

Demolition Management Plan:

Sequence for demolition and slab removal works at Cambridge Halls



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SEQUENCE AND SITE SET UP	

1. SCOPE

1. Demolition and slab removal.
2. Install perimeter sheet piling to allow site turn over 4m.
3. Grub out existing foundations/pile caps including existing piles down 4m.
4. Asbestos removal – price based on management survey to be firmed up prior to any demolition takes place when a full demolition survey is completed.
5. To install all scaffolding, access and other plant required.
6. To supply welfare and management. (fully self-sufficient). With a meeting space for meetings with ourselves and the client.
7. Temporary works that are required to support adjacent ground surrounding the site during the excavations.
8. All temporary works designs required for the works.
9. All statutory notices, local authority notices, permissions and the like are to be obtained prior to the demolition.
10. Hoarding is to be designed and provided by Graham.
11. Water supply is to be provided by Graham.
12. All the service disconnections are to be arranged by the client prior to demolition.
13. Piling platform to be designed by graham and installed on completion of the reduced level dig and turnover.
14. Surplus of muck to go off site.
15. Demolition arisings to be removed from site.

2. GENERAL

Principles and best practice

- All structures will be demolished in accordance with BS: 6187: 2011 at all times.
- Structural integrity of structures during demolition process will be maintained at all times.
- National Federation of Demolition Contractors (NFDC) good working practices and technical guides will be adhered to at all times.
- The project will be registered with the Considerate Constructor's Scheme.

Demolition notice

Section 80 Notice to be applied for at least six weeks in advance, accompanied with all the relevant information required including methodology. The authorities will then issue approval (Section 81).

Health and Safety Executive (HSE) & Construction Notice (F10)

- PPO will develop the construction phase plan as the Principal Contractor.
- The HSE will be informed by the Employer about the project via the Principal Designer.
- PPO will collate information for the H&S file to be submitted to the employer on project completion.

Services

- Where live services cannot be relocated investigation works will take place prior to demolition starting and a safe working method will be developed to ensure no service strikes happen.
- Prior to commencement of works PPO will actively engage with the client regards their arrangements to physically disconnect/ divert all gas, water, electric and communication services (to be arranged by the Employer). PPO to be issued with certification for all isolations/ diversions including plans.

Asbestos

- A management asbestos survey has taken place, a full demolition survey will be completed prior to the demolition.
- Some non-notifiable asbestos was found, the asbestos will be marked up and identified then removed prior to the demolition.
- For notifiable asbestos a licenced asbestos sub-contractor will be employed, a plan of works and RA developed then an ASB5 applied for to the HSE (2 weeks). All other asbestos containing material will be removed by the approved subcontractor partner.
- Should further asbestos be discovered, our procedure is:
 - Stop work immediately.
 - Form a localised exclusion zone.
 - Inform the PPO Site Manager/Supervisor immediately.
 - Conduct a toolbox talk.
 - Inform the Employer.
 - Engage an independent analyst company to collect a sample of the suspect material and test.
 - If proven positive for asbestos, instruct our licensed asbestos removal partners to remove and dispose of the material.

Community Engagement

Community Engagement Strategy

We acknowledge the importance of the community, their needs and expectations. Our Strategy for Engaging with the Community to ensure consistent and positive messaging is as follows:

1. Contact
 - Our Project Manager will act as the key point of contact. The Project Manager will be assisted by the local Graham Community Liaison Officer to ensure a high-quality customer experience.
 - The project will be registered with the Considerate Constructor's Scheme and our site sign boards will clearly display the contact details.
2. Communications
 - We will produce a resident's letter in advance of the works commencing and will letter drop to households/residents and/or businesses in the immediate location surrounding site who are most likely to be impacted by the works – this letter will have the contact details of the senior project manager/person responsible for project operations.

- We will produce a resident's letter in advance of any especially disruptive works (hours of work, noisy working, road closures and suspension of parking bays) commencing and will letter drop to households/residents and/or businesses in the immediate location surrounding site who are most likely to be impacted by the works – this letter will have the contact details of the senior project manager/person responsible for project operations.
 - The Graham Marketing Manager will liaise with the MMU and Unite Students Marketing Leads for collaboration on and issuing of quarterly newsletters and publications of good news stories
3. Complaints
- Complaints received either via head office and/or directly will be managed by Cambridge Halls Project Senior Project Management team
 - Complaints received via head office will automatically be forwarded to stakeholder engagement (civils) team and will be registered onto their CRIS system. The civils teams will then disseminate/pass compliant and contact details on to Senior Project Management Team for their review/assessment/management and relevant resolution/s

Environmental

Bats and other wildlife

In advance of commencement of the project, a bat survey will have been conducted (commonly known as a roost assessment or walk around) by the client's ecologists.

During induction, all team members will be instructed to be mindful of the possible presence of bats during their activities.

If suspect bat droppings are found (guano) or new roosts identified our procedure is.

- Stop work immediately.
- Form a localised exclusion zone.
- Inform the PPO Site Manager/Supervisor.
- Conduct a toolbox talk.
- Inform the Employer and, if required inform the ecologist directly.

During induction, all persons on site will be encouraged to be mindful of all potential wildlife in the working areas.

- Unusual wildlife activity will be reported to the Site Manager/ Supervisor.
- If applicable the site manager will report the wildlife activity directly to our in-house Environmental Officer and seek advice.

Dust

Dust mitigation measures will be in accordance with the management plan that will be created by PPO.

