Client	Reef Group
Contract Title	Tribeca Plots B&C
Contract Number	TBC

EMERGENCY RESPONSE PLAN

TRIBECA (PLOTS B&C)

EMERGENCY RESPONSE PLAN

Martyn Horne
Pre-construction Director

05.10.2023

MAIN AUTHOR	REVIEWER	APPROVER

ISSUE CONTROL

DOCUMENT No.	01

CURRENT REVISION	CURRENT STATUS CODE	SECURITY CLASSIFICATION
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01	Martyn Horne	05/10/2023				
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CONTROLLED COPY NO.	JOB TITLE
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	

Contents

1 Introduction

1.1 Purpose of the Emergency Response Plan

This Emergency Response Plan (ERP) has been produced to assist in managing Ardmore's response following any incident that has the potential to cause harm (full details of the incidents covered by this procedure are contained within the document).

On behalf of Reef Group (the Client), it is intended that this report be submitted to Thames Water Utilities Ltd (TW), and that TW may rely on it for the purpose of accepting that the risk to their pipe assets, as predicted from this impact assessment, is within acceptable limits.

The document aims to clearly outline the responsibilities assigned to named personnel in dealing with specified incidents and how such incidents will be managed immediately to mitigate further risk

Details of the equipment required and the escalation process following an event to ensure all parties are informed so that the appropriate immediate and remedial actions can be taken to resolve the incident

The document also contains site specific drawings detailing the location of emergency equipment, muster points, services etc that will be fundamental to the management of any incident.

Refer also to:

- Construction Phase Plan
- Contract HSQE Management
- Pre-Construction Information Pack

1.2 Location

The site is located at 2-6 St Pancras Way, London, NW1 0TB.

The site is located on land between St Pancras Way and Regent's Canal, to the north of St Pancras International train station. It is bound to the east by Regent's Canal, to the south by Granary Street and St Pancras Hospital, to the west by St Pancras Way (A5202) and to the north by the Tribeca (Plot A) site.

1.3 Scope

The Works include Demolition of the existing building (Class B1 and B8) and erection of 6 new buildings ranging in height from 2 storeys to 12 storeys in height above ground and 2 basement levels comprising a mixed use development of business floorspace (B1), 73 residential units (C3) (10xstudio, 29x1 bed, 27x2 bed 7x3 bed), hotel (C1), gym (D2), flexible retail (A1 - A4) and storage space (B8) development with associated landscaping work.

1.4 Planned Timescale, Start and Finish

The planned timescale for this project is **135 weeks**. The planned start date for the construction phase of the works is **December 2023** and the planned finish date is **July 2026.**

1.5 Changes to Key Personnel

As and when there is a change in key personnel, the Emergency Response Plan will be updated to reflect this and issued to the client.

1.6 CDM Appointments

The project has been assessed against the requirements of the CDM Regulations and falls within the prescribed requirements as notifiable. The project personnel and CDM appointments are listed below.

CDM APPOINTMENTS CONTACT DETAILS				
ROLE	**NAME**	**LOCATION**	**TELEPHONE NUMBER**	**EMAIL ADDRESS**
Client	Jason Russell Reef Group	51 Welbeck St, London W1G 9HL	020 7637 0601	j.russell@reefgroup.co.uk
Client PM / QS	Richard Harris Gardiner & Theobald	10 South Crescent London WC1E 7BD	020 7209 3000	r.harris@gardiner.com
Principal Contractor	Gary Grimwood (Construction Director) Ardmore Construction Group	6 Wharf Studios, London, N1 7GR	07852 002625	ggrimwood@ardmoregroup.co.uk
Principal Designer	Perkins & Will	150 Holborn, London EC1N 2NS	020 7466 1000	
Client appointed Contractors	**TBC**			

1.7 Principal Contractor Responsibilities

ROLES & RESPONSIBILITIES	
HSEQ Department	**Responsibility: Luke Hands**
• Comply with Relevant Legislation • Ensure sufficient resources are provided (Equipment / Personnel) • Ensure suitable Investigations are completed following any incident • Provide suitable site security • Maintain out of hours contacts for emergency response • Ensure any required notifications are made to the enforcing authority	
Construction Director	**Responsibility: Gary Grimwood**
• Ensure requirements of the H&S Plan and ERP are implemented onsite • Ensure nominated persons are aware of their duties and have been briefed on the ERP • Liaise with all other parties in relation the ERP • Be the designated point of contact following all incidents • Ensure all required drills are completed • Authorise the purchase of all required equipment and training • Make arrangements for suitable sub-contractors to attend site to install any required equipment required by ERP • All personnel to receive thorough induction covering key aspects on the ERP • Liaise with all parties (as required) in the event of an incident • Notify the emergency services and act as point of contact • Notify client of any incident • Complete roll call following incident	
Site H&S Advisor	**Responsibility: TBC**
• Complete and update the ERP • Ensure all required equipment is established onsite • Arrange for any required training for site staff • Ensure all posters / signage is accurate and remains up to date • Update the site induction to reflect the EMRP / changes as project develops • Organise / Oversee relevant drills • Ensure all required equipment is suitable and has relevant certification (as required) • Ensure required weekly inspections are completed and records collated • Complete weekly testing of fire alarm	

Fire Marshals	Responsibility: TBC
• Ensure fire points are established as per requirements of ERP drawings • Complete sweep of building (in pairs) following an alarm activation (not a confirmed fire) • Assist in roll call • Assist in any evacuation drills • Complete weekly inspections of fire points Ensure sufficient resources are provided (Equipment / Personnel)	
1st Aiders	**Responsibility: TBC**
• Ensure 1st aid kits are stocked and checked • Confirm emergency equipment (drench showers / eyewash stations) are established in decontamination areas • Assist an injured person as required • Provide update to project manager on any IP • Liaise with Emergency services when they attend site • Accompany IP to hospital	
Security	**Responsibility: TBC**
• Provide access control to site • Provide roll call information in the event of an incident • Ensure Emergency services are directed onto site • Escalate any out of hours alarms • Complete out of hours checks in the event of fire alarm	
Employer	**Responsibility: Jason Russell**
• Provide required input into the ERP • Identify personnel to be contacted in the event of an incident • Provide out of hours contacts • Liaise with Ardmore with respect to Emergency services attending site • Assist Ardmore in the event of a service strike to locate incoming supply to allow for isolation	

Fire marshals and first aiders will be identified on site posters and within the site induction.

1.8 Project Specific Health and Safety Goals

- Accident frequency rate to be zero.
- Work will be planned to cause minimum disruption to local business and residents – any complaints that do arise relating to these works are to be speedily addressed.
- Minimising the potential effect on the local environment and water courses, including water safety and response measures and enhanced hygiene given the proximity of the canal and water borne diseases
- All road closures and street work notices will be submitted following the correct procedures and timescales.
- Thoroughly evaluating task for health & safety hazards and developing controls to protect employees.
- Providing appropriate and well-maintained tools, equipment and personal protective equipment.
- Regularly communicating and reinforcing the company's Health & Safety Goals and Objectives.
- No occupational ill health arising from the project.
- Provide safe access and egress from places of work.
- Establish a site set-up that excludes unauthorised persons from the construction site.
- Refer also to the Construction Phase Plan.

2 Management of Work

2.1 Project Review

The ERP shall be prepared and provided to the client and site team prior to commencement of work, timescales to be agreed with the client.

The ERP validity is from **December 2023 to July 2026 (135 weeks**), however if there are any changes to the scope of works, site conditions or risks and hazards then the ERP shall be reviewed, amended as necessary and signed off by the author, reviewer and approver.

The ERP shall be routinely reviewed every 30 days.

A controlled copy of the ERP will be kept on site and will be easily accessible to all contractors engaged on site.

2.2 Key Systems and Documentation

All company processes and procedures are contained within the Ardmore Group Management System. Key systems and documentation for the compilation and management of this ERP will be:

- The HSQE Policy Statement.
- The HSQE Policies.
- Processes, procedures and guidance documents.
- Forms.
- British and EU standards.
- HSE Approved Codes of Practice.
- Project / contract specific.

2.3 Document Control

A formal document control process shall be agreed by the project team and Reef Group to manage the approval, acceptance, changes, distribution and retention of the ERP and other relevant documents.

2.4 Monitoring Arrangements

2.4.1 General Monitoring

Regular project meetings will be held (frequency to be agreed with Reef Group prior to project start date) throughout the design and construction phase.

The following means are used to monitor projects for conformance and compliance with processes and procedures, standards and legislation, these include:

- Planned site inspections at regular intervals (site management/supervisors' weekly inspections, HSQE Advisor daily recorded inspections, Senior Management / Director Tours monthly, other project specific frequent recorded inspections).
- Statutory Inspections (LOLER, PUWER).
- Audits.
- Incident reviews.

- Near Miss trends.
- Medical surveillance.
- Drug and Alcohol testing.
- Complaints monitoring.
- Certification audits.
- KPI’s.

3 General Arrangements

3.1 Preventing Unauthorised Access to Worksite

A site assessment shall be carried out to determine the requirement for site security. Note this may be referenced in the contract requirements. Control measures include but are not limited to:

- A competent security guard (SIA).
- Physical demarcation/barriers/fencing – timber hoarding will be constructed as per Temporary Works design.
- CCTV surveillance.

Sufficient arrangements will be in place to ensure that those contacted out of hours are in the event contactable and have sufficient resources available and authority to despatch resources in response to an emergency.

No materials or equipment that could be used for vandalism shall be left out in an unsecure location, or near fences where they can be used to access the site.

No contactor shall authorise access to the site in the event of an incident, for any other person other than personnel or sub-contractors, without agreeing the arrangements with Ardmore Group or the Reef Group Representative.

All personnel working on site and visitors to the site will be required to sign in and out at the site office.

Ardmore operate the Datascope system for accessing site, this is achieved by either a security card or a fingerprint reader touched at the turnstile when entering. Both of which bring up the individual's photo which the security guard will check to confirm their identity.

3.2 Information and Training

3.2.1 Competence

All personnel regardless of title must be competent to carry out their responsibilities and tasks. It is the responsibility of the Site Manager and Foreman to ensure that all personnel provide evidence of competence training and records are kept in the site file. The training database is updated by Learning & development (L&D).

3.2.2 Induction

All individuals working on the site will receive an induction from the Site Management Team prior to being allowed to start work on site, the induction will include information regarding the Health and Safety arrangements for the project, hazards, site rules, any contract specific requirements, emergency procedures.

3.2.3 Briefings

Briefings, Toolbox Talks specific to the work and current Health and Safety Alerts/Bulletins, will be carried out for all staff on site by the Site Manager or Foreman.

