC to issue permit to load.** | | | | |  |
|  | **KEY POINTS**   * Permit to dig to be in place * Excavations can be either open cut, stepped, a shallow trench or supported by a trenchbox. The stability of the ground and support system should always be assessed daily and sign off by the TWC. * Lifting carried out by excavator and slinger signaller * Temporary works to be designed and inspected, permit to load issued | | | | |  |
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| Mandatory and additional PPE required:  *(rigger boots or similar are banned from use, wellingtons can only be used following inclusion in the RA)* | | | | | | | | |
| Mandatory PPE: | | | Task-Specific PPE: | | | | | |
| * Gloves (suitable for task) * Hard hat * High-visibility clothing * Light Eye Protection (LEP) * Boots (with steel toecap and mid-sole) * Overtrousers | | |  | | | | | |
| Environmental considerations: *Consider Waste Management - pollution prevention measures, protected wildlife / sites / trees, noise / vibration / dust, resource use. Refer to H02-G03 Environmental Guidance for RAMS* | | | | | | | | |
| Waste Management | | | | | | | | |
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| Pollution Prevention *(water & ground; consider fuels, concrete & silt)* | | | | | | | | |
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| Protected & Invasive Species | | | | | | | | |
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| Nuisance *(noise, dust, vibration)* | | | | | | | | |
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| Resource Use *(fuel, water, aggregates, etc.)* | | | | | | | | |
|  | | | | | | | | |
| Other *(archaeology, NRMM, etc.)* | | | | | | | | |
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| Emergency response: | | | | | | | | |
| Event | | Action to be Taken *(indicate location of first aid facilities, fire extinguishers, spill kits, rescue lines)* | | | Emergency Contact Details | | | |
| Fire: | | Raise the alarm, go to the muster point. | | | Alert Fire Warden or 999 | | | |
| Accident: | | Information on site first aider. First aider to deal with situation, 999 to be called if required. | | | Alert First Aider or 999 | | | |
| Pollution: | | Emergency spill procedure to be actioned. | | | Alert Site Management | | | |
| Water: | | Site management to be informed who will alert UU. | | | Alert Site Management or UU | | | |
| Service strike: | | Stop work immediately and evacuate the area. Service coordinator to be informed immediately. | | | Alert Site Management and Service Provider | | | |
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**Record of briefing of the personnel who are to undertake this work:**

*(Extend the table as necessary to record the briefing on any revisions in separate rows)*

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| ACTIVITY: | Chamber 3 Investigation Works | RAMS Ref.: | [RAMS ##] | Rev: | 0 |
| Briefing Given by: *(name)* |  | Signed: |  | Date: |  |

I confirm that I have received and understood the briefing for the task(s) outlined.

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| ACTIVITY: | Chamber 3 Investigation Works | RAMS Ref.: | | [RAMS ##] | | | Rev: | 0 |
| **MINOR AMENDMENTS** | | | | | | | | |
| AMENDMENT TO RAMS CARRIED OUT BY *(Supervisor responsible for works)* | | | | | | | | |
| Name | Position | Signature | | | | Date | | Time |
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| AMENDMENT SUMMARY *changes required & reasons for minor amendment(s)* | | | | | | | | |
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| Outline of the significant hazards involved: | | | Outline the controls to be followed to do the work: | | | | | |
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| AMENDMENT TO RAMS APPROVED BY *(Manager responsible for works)[if approval by phone call record date & time]* | | | | | | | | |
| Name | Position | Signature | | | Date | | | Time |
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I confirm that I have received and understood the briefing for the task(s) outlined:

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| Forename | Surname | Role  *(in relation to this task)* | Signature | Date and time |
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