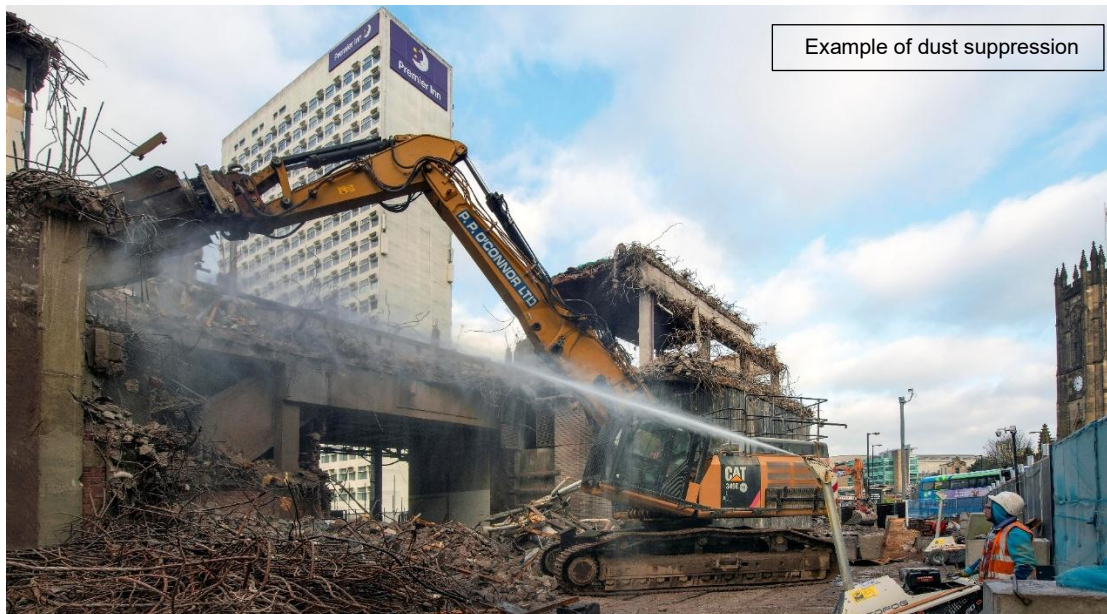
Dust monitoring will be ongoing by the PPO Site Manager/Supervisor throughout all activities and further mitigation measures implemented if required.

During this project, dust will be the most significant environmental issue that will need to be contained.

The Employer will provide an adequate water supply to the site for our use.

This water supply will be directly applied to the structure at the work face, or to rubble in stockpiles when being moved, loaded or recycled.

Air quality will be monitored as the works proceed against initial base line levels established at the beginning of the project bearing in mind the current use of adjacent land.



Example of dust suppression

P. P. O'CONNOR Environmental Management System SOP 1. Air Pollution Section 1 Procedure The purpose of this procedure is to provide guidance and assistance with the development and production of project specific procedures with regards to air pollution on any P.P. O'Connor site. Section 2 Scope This procedure applies to all company personnel and operational activities. The responsibilities for implementing the procedure are outlined below. Site Manager - Overall responsibility for air pollution control on site. - Ensure all sub-contractors and suppliers abide by air pollution control guidelines. - Liaise with the Environmental Advisor for all air pollution control issues. Environmental Manager - Assist Site Managers in the development of the Project Environmental Management Plan regarding the control of air pollution. - Ensure all staff complies with the air pollution control procedures. Section 3 Procedure Operational Control Guidelines - Any requirements for air quality monitoring throughout the project must be identified prior to the commencement of any works. - All activities which may cause air pollution should be highlighted and specific risk assessments and safe systems of works should be prepared. - All operations are to be carefully planned and managed to ensure that impacts are kept to a minimum. - All plant and equipment will be chosen and serviced regularly to minimise emissions. - Where air monitoring is carried out, all records will be retained for a minimum period of 12 years. - All permanent and temporary employees, including sub-contractors and suppliers, will be made aware of their responsibilities to ensure that no air pollution incidents occur. - In the event of an air pollution incident, the Emergency Control Procedures outlined below will be followed. Section 4 Emergency Control Emergency Control Procedures - In the event that excessive dust is arising from operations on site due to plant or traffic movements, then damping down of the roads and surrounding area shall be used to control the dust. Road sweepers shall also be used to keep roads clean and tidy where appropriate. - If the problem persists it may be necessary to install wheel-washing systems. - Where dust is arising from excavations, water shall be applied across the working area. - Where dust is arising from stockpiles of materials, water shall be applied to the stockpile, or the	P. P. O'CONNOR Environmental Management System SOP 1. Air Pollution stockpiles should be sheeted. - Care shall be taken in both instances where water is being applied to the soil to prevent excessive run-off causing a further pollution incident, or a safety hazard due to the weakening of the ground. - If any item of plant is releasing excessive emissions through its exhaust, it should be turned off, returned to the hire firm and replaced with better quality plant. - Where emissions are becoming a problem during cutting the method of working will be changed to use damping or extractive techniques. - Should any excessive odours arise from storage areas including fuel, chemicals and waste the cause should be investigated and changes made to storage arrangements. - Waste must be regularly collected and removed from site to prevent odour emissions. - In the event that a serious environmental incident occurs, contact the company's Environmental Advisor and advise the Environment Agency using the 24 hour Emergency line - 0800 80 70 80
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PPE

Standard mandatory PPE on site will be;

- Overalls with hi viz vest
- Safety helmet
- Safety boots with steel toe cap and mid sole protection as a minimum
- Task specific gloves – cut 5 for manual work
- Light eye protection including prescriptive glasses

Emergency Procedures

PPOC operatives are to abide by the site emergency plan which clearly identifies the fire points, muster point, hospital route and first aid locations.