As part of delivering the project Ardmore Group will:

- Promote a fair culture by finding and tackling the root-cause of Rule breaking and clearly identify this in accident/incident reports.
- Provide an environment where there is a culture to clearly push-back against unsafe requests by all project team members.
- Provide positive responses and solutions to any issues raised.
- Make sure everyone fully understands and takes responsibility.

- Prioritise the safety measures that save lives.
- Highlight areas where we can do better.
- Schedule a suite of activities to actively engage with the workforce to improve the safety culture on the project and drive the right behaviours.

3.2.4 Notices

The following key information for the project will also be displayed on the site HSQE notice board:

- Company HSQE Policy statement.
- HSE Law Poster.
- F10 Notification.
- Ardmore emergency contact numbers.
- Insurance Certificate.
- First Aiders.
- Emergency Procedures.
- Hospital Route.
- Utility Emergency Contact Details

3.2.5 Safe System of Work (SSOW) / Risk Assessment & Method Statement (RAMS)

For all works a SSOW Pack or RAMS will be produced, including location, hazards, SSOW information, emergency details etc. The safe system of work hierarchy will be used to plan safe systems of work in order of safest first – this will be briefed to the site staff. The site management team will brief staff on the contents of the SSOW /RAMS and associated hazards in the work environment prior to the work commencing, staff will sign the relevant briefing form to confirm understanding. The site management team will sign staff into the site of work and check all relevant competence cards.

3.3 Welfare

Welfare provision will be in accordance with the Construction (Design and Management) (CDM) Regulations 2015.

The required welfare for the project will be discussed with the client at the project start up meeting and provisions agreed dependant on the number of Operatives.

Temporary site accommodation will be located in the area mutually agreed between the Principal Designer, Principal Contractor and all necessary third parties. Welfare will be constructed in the basement car park and will include: temporary offices, meeting room, changing rooms, canteen, male & female toilets.

Site welfare facilities will comprise of the following:

- Office (including printer, internet).
- Canteen (including fridge, kettle, and microwave).
- Drying room unit (including lockable cages).
- Toilets (male and female proving facilities to dispose of sanitary items).
- Secure store container(s) for materials & tools.

3.4 First Aid

First aid provisions (including eye wash) and competent and trained First Aiders will be available on every site and office. A site first aid assessment shall be carried out prior to project commencement to determine the first aid provisions including competent first aider requirements. Site First Aiders will be identified on site by First Aid posters, and where possible individually by First Aid stickers on their hard hats.

First Aid kits will be available in the site office, kitchen and where applicable, on site. The Site First Aiders have responsibility for checking and maintaining the content. Kits will be checked weekly by the designated first aiders made up of several site managers.

3.5 Reporting of Accidents and Incidents

3.5.1 Reporting procedure

All accidents and incidents must be reported in line with the timescales stipulated in the Accident and Incident Reporting procedure. All accidents and incidents must be reported to the person in charge of works as soon as possible after the event. The person in charge of works (Site Manager / Supervisor) will report the incident details within immediately. The initial report will be completed within 1 day by the Project or Site Manager. Depending on the actual and potential severity of the incident a full and final investigation will be completed and approved by the HSQE Director.

3.5.2 Notifying Client

Client reporting timescales which differ to the above must be adhered to in all cases. The person in charge of works as soon as possible after the event must notify the Ardmore Group Site and Project Manager & Project Director.

The receiving Project Manager will also notify the:

- Ardmore Group Operations Director.

3.6 Reporting of near misses (hazards)

Reporting of unsafe acts and conditions that are not accidents or incidents shall be reported on a Feedback Card giving enough information to identify and resolve the matter. These can then be reported internally via email.

3.7 Project Site Rules

Additional rules and restrictions on-site will be communicated to all personnel through the site induction, additional task specific rules will be communicated during the task briefings.

- Everybody working onsite must complete an Ardmore induction prior to being issued an access card. Visitors must sign in at the security on entry and on leaving and will need to complete a visitor's induction. Visitors must be accompanied at all times by a site representative who has been inducted.
- Following a successful completion of induction, contractors must report to their line manager to read and sign the Risk Assessment and Method Statement (RAMS), prior to starting work.
- You must attend an Ardmore - Pre-task Safety Briefing meeting prior to starting work and sign the register on completion.
- The site speed limit is 05 MPH. Parking is only permitted in designated areas.
- Food may only be consumed within the designated welfare area.

- Horseplay, whistling and calling to the public is strictly prohibited.
- Where a Permit to Work is applicable to your task you agree to all the terms and conditions stipulated under the permit. By signing the permit, you are signing to agree you understand the requirement set out in the permit and agree to work safely as required by the permit. Deviation from the permit can result in a disciplinary or immediate dismissal.
- A permit must be obtained before carrying out specific tasks example but not limited to hot works, work with ladders and more.
- You must adhere to all emergency procedures. You will be instructed of the emergency arrangements at your induction, including the location of the assembly/muster point. In the event of an emergency, you must exit at the nearest safe exit and head directly to the assembly point.
- Details of emergency key personnel is displayed on the Ardmore Health & Safety Notice board. In addition, you organisation will have trained first aiders, fire wardens/marshal, who you should be made aware off during your RAMS briefing.
- During emergency evacuation you must never return to locker rooms or your desk to collect personal belongings.
- All workers must wear safety helmets, safety boots with midsole protection, hi-vis vest or jacket, and protective gloves as a minimum at all times, unless authorised otherwise by the Health and Safety Manager. Other personal protective equipment (PPE) may be required as specified by your risk assessment, such as high impact eye protection or respiratory protection (must be provided by the employer and worn at all times).
- Areas or rooms with physical barriers and/or sign posting stating ‘no entry’ or ‘authorised personnel only’ are strictly prohibited to enter, unless authorised by management. Forcing locks or ignoring prohibitionary cautionary warning signs may result in dismissal.
- Ardmore operates a strictly no alcohol and drugs policy. Alcohol or none medically prescribed drugs, including illegal drugs onsite is strictly prohibited. Ardmore will conduct random alcohol and drug test. You will be dismissed from site and banned from other Ardmore sites, if you test positive or fail to comply to random drug and alcohol test at any time.
- Smoking, including e-cigarettes is strictly prohibited onsite, except in designated smoking areas. The burning of materials onsite is prohibited.
- The use of radios, mobile phones, including e-tablets is forbidden. Mobile phones may only be used where it is safe to do so, after stopping the work activity. Headphones are not permitted on site.
- Plant vehicle drivers must dismount before making or receiving a call.
- No unauthorised person may interfere, adapt, erect, or strike any scaffold including other work at height equipment e.g., podiums.
- All persons working on the site must report any hazardous conditions, unsafe behaviours, near-misses, accidents, and incidents to their supervisor, when it is safe to do so. No person shall make any worker, work under unsafe condition, or where a hazard is clearly obvious and not effectively managed.
- Equipment and tools should only be operated and used, maintained and repaired by competent person. Incorrect or faulty tools and equipment must not be used and immediately reported to the management and put out of use.

3.8 Emergencies

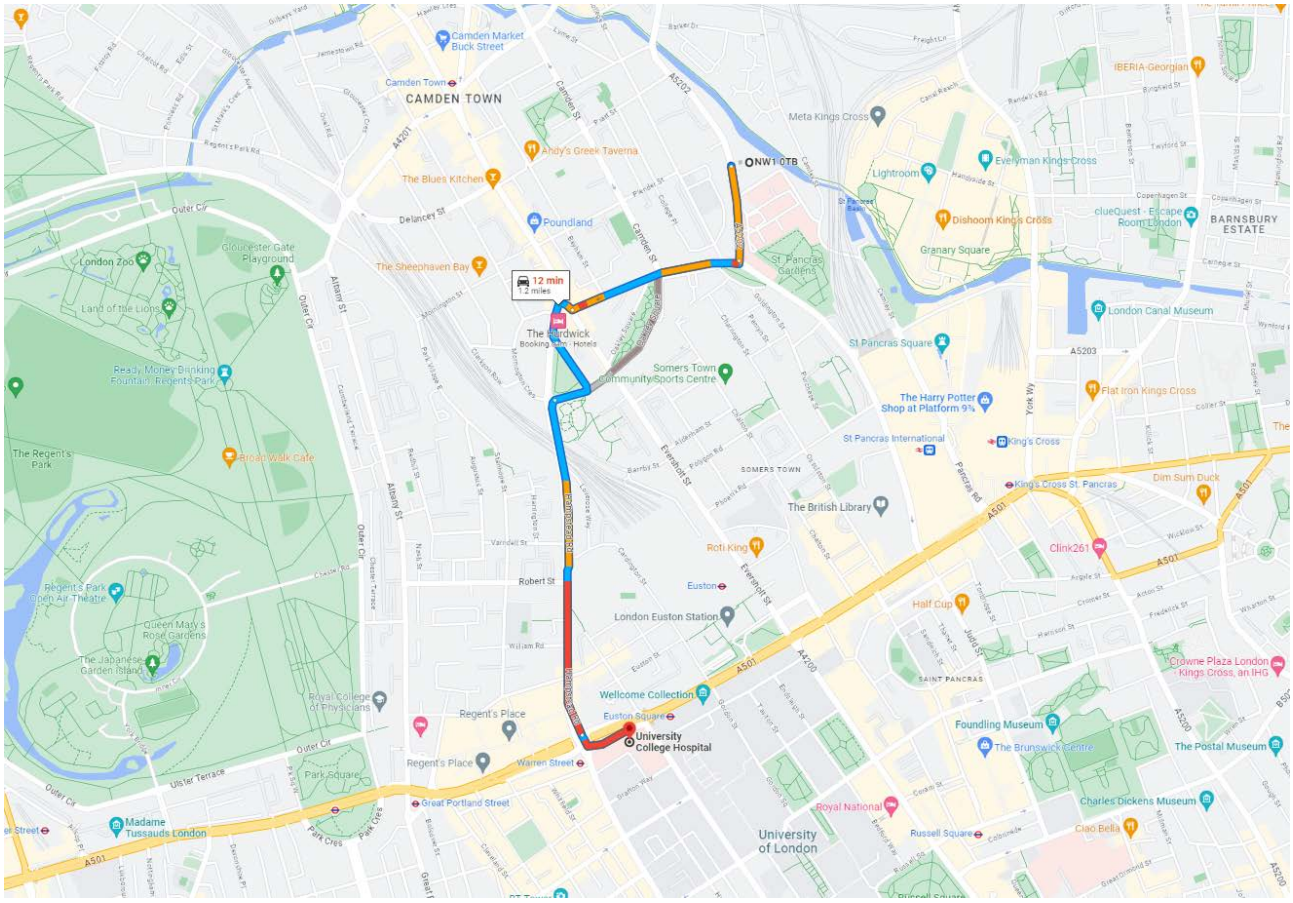
3.8.1 Actions to Protect Personnel in an Emergency

Site specific Emergency Plan(s) are provided for all projects for foreseeable emergency situations. These are published and displayed on site and briefed to visitors and workforce during the Site Induction.