In summary the procedure is as follows:

Emergency contact number: 0161 877 5533

In the unlikely event of an emergency within the PPOC work area then the following steps will be carried out.

1. STOP – Call for help and move away from the work area to a safe point if possible, to do so.
2. Raise the wireless fire alarm call point outside the welfare facilities will be used to raise the alarm to the remainder of the site.
3. PPOC Supervisor will establish contact with the security team if appropriate to do so, and guide the services to the point of the incident.
4. Obey instructions from Site management and/or Emergency Services, If instructed to evacuate area do not stop to collect personal belongings.
5. Report to Assembly point as stated within the fire/emergency plan and a role call will be conducted by your Area Supervisor. Do not re-enter the emergency area until told it is safe to do so.

3. DEMOLITION WORKS

General

Risk Assessments and Method statements

Detailed task specific risk assessments and method statements (RAMS) will be created and approved for all activities on site.

In advance of any works taking place all members of the proposed demolition team, including but not limited to the operators of the demolition plant, demolition operatives and banksmen will be taken into the existing buildings by the Site Manager who will identify and explain the key structural components of the buildings and the intended methodology for safe demolition.

The operators, operatives and Banksmen will read and understand the bespoke method statements, task sheets and risk assessments and make further comments or suggestions if they believe that any points addressed can be improved upon. Any comments or suggestions made, after review, that enhance, and further risk reduce the RAMS will be added and the amended documents issued to the Project Manager for approval.

All persons on site will have read, understood and signed the RAMS prior to being engaged on any activity within the site.

Changes to RAMS will be communicated to the working teams, documented and revised documents re-signed.

Competency

Our proposed full time Site Manager chosen by PPO will be experienced with this type of demolition. public. minimum training will be:

- CCDO (Black card).
- CSCS Card.
- SMSTS.
- Asbestos awareness trained.
- First Aid trained.
- Plant operator certificates.
 - Excavator (if applicable)
 - Telehandler (if applicable)
 - IPAF.
 - PASMA.

Site operatives will be directly employed and trained to a minimum of:

- CSCS.
- CCDO.
- Asbestos awareness trained.
- Cat B asbestos trained (none licensed asbestos removal).
- PASMA trained (some).
- IPAF trained (some).

All plant operators will be directly employed and trained to a minimum of:

- CPCS for the plant being used.
- Asbestos awareness trained.
- And hold a current safe pass.

Inductions, briefings and record keeping

All persons on site will attend an employer site specific induction (if required)

In addition to any employer induction, all persons attending site will also attend a PPO induction.

- The induction will include site rules.
- Daily activity briefings (DABS) will be conducted by the Site Manager to the whole of the site team, including the asbestos removal team each morning prior to the team's starting work.
- The DABS will consist of the following.
 - Proposed activities for the day.
 - Access/egress routes.
 - Emergency routes and procedures.
 - Review of risks and mitigation measures to be implemented.

The following daily/weekly records shall be produced and filed by the PPO Site Manager.

- Induction records.
- Daily diary.
- DABS.
- Signing in/out records.
- Signed RAMS.
- Toolbox talks.
- Asbestos clearance certificates.
- Training certificates.
- Harness inspection records.
- PUWER records.
- LOLER records.
- Plant certificates.
- Plant check records.
- Lifting tackle certificates.

Waste will be separated at source, collected, then removed from site via their individual waste streams.

Demolition (General)

On taking possession of the site, it will be inspected visually to identify areas of settlement that may be visible. We shall consider the stability of the ground and existing changes in levels, close to buried services, cellars, basements and service trenches to ascertain the potential impact our proposed site operations.

Further fencing will then be erected to form the demolition exclusion zone.

Plant will be delivered on drop bed low loaders to the site entrance on Higher Chatham St.

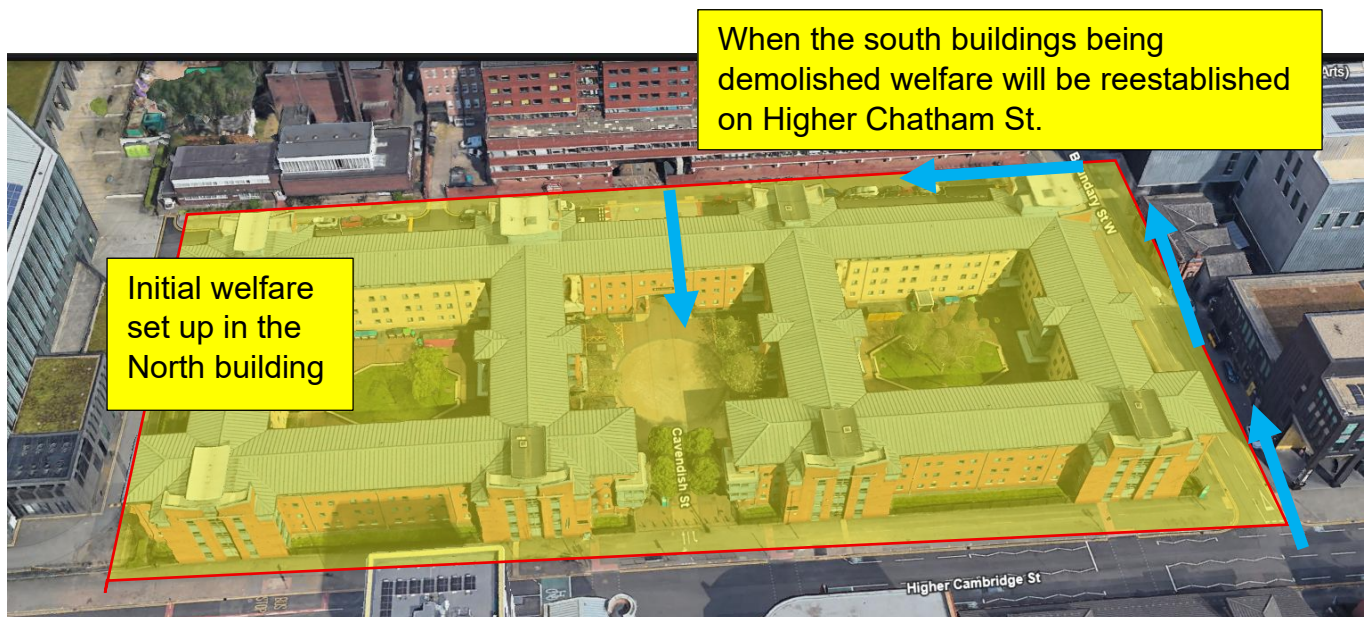
Prior to demolition commencing investigative works shall be undertaken following the soft stripping/asbestos clean-up operations to identify the loadbearing elements of the buildings and the direction of roof/ floor spans. This information will enable us to determine the direction and sequence in which the building will be demolished whilst maintaining the structural stability of the remaining structure.

To protect the live sewer that runs through the building along Cavendish St.

Prior to commencing puncture cellar base slab, we shall CAT scan this area of the site to identify possible unidentified buried services, this survey will be supplemented by hand excavated trial holes if required.

Any unidentified services encountered will be reported immediately to the Employer and the Design Team. Obvious remedial and or safety actions will be implemented immediately as an interim solution until such time as formal instructions are received or if appropriate utility company engineers attend site.

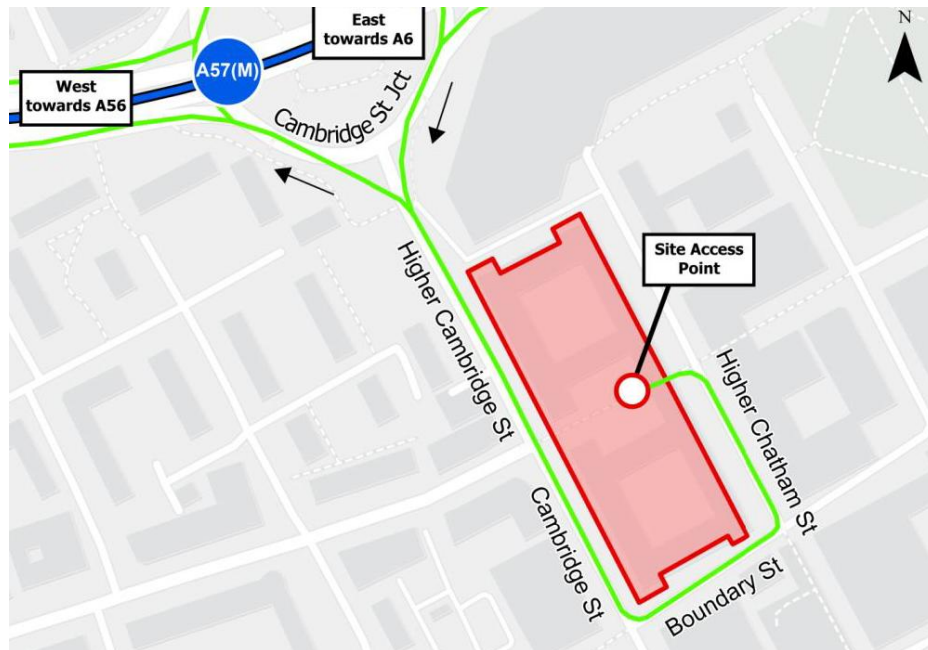
Access, egress, traffic



To ensure that the vehicle routing can work, swept path analysis drawings will be provided in the contractors CMP to show access routes with the use of 16.5m articulated vehicles.

One of the key principles for larger vehicle access is that vehicles will enter and leave the site in a forward gear unless there is unmanageable access constraints.

Any reversing in from the highway would be agreed with the Council and an agreeable strategy put in place to minimise any risk to passersby.



Prior to the contract starting all existing way leaves, access rights and easements will be agreed and discussed with the Employer's Project Manager.

This will determine and confirm the site access and egress, welfare location and configuration, shared access arrangements and the final demolition sequence.

Car parking on site

There will be no on-site parking. Contractor car parking will be making use of public car parks in the vicinity.

Car parking (circa 4-5 spaces) will be maintained for key operatives and an emergency vehicular in case of an emergency.

All operatives will be encouraged not to use private cars and encouraged to use active and sustainable solutions for travel such as walking, bicycle, and local public transport. As such, to encourage these forms of travel, showers will be made available at parking locations to assist the employees.

General car parking will be directed to public and private parking areas, if required, such as:

- University of Manchester Car Park Higher Cambridge St, Manchester M15 6AR;
- University of Manchester Car Park Booth St W, Manchester M15 6AD;
- University of Manchester Car Park Higher Chatham St, Manchester M15 6AR;
- RNCM (Royal Northern College of Music) Booth St W, Manchester M13 9RD; and
- Birley Fields Car Park, Lovell House, 6 Archway, Hulme, Manchester M15 5RN.