The nearest hospital with 24-hour A&E is: **University College Hospital, 235 Euston Rd, London, NW1 2BU.**

999

02034567890



Arrangements will be put in place for the summoning of emergency services to the site. This will include specific information of who will summon the emergency services; who will meet the emergency services and where; and how the emergency services can access the site. This may require prior contact to be made with the emergency services to establish the way to achieve these requirements.

Examples of emergencies are listed below but not limited to:

- Fire or explosion.
- Confined spaces.
- Flooding.
- Radiation.
- Heavy rainfall / snowfall.

- Electrical power supply failure/blackout.
- Discovery of unexploded ordinance (UXO).
- Asphyxiation.
- Terrorism attacks.
- Unplanned structural collapse.
- Utility emergencies.
- Security (to prevent unauthorised access in an Emergency).

Measures to limit Health and Safety consequences may include:

- For-cause Alcohol and Drug testing.
- Stopping of work in all or part of the site.
- Prioritisation of resources.

Actions to limit environmental effects are detailed in the Environmental Management Plan.

3.8.2 Fire Safety

Fire hazards will be addressed as part of the project risk assessment process. The subsequent control measures will be incorporated into the relevant RAMS.

A fire risk assessment will be conducted by a competent person at each part of the operational site and will include measures to prevent fire and hazards associated. A site plan/diagram will be published showing all parts of the site layout and where emergency refuge points are and emergency firefighting equipment, which will be displayed on the site notice board and briefed as part of the induction.

3.8.3 Evacuation

All site personnel and visitors must sign in and out of site using the site attendance register, including at lunch time. This site attendance sheet will be used to take the roll call in the event of a site evacuation.

In the event of an evacuation the person in charge of works (Site Manager) will take the lead in ensuring the alarm is raised, the muster point agreed, and the roll call takes place, the relevant reporting takes place. In some cases, for example in a gas emergency, evacuation may include neighbouring properties. Until the situation is being controlled by emergency services the person in charge or works shall take the lead.

3.8.4 Summoning Emergency Services

The person in charge of works shall be responsible for summoning the emergency services to site unless discharged to another person. In some locations it may be required to send someone to meet and escort the emergency services. Site access shall be sufficient for the size of emergency service vehicles.

Site address to be provided when contacting emergency services: 2-6 St Pancras Way, London, NW1 0TB

3.8.5 Utility Emergency

The utility emergency contact details shall be included in the emergency contact details document displayed on the site HSQE notice board.

In the event of a utility emergency, the person in charge of works shall take the lead in the evacuation, summoning the emergency services, if required, and emergency reporting.

3.8.6 Vehicle Recovery Plan

A vehicle recovery plan will outline the arrangements for the recovery of vehicles that become stranded or stuck whilst on site.

If vehicles and plant breakdown on the public highway and require recovering, the vehicle/plant will be made safe and the owner contacted.

3.9 Site Risks and Hazards

Ardmore Group shall assess the risks created by our undertaking to identify the measures we need to have in place to comply with our duties under health and safety law.

Risk Assessments shall be produced for each site and reviewed by the Project Manager. Risk Assessments shall be briefed to the workforce. Relevant risks and control measures shall be detailed in the site and activity risks section of the RAMS

In addition to the Risk Assessments a daily Point of Work Risk Assessment will be carried out.

Any further hazards identified on site, or during contract review meetings will be risk assessed and briefed to the site personnel and subcontractors as appropriate.

4 Emergency Arrangements

Below are standalone documents that cover the immediate actions to be taken in the event of the following onsite emergencies, these documents will be used by the site team for reference in the event of such incidents to ensure all duties have been discharged.

In the event of any emergency incident the following means of communication will be used:

1. Radio Communication
    a. Channel 1 for emergencies only (all Erith and subcontractor supervisors to carry radios)
    b. Inform site security to expect emergency services onto site

2. Telephone Communication
    a. Used to request appropriate emergency services to site
    b. As back up to radio communication
    c. Client project team informed of incident in the first instance via phone

The following ERPs are relevant to the works being undertaken.

Emergency Response Plan TBC001			
ACCIDENT / INCIDENT			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

A person suffers and accident / medical incident at the workplace

Activation

- Accident leading to personal injury
- Medical incident / emergency
- Near miss
- Dangerous occurrence

Ardmore Response

Accident / Medical Emergency

- Stop works and make the area safe for access
- Summon the Ardmore First Aiders via radio explaining nature of accident / injury
- Inform Ardmore Site Manager of the accident
- First Aider to attend the IP and make assessment of injury and treat at scene if possible
- Where possible remove from works area to welfare area and treat as required – where required specific rescue lifting equipment can be used to move injured person (on advice from First Aider)
- Ardmore Site Manager to summon the emergency services where required.
- First Aider to remain with the IP until emergency services arrive and take control of situation
- Ardmore HSEQ team, Contract Manager, Project Manager and Client to be informed by Ardmore Site Manager so relevant investigation can be completed

Accidents Only

Ardmore Site Manager to undertake the following:

- Cordon off area of accident to prevent unauthorised access
- Collect witness details
- Complete Incident Notification Form (INF)

NOTE: Where RPE / PPE is causing additional discomfort or an inability to treat these will be removed

Incident i.e. damage

- Prevent access to work area
- Summon the Ardmore Site Manager/project Manager
- Assess damage where safe to do so
- Inform client /property Manager (if applicable)
- Ardmore Site Manager to summon the emergency services where required
- Complete Incident Notification Form (INF)
- Notify Ardmore HSEQ team and Construction Director

Equipment

- First aid kits and burns kits where applicable (i.e. where hot-works are being undertaken)
- Eyewash stations
- Defibrillator (on projects with more than 80 operatives)
- Site radios
- Stretcher

PPE

- Disposable gloves for First Aiders

Responsibilities

First Aider

- Ensure first aid kits are stocked and checked
- Confirm emergency equipment, i.e. stretcher, is provided as required and is fit for purpose

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure suitable numbers of First Aiders are available daily
- Provide Emergency services with relevant COSHH/SDS for any substances
- Inform Ardmore management (HSEQ team, Construction Director, etc.)
- Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Emergency Response Plan TBC002			
FIRE			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

A fire alarm (false or real) within the site / workplace

Activation

- Continuous sounding of air horn / klaxon
- Activation of fire alarm (hard wired / WES system)
- Visible smoke / flames

Ardmore Response

ON DISCOVERING A FIRE

- Immediately sound the nearest fire alarm and make those around you aware of the fire
- If trained and safe to do so attempt to tackle the fire using the nearest fire extinguisher
- If the fire cannot be contained leave the area by the nearest available exit, closing any doors as you leave
- Make your way to the fire assembly point (TRAVIS PERKINS) and complete roll call
- Report the location of the fire to the Ardmore Site Manager
- Ardmore Site Manager to summon emergency services to attend site
- Ardmore Site Manager to undertake roll call
- Ardmore Site Manager to liaise with emergency services when they attend site
- Ardmore Site Manager to inform management (HSEQ team, Construction Director, Operations Director, etc.)
- Ardmore Site Manager to complete Incident Notification Form (INF)

ON HEARING THE FIRE ALARM

- Safely stop works and leave the area in an orderly manner
- Make your way to the fire assembly point (TRAVIS PERKINS) and complete roll call
- Ardmore Site Manager to arrange fire marshals to complete sweep of areas to find source of alarm if not confirmed as a fire (two man teams to be in constant radio contact) using [**Channel TBC]**
- Fire marshals to confirm nature of alarm (false or real), once confirmed Ardmore Site Manager to inform Ardmore HSEQ team on outcome

- **Once alarm has been confirmed as a genuine fire follow the procedures detailed above**

OUT OF HOURS ACTIVATION

- Ardmore Security to summon the emergency services
- Ardmore Security to **CALL** Ardmore Site Manager On [TBC]
- Ardmore security to evacuate to the assembly point located at **TRAVIS PERKINS**
- Remain at fire assembly point and assist fire services as required

Equipment

- Site Fire Alarm System
- Air horns / klaxons
- Site radios
- Site register (for roll call)

PPE

- No additional PPE required

Responsibilities

Fire Wardens / Marshals

- Ensure fire points are established on each floor as required
- Complete weekly checks of all fire points
- Complete sweep of building (in pairs) during alarm (not a confirmed fire)

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure Fire risk assessment is kept up to date
- Complete Fire drills (every 3 months and within the first 6 weeks following site set up)
- Complete roll call in the event of an evacuation

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Security Team (Out of Hours)

- Summon fire services
- Communicate out of hours alarm (confirm fire to Ardmore Site Manager / nominated deputy)

Name	Sign	Date

Emergency Response Plan TBC003			
SERVICE STRIKE			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

During excavation works a service is disturbed

Activation

- Accidental damage to a known LIVE service
- Discovery of an unknown service (Live or Isolated)
- Isolated service found to be LIVE

Ardmore Response

Disruption to Thames Water Assets

An existing middle level sewer runs adjacent to the Plot B&C site. The sewer is separated from the proposed Plot B&C site by an existing contiguous piled wall, which forms the northern most retaining wall of the Plot B&C basement.

A 600mm diameter sewer sits to the South West of the site. The client team has agreed to undertake a condition survey of the 600dia connection sewer after construction works and repair undertake such remedial works as may be required as a result of the Works to Thames Water's satisfaction.

The sub-structure around the sewer, including the contiguous piled wall between both plots has been carried out as part of the Pot A works (carried out under a separate Planning Consent (2017/5497/P) and separate approved Piling Method Statement (2020/4315/P)).

During the piling works for Plot B&C real-time vibration monitoring will be provided, with monitors installed as close to the sewer alignment as possible. Proposed monitoring locations are shown at Appendix 01.

ECL has been appointed by the enabling works contractor as the monitoring co-ordinator. They will be fully conversant with the Monitoring Action Plan (MAP) required for monitoring the ground movements relating to the existing third-party assets (TW) during the works. **The monitoring co-ordinator will be required to review any movement & vibration events of a trigger level breach and follow agreed actions according to the MAP.**

Trigger levels:

Colour	VIVRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)	ACTION
Green	<5	- No action required
AMBER	5 – 6	- Inform client & Thames Water that green trigger exceeded. Issue daily reports (where practical) to interested parties.
RED	>7.5	- Inform TWUL and all parties immediately. Stop all site works. Issue reports within 24 hours to all interested parties.