It is noted that street parking is available on:

- Lower Chatham Street (on street parking);
- Higher Chatham Street
- Boundary Street West (on street parking);
- Higher Cambridge Road (on street parking);
- Cavendish Street (on street parking);

- Along with local side streets.

It is acknowledged that parking on local streets is likely to be available for short stay parking only and increased activity may impact on local residents' amenity, therefore construction staff will be instructed not to park in these locations.

PPO and the Employer's Project Manager will liaise with the occupants of neighbouring and any other stakeholder parties regarding access/egress and outline planned activities.

Further fencing and access gates shall be incorporated into the existing fencing where gaps exist. All gates will remain closed and secured. The access/ egress gates will be managed by a designated PPO operative. Gates will only be opened/closed under his/her supervision.

An emergency out of hours contact number 0161 877 5533 shall also be displayed at all access/ egress gates.

Traffic management within the site will be introduced to segregate pedestrians from road vehicles and plant.

Routes will be determined taking into consideration known buried services.

All vehicles shall be required to travel in a forward direction, reversing and manoeuvring vehicles shall be supervised and aided by a banksman. This includes visitors and third-party supplier's delivery vehicles.

A mandatory 5MPH site speed limit will be imposed.

To minimise dirt and debris deposited on the roads all wagons will be sheeted to contain materials and the PPO road sweep deployed (if required)

Prior to leaving the site, HGV vehicles with twin wheels shall be inspected to ensure that no debris has lodged between the tyres. Any foreign objects found will be removed and then washed down using a mobile pressure washer.

Banksmen will be always deployed during plant movement operations and demolition.

Expected Vehicle Movements

Item	Quantity
Low loaders	20 movements in total
Welfare delivery	8 movements in total
RORO Skip for soft strip	5 a day during soft strip
8-wheel tipper	10 a day from when the demolition starts
Fuel delivery	Weekly
Road sweeper	When required

Plant & Equipment

Item	Quantity
Demolition Spec Excavators	Multiple
Demolition Attachments	Multiple
RORO Skip	Multiple
Dust Suppression / Jet Wash	Multiple
General Hand Tools	Various
Power Tools	Various
Heras Fencing / Crowd Barriers	Various
2 Way Radios	1 bank

Scaffolding requirements



Mobilisation Period and Initial Activities prior to commencement of asbestos removals, soft strip and demolition activities

Early dialog will be established between PPO staff and the Employer's project team to enable clear identification of each other's undertakings and safety concerns.

A dilapidation survey will be conducted between the PPO site Manager and clients PM

Welfare will be established in the North Hall building.

The welfare will consist of

- Mess room
- Male/female toilets
- Office
- Drying room
- Tool stores set up on site
- Pedestrian barriers (separating cars from welfare and providing a 'safe zone')

Emergency out of hours contact details will be given to the Employer and posted in the welfare.

A first aider will always be present on site.

The first aider will be identified to all persons on site during induction, including the location of the first aid box.

The first aider's details will be posted on the walls of the welfare area.

Emergency procedures will be explained during induction to site.

The local accident and emergency unit (A&E) details will be explained to all working parties during induction.

A detailed directional map for the local A&E will be posted on the walls of the welfare area, along with emergency contact details.

Safe access and egress routes will be created and maintained.

Evacuation procedure will be developed and maintained.

Muster points in the event of emergency or evacuation will be established and maintained.

Separation of plant and labour will be in force and always maintained and will be clearly sign posted.

Fuel refilling area will be established and clearly sign posted.

A smoking area will be established and clearly sign posted.

Stage 1 - Soft strip

40yard RORO skips will be delivered to site.

Exclusion zones will be established, sign posted and maintained.

Safe access and egress routes will be established, sign posted and maintained.

Emergency escape routes will be established, sign posted and maintained.

The trained soft strip operatives will be informed where asbestos exists.

The trained operatives will remove any loose furniture and other restrictions that may be in the way of the asbestos strippers.

Waste removal

All waste will be separated (General/ Timber) then placed into the RORO skips.

All waste will be taken to our own recycling yard (PP O'Connor Enviro Ltd) Sharston Ind Est Manchester M22 4ss where it will be further separated/ recycled

Using hand tools, operatives will remove the items listed below:

- Other loose furniture.
- Fixed furniture.
- Features and fittings.
- Floor coverings.
- Suspended and false ceilings.
- M&E installations.
- Doors and frames.
- Skirting.
- The waste will be separated at source.
- Exclusion zones will be established, sign posted and maintained.
- Safe access and egress routes will be established, sign posted and maintained.
- Emergency escape routes will be established, sign posted and maintained.

Mobile access platforms will be erected by PASMA trained operative, tagged and recorded.

Operatives wearing full PPE will soft strip and remove waste to skips outside.

Asbestos removal

All asbestos will be removed in accordance with CAR 2012

All asbestos will be disposed into lockable skips then taken to a licensed disposal facility.

Transit routes will be communicated to the whole site team during early morning DABS meetings.

Transit routes will be secured using pedestrian barriers.

The decontamination unit and waste skips will be positioned as per the plan contained in the works information.

Stage 2 - Structural/ Mechanical demolition

Note: Any remaining asbestos will be highlighted and be removed prior/during the demolition

Note: Soft stripping will have been conducted prior to demolition

Note: Andun Engineering (Our independent structural engineering services partner) will have already been to site and advised/ approved our proposed demolition sequence.

Note: The MMP will be separated from the Mill by hand prior to the main demolition.

Isolation certificates will be checked and a permit to demolish raised.

Exclusion zones will be established, communicated and upheld.

Two way radios will be held by:

- Site Manager and supervisors
- Excavator operators
- Banks men

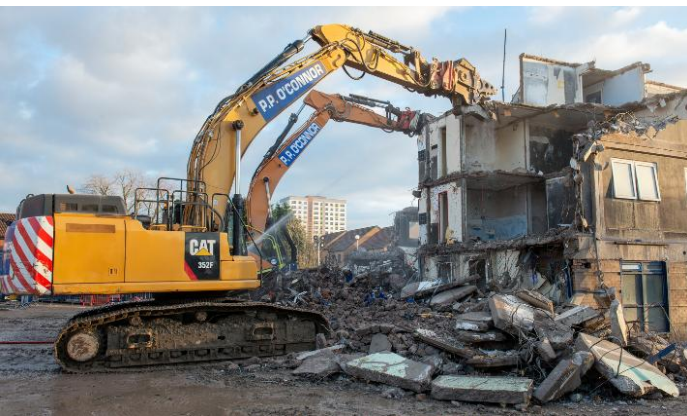
Banks men will be positioned at a safe distance.

Water will be used to suppress dust.

Demolition excavators will be marshalled onto the site and safely off loaded.

Using demolition specific excavators fitted with state of the art 'lenhoff' hydraulic attachments the operators of the excavators under the instruction of the site manager will commence demolition.

Using the various attachments (Shear, pulveriser, and grab) the excavator operators will carefully demolish the buildings.



The operators will demolish the buildings from the top/ down.

The operators will always apply the principle of 'stepping' the demolition to maintain stability of the remainder of the structure.

Demolition arisings will be allowed to fall to the ground in a controlled manner.

All demolition will be in accordance with BS6187: 2011.

Banks men will not only be viewing the works being conducted, maintained an exclusion zone but will be looking at the part of the building still to be demolished.

Banks men and the site manager will be in constant communication with the operators advising them that the areas are clear of persons and stability is being maintained.

Periodically, demolition will cease to allow other excavators working behind the main demolition excavators to retrieve demolition arisings and process/ size reduce the same.

Demolition will be placed into the following waste streams.

- Brick/ concrete
- Metals
- Timber
- General waste

The excavators behind the main demolition excavators will size reduce and stockpile the brick/ concrete, remove rebar from concrete, size reduce metals then place into 40yard RORO skips or stockpile then place into pre planned HGV bulkers.



All general waste and timber will be placed into designated 40yard RORO skips that had already been delivered to site.

All the hardcore and floor slabs will be removed from site continuously to allow the follow-on work to start immediately.

Prior to any vehicle leaving site the wheels will be checked for any objects stuck in between and then washed down using a mobile pressure washer.

Sheet Piling and placing a piling matt

When the south halls have been demolished the ground slab will be broken out and removed from site back loading 6f2 to install a piling mat to install the sheet piles along the site boundary to protect the services in the pavements.

The sheet piles will be installed then the 6f2 will be placed in a stockpile.

The reduce level dig will then take place with all the arisings taken of site.

The area will then be proof dug to 4m below ground slab level and any historic piles removed and engineered back in to the required level.

The piling mat will then be installed allowing the new concrete piles can be installed for the new build.

As this work is taking place on the south side of site the north side demolition will be on going and on completion the same sequence will followed on the north side.

Site clearance and demobilisation

We will invite the Employer to site to inspect the works and confirm that the works have been completed to their satisfaction. We will rectify and snag items and obtain acceptance in writing that the works have been completed to their satisfaction.