The following contacts should be included as relevant to be contacted in case of an emergency:

- Thames Water 24-hour service number on 0800 316 9800
- Waste Operational Control Centre on 0800 009 3908
- Clean Water Network Management Centre on 0800 009 3909

In the event of a failure of a Thames Water Asset, the client team will review remedial actions with Thames Water and, where appropriate, provide overpumping to maintain continuity.

Granary Street and St Pancras Way Highway & Pavements proposed trigger limits.

Movement	CATEGORY	ACTION
0mm-15mm	Green	- No action required
15mm-25mm	AMBER	- Inform client & Thames Water that green trigger exceeded - Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>25mm	RED	- Inform client & Thames Water immediately - All works are to stop immediately - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

Note that a 150mm dia. sewer in Granary St. has been surveyed by TW team recently and confirmed to be redundant with no active connections. However, the maximum predicted displacement at 150mm granary street sewer is approximately 17mm therefore the red trigger for pavement studs along this asset will be set at 20mm (within 1.5x predicted). This will be also in line with the highways limiting criteria.

Preliminary Maximum vertical or horizontal displacement limits between adjacent sets of datum points.

Typically, green trigger levels are the predicted and/or permitted movement, amber being between x1.2 and x1.5 the predicted movement, and red exceeding x1.5 the predicted movement. Red triggers representing the predicted or estimated unacceptable limit of movement, e.g., For party walls red is considered an unacceptable limit the movements which will produce a Building Damage Category 2.

The proposed minimum monitoring frequency to be undertaken is as follow:

- Weekly - Baseline reading for a minimum 2 to 3 weeks prior to any commencement below ground works. Vibration monitoring has been installed on top of the Canal RC capping beam prior to demolition works. We would also recommend that pavement precise studs are installed along the Granary Street prior hard demolition of Plot C or prior construction works to the ORIEL project.
- Weekly – During piling works.
- Weekly –Inclinometer readings during piling and including basement excavation works. This also includes during temporary props removals.
- Weekly – During the basement construction up to ground floor slab.
- Monthly – During the construction of the super-structures provided that the targets are still accessible.

The monitoring specialist awarded the work should provide method statements for all instrumentation. proposed, detailing installation and monitoring techniques for each. This should include confirmation. of manual and remote monitoring frequencies and dates from when regular monitoring reports will be issued.

Reports should include a comprehensive monitoring data including graphical presentation of the results. obtained from the readings.

The reports produced by the monitoring contractor should be forwarded to all interested 3rd parties. at the end of each working week (unless trigger limits are breached or agreed otherwise with 3rd parties).

If people are to work around TW assets they are to have the following :

- PTW as relevant for water mains
- TWOSA as relevant for sewers

Post Completion Surveys

The client team are happy to commit to survey work following construction to check the condition of the sewers immediately adjacent to the site and undertake such remedial works as may be required to Thames Water's satisfaction.

Electrical Services

- Immediately stop works and evacuate the area
- If discovery is by an individual (not plant) remove this person from the area if injured (following the steps set out below if safe to do so)
- Isolate the service if possible
- Use a wooden pole to remove service away from IP
- Remove IP from the area for treatment

- Cordon off the area and request Ardmore Site Manager to attend via radio
- Ardmore Site Manager to inform service provider to attend area and inspect service to ascertain if LIVE (if in doubt)
- Undertake further tests to confirm if the service is LIVE – until such confirmation has been completed no further works will commence
- Service provider to arrange suitable repair to service
- Following suitable confirmation / isolation further tests (CAT/GENNY) will be completed to trace and mark out the discovered service
- **Ardmore Site Manager to undertake the following:**
- Complete Incident Notification Form
- Inform Construction Director, Project Manager and Client
- Inform HSEQ team to initiate investigation
- Arrange for a temporary supply (if affecting other users i.e. members of the public / site works)

Gas Services

- Immediately stop works and evacuate the area
- All plant and equipment to be turned off and keys removed
- Cordon off the works area and prevent further access
- Inform Ardmore Site Manager of the incident and await further instructions
- Ardmore Site Manager will inform service provider of incident and request their attendance to the works location
- Service provider and Ardmore site teams to work to isolate the service
- No further works to be completed until required repair has been completed by specialist contractor / Utilities provider
- Following suitable confirmation / isolation further tests (CAT/GENNY) will be completed to trace the discovered service
- **Ardmore Site Manager to undertake the following:**
- Complete Incident Notification Form
- Inform Construction Director, Project Manager and Client
- Inform HSEQ team to initiate investigation
- Arrange for a temporary supply (if affecting other users i.e. members of the public)

Other Services

- Immediately stop works, raise the alarm and evacuate the area.
- Inform Ardmore Site Manager about discovery or damage to services.
- Ardmore Site Manager to inspect work area to ascertain type of service discovered / damaged.
- Ardmore Site Manager to inform service provider of service strike and seek their assistance.
- Where required liaise with service provider to secure isolation of service (e.g. Thames Water, UKPN, Cadent etc.) and/or initiate an emergency response.

- **Hold Point:** The Ardmore PM will initiate an appropriate and co-ordinated emergency response.
- Following suitable confirmation / isolation further tests (CAT/GENNY) will be completed to trace the discovered service as required.
- **Ardmore Site Manager to undertake the following:**
- Complete Incident Notification Form (INF)
- Inform Construction Director, Project Manager and Client
- Inform HSEQ team to initiate investigation
- Arrange for a temporary supply (if affecting other users i.e. members of the public)

NOTE: If damage occurs to a known service then Ardmore will be responsible for ensuring all incoming supplies are checked / isolated prior to seeking assistance from the service provider.

Responsibilities

Ardmore Site Manager *(or nominated deputy)*

- Investigate all reported service strikes / discoveries
- Report service strikes to:
  - Service provider
  - Emergency Services (If Required)
  - Construction Director
  - Project Manager
  - HSEQ Team
  - Client
- Ensure all discovered services are further surveyed and marked on-site
- Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Emergency Response Plan TBC004			
WORK AT HEIGHT			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

An accident or incident involving personnel working at height

Activation

- Accident / incident whilst undertaking works at height
- Suspension trauma when working in a harness

Ardmore Response

Work at Height Injury / Incident

- Immediately raise the alarm and request the attendance of the Ardmore First Aiders and Ardmore Site Manager to assess the situation
- Stop works and ensure clear access to works area
- In the event that the IP is able to move unassisted, relocate IP to ground level
- Ensure the IP is kept comfortable and given treatment as required
- Where the IP needs assistance to be moved from the Work at Height location they will be relocated to floor level, via the below methods:
  - **Podium;** Where possible the IP will be moved by hand to the floor level to received further treatment
  - **Mobile tower;** A MEWP will be used to provide access to the platform height, the IP will then be moved in to the MEWP and lowered to ground level
  - **MEWP; If** working alone on the MEWP then the ground controls will be used to lower the platform to floor level. **In the event that the ground controls fail then a MEWP to MEWP rescue will be undertaken, this type of rescue should only be considered in exceptional circumstances and only after:**
  - All normal and auxiliary lowering procedures have been attempted and these are unable to lower the platform
  - Ardmore Site Management have contacted the competent and authorised service engineer to report failure of normal and auxiliary lowering systems and request engineering assistance
  - If after inspection by the competent engineering assistance it is not possible to affect a timely repair to allow the machine to be brought to the ground safely, senior management should be contacted for permission to carry out mid-air rescue
  - Where the competent engineering assistance is not readily available and an immediate risk exists to the health and safety of any of the occupants from remaining in the elevated basket until an engineer can attend, then senior management should be contacted for permission to carry out mid-air rescue

- Rescue using another MEWP should only be performed once a site-specific dynamic risk assessment has been carried out and a specific plan has been documented and approved by senior management
- The rescue machine must be positioned to enable the rescue procedure to be carried out without compromising the safety of any personnel involved
- The platforms of both machines must be adjacent to each other with a minimal gap between them, unless exceptional circumstances mean this is not possible (Where this is not possible, the circumstances shall be recorded onto the risk assessment)
- Where reasonably practicable, precautions should be taken to prevent inadvertent movement of both platforms during the transfer
- The person being rescued (transferred from basket to basket) should wear a full body harness with an adjustable lanyard –the lanyard should be attached to the anchor point on the rescue machine before transfer takes place
- Care must be taken not to overload the rescue machine during transfer, this may mean making more than one journey to complete the rescue
- Further guidance on mid-air rescue can be found in ISO 18893:2014 -6.1.2.8 http://www.iso.org/iso/catalogue_detail.htm?csnumber=59976

- As with all accidents / incidents the Ardmore Site Manager will request the attendance of the emergency services (as required)
- Ardmore Site Manager to inform Ardmore HSEQ team of the incident so a full investigation can be completed
- No further Work at Height to be completed until review by Ardmore HSEQ team has been completed
- **Ardmore Site Manager to undertake the following:**
- Complete Incident Notification Form (INF)
- Inform Construction Director, Project Manager and Client
- Inform Ardmore HSEQ team to initiate investigation

Suspension Trauma (Whilst Using a Fall Arrest Harness)

- Immediately raise the alarm and request the attendance of the Ardmore First Aiders and Ardmore Site Manager
- **If there are sufficient numbers of personnel on-site then the following shall apply:**
- **MEWP Rescue - If an elevating work platform (EWP) is available on site and the suspended worker can be reached by the platform, follow the procedure below:**
  - Bring the MEWP to the accident site and use it to reach the suspended worker
  - Ensure that rescue workers are wearing full-body harnesses attached to appropriate anchors in the MEWP
  - Ensure that the MEWP has the load capacity for both the rescuer(s) and the fallen worker. If the fallen worker is not conscious, two rescuers will probably be needed to safely handle the weight of the fallen worker
  - Position the MEWP platform below the worker and disconnect the worker's lanyard when it is safe to do so. When the worker is safely on the MEWP, reattach the lanyard to an appropriate anchor point on the MEWP if possible
  - Lower the worker to a safe location, First Aiders to treat the worker for suspension trauma and any other injury
  - Arrange transportation to hospital if required

Ladder Rescue - If a MEWP is not available, use ladders to rescue the fallen worker with the procedure outlined below:

- If the fallen worker is suspended from a lifeline, move the worker (if possible) to an area that rescuers can access safely with a ladder
- Set up the appropriate ladder(s) to reach the fallen worker
- Rig separate lifelines for rescuers to use while carrying out the rescue from the ladder(s)
- If the fallen worker is not conscious or cannot reliably help with the rescue, a minimum of two rescuers will be required
- If the fallen worker is suspended directly from a lanyard or a lifeline, securely attach a separate lowering line to the harness
- Other rescuers on the ground (or closest work surface) should lower the fallen worker while the rescuer on the ladder guides the fallen worker to the ground (or work surface)
- Once the fallen worker has been brought to a safe location, First Aiders to treat the person for suspension trauma and any other injury
- Arrange transportation to hospital if required