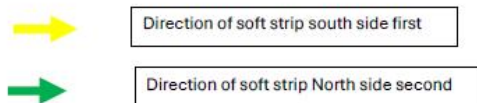
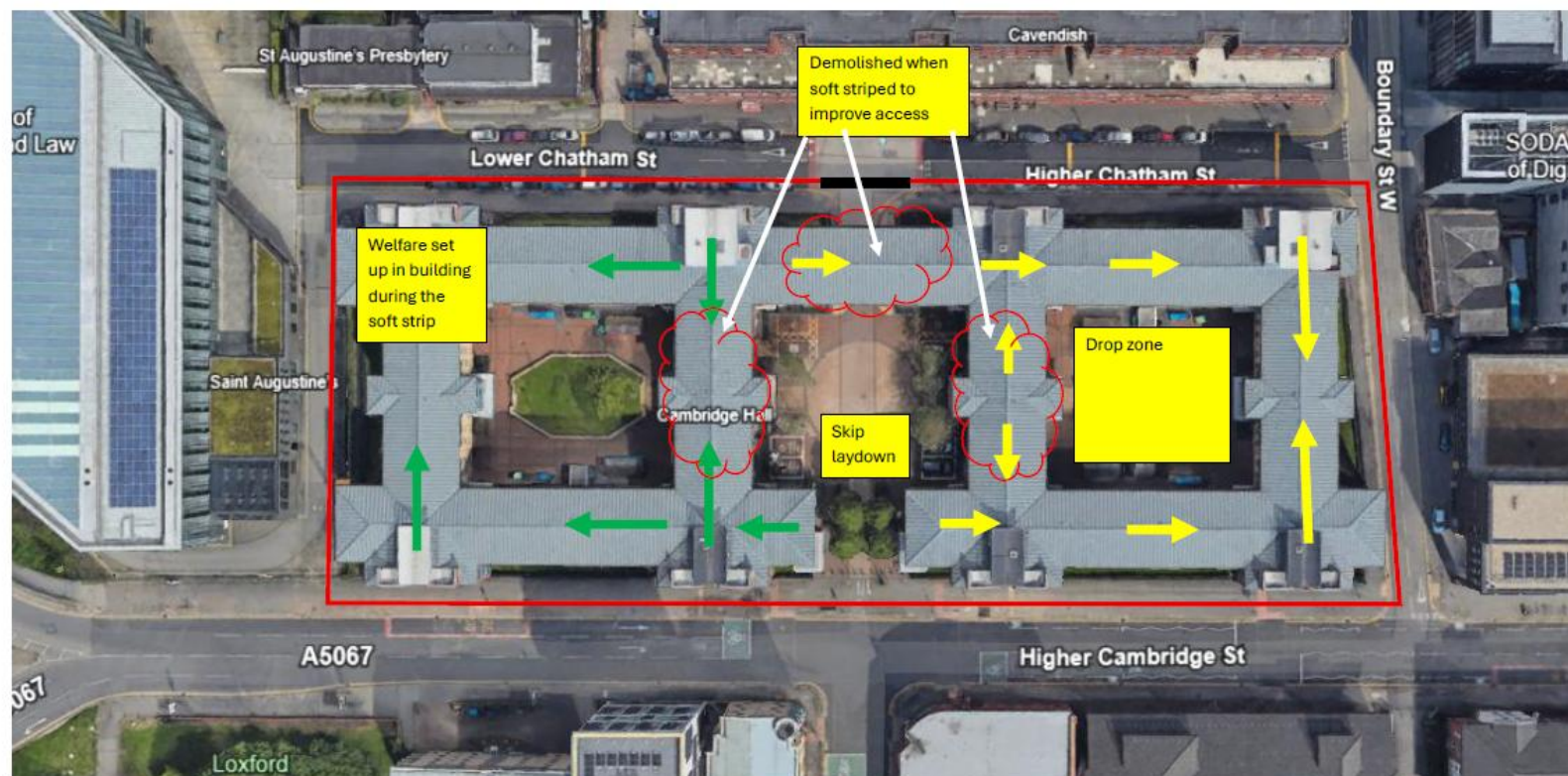
Then we will remove all other plant, equipment, skips and tools from site.

The welfare cabins will be safely loaded and taken off site.

A post demolition dilapidation survey will be conducted with the client/ PC.

The works will be signed off as 'Practical Completion'.

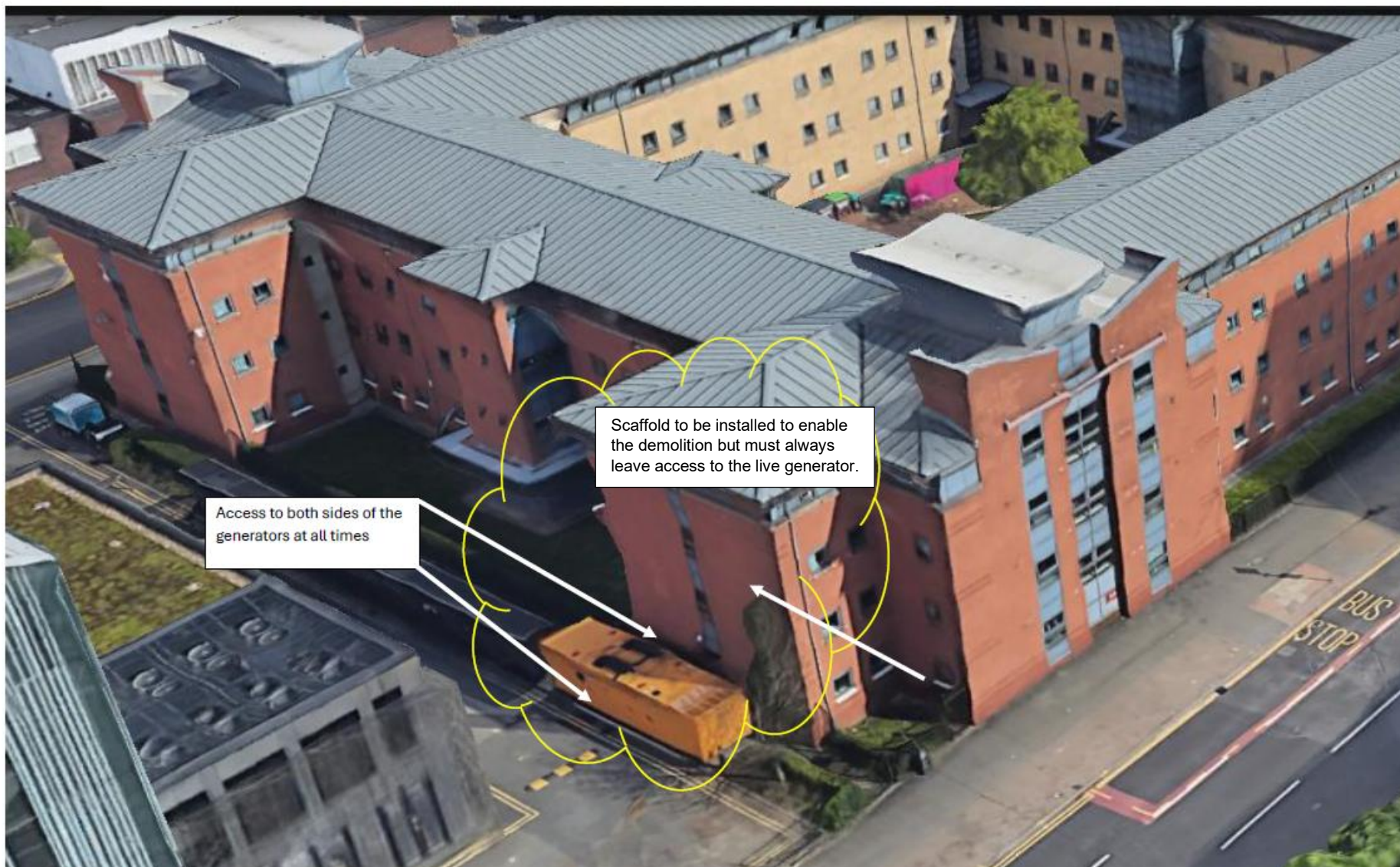
Cambridge Halls M15 6TT set up and Demolition sequence