Rescue from Work Area or Ground Level:

- Ensure that rescuers are protected against falling
- If possible, securely attach a second line to the fallen worker's harness to help rescuers pull the fallen worker to a safe area
- Take up any slack in the retrieving line to avoid slippage
- Once the worker has been brought to a safe location, First Aiders to treat the person for suspension trauma and any other injury
- Arrange transportation to hospital if required

- **If there are limited number of personnel on site then the following shall apply:**
  - Collect GOTCHA rescue kit from
  - Complete rescue to a point of safety
  - First Aiders to attend the suspended person, once rescued and treat as required
  - Arrange for transportation to hospital if required

Man-Riding Basket Rescue (where there is a suitable crane onsite)

- **The man riding rescue cradle must:**
  - Be designed by a professional engineer in accordance with good manufacturing processes to withstand all loads to which it may be subjected
  - Must be kept on site at all times in an accessible location where it is clear of material or other equipment
  - Be fitted with appropriate rigging for quick hook-up by the crane operator
- **To perform a man-riding cradle rescue, follow the steps below:**
  - Notify the crane operator immediately to position the crane to attach the cradle
  - While the cradle is being attached, the rescue crew leader checks that all safety rigging is done and all the required safety equipment is available

- With two rescuers in the cradle, hoist it to a position that is above and as close as possible to the fallen worker (where possible a designated worker on the ground should guide the cradle with a tag line)
- Rescuer 1 exits the rescue cradle and gets into a position to reach the fallen worker, when doing this, rescuer 1 must be tied-off at all times to either the structure or the rescue cradle
- Rescuer 2, who is still in the rescue cradle, lowers the line that will be used to retrieve the worker, rescuer 2 attaches an extra lanyard to the line if required
- Rescuer 1 assesses the fallen worker for injuries and then decides how to proceed (i.e., treat injuries first, guide the fallen worker into the rescue cradle, or lower the cradle to the ground with the fallen worker attached to it).
- Once the fallen worker has been brought to a safe location First Aiders to treat the person for suspension trauma and any other injury
- Arrange transportation to hospital

- Ardmore Site Manager to inform the Ardmore HSEQ team and request Emergency services attend site to assess the rescued person
- No further works involving harnesses will be permitted until a review of the SSOW / RAs has been completed by the Ardmore HSEQ team

NOTE: Any person who has suffered a suspension fall MUST be assessed by Emergency services given the follow on medical risks

Equipment

- First Aid kits
- GOTCHA Rescue kits
- Harness / lanyard
- MEWPS
- Ladders
- Man-riding rescue cradle

PPE

- Harness and lanyard (as required)

Responsibilities

First Aiders

- Assist in the rescue of the suspended person
- Assist in the rescue of any IP using Work at Height equipment
- Ensure First Aid kits are available and stocked

Name	Sign	Date

Ardmore Site Manager *(or nominated deputy)*

- Ensure GOTCHA kit is available when undertaking harness works (as required)
- Ensure rescue procedure is known by all staff involved in Work at Height equipment
- Ensure MEWPS are available for rescue in Work at Height areas (as required)
- Request attendance of the emergency services
- Notify Ardmore HSEQ team, Construction Director, Project Manager and Client of incident Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date
	R.son	

Emergency Response Plan TBC005			
EXCAVATIONS			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

- Operative injured / experiencing medical emergency whilst working within an excavation and able to self-rescue
- Operative injured / experiencing medical emergency whilst working within an excavation and requires rescue by others
- Incident occurring outside the excavation requiring the excavation to be evacuated by all persons within
- Incident occurring inside the excavation requiring the excavation to be evacuated by all persons within
- Personnel trapped by excavation collapse

Activation

- Accident leading to injury
- Person experiencing medical emergency
- Excavation collapse
- Fire / explosion
- Ingress of liquid
- Ingress of free flowing solid
- Ingress of poisonous gas, fumes or vapour
- Oxygen deficiency
- Oxygen enrichment

Ardmore Response

Operative Self Rescue Following Injury or Medical Emergency

- Operative shall stop work immediately and vacate the excavation
- Upon vacating the excavation the operative shall summon Ardmore First Aiders explaining the nature of the injury / medical emergency
- Inform Ardmore Site Manager or nominated deputy of the injury / medical emergency
- First Aider to attend the IP and make assessment of injury / medical emergency

Excavation Rescue by Others Following Injury or Medical Emergency

- Stop works within the Excavation and make safe for access by others
- Summon Ardmore First Aiders to undertake initial assessment of the casualty from outside of the excavation
- Inform Ardmore Site Manager or nominated deputy of the injury / medical emergency
- In the event that it is deemed safe to do so, Ardmore First Aider to enter the excavation and treat the casualty
- First Aider to assist the casualty to exit the excavation if possible
- Where required rescue specific lifting equipment can be used to move the casualty (on advice from First Aider) :
  - If not already wearing a harness casualty to be fitted with a rescue specific harness (i.e. no leg straps)
  - Harness to be attached to excavator lifting point by a suitable means
  - Casualty to be lifted carefully from excavation using the excavator
- In the event that it is deemed unsafe for the Ardmore First Aider to enter the excavation to treat the casualty and the casualty is wearing a harness, consideration should be given as to whether the casualty can be removed safely from the excavation for treatment using an excavator as described above
- If following the initial assessment it is deemed to be too dangerous for the First Aider to enter the excavation and the injuries / condition of the casualty are considered to be too severe for them to be moved, the Emergency Services shall be summoned by the Ardmore Site Manager or nominated deputy
- **NOTE: The Emergency Services should not be solely relied upon to effect a rescue and a suitable and sufficient risk assessment which takes into account the hazards inherent to the excavation and suitable means of access/egress shall be undertaken prior to the commencement of any works.**

Evacuation following an incident outside the excavation

- All operatives shall stop work immediately once the alarm has been raised
- All tools and equipment shall be switched off/made safe
- All operatives to put on re-breathers (if applicable)
- All operatives shall vacate the excavation following the procedure set out in the emergency evacuation plan
- Upon vacation of the excavation a role call shall be undertaken by the supervisor using the entry/exit tally system on the excavation entry permit.
- Once it has been established that all operatives have vacated the excavation, all operatives shall then proceed to the emergency assembly point Travis Perkins where a further role call shall be undertaken by the Site Manager
- Site Manager to summon emergency services should they be required and inform Ardmore HSEQ team
- All personnel shall remain at the assembly point until such time as the all clear has been given and it is deemed safe to return to work.

Evacuation following an incident inside the excavation

- All operatives shall stop work immediately once the alarm has been raised
- All tools and equipment shall be switched off/made safe
- Operatives to put on re-breathers (if applicable)
- All operatives shall vacate the excavation
- Upon vacation of the excavation a roll call shall be undertaken by the supervisor
- Once it has been established that all operatives have vacated the excavation, all operatives shall then proceed to the emergency assembly point Travis Perkins where a further roll call shall be undertaken by the Site Manager
- Site Manager to summon emergency services should they be required and inform Ardmore HSEQ team
- All personnel shall remain at the assembly point until such time as the all clear has been given and it is deemed safe to return to work.

Personnel trapped by excavation collapse

- **Excavation collapses generally occur due to unstable soil conditions combined with improper or inadequate shoring.**
- **The potential hazard of additional collapse is an extremely high risk**
- **Removing soil or debris, adding weight near the edge of an excavation, vibration (such as vehicle movement), rain, may cause additional collapse at any time during an attempted rescue operation.**
- **UNDER NO CIRCUMSTANCES SHOULD A RESCUE BE ATTEMPTED, IN THIS INSTANCE IT IS IMPERATIVE THAT THE EMERGENCY SERVICES BE SOLEY RELIED UPON TO EFFECT A RESCUE/RECOVERY.**
- Inform Ardmore Site Manager or nominated deputy of the excavation collapse
- Ardmore Site Manager to summon the emergency services
- All vehicles to be switched off and the keys removed
- An exclusion zone to be set up around the area of excavation collapse
- Ardmore Site Manager to liaise with the emergency services upon arrival

Equipment

- First Aid kits (standard and burns kits)
- Re-breathers
- Gas monitor
- Harness and lanyard (if applicable)
- Tripod and winch (if applicable)
- Site radios
- Emergency intrinsically safe lighting
- Stretcher

PPE

- Disposable gloves for First Aiders
- Breathing apparatus (if applicable)

Responsibilities

First Aider

- Ensure First Aid kits are stocked and checked
- Ensure emergency rescue equipment is maintained and in full working order at all times

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure an Emergency Evacuation Plan is developed
- Ensure suitable numbers of First Aiders are available daily (minimum 2no)
- Inform Ardmore HSEQ team of request for emergency services to attend site
- Provide emergency services with relevant information
- Inform Ardmore HSEQ team of incident
- Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Supervisor

- Ensure emergency evacuation procedure is followed

- Undertake roll call upon evacuation of the excavation using the entry/exit tally system on the Excavation Entry Permit

Name	Sign	Date

Emergency Response Plan TBC006			
CONFINED SPACE EMERGENCY			
Job Ref		Site	Tribeca – 6 St Pancras Way
Date		Reviewed by	

Description

- Operative injured/experiencing medical emergency whilst working within a confined space and able to self-rescue.
- Operative injured/experiencing medical emergency whilst working within a confined space and requires rescue by others.
- Incident occurring outside the confined space requiring the confined space to be evacuated by all persons within.
- Incident occurring inside the confined space requiring the confined space to be evacuated by all persons within.

Activation

- Accident leading to person injury
- Person experiencing medical emergency
- Fire/explosion
- Ingress of liquid
- Ingress of free flowing solid
- Ingress of poisonous gas, fume or vapour
- Oxygen deficiency
- Oxygen enrichment
- Failure of lock-out/tag-out system

Ardmore Response

Prior to undertaking any of the procedures detailed within this Emergency Response Plan, Ardmore Site Management MUST undertake a dynamic risk assessment which shall give consideration to whether attendance by the emergency services is required.

Operative Self Rescue Following Injury or Medical Emergency

- Operative shall stop work immediately and vacate the confined space
- Upon vacating the confined space the operative shall summon Ardmore First Aiders explaining the nature of the injury/medical emergency
- Inform Ardmore Site Manager or nominated deputy of the injury/medical emergency

- Site Manager to inform Ardmore HSEQ team
- First Aider to attend the IP and make assessment of injury/medical emergency

Confined Space Rescue by Others Following Injury or Medical Emergency

- Stop works within the confined space and make safe for access by others
- Summon Ardmore First aiders
- If safe to do so the IP should be removed from the confined space for initial assessment and treatment by the First Aiders aider
- In the event that it is not safe to remove the IP or their injuries are considered to be too severe for them to be moved, First Aider to enter the confined space to undertake initial assessment and treat the IP.
- Inform Ardmore Site Manager or nominated deputy of the injury/medical emergency
- Where required rescue specific lifting equipment can be used to move the IP (on advice from First Aider) :
  - If not already wearing a harness IP to be fitted with a rescue specific harness (i.e. no leg straps)
  - Harness to be attached to rescue winch
  - IP to be lifted carefully from excavation using the rescue winch
- In the event that it is deemed unsafe for the Ardmore First Aider to enter the confined space to treat the IP and the IP is wearing a harness, consideration should be given as to whether the IP can be removed safely from the excavation for treatment using the rescue winch as described above.
- If following the initial assessment it is deemed to be too dangerous for the First Aider to enter the confined space and the injuries/condition of the IP are considered to be too severe for them to be moved, the Emergency Services shall be summoned by the Ardmore Site Manager or nominated deputy
- **NOTE: The Emergency Services should not be solely relied upon to effect a rescue and suitable and sufficient risk assessment which takes into account the hazards inherent to the confined space and suitable means of access/egress shall be undertaken prior to the commencement of any works.**

Evacuation following an incident outside the confined space

- All operatives shall stop work immediately once the alarm has been raised
- All tools and equipment shall be switched off/made safe
- All operatives to put on re-breathers (if applicable)
- All operatives shall vacate the confined space
- Upon vacation of the confined space a roll call shall be undertaken by the supervisor using the entry/exit tally system on the confined space entry permit.
- Once it has been established that all operatives have vacated the confined space, all operatives shall then proceed to the emergency assembly point Travis Perkins where a further roll call shall be undertaken by the Site Manager
- Site Manager to summon emergency services should they be required and inform Ardmore HSEQ team

- All personnel shall remain at the assembly point until such time as the all clear has been given and it is deemed safe to return to work.

Evacuation following an incident inside the confined space

- All operatives shall stop work immediately once the alarm has been raised
- All tools and equipment shall be switched off/made safe
- Operatives to put on re-breathers (if applicable)
- All operatives shall vacate the confined space following the procedure set out in the emergency evacuation plan
- Upon vacation of the confined space a role call shall be undertaken by the supervisor using the entry/exit tally system on the confined space entry permit.
- Once it has been established that all operatives have vacated the confined space, all operatives shall then proceed to the emergency assembly point Travis Perkins where a further role call shall be undertaken by the Site Manager
- All personnel shall remain at the assembly point until such time as the all clear has been given and it is deemed safe to return to work.

Equipment

- First Aid kits (standard and burns kits)
- Re-breathers
- Gas monitor
- Harness and lanyard (if applicable)
- Tripod and winch (if applicable)
- Site radios
- Emergency intrinsically safe lighting
- Stretcher

PPE

- Disposable gloves for First Aiders
- Breathing apparatus (if applicable)

Responsibilities

First Aider

- Ensure First Aid kits are stocked and checked
- Confirm emergency rescue equipment is maintained and in full working order at all times

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure a suitable and sufficient Confined Space Risk Assessment is undertaken
- Ensure an Emergency Evacuation Plan is developed
- Ensure suitable numbers of First Aiders are available daily (minimum 2no)
- Inform Ardmore HSEQ team of request for emergency services to attend site
- Provide Emergency services with relevant information
- Inform Ardmore HSEQ team of incident
- Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Supervisor

- Ensure emergency evacuation procedure is followed
- Undertake roll call upon evacuation of the confined space using the entry/exit tally system on the confined space entry permit

Name	Sign	Date

Emergency Response Plan TBC007			
SPILL OF HAZARDOUS LIQUID(S)			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

A spill of any oil or chemical within the Ardmore controlled zone

Uncontrolled spills that have the potential to cause Environmental Damage both locally (internally / externally) and to the further site / environment

Activation

- Release of stored hazardous liquid
- Spill of chemicals used in work processes
- Failure of hydraulic hose on site plant (e.g. excavators etc.)
- Spill of fuel (not contained by drip tray / plant nappy)

Ardmore Response

Spill of Hazardous Chemical/Substance, Failure of Hydraulic hose / Fuel Spillage

- Source of spill / leak will be isolated
- Plant / refuelling will be stopped and isolated
- Sources of ignition will be isolated / removed
- Local spill kits will be used to contain / absorb any immediate spills, use containers / absorbent materials to collect / contain liquids
- Due care will be paid to ensure any local drains etc. will be protected with absorbent materials / matting to prevent ingress of contaminants
- Any remaining contents will be removed from damaged containers prior to their removal for disposal / repair
- Persons NOT involved in the clean-up will leave the area
- Gas monitoring will be undertaken during all clean up works (where required)
- Ardmore Site Manager to be informed
- Once contained the absorbent materials will be collected and removed as contaminated waste via the appropriate waste bin
- As part of the clean up the contaminated spill kits will be disposed of as hazardous waste, any contaminated hardstanding / soil will also be removed and disposed of
- Local interceptors will be checked where any spills are of a size that could affect drainage

NOTE (A): Where spill affects personnel (e.g. splashes to skin / eyes) the affected person will be removed to the welfare area and decontaminated under the supervision of the First Aider.

NOTE (B): WHERE A SPILL OCCURS OF A SIZE THAT LEADS TO THE CONTAMINATION OF ANY DRAIN OR PERMEABLE SURFACE (E.G. HARDSTANDING / SOIL) ERITH ENVIRONMENTAL MANAGER WILL BE INFORMED BY ERITH SITE MANAGER

Equipment

- Spill kits
- Waste containers
- Gas monitoring equipment

PPE

- Disposable coveralls
- Nitrile gloves
- Eye protection

Responsibilities

Spill Team

- Contain all spillages effectively
- Dispose of contaminated materials / PPE accordingly

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure spill kits are established in all required areas
- Report any required spillages to Ardmore Safety / Environmental Manager
- Ensure waste materials are correctly disposed of
- Complete Incident Notification form (INF)
- Inform Construction Director, Project Manager and Client

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

Emergency Response Plan TBC008			
STRUCTURAL COLLAPSE			
Job Ref		Site	Tribeca - 6 St Pancras Way
Date		Reviewed by	

Description

- Partial structural collapse of structure
- Complete collapse of structure
- Personnel trapped by partial / complete collapse of structure
- Damage to or the undermining of a structure which renders it unsafe

Activation

- Partial collapse of structure
- Complete collapse of structure
- Damage to or the undermining of a structure which renders it unsafe

Ardmore Response

Partial or Complete Collapse of Structure

- All operatives shall stop work immediately once the alarm has been raised by continuous sounding of air horn
- All vehicles to be backed away from the collapse, switched off and the keys removed
- All operatives shall vacate the structure / area via the nearest available exit
- An exclusion zone to be set up around the area of structural collapse to prevent any unauthorised re-entry
- Ardmore Site Manager to contact service providers should any live service require isolation
- Site Manager to contact the HSEQ team, Construction Director, Project Manager and Client
- Once the structure has been vacated, all operatives shall then proceed to the emergency assembly point located at Travis Perkins where a role call shall be undertaken by the Site Manager to establish that no-one is trapped within the collapsed structure
- In the event that it is found that persons are trapped within the collapsed structure please refer to **Persons Trapped by Partial or Complete Collapse of Structure**, as set out below.
- First Aiders to treat any injured personnel

Persons Trapped by Partial Collapse or Complete Collapse of Structure

- **Prior to any rescue attempt it is imperative that the emergency services are summoned and a structural engineer consulted**

- **Efforts to rescue casualties from a collapsed structure may expose potential rescuers to greater danger than that faced by those trapped within the structure.**
- **Any attempt to assist / rescue trapped personnel should only be undertaken where the risk to those undertaking the rescue is considered to be proportionate to the likelihood of effecting a successful rescue, following a suitable and sufficient dynamic risk assessment being undertaken prior the attempt being made, which should give consideration to the following:**
  - **Is the persons location known**
  - **Can the person be communicated with**
  - **Is potential for further collapse of any residual structure**
  - **Is there potential risk posed from any other nearby structure**
  - **Is there potential risk posed by live services (i.e. gas explosion)**

Damage to or the Undermining of a Structure which renders it Unsafe

- All personnel shall stop work immediately
- All tools and equipment shall be switched off/made safe
- All personnel shall vacate the structure via the nearest available exit
- All vehicles shall be removed from the area (if safe to do so), switched off and the keys removed
- An exclusion zone shall be set up to prevent unauthorised persons re-entering the structure and the immediate surrounding area
- Site Manager to contact the HSEQ team, Construction Director, Project Manager and Client
- Site Manager to complete Incident Notification Form (INF)
- A structural engineer shall be consulted to ascertain the safest method of making the structure stable
- Remedial works to render the structure stable shall be undertaken by competent persons following the method prescribed by the structural engineer
- Investigation to be undertaken by HSEQ team

Equipment

- First Aid kits (standard and burns kits)
- Site radios
- Stretcher

PPE

- Disposable gloves for First Aiders

Responsibilities

First Aiders

- Ensure First Aid kits are stocked and checked

- Treat injured personnel

Name	Sign	Date

Site Manager *(or nominated deputy)*

- Ensure suitable numbers of First Aiders are available daily (as required)
- Inform Ardmore HSEQ team, Construction Director, Project Manager and Client of request for emergency services to attend site
- Provide Emergency services with relevant information
- Complete Incident Notification Form (INF)

Name	Sign	Date

Nominated Deputy

Name	Sign	Date

5 Post Incident Actions

The following guidelines are to be used following any incident to ensure a complete approach to any incident, the timeframes are used to assist in prioritisation. Much of the below will be dependent on the type and severity of incident. For significant incidents Ardmore will ensure suitable additional resources are onsite to assist with investigations / client and authority interface and close out of any remedial actions both onsite and relating to Erith as a corporate body.