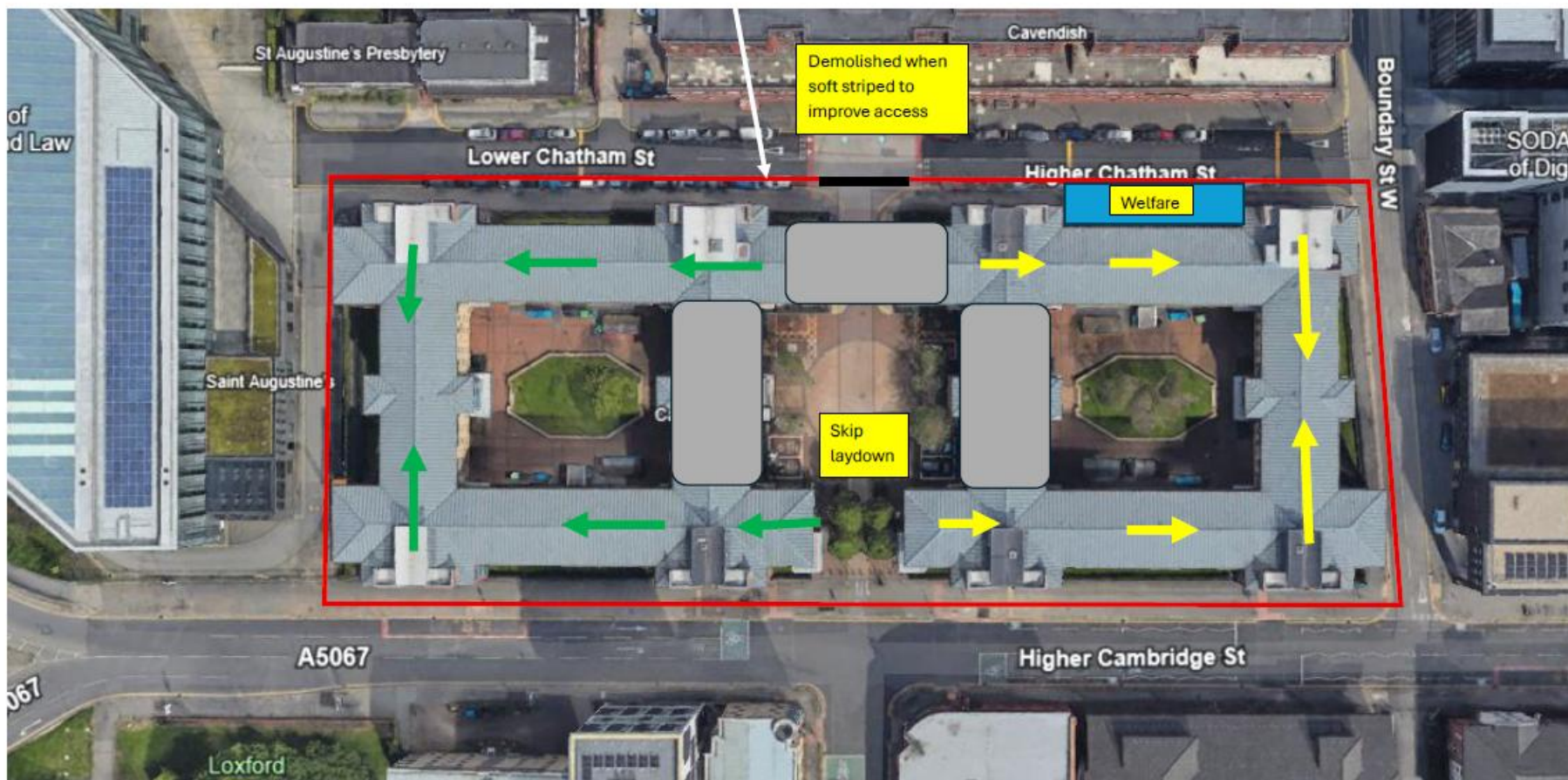


Scaffold requirement Cambridge Halls M15 6TT



Scaffold required for full working scaffold fully monoflexed erected with in the hoarding for full demolition. Diagram 2 shows the emergency generators that have to remain in situ during the demolition so will need scaffold protection with access to both sides and the scaffold to the gable for demolition.





Direction of demolition after south side soft strip is complete with the welfare to be relocated to Higher Chatham St on completion of demolition.



Direction of demolition after North side soft strip is complete with the welfare relocated to Higher Chatham St.