24 Hours

- Complete Incident Notification Form
- Ensure client is fully informed
- Liaise / update authorities (HSE/ EA) (where incident requires this)
- Ensure incident location is secured
- Photographs of incident area / IP (injured Party) / Damaged plant / Equipment (as required)
- Initial witness statements completed
- All initial remedial actions completed to make the area safe (where safe to do so)
- Inform site staff if there is a break in site activities as a result of the incident
- Request assistance in investigation
- Follow up with IP on condition

3 Days

- Undertake detailed site incident investigation (where required)
- Review CCTV footage and ensure any footage can be viewed remotely
- Review current site documents (RAMS etc) to check for compliance / suitability
- Update client
- Liaise with Principal Designer (as required) as part of the investigation
- Ensure all required remedial actions are in place (for minor incidents) before work recommences
- Complete witness statements
- Monitor the IPs condition
- Liaise and support IPs next of kin / relations
- Undertake further remedial actions (as required)
- Instruct specialist contractors to assist in remediation works (as required)

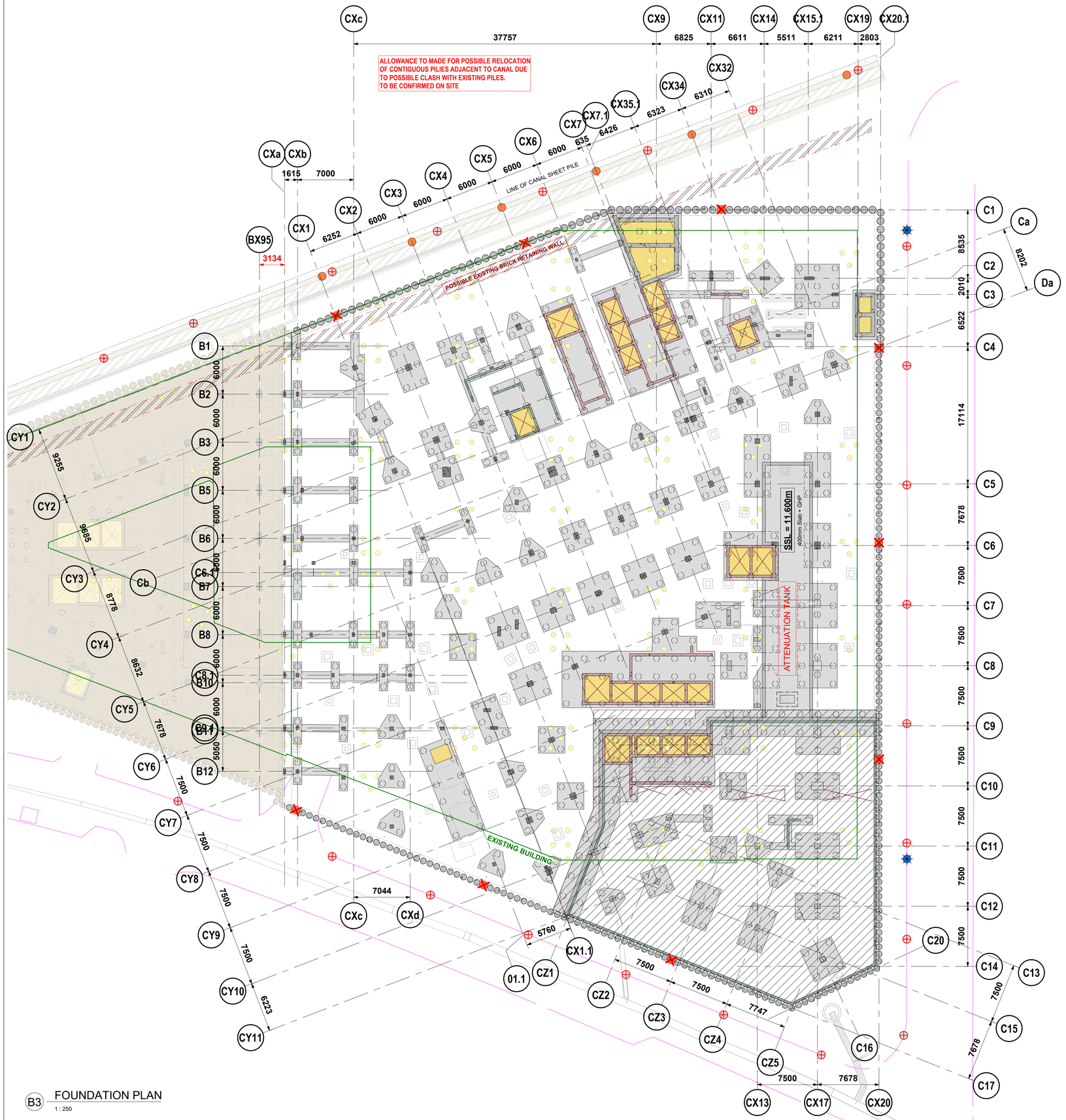
7 Days

- Complete and issue accident investigation report (to all required parties)
- Complete notification of incident to the HSE (where applicable)
- Offer support to those affected by incident (e.g. counselling etc. via health care provider – Building Health)
- Update company documents (RAMS etc)
- Issue Ardmore safety alert (as required)
- Compete all required additional surveys / inspections / safety checks
- Continue communication with IP

Ongoing

- Liaison with authorities (if required)
- Ongoing liaison with IP (if not returned to work)
- Close out of all remedial actions
- Inspection of site conditions to ensure safety standards are maintained
- Review of documents

APPENDIX 01: MONITORING LOCATIONS



B3 FOUNDATION PLAN
1 : 250

VIBRATION TRIGGER LIMITS

COLOUR	VIBRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)
GREEN	3
AMBER	5
RED	7

CONTIGUOUS PILED WALLS TRIGGER LEVELS

COLOUR	INCLINOMETERS IN PILED WALL (mm)
GREEN	0 to 27
AMBER	27 to 40
RED	>40

TRIGGER LEVELS TO ADJOINING BUILDINGS (3D EDM TARGETS LOCATIONS)

COLOUR	MOVEMENT	ACTION
GREEN	0mm - 5mm	- No action required
AMBER	5mm - 12mm	- Crack Monitoring. - Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - Implement any additional propping or change in methodology as required
RED	>12mm	- All works are to stop immediately - Crack Monitoring. - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works.

GRANARY STREET & St. PANCRAS WAY HIGHWAY & PAVEMENTS

COLOUR	PROPOSED TRIGGER LIMITS (mm)
GREEN	<15
AMBER	15 to 20
RED	>20

DEMOLITION TRIGGER LIMITS

COLOUR	VIBRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)	PRECISE LEVEL MOVEMENTS (mm)
GREEN	<5	<5
AMBER	5 to 6	5 to 8
RED	>7.5	>8

NOTES

1. DO NOT SCALE THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS, AND SERVICE'S ENGINEERS DRAWINGS & SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm).
4. WORK TO FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES TO BE REPORTED TO GD PARTNERSHIP FOR CLARIFICATION. IF IN DOUBT ASK.
5. ALL WORK TO COMPLY WITH THE RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND THE BUILDING REGULATIONS.
6. RELEVANT CONCRETE DESIGN MIX:
   - FOUNDATIONS, PILE CAPS, CAPPING BEAMS, GROUND BEAMS, SLABS, BEAMS, AND WALLS INCLUDING RETAINING WALLS: C32/40
   - COLUMNS: C40/50
7. THE CONTRACTOR SHALL ENSURE TEMPORARY LOADS ONTO THE NEW STRUCTURE SHALL BE LESS THAN THOSE WHICH IT HAS BEEN DESIGNED FOR.
8. GD PARTNERSHIP's ROLE ON THIS PROJECT IS THAT OF A 'DESIGNER' AS DEFINED BY THE CONSTRUCTION AND MANAGEMENT REQUIREMENTS.

KEY

- VIBRATION MONITORING (VIBRATION MONITORS TO BE MOVED ALONG WALL AS CONTIGUOUS WALL CONSTRUCTION PROGRESSES)
- 3D EDM TARGETS ON FACE OF RC CAPPING BEAMS
- 3D EDM TARGETS ON FACE OF RC CAPPING BEAMS & INCLINOMETER IN PILES TO TOE

  CARRY OUT CONDITION SURVEYS TO ADJACENT BUILDINGS PRIOR TO ANY WORKS COMMENCING
- PAVEMENT PRECISE STUDS @ APPROXIMATELY 10m c/c. (AVOID SITE ENTRANCE)

ALL TRIGGER LIMITS SHOWN ARE "IN PRINCIPLE" SUBJECT TO FINAL DESIGN

Rev	Date	By / Chk'd	Revision Notes
P06	30.10.23	MM / PP	TRIGGER LEVELS TO GRANARY STREET & St. PANCRAS WAY HIGHWAY & PAVEMENTS REVISED TO SUIT THAMES WATER COMMENTS
P05	02.10.23	MM / PP_RD	NOTE FOR TRIGGER LIMITS ADDED
P04	17.05.23	MM / PP_RD	DEMOLITION TRIGGER LIMITS TABLE REVISED. MONITORING POINTS UPDATED TO SUIT ERITH'S DRAWING
P03	15.05.23	RJW / RD	TRIGGER LIMITS TO THAMES WATER ASSETS ADDED.

Client: Reef Group

GD Partnership Ltd. GDP
Consulting Engineers
The Cart Lodge, Lullingstone Lane, Eynsford, Kent. DA40HZ
Tel: 01322 868622 Fax: 01322 861050
Email : contact@gdteam.co.uk

Project: **Tribeca - Plot C**

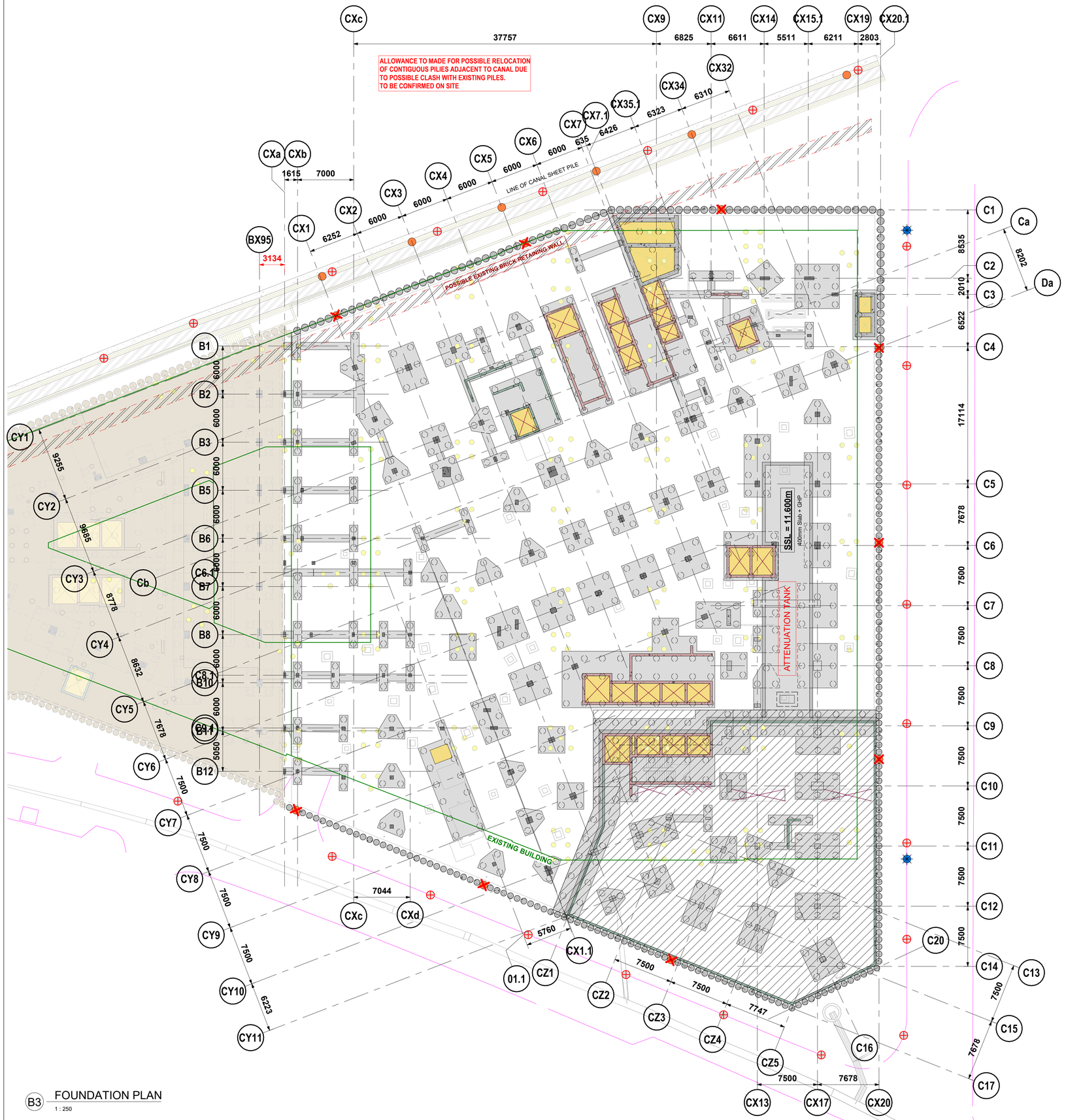
Drawing: **MONITORING STRATEGY**

Scale:	As indicated	at A1	GDP Ref:	21-131
Drawn:	RJW	Checked: YG/RD	Date:	Jan. 2023

Drawing Status:	CDE Status Code	Revision
PRELIMINARY	S2	P06

SHEET NUMBER: TRI - GDP - PC - ZZ - SK - S - 3015
Project | Originator | Zone | Level | Type | Role | Number

Autodesk Docs://TRIBECA/TRI-GDP-PC-ZZ-M3-S-0001.rvt



B3 FOUNDATION PLAN
1 : 250

VIBRATION TRIGGER LIMITS

COLOUR	VIBRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)
GREEN	3
AMBER	5
RED	7

CONTIGUOUS PILED WALLS TRIGGER LEVELS

COLOUR	INCLINOMETERS IN PILED WALL (mm)
GREEN	0 to 27
AMBER	27 to 40
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COLOUR	MOVEMENT	ACTION
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RED	>12mm	- All works are to stop immediately - Crack Monitoring. - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works.

GRANARY STREET & St. PANCRAS WAY HIGHWAY & PAVEMENTS

COLOUR	PROPOSED TRIGGER LIMITS (mm)
GREEN	<15
AMBER	15 to 20
RED	>20

DEMOLITION TRIGGER LIMITS

COLOUR	VIBRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)	PRECISE LEVEL MOVEMENTS (mm)
GREEN	<5	<5
AMBER	5 to 6	5 to 8
RED	>7.5	>8

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KEY

- VIBRATION MONITORING (VIBRATION MONITORS TO BE MOVED ALONG WALL AS CONTIGUOUS WALL CONSTRUCTION PROGRESSES)
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  CARRY OUT CONDITION SURVEYS TO ADJACENT BUILDINGS PRIOR TO ANY WORKS COMMENCING
- PAVEMENT PRECISE STUDS @ APPROXIMATELY 10m c/c. (AVOID SITE ENTRANCE)

ALL TRIGGER LIMITS SHOWN ARE "IN PRINCIPLE" SUBJECT TO FINAL DESIGN

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GD Partnership Ltd. GDP
Consulting Engineers
The Cart Lodge, Lullingstone Lane, Eynsford, Kent. DA40HZ
Tel: 01322 868622 Fax: 01322 861050
Email : contact@gdteam.co.uk

Project: **Tribeca - Plot C**

Drawing: **MONITORING STRATEGY**

Scale:	As indicated	at A1	GDP Ref:	21-131
Drawn:	RJW	Checked: YG/RD	Date:	Jan. 2023

Drawing Status:	CDE Status Code	Revision
PRELIMINARY	S2	P06

SHEET NUMBER: TRI - GDP - PC - ZZ - SK - S - 3015
Project | Originator | Zone | Level | Type | Role | Number

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APPENDIX D- Monitoring Strategy

Monitoring ground movements and adjoining buildings.

1. Conditions surveys to the Thames Water sewers had been carried out as shown on McAllister Group, Plowman Craven – St Pancras Way – dated 30th. Jan. 2019 report as shown on Appendix I.
2. A number of vibration monitoring systems are to be installed on the top of the existing CRT RC capping beam.
3. Inclinometers with 3D survey points will be installed following the demolition works, during construction and post construction. The length of time of post construction monitoring is to be agreed with all parties. The monitoring system to be installed will provide live reporting during the construction works together with trigger limits. The positions of the monitoring system are to be placed strategically on the following buildings:
    - Canal Tow Paths including Plots B and C RC capping beam monitoring - vibration and 3D EDM targets on the face of the capping beam.
    - Precise level studs on pavements/kerb lines along the Granary Street and St. Pancras Way.
    - Thames Water sewer monitoring.
4. Condition surveys will be carried out to the adjacent buildings prior to any works commencing.
5. The specification and detailed monitoring strategy will be provided by the specialist who will be carrying out the works, taking readings and manage the monitoring instrumentation for the duration of the construction works.
6. The accuracy of the standard instrumentation for total station and precise levels is +/- 0.5-2mm, which should be considered whilst reviewing monitored movements.

VIBRATION TRIGGER LIMITS.

Colour	VIVRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)	ACTION
Green	3	- No action required
AMBER	5	- Inform client & Thames Water that green trigger exceeded. Issue daily reports (where practical) to interested parties.
RED	7	- Inform client and all parties immediately. Stop all site works. Issue reports within 24 hours to all interested parties.

DEMOLITION TRIGGER LIMITS.

Colour	VIVRATION MONITORING POINT RESULTANT PEAK PARTICLE VELOCITY (mm/s)	PRECISE LEVEL MOVEMENTS (mm)	ACTION
Green	<5	<5	- No action required
AMBER	5 – 6	5 – 8	- Inform client & Thames Water that green trigger exceeded. Issue daily reports (where practical) to interested parties.
RED	>7.5	>8	- Inform TWUL and all parties immediately. Stop all site works. Issue reports within 24 hours to all interested parties.

TRIGGER LEVELS TO ADJOINING BUILDINGS.

Movement	CATEGORY	ACTION
0mm- 5mm	Green	- No action required
5mm-12mm	AMBER	- Inform client that green trigger exceeded - Crack Monitoring. - Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>12mm	RED	- Inform client immediately - All works are to stop immediately - Crack Monitoring. - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

CONTIGUOUS PILED WALLS TRIGGER LEVELS FOR PLOT B.

Movement	CATEGORY	ACTION
0mm- 23mm	Green	- No action required
23mm- 34mm	AMBER	- Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>34mm	RED	- All works are to stop immediately - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

CONTIGUOUS PILED WALLS TRIGGER LEVELS FOR PLOT C.

Movement	CATEGORY	ACTION
0mm- 27mm	Green	- No action required
27mm- 40mm	AMBER	- Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>40mm	RED	- All works are to stop immediately - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

Granary Street and St Pancras Way Highway & Pavements proposed trigger limits.

Movement	CATEGORY	ACTION
0mm-15mm	Green	- No action required
15mm-25mm	AMBER	- Inform client & Thames Water that green trigger exceeded - Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>25mm	RED	- Inform client & Thames Water immediately - All works are to stop immediately - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

Canal Wall proposed trigger limits.

Movement	CATEGORY	ACTION
0mm-22mm	Green	- No action required
22mm-33mm	AMBER	- Carry out a local structural review. - Frequency of the surveying shall increase - Preparation for the implementation of remedial measures should be required. - implement any additional propping or change in methodology as required
>33mm	RED	- All works are to stop immediately - Implement structural support as required. - Cease works with the exception of necessary works for the safety and stability of the structure and personnel. - Review monitoring data and implement revised method of works

Typically, green trigger levels are the predicted and/or permitted movement, amber being x1.5 the predicted movement, and red exceeding x1.5 the predicted movement. Red triggers representing the predicted or estimated unacceptable limit of movement, e.g., For party walls red is considered an unacceptable limit the movements which will produce a Building Damage Category 2.

Note, all trigger limits shown are *'in principle'* subject to final design.

Proposed Frequency of monitoring readings.

The proposed minimum monitoring frequency to be undertaken is as follow:

1. **Weekly** - Baseline reading for a minimum 2 to 3 weeks prior to any commencement below ground works. However, we would recommend that vibration monitoring to be installed on top of the Canal RC capping beam prior to demolition works. We would also recommend that pavement precise studs are installed along the Granary Street prior hard demolition of Plot C or prior construction works to the ORIEL project.
2. **Weekly** – During demolition works for the removal or saw cutting large beams and ground floor slab and the removal of underground obstructions or foundations.
3. **Weekly** – During piling works.
4. **Weekly** –Inclinometer readings during piling and including basement excavation works. This also includes during temporary props removals.
5. **Weekly** – During the basement construction up to ground floor slab.
6. **Monthly** – During the construction of the super-structures provided that the targets are still accessible.

The monitoring specialist awarded the work should provide method statements for all instrumentation proposed, detailing installation and monitoring techniques for each. This should include confirmation of manual and remote monitoring frequencies and dates from when regular monitoring reports will be issued.

Reports should include a comprehensive monitoring data including graphical presentation of the results obtained from the readings.

If the specified trigger limits are breached the reports produced by the monitoring contractor should be forwarded to all interested 3rd parties. The distribution list for the monitoring report should be confirmed by the main contractor.

22.03.23 - Rev. B – Revised to GMA report.

28.04.23 – Rev. C – Statements referring to reporting on monitoring results and duration added.

11.05.23 – Rev. D – Revised to TW requirements.

15.05.23 – Rev. E – Demolition trigger limit revised.

16.05.23 – Rev. F – Canal wall trigger levels added. Statement referring to 3rd parties information amended.

17.05.23 – Rev. G – Demolition trigger limits added.

02.10.23 – Rev. H – Note for trigger limits added.